



AutoList Operation and Reference
For RG3 v2.12.0.2

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General Safety Requirements

WARNING

The operator must thoroughly read and understand this manual before operating the saw or starting any servicing. All safety and warning instructions should be followed. This manual must be available to all operators.

1. For your own safety, read the operation manual carefully. Know your machine. Learn its applications and limitations, and any hazards specific to this machine. All personnel should be trained in the operational procedures and received safety instruction before operating this equipment. If you have not received proper training in the use of this machine, **DO NOT OPERATE THIS MACHINE**, damage to the equipment or injury to the operator is possible.
2. This machine should not be operated without all of the guards in place and safety devices in operation. Removal of any guards or disabling any of the safety devices may result in damage to the equipment or injury to the operator. If any of the guards or safety devices are missing, damaged or not working properly, **DO NOT OPERATE THIS MACHINE**, notify your supervisor immediately.
3. If the operator has any safety concerns or questions regarding the operation of this equipment, **DO NOT OPERATE THIS MACHINE**, the machine should be locked out and your supervisor notified immediately.
4. All Lock Out/Tag Out procedures must be followed before servicing or adjusting this equipment. If you have not received proper training in the Lock Out/Tag Out procedures for this machine, **DO NOT OPERATE THIS MACHINE**, damage to the equipment or injury to the operator is possible.
5. In case of any equipment malfunction or jam the machine should be powered off and locked out before clearing any materials from the operational areas of this machine. Once cleared the reset procedures need to be followed when powering up the equipment. At no time should any of the machine control systems including electrical, hydraulic or pneumatic circuits be manually overridden.
6. Check machine for damaged parts. Before continued machine use any damaged guard or part must be carefully checked for proper operation of its intended function. Check all moving parts for proper alignment, check for binding of moving parts, breakage of parts, proper secure mounting, and any other condition that may affect machine operation. Guards or other parts that are damaged must be properly repaired or re-placed.
7. Machine must be properly grounded.
8. Maintain and clean machine at recommend intervals. Intervals may need to be adjusted due to work load or material type to keep machine in top condition. Follow instructions for lubrication, setup, and changing accessories

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9. Disconnect machine from power source before, changing accessories, or any servicing activity.
10. Avoid accidental starting. Make sure switch is in the off position before connecting to power.
11. Remove any tools or loose objects from work surface of machine. Make sure any tools used for adjustment or maintenance are removed from machine before machine is restarted. Make a habit of scanning for tools and scraps every time the machine is started.
12. Keep work area clean. Cluttered work areas and workbenches increase the likelihood of an accident.
13. Do not use in dangerous environments. Do not use machine in damp or wet locations, or expose them to rain. Keep work area well illuminated.
14. Keep children away. All visitors should be kept at a safe distance from work area.
15. Make workshop childproof, with padlocks, master switches, or by removing starter keys.
16. Do not force the machine. It will function better and safer at its designed rate.
17. Use the right tools. Do not force the machine or attachments to do a job for which they were not designed. Contact the manufacturer or distributor if there is any question about the machine's suitability for a particular job.
18. Use only recommended accessories. Consult the operation manual for recommended accessories.
19. Wear proper apparel. Avoid loose clothing, gloves, neckties, rings bracelets, or jewelry which could be tangled in moving parts. Keep long hair contained to prevent entanglement. Non-slip footwear is recommended.
20. Always wear safety glasses.
21. Secure the work piece.
22. Keep proper footing and balance at all times.
23. Do not use machine while under the influence of drugs, alcohol, or any medication.
24. Always wear a face mask or dust mask if operation creates excessive dust or chips. Always operate machine in a well-ventilated area and provide proper dust removal.

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25. Never leave machine running unattended. Turn power off. Do not leave machine until it comes to a complete stop.

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1. About AutoList

1.1. What AutoList Does

AutoList takes a list of parts to cut, decides how many of those parts fit on a stick of stock, and then drives the machine through the resulting cut pattern one position at a time. It is the difference between an operator working from a printed cut list and typing every length by hand, and an operator loading a stick, pressing one button, and cutting until the stick is gone.

