MaxLoad® Pro
Version 3.6

User's Guide

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Total Optimization Packaging Software

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Preface

About MaxLoad® Pro

Congratulations on purchasing MaxLoad Pro, a Windows-based multi-sized product loading analysis software. You have made an excellent choice! MaxLoad Pro is extremely powerful and has proven to save millions of dollars for thousands of companies because of the efficiencies you'll realize in your business. We're confident that MaxLoad Pro will provide the same benefit to your company, regardless of your product, package or volume.

For over nine years, TOPS® MaxLoad® technology has been the industry's premier vehicle/container loading system. MaxLoad®Pro offers a sequenced loading report, along with a variety of ways to display the load, such as sequenced 3-dimensional color/number coded load diagrams and placement-by-placement displays. MaxLoad®Pro also has the ability to construct straight and mixed pallets. With MaxLoad®Pro, you can accurately plan your vehicle/container loads in advance, resulting in increased efficiency and better customer support.

Over the years, we've maintained a steady effort to simplify our software so that you, the end user, are able to conduct your loading analysis quickly and efficiently. Just in case you have a problem, we've written this *User's Guide* to assist you with every possible issue or question you might have.

If this *User's Guide* does not answer your questions, or if you should experience problems while using the MaxLoad®Pro software, please call TOPS Technical Support or your TOPS sales representative at 972.739.8677.

How the User's Guide is Organized

This *User's Guide* is organized into 10 chapters and four appendices, as follows:

Chapter 1, **Getting Started**, discusses system requirements necessary to run MaxLoad®Pro and instructions on how to install the MaxLoad®Pro software.

Chapter 2, **The Basics**, presents the basic features and functions of the MaxLoad®Pro system, such as the Control Center, common features used throughout the system and opening an existing manifest. This chapter also outlines MaxLoad®Pro's new features and improvements.

Chapter 3, **Defining MaxLoad®Pro Databases**, presents the three primary MaxLoad®Pro databases – SKU, Pallet/Slipsheet and Vehicle. This chapter walks you through how to define, modify and delete items in each of the three databases.

Chapter 4, **Loading a Truck Manifest**, discusses the features you'll use to define a truck manifest load – the Vehicle, Options, Mixed Pallet and Comments tabs, the SKU List and the Manifest List. This chapter walks you through how to define a truck manifest.

Chapter 5, **Loading a Pallet Manifest**, discusses the features you'll use to define a pallet manifest load – the Mixed Pallet, Options and Comments tabs, the SKU List and the Manifest List. This chapter walks you through how to define a pallet manifest.

Chapter 6, **Loading a Tote Manifest**, discusses the features you'll use to define a tote manifest load. This chapter walks you through how to define a tote manifest.

Chapter 7, **Loading a Single-SKU Manifest**, discusses the features you'll use to define a single-SKU manifest load – the Vehicle, Options and Comments tabs, the SKU List and the Manifest List. This chapter walks you through how to define a single-SKU manifest.

Chapter 8, **Viewing a Solution**, discusses the Manifest View screen, which provides a range of information about a load. This chapter shows you how to view a load solution from different angles and with different options, and presents the different types of information displayed for a load.

Chapter 9, **Editing a Solution**, discusses the Editor screen, which allows you to fine-tune or completely change a load solution. This chapter walks you through how to add and remove SKUs and placements from a vehicle; how to align and center SKUs and placements on a vehicle; how to view the load from different angles; and how to deal with stacking/loading violations.

Chapter 10, **Printing**, walks you through all the system's printing functions, including how to define print parameters, work with the print preview and add text annotations to a printout.

Chapter 11, **Configuration**, discusses how to customize MaxLoad®Pro by turning on and off a range of options and by changing the defaults and/or properties for each individual field in the system.

Chapter 12, **Import/Export Functions,** discusses the various import and export options available in MaxLoad Pro.

Appendix A, **Command Line Parameters**, provides various command line options along with syntaxes available for Maxload.exe.

Appendix B, **Glossary**, provides definitions for a range of terms used in the MaxLoad®Pro system and the product loading industry.

New Features in MaxLoad Pro 3.6

❖ **L-Shape SKUs:** Support L-Shape SKUs like sofas and chairs including the option to optimize their bundle sizes.

❖ **Placement Highlight in 3D View:** This viewing option highlights the selected placement in color and shows other placements as wire frames only.

❖ **SKU Bundles:** Designed for thin SKUs like wood planks and metal sheets, users can set up multiple preferred bundle sizes for loading. Also works for other SKU types like standard shipcase and drums.

❖ **Set Priorities within Stops:** Add both stop off and priority to the manifest list and enable "Stop & Priority". MaxLoad will load according to priorities for each stop.

❖ **Adjust Weight Distribution:** Users can move the entire load towards the front or back of the vehicle to adjust distribution of weights over the king pin and axles.

❖ **Support Weight Limit:** With Weight Limit defined, MaxLoad load the order within these limits. Violations will be highlighted in red so users can edit the load manually to comply with weight restrictions.

❖ **Support Multiple Pallets:** Allow user to select multiple pallets when doing pallet manifests.

❖ **Customize and New Reports:** This new function allows users to specify what data to be included into graphical manifests, load summary and placement list. New reports include load by layer, color stop off, load by placement edge and customized load summary and graphics reports.

❖ **Air Fill Dunnage:** This option highlights in the 3D load solutions area where dunnage can be added to protect and secure the load during transport.

❖ **Advanced Data Filter:** File filter include manifest name, date, user name and customer name.

❖ **Export Load Diagrams:** New option to save the selected 3D load diagram to a graphics file in JPEG, BMP, TIF or other formats.

Chronology of Features in MaxLoad

This section outlines the various releases of the MaxLoad Pro software, along with the features included in each release.

Version 3.0

❖ Support new vehicle types including side-bay trucks, flatbeds and ULDs.

❖ Rotate layers when creating unitload patterns for SKUs.

❖ Split editing to provide two views of the same vehicle load during editing for better visualization.

❖ Edit mixed pallet in vehicle.

❖ Define wheel wells for trucks and corner boxes for sea containers.

❖ Break drum SKU placement into individual items for editing.

❖ Add descriptive comments for manifests include customer name, address, ship status, and delivery date.

❖ Improved layer algorithms for mixed pallets to generate more stable layers by stacking SKUs of similar heights to form layers.

❖ Custom import for pallet and tote manifests.

❖ Direct export to PDF files without the use of Adobe Acrobat or other third party PDF tools.

❖ Import SKUs and order data from a secured FTP server.

❖ Specify Date Range for Manifests: New filter to sort manifests based on the dates they were last saved, within 7, 30, 60, 90 or 180 days.

❖ Implementation of Load Rules: Ability to view and edit contents of load rules within Max Load. Please contact TOPS directly to implement this feature.

Version 2.7x

❖ Enhanced algorithm options including pinwheel patterns for unitloads, pyramidal staggering of pipes, improved nested loading of mixed size rolls and automatically align loads inside transit vehicles

❖ Imports case sizes and pallet patterns from TOPS Pro.

❖ Support Loading by Percentage, for example, 50% of SKU-A, 30% of SKU-B and 20% of SKU-C.

❖ New Export Options include solution, load list, placement list and export by placement.

❖ Data Import Wizard which allows easy import of selected SKU and MFT fields.

❖ More efficient and stable mixed pallets.

❖ Ability to see contents of mixed pallet SKUs in the containers.

❖ Use of Fill Items to for leftover space with selected SKUs,.

❖ Creates partial unitloads to fill leftover spaces on top, optimizes unitload height for top layers.

❖ Right-click menu in the 3D editor for SKU alignment, snap placement and to break a placement into individual items.

❖ Use of loading rules to better optimize and control loading of transit vehicles.

❖ Load by Placement report indicates SKU quantity and configuration for each step.

❖ Improved Import/Export functionality to allow selected data to be transported to and from MaxLoad Pro.

❖ More Language Support: Adds support for Simplified Chinese, Traditional Chinese, Portuguese and Thai.

Version 2.6x

❖ Improved stop-off handling

❖ Color coded orders and rules to force orders to be loaded together

❖ Assign number of units to SKU as piece count

❖ Nest and stagger drums, pipes and rolls in a container

❖ New export options, Export by Placement and Export to XML

❖ New Import options, Import XML, Import Piece count

❖ Split door and side door loading for Rail Cars

❖ Added "Save to Library" feature

❖ Added "Bundle SKUs" feature

❖ MaxLoad Pro self cleans the database for SKUs not used for days, months, or years

❖ Enhanced reports

❖ Better loading algorithms, load for efficiency and/or by speed

❖ Increased stacking rules for loading along with preferred stack sizes

Version 2.5x

❖ Improved loading of mixed pallets for increased stability and stackability

❖ Improved order handling

❖ Improved algorithms

❖ Improved "Maximum Axle Weight" calculations

❖ Added railcars

❖ E-mail reports directly from MaxLoad Pro using the default e-mail client

❖ Load a tote manifest

❖ Load a mixed pallet manifest (a specific collection of SKUs placed on a pallet)

❖ New global security settings in the Global Settings dialog box

❖ "Calculate All Vehicles" feature automatically loads trucks to complete a manifest

❖ Right-click feature displays properties information for the selected SKU

❖ Sort data in a column in ascending, descending, alphabetical, or numerical order

❖ "Multiple Truck Summary Report" feature displays a load report for each truck in the solution

Version 2.x

❖ Added "Multiple View" feature for printouts

❖ Added three new user specified information fields for SKUs and manifests

❖ "Copy to Clipboard" feature allows the user to copy 3D views generated in MaxLoad Pro

❖ "Paste-On Graphics" feature allows the user to paste bitmap images onto the sides of individual SKUs

❖ Added "Colored Outlines" feature for printouts

❖ Activated user passwords

❖ Added Axle weight calculations

❖ Updated Italian translation

❖ Improved online help. The MaxLoad Pro manual is now available through online Help

❖ Improved manual editing of truck and mixed pallet manifests

❖ Less cluttered screens. MaxLoad Pro now allows the user to turn of some columns that they do not use.

Getting Started

Introduction

This chapter covers the following topics to get you up and running on the MaxLoad Pro system.

❖ System Requirements/Specifications

- Standard MaxLoad
- MaxLoad for SQL/Oracle

❖ Installing MaxLoad Pro

- Important Notes
- Installation Procedure
- License Setup
- Setup Client Machines for Network License
- LAN and WAN Explained

❖ Starting MaxLoad Pro

❖ Registration Information

❖ Add a New User

❖ Viewer Mode

❖ Uninstalling and Moving License

By the end of this chapter, you should be logged into the system and ready to use the software.

System Requirements/Specifications

Standard MaxLoad

To install and run the MaxLoad Pro software, your system needs to meet the following requirements:

❖ **Platform:** All versions of Windows (95, 98, 2000, NT, XP, 2003, Vista, Windows 7 and Windows 8) – both 32 and 64 bit

❖ **Network:** Any network is compatible. MaxLoad Pro is not network-protocol dependent; it only needs a file server.

❖ **Processor Required:** Any processor capable of running the installed platform. Recommended Pentium 133 MHz or better

❖ **Hard Disk Space Required:** 50 MB

❖ **RAM Required:** 64 MB or more recommended

❖ **Video Required:** 800 x 600 at 256 colors recommended

Network Information: MaxLoad Pro is installed from a client to the file server. MaxLoad Pro and DirectX usually do not take more than 50 MB space on the file server, depending on the database size. DirectX is copied to the file server for install on client(s) that do not have DirectX. Most Windows clients come with DirectX. Individual workstation's hard disk space requirements will vary. They will have the support files for DirectX and DAO installed that their machine lacks and the program will be run from the network.

The software internally manages concurrent user licensing. No third party metering of the software is required. Licensing can support an unlimited number. The software has been tested with up to 30 concurrent users. Provisions are in place for distinguishing between viewers of old/completed work and generating new work. Those who access the software in View Only mode do not count against the concurrent user limit.

Software Design: The MaxLoad Pro uses 32-bit code. Work is stored as database records instead of individual files, using DAO (MS Access). For import/export of data, MaxLoad Pro uses ASCII comma Delimited text files or csv- comma separated values file and XML, compatible with most document management systems, spreadsheets, databases and

mainframes, including Excel, Access, Paradox, AS400, and UNIX platforms.

MaxLoad for SQL/Oracle

For Microsoft SQL server 2000 and above, Oracle server 9i and above.

Client Requirements

❖ **Processor:** Pentium III 450 MHZ or better

❖ **RAM:** 128 MB or more

❖ **Hard Disk Space:** 50 MB

❖ **Video Required:** 800 x 600 at 256 colors recommended

❖ **Operating System:** Windows NT / 2000 / XP / Vista / Windows7/ Windows8

❖ **DirectX:** 6.0 or above

❖ **OLE DB Provider:** No additional component required for MS SQL Server. Oracle client full installation is required to setup the Oracle OLEDB provider if the database server is Oracle.

❖ **Database component:** MDAC 2.8 or above

Please note this is already built into Windows XP and Vista. It only needs to be installed for earlier version of Windows.

Note: MaxLoad Pro does not require Microsoft .Net platform but can work on any PC with Microsoft .Net platform.

Installing MaxLoad Pro

This section will walk you through the installation process and get you logged into the system. It is recommended that a person in the Information Technology department installs the software.

Note: If during the installation an error message occurs, please make a note of the error message and continue with the installation until it is finished. Then contact TOPS Technical Support for further instructions.

Important Notes

❖ The following instructions apply to both MaxLoad Pro new installation as well as upgrade.

❖ If you are installing or upgrading a network license, please start from the client machine.

❖ Before you begin, make sure you have administrative rights to install to your computer and to the network. After setup, user will require full permissions to access the TOPSAPPS folder and everything inside it.

❖ After installation, you MUST contact TOPS via phone or email to complete the license setup. Until the license is setup, your MaxLoad software will behave like a demo, with access to sample data only.

❖ Have the serial number of your MaxLoad software available. The number is marked on the front of the CD, the CD case and on the Product Registration Card.

Installation Procedure

1. Make sure you have administrative rights to the workstation on which you wish to install MaxLoad Pro. If installing a network copy, you will need the same rights on the network drive.

2. Close all other applications on that workstation.

3. Start the installation process by inserting the MaxLoad Pro CD in the proper drive of the machine. The software setup should run automatically. If this does not happen, click on the Windows Start button and select Run.

   The Run dialog box appears and prompts you to enter a directory path and the program to run.

4. Type D:\SETUP and hit the Enter key on your keyboard (where D: is the CD drive). If your CD drive is designated with another alphabet like E or F, please change it accordingly.

5. A window will open for you to select the software you want to install. Click on "Install MaxLoad Pro".
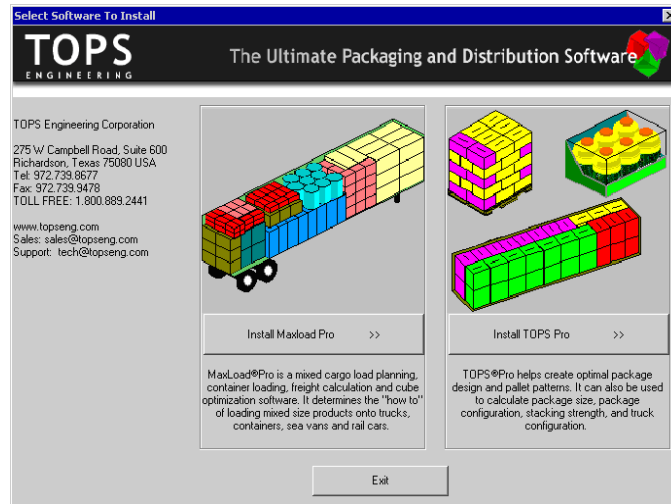
6. You will see a welcome message. Continue installation by clicking on the Next button.
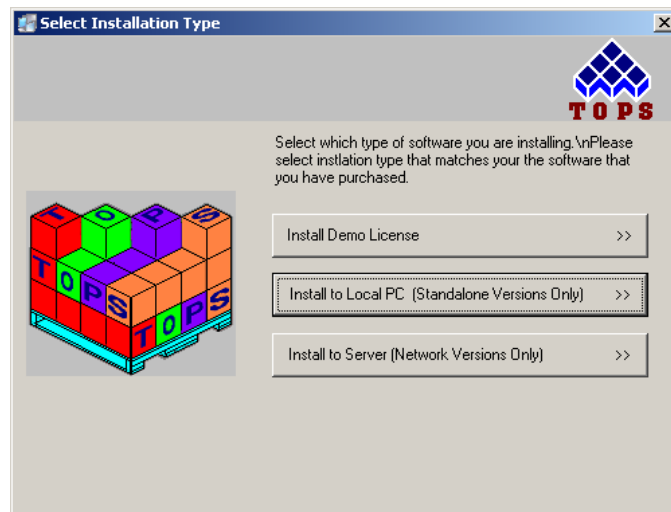
7. Click on "Install to Local PC" if you are installing a stand-alone license. Click on "Install to Server" if you are installing a network version of MaxLoad Pro. Network version should be installed from a client machine to the server. You can check the sticker on the front of the CD case to determine if you have a stand-alone or server copy.

The Backup Replaced Files dialog box appears.
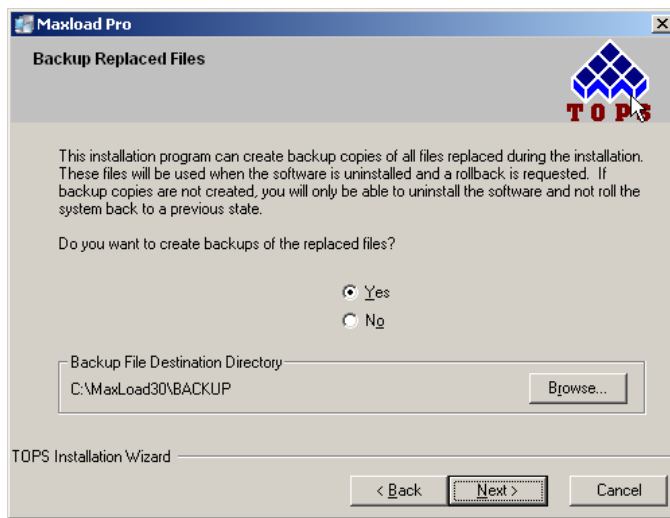
8. To create backup copies, click on Yes and specify a location where the backup files will be saved. Click No if you do not want back up copies of the installation files. When ready, click on Next to continue and the Destination Location dialog box appears.
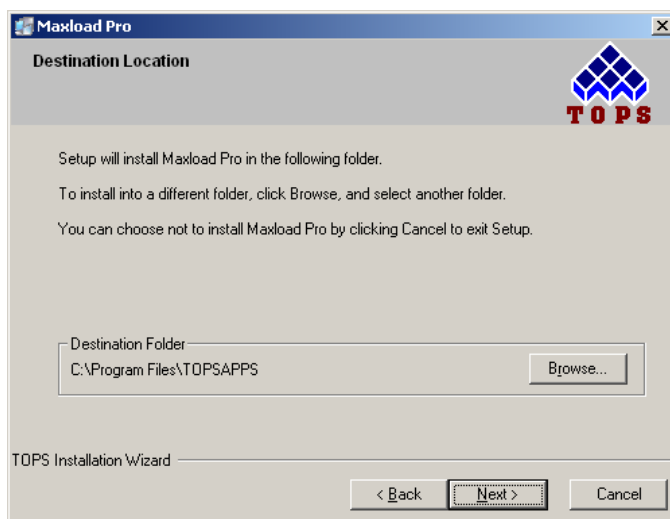
9. You can use the default location to install MaxLoad Pro or click the Browse button to specify a new location. Click on Next to continue.

    ❖ **Stand-alone License** – Use the default folder of C:\Program Files\TOPSAPPS\ or click the Browse button to specify another folder on your computer.

❖ **Network License** – Click the Browse button to select the mapped drive of the server from the client machine.
Note that you will need to run NETSETUP or WANSETUP on each new client machine after installation is complete.
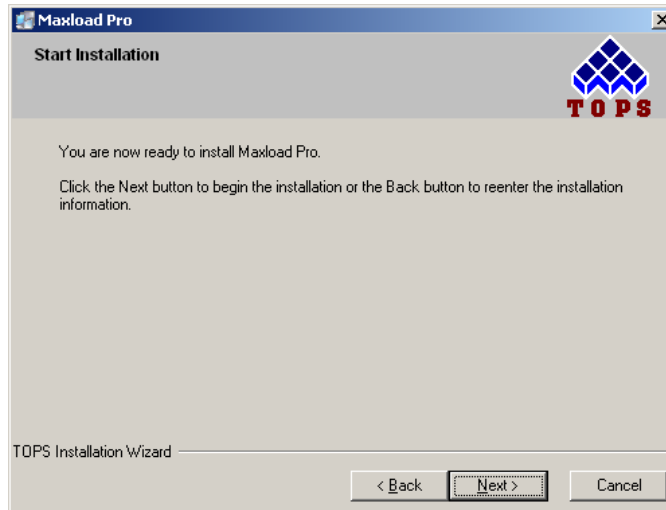
10. Click Next to start the installation process. MaxLoad Pro will start copying the files to the specified location. You will see the progression on screen and the following will appear when installation is complete.
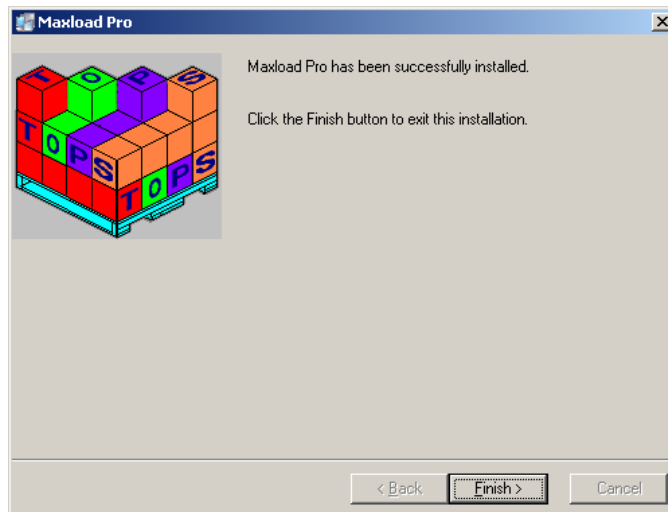
11. Click on Finish to close the dialog box.

When installation is complete, MaxLoad Pro will create the required shortcuts for the software and place those shortcuts on the desktop and under Start | Programs | TOPS for Windows Apps Menu.

You will need to run MaxLoad Pro at this time to finish the License Setup process as described in the next section.

License Setup

Until the license has been setup, the newly installed MaxLoad software will behave as a demo – you can only open and view existing analysis but not perform new calculations. To setup the license, follow these steps and contact TOPS via email or telephone.

1. Start MaxLoad by going to Start | All Programs, select TOPS Apps folder and then click on MaxLoad Pro.

   You will see the Demonstration Mode Information dialog box as shown below prompting for your action. If your license has already been setup, you will go right to the MaxLoad login screen.
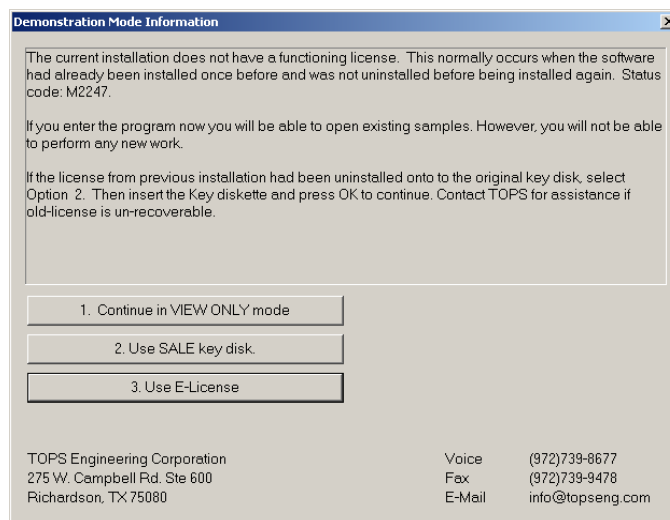
2. Click on the "Use E-License" button and the Reset Authorization screen appears.

Note: Until the license is set, the information in the dialog box above does not reflect the correct serial number or configuration (Number of Users and Network/Stand Alone).

3. Have the following information ready and call TOPS at 972-739-8677 for license setup:

   ❖ Company Name – the company name that you'd like to appear in all reports from MaxLoad
   ❖ Serial number of your MaxLoad Pro license – this is the serial number in the format of 12345.x as marked on the front face of your MaxLoad CD, not the serial number shown in this dialog box.
   ❖ The Key from the above dialog box.

   To setup via email, please send an image of the Reset Authorization screen or click the Email button for MaxLoad to place the license information in a text attachment. Email either to tech@topseng.com so the Verification Code can be emailed to you to complete the process.

   Note that the Verification Code is time sensitive and needs to be entered within 24 hours to complete the license setup process.

4. Upon receipt of new serial number and verification code from TOPS, enter them into the Reset Authorization dialog box click on the OK button. Make sure the Company Name is entered "exactly" the way provided to you.

If all information is entered correctly, you should see a message saying "MaxLoad License successfully set".
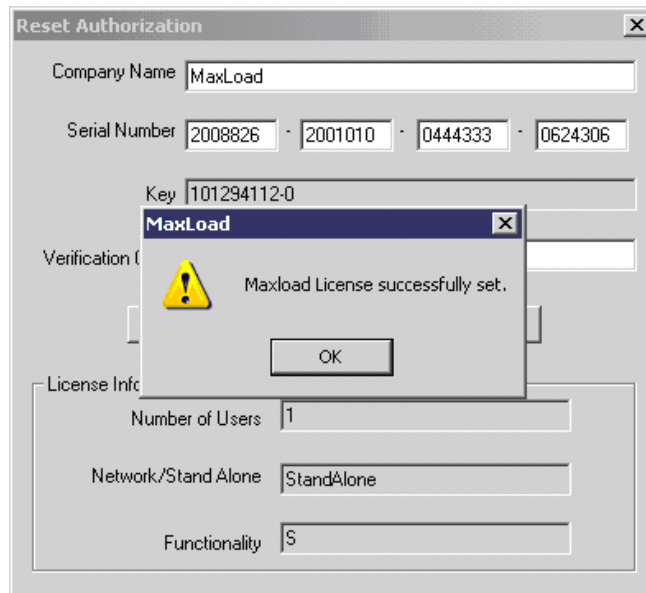
5. Click Ok again to close the Reset Authorization dialog box. The Defaults dialog box appears
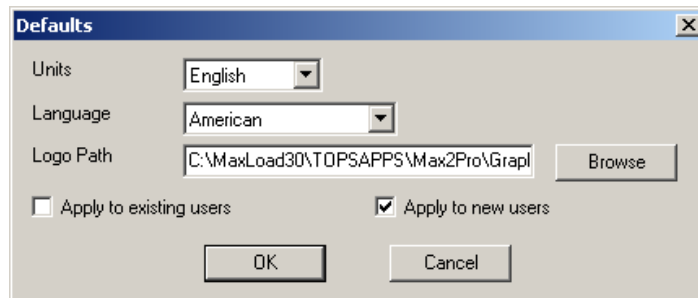
6. Select the default settings for MaxLoad:

   ❖ **Units** – Select from the drop list the units of measure
   ❖ **Language** – Select from the drop list the language used for MaxLoad user interface
   ❖ **Logo Path** – Click the Browse button to specify the location of your company logo to be used all reports from MaxLoad
   ❖ **Apply to existing users** – Check this box to apply the defaults to all existing users
   ❖ **Apply to new users** – Check this box to apply the defaults to all new users from this point on.

When all selections are made, click on the OK button.

The MaxLoad Login screen appears. The software is now ready for use. Please refer to the section "Starting MaxLoad Pro" and later chapters on how to use the software.

Setup Client Machines for Network License

After the license has been properly setup, you can now proceed to setup MaxLoad access on any client machine.

Note that all users should have Full Control (read and write) access to the TOPSAPPS directory on the network

1. Make sure you have administrative rights to the workstation you wish to set up MaxLoad Pro on.

2. Permanently map a network drive to the location on the server, where you installed MaxLoad Pro.

3. Browse across the mapped network drive to the Max2Pro directory. Run the NETSETUP.EXE file for a LAN (Local Area Network) install and WANSETUP for WAN (Wide Area Network) install, respectively.

4. NETSETUP / WANSETUP will verify that there is a valid version of DirectX installed on the local PC, create a local Maxload2.ini file and place it in the Windows directory. It then creates the required shortcuts for the software and place those shortcuts on the desktop and under Start | Programs | TOPS Apps Menu.

WAN and LAN Explained

A **LAN (Local Area Network)** install is a network install where the data and software files are stored on a shared server. Client machines then connect to the server through shortcuts and run all processing on the client side. When you run NETSETUP, MaxLoad will copy over the shortcuts, .INI file and all .DLL files needed for the software to run (it will also check to ensure you have the minimal version of DirectX). Once the install is done and you click a shortcut, the software will find the .INI file which tells it where to find its database and executables. These will then point across the mapped network drive (or UNC path) and the software will run, with the processing load being entirely on the client side.

A **WAN (Wide Area Network)** install differs from a LAN install by copying also all executables and support files to the local client. This way when the software runs, there is no lag in starting the executable file. The only lag then is in reading data from the server. The WAN setup can be used for customer having multiple locations in different cities, but wants to maintain a single database. (This may not work for all situations, depending on the customer's network bandwidth, it may be too slow). Another situation well suited for the WAN install is a slow LAN. If the LAN the customer is using is slow for some reason, they may use a WAN setup to speed up the responsiveness, even on the local network.

Starting MaxLoad Pro

To start MaxLoad Pro, double-click on the MaxLoad Pro icon on the desktop (if you have one), or go to Start | All Programs, go to the TOPS Apps folder and click on MaxLoad Pro.

The Login screen appears, as pictured below.
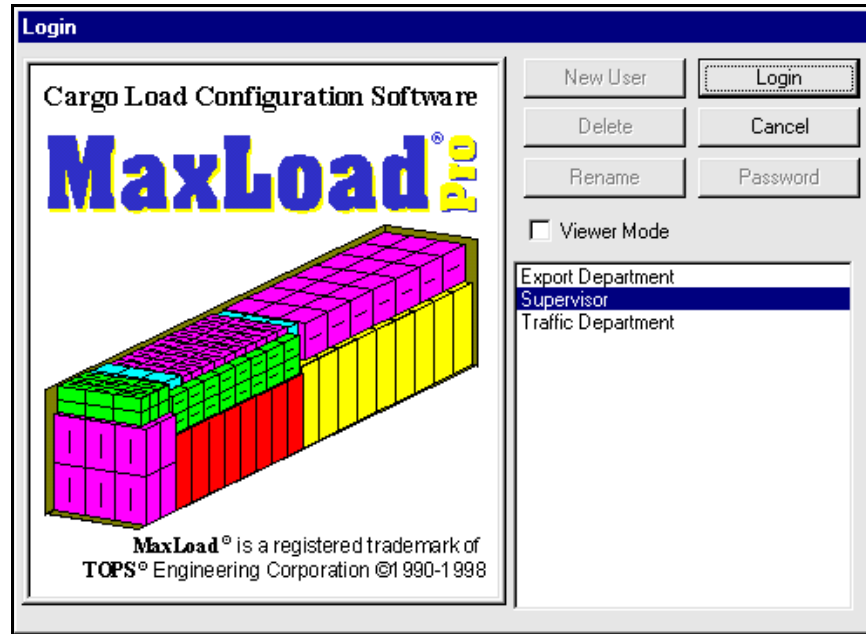
Notice the user list in the bottom right section of the screen; this list shows three users already set up in the system: Export Department, Supervisor and Traffic Department.

Select the user group you belong to and click on the Login button and the MaxLoad Pro Control Center appears, as pictured on the next page.

Note: The Supervisor login is password-protected (password is "tops software"). Log in as a Supervisor only if you're performing Configuration functions. For more information, please refer to Chapter 11, Configuration.

The MaxLoad Pro Control Center serves as your starting point in the system. From the Control Center, you can start or create one of four types of manifests: Truck, Pallet, Tote and Single-SKU.

The MaxLoad Pro Control Center is discussed in Chapter 2, The Basics.

The Truck Manifest is discussed in Chapter 4, Loading a Truck Manifest.

The Pallet Manifest is discussed in Chapter 5, Loading a Pallet Manifest.

The Tote Manifest is discussed in Chapter 6, Loading a Tote Manifest.

The Single-SKU manifest is discussed in Chapter 7, Loading a Single-SKU Manifest.

Registration Information

The About MaxLoad Pro information box, pictured below, provides important information regarding your MaxLoad Pro license. To access this box, open the Help menu and select About MaxLoad.
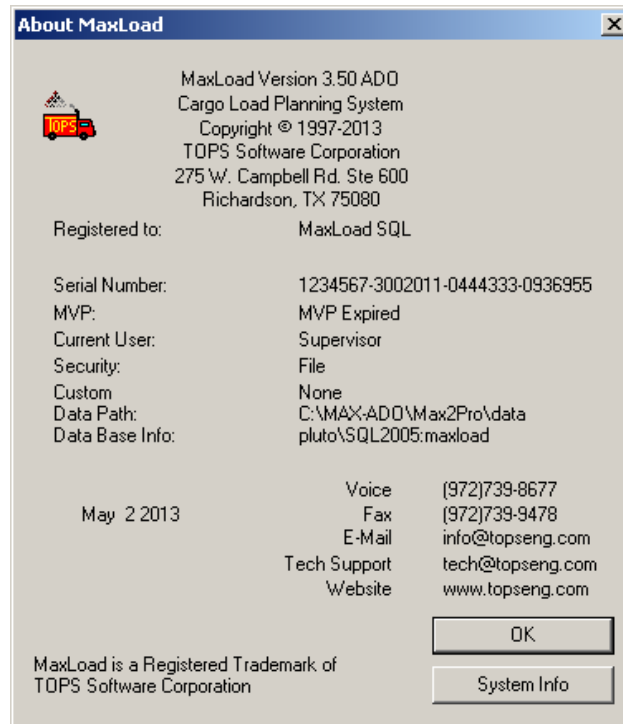
The About MaxLoad information box displays the following information:

❖ **MaxLoad Pro Version:** Shows the version of MaxLoad Pro you are currently running.

❖ **Registered to:** The name of the company or organization the software is licensed to. This is the same Company Name that you enter when you setup the license under the Adjust Authorization function.

❖ **Serial Number:** This is the software serial number. It is unique for every customer. Whenever an issue is reported to technical support, the serial number is the first thing needed. This allows TOPS tech support to look up the customer and version information in the customer database. This number even tells the number of users that can access the software at one time.

❖ **MVP:** This field is not used. Please contact TOPS or email MVP@topseng.com to check your MVP status.

❖ **Current User:** Lists the login name of the current user.

❖ **Security:** Displays the security method used to install the license.

❖ **Custom:** Reflects if any custom programming was done.

❖ **Data Path:** Indicates the location where all the MaxLoad data are saved.

❖ **Date:** The build date of this executable file.

❖ **TOPS Contact Info:** TOPS Engineering Corporation address, phone number, e-mail address, and website address.

Notice that the About MaxLoad information box contains two buttons:

❖ **OK Button:** Closes the About MaxLoad Pro information box.

❖ **System Info button:** Displays the System Information box, as pictured below which provides a range of technical system information and allows you to print, save or email the system information.
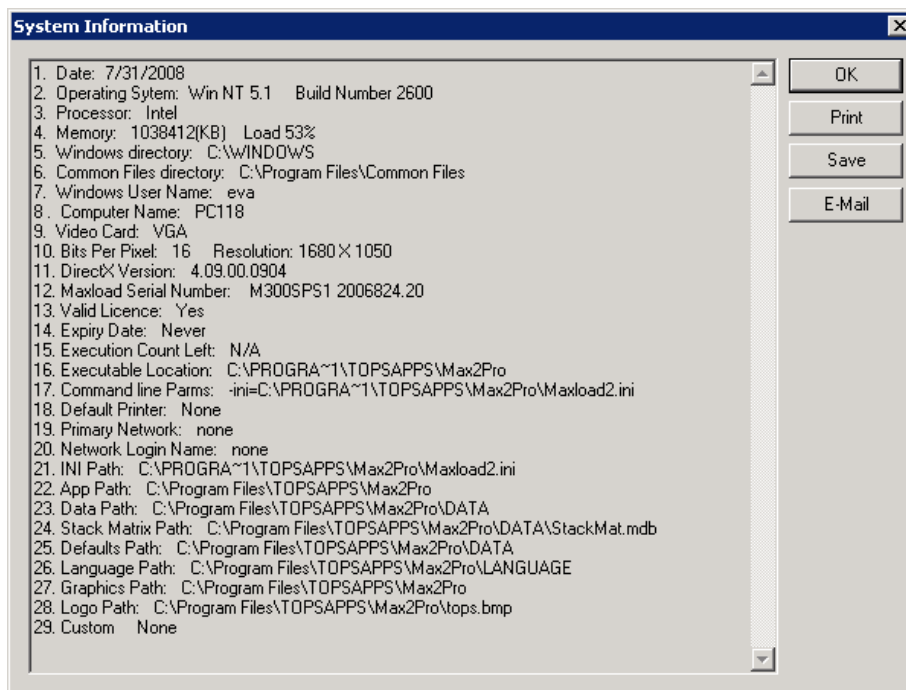
The System Information box displays the following information:

1. **Date:** Current system time.

2. **Operating System**: Machine operating system and build number.

3. **Processor**: Processor manufacturer.

4. **Memory**: Amount of memory being used.

5. **Windows Directory**: Operating system's default directory, usually Windows.

6. **Common Files directory**: Location of System (Windows) common files folder.

7. **Windows User Name**: Name of the user currently logged into the Windows system.

8. **Computer Name**: Machine name as it appears on the LAN.

9. **Video Card**: Style of video adapter.

10. **Bits Per Pixel**: Screen color depth and resolution.

11. **DirectX Version**: It tells the version of directX being used.

12. **MaxLoad Serial Number**: Software serial number.

13. **Valid License**: If the user is running a sale or demo license.

14. **Expiry Date**: This applies to MaxLoad Pro demo. Reflects the date MaxLoad Demo will expire. If this is a sales copy, it shows "Never".

15. **Execution Count Left**: This applies to MaxLoad Pro Demo. Reflects the number of executions left before the demo expires. For a sales copy, it shows "N/A"

16. **Executable Location**: Provides the location while the MaxLoad executable file is saved.

17. **Command line Parms**: Lists any command line option on your copy of MaxLoad during program startup.

18. **Default Printer**: Reports the default printer being used.

19. **Primary Network**: Type of the network the user logs into.

20. **Network Login Name**: It is the username that the user logs in under onto the network.

21. **INI Path**: INI path points to the location of the maload2.ini file. Maxload2.ini file tells the software where to find the data, license, and other required files.

22. **App Path**: Points to the location of the license files.

23. **Data Path**: Points to the location of the max2pro\data directory.

24. **Stack Matrix Path**: Location of the StackMat.mdb (data directory).

25. **Defaults Path**: Location of the Defaults.mdb (data directory).

26. **Language Path**: Location of the language directory which stores all language files.

27. **Graphics Path**: Location of the *.wmf file used by XML.

28. **Logo Path**: Location where the company logo is saved.

29. **Custom**: Show if there is any customization done on your copy of MaxLoad.

Add a New User to the System

No matter your MaxLoad Pro is stand-alone or network, or regardless of the number of concurrent users, you can add as many user logins as you like in MaxLoad Pro. To add your name or department to the list of user names, follow these instructions:

1. Login as a Supervisor. The default password is "tops software" and is case insensitive.

2. Access User Login from the File menu.

3. When the Login dialog box appears, click on the New User button.

4. At the New User dialog box, type in the new user name in the User Name field.

New User	
User Name	[ ] OK
Password	[ ] Cancel
Verify Password	[ ]
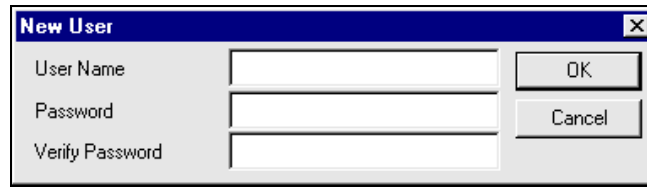
5.   The Password and Verify Password are optional fields. Set a password only if you intend to use MaxLoad Pro in a more secure way.

6.   In the Password field, type in the new user's password.

7.   In the Verify Password field, type in the new user's password again.

8.   Click on OK.

MaxLoad Pro adds the new user to the system and returns you to the Login screen. Notice that the user list now displays the name of the new user.

Viewer Mode

The Viewer Mode checkbox at the login dialog box allows you to start MaxLoad Pro in "viewer" setting only – where you can only open existing analyses for viewing but not performing new calculations.

For a network license supporting say, only two simultaneous users, a third or fourth user can log in using viewer mode to retrieve existing analyses and print reports.

Please note that in Viewer mode, the Calculate button, as well as the New button in each Button Window will be grayed out.

Moving or Resetting License

You will need to contact TOPS for a new Verification Code whenever you are making changes to the operating system on your PC or need to move MaxLoad to another computer or server.

Each MaxLoad license, stand-alone or network, can only be installed on one single machine or server. Multiple installations of the same license, as identified by the unique serial number before the decimal point marked

on the software CD, is a violation of the MaxLoad end user license agreement.

The Basics

Introduction

This chapter presents the basic features and functions of the MaxLoad Pro system. This overview will acquaint you with the following topics:

❖ Control Center

- Button Windows
- Version and Registration Information
- Menu Bar
- Tool Bar (Standard)

❖ Common Features

- Tab System
- Graphical Online Drawing (g.o.d.) System
- Sort Function
- Direct E-mail

❖ Open an Existing Manifest

- Filter (Manifests)
- Combine (Manifests)

❖ Exit MaxLoad Pro

Control Center

Control Center is the starting point for working in the MaxLoad Pro Software. This is the first screen that appears after you login to the software. From the Control Center, as pictured below, you will choose to either open an existing manifest or create a new manifest.
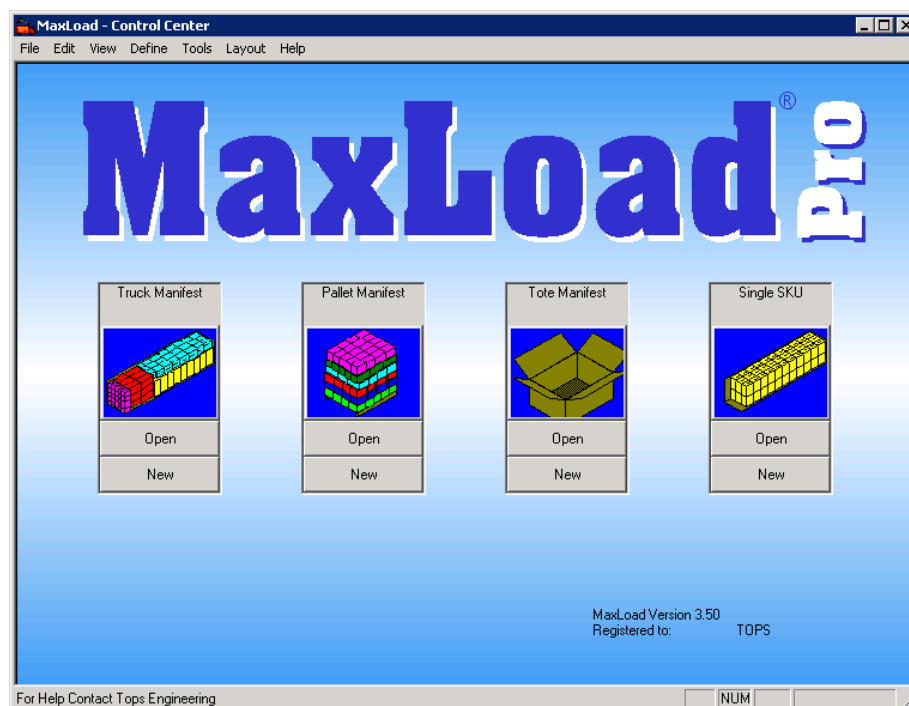
Note: From anywhere in the system, you can access this screen with this Menu Bar command: File | Close.

Notice the following components on this screen:

❖ **Button Windows:** The four button groups provide shortcuts to allow you to create a new manifest or open an existing manifest.

❖ **Version and Registration Information:** Displays the version number and registration information for your copy of MaxLoad Pro.

❖ **Menu Bar:** Contains seven drop-down menus that allow you to perform common tasks.

❖ **Tool Bar (Standard):** Contains shortcuts to various commands in the form of icons.

Button Windows

Button windows are designed as shortcut buttons to open existing or create new manifests. Each contains an Open button and a New button. Note that the New button will be grayed out if "Viewer Mode" is enabled during login.

Open Button: The Open button displays the File Open dialog box, which contains a list of all manifests that have already been defined for a manifest type.

New Button: The New button displays the Manifest Pick List screen, which allows you to create a new manifest for the respective manifest type.

Truck Manifest Button Window: The Truck Manifest button window allows you to load multi-size SKUs into a vehicle. This window can also be used for single-size SKUs.
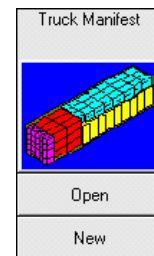
Pallet Manifest Button Window: The Pallet Manifest button window allows you to perform a mixed-pallet loading analysis.
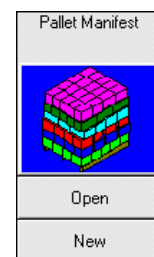
Tote Manifest Button Window: The Tote Manifest button window allows you to load mixed items into a tote.

Single SKU Button Window: The Single SKU button window allows you to determine the exact quantity of single-size SKUs that will be loaded to cube out a vehicle.

Version and Registration Information

The lower right-hand corner of this screen displays the following information:

❖ **Version Number and Registration Information:** Refer to this number if and when you call the TOPS Engineering Technical Support Department.

❖ **Executions Remaining:** If you're running a demo version of the software, this tells you how many more times you can execute the software.

Menu Bar

The Menu Bar provides a number of drop-down menus. These menus provide options that allow you to perform common tasks, many of which are duplicated on the Toolbar.

File   Edit   View   Define   Tools   Layout   Help

The Menu Bar is comprised of the following seven menus:

❖ **File Menu:** Allows you to create new manifests, open existing manifests, save manifests and set up print parameters.

❖ **Edit Menu:** Allows you to undo or redo your most recent action in the Editor, as well as copy text and images to the Windows clipboard.

❖ **View Menu:** Allows you to view loading solutions in a number of formats: by placement, by leading edge, by priority. It also allows you to view the Stacking Violations list to verify that you've not violated any stacking rules.

❖ **Define Menu:** Allows you to define parameters for a new SKU, Tote, Pallet, Vehicle or Stack Matrix.

❖ **Tools Menu:** Allows you to revise your system configuration, system language (MaxLoad Pro is used worldwide) and user list. It also allows you to import and export work to and from the system.

❖ **Layout Menu:** Allows you to work with a number of Align and Snap tools as you position SKUs onto a pallet.

❖ **Help Menu:** Allows you to display Help information for all features and function in the system.

This Menu Bar remains consistent throughout the entire MaxLoad Pro system. Each screen that you work with contains the same seven menus. However, be aware that depending on the individual screen that you're working in, the list of commands (sub-menu choices) changes or becomes tailored to reflect that individual screen. Menu options that cannot be accessed at the moment are disabled ("grayed out").

Toolbar (Standard)
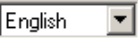
The Toolbar, as pictured below, contains icons that perform individual MaxLoad Pro commands and offer shortcuts that simplify commands. Oftentimes, you can click on an icon once to complete a command, rather than click two or three times using the Menu Bar.

When you place the mouse cursor over the tool button, MaxLoad will show a small context box telling you the function of the current tool icon.

This table outlines the Toolbar icons.

Toolbar Options	
Icon	**Function**
	New: Displays the Manifest Pick List screen, where you can begin work on a new manifest.
	Open: Displays the File Open dialog box, which allows you to open an existing manifest.
	Save: Saves the active manifest.
	Import: Imports a generic list of SKUs or order list.
	Export: Opens a submenu for the user to export the Solution, Placement or Load List to a flat text file like CSV.
	Cut: Cuts a selected graphic or block of text and moves it to the Windows clipboard.

	Copy: Copies a selected graphic or block of text to the Windows clipboard.
	Paste: Pastes a selected graphic or block of text onto a working area of the screen.
	Print: Prints a hard copy of a loading solution.
	About: Displays software license information.
	Help: Accesses the online help system.
English ▾	**Units:** Switches measurement units from English to Metric and vice versa.

Every icon found in the Toolbar has a corresponding Menu Bar option. The Toolbar changes depending on the screen in which you're currently working. The sample Toolbar shown above is found in the Manifest Pick List screen. We chose this Toolbar because most of the icons on this Toolbar are common to other Toolbars. The Manifest View screen and the Editor screen each have their own Toolbars. Each Toolbar is described in detail in their respective chapters.

Common Features

Some features that are used throughout the MaxLoad Pro system are categorized as the Common Features. The primary common features include the following:

- ❖ Tab system

- ❖ Graphical Online Display (g.o.d.) system

- ❖ Sort function

- ❖ Direct E-mail

Tab System

MaxLoad Pro uses tabs throughout the system. Tabs allow you to quickly and easily switch back and forth between different data entry areas or sub-screens. For example, the Manifest Pick List screen contains four tabs, as pictured below, which provide five different sub-screens – Vehicle, Options, Mixed Pallet, Comments and Weights. Similarly, on the Define SKU screen, three tabs allow you to move easily between Size, Stacking and Graphics sub-screens.
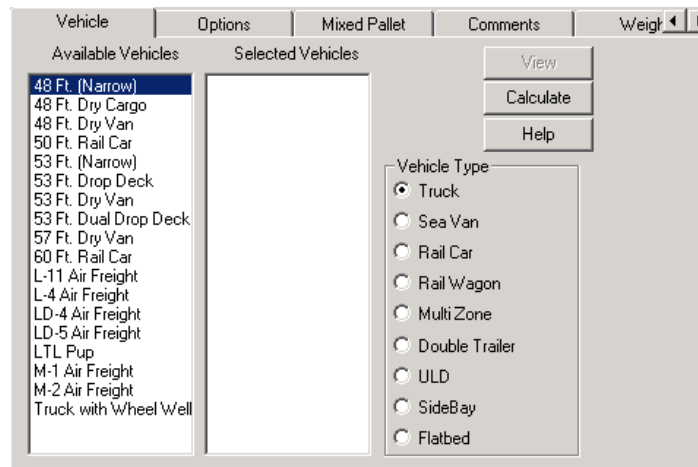
Also, notice that all command buttons – in the figure above, View, Calculate and Help – are available on each tab. To switch between tabs, simply click on the appropriate tab and the new sub-screen will appear.

Click the left arrow button at the top right corner to show the Vehicle tab which is not visible if you are at the Weight tab.

Graphical Online Drawing (g.o.d.) System

The Graphical Online Drawing (g.o.d.) system is referred to throughout this *User's Guide* as the g.o.d. system. The g.o.d. system provides a 3-dimensional image of various objects, as pictured below. The g.o.d. feature is most commonly found in the Define screens (Manifest, SKU, Pallet and Vehicle), but is also available in the Create Unit Load screen and the Manifest Pick List Screen.
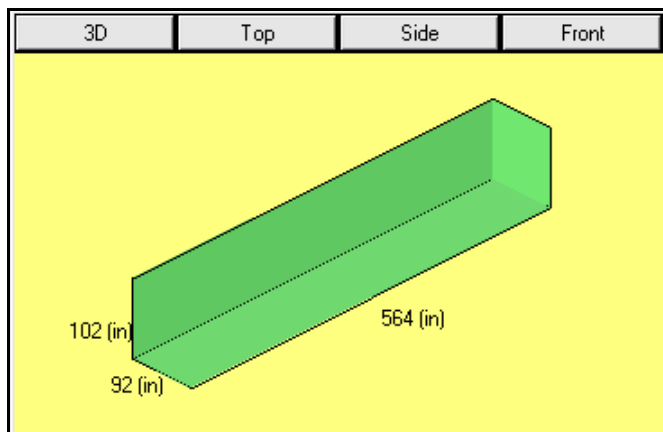
The g.o.d. system helps you define objects by illustrating the characteristics of the item – length, width, height, etc. – as you define it. For example, in the Define Manifest screen, the g.o.d. feature displays a visual of the vehicle you've selected for the manifest. This gives you a visual confirmation of the vehicle before you exit the screen. The g.o.d. system also shows color choice, if applicable.

Notice that the g.o.d. system contains four buttons at the top of the pane:

❖ **3D Button:** Displays a 3-dimensional view of the item.

❖ **Top Button**: Displays the item from the top.

❖ **Side Button:** Displays the item from the side.

❖ **Front Button:** Displays the item from the front.

Sort Function

MaxLoad Pro uses a number of lists to display information for a manifest: SKU List, Manifest List, Solution List, Placement List, Load List, Cut List, etc. Each of these lists is comprised of columns that contain data. The sort function allows you to sort the data in these columns.

For numeric data – quantities, weight, cube percentage – you can sort data in a column in ascending or descending order numerically. For alpha data, such as a list of SKUs (barrel, bulk frozen yogurt, computer, etc.), you can sort data in a column in ascending or descending order alphabetically.

To sort data in a column, follow these instructions:

1. For the column you want to sort, click on the column heading. For example, on the View Screen's Placement List, if you want to sort data in the Quantity column, simply click on the Quantity (Qty) heading. The heading works like a button.

    MaxLoad sorts the Quantity column in ascending order, as pictured below. Notice that the Quantity column reads 1, 2, 3, 3, 12, 15 and so on.

-	Ref	-	SKU	Qty	UL Cnt	Priority	Cube	% Cube	Wgt	% Wgt	X Front	X Side	X Floor
	5		Stereo	1	0	1	3.4	0.1 %	21.0	0.0 %	403	0	94
	1		Computer	2	0	1	19.6	0.6 %	80.0	0.2 %	553	0	26
	1		Computer	3	0	1	29.4	0.8 %	120.0	0.3 %	426	0	65
	1		Computer	3	0	1	29.4	0.8 %	120.0	0.3 %	553	0	0
	1		Computer	12	0	1	117.5	3.3 %	480.0	1.0 %	532	0	0
	6		TV	15	0	1	332.5	9.4 %	1200.0	2.5 %	216	0	65
				138			3102.2	88.1 %	15692	32.7 %			

2. To sort data in the Quantity column in decreasing order, click on the column heading again and MaxLoad sorts the Quantity column in descending order, as pictured below. Notice that the Quantity column now reads 33, 27, 24, 18 and so on.

-	Ref	-	SKU	Qty	UL Cnt	Priority	Cube	% Cube	Wgt	% Wgt	X Front	X Side	X Floor
	5		Stereo	33	0	1	113.0	3.2 %	693.0	1.4 %	216	0	94
	3		Deepfreezer	27	0	1	1220.6	34.7 %	9450.0	19.7 %	0	0	0
	2		Refrigerator	24	0	1	837.8	23.8 %	2088.0	4.3 %	216	0	0
	6		TV	18	0	1	399.0	11.3 %	1440.0	3.0 %	448	0	0
	6		TV	15	0	1	332.5	9.4 %	1200.0	2.5 %	216	0	65
	1		Computer	12	0	1	117.5	3.3 %	480.0	1.0 %	532	0	0
				138			3102.2	88.1 %	15692	32.7 %			

Direct E-Mail

This function allows you to e-mail any of the print reports or a manifest directly from MaxLoad Pro via your default e-mail application. To e-mail a report from MaxLoad, start from the Print Preview Screen and follow these instructions:

1. Click on E-Mail on the menu bar.

2. Select the between JPEG or PDF formats. The system launches your default e-mail application and attaches the selected report in the format selected.

3. Enter the e-mail address where the report will be sent.

4. Send the e-mail.

Note: The e-mail function is built into the Print Preview Screen throughout the MaxLoad Pro System.

To e-mail a manifest, follow these instructions:

1. Open the manifest to be emailed.

2. Click on Tools menu and select Email MFT. The system launches your default e-mail application and attaches the selected report as a TXT file.

Note: MaxLoad Pro works with a MAPI-based e-mail client; for example, Outlook, MS Internet Mail, etc. To setup a particular email client, simply access the Internet Options from the Control Panel. Set the desired email client as the Default Email, under the Programs tab.

Lotus Notes Users: If you are a Lotus Notes user, the procedure is a little different. Located in your Max2Pro directory (install directory) you will see a file named setupsmi.exe. Execute this file and it will find Lotus Notes files and set itself up, accordingly. After this, close and run MaxLoad Pro and Lotus Notes will be the default mail program. Call TOPS Technical Support for any configuration help.

There is no need to run setupsmi.exe if you are using a new version of Lotus Notes which is MAPI-compliant.

Opening an Existing Manifest

To open an existing manifest, follow these instructions:

1   Use one of two options:

   ❖ From the MaxLoad Pro Control Center, click on the Open button on one of the button windows.

   ❖ Or open the File menu and select Open.

   The File Open dialog box appears, as pictured below, with a list of all existing manifests for a selected manifest type. The following figure displays a list of existing vehicle manifests.
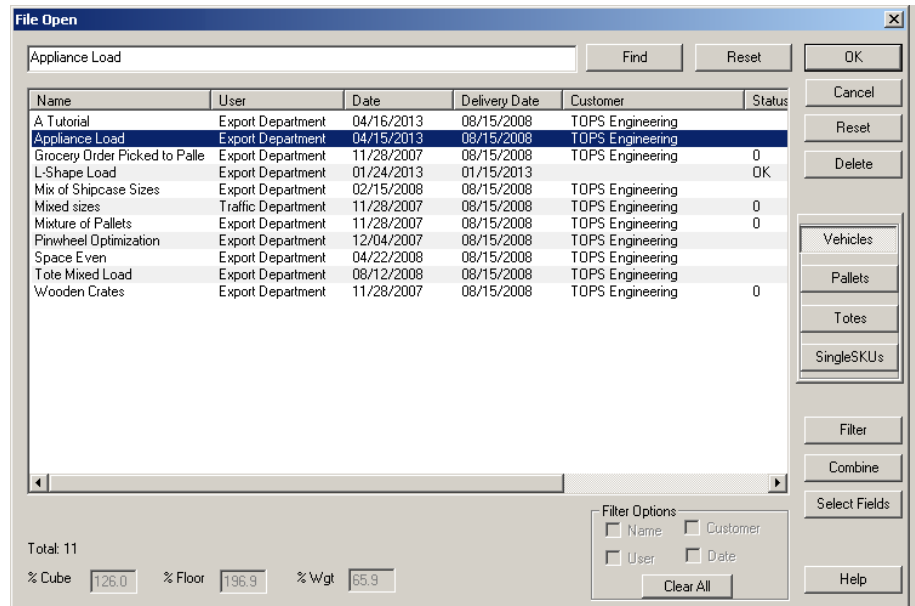
   Note: Remember that manifest names are associated with specific login names, which you choose during the login process. Therefore, if you login as Export Department, the Open Manifest dialog box will display only those manifests that were originally created under the Export Department login name.

   An exception to this is that if the Supervisor has enabled the "Share MFT" option under Global Configuration, then each user will see one another's works. See Chapter 11 for more information.

2   Notice the manifest-type buttons – Vehicles, Pallets, Totes and Single SKUs, on the right-hand part of the dialog box. Click on the button that corresponds to the type of manifest you want to open. For

example, to see a list of existing vehicle manifests, click on the Vehicles button.

3   Click on a manifest name to select it. In this example, we'll select Appliance Load. MaxLoad Pro automatically inserts the manifest name in the field at the top of the dialog box.

3.   Click on OK. Note that you can also double click on the manifest name to open the manifest directly

The Manifest Pick List screen appears, as pictured below, with information for the selected manifest. Notice that the title bar of the Manifest Pick List screen shows the name of the selected manifest – Appliance Load.
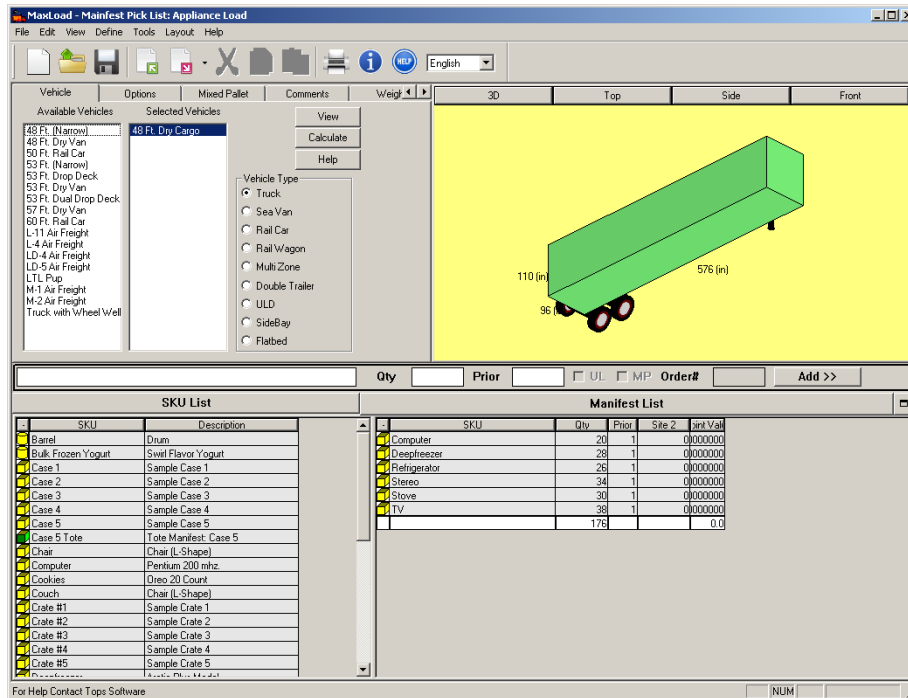
Note: If option "View On Open" under Tools | Configuration is enabled, MaxLoad will open the graphical load solution directly instead of the Manifest Pick List Screen. See Chapter 11 – Configuration for more information.

Filter (Manifest)

If you have lots of manifests saved in MaxLoad, the Filter button allows you to tell MaxLoad to display only the manifests which meet the conditions selected. You can specify among Manifest Name, User, Customer Name and a date range when the manifests were last saved.
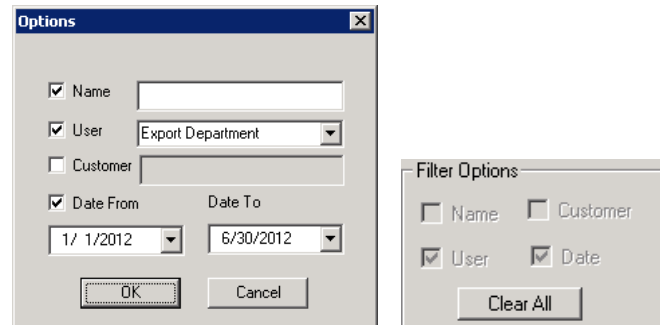
When the manifest filter is enabled, the filtered field options are highlighted with a corresponding check mark. You can quickly clear all filters by clicking on the Clear All button.

Combine (Manifests)

The Combine button allows you to combine two or more manifests into a single one. To use this function, follow these steps:

1. Open the File Menu and select Open.

2. While holding down the 'Ctrl' button on the keyboard, click on the names of the manifests to be combined.

3. When ready, click on the Combine button.

4. The Combine Manifest Options button appears. Click to specify whether to combine the manifests by using Priority or by Stop Off and click on OK.
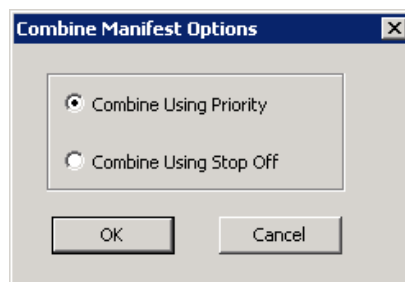
5. Enter a name for the new combined manifest which now contains all the SKUs, corresponding quantities and load priorities or stop numbers (if applicable) of the individual manifests.
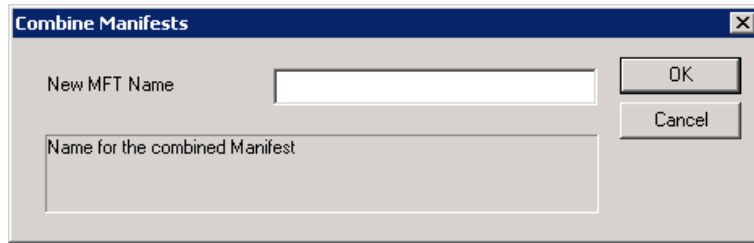
The new manifest will be added to the manifest name list in the File Open dialog box.

