ROMAC PLATE NESTING

Version 2.0

+ + + +

OPERATOR'S MANUAL

Romac Computer Services, Inc.
332 South Main
P. O. Box 660
Lake City, Tennessee 37769

Phone (865) 426-9634
Fax (865) 426-6454

e-mail: romac@romacinc.com

www.romacinc.com

TABLE OF CONTENTS

Software License Agreement and Limited Warranty

The Romac Plate Nesting software and documentation is protected by United States copyright laws and also by international treaty provisions. The Plate Nesting software is subject to the following license agreement and limited warranty.

Romac Computer Services, Inc. grants to Purchaser a non-exclusive paid license to use on Purchaser's computer one copy of the software for each license purchased and paid for. Title to the media on which the software is recorded is transferred to the Purchaser, but not title to the software.

In consideration for this license, Purchaser shall not reproduce copies of this software except to reproduce the number of copies required for use on the Purchaser's computer, and shall include copyright notices on all copies. Unauthorized duplication and distribution of this software is prohibited.

Purchaser may not rent, lease, sell, modify, or otherwise transfer this license except as provided for in this agreement.

Romac Computer Services, Inc. shall have no liability for loss of business or profits caused or alleged to be caused by use of this software. Romac Computer Services, Inc.'s liability shall be limited to correction of any defects reported within sixty (60) days of original purchase date or to refund of purchase price.

This agreement shall be governed by the laws of the Sate of Tennessee.

Registration

Upon installation of this software, you will be given a 30 day evaluation period which gives you access to all program features except the Configuration option.

You may register the software at any time during or after the evaluation period. Each registration gives you a license to use a single installation of the software in accordance with the Software License Agreement and Limited Warranty.

Each installation will generate a different serial number. This serial number is required for registration. The serial number will be included on the printed registration form (see Options|Register|Print Registration Form). The serial number is also available at the Help|About dialog box.

A new registration code may be required if you reformat your hard disk or upgrade to a new computer. Romac Computer Services will transfer your registration to another computer at no charge as long as there is no evidence of violation or abuse of the license agreement.

Program Overview

The Plate Nesting program is designed to assist in determining an optimum or near optimum sequence to cut a group of finish pieces from available stock or purchased pieces.

The program allows entry of quantities and sizes (width x length) of finish piecess to cut followed by quantities and sizes available to cut from. After processing, a summary of gross area used, net area to cut, total drop area, and percent utilization is given. A detailed listing of pieces to cut from, pieces to cut, and the resultant drop is available for listing on the screen or a line printer.

The plate nesting procedure used by the program is designed to yield a minimal drop area in a minimal amount of processing time. In some situations, a given material list can be optimized beyond the result obtained by this computer program. There is no guarantee the program will return the absolute optimum nesting sequence for all material lists.

The program works with a single material description (or unit) at a time. Typical material descriptions are: PL 1/2, 12ga sheet rod, etc. This unit can be edited, processed, printed as an individual report, and saved as an individual file. Editing and processing for a unit is done through 4 program tabs; General, To Cut, Cut From, and Results. A project could consist of one or more of the material description units.

Terms Used:

Size Method

The program currently supports four different methods of length methods. They are:

??**Feet/Inches/Fractions** - supports lengths from 0-0 1/16 to 999-11 15/16. Data entry requires use of the redefined fraction keys. See Length Entry for specifics.

??**Inches/Fractions** - supports lengths from 1/16" to 9999 15/16". Data entry requires use of the redefined fraction keys.

??**Inch decimal** - supports lengths from .001 inch to 9999.999 inches.

??**Millimeters** - supports metric lengths for 1 mm to 9999 mm. Decimal mm entry is not allowed. However, if the length method is changed for an existing list, mm are extended to 2 decimal places.

To Cut List

The finish pieces to be cut. The 'To Cut List' can include up to 100 entries. Each entry consists of a quantity, width, length, and optional Piece ID. The quantity entry can be up to 9999 pieces. The Piece ID can be up to 9 characters in length and can be toggled off and on at the General tab. To delete an item from the list, enter a quantity of 0.

Cut From List

The stock or available pieces from which the finish pieces will be cut. The 'Cut From List' can include up to 10 entries. Each entry consists of a quantity, width and a length. The quantity entry can be up to 9999 pieces. To delete an item from the list, enter a quantity of 0.