A single AutoList session covers four jobs:

1. **Loading the list.** A parts file from a customer's software, or a native RG3 cut list, is opened and mapped so RG3 knows which column is the length, which is the quantity, and what the rest of the columns mean.
2. **Organizing the list.** Parts are collected into groups so that everything cut from one kind of stock is run together, and the operator works one group at a time.
3. **Fitting the parts.** An optimizer packs as many parts of the current group as will fit onto the stick of stock, accounting for the saw kerf and for any material trimmed off the ends.
4. **Running the stick.** The machine moves to each cut position in turn while the operator cycles the saw, and the quantities remaining in the list are decremented as parts are actually cut.

The list is the system of record throughout. Quantities are written back to the cut list file as parts are cut, so a list can be closed part-way through a job and picked up later exactly where it was left off.

FILENAME	QUANTITY	ORIG QTY	LENGTH	MATERIAL	WIDTH	THICKNESS	PART DESC	LengthLeft	Done
Show Cutlist 2024 ROC	1	1	12	3/4 Solid Maple	2	0.75	Left Stile	12	☐
Show Cutlist 2024 ROC	1	1	12	3/4 Solid Maple	2	0.75	Right Stile	12	☒
Show Cutlist 2024 ROC	1	1	8.484	3/4 Solid Maple	2	0.75	Top Rail	8.484	☐
Show Cutlist 2024 ROC	1	1	8.484	3/4 Solid Maple	2	0.75	Middle Rail	8.484	☐
Show Cutlist 2024 ROC	1	1	8.484	3/4 Solid Maple	2	0.75	Bottom Rail	8.484	☐
Show Cutlist 2024 ROC	2	2	3.363	3/4 Solid Maple	2	0.75	Center	6.726	☐

Figure 1 - The AutoList screen with a cut list open

1.2. Activation

AutoList is a licensed feature. On a machine without an AutoList activation key, the page opens to a key entry prompt instead of the cut list screen. Enter the key supplied with the machine in the format xxxx-xxxx-xxxx-xxxx (dashes are optional) and press ENTER.

Activation keys are tied to the machine's serial number. If a key is rejected with a message naming the serial number, the key was generated for a different machine and a replacement must be requested. Accepting a key restarts RG3 so the feature can initialize.

NOTE

The custom label designer described in Chapter 13 is a separate activation. Without it, printing is still available, but label layout is limited to the simple line-and-field form.

1.3. Pusher Mode and Saw Stop Mode

AutoList runs in one of two modes, shown in the banner across the top of the page and reinforced by the color of the band around it.

Mode	Band	How it cuts
PUSHER	Blue	The gage pushes one stick of stock through the saw, stopping at each cut position in the pattern. The whole stick is consumed in one run.
SAW STOP	Red	The gage acts as a length stop. The operator selects a part in the list, the gage moves to that length, the operator cuts, and presses PART CUT to record it.

Table 1 - AutoList operating modes

On most machines the mode is fixed by the machine's configuration and the **Switch to ... Mode** button is hidden:

- Machines configured as a System, with a CPO autoloader, or as a rabbit cutter are always in PUSHER mode.
- Machines with two-hand safety enabled, or with the Kwik Snap option, are always in SAW STOP mode.

Where the machine supports both, the button in the upper right switches between them, and the choice is remembered between sessions.

Chapters 4 and 5 walk through a job in each mode. Everything in between – lists, groups, quantities, optimizers, printing, history – works the same way in both.

1.4. Before You Start

AutoList expects the machine to be homed, connected, and free of active faults. Pressing FIT PARTS & LOAD OUT while the PLC is disconnected or faulted is refused with the usual fault prompt, and nothing is fitted.

On machines fitted with a pipe cutter or rabbit cutter, the saw must also be in automatic mode. If it is in manual, the FIT PARTS & LOAD OUT button is disabled and reads **SAW IN MANUAL MODE**.