When you open the new manifest, you will need to click the Calculate button to find a new loading solution for the combined SKUs and quantities.

Exiting MaxLoad Pro

To exit MaxLoad Pro, follow these instructions:

1 Open the File menu and select Exit.

2 If you've made any changes since you last saved the active file, MaxLoad Pro will prompt you to save the file.

3 If you need to save any changes, click on Yes. MaxLoad Pro saves your changes and closes down the MaxLoad Pro application.

Defining MaxLoad Databases

Introduction

As you set up the MaxLoad Pro system and prepare to use it in your daily operations, one of the most critical functions is setting up the various databases.

Before we begin this chapter, it is important to remember one critical fact: A computer does not think like a human. Therefore, it's imperative that all inputs and measurements be precise. For example, think of a space as tiny as 1/16 of an inch. While you and I may think nothing of such a small number, and certainly would not think it could affect the way a truck is loaded, MaxLoad Pro thinks otherwise.

For a computer, everything is "black and white." An object will either fit or it won't. Let's take a truck that is 99" wide. Suppose you want to place three refrigerators side by side across the nose of the truck; each refrigerator is $33^{1/16}$" wide. A quick calculation shows that $3 \times 33^{1/16}$ equals $99^{3/16}$, which is greater than 99".

Therefore, MaxLoad Pro will not place these refrigerators side by side. If you ever run across a situation like this, double-check the dimensions of both your truck and your SKU. Are they exact dimensions? Also, remember that humans may tolerate a "fudge factor." Perhaps the person loading the truck will make these refrigerators fit. MaxLoad Pro, however, will not.

When you define databases in the MaxLoad Pro system, you'll always start with the Define Menu, located on the Menu Bar. You can use either the mouse or the Tab key to move around within each screen.

This chapter walks you through how to define databases and stack matrix:

- ❖ Stock Keeping Unit (SKU) including creating unitload and bundle
- ❖ Stack Matrix
- ❖ Pallet/Slipsheet
- ❖ Vehicle
- ❖ Tote

You can also use the Import function to import existing data into MaxLoad Pro. This will be covered in Chapter 12.

Stock Keeping Unit (SKU) Database

The Define SKU screen allows you to define a new SKU or modify an existing SKU. In this screen, you enter SKU parameters and save it to the SKU database. Start from the Menu Bar and open the Define menu and select SKU. The Define SKU screen appears, as pictured below.
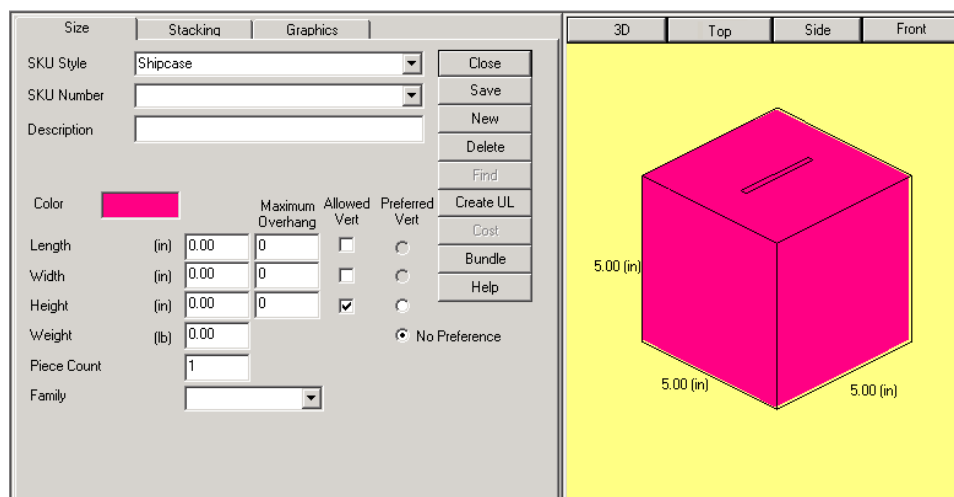
The Define SKU Screen is comprised of the following components:

❖ **Size Tab:** Allows you to define the dimensions of the SKU.

❖ **Stacking Tab:** Allows you to define loading parameters for the SKU.

❖ **Graphics Tab:** Allows you to assign graphics on the SKU.

❖ **g.o.d. Window:** Displays a 3-dimensional graphic image of the SKU.

❖ **Close Button:** Closes the Define SKU screen and returns you to the previous screen.

❖ **Save Button:** Allows you to save changes to an existing or a new SKU.

❖ **New Button:** Allows you to define/create a new SKU.

❖ **Delete Button:** Allows you to delete a SKU from the database.

❖ **Create UL Button:** Allows you to create a unitload for a shipcase or a drum SKU. A unitload is a collection of single-sized items loaded onto a pallet.

❖ **Cost Button:** Activates the Costing function. For more information, contact TOPS Technical Support.

❖ **Bundle Button:** Creates preferred bundle sizes for thin, flat SKUs like sheetrock, wood planks, metal sheets. This will be discussed further later in the chapter.

❖ **Help Button:** Clicks this button to access the on-line help information in this topic.

Note: The Tab key allows you to easily move forward to the next field. To move backward to a previous field, use the Shift and Tab keys simultaneously.

Size Tab (Define SKU)

The Size tab allows you to define the dimensions of a SKU. This is where you will name the SKU and enter the required dimensions for the SKU. You will also start to define specific loading parameters in this screen.

❖ SKU Style: MaxLoad Pro allows you to define five types of SKU's:

▪ **PalletLoad:** A PalletLoad is a SKU that represents an entire unitload. It's beneficial to define a SKU as a unitload any time you want to show a single object loaded onto a pallet or slipsheet.

For example, you might receive a complete palletload of product from a supplier. Rather then referring to the palletload as 50 cases of peanut butter, you can refer to it as one pallet of peanut butter. If you do want to show 50 cases of peanut butter loaded onto a pallet – and have some say in the pallet pattern used when building the unitload – define the SKU as a shipcase or drum, then create a unitload for the SKU.
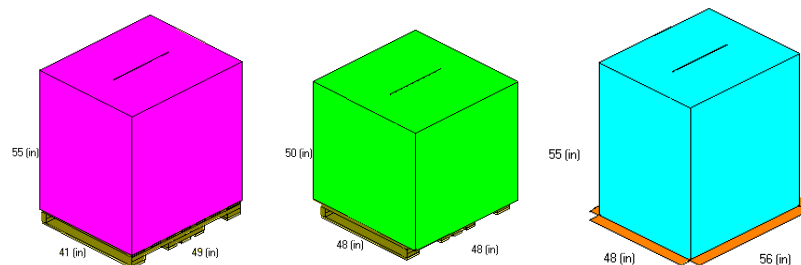
The above examples show PalletLoad SKUs on pallet with and without overhang and on a slip sheet. The dimensions entered represent the dimension for the overall palletload include the pallet.

- **Shipcase:** A rectangular or square object to be referred to as an individual item.

- **Drum:** A cylindrical object to be referred to as a single item.

- **Tote SKU:** A Tote SKU can only be created by saving a Tote Manifest via the File | Save Manifest as SKU function, as indicated by the dimension and weight fields being grayed out. You can, however, define the orientation of the Tote SKU using this menu.

- **Pallet SKU:** Similar to the Tote SKU, the Pallet SKU can only be created by saving a Mixed Pallet Manifest via the File | Save Manifest as SKU function. However, you can define the orientation of the Pallet SKU in this dialog box.

- **L Shape:** Any L-shape object like chair, sofa or similarly shaped items.

❖ **SKU Number:** The SKU Number field is alphanumeric and holds up to 32 characters. Each SKU must have a unique number or name. SKU numbers are sorted numerically and/or alphabetically in a database within MaxLoad Pro. To display and access a list of existing SKU's, click on the down arrow to the right of the field. If you select a SKU from the predefined list, the information for that SKU will automatically fill in the screen.

❖ **SKU Description:** The Description field is also alphanumeric. This field holds up to 50 characters and allows you to give your SKU a more easily recognizable name. This field is optional and does not need to be filled in if you feel the SKU number provides an adequate description.

Note: The SKU Number and Description fields are found in the Sizing, Stacking and Graphics tabs. Changes or additions on one tab are automatically transferred to the other tabs. This also means that you can begin defining a SKU from any of the three tabs.

❖ **Pallet:** The Pallet field is only available when you're defining a PalletLoad. You can choose from multiple pallet/slipsheet styles from the drop down list. MaxLoad Pro will draw a single block to represent a unitload on top of the pallet. If the pallet or slipsheet is not present in the list, you can define a new one in the Define Pallet screen

❖ **Dimensions:** You're required to enter values for Length, Width, Height and Weight for the SKU you're defining. You must enter values in each field. The Weight field is optional and can be set to zero. Be aware that if you choose to do this, MaxLoad Pro will not

calculate accurate weight values – total weight, weight efficiency and estimated axle weights – for your load.

Many industries have different opinions on how to define length, width or height. As a rule of thumb, the packaging industry defines height as the dimension that runs through the case flaps. In other words, if SKU height is set vertical, the case flaps will always face up or down.

Extending this definition, length is defined as the largest dimension of the remaining two dimensions. Width would then be the last dimension undefined. Keep in mind that this is a general rule used in the packaging industry; your industry may be different.

❖ **Diameter:** When you are defining a drum style SKU the length width dimensions get replaced by diameter. Here you enter the width of the cylindrical SKU.

❖ **Maximum Overhang:** Maximum Overhang represents the distance the SKU can overhang the SKU placed beneath it. The overhang can be defined by the length, width, and diameter of the SKU/load. In case of Maximum Overhang by Height, it refers to the distance this dimension can overhang when placed on its side.

❖ **Allowed Vert:** This field allows you to choose the way the SKU is loaded into a transit container. The Allowed Vertical checkboxes tell MaxLoad Pro which dimension is allowed vertical when loading. Check the appropriate box to designate that dimension as vertical. You can check any combination of dimensions to be vertical, or you can designate only one dimension to be allowed vertical.

For example, in many cases, packaging for certain liquids is marked "This End Up ↑." This end is usually the top of the shipcase – where the case flaps are located – and therefore you'll notice that the dimension designated vertical is the height.

If your product displays this characteristic, height would be the only dimension allowed vertical. If an item has no critical dimensions – and is not marked with a "This End Up ↑ " warning – you can designate other dimensions (length, width or both) to be allowed vertical.

❖ **Preferred Vert**: This field is defined as the dimension that must be vertical when loading on the floor, if there is such a restriction for your product. This column contains four radio buttons – labeled Length, Width, Height or No Preference – one of which must be selected.

MaxLoad Pro gives you these choices because most boxes usually have one dimension that is stronger than the other two. When the SKU is not being loaded on the floor, MaxLoad Pro will first attempt to load an SKU with its preferred dimension vertical. If this is not possible, it will use any of the other Allowed Vertical dimensions.

You're not required to commit to a Preferred Vertical dimension. Simply select No Preference. Therefore, whenever an SKU is placed on the floor, MaxLoad Pro will evaluate any dimension allowed vertical when determining the most efficient placement.

Note: The contents of the Preferred Vertical field are mutually exclusive, meaning that you can only choose one Preferred Vertical dimension (or No Preference) from the available Allowed Vertical dimensions.

Further, you cannot choose a dimension as Preferred Vertical if that dimension has not been designated as Allowed Vertical (the Preferred Vertical fields will be grayed out). If you select one dimension as Allowed Vertical, that dimension will automatically be selected as Preferred Vertical.

❖ **Piece Count:** This field reflects the quantity of items going into the SKU. Piece Count will be used in the Manifest List to reflect the total piece count of items for the specific SKU.

❖ **Color:** MaxLoad Pro uses the standard (48-color) Windows Color Selection dialog box, which allows you to select a custom color for each SKU. However, MaxLoad Pro also allows you to override the designated color of the SKU when it is drawn. You can check the color currently used for an SKU by looking at the color box located in the lower portion of the Size tab.

To change the color of an SKU, follow these instructions:

1. Click on the color box. The Color Selection dialog box appears.

2. Click on a color to select it.

3. If the color is correct, click on OK. The Color Selection dialog box closes. MaxLoad Pro assigns the selected color to the SKU.

❖ **Family.** (Not implemented) This field allows you to specify if the SKU is categorized as Frozen, Cooled, Dry and Unknown. MaxLoad uses this information to make sure SKU's of the same family will be are loaded together at specific locations.

❖ **Height Base:** For a L-shape SKU, this represents the height of the seat portion of the SKU.

❖ **Width Base:** For a L-shape SKU, this represents the thickness of the back portion of the SKU.

❖ **Slope:** Check this option when the L-shape SKU has a slope side.

Stacking Tab (Define SKU)

The Stacking tab allows you to define parameters for stacking the SKU within a vehicle or onto a pallet.

❖ **Conveyance Options:** MaxLoad Pro gives you two options for loading a SKU into a vehicle:

- **Unitize:** This option is available only after you've created a unitload for the SKU you're defining. Once you've created a unitload, this box will automatically initialize. When you check this box, the SKU will automatically appear with the UL column checked in the Manifest List on the Define Manifest screen. If this box remains unchecked, the UL column will appear unchecked in the Define Manifest screen. In this case, remember that you can always check the column when you define the manifest.

- **Put on Mixed Pallet:** This option behaves like the Unitize option. If you initialize this box, its corresponding column (MP) will appear checked in the Manifest List in the Manifest Pick List screen. This means the SKUs that do not make a full unitload will be placed onto a mixed pallet, instead of being loaded directly to the floor of the vehicle.

Note: The conveyance options are not available if you are defining a PalletLoad style SKU.

❖ **Load Into Vehicle:** MaxLoad Pro gives you options as to how an item may be loaded into a vehicle. For example, certain SKU's can be loaded only by a forklift from one direction and this can be defined within MaxLoad.

You have three choices on how to load a SKU into a vehicle.

- **By Length:** Loads the length of the SKU parallel with the length of the trailer.

- **By Width:** Loads the width of the SKU parallel to the length of the trailer.

- **Best Fit:** Shows no preference; loads the SKU using the best orientation in relation to other items being loaded.

❖ **No stacking on tops of sided loaded items:** Check this option if you want this SKU not to be loaded on top of SKUs that are loaded on their sides.

❖ **Dead Stacking Rules:** Dead Stacking Rules are guidelines for how MaxLoad Pro will load SKU's into a vehicle when they're not placed on a pallet (sometimes referred to as floor-loading).

- **Must Be Stacked On Floor:** MaxLoad Pro will disregard any solutions in which the SKU is not placed on the floor.

- **Must Not Be Stacked On Floor:** MaxLoad Pro disregards any solutions in which the SKU is placed on the floor.

- **Best Fit:** MaxLoad Pro disregards the two options above and places the SKU where it's most efficient in relation to other items in the load.

- **Prefer On Floor:** MaxLoad Pro will place the SKU on the floor if given the choice of either placing it on the floor or on top of another SKU.

- **Prefer On Top:** MaxLoad Pro will place the SKU on top of another SKU if given the choice of either placing on the floor or on top of another SKU.

❖ **Stack Code:** Defines the stacking relations among different SKUs. The code establishes parameters that a class of SKUs would use. This field contains 10 characters. Whenever you add a new SKU to the database, you'll need to assign a new or existing stack code to the SKU. Most likely, you'll have one stack code that represents a group of SKU's. However, if each product you ship is unique in regard to how it can be stacked, you may want to define a unique stack code for each individual SKU.

MaxLoad Pro treats all SKUs with the same stack code in the same manner regarding; (1) which SKUs can be loaded on top of other SKUs and (2) which SKU's can be placed under other SKUs.

For example, your company ships five different types of lampshades, all identical except for color. In this case, you'd group these five SKUs together using the same stack code. However, if you manufacture another type of lampshade made of paper machete, you'd assign a stack code different from the other five lampshades because the paper machete would change the stacking characteristics.

For SKUs that have no stacking restrictions, we recommend that you use the default stack code "All/All." When you define a SKU and click on OK to save it, the stack code will automatically appear in the Stack Matrix. We'll discuss the stack matrix in greater detail later in this chapter.

If you can't find a stack code that suits your needs, you can define a new stack code. To define a new stack code for the stack matrix, follow these instructions:

1. Click on the New button found just the left of the Stack Code field. The Define New Stack Code dialog box appears.
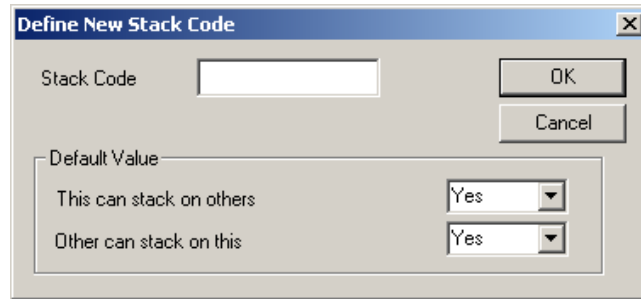
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2. In the Stack Code field, enter a new stack code. You can key in any alpha/numeric combination up to 10 characters long.

3. In the Default Value field, specify – Yes or No – whether other SKU's can be placed under or on top of this SKU. Use these guidelines:

   ■ **This can stack on others:** Can this SKU stack on top of other SKUs? If so, select Yes. If this SKU cannot stack on top of other SKUs, for example. when it is very heavy, select no.

   ■ **Other can stack on this:** Can other SKUs stack on top of this SKU? If so, select Yes. If no other SKUs can be stacked on top of this SKU (as in the case of the paper machete lampshade), select no.

   Keep in mind that you're deciding how this SKU relates to all other SKU's. You may find it necessary to make changes in the stack matrix if an SKU relates differently to other SKUs on a case-by-case basis.

4. If all your stack code information is correct, click on OK. MaxLoad Pro saves the new stack code to the SKU database.

Default Stack Codes

MaxLoad has provided several default stack codes to provide quick classification of stack relations among different SKUS:

■ **All/All:** Assigned to SKUs which can be stacked on top of all items and all items can be stacked on top of it (current SKU being define).

■ **All/None:** Assigned to SKUs which can be stacked on top of all items but nothing can be stacked on top of it.

■ **None/All:** Assigned to SKUs which cannot be stacked on top of any items but all other items can be stacked on top of it.

- **None/None:** Assigned to SKUs which cannot be stacked on top of anything and nothing can be stacked on top of it.

Note: When stacking same SKUs, MaxLoad will refer to Maximum Stack Height instead of the Stack Code for load solutions.

❖ **Maximum Stack Height (On Base):** Defines the number of layers high the same SKU can be safely loaded on its base. Use this option when the case flap is facing the ceiling.

❖ **Maximum Stack Height (On Side):** Defines the number of layers high the same SKU can be loaded on its side. This field compliments the stack code.

For example, when you defined a SKU for Computer Monitors, you also defined a stack code that tells MaxLoad that Computer Monitors can be stacked on top of one another. However, the stacking strength of the bottom Computer Monitor dictates that you can only stack this SKU four layers high. In this case, enter "4" for four layers in the Maximum Stack Height on Base field.

❖ **Maximum Stack Weight:** Defines the maximum weight that can be placed on an individual SKU. This field is defined in units of measure (either English or Metric) representing weight, and also compliments the stack code. Even though the stack code allows one item to be placed on top of another item, this field will override the stack code to limit the weight of a placement on top of a particular SKU. By the nature of this calculation, a stack of SKUs will always be limited to the maximum stack weight of the product on the bottom of the stack.

Note: When building a stack of like SKU's, Maximum Stack Height takes precedence over Maximum Stack Weight. That is, when building a placement of like SKUs, MaxLoad Pro will only take the defined Maximum Stack Height into consideration when determining how to build the placement. However, if there is space for a different SKU to be placed on top of the stack, MaxLoad Pro will then consider the Maximum Stack Weight to determine the new placement.

Maximum Stack Height also takes precedence over the stack matrix. For example: I define a SKU and assign it a new stack code. In the stack matrix, I say that this SKU cannot stack on top of itself. However, if when defining my SKU I also say that the SKU can stack three layers high; this parameter will take precedence over the stack matrix, which says that I cannot stack this SKU on top of itself. This rule was made in an effort to help users limit the number of stack codes within the stack matrix.

For example, my Computer Monitors weigh 30 pounds each. I define the maximum stack height of a computer to be five units tall and the maximum stack weight to be 100 pounds. Is a stack of five computers a legal placement? Yes – regardless of the fact that the bottom computer will be supporting 120 pounds.

Another example, suppose I've stacked three computers on top of one another, meaning that the bottom SKU (computer) is supporting 60 pounds. I notice that there is room to load a 60-pound box of stereos on top of the computers. Is this stack of three computers and one stereo a legal placement? No! Why not? Because the maximum stack weight of 100 pounds will be violated when the stereo is loaded.

❖ **Label:** The Label feature allows you to designate another name for a SKU, as opposed to being limited to the SKU Number. For example, perhaps the SKU Number of a box of parts is "8315," but the SKU is commonly referred to as "Coils." The custom label allows you to assign the SKU both names, while at the same time giving you the control over which name is used when printing.

To initiate this feature, simply type in a string to use as the label. The string should be alpha/numeric and can contain up to 20 characters.

❖ **Stack Limit:** (Not Implemented) This parameter determines how many total SKUs can be in a stack.

❖ **Location:** (Not Implemented) This parameter determines where inside the vehicle the SKUs will be placed.

Stack Matrix

The Stack Matrix allows you to define the stacking relationships between the various stack codes, which are assigned to SKU's in the Define SKU screen. The stackability matrix is a square matrix contains one row and one column for each stack code.

To access the stackability matrix, open the Define menu and select Stack Matrix. The Stack Rules screen appears, along with the stackability matrix.
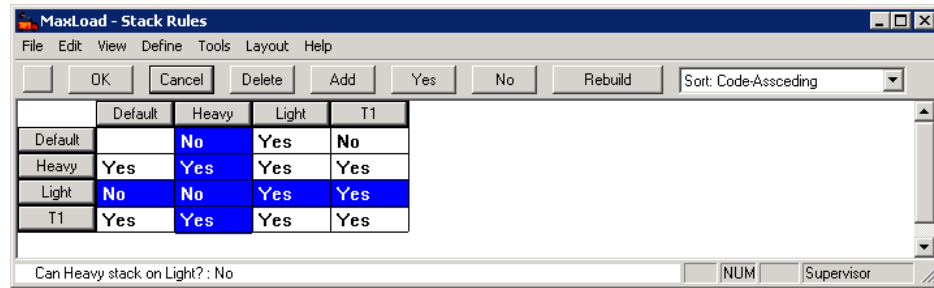
Note: Always start with category at columns, then go left to find the corresponding category along rows. At the current intersected cell, the entry "No" means "Heavy" cannot be stacked on tops of "Light".

Notice that the Stack Rules screen contains the following:

❖ **OK Button:** Clicks to accept all changes made to the stack matrix during the current visit and returns you to the Define SKU screen.

❖ **Cancel:** Clicks to cancel all changes made to the stack matrix during the current visit and returns you to the Define SKU screen.

❖ **Delete Button:** Uses to delete a stack code by first highlighting the row or column header and click on the Delete button.

❖ **Add Button:** Allows you to add a new stack code through the Define New Stack Code dialog box.

❖ **Yes Button:** Allows you to change all values to Yes for a particular row or column.

❖ **No Button:** Allows you to change all values to No for a particular row or column.

❖ **Rebuild Button:** Searches the SKU database for any stack codes that have not been added to the Stack Matrix. MaxLoad Pro updates the Stack Matrix with the new stack codes.

❖ **Sort Field:** Allows you to sort the Stack Codes in ascending order (alphabetically), descending order (alphabetically), or by insertion order.

When you define a SKU, the stack matrix initializes automatically. To work with the Stack Rules Screen, use these guidelines:

■ When you enter a new stack code, MaxLoad Pro adds a new row and column to the matrix. Each entry in the matrix is a box marked with a "Yes" or "No." The Yes/No indicate whether a SKU with the stack code for the corresponding column can be

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loaded on top of a SKU with the stack code for the corresponding row.

- The stack codes across the top of the matrix (columns) are considered the "top" SKU, while the stack codes along the side of the matrix (rows) are considered the "bottom" SKU.

- Click on column and row headers to highlight the entire row or column (or both).

- Use the gray scroll bar or the arrow keys to move around the stack matrix.

- To change a single Yes/No value inside individual cell, simply click on it.

Graphics Tab (Define SKU)

The Graphics tab allows you to place some graphics on the SKU.

❖ **Top Graphic:** This option allows you to place a graphic on the top of a SKU. Click on [...] button to browse to a location from where you can pick a bmp image to be placed as a graphic on the top of the SKU.

❖ **Side Graphic:** This option lets you place a graphic on the side view of the SKU.

❖ **Front Graphic:** This option is used to place a graphic on the front view of the SKU. The Front Graphic option is not available for Palletloads.

❖ **SKU Info:** SKU Info fields are some useful fields which the user can use to write notes about a SKU. These get placed in the SKU List and the Manifest List and is only available in the Manifest report.

❖ **Consumable:** You can check this box to specify if the SKU is perishable.

General Tab (Create Unitload)

The General and Options Tab described in this and following section can be found upon clicking the [Create UL] button in the Define SKU dialog box.

When MaxLoad Pro loads a shipcase or drum onto a pallet or slipsheet, this is known as creating a unitload. First, you must either create a SKU or select an existing SKU from the drop down list.
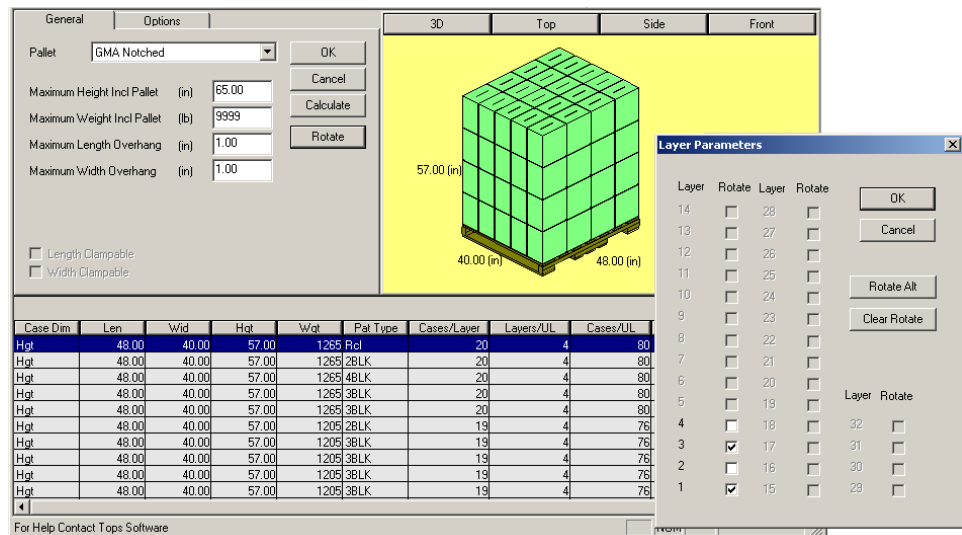
The General tab allows you to select the type of pallet or slip sheet to be used when creating a unitload, as well as to define the absolute maximum size of the unitload and a number of loading options.

❖ **Pallet:** The Pallet field requires you to select a specific pallet to be used in creating the unitload. To see a list of available pallets, click on the down arrow to the right of the field.

We ship MaxLoad Pro with a list of standard pallets for you to choose from. However, if you don't see a pallet that suits your needs, you can always define one.

Note: If you wish to bundle this SKU, but not display it on a pallet, choose None as the pallet style. MaxLoad Pro will display a grouping of SKU's in a specific pattern, but will not display a pallet. You're still required to enter height, weight and any overhang parameters.

Also, keep in mind that even though you've chosen None as the pallet, you're still required to define area (length and width) parameters for this unitload. Therefore, if you define None as a 48-inch by 40-inch area, MaxLoad Pro will generate answers that reflect a grouping of products in an area roughly the size of 48-inches by 40-inches in length and width.

❖ **Maximum Height, Weight and Overhang:** Maximum Height and Maximum Weight are self-explanatory. These fields allow you to assign the maximum height of the unitload, as well as the maximum allowable weight. These height and weight values include the pallet.

The Maximum Length and Width Overhang fields represent the maximum distance a SKU is allowed to overhang the edge of the pallet along the length and width dimensions. You're required to enter a value for both the length and width. If no overhang is allowed, set these fields to zero.

❖ **Rotate:** Click the Rotate button opens the Layer Parameters dialog box which allows you to rotate selected layers on the unitload. Unitload with rotated layers provides better stability but may yield weaker load due to lack to corner support.

To rotate layers, place a check mark against the layer or click the Rotate Alt button to rotate alternate layers. Click OK to confirm.

Options Tab (Create Unitload)

General | Options

Pattern Styles
- ☑ Staggered
- ☑ Block1
- ☑ Block2
- ☑ Block3
- ☑ Block4
- ☑ Block5
- ☐ Block5 Plus
- ☐ Soldiered
- ☑ Diagonal
- ☐ Multi Dim
- ☐ Multi Surface
- ☐ Multi Layer

Load Into Vehicle
- ○ Load By Length
- ○ Load By Width
- ◉ Best Fit

Stack Rules
- ○ Must Be Stacked On Floor
- ○ Must Not Be Stacked On Floor
- ◉ Best Fit

Stack Code   New   All/All

Max Stack Height (ULs)   0
Max Stack Weight (lb)   0.00

OK   Cancel   Calculate

The Options tab allows you to select pattern styles to be used when building the unitload, as well as the loading orientation of the unitload within the vehicle and stacking rules for the unitload.

❖ **Pattern Styles:** The Pattern Styles options tell MaxLoad Pro which pallet patterns to consider when calculating a unitload. When it generates solutions, MaxLoad Pro will analyze any pallet patterns that have been selected. The table on the next page outlines the various pallet patterns.

Pallet Patterns	
Pattern Style	**Is Designed Like This**
Staggered	Applicable to Drum SKUs, this pattern allows more drums to be packed per layer through staggering.
1 Block	Block pattern or column stack
2 Block	Bi-Block pattern
3 Block	Tri-Block pattern
4 Block	Pinwheel pattern
5 Block	Penta-Block pattern
5 Block Plus	Penta-Block Plus pattern
Soldiered	Pattern that spreads the boxes to allow other boxes to be slid down in between.

Diagonal	Diagonal pattern
Multi-Dimension	Each layer can have a different dimension vertical
Multi-Surface	Loads pallet top-to-bottom, front-to-back, and side-to-side with multi-dimensions allowed. Very complex and usually recommended in rear loading circumstances.
Multi-Layer	Puts cases onto the pallet with the last layer with different dimensions vertical.

❖ **Load Into Vehicle:** This option determines the orientation of a unitload when it's loaded into a vehicle:

  ■ **Load by Length:** The length of the unitload is loaded parallel to the length of the vehicle.

  ■ **Load by Width:** The width of the unitload is loaded parallel to the length of the vehicle.

  ■ **Best Fit:** The unitload is loaded using the most efficient orientation, with no consideration of any limiting parameters.

❖ **Stack Rules:** Stack rules for a unitload work like the stack rules for an individual SKU. There are three options:

  ■ **Must Be Stacked on Floor:** MaxLoad Pro will disregard any solutions in which the unitload is not placed on the floor.

  ■ **Must Not be Stacked on Floor:** MaxLoad Pro disregards any solutions in which the unitload is placed on the floor.

  ■ **Best Fit:** MaxLoad Pro disregards the two options above and places the unitload where it's most efficient in relation to other unitloads.

❖ **Stack Code:** It's important to remember that the stacking rules defined for the unitload take precedence over the individual stacking rules of the SKU's that make up the unitload. Due to outside factors such as corner posts, padding, etc., SKU's are generally considered to be stronger when loaded as part of a unitload.

You can assign a Stack Code to a unitload just as you can an individual SKU. Stack Codes will appear in the Stack Matrix along

with all other Stack Codes that were defined when defining an SKU. You can choose an existing stack code, or define a new one.

❖ **Max Stack Height:** Max Stack Height (UL's) defines the maximum number of stacks this unitload can accommodate when it's loaded on itself; that is, the unitload you're defining plus any unitloads stacked on top of it. For example, if you can safely load only one other unitload on top of the unitload you're defining, Max Stack Height would be two. However, if you can safely stack two other unitloads on top of this unitload, Max Stack Height would be three.

❖ **Max Stack Weight:** Max Stack Weight (IL's) defines the maximum amount of weight that can be placed on top of the unitload. This value is defined separately from the Max Stack Weight of the SKU. However, when it comes to these values, you'll need to decide which takes precedence: the individual SKU or the associated unitload.

Unitload Solution

After you've completed the General and Options tabs, you're ready for MaxLoad Pro to generate the unitload solutions. To generate unitload solutions, follow these instructions:

1. Click on the Calculate button. The Create Unitload (UL) screen redisplays with a list of possible solutions displayed in the bottom portion of the screen. MaxLoad Pro calculates these solutions based on the pallet patterns selected in the unitload parameters.
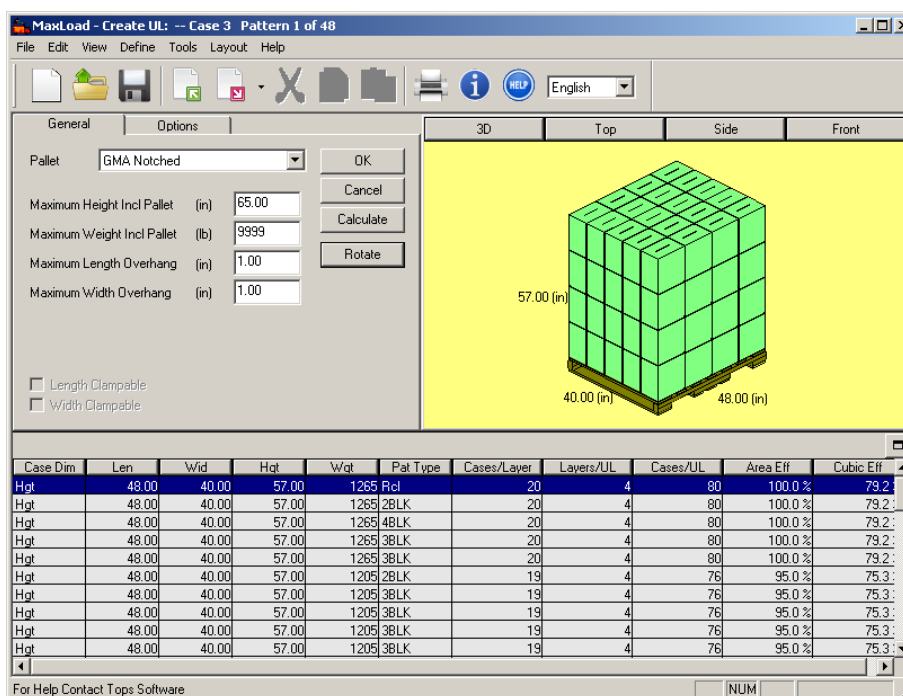
Each unitload solution includes the following information:

❖ The case dimension designated as vertical
❖ The length, width, height and weight of the unitload
❖ The type of pattern used to build the unitload
❖ Number of cases per layer
❖ Number of layers per unitload
❖ Number of cases per unitload
❖ Area and cubic efficiency of the unitload

The g.o.d. window in the upper right portion of the screen displays a graphic of the selected unitload solution. Use the down (▼) arrow or gray scroll bar to the right of the solution list to see the next solution. As you scroll through the list, notice that the g.o.d. window changes to reflect the different possible solutions. Additionally, notice that the information on the title bar changes to reflect the solution that you're currently viewing.

MaxLoad Pro allows you to view the unitload diagram in a number of ways. All options are accessed through the view buttons on top of the g.o.d. window.

In each view for the selected solution, you can rotate the unitload using the arrow keys after clicking anywhere inside the g.o.d. window.

View Options	
Option	**View of the Unitload**
3D	Shows a 3-dimensional view of the unitload
Top	Shows a top view of the unitload (view from above the unitload looking down)
Side	Shows a side view of the unitload
Front	Shows a front view of the unitload

2. Select the pallet pattern that best suits your needs.

3. To rotate layers in the unitload, click on the Rotate button to open the Layer Parameters dialog box.
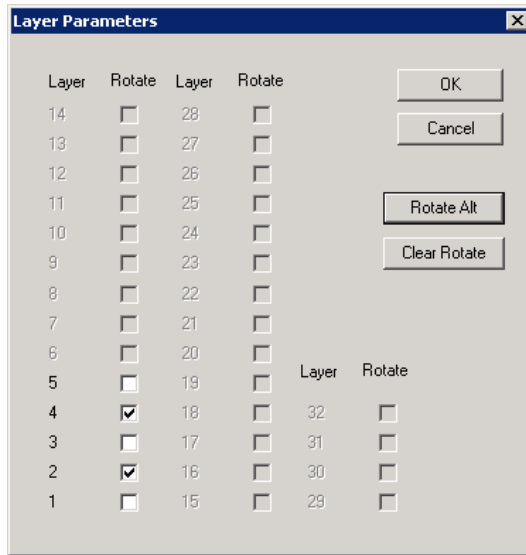
- **Rotate:** Clicks the corresponding box in the Rotate Column to rotate the corresponding layer.

- **Rotate Alt:** Clicks this button to quickly rotate alternate layers of the unitload, instead of checking off individual layers.

- **Clear Rotate:** Clicks this button to clear all layer rotation.

4. Click OK to save layer rotation or click on Cancel to cancel. Rotated layers will apply to all unitload patterns.

5. Click OK again to save the selected pallet pattern and accompanied layer rotation, if applicable.

   MaxLoad Pro saves the selected pallet pattern to this particular SKU. Therefore, when you select the SKU in the Define Manifest screen and click on the Use Unitloads box, MaxLoad Pro draws the SKU in the vehicle using the selected pallet pattern.

   To change the pallet pattern in the future, follow the steps outlined above to save another unitload pattern.
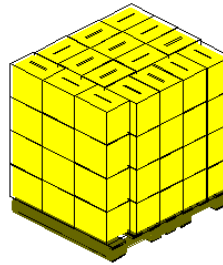
Creating a Unitload vs. Defining a Palletload SKU

By now, you may have noticed that MaxLoad Pro allows you to create a unitload as well as define a palletload. What's the difference? While defining, you must have noticed that the two have quite distinct features.

When you create a unitload, MaxLoad Pro loads individual shipcases or drums onto a pallet/slipsheet with other identical SKU's. In doing so, MaxLoad Pro considers the pallet style, dimensions/weight of the SKU, whether or not the SKU can overhang the edge of the pallet, as well as various pallet patterns. Multiple shipcases can be loaded together to create a unitload. This option is available when you define a SKU. However, only shipcases or drums can be combined to create a unitload.
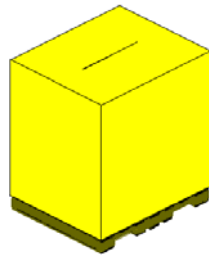
Defined Palletload SKU   **Created Unitload**

Whereas, when you define a palletload, you're defining the outside dimensions of the unitload, without considering the individual shipcases that combine to create a unitload. As with creating a unitload, you must choose a pallet style. However, the dimension you enter will be the absolute dimensions of all of the SKU's when loaded onto a pallet/slipsheet. The result is a block drawn onto a pallet. A SKU already defined as a palletload cannot be loaded with other objects to create a unitload.

Reason why we make the above distinction is that, many of our customers don't want to concern themselves with the pallet patterns that make up a unitload. Perhaps they receive pre-built unitloads and have no control over how a unitload is built. When these companies pick a unitload for shipping, they usually refer to an entire unitload as one object, rather than by the quantity of individual SKU's that combine to create a unitload.

Define a SKU

To define a SKU, start from the Define SKU screen and follow these instructions:

1. Click on the Size tab, if necessary, to activate it.

2. From the SKU Style drop-down list, select SKU Style.

3. Enter information in the following Size tab fields:

   ❖ **SKU Style:** When the SKU screen appears, your first decision is which type of SKU you want to define. The five types of SKUs that can be defined using MaxLoad Pro are palletload, shipcase, drum, tote SKU, and pallet SKU.

   ❖ **SKU Number:** Enter a SKU number.

   ❖ **Description:** Enter a description for the new SKU. This field is optional; you can leave it blank.

   ❖ **Pallet:** Select a pallet. This field is available only if your selected SKU style is a PalletLoad.

   Note: MaxLoad Pro allows you to choose from a large database of both pallets and slipsheets. If you cannot find the pallet you're looking for, you can define a new one.

❖ **Color:** Click on the Color field to display the Color Selection dialog box. Select a color for the new SKU.

❖ **Length:** Enter the absolute length of the SKU.

❖ **Width:** Enter the absolute width of the SKU.

❖ **Height:** Enter the absolute height of the SKU.

❖ **Diameter:** Enter the diameter of the drum. This field is only available if your selected SKU style is a drum.

For example, if you are defining a Palletload style SKU, using a GMA Notched pallet (48" by 40") with one inch of overhang along both the length and width, enter a length of 50 inches and a width of 42 inches (48" by 40" plus an inch of overhang on both sides of the pallet).

❖ **Weight:** Enter the weight of the SKU

❖ **Piece Count:** Enter the quantity of items loaded in this SKU.

❖ **Maximum Overhang Length:** Enter the maximum number of inches the SKU can overhang the SKU placed beneath it along its length.

❖ **Maximum Overhang Width:** Enter the maximum number of inches the SKU can overhang the SKU placed beneath it along its width.

❖ **Maximum Overhang Height:** Enter the maximum number of inches the SKU can overhang the SKU placed beneath it when it is placed on its side.

❖ **Maximum Overhang Diameter:** Enter the maximum overhang along the diameter of the drum. This field is only available if a Drum style SKU is being defined.

❖ **Allowed Vertical:** Select the dimension(s) that will be allowed as the vertical orientation.

❖ **Preferred Vertical:** Select the dimension that will serve as the preferred vertical orientation. If there's no preference, select No Preference.

4. Click on the Stacking tab to activate it. The Stacking tab appears, as pictured here.

5. Enter information in the following Stacking tab fields:

❖ **Unitize:** Check this box to tell MaxLoad Pro to use this SKU as a unitload, whenever possible. This option is available only after you've created a unitload for the SKU.

❖ **Put On Mixed Pallet:** Check the box to place the SKU on a mixed pallet.

❖ **Load into Vehicle:** Select an option for loading shipcases into a vehicle – Load by Length, Load by Width or Best Fit.

❖ **No stacking on tops of side loaded items:** Check the box if this shipcase should not be loaded on top of items loaded on their side.

❖ **Dead Stacking Rules:** Select an option for loading shipcases on the floor – Must Be Stacked On Floor, Must Not Be Stacked On Floor, Best Fit, Prefer On Floor or Prefer On Top**.**

❖ **Stack Code:** Select an existing stack code or define a new one.

❖ **Maximum Stack Height (On Base):** Enter a maximum stacking height when the SKU is stacked on its base.

❖ **Maximum Stack Height (On Side):** Enter a maximum stacking height when the SKU is stacked on its side. This is not available for PalletLoad style SKU's, as they can not be loaded on side.

❖ **Maximum Stack Weight:** Enter a maximum stacking weight of the SKU.

❖ **Location:** Check – Light, Medium, or Heavy- depending on which SKUs can stack on top of the SKU being defined and which cannot.

❖ **Label:** Enter an optional label for the SKU.

6. Click on the Graphics tab to activate it. The Graphics tab appears, as pictured here.

7. Enter information in the following Graphics tab fields:

❖ **Top Graphic:** Use the Browse function to select a graphic for the top of the SKU.

❖ **Side Graphic:** Use the Browse function to select a graphic for the side of the SKU.

❖ **Front Graphic:** Use the Browse function to select a graphic for the front of the SKU

8. If all your graphics parameters are correct, click on the Save button. MaxLoad Pro saves the new SKU to the SKU database.

Create a Unitload

To create a unitload, start from the Define SKU screen and follow these instructions:

1. Click on the Create UL button. The Create Unitload (UL) screen appears. Notice that this screen has two tabs: General and Options tab.
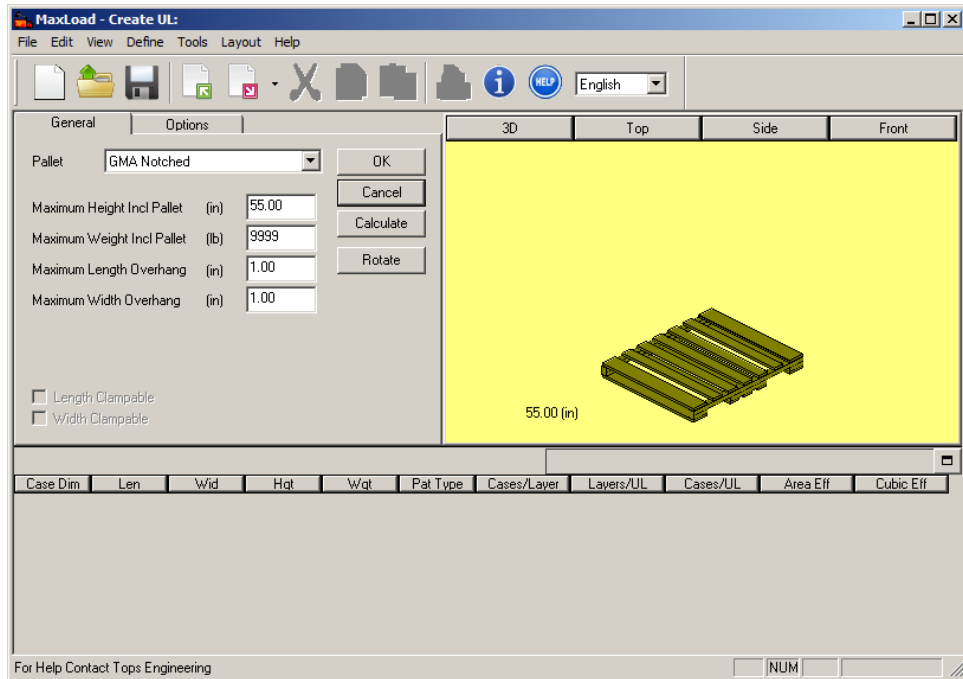
2. At the General tab, enter the following information.

   ❖ **Pallet:** Select a pallet from the drop down list. If you don't see a pallet you want, you can define a new one.

   ❖ **Maximum Height Incl Pallet:** Enter the maximum height of the unitload, including the height of the pallet.

   ❖ **Maximum Weight Incl Pallet:** Enter the maximum weight of the unitload, including the weight of the pallet.

   ❖ **Maximum Length Overhang:** Enter the maximum number of inches the unitload can overhang the pallet along the length of the pallet.

❖ **Maximum Width Overhang:** Enter the maximum number of inches the unitload can overhang the pallet along the width of the pallet.

3. Click on the Options tab to enter the following information.
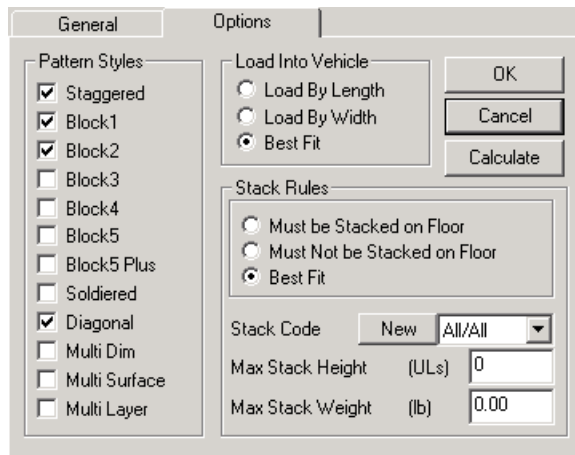
❖ **Pattern Styles:** Select the pattern styles you want MaxLoad Pro to look at during the unitload building process.

❖ **Load Into Vehicle:** Select an option – Load by Length, Load by Width or Best Fit – to specify the orientation (if any) of the unitload when it's loaded into a vehicle.

❖ **Stack Rules:** Select an option – Must be Stacked on Floor, Must Not be Stacked on Floor or Best Fit – to specify any stack rules for this unitload when it's being loaded into a vehicle.

❖ **Stack Code:** Select an existing stack code or define a new one.

❖ **Maximum Stack Height:** Enter a maximum stacking height for the unitload.

❖ **Maximum Stack Weight:** Enter a maximum stacking weight for the unitload.

4. If all of your unitload parameters are correct, click on the Calculate button.

5. Select the pallet configuration you'd like for the SKU and click on OK to save the pattern and back to the Size tab of the Define SKU screen.

6. Click the Save button to save the SKU and the unitload to the SKU database.

Modify an Existing SKU

To modify an existing SKU, follow these instructions:

1. Click on the down (▼) arrow to the right of the SKU Number field. The drop-down list displays a list of existing SKU's.

2. Select the SKU you want to modify. The Define SKU screen redisplays with information for the selected SKU.

3. Modify information on the screen as necessary.

4. If your SKU parameters are correct, click on the Save button.

    If you want to modify the SKU and give it a different name, simply type over the existing description (using standard windows conventions), and click on the Save button.

    MaxLoad Pro saves the modified SKU record to the SKU database.

Delete a SKU from the Database

To delete a SKU from the database, follow these instructions:

1. Click on the down (▼) arrow to the right of the SKU Number field. The drop-down list displays a list of existing SKU's.

2. Select the SKU you want to delete. he Define SKU screen redisplays with information for the selected SKU.

3. Click on the Delete button on the middle portion of the screen. A dialog box appears with the name of the selected SKU and asks "Are you sure you want to continue?"

4. To delete the SKU, click on the Yes button. MaxLoad Pro deletes the selected SKU from the SKU database.

Create SKU Bundle

In addition to creating unitloads, MaxLoad also allows you to define bundles. Bundles provide a more flexible ways of loading SKUs in different preferred configurations for better use of the loading space. This function is available to Shipcase and Drum SKUs. For L-shape SKUs, please see the next section.

SKUs will not be loaded as bundles if the options Use Unitloads and/or Use Mixed Pallets are enabled.

Important: To use bundles, you will need to add the line "DoBundle=True" to the Loadrules.ini file. Please contact TOPS Help Desk for more information.

To define bundle for SKU, follow these steps:

1. Go to Define Menu and select SKU.

2. Enter the SKU information including SKU Number, dimension and weight as shown below. You can also select an existing SKU by clicking the drop down arrow in the SKU Number field.
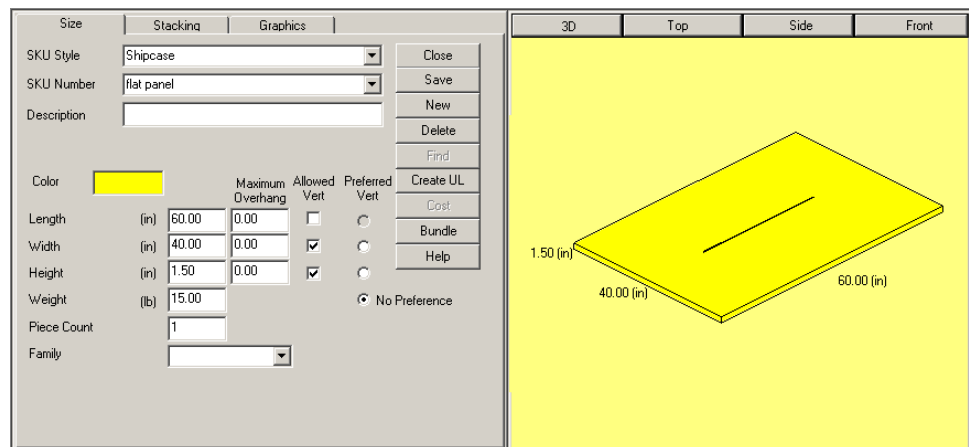
3. Click on the Bundle button to open the Bundle Preferences dialog box as shown below. You can set up to three (3) bundle sizes for the SKU. MaxLoad will load them based on the quantity and space available.

❖ **Bundle Size:** Define the property of the SKU bundle:

Vertical – The dimension of the SKU to be loaded vertical inside the transit vehicle.

Orientation – Define which dimension of the bundle will be loaded parallel to the side of the vehicle.

Length x Width x Height – Enter the SKU quantities along each dimension of the bundle. Referencing the example in the dialog box, the 1 x 1 x 36 bundle will have one SKU along the length and width of the bundle but 36 SKUs along the vertical dimension. This configuration is illustrated in the container on the left below. Note that it shows two bundles with 36 SKUs each placed on a pallet.
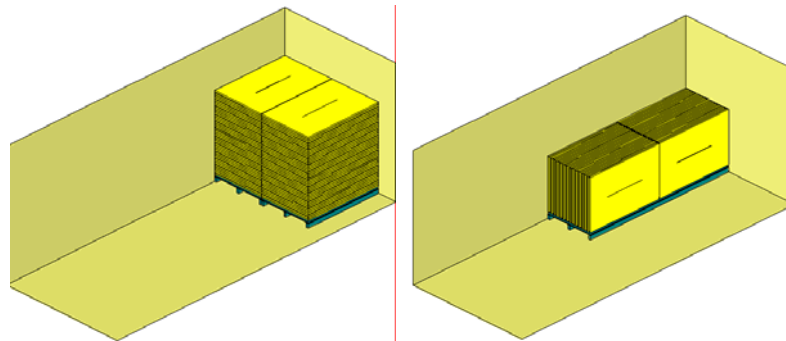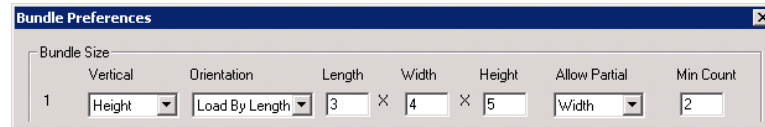

The second bundle preference 2 x 25 x 1 (with SKU width vertical) will load the SKUs as illustrated in the container on the right above. It shows only one (1) bundle with 2 SKUs along the length and 25 along the width but stack only one high. Note that this is

one single bundle of 50 SKUs. The pallet selected will be sized to carry all SKUs for the bundle.

Allow Partial – Click the drop down arrow to specify if partial bundle is allowed and if so, along which dimension.

Min Count – When partial bundle is allowed, enter the minimum number of SKUs for the partial bundle along the specified dimension.

The container here shows a load with a preference which allows partial bundles. The smaller bundle on the right comprises of only 2 SKUs along the width to take advantage of the tighter space. Any SKUs not enough to make a bundle will be floor loaded.
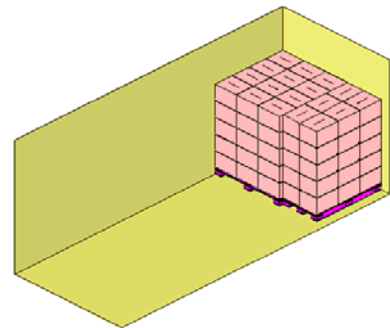
❖ **Pallet** – Specify the pallet, if any, to be used to carry the bundle.

Height – Specify the height of the pallet used for the bundle.

Pallet Style – Select from the drop list the pallet style to be used for the bundle. The size of the pallet will be the same as the footprint of the bundle.

❖ **Slack** – Define extra space around the bundle to accommodate clamp or similar tools for maneuvering. If slacks are added to the bundle length and width, the pallet will be sized accordingly to include these slacks.

Define Bundle for L-Shape SKU

To define bundle for L-shape SKUs, click the Bundle button after entering the dimensions to open the L Shape Bundle Screen as show below.
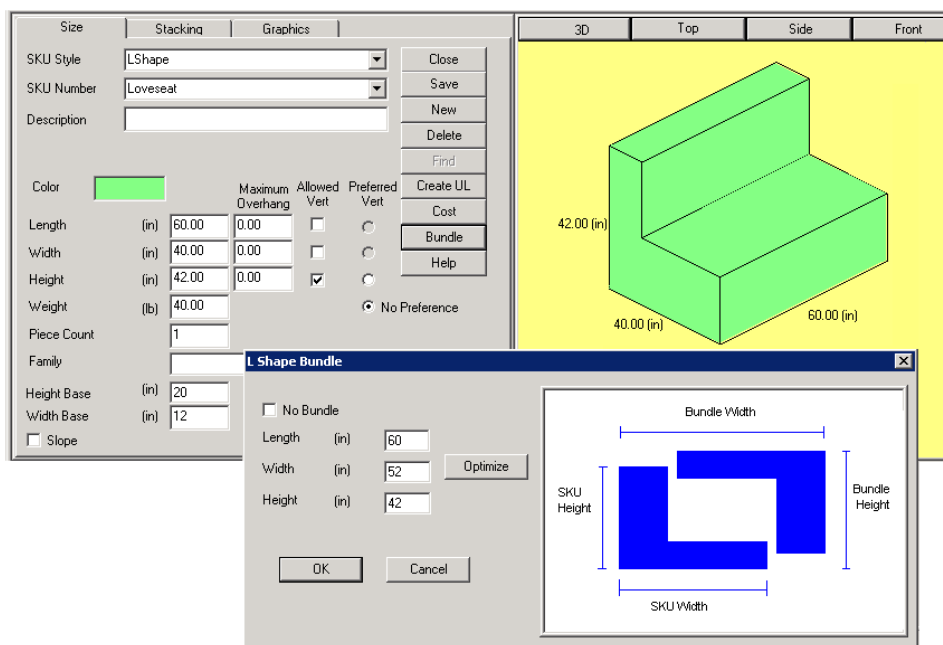
❖ **No Bundle –** Click this box to disable bundles for the SKU. If checked, the SKU will be loaded as a single item and MaxLoad will use the overall dimension (60x40x42 in this example) of the SKU to calculate the space occupied by this unit. The space above the seat will not be treated as loadable space.

Note: Using bundles for L-Shape SKUs is not controlled by the load rules. This No Bundle option will dictate whether L-Shape SKUs will be loaded as bundles.

❖ **Optimize –** Click the Optimize button to have MaxLoad calculate the bundle size which will be displayed in the dimension fields.

To use an alternate bundle size, enter the dimensions directly along the Length, Width and Height fields.

❖ **OK –** Click OK to use the bundle dimension as entered. Make sure to click on Save at the Define SKU dialog box to save all set parameters.

Pallet/Slipsheet Database

The Define Pallet screen allows you to enter parameters for a new pallet or slipsheet and save it to the pallet database. Start from the Menu Bar and Open the Define menu and select Pallet. The Define Pallet screen appears.
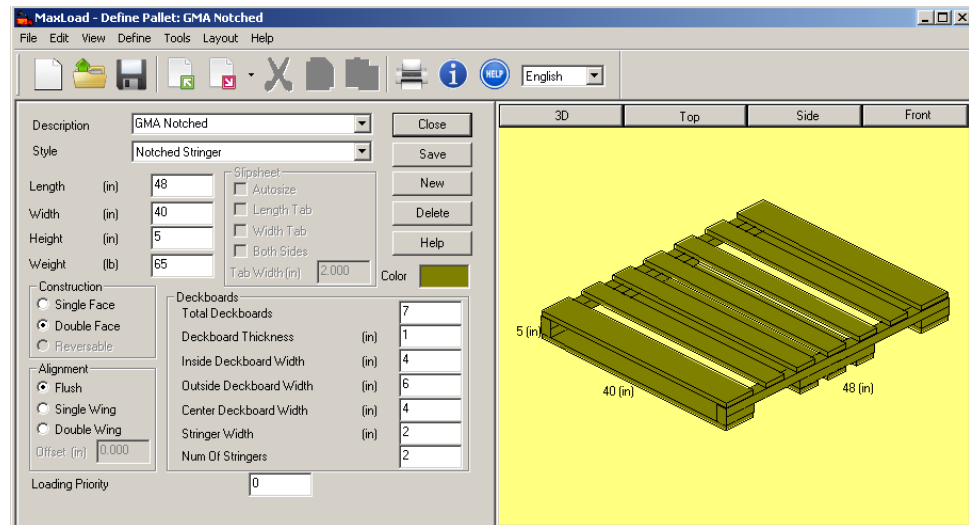
This screen is comprised of the following components:

❖ **Description:**   Enter a description of the pallet or slipsheet you're defining. Use any combination of letters and numbers. The maximum length of the description is 32 characters (including any spaces in between words).

❖ **Style:** Style field allows you to select a pallet style. Click on the down arrow to display a list of pallet styles. If you select Slipsheet, the Slipsheet section of the screen is activated. If you select None, MaxLoad Pro allows you to create a pallet without labeling it as one of the existing styles.

The various styles of pallets that can be defined in the MaxLoad Pro software are:

■ **None:**   Use this pallet style if you do not want a pallet to be displayed in the unitload or mixed pallet view.

■ **Stringer:**   This is most commonly used pallet style, in United States. In a stringer pallet boards of stringers are used between the top and bottom deck boards. The length and width of pallet is the length and width of the stringer boards, respectively.

- **Notched Stringer:** Like a regular stringer, but non reversible and has notches cut in the side to allow for 4 way entry.

- **Block:** This is a 4-way entry pallets. Blocks of solid wood, plywood, or plastic to support the unit load

- **Block Stringer:** A stringer pallet is called so because it uses "stringers," which support the unit load. The stringers are the boards, typically 2 x 4's or 3 x 4's, sandwiched between the top and bottom deck boards.

- **Euro Pallet:** Usually 800mm x 1200mm. This pallet is a standardized block pallet introduced by the European railroads after World War II.

- **Slip Sheet:** Sheet of corrugated slipped under the bottom layer of a load.

- **Chep:** Pallet style by the pallet manufacturer Chep.

❖ **Dimensions:** Enter the length, width, height and weight of the pallet or slipsheet you're defining. For example, a standard GMA (Grocery Manufacturers Association) pallet, commonly used in the U.S. marketplace, measures 48" in length by 40" in width, is generally 5" to 6" in height and weighs 65 pounds.

You can define these dimensions either in English or Metric units by selecting the type of units in the Toolbar.

❖ **Constructions:** Select the pallet construction style:

- **Single Face:** The deck boards are positioned only on top of the pallet.

- **Double Face:** The deck boards are positioned on both sides (top and bottom) of the pallet.

- **Reversible:** The pallet is identical on both sides. A notched pallet cannot be reversed.

Note: If you choose Slipsheet, Euro Pallet, or a None style of a pallet, the construction selection is not available.

❖ **Alignment:** Alignment refers to how you position the stringer in relation to the deck boards.

■ **Flush:** Aligns the stringer flush to the outside edges of the deck boards.

Note: Single Wing and Double Wing are options that allow you to offset the stringers on a double-faced pallet.

■ **Single Wing:** Represents a pallet design that has offset deck boards on the top, but flush deck boards on the bottom.

■ **Double Wing:** Represents a double faced pallet design that has both top and bottom deck boards offset from the stringers.

■ **Offset:** If you select Flush, the Offset field will be grayed out. If you select Single or Double Wing, the Offset field will be activated and you'll need to enter the Offset amount. Offset is the distance that the stringers will be offset from the edge of the pallet.

❖ **Slipsheet**: The Slipsheet section of the screen is activated only if you've selected Slipsheet as the pallet style. You can add tabs to the length, width or to both sides of the slipsheet. If you choose to define tabs as part of your slipsheet, you're required to define a tab width.

You also have the option to autosize the slipsheet. When you activate the Autosize feature, MaxLoad Pro will automatically cut the size of the slipsheet down to the outside dimensions of the unitload.

For example, you choose a 48" by 40" slipsheet. Let's also assume that once you've created a unitload for your SKU, the outside dimensions of the unitload equal 47" by 34." MaxLoad Pro will automatically trim the dimensions of the slipsheet to 47" by 34." If you deactivate this feature, MaxLoad Pro will use the outside dimensions of the unitload as previously defined (in this instance 48" by 40").