Squaring Allowance

Amount of material to be removed from each edge of the CUT FROM piece.

Kerf Allowance

Amount of material removed by the saw, shear, etc. for each parting cut.

If the squaring allowance is greater than 0" then the routine assumes that each 'Cut From' piece must have a squaring cut on each edge.

Rotate Allowed

Denotes whether a finish piece can be rotated 90 degrees for nesting purposed. In some cases (such as grating) you would not want the program to rotate the piece.

Maximum Shearable Length

When the cutting operation is performed by a shear, this denotes the maximum cut length that can be made by the shear.

Process Results

The nested results with plot are available for display to the screen and as a printed report.

Program Operation

The 'To Cut' and 'Cut From' lists are entered into a spreadsheet like grid. The arrow keys and enter key can be used to navigate the fields. These same keys are used to compete a field entry.

The TAB key is used to enter or exit the grid. For example, if the 'To Cut' tab has the focus, pressing the TAB key will switch the focus to the 'To Cut List' grid. If the 'To Cut List' grid has the focus, pressing the TAB key will switch the focus to the 'To Cut' tab.

Size Entry

The program currently supports 4 different size methods - inches/fraction X feet/inches/fractions, millimeters X milimeters, inches/fraction X inches/fractions, and decimal inches X decimal inches. For any individual list, all dimension entries must be entirely of only one of the methods. However, you can convert from one length method to another using the General tab.

When editing a size entry, the cursor will always be placed at the end of the field. The entry does not allow you to insert character into the middle of the field. Characters can be added to the end of the field only. Use the backspace key to erase the last entry in the field. Also, length entry does not support cut and paste.

When entering a fraction, you must use the redefined fractions key. Fractions 1/16 through 15/16 relate to a keyboard character. Pressing that character displays the entry as a fraction. Redefined keys are:

W=1/16 E=1/8 R=3/16 T=1/4 Y=5/16 U=3/8 I=7/16 O=1/2
S=9/16 D=5/8 F=11/16 G=3/4 H=13/16 J=7/8 K=15/16

For feet/inch/fraction entries, the hyphen (-) separates feet and inches. You can substitute the single quote (') or period (.) for the hyphen. Maximum foot entry is 999. Maximum inch entry is 11. It is not necessary to enter a space before entering the fraction.

For inch/fraction entries, the maximum inch entry is 9999.

For decimal inch entries, you can enter 2 digits to the left of the decimal and 3 digits to the right.

5 digits are allowed for millimeter entries. Decimal millimeters can not be entered but are displayed if the list is converted from some other length method.

Data Files

Each material list can be saved as a disk file. The file name can be any valid Windows file name. .PL2 will be appended to the file name for future identification. You will probably want to create a separate folder for each of your projects.

Before starting a new list or exiting the program, you will be prompted to save the current list if any changes have been made or if the list had not been previously saved.

Previous versions of the Romac Plate Nesting program used data files with the extension .PLD. Version 2 of the Plate Nesting Program creates files with extensions of .PL2. Any of the 2 file versions can be loaded using the 'Open Existing List' menu option.

When working with older .PLD file, you will be given the option to save the list using the new file format and then deleting the old version of the file. Note, previous DOS versions of the Romac Plate Nesting program cannot read the new .PL2 format.

The 'Save List' menu option is available if the current list has been previously saved. This option will save the current version of the list without prompts and using the current file name.

The 'Save List As' menu option allows you to enter or change the folder and/or file name prior to saving the list.

The 'Delete List' option deletes the current material list file and also deletes the material list from memory. ALL TRACES OF THE LIST ARE GONE. Material lists can also be deleted using Windows Explorer.

Reports

The current list can be printed. Normally, you would process the nested list prior to printing (if not processed, the Nested Results would not be available for printing). The report can include Nested Results (including a placement plot), the To Cut Listing, and/or the Cut From Listing.

The report prints at 80 columns wide. The printout will be sent to the default printer.

I**MPORTANT NOTE** - The report dialog box gives you a 'Printer Setup' option to change the default printer. If you change the default printer, you must manually change it after the report is printed if you want to return the system to using the previous default printer.

Miscellaneous Configuration

The 'Configuration' option in the Options menu allows you to enter your company name and to specify the default size method for your system.