2. Cut Lists and Mappings

2.1. The Two Kinds of File

AutoList opens two different things, and it is worth being clear about which is which.

A **parts file** is whatever the shop's upstream software produces: a CSV or similar text export, with whatever column names and column order that software happens to use. It is not something RG3 can run directly.

An **.r3d cut list** is RG3's own format – a small database file holding the parts table, the quantities, and the cut history for that job. This is what AutoList actually runs.

Opening a parts file converts it to an **.r3d cut list** first, and then opens the result. Opening an **.r3d** file skips the conversion. Either way the operator presses the same OPEN FILE button and picks a file; the conversion, when one is needed, happens automatically.

NOTE A file with the extension **.rdb** is from a previous-generation RazorGage system and cannot be opened. It must be re-exported as a parts file or converted separately.

2.2. What a Mapping Is

A parts file on its own is just columns of text. The **mapping** is what tells RG3 what those columns mean, and it is the piece that makes one shop's export usable on the machine.

A mapping is stored in a file named **RG3Mapping.db**. When a file is opened, AutoList looks for a mapping in the same folder as the file; if there is not one there, it falls back to the global mapping configured for the machine. This lets a customer with several different export formats keep a dedicated mapping next to each job folder while everything else uses the shop default.

The mapping carries considerably more than column names. In one place it holds:

What it holds	Why AutoList needs it
Column attributes	Which column is the QUANTITY, the LENGTH, the WIDTH, the THICKNESS, the BAR LENGTH, the PART DESC, the SEQ NUM, the LEAD ANGLE and TRAILING ANGLE, and the secondary length. Without a length and quantity, nothing can be fitted.
Tool columns	Columns that carry positions for secondary tools – scribes and similar – so those operations are added to the run at the right places along the part.
Bin column	The column holding a sortation bin number, used when the machine has RazArray hardware.
Group-by list	Which columns are used to break the list into groups, and in what order. See Chapter 7.
Display columns	Which columns are shown in the parts grids and in what order. See Chapter 11.
Conditional formatting	Colour rules applied to rows in the parts grids. See Chapter 11.

What it holds	Why AutoList needs it
Printing preferences	Whether labels print, on what kind of printer, and the label layout itself. See Chapter 13.
Part attributes	Per-part-description settings, such as whether a part gets pocket holes or reverse scribes, that cannot be derived from the parts file alone.

Table 2 - What a mapping stores

Because these settings live with the mapping rather than with the job, they persist across every list opened through that mapping. Changing the group-by columns, the displayed columns, or the label layout while a list is open edits the mapping, and the change applies the next time any list is opened with it.

NOTE

Building and editing mappings is the subject of its own manual. This chapter covers only what an AutoList operator needs to understand about them.

2.3. Opening a List

The controls across the top of the page change with the state of the list: with nothing open they offer the two ways to get a list, and with a list open they name it and offer to close it.

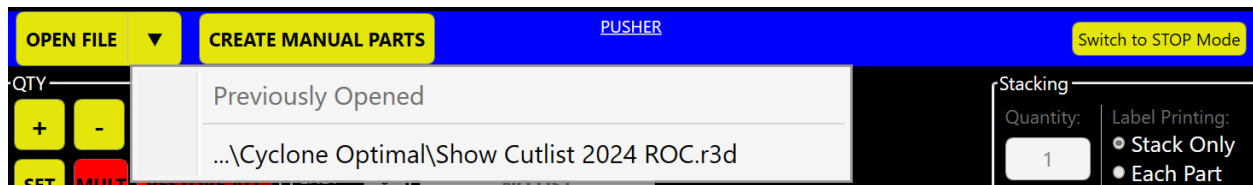


Figure 2 - The file controls with no cut list open



Figure 3 - The file controls with a cut list open

Control	What it does
OPEN FILE	Opens a file browser. Select a parts file or an .r3d cut list.
The arrow beside OPEN FILE	Drops down the list of recently opened files. Selecting one reopens it without browsing. A file that has since been moved or deleted is reported and dropped from the list.
CREATE MANUAL PARTS	Builds a small cut list by hand instead of opening a file. See below. Shown only when no list is open.
CLOSE FILE	Closes the open list. Replaces OPEN FILE while a list is open.
File name label	The name of the list currently open.