❖ **Deck Boards:** Deck boards are the flat surface of the pallet on which you place a product when you create a unitload. MaxLoad Pro requires you to define the number of inside deck boards, the deck board thickness, inside deck board width, outside deck board width, stringer width and center deck board width. You'll enter all values, except for the number of inside deck boards, in either inches or millimeters.

Note: If you choose Slipsheet as the pallet style, the deck boards section of the screen is not activated.

❖ **Loading Priority**: When you specify multiple pallet styles to be used in a truck manifest, MaxLoad will use this value to determine which pallet to use unless the SKU does not fit on the preferred pallet. Enter 1 as the first preferred pallet, 2 as second and so on.

❖ **Color:** To change the color of a pallet/slipsheet, click on the color box and select the color of your choice for the pallet or slipsheet. MaxLoad Pro then assigns the selected color to the pallet/slipsheet.

❖ **g.o.d. Window:** Displays a 3-dimensional graphic image of the pallet.

❖ **Close Button:** Closes the Define Pallet screen and returns you to the previous screen.

❖ **Save Button:** Allows you to save changes to an existing or a new pallet.

❖ **New Button:** Allows you to create a new pallet.

❖ **Delete Button:** Allows you to delete the current pallet from the database.

Note: The Tab key allows you to easily move forward to the next field. To move backwards to a previous field, press the Tab key while holding down the Shift key on the keyboard.

Define a New Pallet

To define a new pallet, start from the Define Pallet screen and follow these instructions:

1. Click on the New button. The Define Pallet screen redisplays with some default values in the dimension fields and the cursor positioned in the Description field.

2. Enter information in the following fields:

   ❖ **Description:** Enter a description of the new pallet.

   ❖ **Style:** Use the down-arrow (▼) to view a list of pallet styles. Select a pallet style.

   ❖ **Length:** Enter the length of the pallet in inches or millimeters.

   ❖ **Width:** Enter the width of the pallet in inches or millimeters.

   ❖ **Height:** Enter the height of the pallet in inches or millimeters.

❖ **Weight:** Enter the weight of the pallet in pounds or kilograms.

❖ **Construction:** Select a type of construction – Single Face, Double Face or Reversible.

❖ **Alignment:** Select a type of alignment – Flush, Single Wing, Double Wing – or key in an Offset value.

❖ **Total Deck Boards:** Enter the total number of deck boards in the pallet.

❖ **Deck Board Thickness:** Enter the thickness of the deck board in inches or millimeters.

❖ **Inside Deck Board Width:** Enter the width of the inside deck board in inches or millimeters.

❖ **Outside Deck Board Width:** Enter the width of the outside deck board in inches or millimeters.

❖ **Center Deck Board Width:** Enter the width of the center deck board in inches or millimeters.

❖ **Stringer Width:** Enter the width of the stringer in inches or millimeters.

❖ **Num of Stringers:** Enter the number of stringers on the pallet.

3. If all your pallet parameters are correct, click on the Save button. MaxLoad Pro saves the new pallet to the pallet database.

Define a New Slipsheet

To define a new slipsheet, start from the Define Pallet Screen and follow these instructions:

1. Click on the New button. The Define Pallet screen redisplays with some default values in the dimension fields and the cursor positioned in the Description field.

2. Enter information in the following fields:

❖ **Description:** Enter a description of the new slipsheet.

❖ **Style:** Select Slipsheet.

❖ **Length:** Enter the length of the slipsheet in inches or millimeters.

❖ **Width:** Enter the width of the slipsheet in inches or millimeters.

❖ **Height:** Enter the height of the slipsheet in inches or millimeters.

❖ **Weight:** Enter the weight of the slipsheet in pounds or kilograms.

❖ **Autosize:** Check the box to automatically size the slipsheet to the unitload dimensions.

❖ **Length Tab:** Check the box to put a tab along the length of the slipsheet.

❖ **Width Tab:** Check the box to put a tab along the width of the slipsheet.

❖ **Both Sides:** Check the box to put a tab along both sides of the slipsheet. You must also check the Length and Width Tab in order to add tabs on all four sides of the sheet.

❖ **Tab Width (in):** Enter the width of the tab in inches or millimeters.

❖ **Color:** Click on the color box and select the color for the slipsheet.

3. If all your slipsheet parameters are correct, click on the Save button. MaxLoad Pro saves the new slipsheet to the pallet database.

Modify an Existing Pallet/Slipsheet

To modify an existing pallet/slipsheet, follow these instructions:

1. Click on the down arrow to the right of the Description field. The drop-down list displays a list of existing pallets/slipsheets.

2. Select the pallet/slipsheet you want to modify. The Define Pallet screen refreshes with information for the selected pallet/slipsheet.

3. Modify information on the screen as necessary.

4. If your pallet/slipsheet parameters are correct, click on the Save button.

   If you want modify the pallet/slipsheet and give it a different name, simply type over the existing description (using standard windows conventions), and click on the Save button.

MaxLoad Pro saves the modified pallet/slipsheet record to the pallet database.

Delete a Pallet/Slipsheet from the Database

To delete a pallet/slipsheet from the database, follow these instructions:

1. Use the Description drop-down list to select the pallet/slipsheet you want to delete.

2. Click on the Delete button on the middle portion of the screen. A dialog box appears with the name of the selected pallet/slipsheet and asks "Do you want to delete this record?"

3. To delete the pallet/slipsheet, click on the Yes button. MaxLoad Pro will remove the selected pallet/slipsheet from the pallet database.

Vehicle Database

Start from the Menu Bar, open the Define menu, and select Vehicle. The Define Vehicle Screen appears.
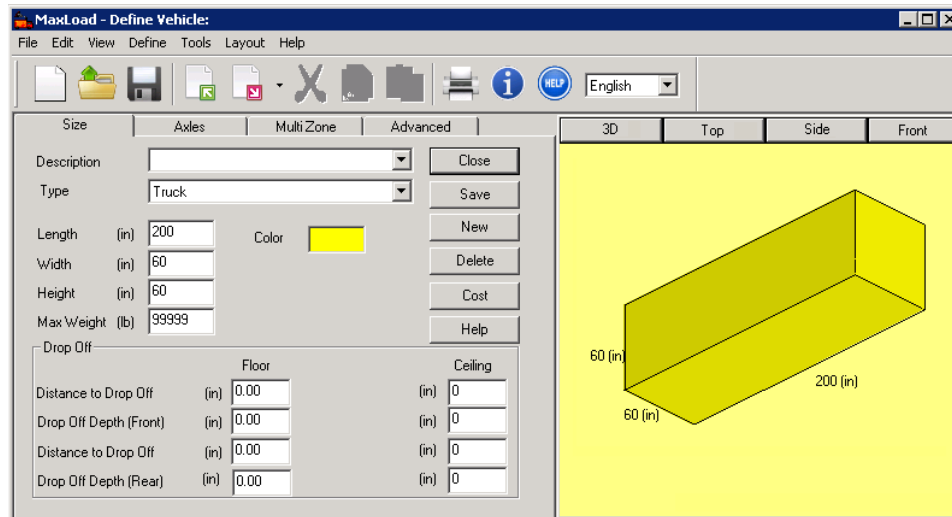
Note the following about the Define Vehicle screen:

❖ **Size Tab:** Allows you to define the dimensions of the container.

❖ **Axles Tab:** Allows you to define parameters for the container's axles

❖ **MultiZone Tab:** Allows you to define a multi-zone vehicle.

❖ **Advanced Tab:** Allows you to define size and location of corner boxes which are common in sea vans or containers.

❖ **(g.o.d.) Window:** Displays a 3-dimensional graphic image of the container.

❖ **Close button:** Closes the Define Vehicle Screen and returns you to the previous screen.

❖ **Save button:** Allows you to save changes to an existing or new container.

❖ **New button:** Allows you to create a new vehicle.

❖ **Delete button:** Allows you to delete a vehicle from the database.

❖ **Cost button:** Allows you to add costing information for the trailer. For more information on using the Cost function, please contact TOPS Technical Support.

Size Tab (Define Vehicle)

The Size tab allows you to enter the inside dimensions of vehicle.

❖ **Description:** Enter a description (name) of the vehicle to define a new vehicle. You can enter a total of 32 characters in this field, including any spaces between words.

To select an existing vehicle, make sure you have specified the correct vehicle type (see below), then select the vehicle name from the drop down list by clicking the down arrow (▼). Once you have selected an existing vehicle, all parameters defined previously for this vehicle will be displayed.

❖ **Type:** Select the type of vehicle to be defined or modified. The various types of vehicles available in MaxLoad Pro are truck, sea van, rail car, rail wagon, multi zone, double trailer, ULD, sidebay, flatbed trucks and tractors.

When defining a new manifest, MaxLoad Pro allows you to filter the vehicle database to display only one type of vehicle type. Any vehicle defined as a truck type will be added to the truck type list on the Manifest Pick List screen. The same principle applies to other container types.

❖ **Dimensions:** You are required to enter the dimensions – length, width and height – of the vehicle you're defining. These values represent the inside (loadable) dimensions of the vehicle. Chapter 4, Loading a Truck Manifest, discusses how to limit the maximum height of the cargo regardless of the inside dimensions of the vehicle. This comes in handy when you're evaluating refrigerated or frozen loads that need room for air circulation.

❖ **Maximum weight**: This refers to the maximum cargo weight allowed in the vehicle. This weight is usually found by subtracting the tare (empty) weight of the vehicle – both trailer and power unit – from the maximum over-the-road weight (80,000 pounds in most states, with some restrictions). The maximum weight is usually around 45,000 pounds for most vehicles in the United States; however, laws vary from state to state and country to country.

❖ **Drop Off:** These fields allow you to define a drop deck (goose neck) trailer, as the one shown here.
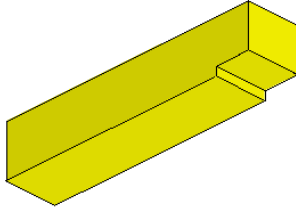
Referring to the figure below these are the different Drop Off parameters:

- **(A / E) Distance to Drop Off:** The distance from the front wall of the trailer to the drop off point at floor and ceiling level respectively.

- **(B / F) Drop Off Depth (Front):** The drop off depth in the front of the vehicle at floor and ceiling level respectively.

- **(C / G) Distance to Drop Off:** The distance from the front wall of the trailer to the drop off point for the rear end drop off, at floor and ceiling level respectively.

- **(D / H) Drop Off Depth (Rear):** The drop off depth in the rear of the vehicle, for floor and ceiling respectively.

Note: Drop deck is not calculated for Single SKU manifests.

❖ **Color:** The Color dialog box allows you to define a custom color for the vehicle. To change the color of a vehicle, click on the color box, and make a color selection.

Size Tab – Special Vehicles

For special vehicle types as described below, you will find different Size tab parameters.

❖ **Double Trailer:** Double trailers composes of two vehicles connected together. Select from the existing vehicle database using the drop down list (▼) the vehicle to use for the first and second trailer.
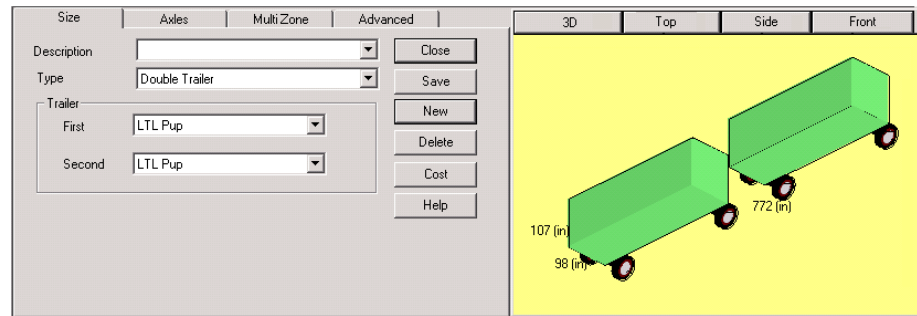
❖ **SideBay:** Sidebay trucks are commonly used for deliveries in the beverage industry and these are the parameters:
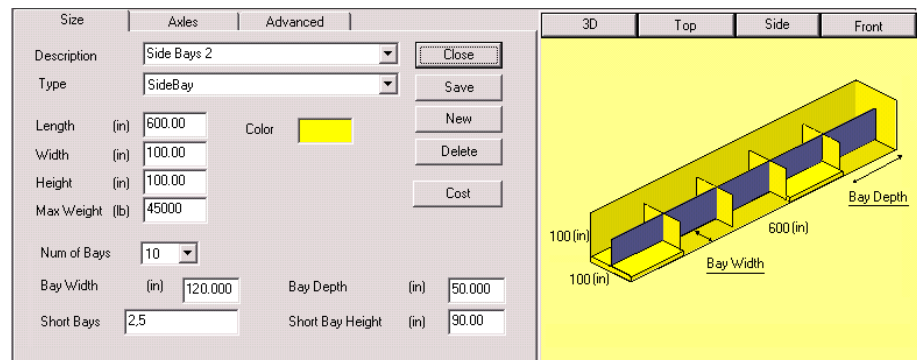
■ **Number of Bays:** Selects from the drop down list (▼) the number of bays inside the truck, from 2 up to 32 bays.

■ **Bay Width:** Enters the width of easy bay for the vehicle. The default value is the total length of the truck divided by the number of bays on each side. In this preceding example, the default bay width is 600 inches divided by 5 (number of bays on each side) which equals 120 inches.

■ **Bay Depth:** This is the depth of each bay, defaulted to half the width dimension of the truck.

■ **Short Bays:** Specifies the bays which have shorter loadable height than the rest. You can enter multiple short bays by separating the bay numbers with a comma. For example, entering 2,5 as in the example will set bay locations 2 and 5 to short bays.

■ **Short Bay Height:** Enters the loadable height of the short bays.

Axles Tab (Define Vehicle)

The Axles Tab allows you to enter parameters that are essential to calculating axle weights for a loaded container.
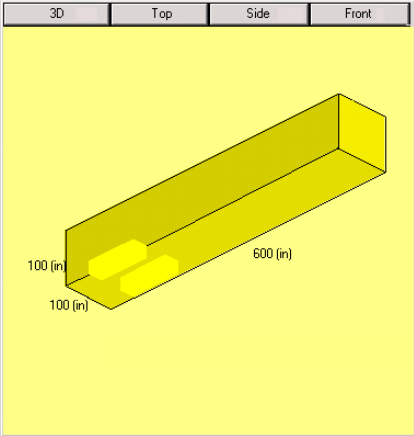

- ❖ **Axle Count:** Enter the number of axles for the vehicle. You can enter a maximum of three axles in this field. MaxLoad Pro will calculate the estimated weight carried by each axle tare weight: Enter the tare weight of the vehicle – the weight of the vehicle when it is empty. Consult your transportation provider for this information.

- ❖ **Tare Weight:** Specify the tare weight of the vehicle.

- ❖ **King Pin/Front Axle:** Specify the type of front reaction point (weight bearing point) for the vehicle. This field does not affect the estimated axle weight calculation for the front reaction point. That is, you'll get the same answer, assuming you define either the first axle or the king pin in the identical location. This option is primarily used to draw the vehicle accurately.

- ❖ **Dist from front:** Enter the distance from the front of the vehicle to the various positions of the king pin and axles. If you select Front Axle in the King Pin/Front Axle option, the King Pin field changes to Front Axle. Contact your transportation provider for more information on this subject.

- ❖ **Wgt:** Enter the tare weight of the king pin and axles. If you select Front Axle in the King Pin/Front Axle option, the King Pin field changes to Front Axle. Contact your transportation provider for more information on this subject.
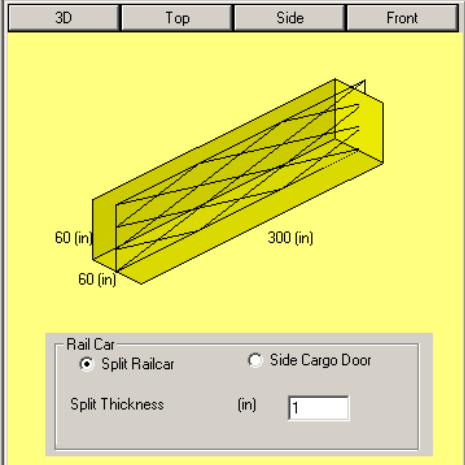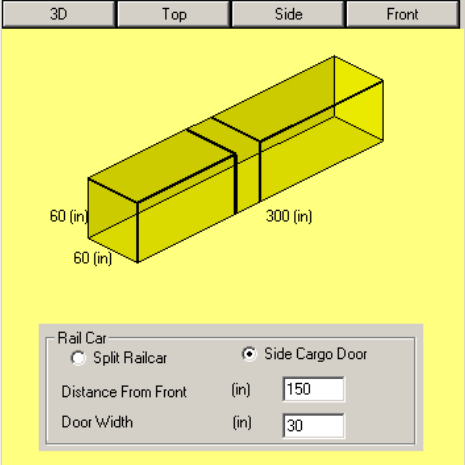
Axles Tab – Special Vehicles

❖ **Truck Wheel Well**

- ■ **Distance From Front:** Specifies the distance from the front of the vehicle location of the wheel wells.

- ■ **Height:** Enters the height of the wheel well.

- ■ **Width:** Enter the width of the wheel well

- ■ **Height:** Enter the height of the wheel well.

❖ **Rail Car and Rail Wagon**

- ■ **Split Railcar (Split Thickness):** If Split Railcar is selected, enter the split thickness of the side cargo door (the thickness of the wall

in the center of an open rail car). Enter this value in inches or millimeters, depending on the Units selected.

- **Distance From Front:** If Side Cargo Door is selected, enter the distance between the side cargo door and the front of the vehicle. Enter this value in inches or millimeters, depending on the Units selected.

- **Door Width:** For Side Cargo Door, enter the width of the side cargo door. Enter this value in inches or millimeters, depending on the Units selected.

Advanced Tab (Define Vehicle)

The Advanced Tab allows you to specify corner boxes commonly found in sea van or containers. You can define up to four identical areas along the top area of the vehicle that will be unavailable for loading.

- ❖ **Corner Boxes:** Corner boxes of dimension 12 inches by 12 inches are commonly found at the four corners of sea vans.
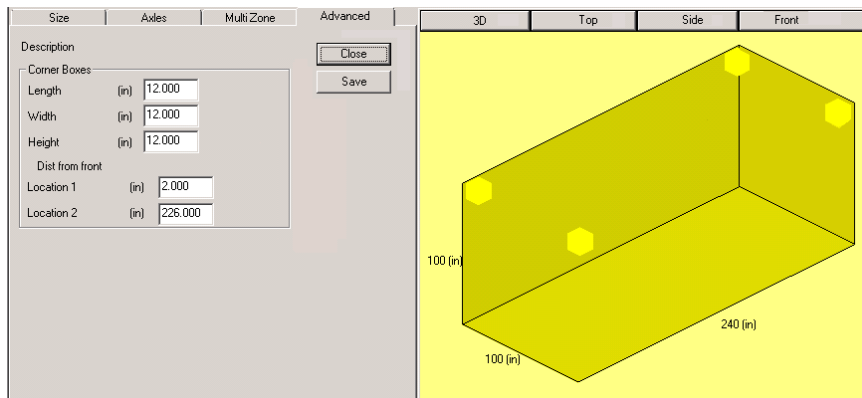
- **Length:** Enters the length of the corner box along the length of the vehicle.

- **Width:** Enters the width of the corner box along the width of the vehicle.

- **Height:** Enters the height of the corner box along the height of the vehicle.

- **Distance from Front (Location 1):** Enters the distance from the front of the vehicle for the location of the first set of corner boxes.

- **Distance from Front (Location 2):** Enters the distance from the front of the vehicle for the location of the second set of corner boxes.

Note: Enter the same distance for location 1 and 2 will give only 2 corner boxes; and combining the use of corner boxes with wheel well will allow you a define areas along both the top and bottom of the vehicle to be blocked off for loading.
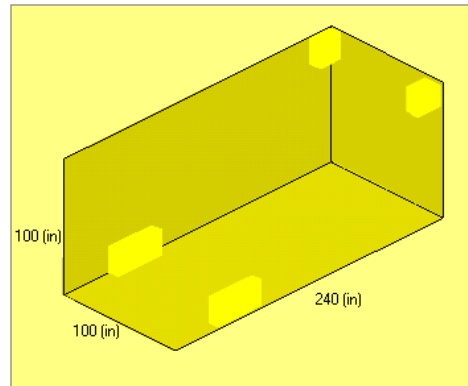
Modify an Existing Vehicle

To modify an existing vehicle, follow these instructions:

1. Click on the down arrow (▼) to the right of the Description field. The drop-down list displays a list of existing vehicles.

2. Select the vehicle you want to modify. The Define Vehicle screen redisplays with information for the selected vehicle.

3. Modify information on the screen as necessary.

4. If your vehicle parameters are correct, click on the Save button.

   If you want modify the vehicle and give it a different name, simply type over the existing description (using standard windows conventions), and click on the Save button.

   MaxLoad Pro saves the modified vehicle record to the vehicle database.

Delete a Vehicle from the Database

To delete a vehicle from the database, follow these instructions:

1. Use the Description drop-down list to select the vehicle you want to delete.

2. Click on the Delete button on the middle portion of the screen. A dialog box appears with the name of the selected vehicle and asks "Are you sure you want to continue?"

3. To delete the vehicle, click on the Yes button. MaxLoad Pro deletes the selected vehicle from the vehicle database.

Tote Database

Start from the Menu Bar and open the Define menu and select Tote. The Define Tote Screen appears, as pictured below.
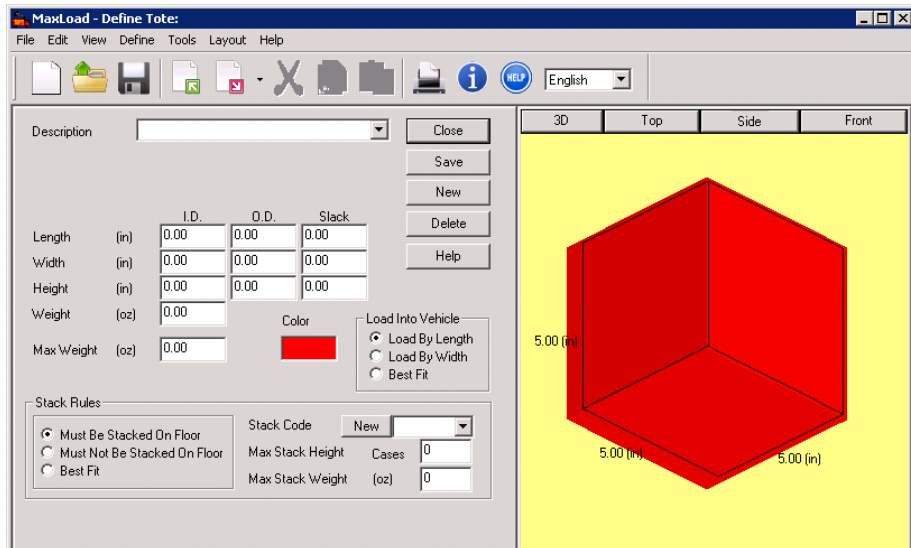
Note the following about the Define Tote screen:

❖ **Description:** Enter a description (name) of the tote. You can enter a total of 32 characters in this field, including any spaces between words. To select an existing tote to check or modify its parameters, click the down-arrow (▼) to select the tote from the list.

❖ **Dimensions:** For a new tote, you are required to enter values for Length, Width, and Height for the tote you're defining. Enter inside and outside dimensions along with slack.

■ **I.D.:** Refers to the inside measurement/dimension of tote

■ **O.D.:** Refers to the outside measurement of tote.

- **Slack:** Refers to the space taken up by packing material and will be available for loading.

  Note: The packaging industry defines height as the dimension that runs through the case flaps. If tote height is set as the vertical dimension, the case flaps will always be facing up or down. Extending this definition, length is defined as the largest dimension of the remaining two dimensions. Width would then be the last dimension undefined. Keep in mind that this is a general rule used in the packaging industry; your industry may be different.

❖ **Weight:** This is the weight of the empty tote.

❖ **Max Weight:** The maximum weight the tote can hold with SKUs in it.

  Note: Weight fields are optional and can be set to zero. Be aware that if you choose to do so, MaxLoad Pro will not calculate accurate weight values – total weight, weight efficiency and estimated axle weights – for your load.

❖ **Color:** The Color dialog box allows you to define a custom color for the tote. To change the color of a tote, click on the color box and make a color selection.

❖ **Load Into Vehicle:** MaxLoad Pro gives you options as to how a tote may be loaded into a vehicle. For example, certain totes can be loaded only by a forklift from one direction.

  You have three choices as to how a tote is loaded into the vehicle:

  - **By Length:** Loads the length of the tote parallel with the length of the container.

  - **By Width:** Loads the width of the tote parallel to the length of the container.

  - **Best Fit:** Shows no preference; loads the tote using the best orientation in relation to other items being loaded.

❖ **Stack Rules:** Stack Rules are guidelines for how MaxLoad Pro will load totes into a container when they're not placed on a pallet (sometimes referred to a floor-loading).

  - **Must Be Stacked on Floor:** MaxLoad Pro will disregard any solutions in which the tote is not placed on the floor.

  - **Must Not be Stacked on Floor:** MaxLoad Pro will disregard any solutions in which the tote is placed on the floor.

- **Best Fit:** MaxLoad Pro will disregard the two options above and place the tote where it is most efficient in relation to other items in the load.

❖ **Stack Code:** The Stack Code designates the stackability for a class of totes. This field contains 10 characters. Whenever you add a new tote to the database, you'll need to assign a new or existing stack code to the tote. Most likely, you'll have one stack code that represents a group of totes. However, if each product you ship is unique in regard to how it can be stacked, you may want to define a unique stack code for each individual tote.

MaxLoad Pro treats all totes with the same stack code in the same manner regarding (1) which totes can be loaded on top of other totes and (2) which totes can be placed under other totes.

For example, your company ships five different types of lampshades, all identical except for color. In this case, you'd group these five SKU's together using the same stack code. However, if you manufacture another type of lampshade made of paper machete, you'd assign a stack code different from the other five lampshades because the paper machete would change the stacking characteristics.

The totes that have no stacking restrictions, we recommend that you use the default stack code "All/All." When you define a tote and click on OK to save it, the stack code will automatically appear in the Stack Matrix.

If you can't find a stack code that suits your needs, you can define a new stack code. To define a new stack code for the stack matrix, follow these instructions:

1. Click on the New button located to the left of the Stack Code field. The Define New Stack Code dialog box appears.
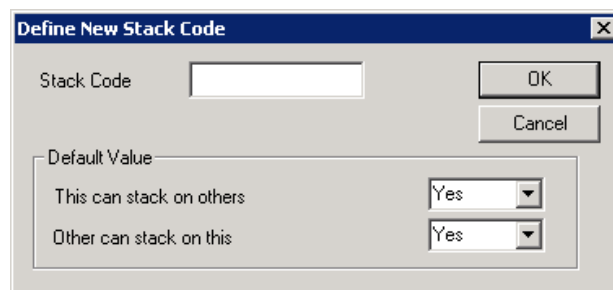
2. In the Stack Code field, enter a new stack code. You can key in any alpha/numeric combination up to 10 characters long.

---

3. In the Default Value field, specify – Yes or No – whether other totes can be placed under or on top of this tote. Use these guidelines:

- **This can stack on others:** Can this tote stack on top of other totes? If so, select Yes, else select No.

- **Other can stack on this:** Can other totes stack on top of this tote? If so, select Yes. If no other totes can be stacked on top of this tote (as in the case of the paper machete lampshade), select no.

Keep in mind that you're deciding how this tote relates to all other totes. You may find it necessary to make changes in the stack matrix if a tote relates differently to other totes on a case-by-case basis.

4. If all your stack code information is correct, click on OK. MaxLoad Pro saves the new stack code to the tote database.

❖ **Max Stack Height Cases:** The Maximum Stack Height is defined as the number of layers high MaxLoad Pro can safely stack a tote on top of itself.

❖ **Max Stack Weight (units):** The Maximum Stack Weight is defined as the maximum weight that can be placed on an individual tote. This field is defined in units (either English or Metric) representing weight, and also compliments the stack code. Even though the stack code allows one item to be placed on top of another item, this field will override the stack code to limit the weight of a placement on top of a particular tote. By the nature of this calculation, a stack of totes will always be limited to the maximum stack weight of the product on the bottom of the stack.

Note: When building a stack of like totes, Maximum Stack Height takes precedence over Maximum Stack Weight. That is, when building a placement of like totes, MaxLoad Pro will only take the defined Maximum Stack Height into consideration when determining how to build the placement. However, if there is space for a different tote to be placed on top of the stack, MaxLoad Pro will then consider the Maximum Stack Weight to determine the new placement.

Maximum Stack Height also takes precedence over the stack matrix. For example, we define a tote and assign it a new stack code. In the stack matrix, we specify that this tote cannot stack on top of itself. However, if when defining the tote we also say that the tote can stack three layers high, this parameter will take precedence over the stack matrix, which says that the tote cannot stack on itself. This rule was

made in an effort to help users limit the number of stack codes within the stack matrix.

Let's see another example, my Computer Monitors weigh 30 pounds each. I define the maximum stack height of a computer to be five units tall and the maximum stack weight to be 100 pounds. Is a stack of five computers a legal placement? Yes – regardless of the fact that the bottom computer will be supporting 120 pounds.

Further if I stack three computers on top of one another, meaning that the bottom tote (computer) is supporting 60 pounds. I notice that there is room to load a 60-pound box of stereos on top of the computers. Is this stack of three computers and one stereo a legal placement? No! Why not? Because the maximum stack weight of 100 pounds will be violated when the stereo is loaded.

❖ **g.o.d Window:** Displays a 3-dimensional graphic image of the tote.

❖ **Close button:** Closes the Define Tote screen and returns you to the previous screen.

❖ **Save button:** Allows you to save changes to an existing or a new tote.

❖ **New button:** Allows you to create a new tote.

❖ **Delete button:** Allows you to delete a tote from the database.

Modify an Existing Tote

To modify an existing tote, follow these instructions:

1. Click on the down arrow to the right of the Description field. The drop-down list displays a list of existing totes.

2. Select the tote you want to modify. The Define Tote Screen redisplays with information for the selected tote.

3. Modify information on the screen as necessary.

4. If your tote parameters are correct, click on the Save button.

   If you want to modify the tote and give it a different name, simply type over the existing description (using standard windows conventions), and click on the Save button. MaxLoad Pro saves the modified tote record to the tote database.

Delete a Tote from the Database

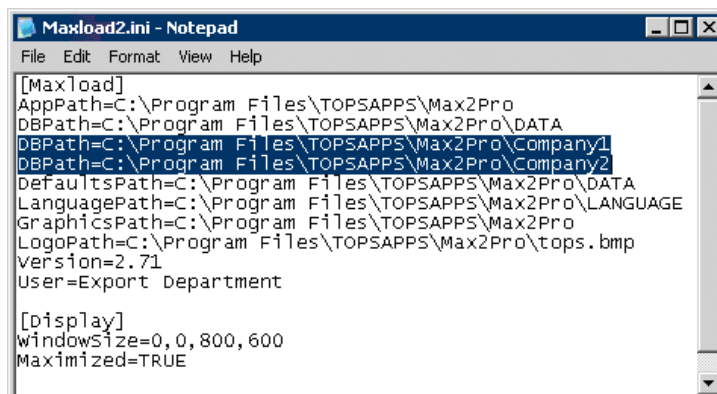To delete a tote from the database, follow these instructions:

1. Use the Description drop-down list to select the tote you want to delete.

2. Click on the Delete button on the middle portion of the screen. A dialog box appears with the name of the selected tote and asks "Are you sure you want to continue?"

3. To delete the tote, click on the Yes button. MaxLoad Pro deletes the selected tote from the tote database.

Using Multiple Databases

MaxLoad Pro saves all data, including SKUs, vehicles, manifests and more within the program in a Microsoft Access database file in the ...\TOPSAPPS\Max2Pro\Data\ folder. However, you are not limited to just one database when using MaxLoad. Sometimes, it makes sense to create separate database, for example, to hold data for different customers or departments. Follow these steps to add two (2) database within MaxLoad Pro:

Note: Please consult your company's IT department if you are not familiar with the use of Windows Explorer or functions related to file operation.

1. Install MaxLoad Pro.

2. Open Windows Explorer by clicking the mouse's right bottom and select "Explore".

3. Browse to the location where MaxLoad Pro was installed. The default location is in the C:\Program Files\TOPSAPPS\Max2Pro\ folder.

4. Make two copies of the "Data" folder.

5. Rename the "Copy of Data" folder to "Company1" (or any name of your choice).

6. Rename the "Copy (2) of Data" folder to "Company2" (or any name of your choice).

7. Open **Maxload2.ini** (in the C:\Program Files\TOPSAPPS\Max2Pro\ folder) in Windows Notepad by double clicking on the file. Add two new "DBPATH=" statements as highlighted in the dialog box below.


8. Go to File | Save in Windows Notepad to save and close the file.

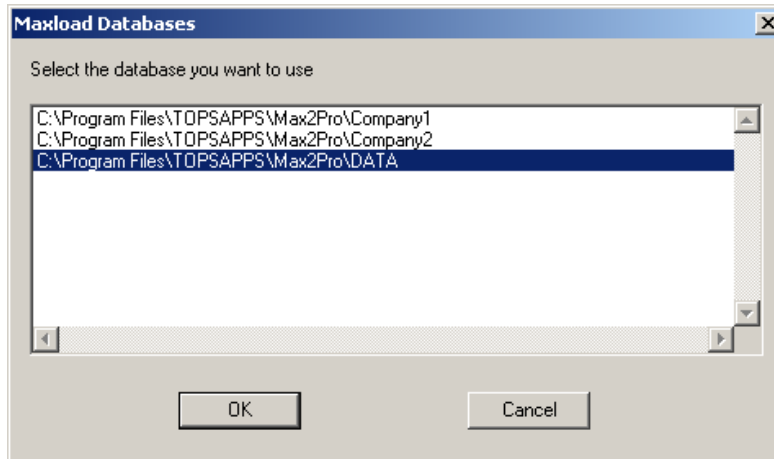9. If you have a MaxLoad shortcut on the desktop, right click on the

shortcut ![Maxload] and select "Properties".

10. In the MaxLoad Properties dialog box as shown below, go to the Target field and add the following "-MultiDb=on" switch like …\TOPSAPPS\Max2Pro\Maxload.exe -MultiDb=on". This switch enables the multiple database function within MaxLoad.
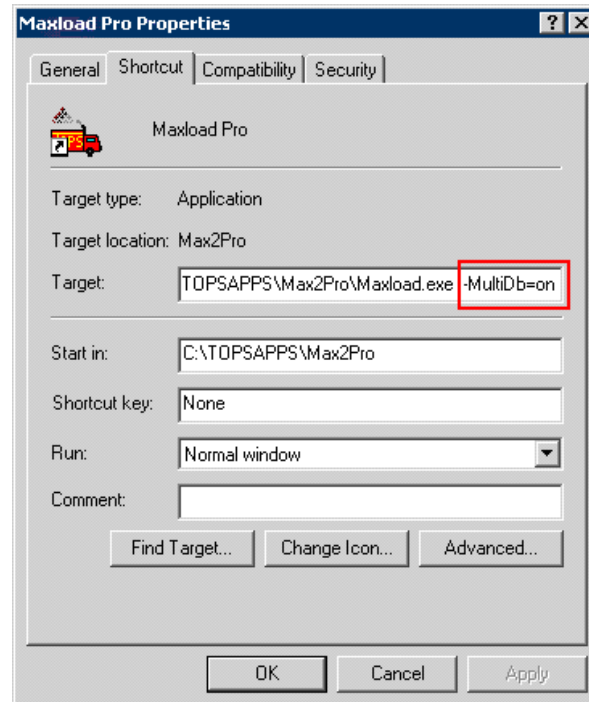
11. Click on OK to save the MaxLoad Properties.

12. Run MaxLoad Pro by using the MaxLoad shortcut that you've just edited. You will see a screen similar to the following, prompting you to select the database from the three available. Select the database you'd like to use and click on OK.

Maxload Databases

Select the database you want to use

C:\Program Files\TOPSAPPS\Max2Pro\Company1
C:\Program Files\TOPSAPPS\Max2Pro\Company2
C:\Program Files\TOPSAPPS\Max2Pro\DATA

OK   Cancel

13. Login and now you should be working with the specific data saved in the selected database.

Note: Since the new database is created from copies of the original database, the contents will be identical. Delete the SKUs and manifests that you don't need and import new data as required.

Loading a Truck Manifest

Introduction

This chapter explains how to use MaxLoad Pro to load a truck manifest with multi-size cases or multiple SKUs into a container, the most commonly used function in MaxLoad Pro.

Note: If you are loading single-SKUs into a container, you can use either the Truck Manifest or the Single SKU Manifest. The difference between the two for single SKU loading is provided at the end of this chapter.

For more information on Single-SKU Manifest, please refer to the next chapter.

This chapter walks you through the process you'd most likely follow when building a load with multi-size cases, including the following topics:

❖ Truck Manifest Pick List Screen

- Vehicle Tab
- Options Tab
- Algorithm Options
- Truck Weight Limit
- Mixed Pallet Tab
- Comments Tab
- Weight Tab
- SKU Addition and Update
- SKU List
- Manifest List

❖ Changing the Display of the SKU and Manifest List

❖ Defining a Truck Manifest

❖ Truck Manifest versus Single SKU Manifest for Single SKU Loads

Truck Manifest Pick List Screen

Once you've logged into MaxLoad Pro, the first screen that appears is the Control Center. To start a new truck manifest, start from the Control Center and click on the New button under the Truck Manifest icon.

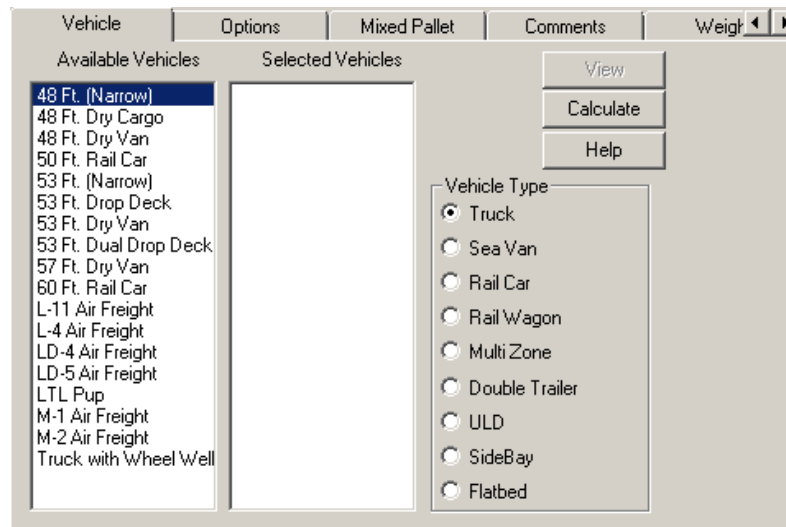The Truck Manifest Pick List screen appears, as pictured below.
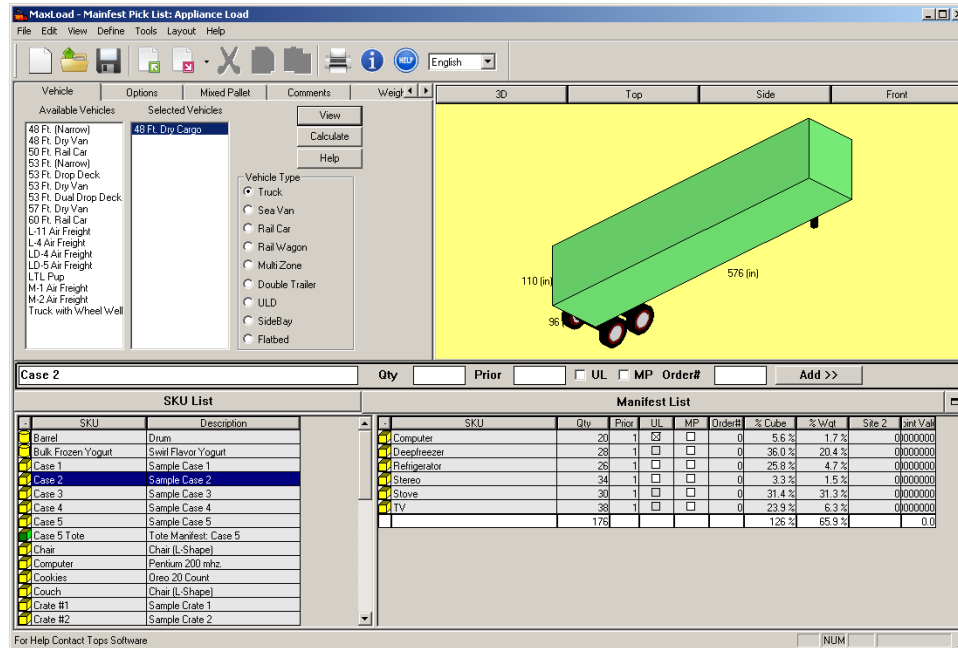
With the Truck Manifest Pick List screen displayed, you're ready to begin defining the components of a new manifest. This screen is the basis for collecting data for building a new manifest. The Truck Manifest Pick List screen is comprised of the following components:

❖ **Vehicle Tab:** Allows you to select the type of vehicle and the specific vehicles to be used for the manifest

❖ **Options Tab:** Allows you to fine-tune your load parameters to get optimum results.

❖ **Mixed Pallet Tab:** Work performed under the Mixed Pallet tab allows you to select and set defaults for loading mixed pallets.

❖ **Comments Tab:** Allows you to enter comments and customer information for the manifest.

❖ **Weight Tab:** Allows you set weight limits for the different axles for different regions.

❖ **g.o.d. Window:** The graphics section on the upper right hand side of the screen displays a 3-dimensional graphical image of the vehicle.

❖ **SKU Input:** Allows you to enter SKU, quantity and other load parameters in the manifest list.

❖ **SKU List:** Displays a list of all available SKUs (shipcases, drums, etc.) in the database. All SKUs in this list are available for loading into a vehicle, onto a pallet or into a tote.

❖ **Manifest List:** Displays a running list of all SKUs to be loaded into the vehicle. As you select SKUs from the SKU List, they will automatically appear in the Manifest List. You will define specifics about the load in this list.

❖ **View Button:** Allows you to view a load without recalculating it. This feature works only if you've previously built a load and is used primarily after you've made changes to a load in the Editor screen.

❖ **Calculate Button:** Allows you to calculate a load.

Vehicle Tab (Truck Manifest)

The Vehicle tab, allows you to select the type of transit vehicle (Truck, Sea Van, Rail Car, etc.) for a manifest.

The Vehicle tab contains the following components/fields:

❖ **Vehicle Type:** Displays the various kinds of vehicles defined in MaxLoad Pro. You can narrow down the list of available vehicles by choosing a Vehicle Type. This action will filter the Available Vehicles list to display only one type of vehicle.

❖ **Available Vehicles:** Displays the list of all vehicles available in the database for the Vehicle Type specified. In order to build a load, you will need to either choose an existing vehicle or define a new one through the Define menu.

Double click on a vehicle in Available Vehicles list to move it to the Selected Vehicles list. Also notice that as a vehicle name is highlighted, a representation of that vehicle displays in the g.o.d. (graphical on-line drawing) window.

MaxLoad Pro allows you to use multiple vehicles at one time. To do so, select more than one vehicle to be analyzed when calculating a manifest. Simply follow the procedure described above to select multiple vehicles.

❖ **Selected Vehicles:** This section displays the vehicles selected from the Available Vehicles list, for a particular manifest. You can have multiple vehicles selected for each truck manifest.

When MaxLoad Pro calculates solutions for a manifest, it uses only those vehicles listed in the Selected Vehicles list. To remove a vehicle from this list, double-click on the vehicle you wish to remove, in the Selected Vehicle list. This will remove the vehicle from the Selected Vehicles list and place it back in the Available Vehicles list.

A representation of the selected vehicle will appear in the g.o.d. window. If you select multiple vehicles, the highlighted vehicle will appear in the g.o.d. window.

❖ **View Button:** The View Button is active if you've opened an existing analysis or a new analysis has been calculated. It opens the Manifest View screen.

❖ **Calculate Button:** The Calculate button will instruct MaxLoad Pro to find loading solutions based on the parameters entered in the analysis. When the calculation is complete, MaxLoad Pro opens the Manifest View screen.

Options Tab (Truck Manifest)

The Options tab, allows you to further customize your manifest by setting various loading parameters.

The Options tab contains the following fields:

❖ **Use Unit Loads:** Check the box to turn on the Unitload (UL) column in the Manifest List. When you turn on this column, you can designate a SKU to be loaded onto a pallet as a completed unitload which is represented by a checked box (☒).

In order for MaxLoad Pro to actually load the SKUs as unitloads, a unitload pattern needs to be pre-defined for the selected SKU using the "Create UL" function under the Define | SKU function. If no pattern has been defined, the check box under the UL column in the Manifest List will remain blank despite clicking on the box to change its state.

Note: A unitload differs from a mixed pallet. A unitload is comprised of identical SKUs, while a mixed pallet is comprised of multiple kinds of SKUs.

❖ **Use Mixed Pallets:** Check the box to turn on the Mixed Pallets (MP) column in the Manifest List. Mixed Pallets are pallet loads consisting of multiple kinds of SKUs.

Unitloads are labeled with SKU names while Mixed Pallets are labeled with MP-N where N is the mixed pallet number.

❖ **Load By Priority:** When a SKU is assigned a high priority number, it will be loaded before a SKU with a lower priority number. Priority 1

will be loaded before priority 2, which will be loaded in front of priority 3.

Note: Load By Priority and Load By Stop Off determine which column is displayed in the Manifest List: Priority or Stop-Off. You can select either Load By Priority option or Load By Stop Off, but not both.

❖ **Load By Stop Off:** When you load by stop-off, the loading method is just the opposite: Stop-off 1 is loaded after stop-off 2, and therefore closest to the rear door; stop-off 2 is loaded after stop-off 3, etc.

❖ **Stop & Priority:** MaxLoad Pro also supports priorities within each stop. Check this option to enforce this functionality.

The following two options (Keep Same Orders Together and Keep Like SKUs Together) work in conjunction with the stop-offs and priorities. In other words, if you build a load with two stop-offs, MaxLoad Pro will keep like SKUs or orders together within the individual stop-off number.

Bear in mind that using either of these options could potentially result in less cubic utilization. While we can't definitely say how these options will affect a load, it's safe to say that these options will affect MaxLoad Pro's calculations, thus making it possible that the load will be affected negatively.

❖ **Keep Same Orders Together:** Check the box to keep the same orders together when loading. This field is directly linked to the Order# field in the Manifest List. When you key in an order number, MaxLoad Pro gives you the option to group SKUs from the same order together. If you do not choose to input order numbers, this field will be meaningless; activating the checkbox will not affect the placement of SKUs within your manifest.

❖ **Keep Like SKUs Together:** This option is very similar to the Keep Same Orders Together option. Activating this option tells MaxLoad Pro to load all products with the same SKU number together. The Keep Like SKUs Together option takes precedence over the Keep Orders Together checkbox, thus answering the question of what happens when both boxes are checked.

❖ **Load by SKU Ratio:** This option loads the container with the specified ratio of SKUs in the Manifest List. When this option is checked, enter the ratio of the respective SKUs in the Qty column.

For example, to load the container with SKUs A, B and C in the ratio of 2:3:1, enter in the Qty column 2, 3 and 1 for SKU-A, SKU-B and SKU-C respectively.

Note: When this option is checked, all SKUs in the Manifest List will be loaded in the ratio specified in the Qty column. You will not get a solution if MaxLoad cannot load all SKUs in the lowest multiple of the specified ratios.

❖ **Minimum Ceiling Clearance:** Minimum ceiling clearance is the minimum amount of air space allowed between the top of the cargo and the ceiling of the vehicle. This option was designed with refrigeration and frozen shipments in mind, which require "breathing" space for freight so that a consistent temperature will remain throughout the vehicle. You can also use this to accommodate the distance needed to maneuver forklifts when loading the vehicle.

Enter a number that represents the minimum amount of empty space required above the cargo. Keep in mind that this space starts at the point above the tallest SKU in the load. If your cargo does not require a clearance between it and the top of the transit vehicle, you can tab through this option and go with the default of zero inches.

❖ **Maximum Vertical Gap:** This option lets you control which spaces MaxLoad Pro joins together for the purpose of loading other items on top.

In the process of loading SKUs and pallets into a transit vehicle, MaxLoad Pro accumulates a list of "leftover" spaces. Whenever possible, MaxLoad Pro will combine neighboring leftover spaces to make bigger spaces. Ideally, these neighboring spaces present a level surface. If they do not present a level surface, you can enter a value in this field that artificially "joins" the two uneven surfaces together, thus creating a larger level surface.

If the difference in height of the two spaces is less than or equal to this value (in English or Metric units), MaxLoad Pro joins together the offending gap, assuming that you will pad or brace the shorter space to bring it up to the height of the taller space.

❖ **Maximum Priority Overlap:** MaxLoad Pro uses this option to determine the placement of the next priority or stop-off. This field allows you to define the distance inside the container that MaxLoad Pro will "mix" items of a different priority or stop-off. This field determines how far forward into another priority or stop-off the front of an item with a lower priority number will be placed.

For example, if maximum priority overlap set to 30 inches, MaxLoad Pro will place the next priority on top of the previous priority, with the front of the lower priority protruding past the end of the higher priority freight by a maximum of 30 inches.

Some shippers cannot mix stop-offs and will build a physical bulkhead of plywood bracing between SKUs of two separate stop-offs. In this case, you would key in a value of zero in this field, which tells MaxLoad Pro to place the next stop-off on the floor, regardless of the fact that there is enough room to load on top.

❖ **Maximum Overhang:** This option is not implemented.

❖ **Days Range:** This option is not implemented.

SKUs in the pick list can be assigned a date and items within the Days Range will be loaded on a transit vehicle and the rest of them goes to the next truck for the next number of days set in the Days Range field.

❖ **Algorithms Button:** This button displays the Algorithm Options dialog box which allows you to determine how MaxLoad Pro will load a manifest. For more information, please refer to the next section.

Algorithm Options

The Algorithm Options dialog box, allows you to determine how MaxLoad Pro will load a manifest.
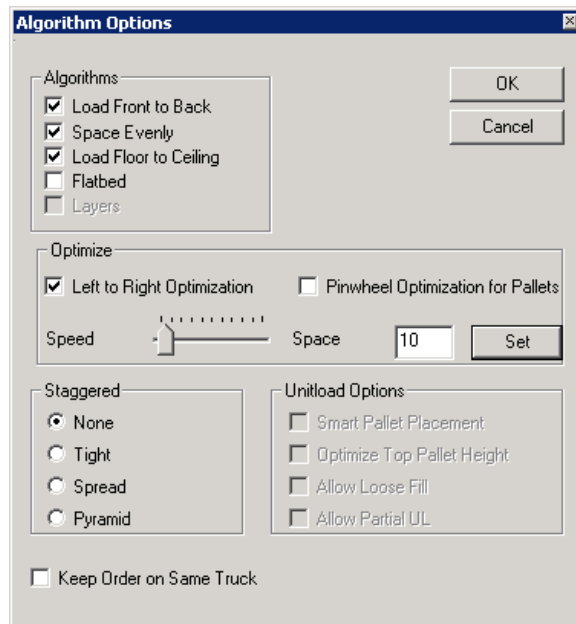
The Algorithm Options dialog box contains the following features:

Algorithms

❖ **Load Front to Back:** Check the box to load the manifest as high as possible and as far forward as possible. This option is useful if you

put together a quote for a customer and want to show the amount of empty floor space available in the vehicle.

Loading front to back may use only half the available floor space, thereby placing most of the loaded weight on the vehicle's drive axles. The overall cubic efficiency of the trailer will likely be very similar, but the difference will be in the placement of the unused cubic space (above the freight with the Load Front to Back option, behind the freight with the Load Floor to Ceiling option).

This option loads the container, starting at the front edge of the container and working towards the opposite edge, stacking mixed or identical SKUs or pallet loads.

❖ **Space Evenly:** Check the box to spread a load over the entire surface area of the container in order to make a more secure load.

Whenever the cubic measurement of the cargo is less than the available cubic capacity of the load – remember that you define parameters of height and weight to define the cubic capacity – an artificial "ceiling" will be created. This lowers the maximum height of the load and forcing it to be spread as equally as possible over the surface area of the vehicle.

❖ **Load Floor to Ceiling:** Check the box to distribute the load evenly across the entire floor space of the transit vehicle, thus balancing the load more evenly between its axles. This algorithm option minimizes unused floor space, making for a more stable load.

❖ **Flatbed:** Check the box to distribute the load as if loading a flatbed truck. Loading starts from the center and spread outwards. The height of the SKUs will also be even out to create a stable load.

❖ **Layers:** The Layers option is only available for Pallet Manifest and is checked by default. This enables MaxLoad to build the mixed pallets with the goal to create stable layers.

Optimize

❖ **Left-to-Right Optimization:** Check the box to have MaxLoad Pro look for the best combination of two placements in order to maximize the space across the width (i.e. left-to-right) of the vehicle

When this box is checked, MaxLoad Pro will attempt to find some combination of two placements to optimize the width of the vehicle. If the box is not checked, MaxLoad Pro will strive to place the largest placement possible in the vehicle, but will not necessarily attempt to maximize the space across the width of the trailer.

It's important to understand that this algorithm does not always provide the best solution, even though the logic behind the algorithm would suggest that it would. Why? Because of the physical dimensions of the SKUs being loaded into a vehicle, there simply may not be a combination of two placements that can maximize the width.

Note: When you select multiple algorithms, MaxLoad Pro will display at least one solution for each algorithm chosen. Additionally, whenever Left-to-Right Optimization is turned on, MaxLoad Pro will calculate two solutions for each algorithm chosen; that is, Front to Back, Floor to Ceiling and Space Evenly.

❖ **Pinwheel Optimization for Pallets:** Check the box to have MaxLoad Pro load pallets in a pinwheel pattern in a container.

❖ **Speed-Space Tab:** Move the sliding bar to optimize the calculation for speed (flush left) or for efficiency (flush right).

The **For Speed** option tells MaxLoad Pro to calculate solutions as quickly as possible.

The **For Space** option tells MaxLoad Pro to take more time and calculate the most space-efficient solutions.

In addition to using the sliding bar, you can also enter a number between 1 (speed) and 200 (space) in the box and click the Set button.

When you click OK, in the Algorithms dialog box, MaxLoad Pro saves your algorithm options to memory and returns you to the Truck Manifest Pick List Screen.

The next time you calculate solutions for this manifest, MaxLoad will display a progress dialog box, as pictured below.

48 Ft. Dry Cargo: Space Evenly L/R		
Qty	1131	
Cubic Eff	94.98%	
CutList Cnt	2869	
Solution Count	136	Stop
Truck	1	
Time Elapsed	00:01	

Notice the following about this dialog box:

- The dialog box displays a running count of the following parameters for the current calculation: quantity, cubic efficiency, cut list count, solution count, truck number and time elapsed.

- A **Stop button** allows you to stop the calculation at any time and gives you the best solution found so far.

Staggered

The staggered pattern is used to load round shape SKUs, like drums, pipes, etc. into a container. MaxLoad Pro gives the following options to load cylindrical SKUs into a container.

❖ **None:** This option assumes that cylindrical objects are rectangular SKUs and loads them in a linear fashion as a shipcase.

❖ **Tight:** Loads as many cylindrical SKUs as possible along the width.

❖ **Spread:** This is to spread the round SKUs during loading.

❖ **Pyramid:** This is for loading the cylindrical SKUs lying in length orientation in the truck, stacking in a pyramid shape.

Unitload Options

These options control how the unitloads will be loaded inside the transit vehicle.

❖ **Smart Pallet Placement:** Check this box to have MaxLoad Pro place stable unitloads and mixed pallets on the floor of the container and then load the uneven palletloads as part of the top layer.

❖ **Optimize Height for Top Layer:** Checking this option gives the software the ability to load partial unitloads, thus more efficiently utilizing the container space.

For Example, suppose you are loading a 48 Ft. Dry Van with 60 inches high unitloads. A 48 Ft. Dry Van is 110 inches in height and you have set a Minimum Ceiling Clearance of 10 Inches. This leaves behind 40 inches of wasted space. Now, with checking the "Optimize Height for Top Layer", MaxLoad Pro will create unitloads with height in the range of 40 inches for the top layer, thus utilizing the container overhead space.

Pallets created under this algorithm will be labeled with SKU name.

❖ **Allow Loose fill on sides:** Checking this option allows MaxLoad Pro to load the selected SKUs as fill items. The SKUs which are left behind as they do not form a complete unitload can be used as fill items, to fill the empty available space in the container.

❖ **Allow Partial Unitloads:** Check this option to place same SKUs not enough to make a full unitload on their own pallets (instead of as loose items) but not mixing them together with other SKUs to create mixed pallets. Pallet loads created under this algorithm will be labeled "PUL-N".

Keep Order on Same Truck

When this option is checked, MaxLoad Pro will keep SKUs with the same order number on the same truck.

Mixed Pallet Tab (Truck Manifest)

The Mixed Pallet tab, allows you to select the pallet to be used and set defaults for loading SKUs onto the mixed-pallet. In order for MaxLoad Pro to use the information you enter on this tab, you must first activate the MP column in the Manifest List by checking the "Use Mixed Pallets" option under the Options tab.

Note: The work you do in this tab is not to be confused with the work you do when you click on the Pallet Manifest icon in the Control Center screen. The Pallet Manifest asks MaxLoad Pro to load the SKUs in the Manifest List onto selected pallet(s). Here, you ask MaxLoad to place the SKUs on the same type of pallet which then be loaded into the selected vehicle(s).

The Mixed Pallet tab contains the following fields.

❖ **Pallet:** Allows you to select from various types of pallets and slipsheets already defined in the Pallet database. Click on the check box the pallet you'd like to use. Selected pallets are shown with the ☑ marks. You can select multiple pallets but MaxLoad will start using the one with the largest available footprint unless the load fails certain parameter requirements including maximum height or overhang.

We ship MaxLoad Pro pre-loaded with a range of popular pallet styles. However, if you can't find a pallet or slipsheet that you want to use for this manifest, you can always define a new one.

For more information, please refer to Chapter 3, Defining MaxLoad Pro Databases.

❖ **Maximum Height Incl. Pallet:** Enter a value representing the maximum height the mixed-pallet is allowed to be. Reminder: the height value includes the pallet height.

❖ **Maximum Weight Incl. Pallet:** Enter the maximum allowable weight of the mixed-pallet. Reminder: the weight value includes the pallet weight.

❖ **Maximum Length and Width Overhang:** These values represent the maximum distance a SKU can hang over the edge of the pallet. The overhang dimension is illustrated below.

For the purposes of building a stable load, we recommend that you limit the maximum overhang to at least one-half the length of the smallest SKU to be used in this manifest. This will ensure that no SKU will have the majority of its mass hanging off the edge of the pallet.

When MaxLoad Pro builds a mixed-pallet load, it will use as much of the "available" space on the pallet as possible. The amount of usable space is determined by the pallet size, the amount of overhang allowed, and the maximum height allowed to build a load.

In effect, MaxLoad Pro uses this information to build invisible "walls" representing the absolute parameters of the mixed-pallet load. In fact, when viewing a load you'll notice that the usable area is shaded a different color to differentiate it from the background of the diagram.

❖ **Maximum Vertical Gap:** Enter the maximum distance that MaxLoad Pro will artificially raise an SKU when it is placed next to a taller SKU. By raising the height of the SKU, MaxLoad Pro combines two separate "spaces" (level surface) on top of each individual SKU into one larger space on top of both SKUs. The larger space gives MaxLoad Pro more freedom when determining which SKU to load next.

❖ **Load into vehicle:** Select from one of the options as how the mixed pallets will be loaded into the vehicle:

  ▪ **By Length:** Select this option to load the mixed pallets such that they are placed with the pallet length along the length of the vehicle.

  ▪ **By Width:** Select this option to load the mixed pallets such that they are placed with the pallet width along the length of the vehicle.

  ▪ **Best Fit:** Select this option to load the mixed pallets in the vehicles where it is most efficient in relation to the other items in the manifest.

Comments Tab (Truck Manifest)

The Comments tab, allows you to enter different information or comments regarding the truck manifest.

The Comments tab contains the following fields.

❖ **Customer:** If desired, enter the name of the customer for the current Truck Manifest. This information will appear in the File Open Dialog box as well as in the Load and Load Front/Back reports.

❖ **Address:** If desired, enter the address of the customer for the current Truck Manifest. This information will appear in the File Open Dialog box as well as in the Load and Load Front/Back reports.

❖ **Status:** Select a status among Error, Fixed, Open and Shipped from the drop-list. This status information will be included in the File Open Dialog Box.

❖ **Delivery Date:** For reference, enter the promised delivery date for the order, represented as Truck Manifest in MaxLoad Pro. You can click to drop-arrow to select the date from the calendar or use the up/down arrow key to select the month, day and year after the parameter is highlighted.

❖ **MFT Comments 1:** Enter comments regarding the truck manifest. Comment 1 appears in the title section of all printouts.

❖ **MFT Comments 2 & MFT Comments 3:** Enter comments regarding the truck manifest to appear on Load and Load Front/Back view printouts only. Comments 2 appear in the header section while Comments 3 appear in the footer section above the customer information.

Weight Tab (Truck Manifest)

To set up weight limits for king pin and axles based on different regions of the country.

❖ **Weight Limit:** Check this box to activate the weight limit option, which allows you to set up weight limits for the kingpin and axles based on different regions of the country.

❖ **Region:** Use the drop-down list to select a region of the country. If no regions are available from the drop list, click on the Edit Regions button to create new regions.

❖ **King Pin:** Enter the weight limit for the king pin – based on regulations in the selected region – in pounds or kilograms, depending on the Units selected.

❖ **Axles:** Enter the weight limit for the axles based on regulations in the selected region.

❖ **Edit Regions Button:** The Edit Region allows you to set up new regions, edit or delete existing regions.

To **create** a new region, start from the Region dialog box and follow these instructions

1. Click on the Edit Regions button and the Region dialog box appears, as pictured here.

2. Click on the New button.

3. Enter information in the following fields:

   - **Region:** Enter the name of the new region e.g. Texas.

   - **King Pin:** Enter the weight limit for the king pin.

   - **Axles:** Enter the weight limit for the axles.

   - **Steer Axle:** Enter the weight limit for the tractor steer axle.

   - **Drive Axle:** Enter the weight limit for the tractor drive axle.

4. If all the new region information is correct, click on the Save button. MaxLoad Pro saves the new region to the database.

To **edit** a region, start from the Region dialog box and follow these instructions:

1. Use the Region drop-down list to select the region you want to edit.

2. Edit king pin, trailer axle, tractor steer and drive axle weights as necessary.

3. If all the updated weights are correct, click on the Save button.

To **delete** a region, start from the Region dialog box and follow these instructions:

1. Use the Region drop-down list to select the region you want to delete.

2. Click on the Delete button

SKU List (Truck Manifest)

The SKU List, as pictured below, displays a list of all SKUs (shipcases, drums, etc.) in the SKU database. This includes SKUs defined using the Define SKU function as well as SKUs imported with the import function. All SKUs in this list are available for loading into a vehicle, onto a pallet or into a tote. SKUs will automatically appear in this list as they are defined.

When you click on a SKU, a blue bar highlights it. The gray vertical scroll bar to the right of the box scrolls through the list and allows you to view more SKUs.

SKU	Description	Dims	Wgt
Refrigerator	Model 363-2	32x29x65 (in)	87 (lb)
TV	Surround Sound Plus	42x32x28.5 (in)	80 (lb)
Large Drum	Large Drum Sample	30x30x50 (in)	60 (lb)
Tissue Paper	500 Sheet 20 Ct.	22.38x16.38x1	6 (lb)
Stove	5 Burner	41x37x42 (in)	500 (lb)
Hand Towels	500 Sheet Role	20x16x24 (in)	5 (lb)
Crate #1	Sample Crate 1	61x61x45 (in)	5 (lb)
Computer	Pentium 200 mhz.	31x21x26 (in)	40 (lb)
Stereo	Surround Sound	29x17x12 (in)	21 (lb)
Case 4	Sample Case 4	29x21x17.5 (in)	14 (lb)
Lamps	Model 1524	24x21x36 (in)	12 (lb)
Crate #5	Sample Crate 5	71x51x55 (in)	12 (lb)
Case 2	Sample Case 2	19x13x16 (in)	11 (lb)
Pallet #5	UL Example 5	48x48x50 (in)	105 (lb)
Pallet #2	UL Example 2	50x42x60 (in)	102 (lb)

This SKU List contains useful information about all the SKUs. All of this information is designed to help you make quick and easy decisions about the items you're shipping.

❖ **SKU Type:** This column contains graphical icons representing the SKU Type: palletload, shipcase, drum, tote or mixed pallet.

❖ **SKU:** This column contains the SKU Number, as defined in the Define SKU screen. This serves as the unique identifier for each of the product items in the database.

❖ **Description:** This column displays the full description of the SKU. As with the SKU column, contents of this column appear exactly as they are defined in the Define SKU screen.

❖ **Dims:** This column displays the dimensions of each individual SKU. The dimensions will appear either in English or Metric units, depending on which units are selected in the Toolbar.

❖ **Wgt:** This column displays the defined weight of the SKU. As with the dimensions column, this column will either appear in English or Metric units, depending on which units are selected in the Toolbar.

❖ **SKU Info 1, SKU Info 2, & SKU Info 3:** These fields display the information saved under the Graphics tab while defining the SKU.

Manifest List (Truck Manifest)

The Manifest List, displays a running list of all the selected SKUs to be loaded into the container. As you select SKUs from the SKU List (by double clicking the SKU), they automatically appear in the Manifest List. The Manifest List allows you to define specifics about the load; it contains both input fields and checkboxes that help tailor this load to your particular needs.

-	SKU	Qty	Prior	UL	MP	Order#	% Cube	% Wgt
	Barrel	1	1	☐	☒		0.9 %	0.0 %
	Case 1	1	1	☐	☒		0.1 %	0.0 %
	Computer	1	1	☐	☒		0.3 %	0.1 %
	Total						1.4 %	0.1 %

Let's take a look at the Manifest List.

❖ **SKU Type:** This column contains graphical icons representing the SKU Type: palletload, shipcase, drum, tote SKU or Pallet SKU.

❖ **SKU:** This is the SKU Number, as defined in the Define SKU screen.

❖ **Qty:** The Quantity column displays the number of a specific SKU or palletloads to be loaded in the container(s).

If a palletload SKU is added to the Manifest List, the quantity will represent the number of palletloads but not the number of individual cartons on this palletload, which in turn will be displayed under the Piece Count column as described later.

Note: If the option "Load by SKU Ratio" under the Options tab is checked, the Qty column will represent the ratios of quantities of all the respective SKUs in the Manifest List.

❖ **SO/Prior:** This column serves a dual purpose, allowing you to build a load using either Priority Numbers or Stop-Offs in the calculations. The Manifest List shows one field or the other – Stop-Offs or Priority – at all times. To specify loading method to use, go to the Options tab and select one or the other. If you don't need to use either loading method, simply leave all numbers in this column the same; that is, all a stop off or priority of "1".

The **Stop-Off** function allows you to consider the loading sequence when various drop-shipments need to be made. If you enter "1" in this column, MaxLoad Pro will place this item at the end of the trailer, where it can be easily reached at the first stop. A stop-off value of "2" places the item further forward in the vehicle, accessible at the second stop-off.

If there's not enough room to load the entire stop-off onto the vehicle, MaxLoad Pro will remove all SKUs that made up the stop-off, and will place all SKUs for the stop-off onto the Cut List. **MaxLoad Pro will not partially load a stop-off**.

However, there is one exception to this functionality: If the first stop-off will not fit into the selected vehicle, MaxLoad Pro will break up the stop-off in an effort to load something. While we understand that this functionality does sacrifice cubic utilization, our customers have indicated that this is the preferred way to handle this situation.

The **Priority** function allows you to define the relative importance of a particular SKU when loading into a vehicle. All SKUs with a priority of "1" will be loaded before SKUs with a priority of "2," which are loaded before SKUs with a priority of "3," and so on. This means that all SKUs with a Priority of "1" will generally be loaded before (and therefore in the front of the vehicle) SKUs with a lower priority value.

If there's not enough room to load all SKUs with a particular priority value, MaxLoad Pro will load as much of the priority as possible, leaving the remaining SKUs to be placed on the Cut List. In other words, **priorities can be split-up, unlike stop-offs.**

❖ **UL:** Allows you to place an SKU onto a unitload "on the fly." If you've previously created a unitload for a particular SKU, you can simply activate this checkbox and move on to the next field. MaxLoad Pro will load these SKUs using the pallet pattern you selected in the Create Unitload screen when you defined the SKU. If you've not

created a unitload for this SKU, the field will be grayed out, meaning that you cannot activate this field. In this case, you'll need to create a unitload in the Define SKU screen, then come back and activate the field.

For more information, please refer to Chapter 3, Defining MaxLoad Pro Databases.

Checking this box does not guarantee that all SKUs will be loaded as part of a unitload. How it is loaded will depend on the number of SKUs that make up a complete unitload as defined in the Create Unitload screen.

For example, suppose you've created a unitload that consists of 44 cases of peanut butter. If you want to load 88 cases of peanut butter, MaxLoad Pro will load all cases onto two complete unitloads. However, if your order calls for 70 cases of peanut butter, MaxLoad Pro will load one complete unitload (44 cases), and will either load the remaining 26 cases on the floor or as part of a mixed-pallet (if the Mixed Pallet column is checked).

The Unitload functionality allows you to either floor load a selected SKU or load it as a unitload. You may find that this feature comes in handy when you have products destined for two customers, but one requires SKUs to be shipped on pallets, while the other does not.

If you want to do this, simply select the SKU twice from the SKU List box. This action will create two separate line items in the Manifest List. Enter a quantity to be loaded as part of a unitload, then check the UL box. Do the same for the second line item of the SKU, but this time do not check the UL box. This will designate this group of SKU to be floor-loaded.

You'll notice that this field may already be activated when you select a SKU from the SKU List. This occurs when you activate the "Unitize" field when you define a SKU. Remember, that you'll need to check this box even if only one SKU is to be shipped as part of a unitload. The column must be displayed in order to activate the UL field.

Note: UL and MP columns appear in the Manifest List only if the "Use Unitloads" and /or "Use Mixed Pallets" options are checked under the Options tab, respectively.

❖ **MP:** MP stands for Mixed Pallet i.e. a palletload consisting of multiple kinds of SKUs. Creating a mixed-pallet on the fly allows you to choose a pallet type and have MaxLoad Pro load SKUs onto that pallet using either default parameters or the options you select through the Mixed-Pallet tab.

MaxLoad Pro builds a default mixed pallet by layers, meaning that it will first look for full layers of SKUs before mixing and matching those layers. MaxLoad Pro will not build a default mixed pallet using a column-building method. Why not? The results of this method are not always considered to be very stable.

When you check the MP box, you assign all SKUs in this row to either a unitload (if the UL box is checked) or to a mixed pallet. When the MP box is checked, this particular SKU will not be floor-loaded. (unless you are using the Fill Item option) Using the scenario in the Unitload section, if 26 cases of peanut butter remain, all 26 cases would be loaded onto a mixed pallet when this column is checked.

MaxLoad Pro builds a default mixed pallet by first looking to see if a unitload has been created for the SKU in question. It will also determine if any parameters are similar – pallet, overhang, maximum height, etc. If a unitload has been created and the parameters are the same, MaxLoad Pro will build full layers based on the patterns used when creating the unitload. Once full layers have been built, the remaining items will be loaded loosely on top of the mixed-pallet.

Example: Suppose we've created a unitload that consists of four layers of peanut butter cases; each layer consists of 11 cases. Taking into consideration the remaining 26 cases that are to be placed onto a mixed pallet, and assuming all parameters are the same, MaxLoad Pro will load two layers of peanut butter (using the same pallet pattern as the complete unitload), comprising 22 cases. Then MaxLoad Pro will load the remaining four cases loosely on top of the mixed pallet.

If any parameters have changed, this loading philosophy is thrown "out the window," and MaxLoad Pro will determine the most efficient way to load the mixed pallet, taking into consideration the new loading parameters.

❖ **Order #:** You have the option of assigning an order number to each SKU or group of SKUs that you ship. This column simply provides information that may be useful to your logistics staff. Information keyed into this field will be available on certain printouts, which in turn can be used when loading the vehicle or pallet.

On the Options tab, you can then tell MaxLoad Pro to keep items within the same order together. If you do not use order numbers, you can uncheck the "Keep Same Orders Together" option under the Options tab.

❖ **% Cube:** This field specifies the total volume of the specified quantity of that particular SKU, UL, or MP will occupy in the container. You

can use this number to get an "estimate" of how many vehicles you will need.

❖ **% Wgt:** This field specifies the total weight of the specified quantity of that particular SKU, UL, or MP will weight with respect to the container.

❖ **SKU Info 1, SKU Info 2, & SKU Info 3:** These fields display the information saved under the Graphics tab while defining the SKU.

❖ **Extra1 & Extra2:** Not implemented.

❖ **Site 1, Site 2, Site 3 & Site 4:** These fields display cost related parameters, please contact TOPS for more information.

❖ **Point Value:** This field displays cost related parameters, please contact TOPS for more information.

❖ **Piece Count:** This field displays the total number of items which is contained within a given SKU, if a piece count has been provided during the SKU definition process. For example, if you have told MaxLoad SKU Shampoo has a piece count of 24 (meaning each box of SKU Shampoo contains 24 bottles of shampoo), then when you enter a quantity of 50 for SKU Shampoo, the Piece Count column will give a number of 1200.

❖ **Fill Item:** When checked, this option instructs MaxLoad Pro to use the referenced SKU as fill items, meaning this SKU will be used to fill all available empty space in the container after the other SKUs (non fill items) are loaded.

Add the SKU to be used as fill item to the Manifest List in the usual manner and enter the quantity. If there is still available space, increase the quantity of the fill item or select a second SKU as fill item.

However, if you specify more fill items than required to fill the void space, they will be placed in the CutList BUT the Next Truck button will not be available.

❖ **Cube:** This field specifies the total volume of the specified quantity of that particular SKU, UL, or MP.

❖ **Wgt:** This field specifies the total weight of the specified quantity of that particular SKU, UL, or MP.

Adding or Updating SKUs to the Manifest List

You can add SKUs to the Manifest List by double clicking the SKU in the SKU list or use the SKU input list shown below to add the SKU information.

Type in the first few characters of the SKU Number in the field below will quickly bring you to the SKU in the list for selection. Enter the quantity and other information including priority, UL, MP (if enabled) and order number, then click on the Add>> button to add the SKU to the Manifest List.

| Stereo | Qty | Prior | ☑ UL ☐ MP Order# | Add >> |

To update existing SKU information in the Manifest List, highlight the SKU in the list. Make any corresponding changes and click on the Update>> button.

| Case 4 | Qty 50 | Prior 1 | ☑ UL ☐ MP Order# | Update >> |

To quickly enable Use Unitload or Use Mixed Pallets for all SKUs in the Manifest List, click the right mouse button to access the context menu as shown below and select the corresponding option.

SKU	Qty	Prior	UL	MP	Order#	% Cube	% Wgt	Cube
Chair	5	0	☒	☐		15.6 %	0.5 %	63180.0000
Case 1	1	1	☒	☒		Properties	0.0 %	6555.00000
Case 1	10	1	☒	☐		Check All UL	0.3 %	6555.00000
Case 1	1	1	☒	☒		Uncheck All UL	0.0 %	6555.00000
Case 2	30	1	☒	☐		Check All MP	0.8 %	3952.00000
Case 4	50	1	☒	☐		Uncheck All MP	1.8 %	10657.5000
Stereo	1	1	☒	☒		Edit	0.1 %	5916.00000
Stereo	1	1	☒	☒			0.1 %	5916.00000

Changing the Display of the SKU and Manifest List

❖ **List Items:** You can control what type of SKU data or Manifest information will be displayed in the SKU or Manifest List via the Edit | Properties menu function by following these steps:

1. Activate the SKU List or the Manifest List by clicking and highlight any one of the SKU item in the list.

2. Go to the Edit Menu in the menu bar and select Properties, which opens the Properties dialog box.

Properties

- [x] -
- [x] SKU
- [x] Qty
- [ ] SO
- [x] Prior
- [ ] UL
- [x] MP
- [ ] Tote
- [x] Order#
- [x] % Cube
- [x] % Wgt
- [x] SKU Info 1
- [ ] SKU Info 2
- [ ] SKU Info 3
- [ ] Extra1
- [ ] Extra2
- [ ] Piece Count
- [x] Fill Item
- [ ] Site 1
- [x] Site 2
- [ ] Site 3
- [ ] Site 4
- [ ] Point Value
- [x] Cube
- [x] Wgt

OK   Cancel

Properties

- [x] -
- [ ] -
- [x] SKU
- [x] Description
- [x] Dims
- [x] Wgt
- [ ] SKU Info 1
- [ ] SKU Info 2
- [ ] SKU Info 3

OK   Cancel
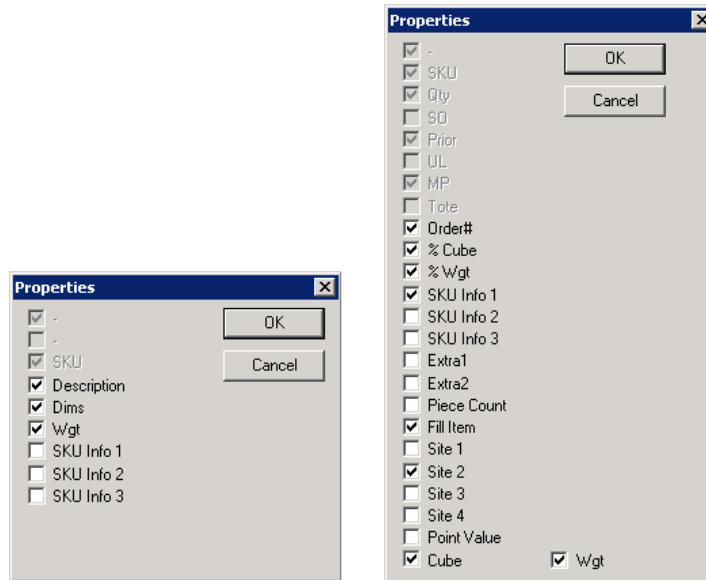
3. Click the box to remove or add items that you would like to be included in the SKU List and Manifest List respectively.

Note: A short cut to access the Properties dialog box is to click the right mouse button while the mouse cursor rests inside the respective area.

❖ **Sort Order:** The SKU and Manifest List appears in ascending or descending order, first numerically then alphabetically, with respect to the selected SKU field. To sort on a particular filed, simply click on the corresponding column heading (SKU, Description, Dims, Wgt, or SKU Info) in the SKU List. To sort the list in the reverse order, click on the same column heading again.

For the Manifest List, you can only sort on SKU, Qty, Prior(ity)/SO or Order #.

❖ **Column Width:** You can adjust the width of each column in the SKU or Manifest List to accommodate all the information in each column. To expand a column, follow these instructions:

1. Position the mouse pointer on the edge of the column heading you want to expand. For example, if you want to expand the Description column, place the mouse pointer (arrow) at the divider line between the Description and Dims columns, as pictured below.

The mouse pointer changes shape from a single arrow to a double-ended arrow, as pictured below.

SKU List		
Description	Dims.	
Vanilla Ice Cream	13x13x24	1
Milk	20x20x45	5
	160x60x60	6

2. With the cursor as a double-ended arrow, now click on the left mouse button and drag the column to the desired width. You can either expand or contract the width of the column.

3. Once the column is expanded to the desired width, release the left mouse button. The double arrow disappears, replaced with the standard mouse pointer. When you release the mouse button, the new column width will be set.

❖ **View Size of the Lists:** The position of the SKU and Manifest List is fixed and always displays in the lower portion of the screen. Regardless of the manifest or the tab selected, the SKU List and Manifest List will always appear. However, you can adjust the view size of the two lists using these methods.

■ **Split View ❶:** By placing the mouse cursor on the vertical bar dividing the two lists, the cursor will change to a ╫. Now click on the left mouse button to move the dividing bar to adjust the size of the views for the two lists.

■ **Full Width View ❷&❸:** By clicking on the title bars of the two lists, the List will change its size to display all selected fields for the List as illustrated below.

SKU List

	SKU	Description	Dims	Wgt
	Tote #3 Sku	Tote Manifest: Cookie/Chip	45x40x40 (in)	0 (lb)
	Toilet Tissue	Extra Soft Brand	24x10x19.5 (in)	0.06 (lb)
	Bulk Frozen Yogurt	Swirl Flavor Yogurt	10x10x12 (in)	0.08 (lb)
	Saltines	Low Fat 20 Ct.	24x19.5x16 (in)	0.25 (lb)
	Case 5 Tote	Tote Manifest: Case 5	20.31x20.31x15.65 (in)	0.5 (lb)
	Potato Chips	Snack Size 50 Ct.	24x16x10 (in)	0.75 (lb)
	Barrel	Drum	35x35x40 (in)	1 (lb)
	Cookies	Oreo 20 Count	10x9.5x11 (in)	1 (lb)
	Heavy		35x35x40 (in)	1 (lb)
	Case 1	Sample Case 1	23x19x15 (in)	10 (lb)
	Case 5	Sample Case 5	19x15x12 (in)	10 (lb)
	Crate #2	Sample Crate 2	55x32x39 (in)	10 (lb)
	Pallet #1	UL Example 1	49x41x55 (in)	101 (lb)
	Pallet #2	UL Example 2	50x42x60 (in)	102 (lb)
	Pallet #3	UL Example 3	48x40x55 (in)	103 (lb)

Manifest List

	SKU	Qty	Prior	UL	Or
	Computer	30	1	☐	
	Case 3	300	1	☐	
	Case 2	168	1	☒	
	Case 1	28	1	☐	
	Bulk Frozen Yogu	300	1	☐	
		826			

SKU List

	SKU	
	Tote #3 Sku	Tote M
	Toilet Tissue	Extra S
	Bulk Frozen Yogurt	Swirl F
	Saltines	Low Fa
	Case 5 Tote	Tote M
	Potato Chips	Snack
	Barrel	Drum
	Cookies	Oreo 2
	Heavy	
	Case 1	Sample
	Case 5	Sample
	Crate #2	Sample
	Pallet #1	UL Exa
	Pallet #2	UL Exa

Manifest List

	SKU	Qty	Prior	UL	Order#	% Cube	% Wgt	Piece Count	Fill Item
	Computer	30	1	☐		23.8 %	3.5 %	30	☐
	Case 3	300	1	☐		17.6 %	13.2 %	300	☒
	Case 2	168	1	☒		31.2 %	5.4 %	168	☐
	Case 1	28	1	☐		8.6 %	0.8 %	28	☐
	Bulk Frozen Yogu	300	1	☐		16.9 %	0.1 %	300	☒
		826				98.1 %	23.1 %	826	

- **Full Screen View ❹:** By clicking on the full screen icon ⧉ to the right of the Manifest List title bar, this will bring both lists to full screen size. This will give you a better view to add SKUs to the Manifest List. To restore the Tab view and the g.o.d. graphics window, click the restore icon ⧉ to the right of the Manifest List title bar.

Defining a Truck Manifest

To define a truck manifest, start from the Control Center and follow these instructions:

1. Under the Truck Manifest box, click on the New button. The Manifest Pick List Screen appears.

2. Double click on the vehicle from the list of Available Vehicles. The selected vehicle(s) display in the Selected Vehicles list.

3. Select the SKUs to be loaded from the SKU List by double clicking the SKUs.

4. In the Manifest List, enter a quantity and specify other parameters like stop-off/priority, order number, etc.

5. On the Options tab, designate which SKUs are to be loaded as part of a unitload or together on a mixed-pallet.

6. If everything is correct, click on the Calculate button. MaxLoad Pro calculates solutions based on your input.

7. Select the truck manifest solution from the Sol List that best meets your needs.

8. From the Menu Bar, open the File menu and select Save As and the File Save As dialog box appears.

9. In the blank line at the top of the box, replace the word "Untitled" with the name of this truck manifest and click Save.

Note: Chapter 8, Viewing a Solution, describes in detail the options you have once a manifest has been calculated. Chapter 9, Editing a Solution, discusses how to use the Editor to customize a solution. Refer to those chapters for more details.

Truck Manifest versus Single SKU Manifest for Single SKU Loads

If you're loading only single-SKUs into a container, you can use either the Truck Manifest or the Single-SKU Manifest as described on chapter 7. The major differences between the two functions are briefed as below:

❖ **Quantity Specification:** In Single-SKU Manifest, it is not necessary to enter a quantity for the SKU to be loaded. MaxLoad Pro will cube out the vehicle using as many of the specified SKU as possible. You can however, tell MaxLoad Pro whether to load as SKU as floor loads or unitloads.

With Truck Manifest, you must provide a quantity for the SKU in order for MaxLoad Pro to find a load solution. If the solution calls for more than one vehicle, adjust the quantity accordingly.

❖ **Load Editing:** There is no edit function for Single-SKU loads. You can select the different loading pattern styles (under the Options Tabs) only but with Truck Manifest, you have full 3D drag-and-drop edit capabilities.

❖ **Algorithm Fine Tuning:** With Single-SKU loads, SKUs can only be loaded as unitloads or straight floor loads. But with Truck Manifest, the single SKUs can be loaded in combination of unitloads, partial unitloads (Optimize Height for Top Layer) or loose items.

❖ **Ceiling Clearance Requirement:** With Truck Manifest, you can specify a minimum ceiling clearance to accommodate forklift or other maneuvers but with Single-SKU, your work around is to reduce the loadable height of the vehicle.

Loading a Pallet Manifest

Introduction

This chapter explains how to use MaxLoad Pro to load a pallet manifest. This chapter walks you through the process you'd most likely follow when building a palletload, including the following topics:

❖ Pallet Manifest Pick List Screen

- Mixed Pallet Tab
- Options Tab
- Algorithm Options
- Comments Tab
- SKU List
- Manifest List

❖ Defining a Pallet Manifest

❖ Printing a Pallet Manifest

Pallet Manifest Pick List Screen

Start from the Control Center and click on the New button under the Pallet Manifest icon. The Pallet Manifest Pick List Screen appears as show here.
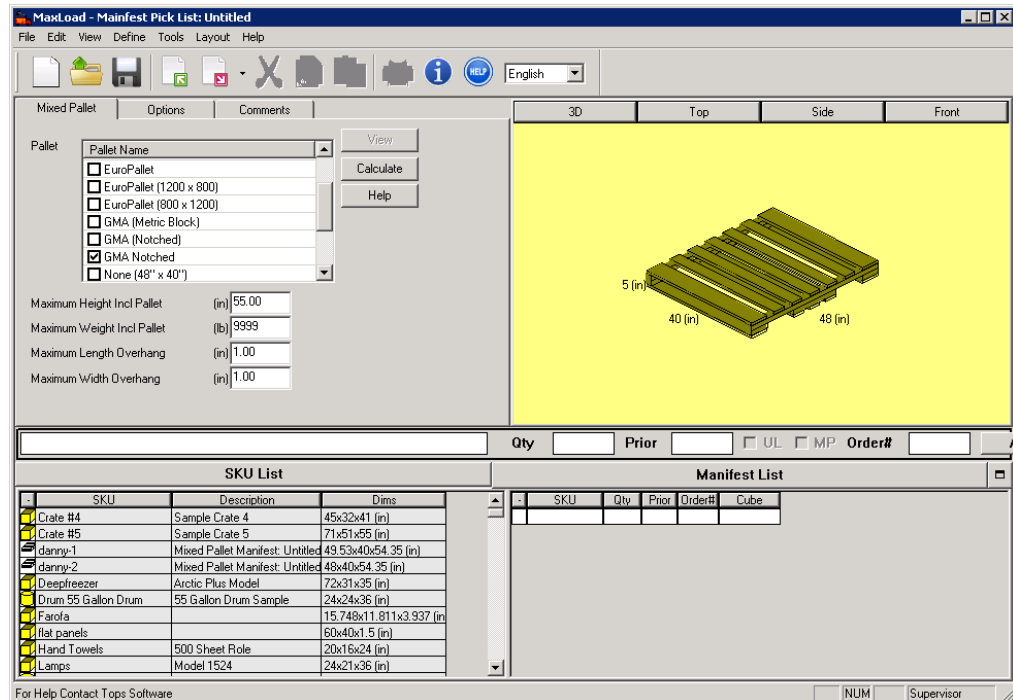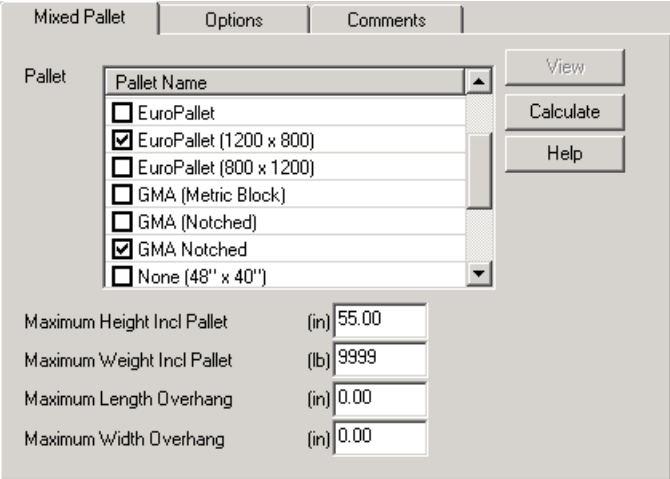
This screen is comprised of the following components:

❖ **Mixed Pallet Tab:** Allows you to select the pallet(s) and enter the overall allowable height, weight, and overhang factors for the load.

❖ **Options Tab:** Allows you to enter parameters for loading the pallet(s).

❖ **Comments Tab:** Allows you to enter comments regarding the pallet manifest, which appear on the printed reports.

❖ **g.o.d. Window:** Displays a 3-dimensional graphic image of the pallet.

❖ **SKU Input:** Allows you to enter SKU, quantity and other load parameters in the manifest list.

❖ **SKU List:** Displays a list of all SKUs available for loading onto a pallet.

❖ **Manifest List:** Running list of selected SKUs to be loaded onto pallet(s). Here you even define the specifics about the load, like priority, quantity, etc.

❖ **View Button:** Allows you to view a load without recalculating it. This feature works only if you have previously built a load and is used primarily after you have made changes to the load in the Editor screen.

❖ **Calculate Button:** Allows you to calculate a pallet manifest.

❖ **Algorithms Button:** Allows you to select the algorithms when creating the pallet manifest.

Mixed Pallet Tab (Pallet Manifest)

The Mixed Pallet tab, pictured below, allows you to select a pallet and enter the overall height, weight and overhang data for the load.

The Mixed Pallet tab contains the following fields:

❖ **Pallet:** Allows you to select from various types of pallets and slipsheets already defined in the Pallet database. You can select multiple pallets for the manifest and evaluate which one works the best for you.

We ship MaxLoad Pro pre-loaded with a range of popular pallet styles. However, if you can't find a pallet or slipsheet that you want to use for this manifest, you can define a new one as described in Chapter 3.

Note: Similar to using multiple vehicle types in Truck Manifests, turn off **CalcAllTrucks** if you want to see solutions for each selected pallet types.

❖ **Maximum Height Incl. Pallet:** Enter the maximum height of the mixed pallet load. Remember to include the height of the pallet in this value. MaxLoad Pro will not calculate any solution that violates this maximum height.

Theoretically, there's no limit to the height to which MaxLoad Pro can build a mixed pallet. The only limit is the value that you enter into this field. Most mixed pallets are built to a height of 40-70 inches.

❖ **Maximum Weight Incl. Pallet:** MaxLoad Pro will not calculate any solutions that violate the defined maximum weight for the mixed pallet. As with the Maximum Height field, remember that this value includes the weight of the pallet too. You can verify the defined weight through the Define Pallet screen. For more information, please refer to Chapter 3, Defining MaxLoad Pro Databases.

Again, there's no theoretical limit to the amount of weight you can enter in this field. However, you may want to check with the pallet manufacturer or shipping personnel to determine the maximum weight your pallet can handle.

❖ **Maximum Length and Width Overhang:** These values represent the maximum distance a SKU can hang over the edge of the pallet. The overhang dimension is illustrated below.

For the purposes of building a stable load, we recommend that you limit the maximum overhang to at least one-half the length of the smallest SKU to be used in this manifest. This will ensure that no SKU will have the majority of its mass hanging off the edge of the pallet.

When MaxLoad Pro builds a mixed-pallet load, it will use as much of the "available" space on the pallet as possible. The amount of usable space is determined by the pallet size, the amount of overhang allowed, and the maximum height allowed to build a load.

In effect, MaxLoad Pro uses this information to build invisible "walls" representing the absolute parameters of the mixed-pallet load. In fact, when viewing a load you'll notice that the usable area is shaded a different color to differentiate it from the background of the diagram.

Options Tab (Pallet Manifest)

The Options tab, pictured below, allows you to further customize your mixed pallet manifest by setting various loading parameters. To access this screen, use the mouse to click on the Options tab button found at the top of the Mixed Pallet Manifest Pick List screen.

Note options not available to the Pallet Manifest will be grayed out.

The Options tab contains the following fields:

❖ **Load By Priority:** When a SKU is assigned a high-priority number, MaxLoad Pro loads it before loading a SKU with a lower priority. MaxLoad Pro loads priority 1 before priority 2, which is loaded before priority 3.

❖ **Load By Stop Off:** When you load by stop off, the loading method is just the opposite of Load By Priority. Stop off 1 is loaded after stop off 2, and therefore closest to the rear door; stop off 2 is loaded after stop o-ff 3, etc.

Note: The following two options (Keep Same Orders Together and Keep Like SKUs Together) work in conjunction with stop-offs and priorities. In other words, if you build a load with two stop-offs, MaxLoad Pro will keep like SKUs or orders together within the individual stop-off or priority number.

Bear in mind that checking either one of these boxes could potentially result in loss of cubic utilization. While we can't definitively say how these options will affect a load, it's safe to say that these options will affect MaxLoad Pro's calculations, thus making it possible that the load will be affected negatively.

❖ **Stop & Priority:** Check this option when you want to add priority to each Stop Off.

❖ **Keep Same Orders Together:** This option is linked directly to the Order # field in the Manifest List. When you key in an order number, MaxLoad Pro gives you the option to group SKUs from the same order together when loading. If you do not choose to input order numbers, this field will be meaningless, and activating the checkbox will not affect the placement of SKUs within your manifest.

❖ **Keep Like SKUs Together:** This option is very similar to the Keep Same Orders Together option. Activating this option tells MaxLoad Pro to load all products with the same SKU number together. The Keep Like SKUs Together checkbox takes precedence over the Keep Orders Together checkbox, thus answering the question of what happens when both boxes are checked.

❖ **Load by SKU Ratio:** This option loads the pallet with the specified ratio of SKUs in the Manifest List. When this option is checked, enter the ratio of the respective SKUs in the Qty column.

For example, to load on the same pallet with SKUs A, B and C in the ratio of 2:3:1, enter in the Qty column 2, 3 and 1 for SKU-A, SKU-B and SKU-C respectively.

Note: When this option is checked, all SKUs in the Manifest List will be loaded in the ratio specified in the Qty column. You will not get a solution if MaxLoad cannot load all SKUs in the lowest multiple of the specified ratios.

❖ **Maximum Vertical Gap:** This option allows you to control which spaces MaxLoad Pro joins together for the purpose of loading other items on top.

In the process of loading SKUs onto a mixed pallet, MaxLoad Pro accumulates a list of "leftover" spaces. Whenever possible, MaxLoad Pro combines neighboring leftover spaces to make larger spaces. Ideally, these neighboring spaces present a level surface. If they do not present a level surface, you can enter a value in this field that artificially "joins" the two uneven surfaces together, thus creating a larger level surface.

If the difference in height of the two spaces is less than or equal to this value (in English or Metric units), MaxLoad Pro joins together the offending gap, assuming that you will pad or brace the shorter space to bring it up to the height of the taller space.

❖ **Maximum Priority Overlap:** MaxLoad Pro uses this option to determine the placement of the next priority or stop-off. This field allows you to define the distance on the pallet that MaxLoad Pro will "mix" items of a different priority or stop-off. This field determines how far forward into another priority or stop-off the front of an item with a lower priority number will be placed.

For instance, if the value in this field is 30 inches, MaxLoad Pro will place the next priority on top of the previous priority, with the front of the lower priority protruding over the top of the higher priority by a maximum of 3 inches. This would leave a 3 inch gap between the two loading of two priorities

❖ **Algorithms Button:** This button displays the Algorithm Options dialog box, which allows you to determine how MaxLoad Pro will load a manifest

Algorithm Options

The Algorithm Options dialog box, allows you to determine how MaxLoad Pro will load a manifest. The sliding calculation bar allows you to calculate loads based on speed or efficiency. MaxLoad also features a progress bar and dialog box that display how your load is being configured while it is calculating.
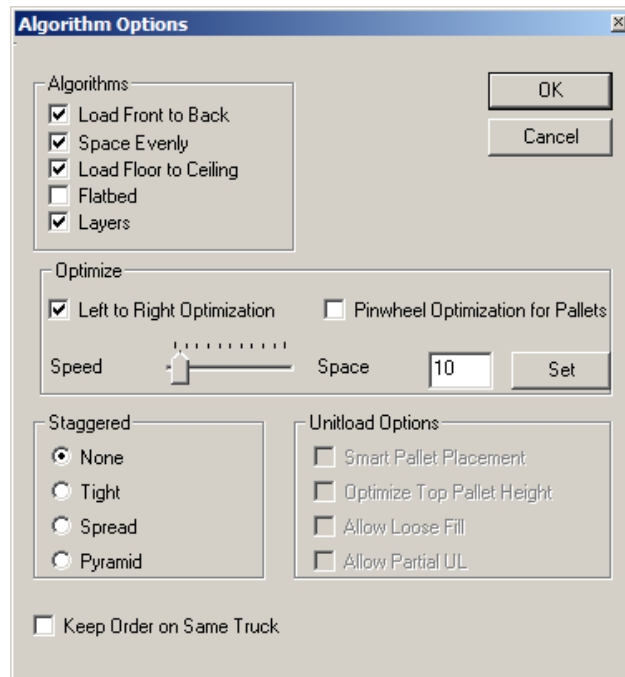
The Algorithm Options dialog box contains the following features:

Algorithms

❖ **Load Front to Back:** Loads a pallet starting at one edge of the pallet and working toward the opposite edge, stacking mixed or identical-sized SKUs in columns.

❖ **Space Evenly:** Essentially spreads a load over the entire surface area of the pallet in order to make a more secure unitload. Whenever the cargo's cubic measurement is less than the unitload's available cubic capacity – remember that you define parameters of height, weight and overhang to define the cubic capacity – MaxLoad Pro creates an artificial "ceiling." This lowers the maximum height of the load, forcing it to be spread as equally as possible over the surface area of the pallet.

❖ **Load Floor to Ceiling:** MaxLoad Pro first takes the largest, strongest SKU it can find, starting at the base of the pallet and builds the load upwards. It always loads the larger boxes first, with smaller boxes on top. This loading method may result in mixed layers of products, depending on the quantities chosen and other parameters (e.g. stacking strength).

❖ **Flatbed:** Not applicable for Pallet Manifest.

❖ **Layers:**   The Layers algorithm will be checked automatically by default for Pallet Manifest. When Enabled, MaxLoad Pro will group SKUs of similar heights to form stable layers for the entire pallet.

Optimize

❖ **Pinwheel Optimization for Pallets:** This feature is not available for loading pallet.

❖ **Left-to-Right Optimization:** Check the box to optimize the manifest load from left to right.

Looks for the best combination of two placements in order to maximize the space across the width of the pallet. When you use this option, MaxLoad Pro attempts to find some combination of two placements to optimize the width of the pallet. If the box is not checked, MaxLoad Pro will strive to place the largest placement possible in the pallet, but won't necessarily attempt to maximize the space across the width of the pallet.

It's important to understand that this algorithm does not always provide the best solution, even though the logic behind the algorithm would suggest that it would. Why not? Because of the physical

dimensions of the SKUs being loaded onto a pallet, there simply may not be a combination of two placements that can maximize the width.

❖ **Speed-Space Tab:** Move the sliding bar to optimize calculation for speed (flush left) or for efficiency (flush right)

The **For Speed** option tells MaxLoad Pro to calculate solutions as quickly as possible.
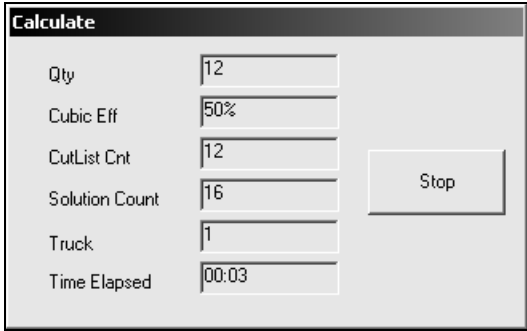
The **For Space** option tells MaxLoad Pro to take more time and calculate the most space-efficient solutions.

In addition to using the sliding bar, you can also enter a number between 1 (speed) and 200 (space) in the box and click the Set button.

When you click OK, in the Algorithms dialog box, MaxLoad Pro saves your algorithm options to memory and returns you to the Pallet Manifest Pick List Screen.

The next time you calculate solutions for this manifest, MaxLoad will display a progress dialog box.

Note: When you select multiple algorithms, MaxLoad Pro will display at least one solution for each selected algorithm. Also, whenever Left to Right Optimization is turned on, MaxLoad Pro will calculate two solutions for each selected algorithm.

Notice the following about the Progress Dialog Box :

■ The dialog box displays a running count of the following parameters for the current calculation: quantity, cubic efficiency, cut list count, solution count, container number and time elapsed.

■ A Stop button allows you to stop the calculation at any time and gives you the best solution found so far.

Staggered

This algorithm is used to load round shape SKUs. Due to the cylindrical shape, MaxLoad Pro gives the following options to load the SKUs onto a pallet.

❖ **None:** This option assumes that cylindrical objects are rectangular SKUs and loads them in a linear fashion as a shipcase

❖ **Tight:** Loads as many cylindrical SKUs as possible along the width.

❖ **Spread:** This to spread the round SKUs during loading

❖ **Pyramid:** This is for loading the cylindrical SKUs on their side, in horizontal orientation, stacking in a pyramid shape.

Unitload Options

These are available for Truck Manifest only and are grayed out for Pallet Manifest. Refer to Chapter 4, Truck Manifest for more details.

Comments Tab (Pallet Manifest)

The Comments tab provides the same fields as in the Truck Manifest. For more information, please refer to Chapter 4, Loading a Truck Manifest on page 4.15.

SKU List (Pallet Manifest)

The SKU List, displays a list of all SKUs available in the SKU database. For more information, please refer to Chapter 4, Loading a Truck Manifest, on page 4.18.

Manifest List (Pallet Manifest)

The Manifest List displays the SKUs onto the pallet. As you select SKUs, by double clicking in the SKU List, they automatically appear in the Manifest List. For more information, please refer Chapter 4, Loading a Truck Manifest, on page 4.19.

Defining a Pallet Manifest

To define a new pallet manifest, start from the Control Center and follow these instructions:

1. Under the Pallet Manifest box, click on the New button. The Manifest Pick List Screen appears

2. Select the pallet(s) from Pallet list to be used for the manifest by clicking against the pallet types you'd like to evaluate.

   Note: Uncheck the CalcAllTrucks option under the Tools> Configuration>Global menu in order to evaluate one pallet load at a time. You will need to login as Supervisor (password = tops software) in order to access the Global menu.

3. Enter values for maximum height, weight and overhang. The maximum height and weight values include the pallet. Maximum overhang must be defined for both the length and width of the pallet.

4. Select the SKUs to be loaded from the SKU List by double clicking the item. The selected SKUs display in the Manifest List.

5. In the Manifest List, enter a quantity and stop-off/priority number for each SKU. You can designate which loading method (i.e. by stop-off or priority) to use under the Options tab.

6. In the Manifest List, key in an order number, if applicable.

7. If everything is correct, click on the Calculate button.

8. Select the solution that that best meets your needs from the Sol List.

9. From the Menu Bar, open the File menu and select Save As.

10. In the blank line at the top of the box, replace the word "Untitled" with the name of this mixed pallet manifest.

11. Check the Save As SKU box, if you want to save the manifest as a SKU to be used in a Truck Manifest and click on OK. The Save Manifest as SKU dialog box appears, as pictured below.
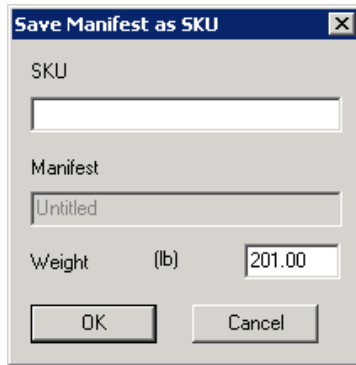
12. In the blank SKU field, give the mixed pallet manifest a SKU name and click OK. MaxLoad Pro saves the new mixed pallet manifest/ SKU to memory and returns you to the View Screen.

Note: Chapter 8, Viewing a Solution, describes in detail the options you have once a manifest has been calculated. Chapter 9, Editing a Solution, discusses how to use the Editor to customize a solution. Refer to those chapters for more details.

Printing a Pallet Manifest

To see a report of the new mixed pallet manifest, open the File menu and select one of the Print Preview options.

In the Mixed Pallet analysis, the normal Print and Print Preview functions are available. Further, if you're working with a Truck analysis in which one or more mixed pallet SKUs are loaded onto a vehicle, you can print reports for those mixed pallet SKUs that are part of the truck manifest. From the Truck analysis, follow these instructions:

1. Open the File Menu, select Print Preview, then select Unitload. The Print Preview window displays a report for the first mixed pallet SKU loaded onto the vehicle.

2. If the truck manifest includes more than one mixed pallet SKU, click on the Next Page button. The Print Preview window displays a report for the next mixed pallet SKU in the manifest.

Loading a Tote Manifest

Introduction

A tote manifest is a specific collection of SKUs placed into a shipcase. For example, suppose you ship snack products to a small grocery store on a routine basis. This shipment always includes cases of cookies, potato chips and saltines.

The tote manifest allows you to place these various items, or SKUs, into a tote (shipcase) and load it onto a vehicle. MaxLoad Pro allows you to create this tote manifest, save it to the SKU database and use it as a SKU in a vehicle analysis.

This chapter walks you through the process you'd follow when building a tote, including the following topics:

❖ Tote Manifest Pick List Screen

- Tote tab
- Options tab
- Algorithm Options
- Comments tab
- SKU list
- Manifest list

❖ Defining a Tote Manifest

❖ Printing a Tote Manifest

Tote Manifest Pick List Screen

Start from the Control Center and click on the New button under the Tote Manifest icon. The Tote Manifest Pick List screen appears.
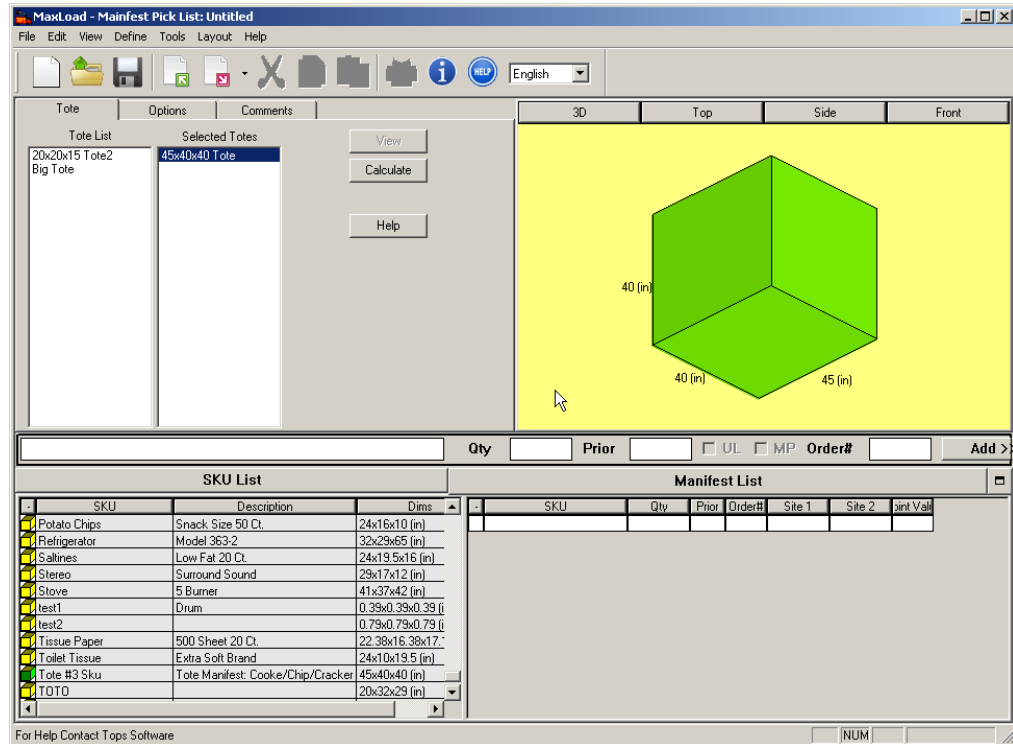
This screen is comprised of the following components:

❖ **Tote Tab:** Lists the available totes/shipcases that can be used for a manifest.

❖ **Options Tab:** Allows you to enter parameters for loading the totes.

❖ **Comments Tab:** Enter comments regarding the tote manifest.

❖ **g.o.d. Window:** Displays a 3-dimensional graphic image of the tote.

❖ **SKU List:** Displays a list of all SKUs available in the SKU database.

❖ **Manifest List:** A running list of selected SKUs for a tote manifest.

❖ **View Button:** Allows you to view a load without recalculating it.

❖ **Calculate Button:** Allows you to calculate a tote manifest.

Tote Tab (Tote Manifest)

The Tote tab, pictured below, allows you to select a shipcase to be used with the tote.
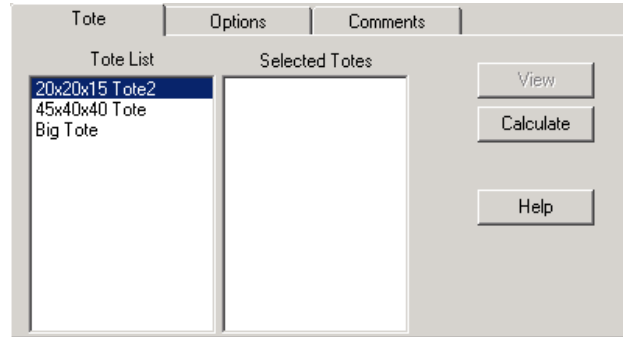
The Tote tab contains the following features:

❖ **Tote List:** Displays a list of available shipcases in the tote database. In order to build a load, you will need to either choose an existing tote or define a new one through the Define menu.

Double click on a tote in Tote List to move it to the Selected Totes list. Also notice that as a tote name is highlighted, a representation of that tote appears in the g.o.d. (graphical on-line drawing) window.
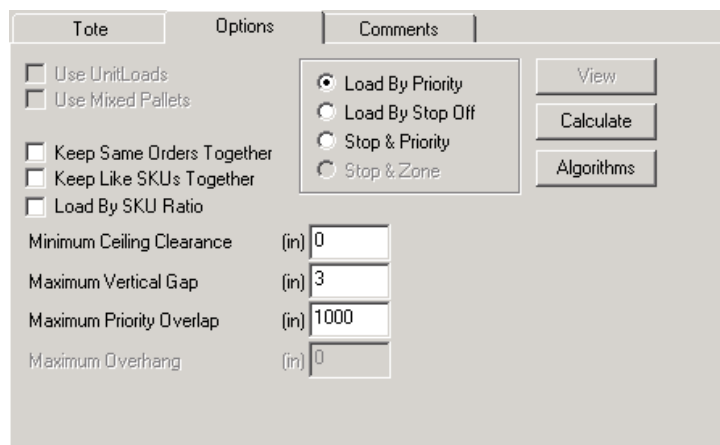
MaxLoad Pro allows you to load multiple totes at one time. To do so, select more than one tote to be analyzed when calculating a manifest. Simply follow the procedure described above to select multiple totes.

❖ **Selected Totes:** Displays the totes selected from the Tote List, for a particular manifest.

When Maxload Pro calculates solutions for a manifest, it uses only the totes listed in the Selected Totes list. To remove a tote from this list, double click on the tote in question, in the Selected Tote list. This will remove the tote from the Selected Tote list and place it back in the Tote List. A representation of the selected tote will appear in the g.o.d. window.

Options Tab (Tote Manifest)

The Options tab, pictured below, allows you to further customize your tote manifest by setting various loading parameters. To access this screen, use the mouse to click on the Options tab button found at the top of the Tote Manifest Pick List screen.

The Options tab contains the following fields, though these might not be very relevant for a tote manifest:

❖ **Load By Priority:** When a SKU is assigned a high priority number, it will be loaded before an SKU with a lower priority number. Priority 1 will be loaded before priority 2, which will be loaded in front of priority 3.

Note: Load By Priority and Load By Stop Off options determine which column is displayed in the Manifest List: Priority or Stop-Off. You can select either Load By Priority option or Load By Stop Off, but not both.

❖ **Load By Stop Off:** When you load by stop-off, the loading method is just the opposite: Stop-off 1 is loaded after stop-off 2, stop-off 2 is loaded after stop-off 3, etc.

Note: The following two options (Keep Same Orders Together and Keep Like SKUs Together) work in conjunction with stop-offs and priorities. In other words, if you build a load with two stop-offs, MaxLoad Pro will keep like SKUs or orders together within the individual stop-off or priority number.

Bear in mind that checking either one of these options could potentially result in the loss of cubic utilization. While we can't definitely say how these options will affect a load, it's safe to say that

these options will affect MaxLoad Pro's calculations, thus making it possible that the load will be affected negatively. Load By Stop Off for totes works in conjunction with the Load Front to Back algorithm.

❖ **Stop & Priority:** Check this option when you want to add priority to each Stop Off.

❖ **Keep Same Orders Together:** This option is linked directly to the Order # field in the Manifest List. When you key in an order number, MaxLoad Pro gives you the option to group SKUs from the same order together when loading. If you do not choose to input order numbers, this field will be meaningless, and activating the checkbox will not affect the placement of SKUs within your manifest.

❖ **Keep Like SKUs Together:** This option is very similar to the Keep Same Orders Together option. Activating this option tells MaxLoad Pro to load all products with the same SKU number together. The Keep Like SKUs Together option takes precedence over the Keep Same Orders Together checkbox, thus answering the question of what happens when both boxes are checked.

❖ **Load by SKU Ratio:** Selection of this option directs MaxLoad Pro to load a tote with a given ratio of SKUs instead of quantities.

For example, you can instruct MaxLoad to load a container with double the quantity of SKU-A than SKU-B; or have the quantity of three selected SKUs in the ratio of 3:2:1.

❖ **Minimum Ceiling Clearance:** This feature is available only for Truck Manifest analysis. For more information, please refer Chapter 4, Loading a Tote Manifest

❖ **Maximum Vertical Gap:** This option lets you control which spaces MaxLoad Pro joins together for the purpose of loading other items on top.

In the process of loading SKUs into a tote, MaxLoad Pro accumulates a list of "leftover" spaces. Whenever possible, MaxLoad Pro combines neighboring leftover spaces to make larger spaces. Ideally, these neighboring spaces present a level surface. If they do not present a level surface, you can enter a value in this field that artificially "joins" the two uneven surfaces together, thus creating a larger level surface.

If the difference in height of the two spaces is less than or equal to this value (in English or Metric units), MaxLoad Pro joins together the

offending gap, assuming that you will pad or brace the shorter space to bring it up to the height of the taller space.

❖ **Maximum Priority/Stop-Off Overlap:** MaxLoad Pro uses this option to determine the placement of the next priority or stop-off. This field allows you to define the distance inside the tote that MaxLoad Pro will "mix" items of a different priorities or stop-offs. This field determines how far forward into another priority or stop-off the front of an item with a lower priority number will be placed.

For instance, if the value in this field is 30 inches, MaxLoad Pro will place the next priority on top of the previous priority, with the front of the lower priority protruding over the top of the higher priority by a maximum of 30 inches.

❖ **Algorithms Button:** This button displays the Algorithm Options dialog box, which allows you to determine how MaxLoad Pro will load a manifest.

Algorithm Options

The Algorithm Options dialog box, allows you to determine how MaxLoad Pro will load a manifest. The sliding calculation bar allows you to calculate loads based on speed or efficiency. MaxLoad Pro also features a progress bar and dialog box that display how your load is being configured while it is calculating.
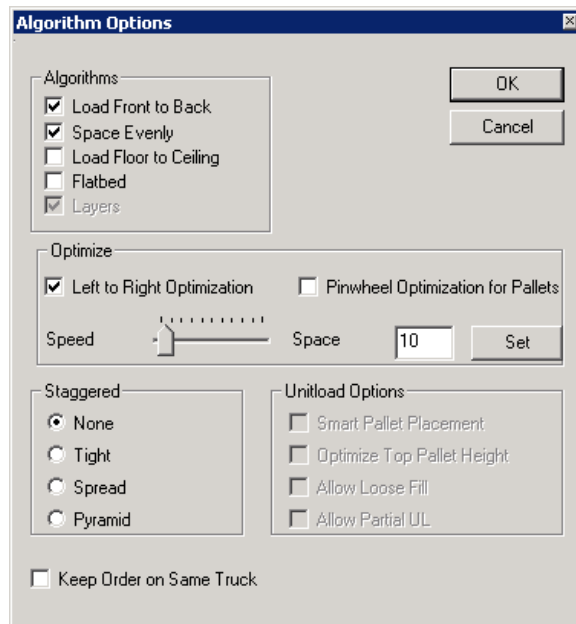
The Algorithm Options dialog box contains the following features:

Algorithms

❖ **Load Front to Back:** Loads a tote, starting at one edge of the tote and working toward the opposite edge, stacking mixed or identical-sized SKUs in columns.

❖ **Space Evenly:** Essentially spreads a load over the entire surface area of the tote.

❖ **Load Floor to Ceiling:** MaxLoad first takes the largest, heaviest SKU it can find, starting at the base of the tote and moving upwards. MaxLoad Pro always loads larger SKUs first, with smaller SKUs on top. This loading method may result in mixed layers of products, depending on quantities chosen and other parameters (e.g., stacking rules).

❖ **Layers:** Available to pallet manifests only and is grayed out for Tote Manifest, this will load SKUs with similar heights to form stable layers.

Optimize

❖ **Pinwheel Optimization for Pallets:** This feature is not available for loading totes

❖ **Left-to-Right Optimization:** Check the box to optimize the manifest load from left to right.

Looks for the best combination of two placements in order to maximize the space across the width of the tote. When you use this option, MaxLoad Pro attempts to find some combination of two placements to optimize the width of the tote. If the box is not checked, MaxLoad Pro will strive to place the largest placement possible in the tote, but won't necessarily attempt to maximize the space across the width of the tote.

It's important to understand that this algorithm does not always provide the best solution, even though the logic behind the algorithm would suggest that it would. Why not? Because of the physical dimensions of the SKUs being loaded into a tote, there simply may not be a combination of two placements that can maximize the width.

❖ **Speed-Space Tab:** Move the sliding bar to optimize calculation for speed (flush left) or for efficiency (flush right).

The **For Speed** option tells MaxLoad Pro to calculate solutions as quickly as possible.

The **For Space** option tells MaxLoad Pro to take more time and calculate the most space-efficient solutions.

In addition to using the sliding bar, you can also enter a number between 1 (speed) and 200 (space) in the box and click the Set button.

When you click OK, in the Algorithms dialog box, MaxLoad Pro saves your algorithm options to memory and returns you to the Tote Manifest Pick List Screen.

The next time you calculate solutions for this manifest, MaxLoad will display a progress dialog box, as pictured on the next page.

Note: When you select multiple algorithms, MaxLoad Pro will display at least one solution for each selected algorithm. Also, whenever Left to Right Optimization is turned on, MaxLoad Pro will calculate two solutions for each selected algorithm.

Notice the following about the Progress Dialog Box :

■ The dialog box displays a running count of the following parameters for the current calculation: quantity, cubic efficiency, cut list count, solution count, container number and time elapsed.

■ A Stop button allows you to stop the calculation at any time and gives you the best solution found so far.

Staggered

This algorithm is used to load round shape SKUs. Due to the cylindrical shape, MaxLoad Pro gives the following options to load the SKUs in a container.

❖ **None:** This option assumes that cylindrical objects as rectangular SKUs and loads them in a linear fashion as a shipcase

❖ **Tight:** Loads as many cylindrical SKUs as possible along the width.

❖ **Spread:** This to spread the round SKUs during loading

❖ **Pyramid:** This is for loading the cylindrical SKUs on their side, in horizontal orientation, stacking in a pyramid shape.

Unitload Options

These are available for Truck Manifest and are not applicable for Tote Manifests.

Comments Tab (Tote Manifest)

The Comments tab provides the same fields as in the Truck and Pallet Manifest. For more information, please refer to Chapter 4, Loading a Truck Manifest.

SKU List (Tote Manifest)

The SKU List, displays a list of all SKUs available in the SKU database. For more information, please refer to Chapter 4, Loading a Truck Manifest, on page 4.18.

Manifest List (Tote Manifest)

The Manifest List displays the SKUs onto the pallet. As you select SKUs, by double clicking in the SKU List, they automatically appear in the Manifest List. For more information, please refer Chapter 4, Loading a Truck Manifest, on page 4.19.

Defining a Tote Manifest

To create a new tote manifest, start from the Control Center and follow these instructions:

1. Under the Tote Manifest box, click on the New button. The Manifest Pick List Screen appears

2. From the Tote List, select the tote (shipcase) that you want to use to create the new tote manifest. You'll place your SKUs into this tote (shipcase). To select a tote from the Tote List, double-click on it. The selected tote appears in the Selected Totes list.

3. From the SKU List, select the specific SKUs that will be placed into the tote. To select a SKU, double-click on it. The selected SKUs appear in the Manifest List.

4. Define the quantity of each SKU, in the Manifest List, that will be placed into the tote. When you're finished defining SKU quantities, click on the Calculate button.

    MaxLoad Pro calculates various solutions for the tote manifest and displays the first of the solution from the Sol List in the View Screen

5. Select the tote manifest solution from the Sol List that best meets your needs.

6. From the Menu Bar, open the File menu and select Save As. The File Save As dialog box appears.

7. In the blank line at the top of the box, replace the word "Untitled" with the name of this Tote manifest.

8. Check the Save As SKU box, if you want to save the manifest as SKU to be used in a Truck Manifest and click OK. The Save Manifest as SKU dialog box appears, as pictured below.
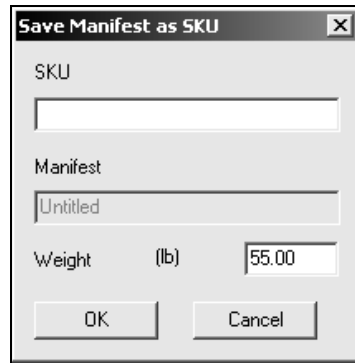
9. In the blank SKU field, give the tote manifest a SKU name and click OK.

   MaxLoad Pro saves the new tote manifest/SKU to the SKU database and returns you to the View Screen.

Printing a Tote Manifest

To see a report of the tote manifest, open the File menu and select one of the Print Preview options.   Also, suppose you're working with a truck manifest that has one or more tote SKUs loaded onto a vehicle. From the truck analysis, you can print reports for those tote SKUs that are part of the truck manifest. From the truck analysis, follow these instructions:

1. Open the File Menu, select Print Preview, then select Totes. The Print Preview window displays a report for the first tote SKU loaded onto the vehicle.

2. If the truck manifest includes more than one tote SKU, click on the Next Page button. The Print Preview window displays a report for the next tote SKU in the manifest.

Loading a Single-SKU Manifest

Introduction

This chapter explains how to load a single-sized case manifest using MaxLoad Pro. All you have to do is to pick a transit vehicle and the SKU to be loaded, MaxLoad will show you the different ways to cube out the vehicle with the selected SKU.

The topics outlined in the chapter are as follows:

❖ Single-SKU Manifest Pick List Screen

- Vehicle Tab
- Options Tab
- Comments Tab
- SKU Addition and Update
- SKU List
- Manifest List

❖ Defining a Single–SKU Manifest

Single-SKU Manifest Pick List Screen

Once you've logged into MaxLoad Pro, the first screen that appears is the Control Center. This screen, described in detail in Chapter 2, The Basics, contains icons representing each of the various types of problems you can solve using MaxLoad Pro. To start a new Single-SKU Manifest, start from the Control Center and follow these instructions:

Click on the New button under the Single SKU icon.

System Response: The Single-SKU Manifest Pick List screen appears, as pictured on the next page.

Once the Single-SKU Manifest Pick List screen is displayed, you're ready to begin defining the components of a new manifest. This screen is the basis for collecting data for building a new manifest.
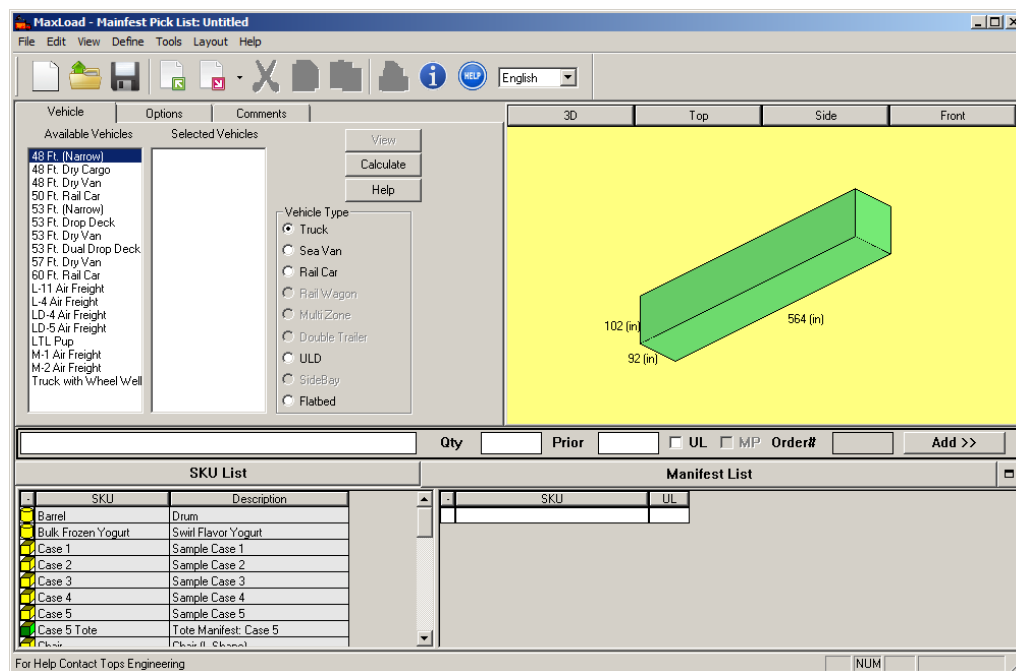
The Single-SKU Manifest Pick List Screen is comprised of the following components:

❖ **Vehicle Tab:** Allows you to select the type of transit vehicle to be used for a manifest.

❖ **Options Tab:** Allows you to define the pattern in which the SKU will get loaded in the transit vehicle.

❖ **Comments Tab:** Allows you to enter comments to be displayed on the Single-SKU printouts.

❖ **g.o.d. Window:** Displays a 3-dimensional graphic image of the selected transit vehicle.

❖ **SKU List:** Displays a list of all SKUs (PalletLoads, Shipcases, Drums, Tote SKUs, and Pallet SKUs) available in the SKU database.

❖ **Manifest List:** Displays the single SKU selected to be loaded into the transit vehicle, particular to a manifest. As you select the SKU from the SKU List it automatically appears in the Manifest List.