Table 3 - Cut list file controls

2.4. What Happens During a Conversion

When the file selected is a parts file rather than an `.r3d`, AutoList converts it in place before opening. Three things during that conversion are visible to the operator.

The extension is checked. The mapping records the file extension it expects. Selecting a file whose extension does not match is refused with a message naming both extensions – usually a sign that the wrong mapping is in play, or the wrong file was picked.

New part descriptions are prompted for. If the parts file contains part descriptions the mapping has not seen before, a window opens listing them so their attributes can be set. Attributes such as pocket holes cannot be guessed from the file, so the conversion stops and asks rather than assuming. Attributes entered here are saved back to the mapping and reused automatically next time.

Warnings are reported. Rows the converter had to skip, and text found in columns that should hold numbers, are collected and shown after the conversion in a single summary (the first ten, with a count of any beyond that). These are worth reading – a skipped row is a part that will not be cut.

If the conversion fails outright, the reason is shown and no list is opened.

The **DELETE RAW CUTLIST AFTER CONVERSION** option on the **OPTIONS** tab controls whether the original parts file is removed once the `.r3d` has been written. It is on by default, which keeps job folders from filling with files that have already been converted.

2.5. Creating a List by Hand

CREATE MANUAL PARTS opens a small editor for building a list without any file at all – useful for a handful of parts, a remake, or a test.

Each entry takes a length, a quantity, a material, and an optional description. ADD puts the entry in the table, and entries already in the table can be selected and deleted. SAVE writes the list; SAVE AND OPEN writes it and opens it in AutoList immediately.

Lists created this way behave exactly like any other cut list once open: they group, fit, run, print, and record history the same way.

2.6. Editing Part Attributes Later

Part attributes – the per-description settings captured during conversion – can be revised at any time with **EDIT PART ATTRIBUTES** on the **OPTIONS** tab, which opens the same editor with every part description in the mapping listed.

NOTE

Editing part attributes changes the mapping, not any `.r3d` file that has already been converted. To apply the change to an existing job, reopen or reconvert the original parts file.

3. The AutoList Screen

The page is built in three bands: the file controls across the top, a strip of run settings below them, and the tab area filling the rest of the screen. Figure 1 shows all three.

3.1. The Run Settings Strip

This strip carries everything that affects the next fit. It is visible on the CURRENT GROUP, GROUPS, COLUMN DISPLAY, ALL PARTS, and OPTIONS tabs, and hidden on the PRINTER and CUT HISTORY tabs, which need the full width.

Group	Contents
QTY	+, -, SET, MULT, RESTORE, and RESTORE ALL. Adjusts the quantity remaining on parts in the list. Enabled only on the CURRENT GROUP and ALL PARTS tabs, since those are the only tabs with a part selected. See Chapter 6.
Trim	START and END trim amounts, in the current display unit. Pusher mode only. See Chapter 8.
Bar length and optimizer	BAR LENGTH, the OPTIMIZER dropdown and its ? help button, the FIT PARTS & LOAD OUT button, and – on autoloader machines – USE REMAINING. See Chapters 8 and 9.
Defecting buttons	SCAN-RUN, SCAN-VIEW, and PUSH TO SCAN START. Shown only on machines with the Optimal defecting option. Covered in the defecting documentation.
Group image	A picture of the current group's part, when the mapping nominates an image column and a matching image file is found. See Chapter 7.
Stacking	The stacking quantity, and – when paper label printing is on – whether one label prints per stack or one per part. See Chapter 8.

Table 4 - The run settings strip

3.2. The FIT PARTS & LOAD OUT Button

This is the button that starts everything, and its face reports why it cannot.