Note: For Truck Manifest, Pallet Manifest, and Tote Manifest the Manifest List can contain more than one SKU.

❖ **View Button:** Allows you to view a previously calculated load, without recalculating it. This feature works only if you've previously calculated a load and is used primarily after you've made changes to a load in the Editor screen.

❖ **Calculate Button:** Allows you to calculate a load/manifest.

Vehicle Tab (Single-SKU Manifest)

The Vehicle tab, allows you to select the type of transit vehicle (Truck, Sea Van, Rail Car, etc.) for a manifest.

The Vehicle tab contains the following components/fields:

❖ **Vehicle Type:** Displays the various kinds of vehicles defined in MaxLoad Pro. You can narrow down the list of available vehicles by choosing a Vehicle Type. This action will filter the Available Vehicles list to display only one type of vehicle.

❖ **Available Vehicles:** Displays the list of all vehicles available in the database for the Vehicle Type specified. In order to build a load, you will need to either choose an existing vehicle or define a new one through the Define menu.

   Double click on a vehicle in Available Vehicles list to move it to the Selected Vehicles list. Also notice that as a vehicle name is highlighted, a representation of that vehicle displays in the g.o.d. (graphical on-line drawing) window.

❖ **Selected Vehicles:** Displays the vehicle selected from the Available Vehicles list, for a particular manifest.

   When MaxLoad Pro calculates solutions for the Single-SKU manifest, it uses only the vehicle listed in the Selected Vehicles list. To select another vehicle, simply double-click a different vehicle under the Available Vehicle list, the current selection will be update to reflect the new selection.

A representation of the selected vehicle will appear in the g.o.d. window.

❖ **View Button:** The View Button is active if you've opened an existing analysis or a new analysis has been calculated. It opens the Manifest View screen.

❖ **Calculate Button:** The Calculate button will instruct MaxLoad Pro to find loading solutions based on the parameters entered in the analysis. When the calculation is complete, MaxLoad Pro opens the Manifest View screen.

Options Tab (Single-SKU Manifest)

The Options tab, as pictured below, allows you to further customize your manifest by defining pattern styles for the load.
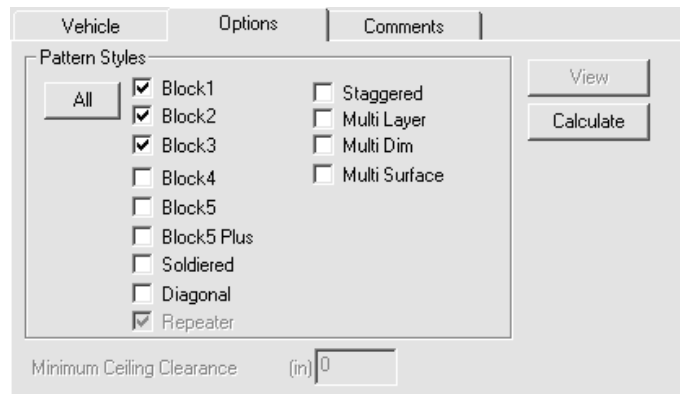
MaxLoad Pro allows you to analyze a number of pattern styles when loading a SKU into a vehicle. When loading SKUs into a vehicle, MaxLoad Pro will attempt to calculate at least one solution for every pattern style you've chosen. Keep in mind, however, that MaxLoad Pro may not find a solution that utilizes every pallet pattern chosen. This is especially true for some of the less common pattern styles, such as Soldiered, Multi Layer, Multi Dim, etc. The characteristics of the SKU will ultimately determine whether or not a pattern style can be used to develop a solution.

Below are images of two unitloads, displayed in plan view for each pattern type. Each image uses the depth dimension as the vertical dimension.

❖ **Block1:** The Block1 pattern is also known as column stack pattern. It is simple pattern with all of the shipcases stacked in the same orientation.
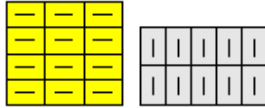
❖ **Block2:** A bi-block pattern is formed by the shipcases stacked in two different orientations. Also known as an interlock pattern, when used in conjunction with layer rotation.
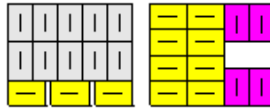
❖ **Block3:** In a tri-block pattern the SKU blocks are stacked in three different orientations
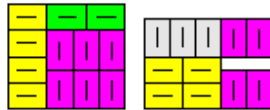
❖ **Block4:** A Block4 pattern, is made up of four blocks of shipcases that form a pinwheel-like figure
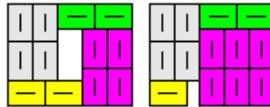
❖ **Block5:** A penta-block pattern is made up of five blocks of shipcases. Four blocks of shipcases form a pinwheel configuration; the fifth block of shipcase is positioned in the middle.
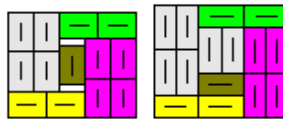
❖ **Block5 Plus:** The Block5 Plus pattern has another Block5 pattern in the middle of the configuration. Four blocks of shipcases form a pinwheel configuration; a separate 5-block configuration of shipcases is positioned in the middle.

❖ **Soldiered:** In a Soldiered pattern the cases are spaced apart so that other cases can be turned on their sides and fit into the space.
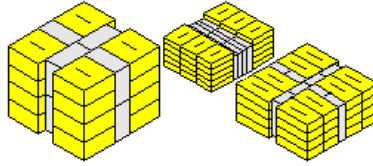
- ❖ **Diagonal:** The diagonal pattern has alternating blocks of shipcases that form a diagonal configuration.
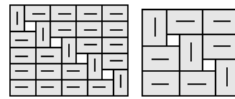
- ❖ **Staggered:** The staggered pattern is used to load round containers onto a pallet. As you can see, the round containers mean the configuration will have a staggered, rather than linear, pattern.
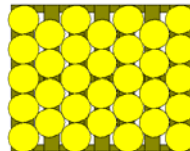
- ❖ **Multi Layer:** In the two unitloads pictured on next page, the top layer is lifted to show that different layers have different patterns. With a multi-layer pattern, MaxLoad Pro configures the unitload with the vertical dimension specified by the user, with the exception of the top layer. (The top layer is not affected by stacking strength).
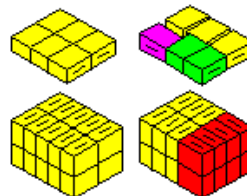
- ❖ **Multi Dim:** In a Multi Dim pattern, each layer has a different vertical dimension.
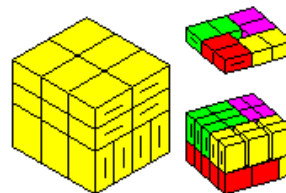
- ❖ **Multi Surface:** The figure below shows a multi-surface pattern. With this pattern, MaxLoad Pro turns the pallet on its side, loads the pallet, configures the pattern, then turns the pallet upright again. In the figure below, the arrows indicate the side on which MaxLoad Pro loaded the

pallet. To use a multi-surface pattern, it's necessary to select at least two dimensions as vertical dimensions. When you use a multi-surface pattern, MaxLoad Pro automatically calculates other multi-patterns
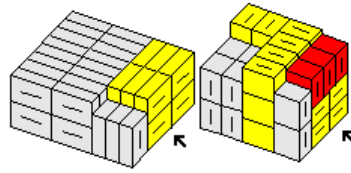
Comments Tab (Single-SKU Manifest)

The Comments tab provides the same fields as in the Truck, Pallet and Tote Manifest. For more information, please refer to Chapter 4, Loading a Truck Manifest, on page 4.16.

Adding or Updating SKUs to the Manifest List

You can add SKUs to the Manifest List by double clicking the SKU in the SKU list or use the SKU input list shown below to add the SKU information.

Type in the first few characters of the SKU Number in the field below will quickly bring you to the SKU in the list for selection. Enter any quantity (it will not be used but we will need a number here) and whether it is loaded as UL, then click on the Add>> button to add the SKU to the Manifest List.

| Computer | | Qty | 1 | Prior | | □ UL □ MP Order# | | Add >> | |

SKU List (Single-SKU Manifest)

The SKU List, displays a list of all SKUs available in the SKU database. For more information, please refer to Chapter 4, Loading a Truck Manifest, on page 4.18.

Manifest List (Single-SKU Manifest)

The Manifest List displays the SKUs onto the pallet. As you select SKUs, by double clicking in the SKU List, they automatically appear in the Manifest List. For more information, please refer Chapter 4, Loading a Truck Manifest, on page 4.19.

Defining a Single-SKU Manifest

To define a Single-SKU Manifest, start from the Control Center and follow these instructions:

1. Under the Single-SKU Manifest box, click the New button or go to the File Menu, select New and then Single SKU Load from the submenu. The Manifest Pick List Screen appears

2. Select a vehicle from the list of Available Vehicles by double clicking on the vehicle. The selected vehicle displays in the Selected Vehicles list.

3. Select the SKU to be loaded from the SKU List by double clicking on the SKU. The selected SKU displays in the Manifest List pane.

4. If a unitload pattern has been defined previously for the selected SKU, the UL option in the Manifest List will be enabled (⊠); MaxLoad will fill the vehicle with the selected SKU in unitloads.

   To cube out the vehicle with floor-loaded SKUs (not unitloads), click on the UL icon to remove the cross mark.

5. If everything is correct, click on the Calculate button.

   MaxLoad Pro calculates solutions based on your input and displays them in the solution view screen.

Viewing a Solution

Introduction

This chapter discusses the various ways in which you can view a completed manifest. You will learn ways to progressively load or unload the vehicle to see how the load is constructed. This chapter will also discuss in detail the various text reports that are available after calculating a solution.

Though the process of building the various types of manifests is dramatically different, the options provided when viewing a solution are generally quite similar. The majority of what we discuss in this chapter applies to the solutions calculated when building all four manifest types (truck, pallet, tote, single SKU). Any differences will be highlighted.

The various topics outlined in this chapter are as follows:

❖ Manifest View Screen

- ▪ Toolbar
- ▪ View Buttons
- ▪ Other View Options
- ▪ Additional Viewing Options
- ▪ Action Buttons
- ▪ Load Statistics
- ▪ Tabs
  - o Sol List
  - o Placement List
  - o Load List
  - o Cut List
  - o Cost
  - o Air Bag / Dunnage

❖ Viewing Items on the Cut List

❖ SKU Information

Manifest View Screen

To view a load, follow these instructions:

1. Key in all of the necessary parameters in the Manifest Pick List screen and click on the **Calculate** button**.**

    If the load has been previously calculated, open the manifest from the File menu and click on the **View** button. The software will redraw what has already been calculated and saved rather than recalculating the solution.

    The View screen appears. The MaxLoad Pro Manifest View screen, as pictured below, contains the primary results of your loaded manifest. This screen includes both the loading diagram and all information associated with the manifest.
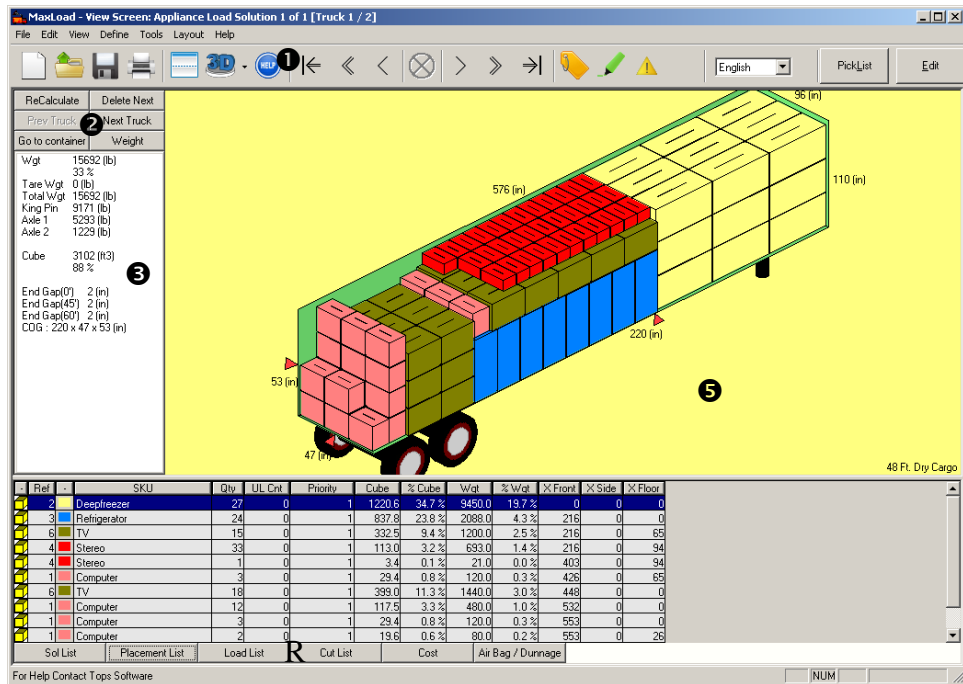
The Menu Bar is essentially the same in this screen as it was in the Manifest Pick List screen, but notice the following differences:
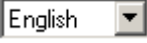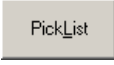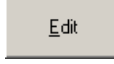
❖ **Toolbar ❶:** Icons, lists, and buttons below the Menu bar.

❖ **Action Buttons ❷:** Buttons used to recalculate load, go to a next or different truck.

❖ **Load Statistics ❸:** Brief load statistics displayed under the view Buttons

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❖ **Solution Tabs ❹:** A series of tabs/buttons, located at the bottom of the screen, displaying a number of lists with information about the load.

❖ **g.o.d. Window ❺:** Displays a 3-dimensional graphic image of the container or pallet

Toolbar (View Screen)

The Toolbar on the View Screen is significantly different from the Toolbar on the Manifest Pick List screen. It consists of various icons, lists, and buttons that are designed to make it easier to perform certain functions.   Items in the Toolbar are described in detail below:

Icon	Function
	New: Displays the Manifest Pick List, where you can start a new manifest file.
	Open: Displays the File Open dialog box, which allows you to open an existing manifest.
	Save: Saves the active manifest.
	Print: Prints a hard copy of the active manifest.
	Split Edit: Displays the Split Editor screen, where you can edit the solution in two different views of the solution.
	View: Clicks the drop down arrow to select the view of the vehicle or pallet in the g.o.d. window.
	Help: Clicks to open the on-line help documentation.
	Remove All: Completely unloads the vehicle or pallet. MaxLoad Pro automatically transfers all SKUs in the load to the Cut List.

≪	**Remove Placement:** Removes one placement, section or stop-off/priority from the vehicle or pallet,
‹	**Remove SKU:** Removes one SKU from the vehicle of pallet.
⊗	**Reject:** Grayed out in the View screen but available in Edit mode, this function rejects the current placement and asks MaxLoad Pro to try the next placement.
›	**Put SKU:** Adds one SKU to the vehicle or pallet.
≫	**Put Placement:** Add one placement, section or stop-off/priority to the vehicle or pallet, depending on the selection under the View Menu | View by option (placement, leading edge or priority).
⇒|	**Put All:** Completely loads the vehicle or pallet.
🏷	**Labels:** Turns SKU labels on and off.
✏	**Outline:** Turns on the wire frame view for SKU placements.
⚠	**Violations:** Displays a report highlighting all current stacking violations.
English ▼	**Units:** Switches measurement units from English to Metric and vice versa.
PickList	**Pick List:** Displays the Manifest Pick List screen, where you can change the parameters of the manifest.
Edit	**Edit:** Displays the Editor screen, where you can edit the solution.

View Button 3D ▾

The View buttons allow you to view the loaded container, pallet, or tote from different angles: Top, Side, Front and 3D Front or Back Views. Click the drop down arrow to select the desired view from the list.

❖ **3D Front View:** Displays a standard 3D view of the diagram.

❖ **3D Back View:** Displays the 3D back view of the current load.

❖ **Top View:** Displays the load from the top, looking down into the diagram.

❖ **Side View:** Displays the load from the right side of the diagram.

❖ **Front View:** Displays the load looking forward from the rear of the diagram.

Other View Options

❖ **Rotate:** In addition to the standard views described above, you also have the option of viewing the load diagram from additional angles. Any conceivable angle is possible.

To rotate the diagram, follow these instructions:

1. Use the mouse to click anywhere on the diagram portion of the screen. This action makes the diagram portion of the screen active, thus making it available to be rotated.

2. Use the arrow keys on your keyboard to rotate the diagram to the desired position for viewing. All four arrow keys are available to you, allowing you to rotate the diagram to view from the front, rear, top, bottom, right side, and left side (and any angle in between) of the vehicle.

When rotating the solution diagram, it will appear as if the diagram is stationary, and you are moving. For instance, when using the "up" arrow (↑), it will appear as if you are being raised up and over the diagram, allowing you to see the top of the solution. When you click the "right" arrow (→), it will appear as if you are moving around the solution to the right. The same is true of the other two arrow keys (down and left).

❖ **Zoom In and Out:** MaxLoad Pro also allows you to "zoom in" and "zoom out" of a solution diagram. Zooming in gives you a more

detailed view of the load. Zooming out gives you a "big picture" perspective.

To "zoom in" or "zoom out" on the vehicle diagram, follow these instructions:

1. Click on the diagram window to make it active.

2. Press on the "T" key on your keyboard to "zoom in." Press on the "Y" key to "zoom out." Continue to press on the respective key until the diagram is sized to your liking.

Additional Viewing Options

Three more viewing options are available via the View Menu in the Menu Bar: By Placement, By Leading Edge, or By Priority/Stop-Off. These options work in conjunction with the placement arrow buttons (&) to put or remove placements according to the viewing options described below:

❖ **View by Placement:** Allows you to load or unload a manifest "by placement." A placement is a group of like SKUs loaded with the same dimension vertical and with the same dimension parallel to the vehicle or pallet.

❖ **View by Leading Edge:** Allows you to view the load one section at a time. MaxLoad Pro will load the first placement of cargo, as defined above. Other SKUs will be loaded around the first placement, but will not extend beyond the leading edge of the first placement. Once the first section of SKUs are loaded, another placement is loaded as far forward as possible up against the leading edge of the prior section, and up against the left wall of the vehicle, or left edge of the pallet.

❖ **View by Priority/Stop-Off:** Allows you to view the load one priority or stop-off at a time. Remember that you can build a load by priority or stop off when defining your manifest in the Manifest Pick List screen.

Action Buttons (View Screen)

There are several action buttons beneath the Tool Bar which allow you to recalculate the solution for the current vehicle or, if the load requires more than one vehicle, allows you to go to the next one.

❖ **ReCalculate:** Allows you to re-calculate the load solution for the SKUs, using the same vehicle or select a new one. MaxLoad Pro will

prompt you to select another vehicle if the option "Show next vehicle dialog" (found under Tools | Configuration) is enabled. Else, it will use the same vehicle to re-calculate the load. This button serves the same function as clicking on the PickList button to return to the manifest screen to select another vehicle and click Calculate again.

❖ **Delete Next:** If the solution calls for the use of two or more vehicles, this button will be active and allows you to delete the solution for the next vehicle. You will see the following message:
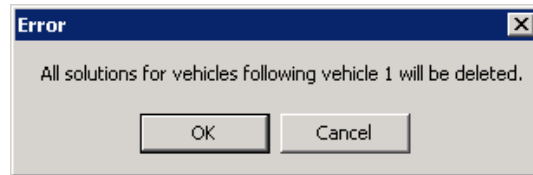
Click OK to confirm deletion of the load in the next vehicle.

❖ **Prev Truck:** If available, click to view the solution for the previous truck.

❖ **Next Truck:** If available, click to view the solution for the next truck. If the solution had been deleted with the "Delete Next" button as described earlier, you will be prompted to select a vehicle to load the items in the Cut List if the "Show next vehicle dialog" (found under Tools | Configuration) is enabled. Else, it will use the same vehicle to calculate the solution.

❖ **Go to container:** If your Manifest contains multiple vehicles, for example, 10 vehicles, this button allows you to quickly go to the designated vehicle instead of clicking the Next Truck button many times.
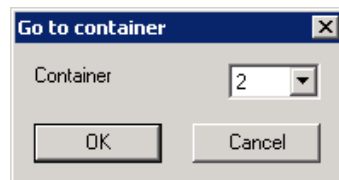
❖ **Weight:** Access the weight distribution dialog box where you can move the entire load towards the front or back of the trailer. Click the <- button to move the entire load one inch towards the tail of the trailer and -> one inch towards the front. Clicking the |<- or ->| buttons to move the entire loads to the end of front of the trailer respectively. Note that all weight information will be updated accordingly.

To save the redistributed load, click the EXIT button.
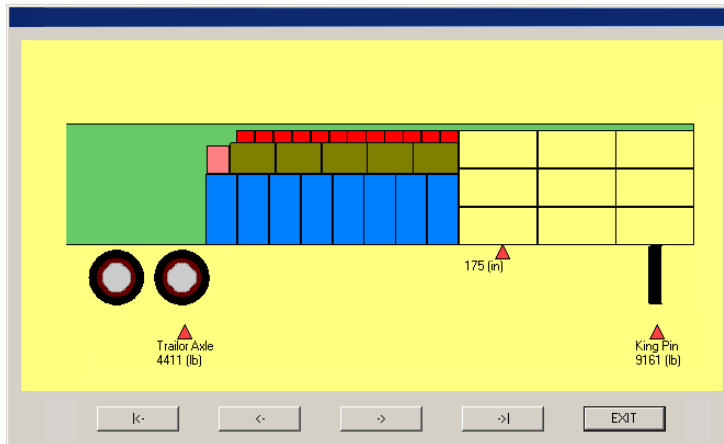
Load Statistics (View Screen)

Load Statistics, as pictured below, are displayed on the left side of the Manifest View screen, just below the Action Buttons.

Following are some of the fields available under the load statistics section:

- ❖ **Wgt:** Total weight and percentage weight of the load.

- ❖ **TareWgt:** The weight of empty container.

- ❖ **TotalWgt:** Sum total of Wgt. and Tare Wgt.

- ❖ **King Pin, Axle 1 and 2:** Total load weight on king pin and each axle.

- ❖ **Cube:** The percentage volume of the container filled with product

- ❖ **End Gap:** The distance between the last loaded SKU from the end of the container.

- ❖ **COG:** Center of Gravity.

Note: For Single SKU the information provided in the Load Statistics is the SKU and Container's length, width, height and weight information.

Tabs (View Screen)

The List Tabs, at the bottom of the View Screen, allow you to see various statistics regarding the load that you are viewing.

You can specify what statistics to display via the right click Properties menu. To access this function, place the mouse cursor within the statistics area and click the right mouse button. At the pop-up menu, select Properties. Remove the check marks against the fields you want removed from the solutions.

Sol List

The Sol List or the Solution List, as pictured below, appears whenever multiple solutions are calculated for the manifest, depending upon multiple container sizes or loading algorithms.

Truck	Algorithm	Qty	Cube	% Cube	Wgt	% Wgt	CutList Cnt
48 Ft. Dry Van	Space Evenly	1000	2257.8	63 %	12500	27.8 %	0
48 Ft. Dry Van	L/R Space Even	1000	2257.8	63 %	12500	27.8 %	0
48 Ft. Dry Van	L/R Floor to Ceiling	1000	2257.8	63 %	12500	27.8 %	0
48 Ft. Dry Van	Load Floor to Ceiling	1000	2257.8	63 %	12500	27.8 %	0
53 Ft. Dry Van	Load Floor to Ceiling	1000	2257.8	57 %	12500	27.8 %	0
53 Ft. Dry Van	L/R Floor to Ceiling	1000	2257.8	57 %	12500	27.8 %	0
53 Ft. Dry Van	Space Evenly	1000	2257.8	57 %	12500	27.8 %	0
53 Ft. Dry Van	L/R Space Even	1000	2257.8	57 %	12500	27.8 %	0

MaxLoad Pro even calculates multiple solutions when performing a Single-SKU loading analysis. For more information, please refer to Chapter 7, Loading a Single-SKU Manifest.

❖ **Truck / Tote:** Lists the selected containers for a particular manifest

❖ **Algorithm:** Displays the loading algorithm for the solution.

❖ **Qty:** The count of SKUs loaded in to the container or on the pallet

❖ **Cube:** The total volume of the loaded SKUs

❖ **%Cube:** The percentage of the container or pallet's volume that loaded SKUs occupy

❖ **Wgt:** Total weight of the product

❖ **%Wgt:** The percentage of the maximum weight that the SKUs weighs

❖ **CutList Cnt:** The total number of the SKUs which could not be loaded in to the container or pallet

Use the scroll bar to scroll through the list. Also, you can use the mouse to highlight a different solution. Notice that each time you select a different solution, the manifest solution diagram redraws to reflect the selected solution.

Placement List

The Placement List, as pictured below, displays the information for each SKU, accordingly to the placement sequence of the load.

-	Ref	-	SKU	Qty	UL Cnt	Priority	Cube	% Cube	Wgt	% Wgt	X Front	X Side	X Floor
	6		TV	36	0	1	798.0	22.7 %	2880.0	6.0 %	0	0	0
	5		Stove	28	0	1	1032.4	29.3 %	14000.0	29.2 %	168	0	0
	4		Stereo	32	0	1	109.6	3.1 %	672.0	1.4 %	168	0	84
	1		Computer	20	0	1	195.9	5.6 %	800.0	1.7 %	168	74	0
	4		Stereo	2	0	1	6.8	0.2 %	42.0	0.1 %	284	0	84
	3		Refrigerator	12	0	1	418.9	11.9 %	1044.0	2.2 %	455	0	0
	6		TV	2	0	1	44.3	1.3 %	160.0	0.3 %	455	0	65

❖ **Ref / No:** Reference number or the Placement number for the SKU

❖ **Color:** The color assigned to the SKU

❖ **SKU:** SKU Number

❖ **Qty:** Quantity of SKUs loaded for that particular placement in the load.

❖ **ULCnt:** Unitload count (if applicable) is the number of whole unitloads for the corresponding SKU for that placement in the load.

❖ **Priority/Stop-Off number:** Displays the priority or stop-off assigned to that SKU in the Manifest List.

❖ **Cube:** The volume of that particular SKU placement.

❖ **%Cube:** The percentage of the total volume of that container that total volume occupied by that particular SKU placement.

❖ **Wgt:** Weight of each SKU times Qty for the placement weight.

❖ **%Wgt:** The percentage of total weight limit (for the vehicle) taken up by the SKU placement.

❖ **XFront, XSide, & XFloor:** The location the SKU placement from the front, side, and floor of the container or pallet

If you have the Outline option ✎ enabled by depressing the Outline icon, highlighting each placement is the list will show the selected placement in color while the rest of the SKUs in wire frames. This allows you to easily view selected placement with respect to the rest of the placements.

Ref	-	SKU	Qty	UL Cnt	Priority	Cube	% Cube	Wgt	% Wgt	X Front	X Side	X Floor
2		Deepfreezer	27	0	1	1220.6	34.7 %	9450.0	19.7 %	0	0	0
3		Refrigerator	24	0	1	837.8	23.8 %	2088.0	4.3 %	216	0	0
6		TV	15	0	1	332.5	9.4 %	1200.0	2.5 %	216	0	65
4		Stereo	33	0	1	113.0	3.2 %	693.0	1.4 %	216	0	94
4		Stereo	1	0	1	3.4	0.1 %	21.0	0.0 %	403	0	94
1		Computer	3	0	1	29.4	0.8 %	120.0	0.3 %	426	0	65
6		TV	18	0	1	399.0	11.3 %	1440.0	3.0 %	448	0	0
1		Computer	12	0	1	117.5	3.3 %	480.0	1.0 %	532	0	0
1		Computer	3	0	1	29.4	0.8 %	120.0	0.3 %	553	0	0
1		Computer	2	0	1	19.6	0.6 %	80.0	0.2 %	553	0	26
			138			3102.2	88.1 %	15692	32.7 %			

Note: You can print this report through the File | Print | Placement List Menu. This report can even be exported through the Tools menu

Load List

The Load List, as pictured below, provides a summary of all SKUs in the current vehicle load, totaled for each SKU on one line. The information (column headings) provided in Load List is identical to that provided in the Placement List. Like Placement List this list can also be printed or exported.

-	-	SKU	Qty	Priority	Cube	% Cube	Wgt	% Wgt
		Computer	20	1	195.9	5.6 %	800.0	1.7 %
		Deepfreezer	3	1	135.6	3.9 %	1050.0	2.2 %
		Refrigerator	12	1	418.9	11.9 %	1044.0	2.2 %
		Stereo	34	1	116.4	3.3 %	714.0	1.5 %
		Stove	28	1	1032.4	29.3 %	14000.0	29.2 %
		TV	38	1	842.3	23.9 %	3040.0	6.3 %
		Total	135		2741.6	77.9 %	20648	43 %

Cut List

The Cut List is the list of SKUs that did not fit into the selected container or the pallet, when CalcAllTrucks feature is turned off. The information (column headings) displayed in this list is identical to that of the Load List (with the addition of a Unitload Count column).

		SKU	Qty	UL Cnt	Priority	Cube	% Cube	Wgt	% Wgt
		Deepfreezer	25	0	1	1130.2	32.1 %	8750.0	18.2 %
		Refrigerator	14	0	1	488.7	13.9 %	1218.0	2.5 %
		Stove	2	0	1	73.7	2.1 %	1000.0	2.1 %
		Total	41			1692.7	48.1 %	10968	22.9 %

If you do not want any SKUs to appear in the CutList, enable the CalcAllTrucks feature in the Global Configuration Settings (under Tools | Configuration Menu). For more information on Calculate All Trucks feature, please refer to Chapter 11, Configuration.

Cut List can also be printed through the File menu.

Note: Cut List is not available for Single-SKU manifests.

Cost

The Cost tab is not implemented at this time.

Air Bag / Dunnage

To ensure transit loads are secure during transport, dunnage materials like air bags can be added in between SKUs to minimize or prevent product damage.

This function, when enabled, highlights spaces among SKU placements meeting the specified dimension criteria.

At the Solutions view, click on the Air Bag / Dunnage tab at the bottom to bring up Air Bag/Dunnage Dimension dialog box as shown below.

Enter the minimum value along the three dimensions to highlight any void space for dunnage. Any space meeting the criteria will be highlighted in the g.o.d. window with their respective dimensions and locations detailed in the table.

MaxLoad - View Screen: Appliance Load Solution 1 of 1 [Truck 1 / 2]

File Edit View Define Tools Layout Help

ReCalculate   Delete Next
Prev Truck   Next Truck
Go to container   Weight

Wgt   15469 (lb)
            32 %
Tare Wgt   0 (lb)
Total Wgt 15469 (lb)
King Pin   9151 (lb)
Axle 1   5129 (lb)
Axle 2   1189 (lb)

Cube   3053 (ft3)
            87 %

End Gap(0')   2 (in)
End Gap(45') 2 (in)
End Gap(60') 2 (in)
COG : 217 x 47 x 53 (in)

96 (in)
576 (in)
110 (in)
217 (in)
53 (in)
47 (in)
48 Ft. Dry Cargo

English

PickList

Number	X1	Y1	Z1	X2	Y2	Z2	Length	Width	Height
1	426.000	65.000	0.000	448.000	93.500	96.000	22.000	96.000	28.500
2	386.000	93.500	29.000	532.000	105.500	58.000	146.000	29.000	12.000
3	386.000	93.500	58.000	532.000	105.500	96.000	146.000	38.000	12.000
4	403.000	93.500	0.000	532.000	105.500	29.000	129.000	29.000	12.000
5	553.000	26.000	31.000	573.999	52.000	96.000	20.999	65.000	26.000

Sol List   Placement List   Load List   Cut List   Cost   Air Bag / Dunnage

For Help Contact Tops Software   NUM   Supervisor

Viewing Items on the Cut List

Once a solution has been calculated, if MaxLoad Pro determines that the entire manifest will not fit in the selected vehicle, you have the option to take items from the Cut List and load them into another vehicles. **This assumes you are not using the CalcAllTrucks feature** which will place remaining items in the next vehicle of same truck type.

To determine if the entire manifest fits into the vehicle, simply look at the Cut List. If there are any SKUs in the Cut List, then the entire manifest did not fit. If the Cut List is empty, then everything in this manifest fits on the selected vehicle. Another way to determine if all SKUs fit is to check the Next Truck button, which is located under the View buttons. If the Next Truck button is "grayed out," then all SKUs fit into one container. If the Next Truck button is activated, then this manifest requires additional vehicles.

To view items on the Cut List and load them into another container, follow these instructions:

1. Click on the Next Truck button. The New Truck dialog box appears, as pictured below.

Note: In situations where you chose to analyze more than one loading algorithm or selected more than one vehicle to calculate, MaxLoad Pro will warn you that "All solutions other than the one currently being viewed will be deleted." If this is acceptable, click on OK. If deleting the additional solutions is not acceptable, click on the Cancel button.
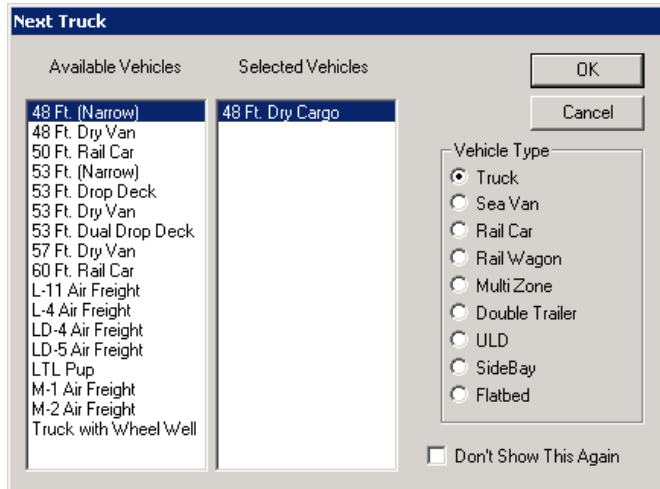
2. You will next be asked to select another vehicle from a Next Truck dialog box. You can either select the same vehicle or choose a new one.

   Note: If you only load one type of vehicle and do not want to see this dialog box to select another vehicle, you can turn it off by checking the "Don't Show This Again" option in the dialog box or through the Tools | Configuration menu (disable "Show next vehicle dialog"). For more information, please refer to Chapter 11, Configuration.

3. Click on OK. MaxLoad Pro draws a new solution with the items previously on the Cut List. MaxLoad Pro updates the Cut List to reflect that fewer items (if any) remain to be loaded as part of this manifest. If the Cut List still contains freight, repeat this procedure until all items from the manifest have been loaded onto a vehicle.

Note: If at any time you wish to see the previous vehicle in the sequence, click on the Prev (Previous) Truck button. The previous solution will appear.

During the process of loading items from the Cut List, the page title will list container or pallet – first, second, etc. – you're currently viewing. This will prevent you from "getting lost" when viewing multiple vehicles in sequence.

SKU Information

MaxLoad Pro provides a right-click function that displays properties information for a selected SKU. To display SKU information, start from the View Screen and follow these instructions:

1. Position the mouse pointer over the SKU for which you want to display information and right-click on the SKU. A pop-up menu appears.

2. Click on Properties. The Properties window appears, as pictured here.
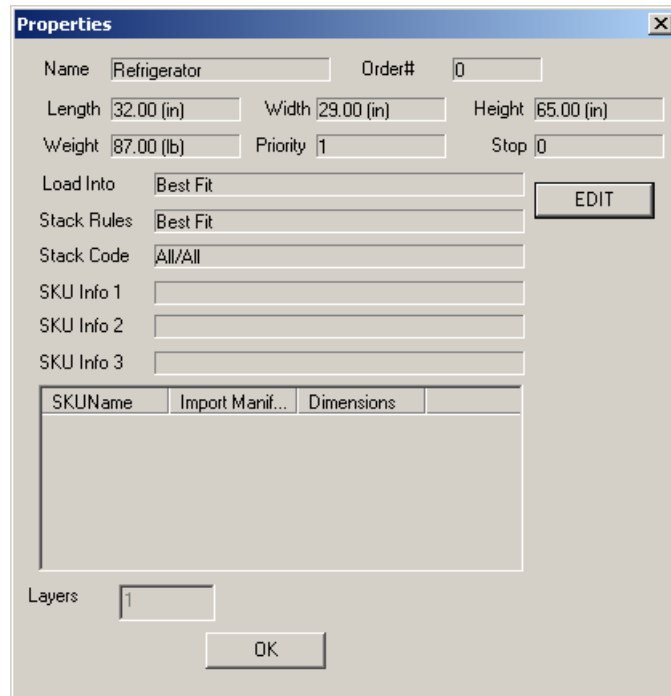
As you can see, the Properties window displays a range of basic properties for the selected SKU: name, length, width, height, etc.

3. Additional SKU properties are also found in the Status Bar at the bottom of the screen.

4. You can edit the selected SKU via the Define | SKU menu by clicking on the Edit button. Note that any changes made in SKU properties will only be reflected in the manifest after a recalculation.

Editing a Solution

Introduction

MaxLoad Pro Editor can be used to edit a solution built by MaxLoad Pro, manually build a load starting with an empty container or a pallet, and manually edit a partially-built manifest.

Note: MaxLoad Pro does not allow you to edit Single-SKU manifest.

The various topics outlined in this chapter are:

❖ Editor Screen

- Split Edit Screen
- Toolbar
- Cut List
- Orientation Box
- View Buttons/View Options
- Load Statistics
- Snap Buttons
- Status Bar
- SKU Information

❖ Editing a Load

- Placing a SKU
- Moving a SKU
- Removing a SKU
- Breaking a Placement

❖ Editing Mixed Pallets in the Vehicle

❖ Stacking/Loading Violations

❖ Saving the Edited Load

Editor Screen

To work with the Editor, start from the Manifest View screen and click on the Edit button on the Tool Bar to access the Edit Screen as shown here.
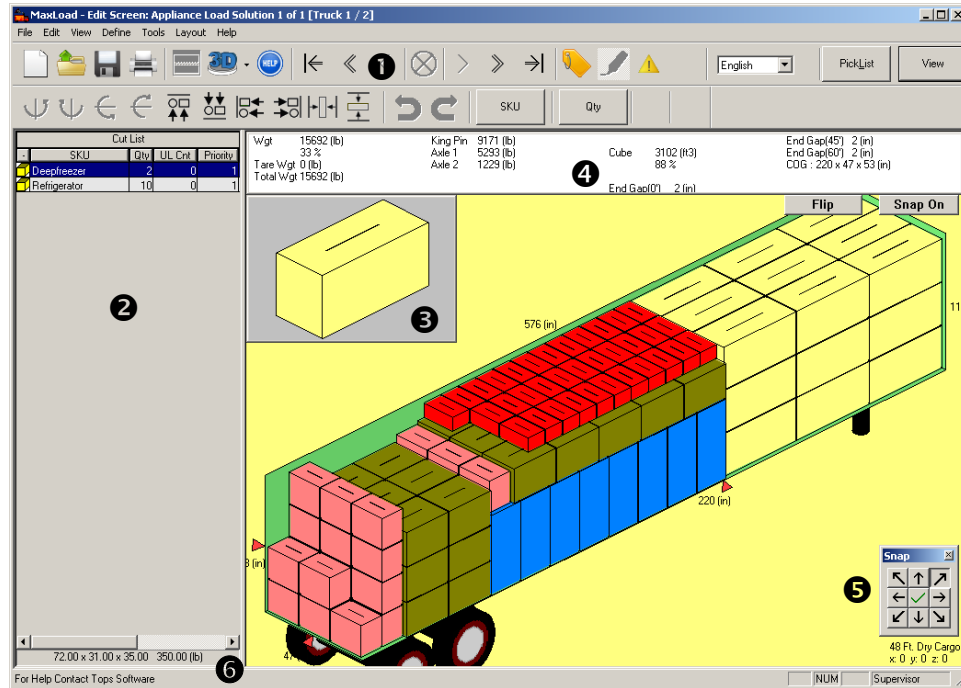
The Editor Screen is divided into two separate sections, a Cut List on the left and 3D load diagram solution on the right. To return to the Manifest View screen, click the View icon button on the Tool Bar.

❖ **Toolbar ❶:** Contains a number of icons and buttons that allow you to execute routine editing commands.

❖ **Cut List ❷:** List of SKUs that did not fit into the selected container or on a selected pallet.

❖ **Orientation Box ❸:** Displays a 3-dimensional image of a selected SKU. The Orientation Box allows you to change both the orientation and dimension vertical of the SKU.

❖ **Load Statistics ❹:** Displays a different statistics for a load.

❖ **Snap Buttons ❺:** Assists you in manually placing SKUs by forcing a SKU you are moving as far as it can go in the direction you've selected on the Snap button.

❖ **Status Bar ❻:** Displays constraint messages, which let you know you've violated a stacking or placement rule for an SKU.

Split Edit Screen

When you click on the Split Edit ▭ icon on the Tool Bar, you will see a very similar edit screen except that there are two 3D views of the same load diagram, one on top of the other. You can change one of the displays to a different view so you can have two perspective of the same load during editing.

To change either view, you need to first click on the view pane you are changing and then go to the View icon 3D ‾ on the Tool Bar to select a different view. The Flip button in each view pane allows you quickly change the 3D view from front to back or vice versa.
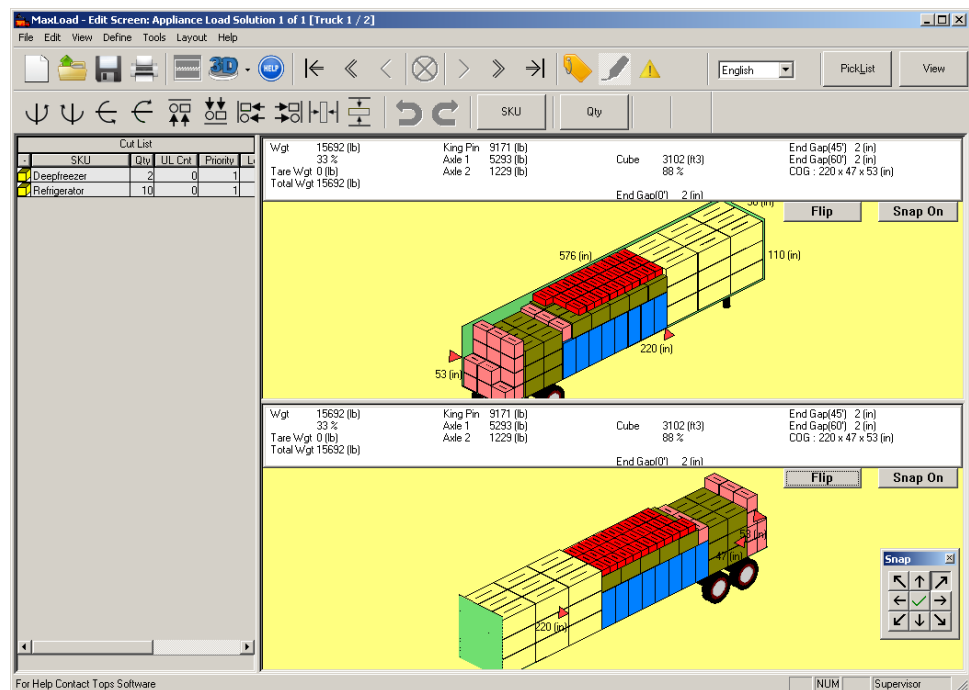
The load is edited in exactly the same way as in the regular edit screen but now you can initiate the edit from either view. Any changes to the load will be updated in both views simultaneously.

To exit Split Edit screen back to the Manifest View, click on the View button on the Tool Bar or click the PickList icon button to return to the Manifest Pick List screen.
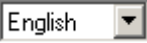
Toolbar (Editor Screen)
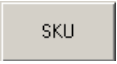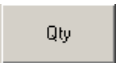
The Toolbar contains a number of icons and buttons that act as shortcuts for executing routine edit commands. Most commands also have a corresponding menu option in the Menu Bar.

The following table outlines the various Toolbar options.

Icon	Function
	New: Displays the Manifest Pick List Screen, where you can start a new manifest.
	Open: Displays the Open Manifest dialog box, which allows you to select and open an existing manifest.
	Save: Saves the active manifest.
	Print: Prints the active manifest
	Split Edit: To access the Split Edit screen. This option is grayed out when you are in the Editor screen.
	View: Clicks the drop down arrow to select the view of the vehicle or pallet in the g.o.d. window.
	Help: Clicks to open the on-line help documentation.
⇐	**Unload Vehicle:** Completely unloads the container or pallet. MaxLoad Pro automatically transfers all SKUs in the load to the Cut List.
≪	**Unload Placement:** Unloads the next placement of SKUs.
⟨	**Unload SKU:** Removes a selected SKU from the container or pallet.
Icon	**Function**

⊗	**Reject:** Rejects a computer-chosen placement and instructs the computer to try another one. You can perform this action repeatedly until you find a suitable placement. This button is grayed out when the last placement has been loaded.
〉	**Load SKU:** Adds a selected SKU to the container or pallet.
》	**Load Placement:** Loads the next placement of SKUs.
⇥	**Load Vehicle:** Completely loads the container or pallet. If you've partially edited the load, MaxLoad Pro will determine the rest of the load mathematically, based on the placement of existing SKUs.
	Labels: Turns SKU labels on and off.
	Outline: Turns on the wire frame view for SKU placements.
⚠	**Violations:** Displays a report highlighting all current stacking violations.
English ▾	**Units:** Switches measurement units from English to Metric and vice versa.
PickList	**Pick List:** Displays the Manifest Pick List screen, where you can change the parameters of the manifest.
View	**View:** Returns to the Manifest Solution view screen.
↻	**Rotate Right:** Rotates the orientation box to the right.
↺	**Rotate Left:** Rotates the orientation box to the left.

Icon	Function
⟵	**Rotate Down:** Rotates the orientation box downward.
⟵	**Rotate Up:** Rotates the orientation box upward.
	Align Up: Aligns selected SKUs flush up in the container or on the pallet or tote.
	Align Down: Aligns selected SKUs flush down in the container or on the pallet or tote.
	Align Left: Aligns selected SKUs flush left in the container or on the pallet or tote.
	Align Right: Aligns selected SKUs flush right in the container or on the pallet or tote.
	Center Horizontally: Centers selected SKUs horizontally in the container or on the pallet or tote.
	Center Vertically: Centers selected SKUs vertically in the container or on the pallet or tote.
⟲	**Undo:** Allows you to cancel the previous edit command.
⟳	**Redo:** Allows you to override the undo command.
SKU	**SKU:** Displays the SKU List dialog box, which allows you to select one or more SKUs to add to the load.
Qty	**Quantity:** Displays the SKU Quantity dialog box, which allows you to specify the number of SKUs to add to the load.

Note: Although the Toolbar in the Editor screen looks similar to the Toolbar in the Manifest View screen, the Load Buttons behave differently. In the Manifest View screen, you can use the Load Buttons to view the load "by placement," "leading edge" or "stop-off/priority." In the Editor screen, the Load Buttons allow you to view the load "by placement" only. You cannot use the Load Buttons to view the load in any other manner.

The Reject button is also active in the Editor screen so you can reject the current placement suggested by MaxLoad Pro. You can keep hitting the reject button until you are satisfied with the current SKU placement.

Cut List (Editor Screen)

The Cut List, is a listing of all SKUs that did not fit into the selected transit container or a pallet. The Cut List contains an icon representing the SKU shape, SKU Name, Quantity, Unitload Count, etc.
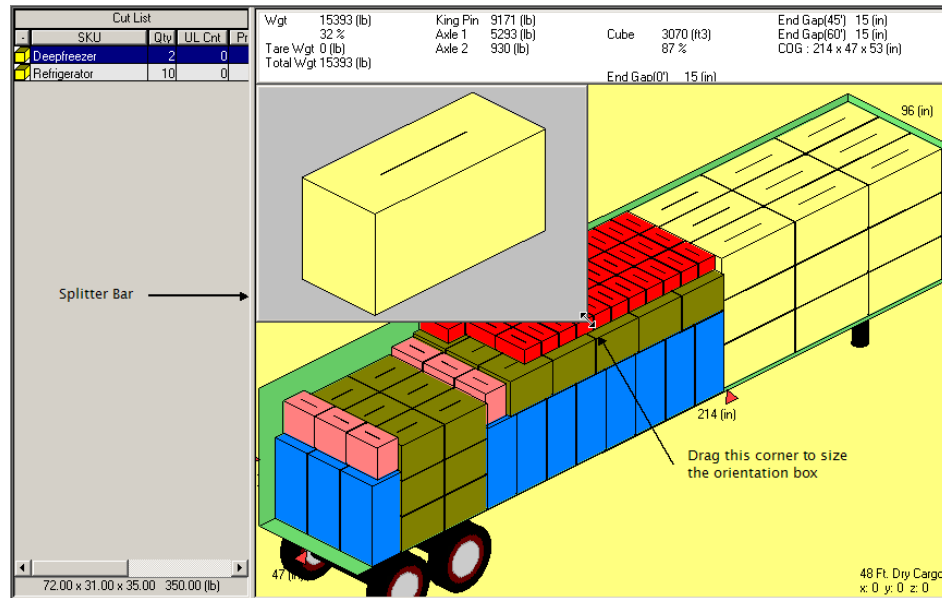
When you click on a SKU in the Cut List, the information will be highlighted with a blue highlight bar. Below the Cut List, at the bottom of the screen, you'll see a field that displays the dimensions and weight of the selected SKU as in the figure above.
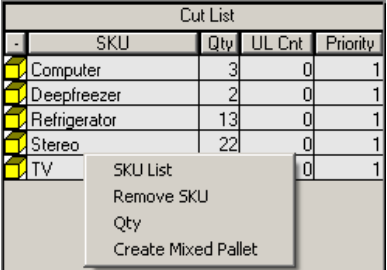
Items in this list are stored in text form in alphabetical order. As you're editing, when you select an SKU from the Cut List to add to the load, the SKU will appear to scale in the 3-dimensional shape it was defined in the orientation box. As you remove a SKU from the diagram and drag it to the Cut List, MaxLoad Pro transforms the SKU from the 3-dimensional shape to text form and moves it into the Cut List.

There is a splitter bar between the Cut List and the Solution View, you can adjust the width of the Cut List by placing the mouse cursor on the splitter bar. When the cursor changes its shape, click on the left mouse button to size the Cut List.

Editing the Cut List

You can add and remove items to the Cut List for placement into the edited load or modify the quantity for any SKU currently in the Cut List. To modify the Cut List, follow these instructions:

1. Right-click over the Cut List. A small box appears, as pictured below, with options – SKU List, Remove SKU, Quantity and Create Mixed Pallet.

2. To add SKU items to the Cut List, select SKU List. The SKU List dialog box appears, as pictured below.
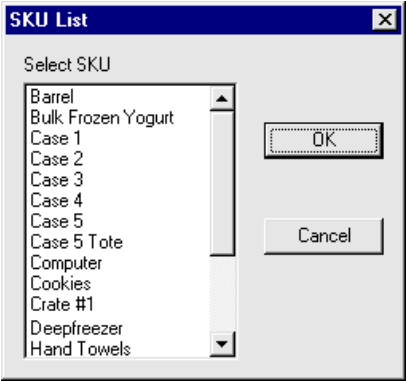
3. Select the SKU you want to add to the Cut List and click on OK. The SKU Quantity dialog box appears, as pictured on the next page. The dialog box displays the name of the selected SKU item.
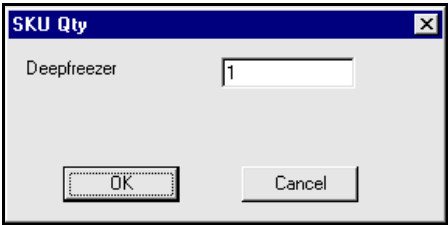
4. Enter the quantity desired and click on OK.

5. To change the quantity of an existing SKU item in the Cut List, highlight the SKU item in the list.

6. Right-click over the Cut List.

7. Select the Quantity option. The SKU Quantity dialog box appears, as pictured above. The dialog box displays the name of the selected SKU item.

8. Enter the new quantity for the selected SKU.

9. Click on OK. The Cut List redisplays with the updated quantity of the selected SKU.

10. To remove a SKU item from the Cut List, click on the SKU which becomes highlighted.

11. Right-Click over the highlighted SKU and select the Remove SKU option. The selected SKU will be removed from the Cut List.

    Note: Unitized SKU cannot be removed from the Cut List in this manner. You will have to do this in the Manifest List.

Create Mixed Pallet from the Cut List

You can manually create mixed pallets using the SKUs in the Cut List and place them inside the truck. To create mixed pallets in this manner, follow these steps.

1. Right-click over the Cut List and select Create Mixed Pallet in the pop-up dialog box. The Select Pallet dialog box will open.
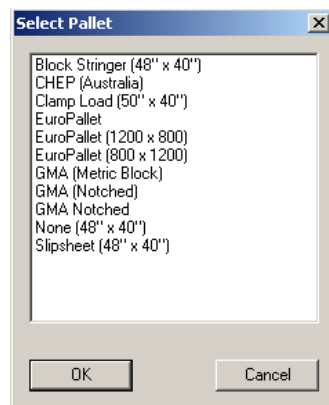
2. Select the pallet style you will use for the mixed pallet and click OK.

3. The Mixed Pallet Edit screen will open.

4. Create the mixed pallet by dragging and dropping SKUs onto the pallet area as described in the next section.
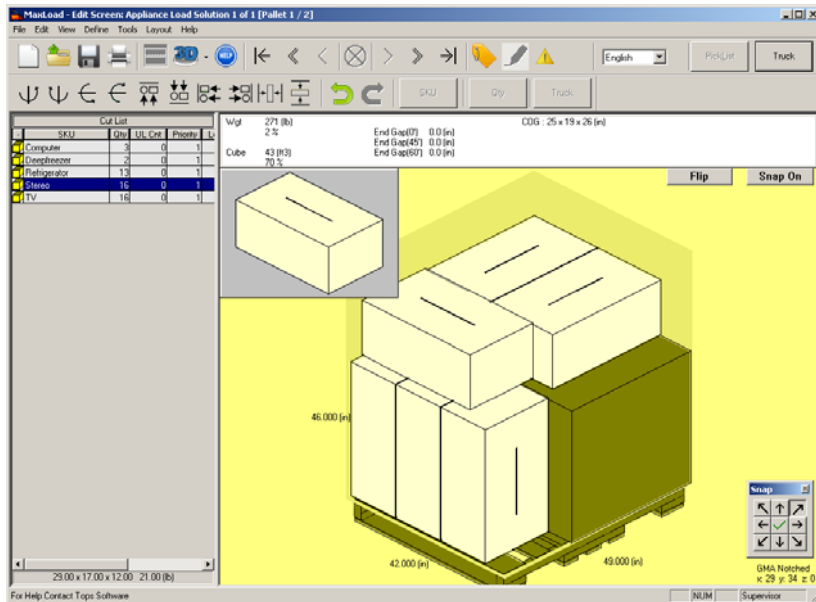
5. When done, click on the Truck icon button on the Tool Bar.

6. A new SKU with name MP-1 will be added to the Cut List.

7. To place this mixed pallet into the truck, highlight MP-1 on the Cut List. When the mixed pallet appears in the orientation box, click, drag and drop the pallet inside the truck.
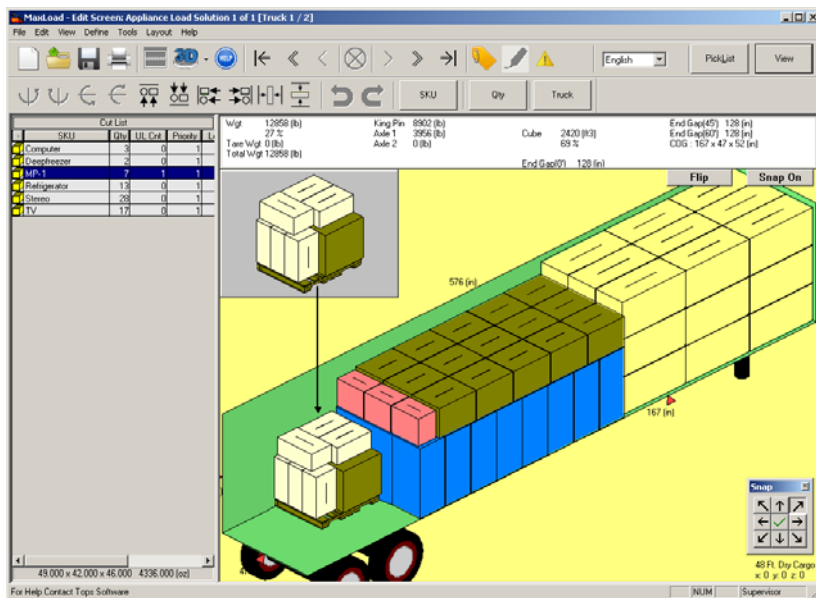
8. You now have a mixed pallet created on-the-fly placed inside the truck. You can edit this pallet again by clicking on it (inside the truck).

   After editing the mixed pallet, click on the Truck button on the Tool Bar to place the edited pallet back inside the truck.

Orientation Box (Editor Screen)
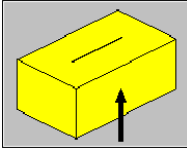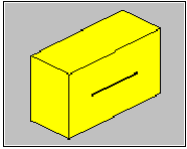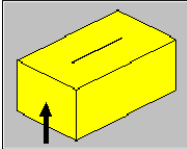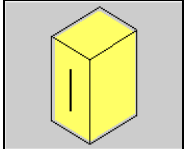
The Orientation Box displays a 3-dimensional representation of the SKU you have chosen from the Cut List. This box appears in the upper left-hand corner of the Editor Screen, only after you have selected a SKU.
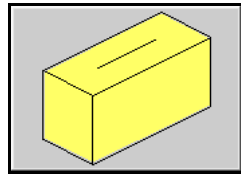
To activate the Orientation Box, select an SKU from the Cut List. To remove it, simply press the [Esc] button on your keyboard.
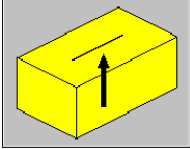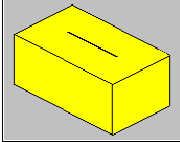
The Orientation Box allows you to perform the following tasks:

❖ **Change the Vertical Dimension of the SKU:** To change the vertical dimension of the SKU, click on the face of the SKU that you want to position against the floor (that is, the new base of the SKU). The figure below shows a visual illustration.

Clicking Here …	Changes the Vertical Dimension of the SKU Like This

❖ **Change the Orientation of the SKU:** To change the orientation of the SKU, click on the face of the SKU that currently faces up.

MaxLoad Pro rotates the SKU 90 degrees. The figure below shows a visual illustration.

Clicking Here …	Changes the Orientation of the SKU Like This

If you need to change both the vertical dimension and the orientation of a SKU, it's easy to change the vertical dimension first, and then change the orientation.

Helpful Hint: Make any changes necessary to the vertical dimension and the orientation of the SKU before you drag the SKU into the vehicle. Once the SKU has been placed into the vehicle, you cannot make changes to the loading orientation. If you need to change the loading orientation of a SKU once it has been placed, you must first drag the SKU to the Cut List, then select the SKU again, following the procedure outlined above.

If the SKU is too small, it will be difficult to click on its face change the orientation via this box. In such a case, resize the box by dragging its lower right hand corner or use the rotation icons on the Tool Bar.

View Options (Editor Screen)

To change the view of the editing load, click on the down arrow of the View icon on the Tool Bar and select a different view from the drop list. The Flip button also allows you quickly change the 3D view from front to back or vice versa.

The different view may come in handy during the edit process. For example, if you're using the 3D view and can't see a SKU that you want to remove, simply choose another view that will help you get a clear picture of that SKU.

In addition to the standard views – Top, Side, Front and 3D – you can also view the load diagram from other angles. Following are some other view options available in the Editor Screen:

❖ **Zoom In or Out:** To "zoom in" or "zoom out" on the load diagram, follow these instructions:

1. Click on the diagram window to make it active.

2. Press the "T" key on your keyboard to "zoom in." and the "Y" key to "zoom out." Continually click on the respective key until the diagram is sized to your liking.

❖ **Rotate the Load Diagram:**   You can rotate the diagram to view it from any angle, giving you 360-degree freedom to view the diagram from any conceivable angle.

To rotate the load diagram, follow these instructions:

1. Click anywhere in the diagram portion of the screen. This makes the diagram "active," thus allowing it to be rotated.

2. Use the arrow keys on your keyboard to rotate the diagram to the desired position. All four arrow keys are available to you, allowing you to rotate the diagram to view from the front, rear, top, bottom, right side and left side of the vehicle.

Note: You can edit a load from any angle. Once you've rotated the diagram to the preferred viewing angle, you can proceed with editing.

Load Statistics (Editor Screen)

Load Statistics is displayed above the 3D truck graphics. It displays some of the important information for the loaded container like cargo weight, cube, tare weight, weight and cube efficiency, end gaps and COG, etc.

Wgt	13066 (lb)	King Pin	8904 (lb)			End Gap(45')	128 (in)
	27 %	Axle 1	4136 (lb)	Cube	2461 (ft3)	End Gap(60')	128 (in)
Tare Wgt	0 (lb)	Axle 2	26 (lb)		70 %	COG : 172 x 46 x 51 (in)
Total Wgt	13066 (lb)			End Gap(0')	79 (in)		

Snap Buttons (Editor Screen)

The Snap buttons, as pictured below, assist you in manually placing SKUs by forcing a SKU you are moving as far as it can go in the direction you've selected the Snap button.

When the Snap feature is on, MaxLoad Pro automatically places objects as far as possible in the selected direction, regardless of where you initially place the object in the container or pallet. When the Snap feature is off, an object will remain where you initially place it.

To turn the Snap feature on, click on the center button. The center button displays a green check mark; all snap buttons become activated.

To turn the Snap feature off, click on the center button again. The center button displays a red "X" mark; all snap buttons become deactivated.

Note: The Snap feature can even be accessed from the Menu Bar, from the Layout menu option.

Status Bar (Editor Screen)

The status bar is located at the bottom of the Editor screen. When you select a SKU that has already been placed in a solution, the status bar displays the SKU number, along with the quantity of SKUs in the selected placement. Below is the SKU information for the first placement inside the vehicle for the Appliance Load Manifest.

> 1: Deepfreezer - Stack Code All/All, Priority 1, 27 Pieces (72.00 X 31.00 X 35.00 (in) 350.00 (lb))

The status bar also displays constraint messages, which let you know when you've violated a stacking or placement rule after you've finished moving an SKU. Once you release a SKU or group of SKUs at its new placement, the status bar will turn red if you've violated a stacking rule. The error message will display until you click the mouse on another SKU.

Note: Keep in mind that the Editor will allow you to violate any previously defined orientation or vertical dimension parameters. However, the status bar at the bottom of the screen will warn you of any loading violations that have occurred during the edit process. To view existing violations in the current load, clip on the ⚠️ button in the tool bar.

SKU Information

MaxLoad Pro provides a right-click function that displays properties information for any selected SKU. This function is available for truck, pallet and tote manifests but not available for a single SKU manifest. To display SKU information, start from the View or Edit Screen of a truck, pallet or tote manifest and follow these instructions:

1. Position the pointer over the SKU for which you want to display information.

2. Right-click on the SKU. A dialog box as shown below appears.

```
Properties
Break Placement
Edit
Export                ▶

Align Rear
Align Rear Left
Align Left
Align Front Left
Align Front
Align Front Right
Align Right
Align Rear Right
Align Center
```
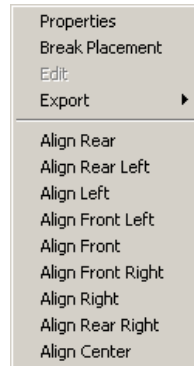
Note: The above dialog box with all functions available appears if you're right-clicking in the Edit screen. If you right-click the SKU in the View Screen, only the Properties option is available.

3. To export the current view of the load solution (in the View or Edit screen), select Export in the right click menu. Specify the format of the output graphics and enter a filename at the Save As dialog box.

Editing a Load

Before you begin the edit process, it's important to understand how the Editor is designed to work. In most cases (though not all), MaxLoad Pro loads a SKU together with other identical SKUs to form a large placement.

A placement is defined as a block of identical SKUs loaded with the same dimension vertical and oriented in the same direction in the container. MaxLoad Pro loads the largest placement possible of a SKU before loading smaller placements or single SKUs. MaxLoad Pro uses this method of loading because of the ease of loading and unloading.

Therefore, considering how MaxLoad Pro groups like SKUs together while loading, understand that, in order to select an individual SKU (or layer or column of SKUs), you must first select the entire placement of the SKU in question.

Note: To edit a load diagram, you must first create a new manifest or open an existing manifest. In this section, any reference to SKU also applies to unitload unless otherwise noted.

Placing a SKU

Discussed below are some ways of placing SKUs in the Editor:

❖ **Placing a SKU into a container or on a pallet:**

1. Select a SKU from the Cut List. The Orientation Box displays to the right of the Cut List with a 3-dimensional image of the selected SKU. Notice that the mouse pointer is attached to a miniature box.

2. Make changes to the vertical dimension and/or the orientation of the SKU.

3. Once you've made changes to the loading parameters, hold down the left-click button on your mouse and drag the SKU to the desired position in the vehicle. When you're satisfied with the placement of the SKU, release the mouse button.

    MaxLoad Pro adds the selected SKU to the load. If the SKU is too large for the desired space, you'll hear a beep, and nothing will be drawn. The SKU will remain in the Orientation Box.

4. If the selected SKU is too big to fit into the space, you may want to specify another dimension vertical, change the orientation of the SKU or make changes to both parameters.

5. Repeat steps 1-3. Keep in mind that there may be instances where the object simply will not fit in the intended space.

Note: The Status bar will turn red whenever a stacking code is violated.

❖ **Building a Placement:**

1. Load the first SKU in the container or on the pallet..

2. Hold down the Shift key and click on the side of the SKU where you want to place another SKU. See the graphic below for an illustration of this procedure.

1.	2.	3.
To add a second SKU to the right of the SKU, click here…	To add a third SKU to the first two SKUs (2), click here…	To add a second row of SKUs (3), click here…
4.	5.	6.
To add another layer of SKUs (4), click here…	To add another two-layer row of SKUs (5), click here…	You now have a two-layer placement; each layer has three rows of three SKUs (6).
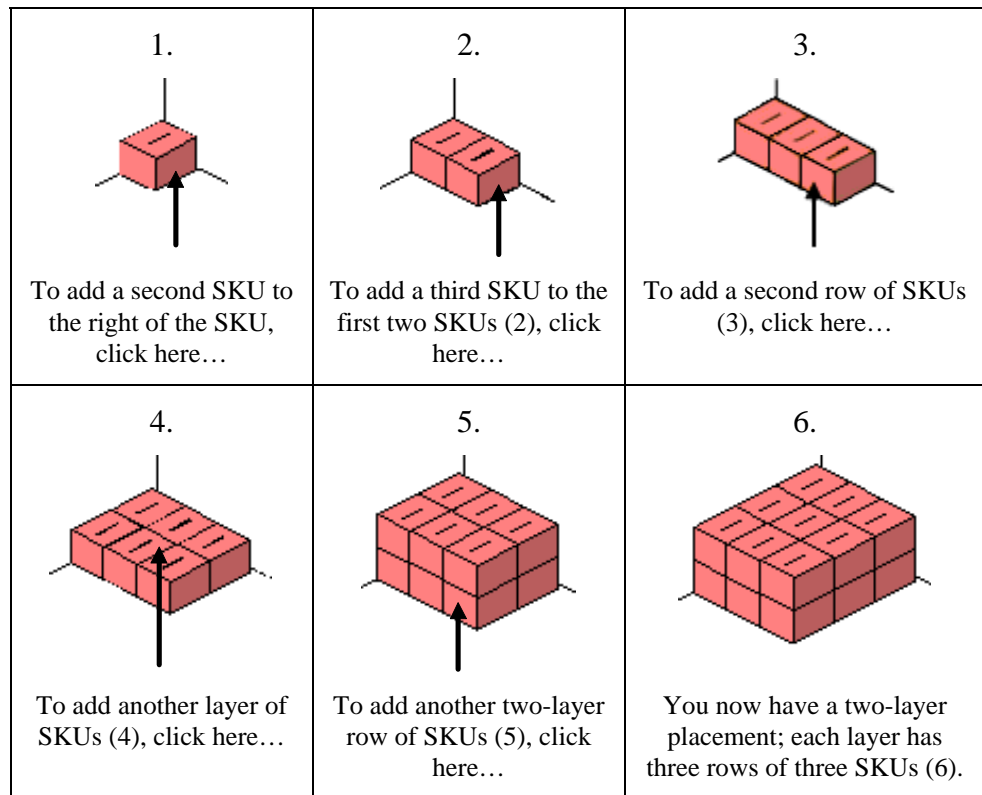
3. As you can see by the graphic, you can add another row, column or layer to the placement using the Shift/Click combination. You can achieve these results by clicking anywhere on the face of the SKU group to which you want to add another row, column or layer.

For example, in frame number 5, you can get the result displayed in frame number 6 by clicking on the designated face of any of the six SKUs in that row.

4. If you don't want to add an entire row, column or layer to the placement, re-select the SKU from the Cut List, and then place the SKU in the desired location (just as you would if you were starting a new placement). You are not required to use the Shift key to begin a new placement.

Moving a SKU

Discussed below are some ways of moving SKUs in the Editor Screen.

❖ **Moving a SKU within a container or on a pallet:**

1. Position the mouse pointer over the SKU that you want to move.

2. Left-click on the SKU and move it to the desired position. You'll see an outline of the SKU as you begin to move it, though the SKU will remain in its original place. Continue depressing the mouse button until you reach the new location for the SKU.
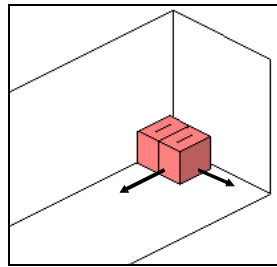
3. When you've moved the SKU to the desired position, release the mouse button. MaxLoad re-draws the SKU in the new location.

❖ **Moving one SKU on top of another SKU:**

1. Position the mouse pointer over the SKU you want to move.

2. Left-click on the SKU and begin dragging it to its new position on top of the second SKU. An outline of the SKU will appear

3. Using the outline of the SKU as a reference point, move the SKU to the desired position.

4. Release the mouse to release the SKU in its new position. MaxLoad Pro re-draws the SKU in the new location.
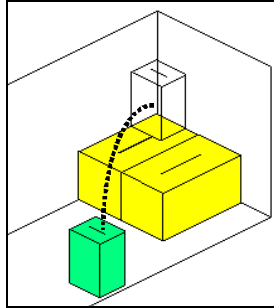
❖ **Moving a SKU using the Top View:** This view is useful especially when want to move a SKU on another. As this view provides a unique perspective on the placement of a SKU, allowing you to ensure that the SKU is placed in the intended position.

1. Click on the Top button. The 3-dimensional view of the load redisplays to show you a view from the top of the container or pallet.

2. Select the SKU you want to move, then left-click and drag the SKU anywhere within the space provided. MaxLoad Pro re-draws the object in the new location.
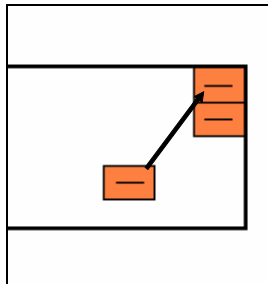
❖ **Moving a SKU from above the floor to a new position on the floor:**

1. Position the mouse pointer over the SKU you want to move.

2. Left-click on the object and begin dragging it to its new position on the floor. An outline of the SKU will appear and move with your mouse.

3. Using the outline of the object as a reference point, move the object to the desired position, as pictured below.

4. Release the mouse to release the SKU in its new position. MaxLoad Pro re-draws the SKU in the new location.
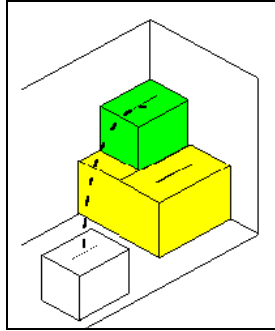
If there's not enough room to place the SKU release it in its new position, the Editor will try to find an eligible placement as close as possible to the intended placement. If the Editor cannot find a suitable placement, it will return the SKU to its original placement (that is, where it was before you attempted the move).

❖ **Temporarily moving SKUs out of the way while Editing:**

1. Relocate the SKU within the vehicle.

2. Drag the SKU or group of SKUs to the Cut List, where it will be stored in text form.

   Note: The placement group will be broken down into individual items when moved back to the Cut List.

   Relocate the SKU to the empty space under the load diagram. Be sure to drag the SKU completely off the vehicle; make sure no part of the SKU remains touching the vehicle.

   Note: If the Snap feature is turned on, the SKU will move in the direction programmed by the Snap.

Removing a SKU

❖ **Removing a SKU off the pallet or a container:**

1. Select the SKU to be removed and drag it off the g.o.d. window.

   MaxLoad Pro takes the SKU off the container or pallet and add it to the Cut List, thus increasing the cut list quantity.

❖ **Removing a Layer/Column SKUs from a larger Placement:**

1. Remove the entire placement to the Cut List. The figure on the next page shows a placement being moved off of the vehicle.

2. Return the individual SKUs back onto the vehicle, placing the desired layer, column or row in its new position.

3. Remember the "shortcut" method of building a placement.
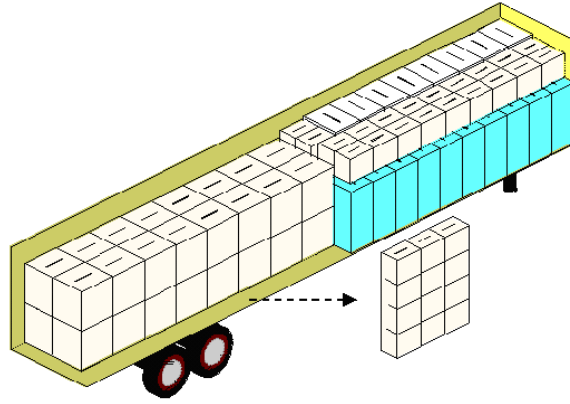
Breaking a Placement

You can break a placement of shipcases as well as drums. To break a placement into its individual items, follow these instructions:

1. Right click on the placement block. A pop-up menu appears

2. Select Break Placement in the pop-up dialog box.

   MaxLoad Pro re-draws the solution with the selected SKU broken into individual items. Note that the each SKU now has its own label, versus only one label for the entire placement.

   Note: You cannot break a single unitload into individual SKUs.
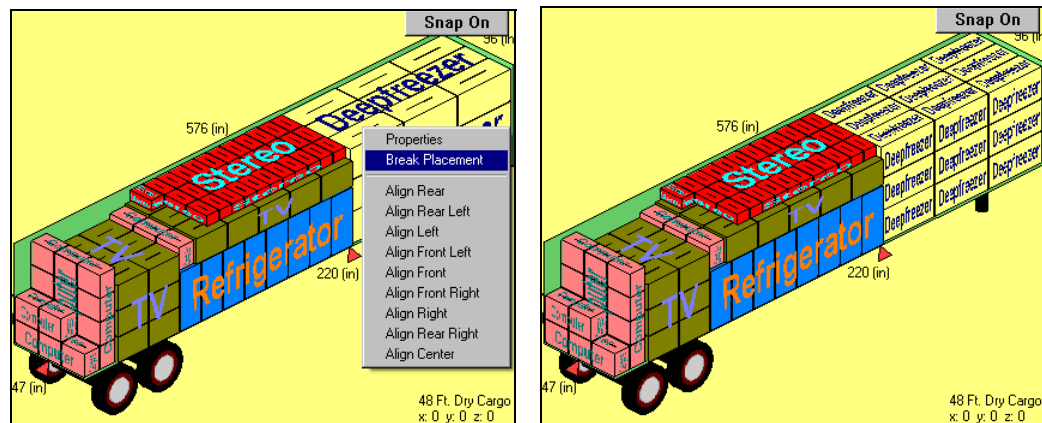
Editing Mixed Pallets in the Vehicle

MaxLoad Pro allows you to edit a mixed pallet inside a loaded vehicle or create a new mixed pallet from the Cut List as described in an earlier section. The following steps illustrate how to move SKUs from one mixed pallet and place them on another mixed pallet on the same vehicle.

Note that the edit function is available to mixed pallets only, unitloads are not editable.

1. At the vehicle editor screen, place the mouse cursor over the mixed pallet you want to edit and click the right mouse button. A pop-up menu appears.
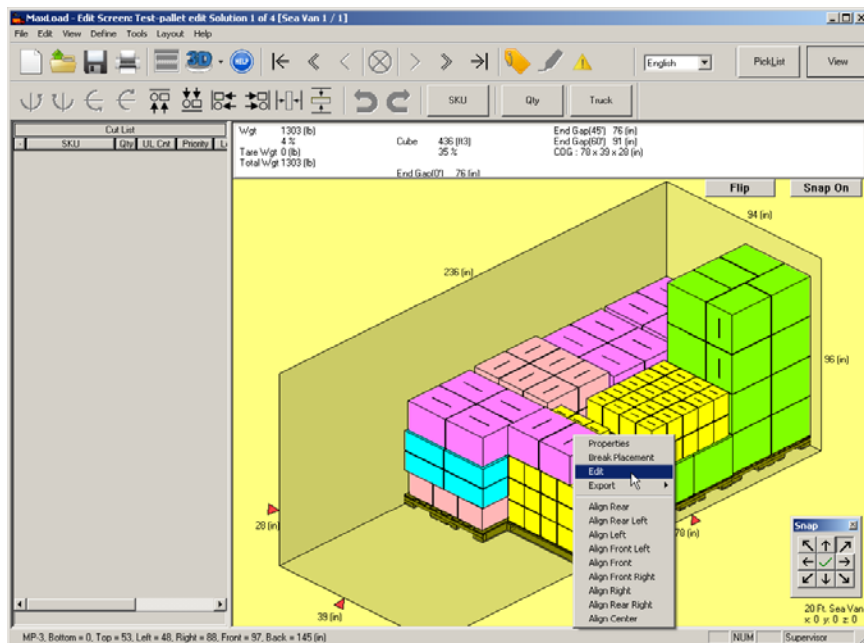
2. Select Edit. Note that you can select Properties to view the contents of the mixed pallet.

   A new editor screen containing just the mixed pallet opens. Note that you can go to this same screen directly by double clicking the mixed pallet inside the vehicle.
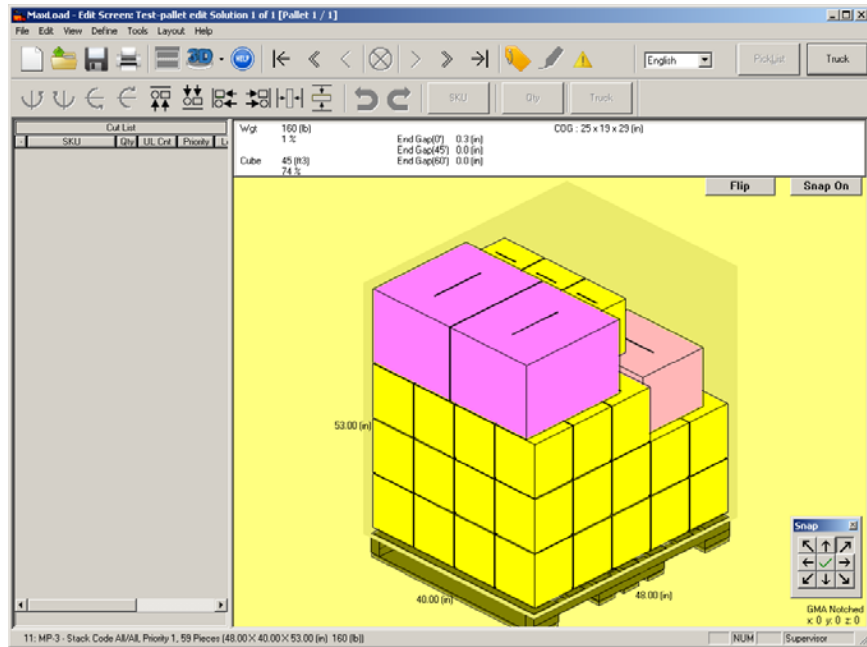
3. The Mixed Pallet editor works the same way as the vehicle load editor. You can click, drag and move selected SKUs to a different location on the pallet or remove them altogether from the pallet by bringing them to the Cut List.

   Here, the entire top layer has been removed and placed in the Cut List.
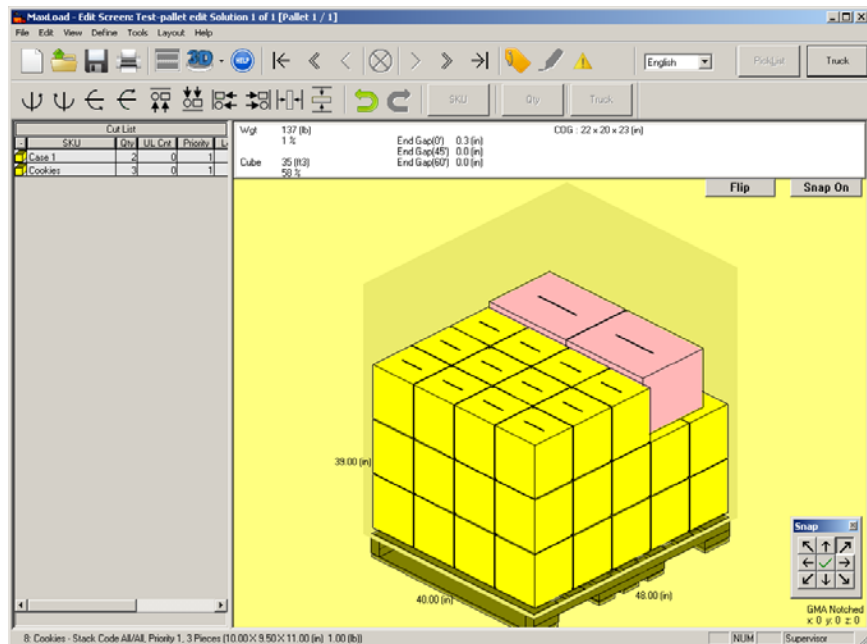
4. Click the Truck button on the Tool Bar to bring the edited mixed pallet back to the vehicle edit screen. The SKUs from the mixed pallet are now in the Cut List.

---
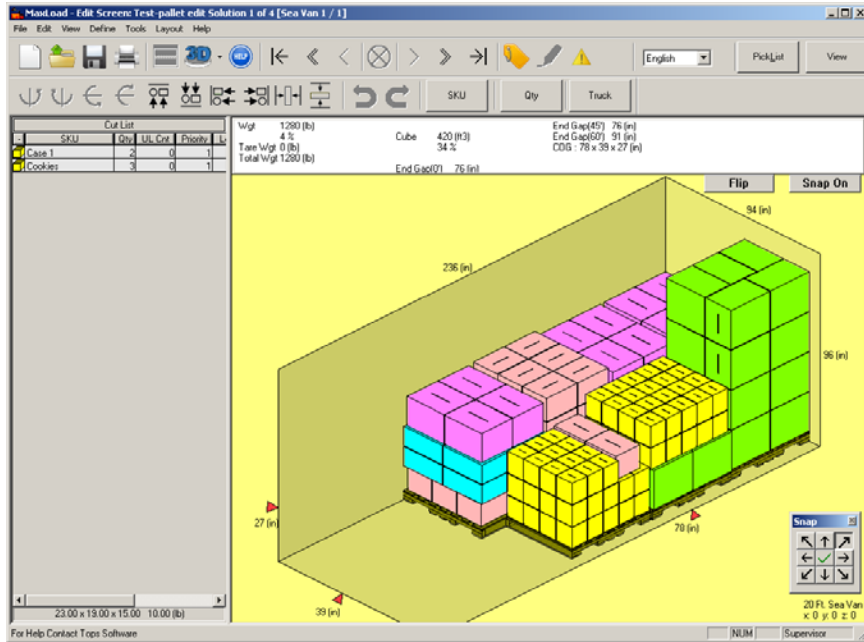
5. You can add the items on the Cut List as floor items by dragging and dropping them into the truck in the vehicle edit screen.

6. Double click on another mixed pallet if you want to place the SKUs on the Cut List to a different pallet. You might want to turn off the Snap function in order for the SKUs to be centered on the pallet.

7. To create a new mixed pallet for the SKUs on the Cut List, right click the mouse button within the Cut List area and select Create Mixed Pallet in the pop-up dialog.
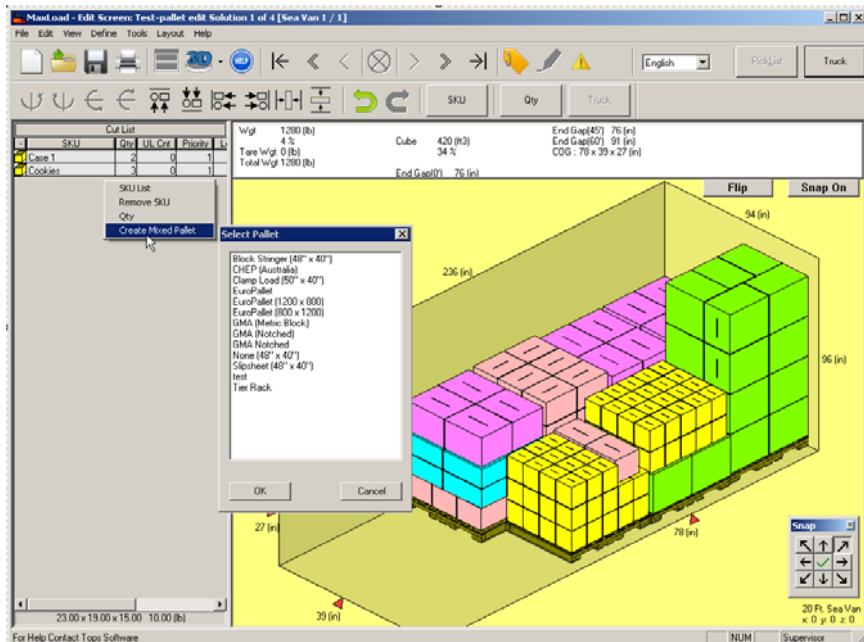
8. Select the pallet you'd like to use and a new editor screen containing the specified pallet opens.

9. Place the SKUs onto the pallet as desired and click on the Truck button when done.
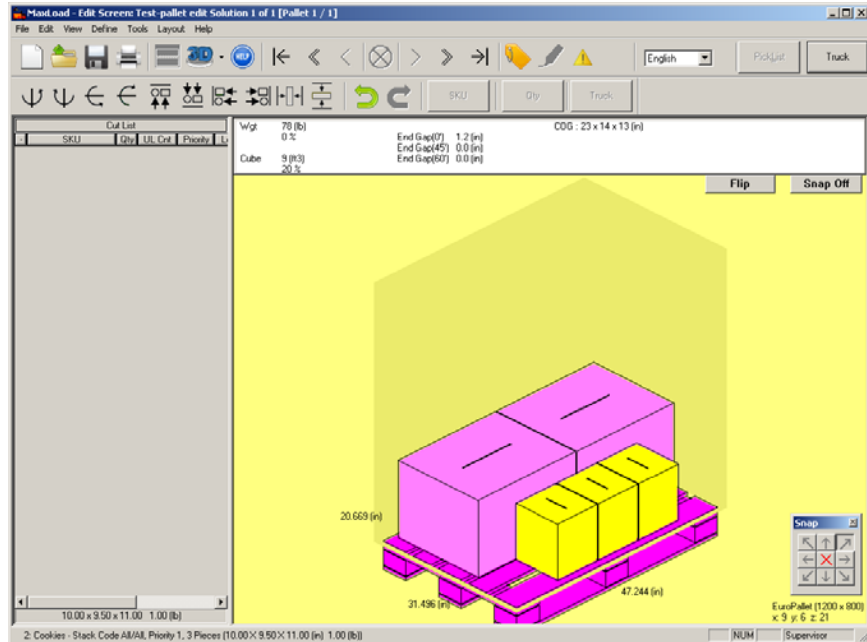
10. Back at the Vehicle Edit screen, you will see a new SKU MP-5 on the Cut List. This is the new mixed pallet you'd just created. You can see the pallet in the Orientation box if you highlight it on the Cut List as shown below.

11. To place this new pallet inside the truck, just drag and drop it inside the vehicle.

12. When you are done with editing, click the View button to go back to the Manifest View screen, or click the PicList button to go all the way back to the PicList screen.

Note: Unlike editing for vehicle loads, you cannot add SKUs or quantity to the Cut List when editing mixed pallets.

Stacking/Loading Violations

The MaxLoad Pro Editor allows you to override stacking rules during the edit process. In other words, though you may have designated that peanut butter cannot be stacked on top of cotton balls, the Editor will allow you to place a case of peanut butter on top of a case of cotton balls.

However, when you release the object in its new position, you'll notice that the status bar turns bright red, alerting you of the stacking violation. The status bar will remain red until you select another object to edit. In addition to the status bar, you can also access a report that provides a cumulative listing of all stacking violations. To display this Stacking Violation Report, click on the Stacking Violations icon ⚠ in the Toolbar.

Clicking on the stacking violation icon will display the stacking violation messages. Each message tells you when you've violated certain load

parameters of the container, the stacking rules of the SKU that you recently moved, or if a SKU is affected by the SKU that you recently moved.

The common stacking violations are as follows:

❖ (SKU Number) must be stacked on floor

❖ (SKU Number) must not be stacked on floor

❖ (SKU Number) violates stacked (Stack Code) of (other SKU Number)

❖ (SKU Number) is carrying (X lbs/kg). Its maximum weight allowed is (X lbs./kg.)

❖ (SKU Number) is allowed only (length, width, height) orientation

❖ (SKU Number) is stacked (X units) high. Its maximum stack height is (X units)

❖ Maximum vehicle weight has been exceeded

❖ Minimum ceiling clearance has been exceeded

Example: I want to load a grandfather clock into a sea van. The grandfather clock must be stacked on floor. However, the only place I can see to stack the grandfather clock is on top of a desk. When I drag the clock to the desk and release the mouse button, the status bar turns red, announcing that I've violated the "Must be Stacked on Floor" rule. It is now up to you to correct this violation.

The Edit Stacking Violations screen appears, as pictured below, with all the stacking violations found within the load.
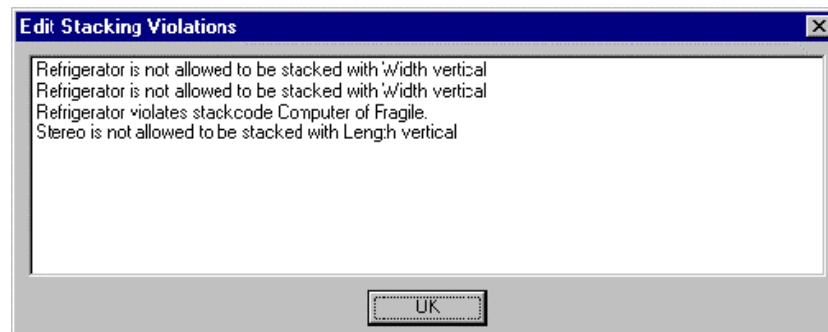
This list identifies which stacking rules have been violated, thus allowing you to go back and correct the load. This list is included with the Placement List when it comes time to print the manifest.

Saving the Edited Load

To save the edited manifest, click on the Save icon 🖫 on the Tool Bar. As an option, you can open the File menu and select Save. If you're saving the solution for the first time, MaxLoad Pro asks you to name the manifest.

MaxLoad Pro saves your changes as part of the manifest file. To view the edited changes later, remember to click on the View button rather than the Calculate button. Clicking on the Calculate button will recalculate the entire load based on the parameters you've assigned. Clicking on the View button simply calls up the manifest that you last saved, preserving any changes that were previously made.

Note: For MaxLoad Pro to replicate the edited load and make it available in the Solution List, save the edited load to library by clicking the "**Save To Lib**" checkbox in the Save As dialog box.

Printing

Introduction

This chapter presents the various options available when you're ready to print in MaxLoad Pro. MaxLoad Pro allows you to print various databases and multiple reports, each giving specific information regarding the load. You can preview your work before printing, which allows you to make adjustments before actually sending your work to the printer.

As with viewing and editing, printing is a standard function that does not change regardless of the type of manifest. We've attempted to make the print process as generic as possible; thus, this chapter covers printing in a generic manner. Whenever we reference printing a truck manifest, the same principles apply to a pallet manifest, single-SKU manifest or tote.

The various topics outlines in this chapter are:

❖ Printer Setup

▪ Print to File/Create PDF Documents

❖ Printing Options

▪ Reports/Solutions
▪ Report Types
▪ Databases

❖ Print Preview

▪ Report Exports

❖ Annotate Printouts

▪ Adding Text
▪ Adding Arrows

Printer Setup

The first step to printing in MaxLoad Pro is to find which is your default printer and where it is printing. This information is available through the Print Setup Dialog Box.

Click on Print Setup under the File menu. The Print Setup dialog box appears.
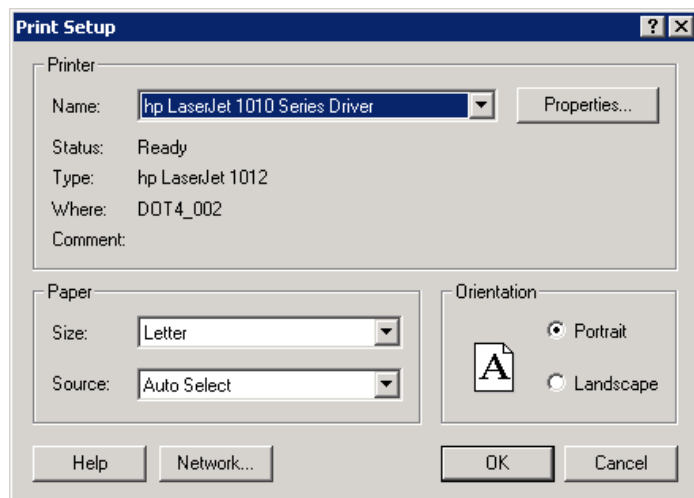
This dialog box allows you to set a default printer and other print parameters, which are inherent to your Windows operating system.

Select the local or network printer and click OK. The software prints the selected report or database.

Print to a File/Create PDF Documents

Printing to a file is useful if you want to share your calculations with other users electronically or if you have a document to be printed by a commercial printing service that uses higher-resolution printers. In that case, you can print the document to a file, and then take that file to the commercial printer.

To create PDF documents from MaxLoad Pro you should have a licensed copy of Adobe Writer installed. The Adobe Writer or Distiller should be the selected default printer, in the Print Setup dialog box.

From version 3.X onwards, you can create PDF outputs directly from MaxLoad Pro without the presence of Adobe Writer or other third party PDF writer. Start at the Print Preview Screen, then go to the Export Menu and select Export PDF. You will be prompted to enter the location where the PDF output will be saved.

Printing Options

MaxLoad Pro allows you to print a number of diagram views, reports, and databases.

Reports/Solutions

You can print a report/solution at any time, provided you've already opened an existing manifest. To print a new manifest, you first have to calculate the load before printing. Regardless of the type of report you wish to print — the same procedures will apply.

Depending on the manifest, there are two ways a solution can be printed.

❖ **Print:** Print feature from the File menu is used when you have a manifest that fits in one container or on one pallet.

   To print a solution, follow these instructions:

   1. From the Menu Bar, open the File menu and select Print A submenu appears with a list of print options – Load, Manifest, Summary, etc.

   2. Select the type of report or diagram view you want to print. For example, to print the load diagram, select Load.

The Print Parameters dialog box appears.
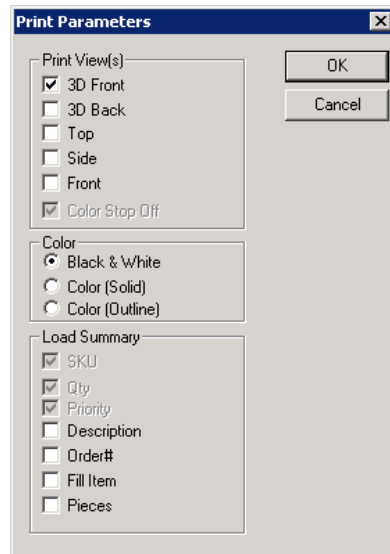
3. Select the view you want to use in your printout – 3D Back, Top, etc. You can select more than one view option. Each view will be printed on a subsequent page.

4. Select the print color: Black & White, Color (Solid), or Color (Outline).

5. Click on OK.

6. At the Print dialog box, select the printer and click OK. The software prints the selected report.

❖ **Multi Print:** Multi Print option is useful in analyses which have big manifests going in more than one container or on more than one pallet. Similar to the Print option this option can also be accessed from the File menu.

To multi print, follow these instructions:

1. From the Menu Bar, open the File menu and select Multi Print. The Multi Print Parameters dialog box appears.
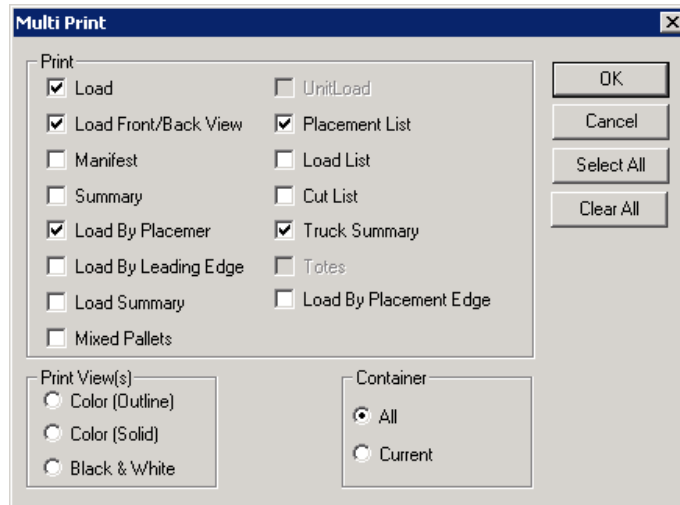
2. Select the report to print.

   Note: You can select more than one report. Each report will be printed on a subsequent page.

3. Click Select All button to select all reports and Clear All button to undo report selection.

4. Select the print type: Black & White, Color Solid, or Color Outline.

5. Select the containers. Select All for all containers for that manifest or Current to print report for a selected container and click on OK.

6. The Print dialog box appears. Select the printer and click OK. The software prints the selected report(s).

Report Types

The views allow you to view the load at various stages of the loading process, while the reports display relevant information regarding the active manifest. The various printing options that you can preview or print from the File menu is as listed below:
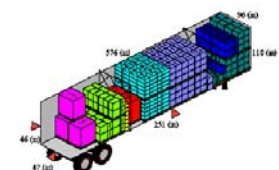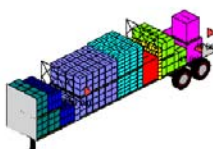
❖ **Load:** Prints the load diagrams of the current solution. Select from among 3D front, 3D back, top, side and front views.
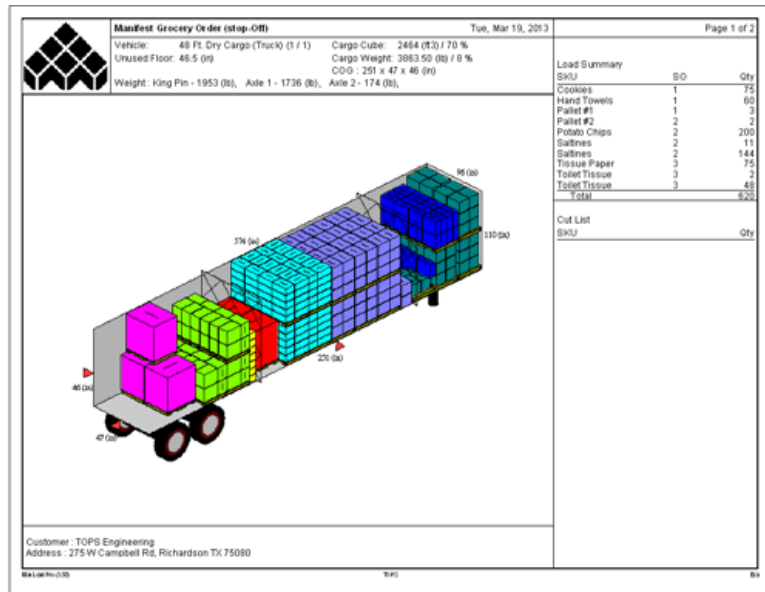
If "Color Stop Off" option is checked, the SKUs will be colored accordingly to stop off number as shown nexr.
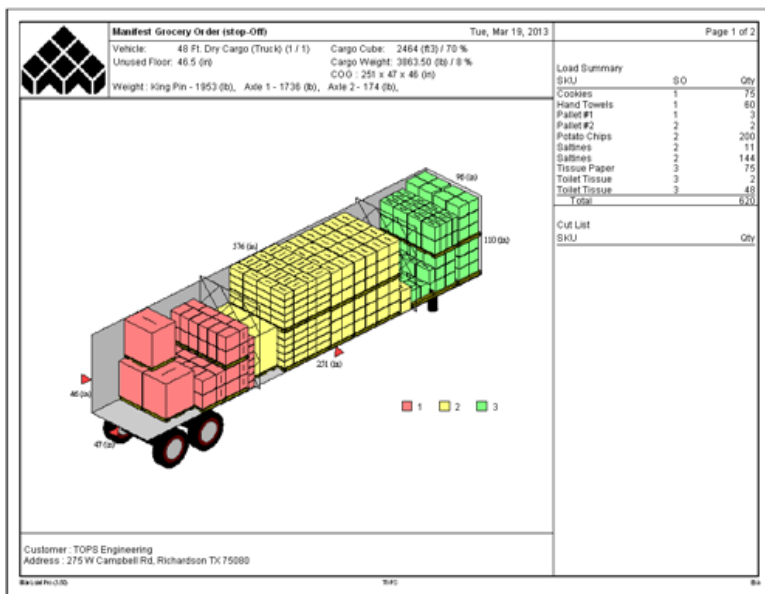
❖ **Load Front/Back View:** Prints a report with both the front and back view of the loaded container or pallet. Select from options of Top-Bottom direction or Left-Right direction as illustrated below.

❖ **Manifest:** Prints the manifest pick list and associated options selected for each SKU specified via the Properties function via the right click short cut menu.

❖ **Summary:** Prints a summary of the load. If there are stop offs or priorities in your load, the SKUs are grouped by stops or priorities in the summary.

❖ **Load By Placement:** Prints a report of the vehicle/pallet being loaded one placement at a time. This report indicates SKUs, SKU quantities, and the load configuration for each step.
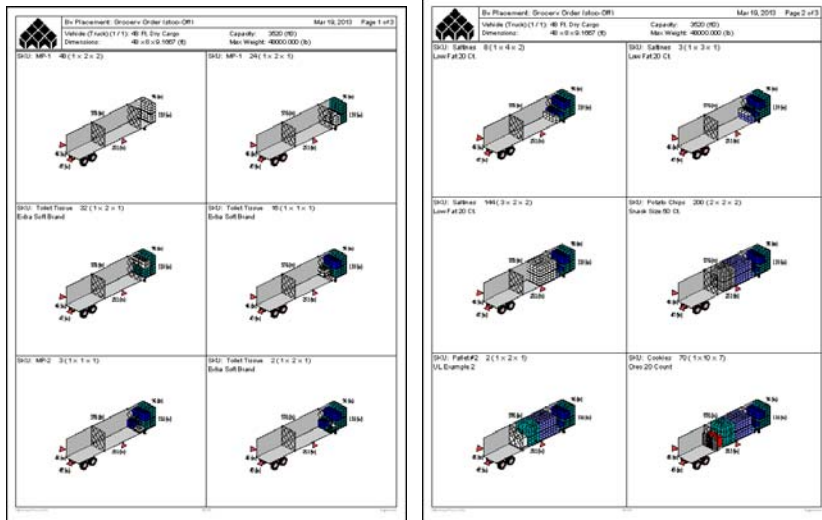
❖ **Load By Layer:** Available only for pallet manifests and with solutions based on layer construction, it prints the pallet load showing each successive layer.
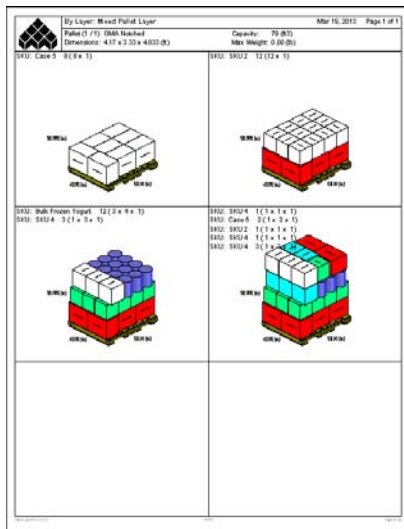
❖ **Load By Leading Edge:** Prints the load showing each successive leading edge. It shows less steps when compared to the Load by Placement report.
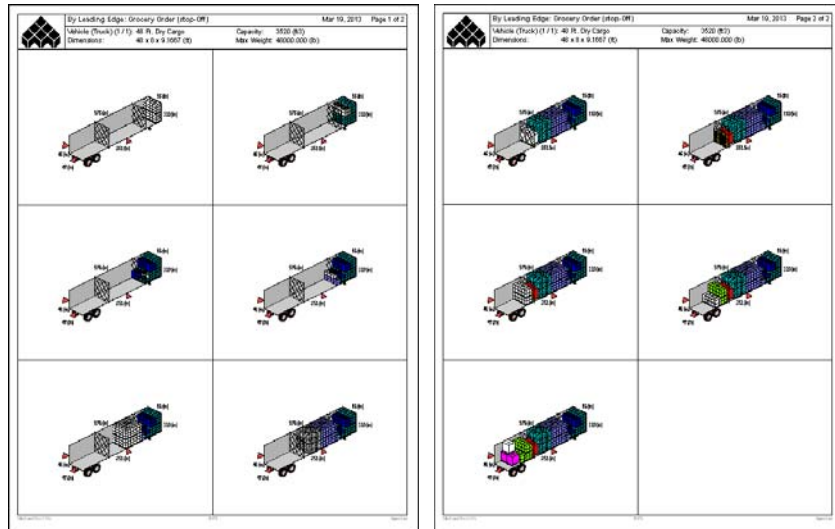
❖ **Load By Stop-Off:** Prints a diagram of the container/pallet being loaded one stop off at a time.
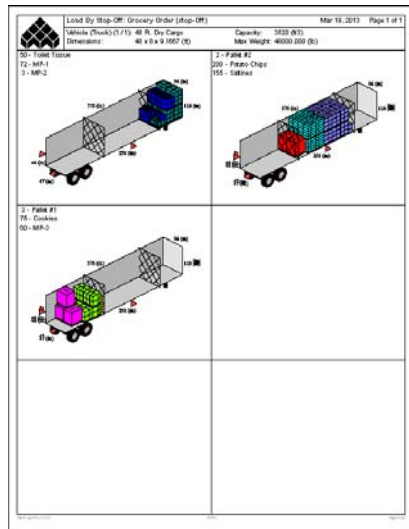
❖ **UnitLoads:** Have the option to print each individual unitload and/or mixed pallets inside the vehicle. The 3D diagram of the pallet load report provides the following details

For Unitload:
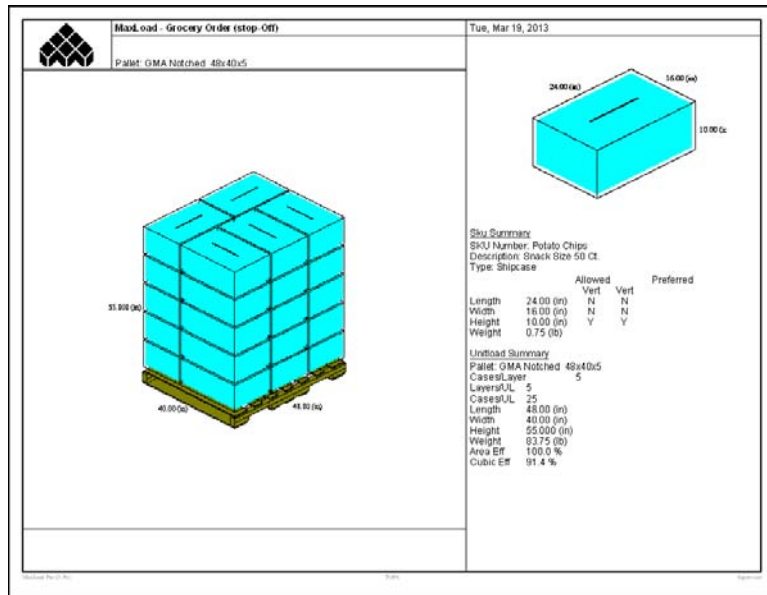
- SKU number and description
- Properties of SKU including length, width, height, weight and loading preference
- Pallet used for the unitload
- TiHi information: Cases per layer, number of layers on the pallet and total number of cases on the pallet.
- Dimension and weight of the unitload
- Area and cubic efficiency for the unitload

For Mixed Pallet:

- Type of pallet used
- Length, width, height and weight of the pallet load
- A summary of the contents on the pallet including SKU, quantity and SKU dimension

❖ **Placement List:** Prints a text report broken down by placement inside the vehicle. It contains the same information found under the Placement List in the Solution View.

Data includes:

- Placement Number
- SKU Number and Description
- SKU Quantity in the placement
- Number of unitload or mixed pallet within the replacement
- The Stop for the placement
- Configuration of the placement
- Orientation of the placement, i.e. which dimension is loaded vertically
- Position of placement from the front, side and floor of the vehicle

❖ **Load List:** Prints a breakdown of the solution by SKU Number. It contains the same information found under the Load List in the Solution View including:

No.	SKU	Order#	Qty	UL Cnt	Stop	Cube (ft3)	% Cube	Wgt (lb)	% Wgt
8	Toilet Tissue	124	7	0	3	18.96	0.5 %	0.4	0.0 %
7	Tissue Paper	145	8	0	3	29.02	0.8 %	48.0	0.1 %
8	Toilet Tissue	124	48	3	3	146.67	4.2 %	197.6	0.4 %
7	Tissue Paper	145	72	6	3	360.93	10.3 %	822.0	1.7 %
6	Saltines	145	11	0	2	47.67	1.4 %	2.8	0.0 %
6	Saltines	145	144	12	2	706.67	20.1 %	816.0	1.7 %
5	Potato Chips	145	200	8	2	488.89	13.9 %	670.0	1.4 %
4	Pallet #2	145	2	0	2	145.83	4.1 %	204.0	0.4 %
1	Cookies	132	20	0	1	12.09	0.3 %	20.0	0.0 %
2	Hand Towels	132	3	0	1	13.33	0.4 %	15.0	0.0 %
1	Cookies	132	85	1	1	61.11	1.7 %	150.0	0.3 %
3	Pallet #1	145	3	0	1	191.83	5.4 %	303.0	0.6 %
2	Hand Towels	132	60	3	1	283.33	8.0 %	495.0	1.0 %
			663	33		2506.34	71.2 %	3743.78	7.8 %

- Placement Number
- SKU Number
- SKU Quantity in the placement
- The Stop for the placement
- Total cube usage of each placement
- Percentage cube usage for each placement
- Total weight of each placement
- Percentage weight for each placement

❖ **Cut List:** Prints a list of SKU's that were not able to be loaded onto the vehicle/pallet.

No.	SKU	Order#	Qty	UL Cnt	Stop	Cube (ft3)	% Cube	Wgt (lb)	% Wgt
9	MP-1		8	1	3	41.96	1.2 %	113.0	0.2 %
10	MP-2		7	1	3	27.22	0.8 %	65.4	0.1 %
7	Tissue Paper	145	72	6	3	360.93	10.3 %	822.0	1.7 %
8	Toilet Tissue	124	48	3	3	146.67	4.2 %	197.6	0.4 %
			135	11		576.78	16.39 %	1198.03	2.5 %

Cut List: Grocery Order (stop-Off)   Mar 20, 2013   Page 1 of 1
Vehicle (Truck) : 48 Ft. Dry Cargo   Capacity: 3520 (ft3)
Dimensions: 48 x 8 x 9.1667 (ft)   Max Weight: 48000.000 (lb)

- Placement Number
- SKU Number
- Order number
- SKU Quantity in the placement
- Number of unitload or mixed pallet within the replacement
- The Stop for the placement
- Total cube usage of each placement
- Percentage cube usage for each placement
- Total weight of each placement
- Percentage weight for each placement

❖ **Mixed Pallets:** This report is only available for Truck Manifest. It lists the contents of various mixed pallets in the container including SKU Number and quantity, total cube and weight for the SKUs and the stop number for the pallet load.

❖ **UnitLoad:** This view is only active after an SKU has been created as a unitload from the Define>SKU>Create UL screen. It prints an enlarged view of a unitload with the following details:

- SKU number and description
- Properties of SKU including length, width, height, weight and loading preference
- Pallet used for the unitload
- TiHi information: Cases per layer, number of layers on the pallet and total number of cases on the pallet.
- Dimension and weight of the unitload
- Area and cubic efficiency for the unitload
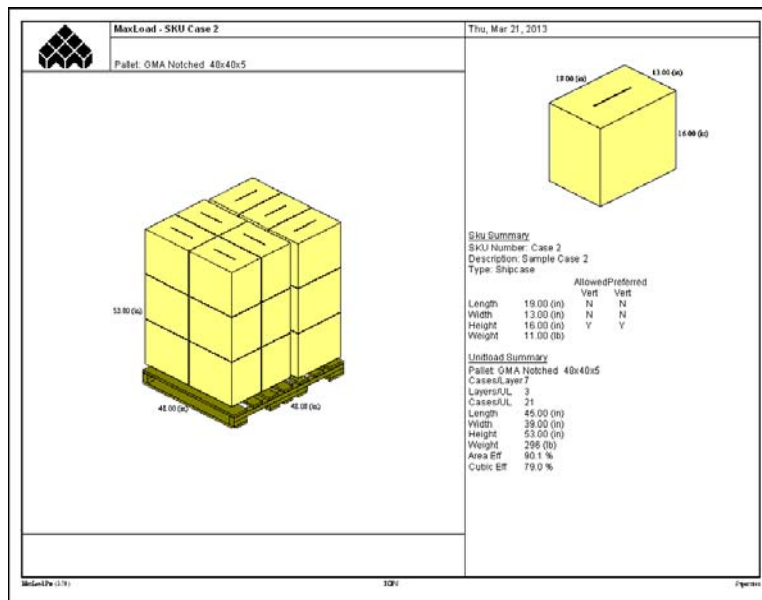
❖ **Truck Summary:** Prints a breakdown of SKUs and piece count in each vehicle.

Truck Summary: Grocery Order (stop-Off)					Mar 20, 2013	Page 1 of 1
Vehicle (Truck) : 48 Ft. Dry Cargo			Capacity: 3520 (ft3)			
Dimensions: 48 x 8 x 9.1667 (ft)			Max Weight: 48000.000 (lb)			
	# 1	# 2			Total	(Piece)
Cookies		105			105	(105)
Hand Towels		63			63	(63)
Pallet #1		3			3	(3)
Pallet #2		2			2	(2)
Potato Chips		200			200	(200)
Saltines		155			155	(155)
Tissue Paper	72	8			80	(80)
Toilet Tissue		55			55	(55)
Cube ((ft3))	360.9	2191.3				
% Cube (%)	10	62				
Wgt ((lb))	822	3182				

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❖ **Totes:** Prints a breakdown of SKU's included in a tote.

❖ **Load Summary:** Similar to the Load List, this report prints a detailed load summary of the current vehicle with details about the SKU's stacking and loading preference:

- SKU Number and Description
- Quantity of SKU in the placement
- Cube and Weight of the SKU placement
- Dimension of the SKU
- Amount of overhang allowed for the SKU during stacking
- Dimension of the SKU that allowed to be stacked vertical and the preferred allowed vertical dimension
- Stacking preference for the SKU
- Loading preference for the SKU – by length, width or best fit
- Maximum stack height (on base and side) and stack weight for the SKU

Load Detail Summary: Grocery Order (stop-Off)   Mar 21, 2013   Page 1 of 1

Vehicle (Truck) (1 / 1): 48 Ft. Dry Cargo   Capacity: 2552 (ft3) / 73 %   Used Floor: 94 %
Dimensions: 48 x 8 x 9.1667 (ft) Max Weight: 4003.77 (lb) / 8 %   Unused Floor: 37 (in)

					Package			Max Overhang			Allow Vertical			Prefe	Stack	Loading	Max Stack	Max Stack	Max Stack
SKU	Description	Qty	Cube	Wgt	(H)	(W)	(D)	(H)	(W)	(D)	(H)	(W)	(D)	Vertical	Prefer	Prefer	Hgt	onSide	Wgt
Cookies	Oreo 20 Count	020	12.1	0020.00	11.00	09.50	10.0	000.0	000.0	000.0	Y	Y	Y	Any	BestFit	BestFit	100	100	20
Cookies	Oreo 20 Count	085	61.1	0150.00	11.00	09.50	10.0	000.0	000.0	000.0	Y	Y	Y	Any	BestFit	BestFit	100	100	20
Hand Towel	500 Sheet Role	003	13.3	0015.00	24.00	16.00	20.0	000.0	000.0	000.0	Y	Y	Y	Any	BestFit	BestFit	100	100	75
Hand Towel	500 Sheet Role	060	283.3	0495.00	24.00	16.00	20.0	000.0	000.0	000.0	Y	Y	Y	Any	BestFit	BestFit	100	100	75
Pallet #1	UL Example 1	003	191.8	0303.00	55.00	41.00	49.0	000.0	000.0	000.0	Y	N	N	Hgt	BestFit	BestFit	100	100	200
Pallet #2	UL Example 2	002	145.8	0204.00	60.00	42.00	50.0	000.0	000.0	000.0	Y	N	N	Hgt	BestFit	BestFit	100	100	250
Potato Chi	Snack Size 50 Ct.	200	488.9	0670.00	10.00	16.00	24.0	000.0	000.0	000.0	Y	N	N	Hgt	BestFit	BestFit	100	100	10
Saltines	Low Fat 20 Ct.	011	47.7	0002.80	16.00	19.50	24.0	000.0	000.0	000.0	Y	N	N	Hgt	BestFit	BestFit	100	100	100
Saltines	Low Fat 20 Ct.	144	706.7	0816.00	16.00	19.50	24.0	000.0	000.0	000.0	Y	N	N	Hgt	BestFit	BestFit	100	100	100
Tissue Pap	500 Sheet 20 Ct.	008	29.0	0048.00	17.10	16.40	22.4	000.0	000.0	000.0	Y	Y	Y	Hgt	BestFit	BestFit	100	100	125
Tissue Pap	500 Sheet 20 Ct.	072	360.9	0822.00	17.10	16.40	22.4	000.0	000.0	000.0	Y	Y	Y	Hgt	BestFit	BestFit	100	100	125
Toilet Tis	Extra Soft Brand	007	19.0	0000.40	19.50	10.00	24.0	000.0	000.0	000.0	Y	N	N	Any	BestFit	BestFit	100	100	10
Toilet Tis	Extra Soft Brand	048	146.7	0197.60	19.50	10.00	24.0	000.0	000.0	000.0	Y	N	N	Any	BestFit	BestFit	100	100	10

To print Load Summary for all vehicles in the manifest, use the Multi Print or Multi Preview function.

❖ **Load By Placement Edge:** Similar to the Load By Leading Edge report, this prints the load showing each successive placement edge, together with the placement information including SKU number, quantity and arrangement of SKU in that placement.
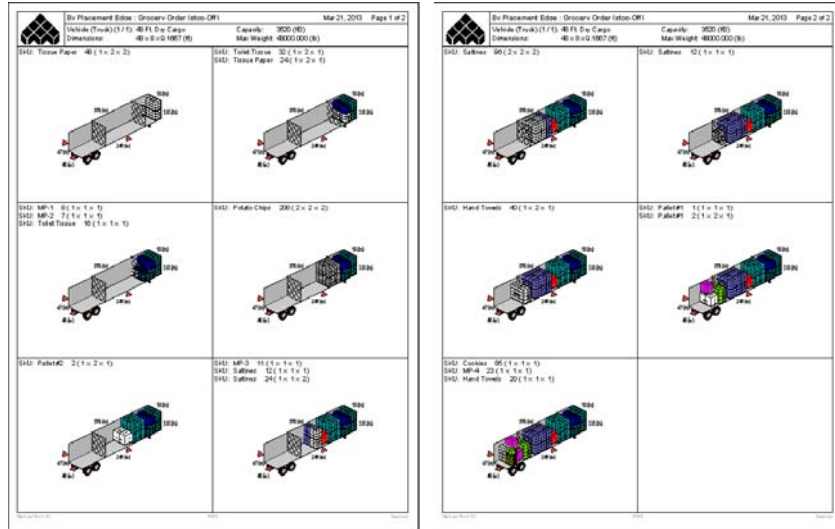
❖ **Customized Reports:** Allows users to select the data to be included in the graphical and summary reports in MaxLoad and will be discussed in more details in the next section.

Customized Reports

This print option leads to a submenu so you can customize the data to be included in the Graphics (Load) Report or the Summary Report.

Note: If the manifest consists of multiple vehicles, the customized report will only report on the current vehicle.

Graphics Report

❖ **Header Details:** Allows users to select what data to be included in the Summary report in MaxLoad.

❖ **Summary Details:** This section gives users control over what portion of the page will be used for summary and what data go into that section. If you uncheck the Report Summary, the graphics report will only give the 3D Load view of the vehicle, without any data.

- **Report Size:** Specify what percentage of the page will be used for summary data. Select the percentage from the drop down list. The bigger the number, the more the page will be made available for the summary.

- **List Option:** Specify whether the report will contain Load summary or Placement summary.

- **Select Options:** Check against the data you'd like to be included in the summary.

- **Length:** Click the drop down list to specify the field length for the selected data.

❖ **Graphical View Details:** Specify the options for the graphics section of the summary. This portion is placed on the left side of the report.

- **Print Color:** Specify if the report will be in color or black and white.

- **Load Colors:** Select the color option to be used for the load.

- **Report Types:** Specify the graphics view to be included in the summary report.

❖ **Usage Status Bar:** Provide a summary on how much of the space assigned to the summary section has been used up by the current selections.

❖ **Font:** Select the font to be used for the custom report.

Note: Before you print, use the printer's properties to specify the printout to be in portrait or landscape format.

Summary Report

- ❖ **List Options:** Specify whether the report will contain the Load summary or Placement summary.

- ❖ **Load List Options:** Available only when Load List is selected, this allows you to specify the data to be included in the report and the filed length to accommodate the data:

    - Sequence Number
    - Order Number
    - Description

- ❖ **Placement List Options:** Available only when Placement List is selected, this allows you to specify the data to be included in the report and the filed length to accommodate the data:

    - Placement Number
    - Front - distance of placement from the front of the vehicle
    - Floor - distance of placement from the floor of the vehicle
    - Side - distance of placement from the side of the vehicle

- ❖ **SKU Options**

    - **Package Options:** Include the selected dimensions for the SKUs in the custom load reports.

    - **Allow Vertical Options:** Show the Allow Vert setting, as Y for yes and N for no, of the selected dimension for the SKUs in the custom load reports.

    - **Maximum OverHang Option:** Show the Maximum Overhang settings of the selected dimension for the SKUs in the custom load reports.

- **Maximum Stack Options:** Show the Maximum Stack Height and Weight settings of the selected dimension for the SKUs in the custom load reports.

❖ **General Options:** This section allows you to select additional details regarding the SKU placements inside the vehicle to the Load or Summary List.

- SKU Name
- Load Dimension: dimension of the SKU placement
- Number of SKUs: total number of SKUs in the placement
- Number of Unitloads: total number of unitloads in the placement
- Priority
- Stop Off
- Volume
- Percent Cube
- Weight
- Percent Weight
- Rotation: preferred Vertical setting for the SKU
- Stack Preference
- Loading Preference

❖ **Usage Status Bar:** Provide page usage summary for the current selections and field lengths.

❖ **Font:** Select the font to be used for the custom report. Select a smaller font to accommodate more information on the report.

Databases

The various databases that can be printed from MaxLoad Pro are as follows:

❖ Manifest: Prints all saved manifests in MaxLoad Pro. Data includes manifest names and names of the user who created the manifests.

❖ SKUs: Prints all the saved SKUs from the database including shipcases, drums, tote SKUs, pallet SKUs, and palletloads. Data include the SKU number, description, dimensions and weight.

❖ Pallets: Prints the names of all the saved pallets from the database including slipsheets, europallets, strings, etc.

❖ Vehicles: Prints the various containers saved in the databases. Including trucks, sea vans, rail cars, etc and their dimensions and weights.

❖ Totes: Prints the possible totes saved in the database with both inside and outside dimensions.

To print the MaxLoad Pro databases, follow these instructions:

1. From the File menu, click Print Databases.

2. Select the database to be printed. The Print dialog box appears.

3. Select the printer and click OK.

Note: Unlike reports, the MaxLoad Pro database cannot be previewed before printing.

Print Preview

As with most other Windows programs, MaxLoad Pro allows you to preview your work before you actually print it. From the Print Preview screen, you can add annotations to your printout and customize your work. Remember, a diagram or report will print out exactly as it appears in the Print Preview screen.

To access the Print Preview screen, follow these instructions:

1. From the Menu Bar, open the File menu and select Print Preview or Multi Preview, respectively.

2. Select the type of report or diagram view you want to display a print preview. Please to the section "Report Types" for a description of the different reports available.

   Note: The print preview displays either in color or in black-and-white, depending on the selected printing method.
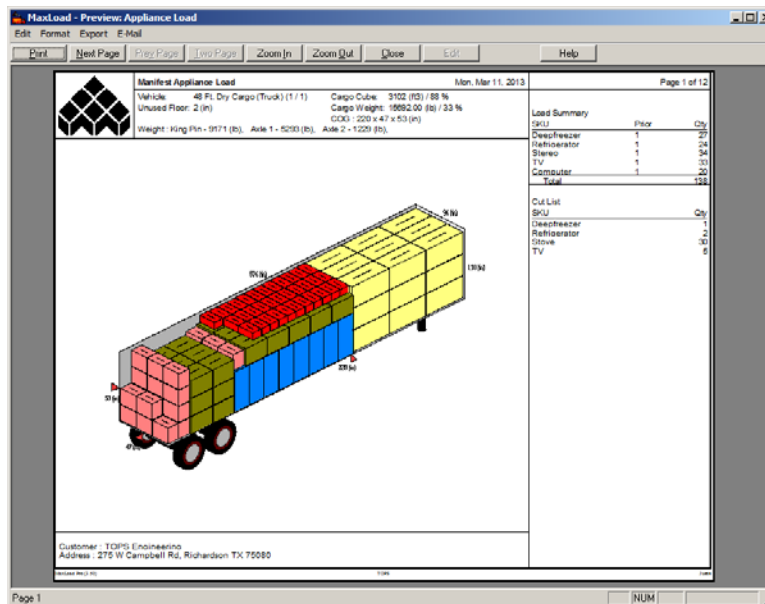
Notice the Toolbar, pictured below, at the top of the Print Preview screen.

| Print | Next Page | Prev Page | Two Page | Zoom In | Zoom Out | Close | Edit | Help |
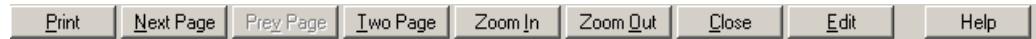
The Toolbar contains the following buttons:

❖ **Print:** Prints the diagram/report.

❖ **Next Page:** Displays the second page of the printout. If there is no next page, this button will be grayed out. The total number of pages for the preview is indicated on the top right hand corner of the report.

❖ **Previous Page:** Displays the previous page of the printout as you view the second page. If there is no previous page, this button will be grayed out.

❖ **Two Page:** Displays a split-screen view of a multi-page printout to show two pages at a time. If there is only one page, this button will be grayed out.

❖ **One Page:** Converts back to the one-page view if you are currently on the Two Page view.

❖ **Zoom In:** Displays a magnified view of the previewed document. MaxLoad Pro allows you to zoom in twice.

❖ **Zoom Out:** Displays a reduced view of the previewed document. This feature works if you've zoomed in.

❖ **Close:** Closes the Print Preview and returns you to the point where you initiated the preview process.

❖ **Edit:** Initiates the annotation process and makes your mouse pointer "live."

❖ **Help:** Opens the on-line Help document within MaxLoad.

Report Exports

Under the Export Menu in the Print Preview screen, you have these export options:

❖ **Export JPG:** Automatically generates JPEG files with filename ManifestName1.jpg, ManifestName2.jpg, ManifestName3.jpg, etc in the specified file location, one file for each page of the reports.

❖ **Export BMP:** Automatically generates JPEG files with filename ManifestName1.bmp, ManifestName2.bmp, ManifestName3.bmp, etc in the specified file location, one file for each page of the reports.

❖ **Export PDF:** Creates a single PDF file with name ManifestName.pdf in the specified location. The file will include all pages of the selected reports.

E-Mail Reports

Under the E-Mail Menu in the Print Preview screen, you have these options:

❖ **E-Mail JPEG:** Launches your default e-mail application and attached the current reports in JPEG format. This allows you to e-mail any of the print reports directly from MaxLoad.

❖ **E-Mail PDF:** Launches your default e-mail application and attached the current reports in PDF format. This allows you to e-mail any of the print reports directly from MaxLoad.

Annotate Printouts

MaxLoad Pro allows you to annotate printouts by letting you add text and arrows thus making it easy to add last-minute notes to your diagram.

Adding Text

To add text to the output, start from the Print Preview panel and follow these instructions:

1. Click on the Edit button.

2. Click on the area of the output where you want to enter text. MaxLoad Pro displays a four-cornered entry field with the cursor positioned inside the field. Notice that you can "drag" the entry field to any position on the screen.

3. Enter the text that you want to appear in the selected area. At this time, you cannot mix fonts within a single annotation.

4. To change the font and/or font size, open the Format menu and select Font. The Font dialog box appears.

5. Use the Font dialog box to select the font, font style and/or size, and then click on OK. This closes the Font dialog box and returns to the Print Preview panel.

6. Drag the text fields so they're positioned where you want them.

7. If the added text is correct, click on the Print button. MaxLoad Pro sends the analysis output to the printer.

Adding Arrows

From time to time, you might want to enhance a printout with some well-placed arrows. In MaxLoad Pro, inserting an arrow on a printout involves a little-known keyboard trick – using the Alt key and the numeric keypad to insert keystrokes that are not usually available. This method offers an advantage over using bitmaps – these arrows have transparent backgrounds and won't obliterate the area on the printout where they're placed.

Most fonts have more symbols than the normal 26 letters, 10 numbers and punctuation symbols. A font often includes arrows, trademark symbols, accented characters, etc. In most word processors, you use the application's Insert Symbol feature and selecting from a range of symbols. Microsoft Word also allows you to choose which font symbols you want to use.

At this time, MaxLoad Pro does not have an Insert Symbol feature, so in lieu of that you'll use the Alt-keypad routine. In Microsoft Word, if you open the Insert menu and select Symbol, the Symbol dialog box appears, as pictured on the next page. You can also use the Windows Character Map feature, located in the Accessories folder.
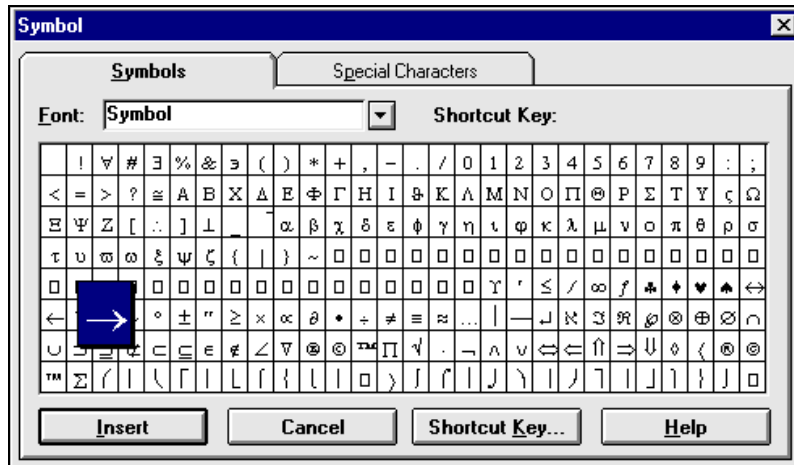
If you highlight a symbol – such as the right arrow ($\rightarrow$) – a number appears on the status bar; for example, 174. This number represents the ASCII code for the selected symbol and the selected font.

The following steps allow you to insert these characters into most programs, even if they don't have an Insert Symbol feature. To insert characters into a MaxLoad Pro printout, follow these instructions:

1. Go to the Print Preview Screen and zoom in.

2. Click on the screen to insert text.

3. Make sure the keyboard's Num Lock light is on.

4. Open the Text menu and select Font to display the Font dialog box.

5. Select the font you want to use.

   Note: To insert arrows onto the printout, you'll probably want to use the Symbol or Wingdings font. If you want to simply bold or italicize the text, the active font should be sufficient.

6. Hold down the Alt key on your keyboard.

7. While holding down the Alt key, type the ASCII number for the symbol you want to insert with a zero (0) in front; for example, type 0172. Use the table on the next page as a guide.

Common Ascii Codes for Symbols

Symbol Font   Wingdings Font

0171 ↔	0219 ⇔	0223 ←	0231 ←	0239 ⇦
0172 ←	0220 ⇐	0224 →	0232 →	0240 ⇨
0173 ↑	0221 ⇑	0225 ↑	0233 ↑	0241 ⇧
0174 →	0222 ⇒	0226 ↓	0234 ↓	0242 ⇩
0175 ↓	0223 ⇓	0227 ↖	0235 ↖	0245 ↘
1076 °	0226 ®	0228 ↗	0236 ↗	0246 ↗
	0227 ©	0229 ↙	0237 ↙	0247 ↙
	0228 ™	0230 ↘	0238 ↘	0248 ↘

Note: To change the font, you must first key in a letter or any text, and then highlight it. Then you'll be able to change the font for that text and any additional text.

8. After you type in the ASCII number, release the Alt key.

MaxLoad Pro inserts the selected symbol onto the printout. You might need to adjust the font size to make it more legible.

Configuration

Introduction

This chapter discusses how to define the configuration of the MaxLoad Pro System. Configuration features are subject to certain authorizations. Most Configuration features can be accessed and changed by any user. Global configuration parameters are the only parameters that can be accessed and changed by the Supervisor alone.

This chapter is organized in to following topics:

❖ Configuration Settings

❖ Global Settings/Supervisor Functions

❖ Properties

- Lists
- Measurement Input Fields
- Non-Measurement Input Fields
- Radio Buttons
- Check Boxes

❖ Example 1: Changing the Default Vehicle Type

❖ Example 2: Adding a Default Selected Vehicle

❖ Example 3: Changing the Default Mixed Pallet Height

Configuration Settings

MaxLoad Pro can be configured as per user needs from the MaxLoad Configuration dialog box. The MaxLoad Configuration dialog box displays a range of options that define the way MaxLoad Pro performs its work. This dialog box allows you to turn on and off each of these options. To access the Configuration dialog box, start from the Menu Bar and follow these instructions:

1. Open the Tools menu and select Configuration. The MaxLoad Configuration dialog box appears, as pictured below.
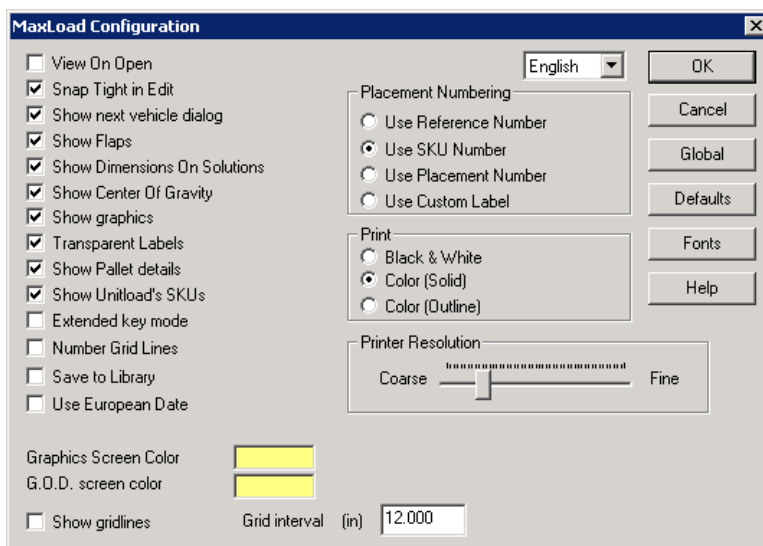
   As you can see, this dialog box contains a large array of options for you to work through. This section discusses each of these options in detail.

2. After you've made changes on the Configuration dialog box, you'll want to save your work. Click on OK. MaxLoad Pro saves your Configuration changes and returns you to the previous screen.

3. To exit the box without saving changes, click on the Cancel button. MaxLoad Pro ignores any Configuration changes and returns you to the previous screen.

❖ **View On Open:** If this box is checked, MaxLoad Pro will take you directly to the Manifest Solution screen upon opening the last saved version of the existing analysis, bypassing the Manifest Pick List screen.

   If this box is not checked, MaxLoad Pro will open the Manifest Pick List screen first, regardless of whether or not the solution has been

previously calculated. You can then click the View button to see the previously saved solution. If you click on the Calculate button, MaxLoad Pro will redo the solution for the opened manifest.

❖ **Snap Tight in Edit:** This option controls the default setting for the Snap button in the Edit screen. When this button is checked, the Snap button will be "on" and will assist you in placing cargo when editing a load. During the edit process, when you drag and drop an SKU into a vehicle or onto a pallet/slipsheet, MaxLoad Pro places that object into the nearest corner (i.e., as far forward and as far left as possible). The corner must always be forward and to the left of the selected placement.

❖ **Show next vehicle Dialog:** This option applies when you're loading items from the Cut List onto another container or click the ReCalculate button in the View Screen. When you do that, you have the option to change the type of container that was used initially. When the option is checked, the Next Truck dialog box will appear that allows you to make another selection.
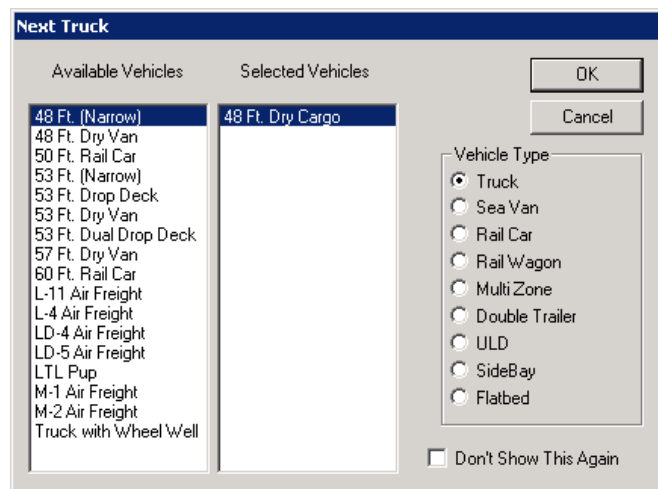
If this option is not checked, MaxLoad Pro assumes you would use the same type of vehicle. You can also check the option "Don't Show This Again" in the above dialog to disable the Show Next Vehicle Dialog.

❖ **Show Flaps:** When this option is selected, all shipcases will appear with a case flap that designates the top of the box. The case flap always runs parallel to the length of the box, thus giving you an easy reference point when viewing the solution. The line on the box runs parallel with the length dimension of the box.

The SKUs appear as cubes when this option is unchecked.
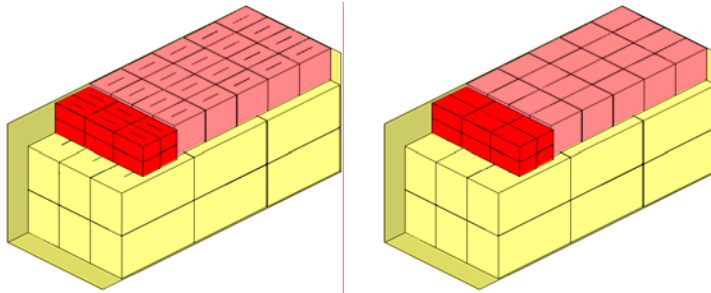
❖ **Show Dimensions On Solutions:** When this option is selected, MaxLoad Pro displays dimensions of the container or pallet in the Manifest View screen. The container dimensions appear exactly as you entered them when defining a vehicle. However, the pallet/slipsheet dimensions – when viewing a mixed pallet manifest – are displayed using the actual dimensions of the pallet plus any overhang. If no overhang is utilized, the pallet's actual dimensions are displayed. The height displayed is the actual height of the mixed-pallet load.

No dimensions are displayed on solution, if this option is unchecked.

❖ **Show Center of Gravity:** If checked, the center-of-gravity (COG) will be displayed in the g.o.d. window with red triangular markers in addition to the numeric display in the load statistics section, in the View Screen.

❖ **Show Graphics:** When this option is selected, MaxLoad Pro displays any graphics that have been assigned to a shipcase, SKU, tote, etc.

❖ **Transparent Labels:** When this box is checked, meaning to use transparent labels, MaxLoad Pro places the label texts directly onto the SKUs and placements (as below left), overlapping SKU outlines and flap indicators.
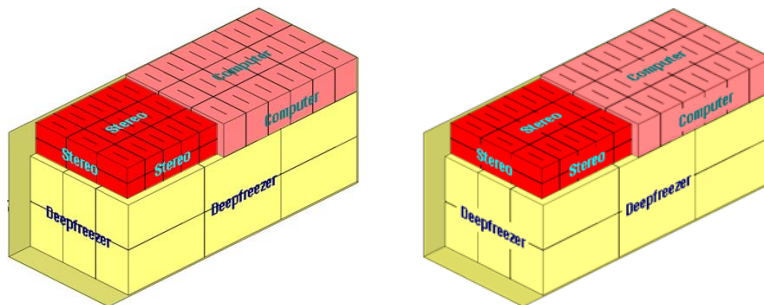
If this box is not checked, MaxLoad Pro places the text of the placement numbering reference on a label with background of the same color as the SKU, then onto the object, therefore making it easier to see (figure on right).

❖ **Show Pallet Details:** Depending on how complicated your load may be, MaxLoad Pro is required to draw a very detailed solution on screen. As a result, you may find the amount of time it takes to display the solution to be unacceptable. To speed things up, MaxLoad Pro allows you to turn off pallet details, which is one of the most common culprits when a solution takes a long time to draw.
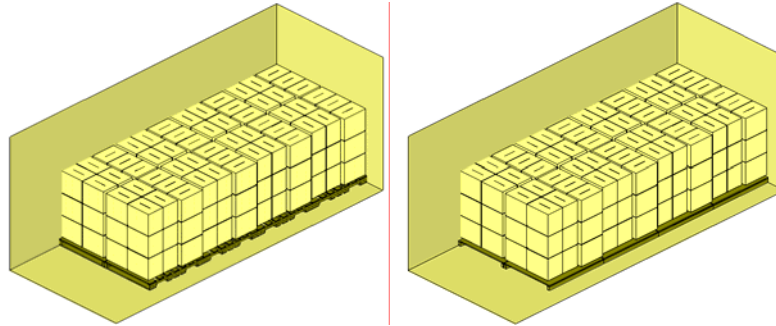
When this option is selected, MaxLoad Pro draws all pallet details when displaying the solution (as left). These details include all deck boards, stringers, etc. Else, the pallet will be illustrated in a simpler format as on the right.

This option only applies to unitloads or mixed pallets drawn in a transit vehicle. It does not apply to mixed-pallet manifests.

❖ **Show Unitload's SKUs:** When this option is selected, MaxLoad Pro displays the individual SKUs that comprise a unitload (below left).

Else, the unitloads appear as one large shipcase of pallet size (below right).
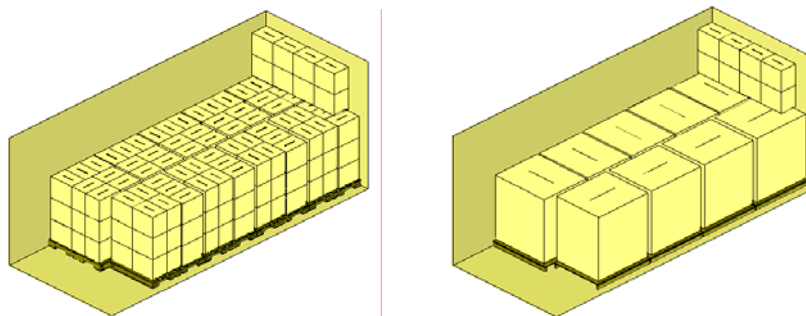
❖ **Extended Key Mode:** This option controls the way that you enter information when building a load in the Manifest Pick List screen. You have two options: Standard Mode and Extended Key Mode.

Standard Mode provides a quick and easy way to key in quantities only. When you select an SKU from the SKU List, that SKU will

appear in the Manifest List with the cursor flashing in the Quantity field. After you key in a quantity, pressing Enter returns the cursor to the SKU List, where you can select another SKU. Repeat this process until you've entered quantities for all SKUs in your manifest.

Extended Key Mode routes the cursor through all fields in the Manifest List, as follows:

1. After you select an SKU from the SKU List, the cursor moves to the Quantity field of the Manifest List.

2. In the Quantity field, enter a quantity. Press Enter.

   The cursor moves to the Priority/Stop-Off field.

3. In the Priority/Stop-Off field, enter a value (if applicable). Press Enter.

   The cursor moves to he UL (Unitload) column (if the column is turned on in Configuration).

4. In the Unitload (UL) field, tap the space bar to toggle this field on and off; the box shows an "X" when it's on and is blank when it's off. Press Enter.

   The cursor moves to the MP (Mixed Pallet) column, which works the same way as the UL column.

5. In the Mixed Pallet field, tap the Space Bar to toggle this field on and off; the box shows an "X" when it's on and is blank when it's off. Press Enter.

   The cursor moves to the Order Number column.

6. In the Order Number field, enter an order number (if applicable). Press Enter.

   The cursor moves back to the SKU List, where you can select another SKU and start the process all over again.

In Extended Key Mode, if you don't need to enter information – a particular field is not applicable to your manifest – pressing Enter in that field automatically moves the cursor to the next field. Pressing Enter does not change any information in the field.

For instance, the Priority field will always show a default of "1." If this is acceptable and you don't need to change this priority value, simply press Enter to move to the next field. The priority value will remain as "1."

Check the Extended key mode option in the Configuration dialog box for extended key mode, else leave it unchecked for Standard Mode.

❖ **Number Grid Lines:** Gridlines are markers in the container spaced at a user-defined interval. Gridlines provide a quick and easy reference point for determining how much floor space remains in a loaded vehicle. This option automatically numbers gridlines on a truck to mark specific distances on the floor space. Gridlines apply only to vehicles, not to pallets or slipsheets.
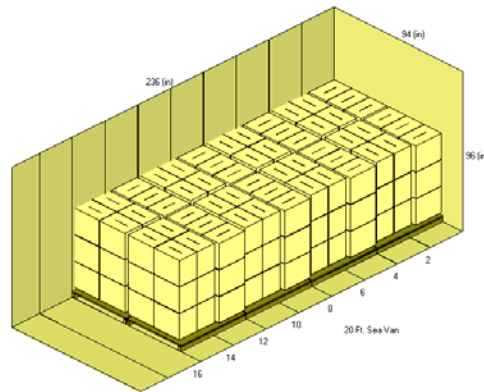
Note: This option works only if the Show gridlines option is checked.

❖ **Save to Library:** This feature gives the user the flexibility to save edited loads to library. If later they replicate a load, MaxLoad Pro will show the saved edited load in the Sol List.

When enabled, you will see this feature as a check box option in the File | Save As dialog box.

❖ **Use European Date:** Check this option to use the European date format DD/MM/YYYY within MaxLoad Pro.

❖ **Graphics Screen Color:** MaxLoad Pro allows you to control the background color of the solutions graphics screens.

To change the color of the solution and edit screens, follow these instructions:

1. Click on the color box in the Configuration dialog box to open the Color dialog box.
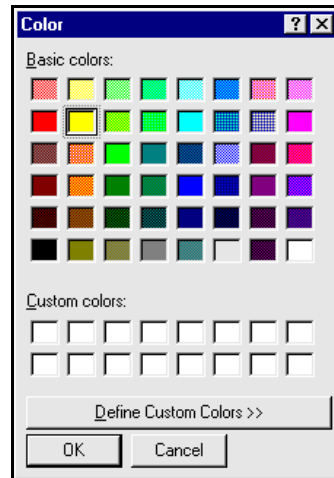
2. Using the mouse pointer, select a new color and click on OK to confirm.

3. To exit the screen and negate any changes, click on the Cancel button.

❖ **g.o.d. Screen Color:** MaxLoad Pro even allows you to control the color of all graphic-online-drawing (g.o.d.) windows.

To change colors, follow these instructions:

1. Click on the color box in the Configuration dialog box.

2. Using the mouse pointer, select a new color.

3. When you're finished, click on OK.

4. To exit the screen and negate any changes, click on the Cancel button.

❖ **Show Gridlines:** This option turns gridlines on and off in a vehicle. Gridlines are markers in the vehicle spaced at a user-defined interval. Gridlines provide a quick and easy reference point for determining how much floor space remains in a loaded vehicle. Gridlines apply only to vehicles, not to pallets or slipsheets. An example of a vehicle with gridlines is pictured on the next page.

Note: Check the Number Grid Lines option to sequentially number the gridlines.
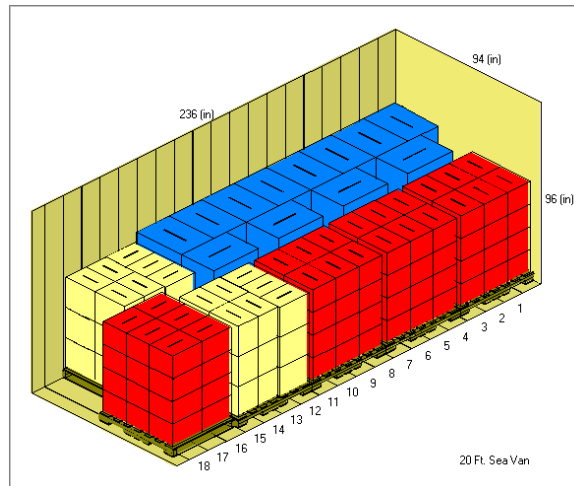
❖ **Grid Interval:** Once you've decided to show gridlines, you must decide at what interval they will be spaced. You can control this through the Grid Interval field. Simply key in a value that represents the desired interval.

❖ **Measurement Units:** This field allows you to control the measurement unit defaults. Whenever you begin a new manifest, the measurement units that initially appear in the Manifest Pick List screen will be controlled by this field.

To display the list – your only options are English and Metric – or change units, click on the down-arrow on the right side of the box. Use the mouse to click on the new selection.

For this change to be effective logout and log back into the software.

❖ **Placement Numbering:** Placement numbering is an arbitrary method to identify SKUs or groups of SKUs in the View Screen for easy identifications. The four placement numbering options available are as follows:

- **Use Reference Number:** Refers to a computer-selected number that helps you determine which SKU is which, when viewing or printing a solution. Each SKU is assigned a reference number

when the load is calculated. When viewing a solution, the Placement List contains a column that displays a key to the numbering system.

- **Use SKU Number:** Tells MaxLoad Pro to use SKU Number as a placement number.

- **Use Placement Number:** Assigns each placement a unique number. Because there may be multiple placements for different SKU Numbers, you'll often notice that SKU Numbers are assigned different placement numbers as you view the load.

- **Use Custom Label:** Tells MaxLoad Pro to use the custom label that you designated when defining an SKU.

❖ **Print:** Print defaults can be set with one of these three options:

- **Black & White:** For non-color printer users, this option allows you to print a black-and-white outline of the loaded vehicle, as opposed to a gray-scaled printout. If you work with a color printer, MaxLoad Pro will print a black-and-white printout when the option is checked. If the option is not checked, the solution diagram will print using the colors assigned when defining an SKU.

- **Color (Solid):** In Print Preview, this option draws items on the screen in solid colors, with the lines on the items drawn in black.

- **Color (Outline):** In Print Preview, this option draws items on the screen with only the outline of the item. The body of the item is white, with the outline of the item drawn in color.

Note: Any changes you make to the Print defaults, become active only once you log out of the software and then log back in again.

❖ **Printer Resolution:** In an effort to speed up the printing process, MaxLoad Pro gives you a choice as to how "coarse" or "fine" printouts will appear. To change the setting, simply use the mouse pointer to slide the handle in one direction or the other.

You will receive printouts faster when the setting is closer to "coarse." Printouts will take longer when you set this option closer to "fine."

Global Settings (Supervisor Functions)

Only supervisor can enter and update global settings for the MaxLoad Pro configuration. This section presents the Global Settings dialog box and each of the global configuration options.

Global Settings

To enter and update the MaxLoad Pro global settings:

1. Login to MaxLoad Pro as a Supervisor. The password for supervisor is "tops software".

2. At the Control Center, go to the Tools menu and select Configuration. The MaxLoad Configuration Screen appears.

3. Click on the Global button to access the Global Settings Screen appears, as pictured below.
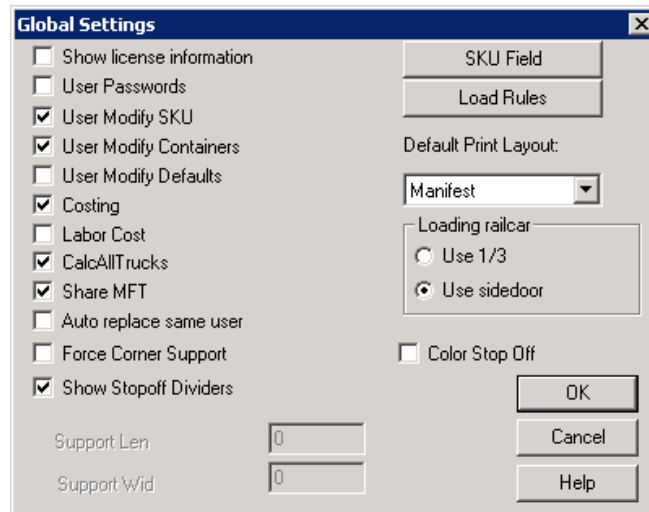
The Global Settings Screen contains the following options:

❖ **Show license information:** This switch turns off the license information found in the bottom right hand corner of the Control Center screen. When this box is checked, the license information will appear.

When this box is unchecked, the license information will remain hidden.

However, you can always access this information from the Menu Bar: Open the Help menu and select About MaxLoad.

❖ **User Passwords:** Protects user logins with passwords. If checked, users will be prompted for a password at the login screen.

❖ **User Modify SKU:** Allows all users to modify, add or delete SKUs from the database.

❖ **User Modify Containers:** Allows all users to modify, add or delete containers from the database.

❖ **User Modify Defaults:** Allows all users to modify defaults set up in the system.

Note: If any of the above User Modify feature is turned off then only a user logged in as a Supervisor can make changes to SKUs, Containers, or Defaults, respectively.

❖ **Costing:** Activates a decision-making tool for SKU/item costing in a given manifest.

❖ **Labor Cost:** Activates a decision-making tool for costing man hours and labor involved in a given manifest.

Note: Costing and Labor Cost is undocumented features reserved for specific customers. Contact TOPS Technical Support for details.

❖ **CalcAllTrucks:** Activates the Calculate All Trucks feature, which calculates solutions using as many trucks (the same truck currently selected) as necessary to load a manifest. With this option enabled, you can quickly tell the total quantity of Vehicles or Pallets (for Pallet Manifest) needed to fulfill an order, as represented by the PicList.

❖ **Share MFT:** Allows all users to see all files. If this feature is turned off, users can only see their own manifests.

❖ **Auto Replace Same User:** Allows the supervisor to log out a user, then automatically log in the same user.

❖ **Force Corner Support:** Allows you to activate corner support when placing SKUs on top of other SKUs. This involves defining the length and width of the corner support.

▪ **Support Len:** If you turn on the Force Corner Support option, this field allows you to enter the length of the corner post in inches or millimeters, depending on the Units selected.

▪ **Support Wid:** If you turn on the Force Corner Support option, this field allows you to enter the width, or thickness, of the corner post in inches or millimeters, depending on the Units selected.

❖ **Show Stopoff Dividers:** If this option is checked, MaxLoad Pro will draw lines/ dividers to separate different stop offs.

If the overlapping between stop offs is allowed, the divider is placed at the beginning of the next stop as illustrated below.
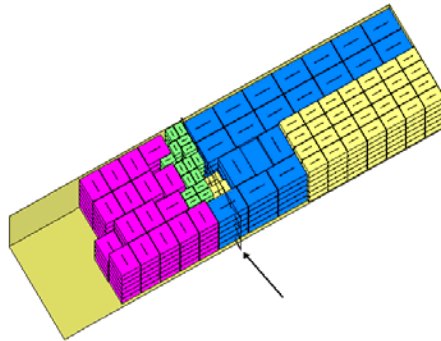
❖ **SKU Field Button:** Displays the SKU List dialog box, which allows you to display dimensions, weight and SKU information in the SKU List on the Manifest Pick List Screen. If these fields are turned off, the startup of MaxLoad will be much faster.
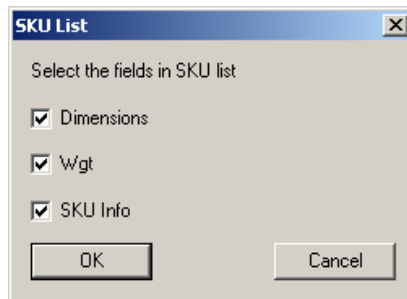
❖ **Load Rules:** In order to create customized solutions, MaxLoad Pro makes use of specific loading algorithms or parameters saved in a text file named "loadrules.ini" in the \Max2Pro\Data\folder. If such a file is present, clicking on the Load Rules button will open this file and displays its contents in the Load Rules dialog box.

Please contact TOPS for the use of load rules if MaxLoad Pro does not provide the solution you are for.

❖ **Default Print Layout:** Select from the drop list the default MaxLoad report that will be printed whenever the generic print command is issued within MaxLoad.

❖ **Loading Railcar:** Select an option – either Use 1/3 or Use Sidedoor – to specify how a railcar will be loaded.

❖ **Color Stop Offs:** Color distinction for stop offs, thus making them easily identifiable.

❖ **OK Button:** Saves the changes made and closes the Global Settings dialog box.

❖ **Cancel Button:** Closes the Global Settings dialog box.

Defaults

The Defaults button opens the Defaults dialog box, as pictured below, where you can easily select default unit of measure, the language and the location for a graphical logo to be used in all reports within MaxLoad Pro.
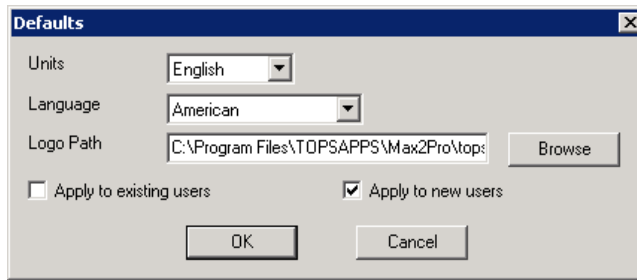
❖ **Units:** Globally selects the unit of measure for MaxLoad Pro.

❖ **Language:** Selects from the drop list, one of the many languages supported by MaxLoad Pro.

❖ **Logo Path:** Allows you to specify the location for the graphical logo to be printed on each of the report types from MaxLoad Pro.

❖ **Apply to existing users:** Check this box if the current default settings are to be applied to the all existing users.

❖ **Apply to new users:** Check this box if the current default settings are to be applied to all new users. These two boxed are not mutually exclusive, you can check both options to have the new defaults apply to all users.

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Fonts

The Fonts button opens the MaxLoad Fonts dialog box, pictured below, where you can choose from multiple fonts to use when printing or viewing a solution. MaxLoad Pro allows you to assign different fonts to 10 different heading/text types located throughout system.
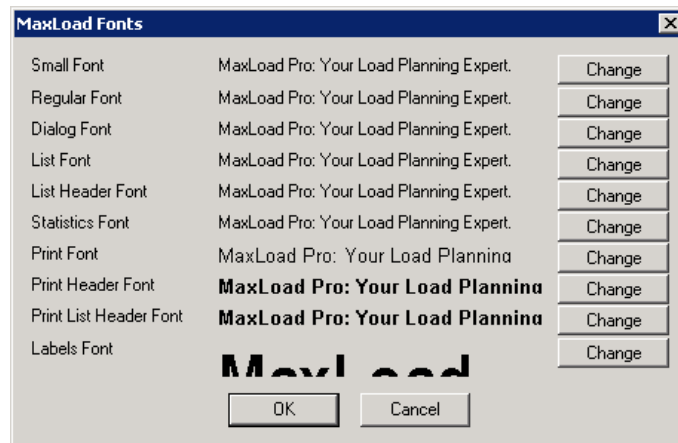
To change a font, follow these instructions:

1. Click on the Change button next to the text/heading style that you want to modify.

   A standard Windows Font dialog box appears. This Font dialog box is similar to that found in most major word processing/spreadsheet programs.
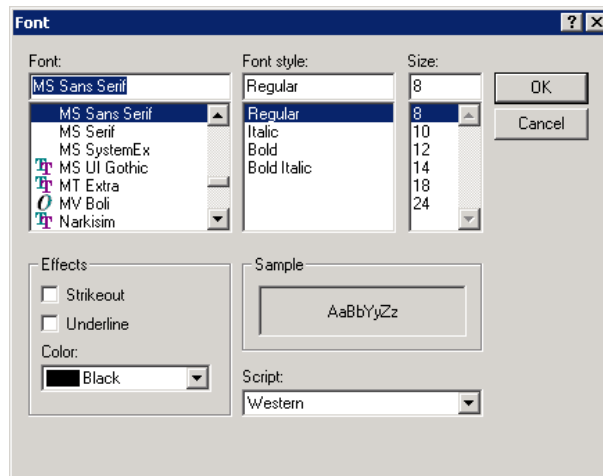
2. Make the appropriate changes, then click on OK.

3. To exit the MaxLoad Fonts dialog box without saving any changes, click on Cancel.

Note: As a suggestion, we've found that the Arial Bold font are the easiest to view.

Properties

In addition to the Configuration dialog box, MaxLoad Pro provides a number of Properties Sheets that allow you to define the various defaults and properties in the system. All users have access to these Properties Sheets.

Each field is linked to a Properties Sheet dialog box, which allows you to change both defaults and/or properties for the specific field. This provides a general overview of the defaults/properties functions in MaxLoad Pro.

Similar fields have similar Properties Sheets. In MaxLoad Pro, the various fields fall into one of four categories:

❖ **Lists:** A collective display of various fields. For example SKU List.

❖ **Measurement Input Fields:** Fields that contain a dimension or weight.

❖ **Non-Measurement Input Fields:** Fields that contain numeric values, but don't measure anything.

❖ **Radio Buttons:** Fields that contains radio buttons.

❖ **Check Boxes:** Fields that contain check boxes.

Regardless of field type, all fields allow you to change their Control Label (name). You'll use the Properties Sheet to change a field's Control Label.

To access the Properties Sheet dialog box, use one of two options:

Option 1

1. Click on the field whose properties you want to change.

2. From the Menu Bar, open the Edit menu and select Properties. The Properties Sheet dialog box appears.

Option 2

1. Right click on the name of the field that you wish to change properties. A Properties button appears.

2. Left click on the Properties button. The Properties Sheet dialog box appears.

Lists

Working in the software you will notice that there are various lists, like SKU List, Manifest List, Sol List, Placement List, displaying important information about SKUs, unitloads, mixed pallets, solutions, etc. The type of information displayed in these lists can be controlled by the Properties feature. The Properties dialog box for Lists can only be accessed by the Edit menu.

For example, to view the Properties for the SKU List follow these instructions:

1. Select any column header in the SKU List, by clicking on the tab for SKU, Description, etc.

2. From the Menu Bar, open the Edit menu and select Properties. The Properties dialog box appears. Here you can check and uncheck as to what needs to be visible in the SKU List.
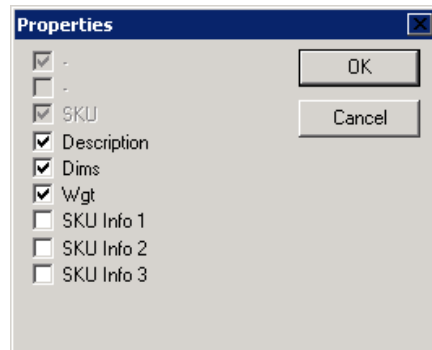
Measurement Input Fields

All Define Screens (for example, Define SKU) contain measurement input fields. You'll use this type of field type to input the dimensions or weight of an object.

When you access the Properties Sheet for a measurement input field, you'll notice that it's comprised of two tabs: Defaults and Properties. Both tabs contain nearly identical information, except that the Defaults tab also allows you to change the name of the field (the Control Label) and has a Default Value field. The Defaults and Properties tabs are pictured below.

❖ **Defaults Tab:** Changes made to the Defaults tab affect all future SKUs, pallets or vehicles that you define, including the one that you are currently defining.

For instance, suppose you're in the Define SKU screen and you change how MaxLoad Pro reports length – from inches to feet, under the Defaults Tab. Not only will this affect the SKU you're editing, this action will also affect all future SKUs that you define.

❖ **Properties Tab:** Changes made to the Properties tab will only affect the individual SKU, pallet or vehicle that you're currently defining, and will not affect any future records. .

Principally, the Properties Sheet allows you to set the measurement units for a particular field.

The Properties Sheet dialog box also allows you to do the following:

❖ Change the measurement units for the field that you are making changes to. There are three choices in regards to measurement units; English, Metric, or Global.   English and Metric are self-explanatory. But if you choose Global, MaxLoad Pro uses the measurement units selected in the toolbar.

❖ Set a default value for that parameter. This field is only available under the Defaults Tab.

❖ Set the number of decimal places, in both English or Metric, to be displayed for each field.

❖ Change the Unit Type – inches, feet/millimeters, centimeters, etc.

❖ Check whether or not you want MaxLoad Pro to truncate zeroes (i.e., display zeroes after the decimal point).

❖ Input fractions rather than decimals with the Show Fractions feature.

❖ Change the name of the Control Label for each field. For example change the name of height to depth. This field is only available under the Defaults Tab.

Non-Measurement Input Fields

Non-measurement input fields are not as common as measurement input fields. You're most likely to run across these fields only when you're defining stacking relationships.

The Define SKU screen provides a good example of this type of field. Under the Stacking tab, the fields labeled Maximum Stack Height (On Base and On Side) are considered Non-measurement input fields. In the Define Pallet screen, the field labeled Total Deck Boards is another example of a non-measurement input field.

A Non-Measurement Input screen accepts only whole numbers and is generally used when answering the question "How many?" These fields accept a maximum of three characters.
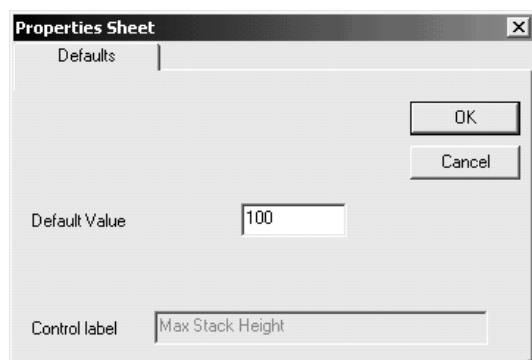
Notice that there's only one tab in this dialog box: Defaults. When you make a change in this field, it will not affect any previously defined items but it will affects all future SKUs, pallets or vehicles, including the one you're currently defining. You can also change the name of this field using the Control Label feature.

Radio Buttons

Radio buttons contain their own default behavior. Remember that radio buttons are mutually exclusive, meaning that you can choose only one option; you cannot select multiple options. Because radio buttons are unique in behavior, they also must have a unique Properties Sheet.

Regardless of which field you click on in a radio button box, you'll always access a common Properties Sheet; in other words, all buttons tie into the same sheet. As with non-measurement input fields, this dialog box only contains a Defaults tab, meaning that changes made to the Properties Sheet will affect the item you're currently defining, as well as any future items that you define.
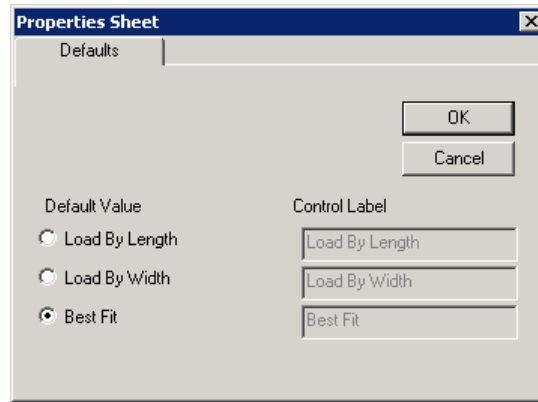
Check Boxes

Check boxes allow you to turn certain MaxLoad Pro features on and off. Unlike radio buttons, check boxes are not mutually exclusive, meaning that each one behaves independently of the other. Because of this behavior, check boxes are considered unique enough to warrant unique Properties Sheet. There's one exception: the check boxes in the Allowed Vertical Column, whose Properties Sheet behaves in much the same fashion as a radio button.
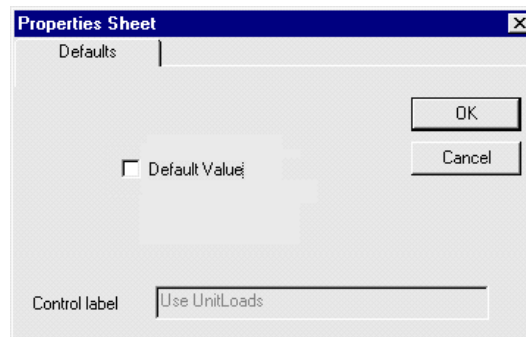
To change a check box default, access the Properties Sheet for the specific field that you want to change. Unlike a radio button Properties Sheet, each field has its own separate Properties Sheet. Use your mouse to click on or off the Default Value for that field. Notice too that you can change the Control Label for the field in question. When you're finished making changes, click on OK to exit the Properties Sheet.

Examples

Below are some examples illustrating how to change the defaults for some common functions and features within MaxLoad Pro:

Example 1: Changing the Default Vehicle Type

If you use mostly sea vans or sea containers for your loads, you can change the vehicle type from the current default of Truck to Sea Van by following these steps:

1. At the Manifest Pick List Screen, place the mouse cursor anywhere in the Vehicle Type section and right click the mouse button. The Properties button appears.

2. Click on the Properties button. The Properties Sheet for the Defaults of the current field (Vehicle Type) appears as shown here, showing the current default of "Truck".
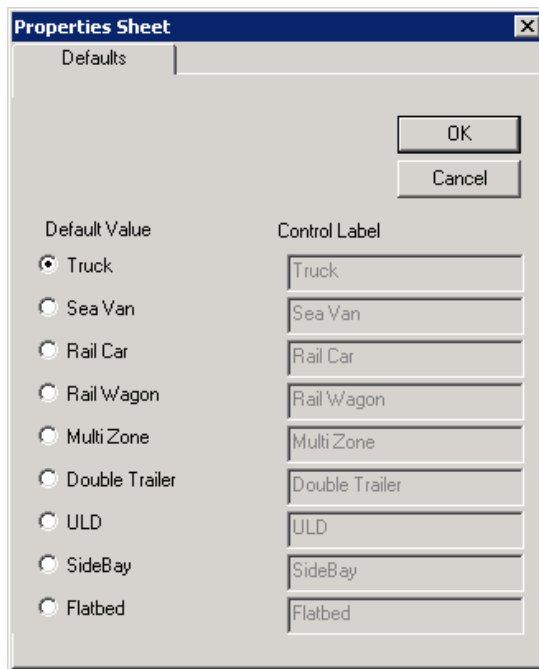
3. Click on "Sea Van", making it the new default vehicle type. The radio button for Sea Van is now selected.

4. Click on OK to use the new default. The Confirm dialog box appears as below.
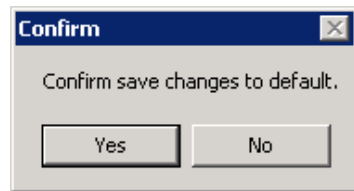
5. Click on Yes to confirm the change.

This new default will take effect when you do a new Truck or Single SKU Manifest.

Example 2: Adding a Default Selected Vehicle

When you do a new Truck or Single SKU Manifest, you will have to select a vehicle from the Available Vehicles list. If all your loads only go into 53 Ft Dry Van, you can set this as the Default Selected Vehicle so you don't have to specify the vehicle every time you create a new manifest. The following steps illustrates how to add a default selected vehicle.

1. At the Manifest Pick List Screen, place the mouse cursor anywhere in the Selected Vehicle section and right click the mouse button. The Properties button appears.

2. Click on the Properties button. The Properties Sheet for Selected Vehicle appears as shown here, showing the current default of "None".
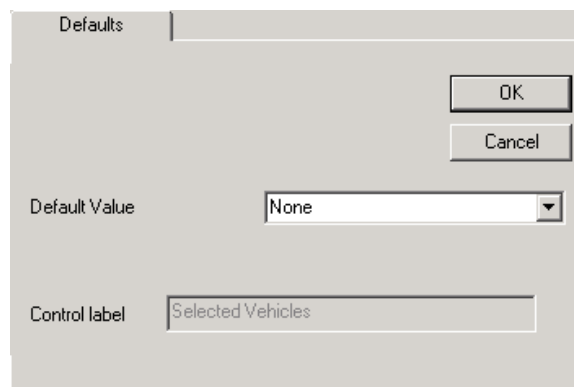
3. Click on the drop list (▼) and then move the scroll bar until you see 53 Ft Dry Van on the list.
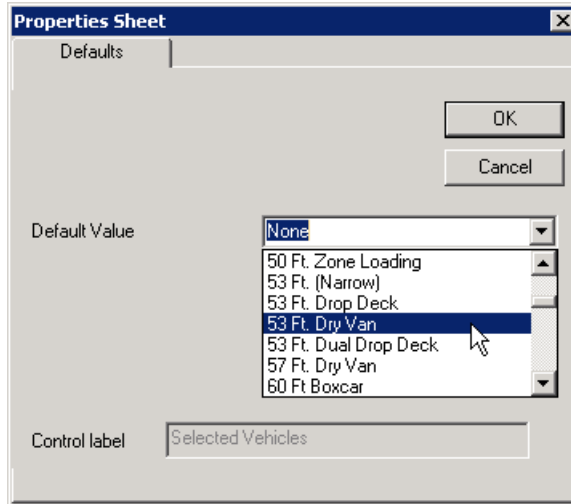
4. Click on "53 Ft Dry Van" to make it the current selection and then click on the OK button.

5. You will see a Confirm dialog box as in the previous example. Just click on the Yes button to confirm.

You will see the "53 Ft Dry Van" as the Selected Vehicle whenever you create a new Truck or Single SKU Manifest.

Example 3: Changing the Default Mixed Pallet Height

When you create a Pallet Manifest or placing mixed SKUs on a pallet, you can specify how high the pallet can stack (Maximum Height Incl Pallet). The default value in MaxLoad Pro for this parameter is 55 inches. To change this default value, please follow these steps:

1. At the Manifest Pick List Screen for Mixed Pallet, place the mouse cursor at the text "Maximum Height Incl Pallet" and right click the mouse button. The Properties button appears.
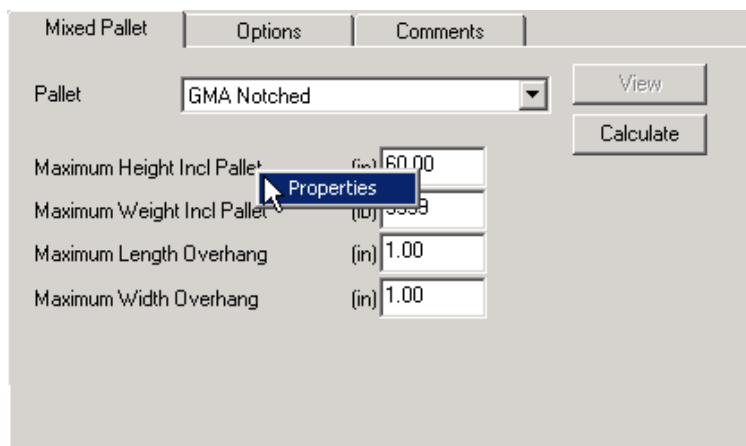
2. Click on the Properties button. The Properties Sheet, with Properties tab as the active tab, appears.

3. Click on the Defaults tab. The Defaults tab, as shown here, appears.
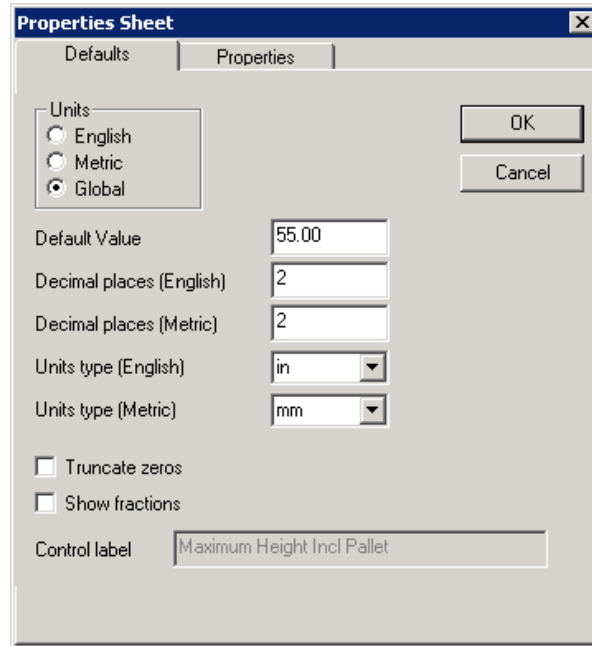
4. Change the "Default Value" from 55.00 to 60 and click on the OK button.

5. You will see a Confirm dialog box as in the previous example. Just click on the Yes button to confirm.

You will see the new default value in the Maximum Height Incl Pallet field when you create a new Pallet Manifest or under the Mixed Pallet tab in a new Truck Manifest.

You can follow this example to change the default Overhang Values for pallets.

Import/Export Functions

Introduction

Customers often need to import bulk amounts of data and MaxLoad Pro can accommodate this need. If the product's name, weight and dimensions can be collected, this data can then be properly arranged in an Excel document for import into MaxLoad Pro. Most ERP systems, like SAP, for example, can export product data in a comma delimited ASCII format, which can be transferred to an Excel document for import. You can find an example of such a file in your Max2Pro (or Max2Demo) folder and the file name is Import.xls.

The various Import and Export options available in MaxLoad Pro are:

- ❖ Import (Generic)

  - ▪ MaxLoad Pro ASCII Interface
  - ▪ Import Command Entries
  - ▪ Import Record Entries
  - ▪ Units Data Field

- ❖ Import - XML

- ❖ Import Tops Data

- ❖ Custom Import

  - ▪ Import SKU
  - ▪ Config SKU Import
  - ▪ Import Picklist
  - ▪ Config Picklist Import

- ❖ Export Databases

- ❖ Export - XML

- ❖ Export by Placement

- ❖ Custom Export (Solution, Placement List, Load List)

- ❖ Export - Summary

- ❖ Export - Mixed Pallets

- ❖ Export – UnitLoads

- ❖ Export Manifest

- ❖ Email Manifest

- ❖ Ftp Import

Import (Generic)

Use the Generic Import function to import data which conforms to MaxLoad Pro's ASCII Interface Format as described in the following section. Once the import file is created, follow these instructions to import:

1. Login to MaxLoad Pro.

2. From the Menu Bar, open the Tools menu, select Import. A sub menu appears.

3. Select Import (Generic) which opens the Import File dialog box as shown below.
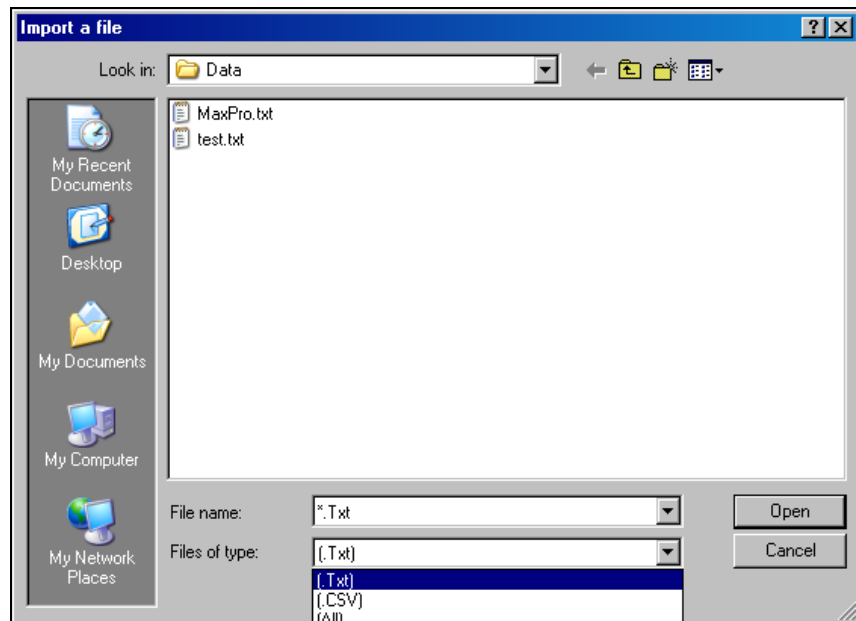
4. Highlight the file to be opened and click on the Open button. Then click Import.

    MaxLoad Pro will start importing the data. You will see the status of the process in the pop-up Importing dialog box.

MaxLoad Pro ASCII Interface

MaxLoad Pro ASCII interface is flexible and easy to implement. The ASCII file which gets imported into MaxLoad Pro should comply with the import template. A sample IMPORT.XLS file (import template) has been included with the software. This file is accessible through the Start Menu Shortcuts under "TOPS for Windows APPS" menu and can even be found in the Max2Pro/Max2Demo directory.

As Maxload Pro accepts files with both .TXT and .CSV extensions, the data can be exported from another system in comma delimited text file and then triggered as per the import template or created in Microsoft Excel and then saved as CSV file (Comma Separated Values). The resulting file is readable by MaxLoad Pro. The import file can contain Import Commands that force the software to execute additional functions such as deleting other manifests, exiting after import, chaining to another import file, etc.

The import file is then imported into MaxLoad Pro either using the Import function in the Tools Menu or a command line parameter for automatic import. When importing from ASCII MaxLoad Pro fills in any fields that are missing or incomplete. It does not perform this error checking during regular operation. Any field that is left blank gets filled during the import using the system defaults (as if the user had been entering the information from the keyboard).

Import Command Entries

[Version]	Every MaxLoad Pro import/export file begins with the header [Version]. The next line denotes the MaxLoad Pro software version from which the data is being exported or being imported into. When creating an import file, this information is listed on the first two lines.
[English]/ [Metric]	When exporting/importing, one of these two "flags" is included after the [Version] section to indicate the current default units in the software.
[Delete]	After import or before chaining, delete the imported file.
[Rename To]	After import or before chaining, rename this file to the name indicated on the next line. If both [Delete] and [Rename To] are indicated, [Delete] takes precedence.
[Chain To]	After importing the current file, import the file listed on the next line, deleting or renaming this file as previously specified.
[Clear SKU File]	Delete all SKU's from the SKU database.

[Clear Truck MFT]/[Clear Vehicle MFT]	Delete all Truck/Vehicle Manifests for all users.
[Clear Pallet MFT]	Delete all Mixed Pallet Manifests for all users.
[Clear Tote MFT]	Not implemented.
[Clear Single MFT]	Delete all Single SKU Manifests for all users.
[Clear All MFT]	Delete all manifests for all the users.
[Exit]	After completion of import, exit the program.

Import Record Entries

[ContainerList]	This is an optional section and indicates what vehicles (containers) the manifest should attempt to load its SKUs into. If this section is not included then no default container is assigned to the manifest and the user has to manually select a container before calculating the manifest.
[Manifest]	Manifest even referred as "order" or "shipment" describes the type of container to be loaded, what loading patterns will be used. Use subsequent [PickList] records to define what SKU's will be loaded.
[Pallet]	Descriptions of the pallets a SKU can be loaded onto.
[PickList]	The PickList section lists the SKUs to be loaded to a manifest. It includes manifest fields like - SKU quantities, priority, order #, whether to unitize it, etc.
[PlaceList]	Use by calculated loads to record the location of each loaded item in a container/pallet.
[SKU]	Each record describes a SKU and includes SKU type, SKU name, descriptions, dimensions, orientation preference, piece count and other related information.
[Stack]	A list of the current stack codes and their default states. Does not contain a complete description of the stackability matrix.
[Tote]	Not implemented.
[UnitLoad]	Describes which pallet to use for a given Manifest, SKU, or Mixed Pallet. Also specifies what overhang, underhang, etc. to use instance.
[User] record	Individual user settings including, Name, Stackmatrix path, and other settings found under the Configuration" menu.
[Vehicle]	Descriptions of the vehicles that may be loaded.
Units Data Field	Anytime a distance, weight, area, volume, or percent is exported it is formatted/described using the Units Data Field format. (See the next section.)

Units Data Field

The following information is the breakdown of the units' field used by MaxLoad Pro while exporting and importing. The following types of Units fields are used in MaxLoad Pro: Dimensions, Weight, Volume, Area, and Percent (English/Metric is ignored).

When a field is a numerical floating point value, such as a distance (inches) or weight (kilograms), it will be stored as a Units field. This includes all the formatting data required to display in either English or Metric units. Internally, the value is stored as a standardized English value. A Units field contains a number of sub-fields. The entire set is exported as a character string enclosed in quotes. The sub-fields are space-delimited inside this string.

```
"12 (in) G N N 0 0 2 3"
```

Subfield:	1	2	3	4	5	6	7	8	9
Name:	value	units	english/metric	fractions	zeros	english convert	metric convert	#decimals	#decimals
Example:	12	(in)	G	N	N	0	0	2	3

Subfield Descriptions

1. **Value:** This value will be translated to its internal English representation upon import. Fields 3, 6, and 7 are used to convert this number to its internal English representation. If this is the only field entered for a unit, it need not be in quotes. In that case, all other fields will be imported as the current system defaults. When MaxLoad exports this value from the program it will adhere to all the display parameters that were set, this means that exporting and re-importing could loose a few significant digits or end up rounded to the nearest 64th.

2. **Units:** Textual representation of the type of units, (in), (gr), (lbs), etc. This field is currently ignored by the import parser and may be any value. It is exported to ease the reading of ASCII file.

3. **English/Metric:** Instructs the program to convert units.

   - `E` – English, convert using sub-field 6
   - `M` – Metric, convert using sub-field 7
   - `G` – Global, during a normal export the current global state is exported so that the appropriate state can be "assumed" on re-import. See the `[English]` and `[Metric]` sections

---

4. **Fractions:**

- Y – Display with fractional parts rounded to the nearest $1/64^{th}$
- N – As Decimals with the appropriate number of decimal places

5. **Zeros:**

- Y – Show significant figures after the decimal point.
- N – Truncate trailing digits after the decimal

6. **English Convert:** An index into the English multiplier table. The multiplier is used to convert the internal value to and from the displayed value. Each type of Units field has its own multiplier tables.

7. **Metric Convert:** An index into the Metric multiplier table.

8. **English Decimals:** The maximum number of significant digits after the decimal to show when displayed in English.

9. **Metric Decimals:** The maximum number of significant digits after the decimal to show when displayed in Metric.

All sub-fields except sub-field 1 are optional when creating your own import file. However, you may not skip one and enter the next. This would confuse the parser. For example, you may enter `12`, `"12"`, `"12 (in) G"`, or `"12 (in) G Y N 0 0"`, but not `"12 (in) G 0 0"`. The missing sub-fields will be filled by the defaults for the particular field (ex: the weight field for an SKU or the Length field of a pallet). Careful coordination must be used if you skip these sub-fields. Know your defaults.

In the following few pages we will discuss some of the Import Record Entries in detail. Please follow this key to better understand Record Entry Tables for each Entry:

Note: A 'Y' indicates that the mentioned pallet pattern is allowed. Patterns switches only apply to Single SKU Manifests and UnitLoads.

Reserved: These fields are reserved for future use. Items may have values when exported but should not be constructed by the user for import. Allow the system to fill them in during import.

Italics: Items in italics are not currently implemented. Leave these blank.

(#): On some of the string values below, a number can be found in parentheses. This number represents the maximum field width.

[SKU] Record

This record field is used to define SKUs. Each record describes a SKU.

Column	Name	Type	Description
A	SKU Type	Numeric	0 – Unknown *1 – Carton* 2 - *Tray* 3 – Shipcase *4 – Bag* *5 – Tub* 6 – Drum *7 – Bottle* 9 – Tote SKU 10 – Pallet SKU 11 – Unitload / Pallet Load 13 – L Shape SKU
B	Name	String (32)	SKU Number
C	Description	String (50)	SKU Description (Optional)
D	*MFT*		
E	Pallet	String (32)	Name of the pallet to Unitize this SKU onto.
F	SubType	Numeric	0 – Unknown *1 - Single Ended bags* *2 – Double Ended Bags* 3 – Round Drum *4 - Ovals* 5 – Rectangular 6 – Mixed Pallet
G	Length	Distance	SKU length or SKU diameter for drum style SKUs.
H	Width	Distance	SKU width
I	Height	Distance	SKU height.
J	Weight	Weight	SKU weight.
K -M	*Reserved*		*Reserved – Distance*
N	Max Stack Wgt	Weight	Maximum weight allowed to be stacked on this SKU
O	Length Vert	Y/N	Y - Length is allowed Vertical (End Stack)
P	Width Vert	Y/N	Y - Width is allowed Vertical (Side Stack)
Q	Height Vert	Y/N	Y - Height is allowed Vertical (Bottom Stack)
R	Unitize	Y/N	Y –MaxLoad Pro will use this SKU as a unitload whenever possible.

S	Mixed Pallet	Y/N	Y - This SKU may be placed on a pallet with other SKU's after as many full pallets of this SKU as can be have been constructed (that is, put leftovers on mixed pallets).
T	*Tote*		
U	Has UL		Y - A UnitLoad Record exists for this SKU. If the user indicated that he wants the SKU unitized, it will use this pre-defined UnitLoad for full pallets of the SKU instead of generating one on the fly.
V	Stagger	Y/N	Mostly used for cylindrical shape SKUs.
W	Preferred Vert	Numeric	0 - Length 1 - Width 2 - Height 3 - No Preference
X	Label Surface	Numeric	0 - Length 1 - Width 2 - Height
Y	Dead Stacking Rules	Numeric	0 - Must be stacked floor 1 - Must not be stacked on floor 2 – Best Fit 3 – Prefer on Floor 4 – Prefer on Top
Z	Load Into vehicle	Numeric	0 - Length 1 - Width 2 - Best Fit
AA	Stack Code	String (20)	Stack Code from stack matrix.
AB	Max Stack Height (On Base)	Numeric	Maximum number of cases allowed high (of Self) when upright.
AC	Max Stack Height (On Side)	Numeric	Maximum number of cases allowed high when on side or on end.
AD	Color	Numeric	Decimal representation of a 4 Byte RGB value (see values on the next page)
AE	Label	String (20)	Another name for the SKU besides SKU Number
AF	Top Graphic	String (255)	Full path to the paste on graphic file to be shown on top of the SKU.
AG	Side Graphic	String (255)	Full path to the paste on graphic file to be displayed on the side of the SKU
AH	Front Graphic	String (255)	Full path to the paste on graphic file to be pasted on the front of the SKU
AI	SKU Info 1	String (64)	Additional notes fields for SKU. This info gets displayed in the SKU List and the Manifest List but not on reports.

AJ	SKU Info 2	String (64)	Same as SKU Info 1
AK	SKU Info 3	String (64)	Same as SKU Info 1
AL – AX	*Reserved*		*Reserved*
AY	Piece Count	Numeric	This reflects the quantity of items going in the SKU.
AZ	No Stack Side	Y/N	Nothing can stack on top of this SKU if it's side loaded
BA	Bundle Count 1	Numeric	Number of items in a bundle (first preference)
BB	Bundle Count 2	Numeric	Number of items in a bundle (second preference)
BC	Bundle Count 3	Numeric	Number of items in a bundle (third preference)
BD	Load Location	Numeric	0 – Load in front 1 – Load in middle 2 – Load in rear

Color Values for SKU Import

Use the decimal value on the far right to represent the color of SKU when doing a generic import of SKU as explained in the previous section.

Red	RGB(255, 0, 0)	255
Maroon	RGB(128, 0, 0)	128
Light yellow	RGB(255, 255, 128)	8454143
Yellow	RGB(255, 255, 0)	65535
Light Orange	RGB(255, 128, 64)	4227327
Orange	RGB(255, 128, 0)	33023
Olive/brown	RGB(128, 128, 0)	32896
Light green	RGB(128, 255, 128)	8454016
Neon Green	RGB(128, 255, 0)	65408
Green	RGB(0, 255, 0)	65280
Medium Green	RGB(0, 255, 128)	8453888
Aqua/Teal	RGB(0, 128, 128)	8421376
Light Cyan	RGB(128, 255, 255)	16777088
Cyan	RGB(0, 255, 255)	16776960
Blue	RGB(0, 0, 255)	16711680
Dark blue	RGB(0, 0, 128)	838608
Pink	RGB(255, 128, 255)	16744703
Magenta	RGB(255, 0, 255)	16711935
Rose	RGB(255, 0, 128)	8388863
Purple	RGB(128, 0, 255)	16711808

[UnitLoad] Record

UnitLoad Records are used to describe the parameters needed to display items grouped together on a pallet. This includes unitloads for individual SKUs, the mixed pallet parameters for truck Manifests, and the parameters for mixed pallet manifests.

Column	Name	Type	Description
A	Type	Numeric	0 - UnitLoad 1 - Mixed Pallet on a Truck 2 - Mixed Pallet Manifest
B	Name	String (64)	Name of SKU or Manifest, depending on type. SKU names are limited to32 characters while Manifest Names can be up to 64 characters.
C	Pallet	String (32)	Name of Pallet being used.
D	Stack Code	String (20)	Stack code (from Stack Matrix) to use when loading into vehicle.
E – N	*Reserved*		*Reserved*
O	Stack Height	Numeric	Number of SKUs/loads allowed to be stacked on one another.
P	Stack Rules	Numeric	0 - Must be stacked on floor 1 - Must not be stacked on floor 2 - Best Fit
Q	Load Into vehicle	Numeric	0 - Load By Length 1 - Load By Width 2 - Best fit.
R - T	*Reserved*		*Reserved*
U	Corner Posts		Y – Place corner posts on the unitloads
V - Z	*Reserved*		*Reserved*
AA	Block 1	Y/N	Note 1 - One Block (Columnar)
AB	Block 2	Y/N	Note 1 - Two Block (Interlock)
AC	Block 3	Y/N	Note 1 - Three Block (TriBlock)
AD	Block 4	Y/N	Note 1 - Four Block (Spiral, Pinwheel)
AE	Block 5	Y/N	Note 1 - Five Block (Filled Spiral)
AF	Block 5P	Y/N	Note 1 - Five Block Plus (Double spiral with Fill)
AG	Soldier	Y/N	Note 1 - Soldiered
AH	Diagonal	Y/N	Note 1 - Diagonal
AI	*Reserved*		*Reserved*
AJ	Multi-Dim	Y/N	Note 1 - Allow each layer to have a different case dim vertical.
AK	Multi-Surface	Y/N	Note 1 - Using the one through four blocks, load as though gravity were pulling toward the wall.
AL	Multi-Layer	Y/N	Note 1 - Allow top layer to be any dimension vertical regardless of dimensions allowed vertical for this SKU (because it's on top).

AM	Stagger	Y/N	Note 1 - Allow staggered patterns for round objects.
AN	Max. Len. Overhang	Distance	Distance cases are allowed past edge of pallet.
AO	Max. Wid. Overhang	Distance	Distance cases are allowed past edge of pallet.
AP	Max Height	Distance	Maximum unitload height.
AQ	Max Weight	Weight	Maximum unitload weight
AR	Corner Posts Support Length	Distance	Thickness of material for corner posts.
AS	Corner Posts Support Width	Distance	Width of corner posts.
AT	Max Stack Wgt	Weight	Maximum weight of items allowed being stacked on top of this UL.
AU	Max Vert Gap	Distance	Maximum height difference between adjacent mixed pallet items to be considered level when loading items onto them.
AV - AY	*Reserved*		*Reserved*
AZ	Block 1	Y/N	Note 2 - One Block (Columnar)
BA	Block 2	Y/N	Note 2 - Two Block (Interlock)
BB	Block 3	Y/N	Note 2 - Three Block (TriBolck)
BC	Block 4	Y/N	Note 2 - Four Block (Spiral, Pinwheel)
BD	Block 5	Y/N	Note 2 - Five Block (Filled Spiral)
BE	Block 5P	Y/N	Note 2 - Five Block Plus (double spiral with fill)
BF	Solider	Y/N	Note 2 - Soldiered
BG	Diagonal	Y/N	Note 2 - Diagonal
BH	*Reserved*		*Reserved*
BI	Multi-Dim	Y/N	Note 2 - Allow each layer to have a different case dim vertical.
BJ	Multi-Surface	Y/N	Note 2 - Using the one through four blocks, load as though gravity were pulling toward the wall.
BK	Multi-Layer	Y/N	Note 2 - Allow top layer to be any dimension vertical regardless of dimensions allowed vertical for this SKU (because it's on top).
BL	Stagger	Y/N	Note 2 - Allow staggered patterns for round objects.
BM	Len Overhang	Float	Distance cases are allowed past edge of pallet.
BN	Width Overhang	Float	Distance cases are allowed past edge of pallet.
BO	Max Height	Float	Maximum Height for calculating UnitLoad.
BP	Max Weight	Float	Maximum Weight for calculating UnitLoad

BQ	Corner Post T	Float	Thickness of material for Corner Posts
BR	Corner Post W	Float	Width of corner posts.
BS	Max Stack Wgt	Float	Maximum weight of items allowed to be stacked on top of this UL.
BT	Max Vert Gap	Float	Maximum height difference between adjacent mixed pallet items to be considered level when loading items onto them.
BU	Length	Float	Reserved. Calculated length of loaded UnitLoad .
BV	Width	Float	Reserved. Calculated width of loaded UnitLoad.
BW	Height	Float	Reserved. Calculated height of loaded UnitLoad.
BX	Weight	Float	Reserved. Calculated weight of loaded UnitLoad.

Notes

1. The Decimal representation of a bit field defining the layers that are to be rotated. Bit 1 = bottom layer. Max of 32 bits.

2. A 'Y' indicates that the mentioned pallet pattern is allowed. Patterns switches only apply to single SKU UnitLoads (Not Mixed Pallet Loads).

3. Reserved Items may have values when exported but should not be constructed by the user for import. Allow the system to fill them in during import

[Manifest] Record

Manifest even referred as "order" or "shipment" describes the type of container to be loaded, what loading patterns will be used. Use subsequent [PickList] records to define what SKU's will be loaded.

Column	Name	Type	Description
A	Name	String (64)	Name of the manifest.
B	User Name	String	Name of user creating this manifest. If left blank and user logins are active, only Supervisor will be able to open.
C	Manifest Type	Numeric	0 - Vehicle 1 - Pallet 2 - Tote 3 - Single SKU
D	Units	E/M	E - English M - Metric G - Global Setting to be put into place when opening this manifest
E - G	*Reserved*		*Reserved.*
H	Show Flaps	Y/N	Y - Show Flaps on cases.
I	Vehicle Type	Numeric	0 - Truck 1 - Sea van 2 - Railcar Vehicle manifests only.
J	Use UnitLoads	Y/N	Y - Put SKU's on pallets (unitize) - Vehicle manifests only.
K	Use Mixed Pallets	Y/N	Y - Put SKUs on mixed pallets - Vehicle manifests only.
L	*Reserved*		*Reserved*
M	Group Orders	Y/N	Y - Attempt to keep items with the same stop off or priority and the same order number near each other in the load. This may cause a loss of efficiency.
N	Group Like SKUs	Y/N	Y - Attempt to keep SKUs with the same stop off or priority clustered in the load.
O	Load Front to Back	Y/N	Y - Use the standard front to back algorithm.
P	Load Floor to Ceiling	Y/N	Y - Use the optional floor to ceiling algorithm. This algorithm does not handle multiple stop off's or priorities.
Q	Load by priority	Y/N	Use the priority system rather than the stop off system.
R	Load by stop off	Y/N	Use the stop off system rather than the priority system. Do not set both load by priority and load by stop off to 'Y'
S - U	*Reserved*		*Reserved*

Column	Name	Type	Description
V	Max Cargo Wgt	Weight	Maximum weight allowed in load.
W	Min Vert Clearance	Distance	For vehicles only. The amount of ceiling clearance required.
X	Max Vert Gap	Distance	Maximum height difference between adjacent items to be considered level when loading items onto them.
Y	Max Overlap	Distance	The distance down the length of the vehicle one priority or stop off can overlap the previous priority or stop off.
Z	*Reserved*		*Reserved*
AA	Block 1	Y/N	Note 1 - One Block (Columnar)
AB	Block 2	Y/N	Note 1 - Two Block (Interlock)
AC	Block 3	Y/N	Note 1 - Three Block (TriBlock)
AD	Block 4	Y/N	Note 1 - Four Block (Spiral, Pinwheel)
AE	Block 5	Y/N	Note 1 - Five Block (Filled Spiral)
AF	Block 5P	Y/N	Note 1 - Five Block Plus (Double Spiral with fill)
AG	Soldier	Y/N	Note 1 - Soldiered
AH	Diagonal	Y/N	Note 1 - Diagonal
AI	*Reserved*		*Reserved*
AJ	Multi-Dim	Y/N	Note 1 - Allow each layer to have a different case dim vertical.
AK	Multi-Surface	Y/N	Note 1 - Using the one through four blocks, load as though gravity were pulling toward the wall.
AL	Multi-Layer	Y/N	Note 1 - Allow top layer to be any dimension vertical regardless of dimensions allowed vertical for this SKU.
AM	Stagger	Y/N	Note 1 - Allow staggered patterns for round objects.
AN	*Reserved*		*Reserved*
AO	Load Layers	Y/N	Y - For mixed pallet manifests, Attempt to load complete layers of SKUs, as defined in the individual UnitLoads for those SKUs, before loading loose cases.
AP	*Reserved*		*Reserved*
AQ	Mixed Pallet Count	Numeric	Number of mixed pallets generated by this Vehicle Manifest.
AR - AU	*Reserved*		*Reserved*
AV	Load Space Evenly	Y/N	Y - Load using the Space evenly algorithm
AW	Load using L/R	Y/N	Y - Apply Left to right optimization to the other algorithms when loading
AX	MFT	String (128)	An optional comment field that appears

Column	Name	Type	Description
	Comment 1		on reports.
AY	MFT Comment 2	String (128)	An optional comment field that appears on reports.
AZ	MFT Comment 3	String (128)	An optional comment field that appears on reports.
BA	Report Type	Numeric	Indicates which views to print 1 - 3D Front 2 - 3D Back 4 - Top 8 - Side 16 - Front.
BB	Show Graphics	Y/N	Print cases with Paste on
BC	Print Style	Numeric	0 - B/W 1 - Color Outline 2 - Color throughout
BD	Resolution	Numeric	Integer between 50 and 100. 100 - Fine print using the largest Bitmap we can make, AKA fine. 50 - Course.

[ContainerList] Record

The ContainerList Record indicates the vehicle(s) to be loaded by this manifest. Mixed pallet manifests do not use this record and Single SKU manifests use exactly one container.

Column	Name	Type	Description
A	MFT Name	String (64)	Manifest that this vehicle is being used in for. Must already exist.
B	Vehicle Name	String	As found in the vehicle database. Must already exist.
C	Number	Numeric	Which truck should this vehicle be assigned to? If there are multiple trucks of SKUs, then this would specify that the vehicle was for the nth truck. Normally should be 1 for new manifests.
D	Current	Y/N	Used when 'View' is clicked. The current vehicle is the one displayed.
E	MFT Type	Numeric	0 - Vehicle 1 - Pallet 2 - Tote 3 - Single SKU onto Vehicle.

[PickList] Record

The PickList section lists the SKUs to be loaded to a manifest. It includes manifest fields like - SKU quantities, priority, order #, whether to unitize it, etc.

Column	Name	Type	Description
A	SKU Name	String (32)	Name of the SKU as found in the SKU file.
B	MFT Name	String (64)	Name of the Manifest this record belongs to.
C	Number	Numeric	All Pick records for a given single Manifest are numbered sequentially.
D	SKU Type	Numeric	See Type in the SKU Record definition.
E	SKU Subtype	Numeric	See Subtype in the SKU Record definition.
F	*Reserved*		*Reserved*
G	Quantity.	Numeric	SKU quantity to be loaded.
H	Order Number	String	Use as you will. The "Keep Like Orders Together" switch makes use of this.
I	Priority	Numeric	Lowest priority is loaded first.
J	Use UnitLoads	Y/N	Y - Build unitloads of this SKU before loading into container.
K	*Reserved*		*Reserved*
L	Use Mixed Pallets	Y/N	Y - Load loose items of this SKU on Mixed Pallets.
M	Stop Off	Numeric	Load Last Stop First. Never load a partial stop. Base 1. Stop off's of zero "0" never get loaded.
N - O	*Reserved*		*Reserved*
P	MFT Type	Numeric	0 - Vehicle 1 - Pallet 2 - Tote 3 - Single SKU onto Vehicle.

[Tote] Record

The Tote is where you describe the Tote Container types.

Column	Name	Type	Description
A	Style	Numeric	Use 0
B	Name	String	Name of Tote
C	Group	Numeric	Not used
D	Outside Length	Distance	Outside Length
E	Outside Width	Distance	Outside Width
F	Outside Height	Distance	Outside Height
G	Inside Length	Distance	Inside Length
H	Inside Width	Distance	Inside Width
I	Inside Height	Distance	Inside Height
J	Weight	Weight	Weight of this Tote
K	Special Length	Distance	Not Used
L	Special Width	Distance	Not Used
M	Special Height	Distance	Not Used
N	Maximum weight	Weight	Maximum Weight that can be loaded in this Tote
O	Maximum Stack Weight	Weight	Maximum Weight that can be put on top of this Tote
P	Orientation	Numeric	0 - Load into Vehicle by Length 1 - Load into Vehicle by Width 2 - don't care
Q	Stack Rules	Numeric	0 - Must be stacked on floor 1 = Must not be stacked on floor
R	Stack Code	Numeric	*Stack code to use for the Tote*
S	Stack Height	Distance	Number of these UnitLoads allowed to be stacked on one another.
T	Manifest Type	Numeric	0 - Vehicle 1 – Pallet *2 – Tote* 3 - Single SKU onto Vehicle
U	Color	Numeric	Decimal representation of a 4 Byte RGB value.

[Pallet] Record

The Pallet record section contains descriptions of the pallet a SKU can be loaded onto.

Column	Name	Type	Description
A	Type	Numeric	Type – 10 for Pallet
B	Name	String(32)	Name of the Pallet
C	Style	Numeric	Pallet Style 1 = None; 2 = Stringer; 3 = Notched Stringer; 4 = Block; 5 = Block Stringer; 6 = Euro; 7 = Slip-Sheet
D	Total Deck boards	Numeric	Number of deck boards in the Pallet
E	Auto Size	Y/N	Y = Slip-sheet is trimmed to outside dimensions of the unit load
F	Length Tab	Y/N	Y = Tab added to length
G	Width Tab	Y/N	Y = Tab added to width
H	Both sides	Y/N	Y = Tab added on both sides
I	Construction	Numeric	Pallet construction style 0 = Single Face 1 = Double Face 2 = Reversible
J	Alignment	Numeric	Refers to how the stringer is positioned in relation to the deck boards. 0 = Flush 1 = Single Wing 2 = Double Wing
K	Length	Distance	Length of Pallet or Slip sheet
L	Width	Distance	Width of Pallet or Slip sheet
M	Height	Distance	Height of Pallet or Slip sheet
N	Weight	Weight	Weight of Pallet or Slip sheet
O	Wing Offset	Distance	Distance that the stringers will be offset from the edge of the pallet. 0 if alignment is Flush
P	Deck board Thickness	Distance	Deck board thickness
Q	Inside Deck board Width	Distance	Width of the inside deck board
R	Outside Deck board Width	Distance	Width of the outside deck board
S	Center Deck board Width	Distance	Width of the center deck board

Column	Name	Type	Description
T	Stringer Width	Distance	Width of the stringer
U	Tab Width	Distance	Width of Tabs
V	Color	Numeric	Decimal representation of a 4 Byte RGB value
W	Number of Stringers	Numeric	Number of stringers on the Pallet

[Vehicle] Record

The Vehicle record section contains descriptions of the vehicle types.

Column	Name	Type	Description
A	Type	Numeric	Use 12
B	Name	String (64)	Name of vehicle
C	Style	Numeric	0 = Truck 1 = Sea van 2 = Railcar 3 = Rail wagon 4 = Multi zone 5 = Double Trailer 6 = ULD 7 = Side bay truck 8 = Flatbed 9 = Tractor
D	Rail Car style	Numeric	0 = Split 1 = Side Door
E	Length	Distance	Loadable inside length of vehicle
F	Width	Distance	Loadable inside width of vehicle
G	Height	Distance	Loadable inside height of vehicle
H	Max. Weight	Weight	Maximum loadable weight for the vehicle
I	Distance to Drop off (Front)	Distance	Distance of drop deck at the front of the vehicle
J	Front Drop off Depth	Distance	Depth of drop deck at the front of the vehicle
K	Distance to Drop off (Rear)	Distance	Location of drop deck at the rear of the vehicle (distance from front of vehicle)
L	Rear Drop off Depth	Distance	Depth of drop deck at the rear of the vehicle
M	Side Door Distance	Distance	(For rail car only) Location of side door from the front of the car.
N	Side Door Width	Distance	(For rail car only) Width of the side door.

O	King Pin Distance	Distance	Distance of king pin from the front of the vehicle.
P	Axle Count	Numeric	Axle count for the vehicle.
Q	Axle 1	Numeric	Distance of first axle from the front of the vehicle.
R	Axle 2	Numeric	Distance of second axle from the front of the vehicle.
S	Axle 3	Numeric	Distance of third axle from the front of the vehicle.
T	Tare Weight	Weight	Tare weight of the vehicle.
U	Color	Numeric	Color of the vehicle.
V	King Pin/Front Axle	Numeric	Specify whether it is a king pin or axle at the front of the trailer 0 = King Pin 1 = Front Axle
W	Front Ceiling Drop/Outside Ceiling Width (rail Wagon)	Distance	Distance of ceiling drop from front of the vehicle (For Rail Wagon, this is the outside width of the raised ceiling)
X	Front Ceiling Drop Distance/ Outside Ceiling height (rail Wagon)	Distance	Depth of the ceiling drop at the front of the vehicle (For Rail Wagon, this is the outside height of the raised ceiling)
Y	Rear Ceiling Drop/ Inside Ceiling Width (rail Wagon)	Distance	Location of ceiling drop at the rear of the vehicle (distance is from front of the vehicle). (For Rail Wagon, this is the inside width of the raised ceiling)
Z	Rear Ceiling Drop Distance/ Inside Ceiling Width (rail Wagon)	Distance	Depth of the ceiling drop at the rear of the vehicle (For Rail Wagon, this is the inside height of the raised ceiling)
AA	Split Thickness (Rail car when split)	Distance	(For Split Rail Car only) The thickness of the divider running along the length of the rail car.
AB	Trailer 1 (Double Trailer)	String (64)	Name of vehicle used as first trailer
AC	Trailer 2 (Double Trailer)	String (64)	Name of vehicle used as second trailer
AD	Bay Count	Numeric	Number of total bays in the side bay truck

AE	Short Bays	Numeric, Numeric	The location of short bays separated by commas (MaxLoad assumes short bays on both side of the vehicle)
AF	Split Bays	Y/N	Should be blank
AG	Short Bay Height	Distance	Loadable height of each short bay
AH	Split Bay Height	Distance	Not used
AI	Bay Split Thickness	Distance	Not used
AJ	Bay Width	Distance	Width of each bay (along length of truck)
AK	Bay Depth	Distance	Depth of each bay (along width of truck)
AL	Wheel Well Distance	Distance	Location of wheel wells from the front of the vehicle
AM	Wheel Well Length	Distance	Length of wheel wells of the vehicle
AN	Wheel Well Width	Distance	Width of wheel wells of the vehicle
AO	Wheel Well Height	Distance	Height of wheel wells of the vehicle
AP	Corner Boxes: Distance from front - Location1	Distance	Location of first set of corner boxes from the front of the vehicle
AQ	Corner Boxes: Distance from front - Location2	Distance	Location of second set of corner boxes from the front of the vehicle
AR	Corner Boxes: length	Distance	Length of defined corner boxes (apply to for both sets of corner boxes)
AS	Corner Boxes: width	Distance	Width of defined corner boxes (apply to for both sets of corner boxes)
AT	Corner Boxes: height	Distance	Height of defined corner boxes (apply to for both sets of corner boxes)
AU	# of Axles for Axle 1	Numeric	Number of axles for Axle 1
AV	# of Axles for Axle 2	Numeric	Number of axles for Axle 2
AW	# of Axles for Axle 3	Numeric	Number of axles for Axle 3

XML

XML (eXtensible Markup Language) is a widely used standard that facilitates the interchange of data between computer applications. Import of data in XML format is flexible and not tied to any operating system or hardware type. It is a fairly easy way for external data to be imported into MaxLoad Pro.

1. From the Menu Bar, open the Tools menu, select Import, then XML. The Open File dialog box appears, as pictured here.

2. The file filter in the dialog box displays only XML files. Highlight the file you'd like to import and click on the Open button.
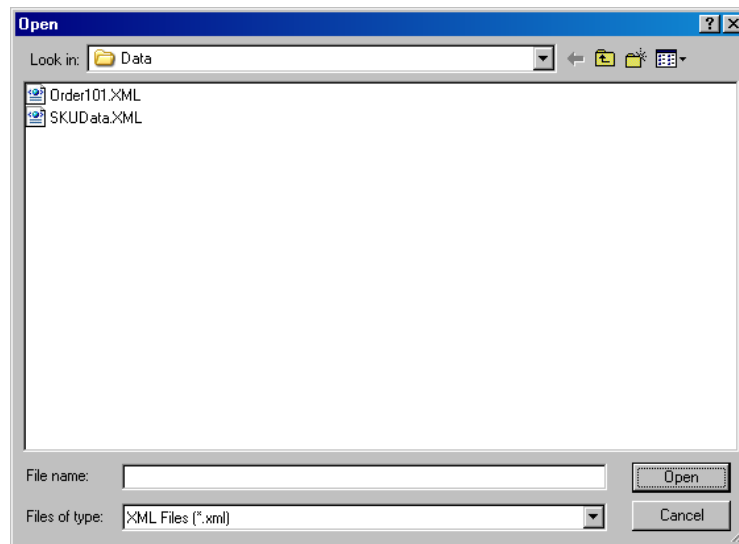
Note: Contact TOPS tech Support for further assistance.

Import Tops Data

This feature is available for MaxLoad Pro 2.70 or later and TOPS Pro 5.05 or later. It allows case sizes and most pallet patterns created from TOPS Pro (TOPS' Package Design and Palletization Software) to be imported into MaxLoad Pro.

In MaxLoad Pro 2.70 or later, the software comes with an INI file, Tops2Max.ini, found in Windows system folder. This text file specifies the paths where the two programs (TOPS and MaxLoad Pro) are located as well as the location where MaxLoad Pro will look for the data to be exported from TOPS Pro. Below is an example of the file.

Tops2Max.ini

```
[TopsPro]
AppPath=C:\Program Files\TOPSAPPS\TOPSPRO
ExportPath=C:\Program Files\TOPSAPPS\TOPSPRO\Export
AutoLoad=

[Maxload]
AppPath= C:\Program Files\TOPSAPPS\Max2Pro
```

From the Menu Bar, open the Tools menu; select Import, then Import Tops Data.

System Response: MaxLoad will go to the location specified in the ExportPath of the Tops2Max.ini file and import all files. When importing is done, it will display a message "Import Complete".

Note: To export analyses from TOPS Pro (which will be placed in the folder referenced in the Tops2Max.ini file), open the File menu from Menu Bar and select Save As. After entering the filename, check the "Export to MaxLoad" option and click on Save. Please also refer to the TOPS Pro User's Guide for more information.

Custom Import

The Custom Import function allows you to import SKU and Picklist (include truck, pallet and tote manifests) details stored in other database into MaxLoad Pro for load optimization. The data to be imported needs to be saved in a comma separated value (CSV) file as in an Excel spreadsheet or a pure text file.

With the Custom Import functions, you can specify what fields in your existing file you would like to be imported into MaxLoad and where in the file (which columns) the fields are located.

Config SKU Import

Before you can start importing custom data, you have to tell MaxLoad Pro how the incoming data are formatted in the csv or text files. This involves specifying what data each column in the csv file represents via a field selection screen as described below.

From the Menu Bar, open the Tools menu, select Import and then Config (or Setup) SKU Import. The SKU Select Fields dialog box appears, as shown here.
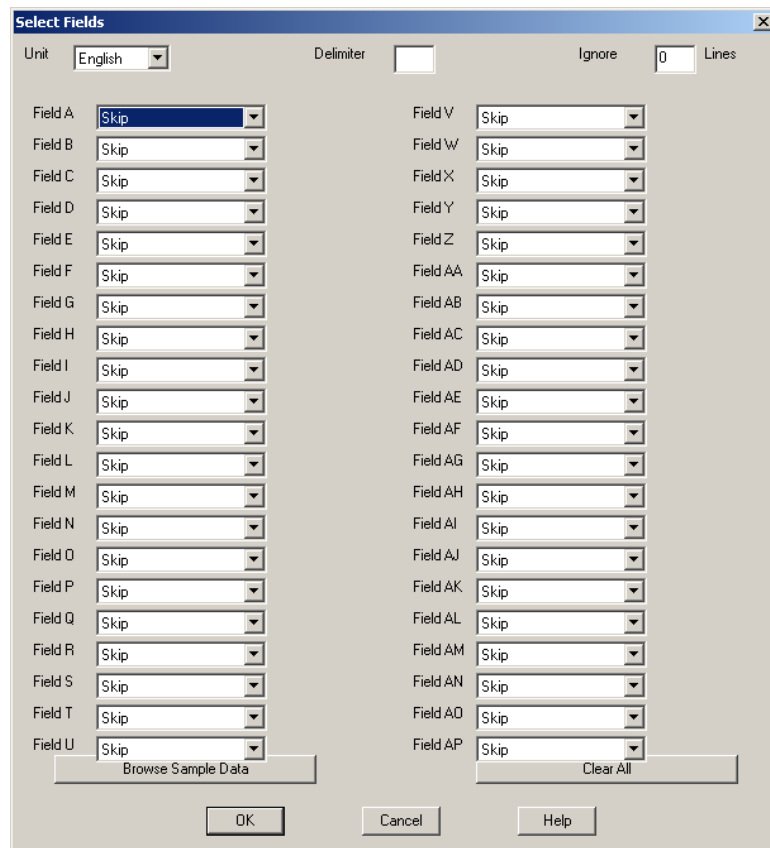
❖ **Unit:** Specify the unit measure for the imported data.

❖ **Delimiter:** Enter the character that is used to separate the individual field for each record in the text file. Commonly used characters include ",","|", and ";". If the data is in an CSV file, the delimiter will be ",".

❖ **Ignore Lines:** Indicates the number of lines at the beginning of the file that MaxLoad Pro should ignore during the import process. These are likely to be dates, column headings and information other than the actual records.

❖ **Fields:** Defines which columns or fields from the external data file will be imported into MaxLoad Pro. The field number (from A through AF) corresponds to the columns in your data file. Click on the down (▼) arrow at the corresponding field to open the drop-down list and select the item to be imported.

For example, if your data file contains SKU Name in column A and SKU Description in column B, select SKU Name from the drop-down list in Field A and Description in Field B. The rest of the fields can be left as "Skip", meaning not imported into MaxLoad Pro.

The data which can be imported are the same data that you can define for each SKU, can described in Chapter 3 under DKU Database.

❖ **Browse Sample Data File:** This opens the "Import a File" dialog box as shown in Figure 12.1 where you can specify the external file to be imported. After you have provided a filename, the first record of the file to be imported will be displayed next to the field so you can verify the data import is properly configured.

❖ **Clear All:** Click this button to clear all current settings.

Import SKU

1. From the Menu Bar, open the Tools menu, select Import and then Import SKU. The Import File dialog box appears.

2. MaxLoad Pro accepts ASCII files with both .txt and .CSV extension. Specify the file in the Files of type field. You can also select All to display all files in the selected folder.

3. Highlight the file to be opened and click on the Open button. If you have previously configure the SKU Import function (see previous section), MaxLoad Pro will start importing the data. Otherwise, MaxLoad Pro will open a SKU Select Fields dialog box as described earlier section.

Config Picklist Import

From the Menu Bar, open the Tools menu, select Import and then select Config Picklist Import. You can import Truck, Pallet or Tote manifests.

The Picklist Select Fields dialog box appears, as pictured here.

❖ **Delimiter:** Enter the character that is used to separate the individual field for each record in the text file. Commonly used characters include ",",",|", and ";". If the data is in a CSV file, the delimiter will be ",".

❖ **Ignore:** Indicates the number of lines at the beginning of the file that MaxLoad Pro will ignore during the import process. These are likely to be dates, column headings and information other than the actual records.

❖ **Fields:** Defines which columns or fields from the external data file will be imported into MaxLoad Pro. The field number (from A through AK) corresponds to the columns in your data file. Click on the down (▼) arrow at the corresponding field to open the drop-down list and select the item to be imported. Select Skip if the data is not to be imported into MaxLoad.

For example, if your data file contains Manifest Name, SKU, Quantity, Priority and Order Number in columns A, B, C, G & H respectively, you should select the corresponding item from the drop-down list in the same Field number. The rest of the fields can be left as Skip, meaning not being imported into MaxLoad Pro.

Your external data file must contain the column "manifest" which corresponds to the name of the manifest inside MaxLoad Pro. After import, you should see this manifest name in the File Open dialog box.

❖ **Browse Sample Data File:** This opens the "Import a File" dialog box as shown in Figure 12.1 where you can specify the external file to be imported. After you have provided a filename, the first record of the file to be imported will be displayed next to the field so you can verify the data import is properly configured.

For definition of the different Picklist fields and their assigned values, please refer to the record format on pages 12.15.

Import Picklist

To import Picklist into MaxLoad Pro, follow these instructions:

1. From the Menu Bar, open the Tools menu, select Import and then Import PickList. The Import a File dialog box appears.

2. MaxLoad Pro accepts ASCII files with both .txt and .CSV extension. Specify the file in he Files of type field. You can also select All to display all files in the selected folder.

3. Highlight the file to be opened and click on the Open button.

If you have previously configured the PickList Import function (see previous section), MaxLoad Pro will start importing the data. Otherwise, MaxLoad Pro will open a PickList Select Fields dialog box.

Note: If you want to remove the pre-existing SKU and Manifest databases from MaxLoad Pro, import the file PURGEALL.TXT first. You will find this file under the \Max2Pro\ or \Max2Demo\ folders. This is a simple file with four lines telling MaxLoad Pro to delete existing SKU and Manifest data.

Note: As MaxLoad Pro's internal data structure is generated through DAO, it is possible to directly manipulate MaxLoad Pro's data (through Microsoft Access for instance).   However, this manipulation should be limited to extracting information from the MaxLoad Pro tables.

Export Databases

As in the same way you prepare data to be imported into MaxLoad Pro, you can export data from MaxLoad Pro and use them in other applications. The export file created will be in the comma delimited format.

To export databases from MaxLoad Pro, follow these instructions:

1. From the Menu Bar, open the Tools menu, select Export. A submenu appears with a list of Export options – Export Databases, XML, Export By Placement, and Custom Export.

2. Select Export Databases to open the Export dialog box.
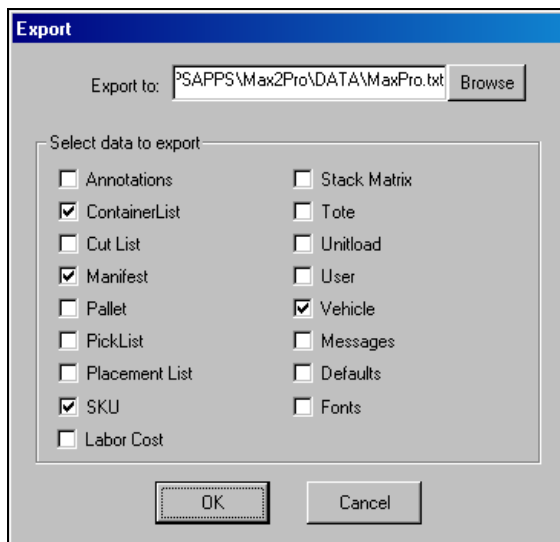
3. The Export dialog box lets you browse to a location, where you want to save the exported database. By default the exported file gets saved to the Data folder, under the Mx2Pro directory. The Export dialog box lets you export over 15 databases.

4. Once the selection is made, click OK.

   The software will create the file and export the selected data. During export an export dialog box will appear on the screen. Once the export is complete, the dialog box will be closed automatically.

XML

MaxLoad Pro can export the currently opened manifest to an XML file. The output can be easily read by other applications for further processing.

To export MaxLoad Pro data in XML format, follow these instructions:

1. From the Menu Bar, open the Tools menu and select Export. The Save As dialog box appears, as pictured below.
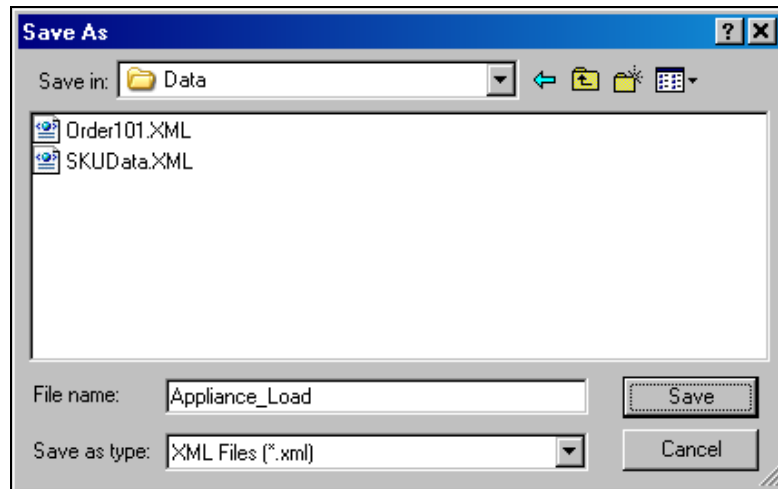
2. Type the file name that will be used for the selected export in the File name field and click Save. MaxLoad Pro will create an XML file in the specified directory path.

Export by Placement

The Export by Placement function generates step-by-step JPEG images to illustrate the loading procedure to a transit container for the currently opened manifest. The export images are the same as the ones in the Load by Placement report.

To Export by Placement, follow these instructions:

1. From the Menu Bar, open the Tools menu and select Export, then Export by Placement. The Save As dialog box appears, as pictured below.
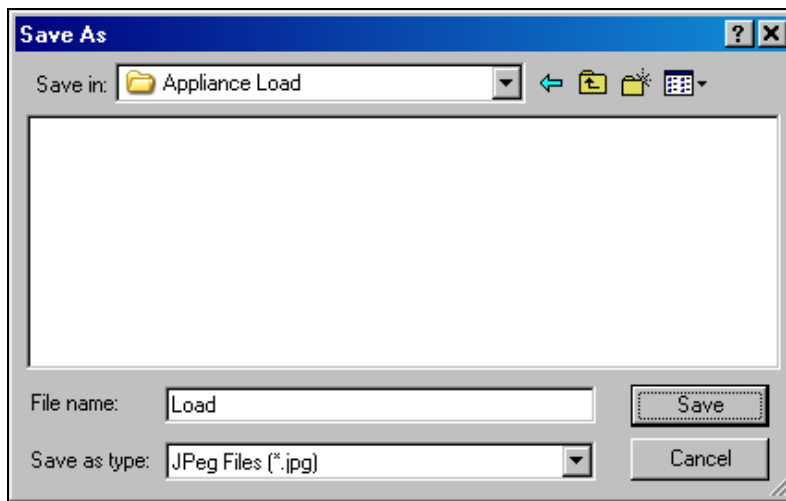
2. Type in the name of the image file that will be used to save the placement images in the File name field and click Save.

    Depending on the number of placement steps for the manifest, MaxLoad Pro will generate a series of JPG images in the specified directory path.

Note: The images will be named Filename1-1.jpg, Filename1-2.jpg, and so on. In the example illustrated in the above dialog box, the placement images will be named Load1-1.jpg, Load1-2.jpg… Load1-10.jpg.

Custom Export

The Custom Export function allows you to export load summaries to an ASCII comma delimited text file. With custom export you can specify which fields in summary you would like to export from MaxLoad Pro and where to place the fields in the output file. The output file(s) can then be easily imported into other applications for further processing. The various load summaries that can be exported using this feature are as follows:

❖ Solution
❖ Placement List
❖ Load List

To custom export a summary, follow these instructions:

1. From the Menu Bar, open the Tools menu and select Export. A submenu appears with a list of Export options – Export Databases, XML, Export By Placement, and Custom Export.

2. Cursor over Custom Export and another sub menu appears. Select one of the three options – Solutions, Placement List or Load List. The Export dialog box appears, as pictured below.
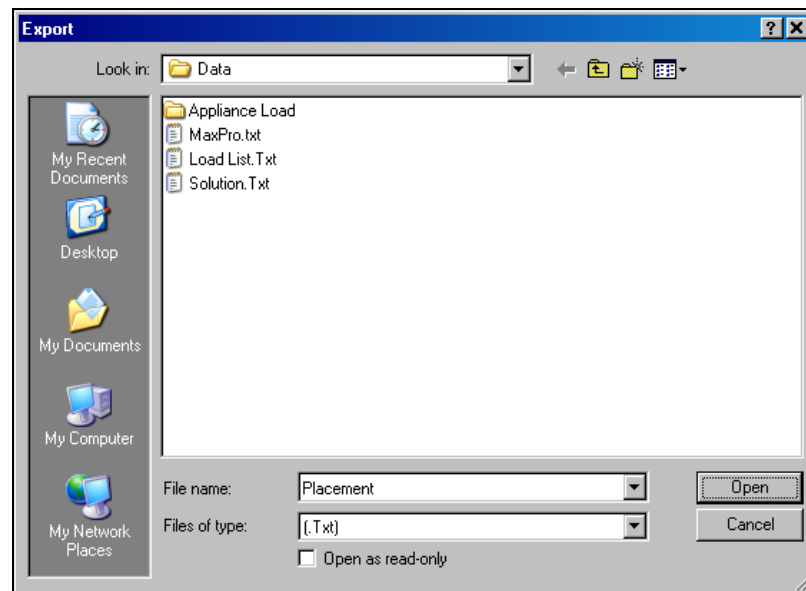
2. Type the file name that will be used for the selected export in the File name field and click Open. The Select Fields dialog box appears.

---
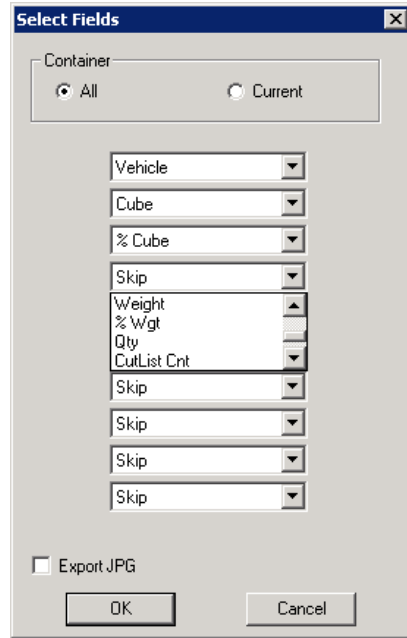
4. Select Fields dialog box allows you to specify the data to be included in the data file.

   ❖ **Containers:** If your load solution uses more than one container, click All to export data for all containers else click Current to export data for the current container only.

   ❖ **Export Fields:** For each field, click the down-arrow (▼) to view the list of data you can export for the selected report type (Solution, Placement List or Load List). The data available is similar to the data available under the same report name within the MaxLoad Pro's Manifest View Screen.

   ❖ **Export to JPG:** Check this box instruct MaxLoad Pro to also create a JPG output for the selected report.

5. Once the selection is made, click OK. The software will create the file and export the selected data.

Custom Export File

The first export field in the custom export file corresponds to the first column of the comma delimited file, the second field to the second column, respectively. Select Skip if you'd like to keep a blank column in the output file.

Below is a sample Placement list output with data as specified in Figure 12.9. The data are in the sequence of SKU, Quantity, Unitload Count, Cube, %Cube, X Front, X Side and X Floor for all containers.

```
Truck #1
Deepfreezer, 16, 0, 723.3 (ft3), 20.5 %, 0 (in), 0 (in), 0 (in)
Deepfreezer, 14, 0, 632.9 (ft3), 18.0 %, 0 (in), 0 (in), 35 (in)
TV, 15, 0, 332.5 (ft3), 9.4 %, 0 (in), 0 (in), 70 (in)
Stereo, 17, 0, 58.2 (ft3), 1.7 %, 0 (in), 42 (in), 70 (in)
Stereo, 7, 0, 24.0 (ft3), 0.7 %, 0 (in), 42 (in), 82 (in)
Stereo, 76, 0, 260.2 (ft3), 7.4 %, 0 (in), 62 (in), 0 (in)
Refrigerator, 19, 0, 663.2 (ft3), 18.8 %, 0 (in), 62 (in), 24 (in)
Computer, 9, 0, 88.2 (ft3), 2.5 %, 0 (in), 62 (in), 89 (in)
Computer, 1, 0, 9.8 (ft3), 0.3 %, 480 (in), 0 (in), 70 (in)
Computer, 12, 0, 117.5 (ft3), 3.3 %, 504 (in), 0 (in), 35 (in)
Computer, 4, 0, 39.2 (ft3), 1.1 %, 504 (in), 0 (in), 87 (in)
Computer, 2, 0, 19.6 (ft3), 0.6 %, 551 (in), 62 (in), 0 (in)
Computer, 1, 0, 9.8 (ft3), 0.3 %, 551 (in), 62 (in), 52 (in)
Computer, 1, 0, 9.8 (ft3), 0.3 %, 551 (in), 62 (in), 78 (in)


Truck #2
TV, 81, 0, 1795.5 (ft3), 51.0 %, 0 (in), 0 (in), 0 (in)
Stove, 8, 0, 295.0 (ft3), 8.4 %, 378 (in), 0 (in), 0 (in)
Refrigerator, 10, 0, 349.1 (ft3), 9.9 %, 378 (in), 37 (in), 0 (in)
TV, 4, 0, 88.7 (ft3), 2.5 %, 378 (in), 37 (in), 65 (in)
Stove, 2, 0, 73.7 (ft3), 2.1 %, 538 (in), 37 (in), 0 (in)
Refrigerator, 1, 0, 34.9 (ft3), 1.0 %, 542 (in), 0 (in), 0 (in)


Truck #3
Stove, 40, 0, 1474.9 (ft3), 41.9 %, 0 (in), 0 (in), 0 (in)
```

Export Summary

The Summary export function allows you to export load summary to an ASCII comma delimited text file. The export include manifest name, truck type, truck number, SKU name, SKU description, quantity, and load priority as in the example below:

```
Appliance Load,48 Ft. Dry Cargo,1/2,Computer,Pentium 200 mhz.,20,20,1,0,
Appliance Load,48 Ft. Dry Cargo,1/2,Deepfreezer,Arctic Plus Model,27,27,1,0,
Appliance Load,48 Ft. Dry Cargo,1/2,Refrigerator,Model 363-2,24,24,1,0,
Appliance Load,48 Ft. Dry Cargo,1/2,Stereo,Surround Sound,34,34,1,0,
Appliance Load,48 Ft. Dry Cargo,1/2,TV,Surround Sound Plus,33,33,1,0,
Appliance Load,48 Ft. Dry Cargo,2/2,Deepfreezer,Arctic Plus Model,1,1,1,0,
Appliance Load,48 Ft. Dry Cargo,2/2,Refrigerator,Model 363-2,2,2,1,0,
Appliance Load,48 Ft. Dry Cargo,2/2,Stove,5 Burner,30,30,1,0,
Appliance Load,48 Ft. Dry Cargo,2/2,TV,Surround Sound Plus,5,5,1,0,
```

Export Mixed Pallets

The Mixed Pallets Report output a text file in the specified location, providing details on the contents of each mixed pallet in the current manifest. If there is no mixed pallets in the current manifest, the output file will only contain the first title row but with no data.

```
Mixed Pallet, SKU, Qty
Mixed Pallet 6, Hand Towels, 5
Mixed Pallet 5, Saltines, 1
Mixed Pallet 4, Saltines, 2
Mixed Pallet 4, Toilet Tissue, 7
Mixed Pallet 3, Saltines, 4
Mixed Pallet 3, Tissue Paper, 8
Mixed Pallet 2, Cookies, 11
Mixed Pallet 2, Saltines, 4
Mixed Pallet 2, Toilet Tissue, 8
Mixed Pallet 1, Cookies, 17
Mixed Pallet 1, Potato Chips, 20
```

Export UnitLoads

The UnitLoads Export allows you to output all unitloads created for each SKU in the MaxLoad Pro database to an XML file. The export file will be in the format as provided below, giving dimension of the SKUs and TIHI details (number of cases per unitload layer and number of layers on the pallet) and overall dimension of the unitload.

```
- <maxout units="English">
  - <UnitLoadList>
    - <UnitLoad>
        <SKUNumber>Bulk Frozen Yogurt</SKUNumber>
        <SKUDescription>Swirl Flavor Yogurt</SKUDescription>
        <SKULength>10.00 (in)</SKULength>
        <SKUWidth>10.00 (in)</SKUWidth>
        <SKUHeight>12.00 (in)</SKUHeight>
        <SKUWeight>0.08 (lb)</SKUWeight>
        <CasePerLayer>20</CasePerLayer>
        <LayerPerUL>4</LayerPerUL>
        <CasePerUL>80</CasePerUL>
        <ULLength>50.00 (in)</ULLength>
```

```
            <ULWidth>40.00 (in)</ULWidth>
            <ULHeight>53.00 (in)</ULHeight>
            <ULWeight>71.40 (lb)</ULWeight>
          </UnitLoad>
        - <UnitLoad>
            <SKUNumber>Case 1</SKUNumber>
            <SKUDescription>Sample Case 1</SKUDescription>
            <SKULength>23.00 (in)</SKULength>
            <SKUWidth>19.00 (in)</SKUWidth>
            <SKUHeight>15.00 (in)</SKUHeight>
            <SKUWeight>10.00 (lb)</SKUWeight>
            <CasePerLayer>4</CasePerLayer>
            <LayerPerUL>3</LayerPerUL>
            <CasePerUL>12</CasePerUL>
            <ULLength>48.00 (in)</ULLength>
            <ULWidth>40.00 (in)</ULWidth>
            <ULHeight>50.00 (in)</ULHeight>
            <ULWeight>185.00 (lb)</ULWeight>
          </UnitLoad>
        - <UnitLoad>
        ......
        ......
```

Export Manifest

The Export Manifest function allows you to export the current manifest to a comma separated text file in a specified location. The output text file contains all data pertaining to the current manifest including SKU, vehicle and load solution details. Use this function to export all relevant data for a manifest so it can be directly imported in MaxLoad Pro as in the case for sending the information to TOPS Engineering for technical assistance.

Email Manifest

The Email Manifest function combines the steps of exporting the current manifest and adding it as an attachment in your email client so it can be sent off to another party.

The receiving party needs to have MaxLoad Pro to view the manifest. Upon receipt of the manifest (txt file), they should go to the Tools Menu, select Import and then Import (Generic). The manifest should now appear in the File Open dialog box.

Ftp Import

The Ftp Import function allows you to import a file from an ftp site.

1. From the Menu Bar, open the Tools menu and select Ftp Import. The FTP Get dialog box opens.

2. Enter the address for the ftp site where data is to be imported or select from the drop list if previous ftp addresses have been used. Enter the User name and Password for site access and click on the Connect button.

   Once connected, the contents of the site will be displayed in the File List as shown here.
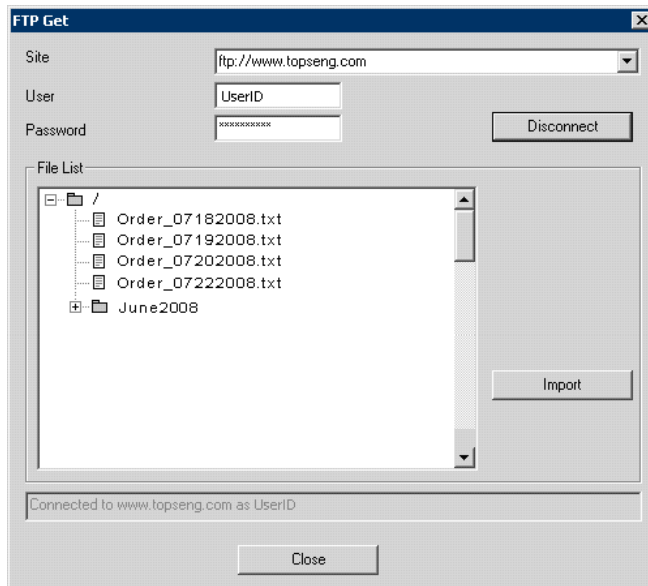
3. Select the file to be imported from the list and click on the Import button. You will see a process window which will close automatically when the import process is complete. If this is a manifest you are importing, you should see it in the File Open dialog box. For SKU import, they will appear in the SKU list in the PickList screen.

4. Click on the Disconnect button and then the Close button to exit the Ftp Import function.

Command Line Parameters

MaxLoad Pro supports the following command line options:

Command	Description
-DBPath=<path>	Allows users to override the .ini file and specify a different location for the software to find its data. Use the Maxload.mdb in the specified path instead of checking in the path indicated in the Maxload2.ini file.
-Import=<path>	This command automatically imports the specified file when the software starts. For example, an order processing system could first export an order file and then when Maxload Pro is launched, the data would automatically be imported. Imports the specified file on startup if it exists.
-Ini=<path>	Allows users to specify the location of the specific topspro.ini file that they want to use. Use the specified INI file instead of the one in C:\Windows\maxload2.ini file.
-MultiDb=On	With this option, users can specify multiple database paths (dbpath) in the Maxload2.ini file. With this feature activated, the user will be prompted on startup, for which database to use.
-User=<username>	Automatically logs the user into the software as a specified user. This allows the user to skip the login screen.
-View	Starts the program in view only mode. View only mode prevents the user from being able to modify any data in the program.

Note: User names, paths, and filenames that contain spaces or other delimiters should be enclosed in double quotation marks like "this".

Glossary

Algorithm: Mathematical rule or rules that specify how to solve a given problem

Allow Loose fills on sides: This feature will first fill the container with as many unitloads as possible, and then it looks at any SKUs in the Cut List to see if they will fit in any of the open spaces remaining.

Allowed Vertical: Dimension of the SKU (length, width, and/or depth) that is allowed to be loaded vertical. See also Preferred Vertical.

Axles: A transverse bar or shaft connecting the opposite wheels of a trailer or railcar.

Bundle: Two or more SKUs held together with a strap or a rope to form a shipping unit.

Button Bar: A bar at the top of the screen comprised of icons that control certain functions (such as print, open, save, etc.) and give you instant access to those functions.

Case: An SKU defined as a square or rectangle.

Check Box: A check box turns an option on or off. If the check box contains an X or check mark, the option is turned on.

Clampable: Ability of a palletload to be handled by squeezing both sides of the load. A pallet pattern is suitable for being clamped if any void between SKU's does not exceed 0.5" inches.

Clipboard: Areas of memory where text and commands can be stored to wait for further action, such as importing into a report. The contents of the Clipboard are erased when you exit Windows.

COG: Center of Gravity

Column Loading: Loading a mixed pallet by building full columns of each SKU.

Column Stack Loading: Loading a straight pallet by building full columns of an SKU. Also called row or column loading.

Command Line Parameter: An instruction or a switch, issued to MaxLoad Pro, to execute a particular action when the executable is launched. Example –user will automatically login a specified user.

Control Center: This the first screen when the user logs into to software. This screen has four buttons – Truck, Pallet, Tote, Single SKU – that allow the user to launch various parts of MaxLoad Pro.

Control Label: The name of a specific field. For example, in the Define SKU screen, SKU Name and Description represent the Control Label for those particular fields.

Constraint Message: A warning message that appears when you've violated a stacking or placement rule while manually editing a manifest. This message always displays in the Status Bar at the bottom of the Edit screen.

Corner Posts: Edge protectors found on the corner of unitloads, used to force corner support. MaxLoad Pro allows you to define the length and thickness of corner posts for a unitload.

Creating a Unitload: The process of loading a SKU onto a pallet or a slipsheet. This procedure takes into account various parameters, including the maximum height, weight and overhang of the unitload you're creating. MaxLoad Pro also allows you to analyze various pallet patterns when creating a unitload.

Cubic Efficiency %: The cubic efficiency of a transit vehicle load is calculated by multiplying the (individual SKU cube) by (the number of shipping cases per transit vehicle load), then dividing this product by the available cube of the transit vehicle. The available cube of the transit vehicle is (the transit vehicle length) times (the transit vehicle width) times (the transit vehicle height). When calculating the cubic efficiency % of a unitload or mixed-pallet load, MaxLoad Pro will use the absolute outside dimensions (including the pallet) of the loaded unitload.

Cut List: After calculating a manifest the SKUs which cannot fit in the specified container or a pallet are listed in the Cut List

Deck Boards: Wooden planks that make up the surface of a pallet. When you define a pallet in MaxLoad Pro, you're required to define the number of deck boards, as well as the deck board width and height.

Dead Stacking / Floor Loading: Loading an SKU loosely in to a vehicle without the use of pallets or slipsheets. Also known as hand stacking.

Dead Stacking Rules: Stacking rules for SKU's that are loaded loosely into a vehicle rather than as part of a unitload or mixed pallet.

Default: A setting or value automatically provided by MaxLoad Pro unless an alternative is specified. Many MaxLoad Pro defaults can be changed for all future analysis by going into the Configuration section and changing them. Other options may change a default for the active analysis only, and will reset when you exit MaxLoad Pro.

Double-Face Pallet Construction: A pallet style that has both a top and bottom deck.

Double Trailer: A single tractor may pull more than one trailer at one time. MaxLoad Pro can calculate the contents of both trailers at the same time.

Double-Wing Alignment: A type of pallet alignment that has overhangs on both decks.

Drop Deck: A goose-neck trailer that has a drop-off for both the front and rear of the trailer.

Drum: An SKU that is defined as a cylinder.

End Gap: The distance between the last loaded SKU the end of the container.

Euro-Pallet: A commonly used pallet style in Western European countries. The Euro-Pallet is usually 1200 mm in size and utilizes a block construction to allow for four-way entry.

Floor to Ceiling: A specific algorithm used by MaxLoad which loads a layer of SKUs across the entire floor before it allows to create a second layer.

Floor loading: See Dead Stacking.

Flush Alignment: A pallet style that has no wings.

Footprint-Shipcase: The area of the horizontal surface (base) touching an item below it (another SKU or the floor). This value can be referred to either in square inches/ centimeters or by the length and width of an SKU's base.

Footprint-Pallet Load: The area of the physical pallet plus any defined overhang.

Front to Back: A specific algorithm used by MaxLoad Pro which will stack a vertical layer at the front of the truck before proceeding with further vertical layers moving towards the back of the truck

Global Configuration: A configuration that applies to all aspects of the program. For instance, Maximum Overhang is defined in the Vehicle Loading Options screen, and applies to all SKU's loaded in a manifest, as opposed to a separate value for each individual SKU.

King Pin: Vertical rod sticking out of the bottom-forward portion of a vehicle that connects the trailer to a tractor.

Layer Loading: Loading a mixed pallet by building full layers of an SKU.

Leading Edge Loading: Loading method whereby each new placement that touches the far wall of the vehicle is considered to be a new leading edge.

Load By SKU Ratio: This algorithm gives the user an option to a container with a specified ratio of SKUs in the Manifest List.

Load By Priority: A number assigned to a SKU as it is loaded into a transit vehicle that denotes its importance of loading order in relation to other items in the load.

Load List: Displays the list of SKUs which are loaded on the truck. This shows the SKU quantity, the priority, the cubic usage and relative weight.

Manifest: All the relevant information regarding the building of a load. A manifest is comprised of vehicle information, as well as the type and quantity of SKU's to be loaded into a vehicle.

Maximize Button: A small box at the right of a window title bar that contains an upward-pointing triangle. When clicked, a window that has been at a medium size will expand to the screen.

Maximum Overhang: Maximum amount of space an SKU is allowed to hang over the edge of a pallet. This figure is defined individually for both the length and width of the pallet.

Maximum Priority Overlap: Maximum amount of space SKU's of two separate load priorities are allowed to "mix" together when being loaded into a transit vehicle. For example, if the maximum priority overlap is defined as 48 inches, items given a priority of "2" would be loaded on top of items with a priority of "1" by no more than the 48 inches defined. This figure is based on the front (leading edge) of the SKU.

Maximum Vertical Gap: The maximum difference in height between two surfaces that can still be considered level or flat. Older versions of MaxLoad Pro refer to this as amalgamation distance.

MaxLoad Pro Control Panel: A screen that provides the initial interface with MaxLoad Pro. This screen contains various "hotkeys" that allow you to launch into various parts of the program.

Menu: A list of commands that can be applied to the active window or application.

Menu Bar: The area at the top of a window containing the main headings for all menu items available for that window.

Minimize Button: A small box containing a downward-pointing arrow, which is located next to the maximize button at the right of a window's title bar. Clicking on this button shrinks the window to an icon. See also Maximize Button.

Minimum Ceiling Clearance: Minimum amount of required space between the top of the cargo and the ceiling of the transit vehicle.

Mixed Pallet: A palletload consisting of multiple kinds of SKU's and isn't made up of full SKU layers.

Mixed Pallet for Display: Mixed pallet or unitload used for end-of-aisle display purposes at warehouse clubs and other wholesale and retail outlets. Usually multiple products are arranged in eye-pleasing layers that allow consumers to pick items off the pallet for purchase.

Nest: A group of cylindrical SKUs like cans, drums or pipes that fit one within the other

Offset: The figure that represents how far a wing extends beyond a stringer on a pallet.

Optimize Height for Top Layer: This algorithm lets the software load partial unitloads in a container. This is only true for Truck Manifest.

Pallet: A low platform of wood, metal or fiberboard used to stack smaller units of product for transportation or storage.

Pattern Styles: MaxLoad Pro assigns a name to a pallet pattern type to assist in visualizing the basic pattern. For more information on pallet patterns, including graphic images, please refer to Appendix C, Pallet Patterns.

Pinwheel Optimization: This algorithm will load unitloads onto the truck in a pinwheel layout as opposed to loading by length or width.

Placement: A block of SKU's loaded with the same dimension vertical and oriented in the same direction in the vehicle.

Plan View / Top View: Overhead view of a diagram.

Picklist: List of all loaded SKU's from the Manifest List.

Piece Count: Number of items contained within a given SKU.

Preferred Vert: Due to stacking strength requirements, every SKU will have both an "allowed" and "preferred" vertical orientation. The preferred vertical dimension is assumed to be the dimension with the greatest stacking strength. Unless it is physically not possible, the preferred vertical dimension will always be used when floor-loading an item within a vehicle.

Priority: Sets the relative importance of a SKU. SKUs with the lowest number gets greater importance than higher numbered SKUs and will be loaded on the container or pallet in sequential order.

Properties: Properties are similar to defaults (defined earlier). They represent a specific setting for a particular field. However, they differ from defaults in that a Property applies only to one record (i.e., one specific SKU) rather than all records. For example, when you change the properties from inches to feet for the length field of SKU # 12345, only SKU # 12345 will be affected. If you want that change to affect all future SKU's that you define, you will need to make the change in the Defaults field.

Rail Car: Standard container behind a train engine

Rail Wagon: Container pulled behind a train engine which has a curved roof.

Record: MaxLoad Pro stores much of its information in an Access database within the system. The database consists of various records, which represent various pieces of stored information. For example, when you define a vehicle, all the information you input to define that vehicle makes up the record for that vehicle. The same goes for an SKU or pallet. Information for each individual SKU or pallet is considered the record for that SKU or pallet.

Reversible Pallet Construction: A pallet style that has a similar top and bottom deck, both capable of carrying a load.

Sea Van: Any end-loading container capable of being transported via an ocean carrier.

Single Face Pallet Construction: A pallet style that only has a top deck.

Single-Wing Alignment: A type of pallet alignment in which the overhang is only on the top deck.

Sizing Handle: The small solid squares that appear on the borders of certain list boxes. You can drag these handles to size the box and its contents.

SKU: Stock Keeping Unit. Any individual shipcase, unitload or drum that is loaded onto a pallet or into a container.

Smart Pallet Placement: Regular pallet placement sees the unitload as a single block and does not consider how level the top layer is. Smart Pallet Placement ensures the top layer will be suitable for other items to stack upon looks at the stability of the unitload to determine which should be on top and which should be loaded on the floor.

Space Evenly: This algorithm spreads the load over the entire surface area of the container in order to make a more secure load.

Sol List: Based on the algorithms selected, Maxload Pro will typically display several solutions and these are listed in the solution list or sol list.

Soldiered: Type of pallet loading where a SKU can be slipped down turned on its edge between the pallet pattern seams in order to create a more efficient palletload.

Stack Code: User-defined label that determines how items are stacked within a load. Items with similar stacking characteristics should be defined with the same stack code.

Stack Matrix: The row/column matrix that allows you to define stacking relationships among groups of SKU's. The stack matrix can be accessed either through the Define SKU screen or through the Tools/Stackability menu option.

Staggered Patterns: Allows the user to nest/stagger cylindrical objects.

Stop-Off: Same as Drop-Off. This is a load that will have items delivered to multiple destinations.

Straight Pallet: A palletload consisting of a single type of SKU.

Tare Weight: Empty weight of a container.

Title Bar: The part of a window or dialog box that contains its title.

Tote: A master pack carton into which SKU's of various sizes and shapes are loaded for transit.

Unitized: The placing of a SKU onto a pallet.

Unitload: The product created when MaxLoad Pro develops a palletload of SKU's. A unitload differs from a mixed pallet in the sense that a unitload is comprised of identical SKU's, while a mixed pallet is comprised of multiple kinds of SKU's.

Unitload Height: The overall unitload including pallet height. For example, most transit vehicles allow for approximately 108-110 inches of vertical clearance height. Therefore, a good Unitload Height will not exceed 54 inches (to allow for double stacking in the transit vehicle).

UL: UL stands for unitload. It represents a loaded pallet or slipsheet with one size of SKU's.

Unitload Length: The length of the pallet plus any allowable overhang. For example, if the pallet length is 48 inches and there's one inch of overhang allowed on each side of the pallet, the Unitload Length is 50 inches.

Unitload Width: The width of the pallet plus any allowable overhang. For example, if the pallet width is 40 inches and there's one inch of overhang allowed on each side of the pallet, the Unitload Width is 42 inches.

Viewer: A utility program that allows users to view completed manifests. The viewer doesn't actually perform any work, and therefore is not limited to the number of concurrent users. Used primarily for integrating MaxLoad Pro with document management systems, the Viewer also allows loaders to view, on screen, the results of a completed manifest as well as sending the manifest to a printer or an e-mail program.

Weight Efficiency %: The weight efficiency of a transit vehicle load is calculated by multiplying (the individual SKU weights) by (the number of shipcases per transit vehicle load), and then dividing this product by the maximum allowable weight of the transit vehicle.

Weight Limit: Represents the maximum amount of weight which may be loaded in a given container or UL.

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