Button reads	Meaning
FIT PARTS & LOAD OUT	Ready. Pressing it fits the current group to the stock and opens the run screen.
NO LIST	No cut list is open. Disabled.
FITTING	A fit is in progress. Disabled until it finishes.
SAW IN MANUAL MODE	Pipe cutter or rabbit cutter machine with the saw switched to manual. Disabled until the saw is returned to automatic.

Table 5 - FIT PARTS & LOAD OUT button states

On Optimal machines the button may be hidden entirely, since those machines normally start a run from a defecting scan instead.

3.3. The Tabs

Tab	Purpose
CURRENT GROUP	The parts in the group being cut, with QTY LEFT and LENGTH LEFT totals and the group navigation buttons. The working tab.
GROUPS	Every group in the list, and the settings that control how the list is divided into groups.
COLUMN DISPLAY	Which columns appear in the parts grids, in what order, and the conditional formatting rules.
ALL PARTS	Every part in the list, regardless of group.
CUT HISTORY	A diagram of every stick run against this list, with label preview and quantity restore.
PRINTER	Label printing setup and layout.
YIELD	The static fields written into yield reports.
OPTIONS	Machine-side AutoList preferences.

Table 6 - The AutoList tabs

Several tabs stay disabled until a list is open, since they have nothing to act on: GROUPS and COLUMN DISPLAY are greyed out, and PRINTER reads NO CUTLIST OPEN.

4. Running a List in Pusher Mode

This chapter is the whole job, start to finish. Later chapters cover each step in detail.

4.1. Open the List

Press OPEN FILE and select the parts file or .r3d cut list, or pick a recent file from the dropdown beside it. Answer the new-part-attributes prompt if one appears, and read any conversion warnings.

When the list opens, the CURRENT GROUP tab shows the first group's parts, and the QTY LEFT and LENGTH LEFT figures above the grid show how much work that group represents.

4.2. Check the Group

Confirm that the group shown is the one you intend to cut and that the stock at the machine matches it. The GROUPS tab lists every group; PREV GROUP and NEXT GROUP step between them without leaving the CURRENT GROUP tab.

If the mapping nominates an image column, a picture of the group's part is shown at the right of the settings strip – a quick visual confirmation that the right profile is loaded.

4.3. Set the Stock

Set the three values that describe the stick you are about to load:

1. **BAR LENGTH** – the length of the stock. Press the button and enter the length. If the list carries a bar length column and the option to use it is on, this is filled in automatically when the group is loaded.
2. **START** and **END trim** – how much to cut off each end before and after the parts. See Chapter 8 for how the end trim interacts with the machine's home offset.
3. **Stacking quantity** – how many pieces are cut per position, if the machine is cutting a stack rather than a single stick.

4.4. Choose the Optimizer

Pick First Fit, Exhaustive Enum, or Sequence from the OPTIMIZER dropdown. The ? button beside it summarizes the three. Chapter 9 covers when each is the right choice. The selection is remembered between sessions.

4.5. Fit and Load Out

Press FIT PARTS & LOAD OUT. AutoList packs as many parts from the current group as will fit onto the stock, works out the cut positions, and opens the run screen.

If nothing fits, a message says so rather than opening the run screen. The usual causes are a bar length shorter than the shortest remaining part, or a stacking quantity higher than the quantity left on any part.

If the machine is configured with a minimum yield and this pattern falls below it, a prompt shows the yield, the limit, and a diagram of the pattern, and asks whether to override. Answering no abandons the fit so the stock can be reconsidered.

4.6. Run the Stick

On the run screen:

1. Press **MOVE TO LOAD POSITION**. The gage moves clear so the stick can be loaded.
2. Load the stick against the stop and press **RUN**.
3. The gage moves to each cut position in turn. Cycle the saw at each one. The status line names the position number and the tool it is waiting for.
4. Parts are marked YES in the DONE column as they are completed.
5. When the last position is finished the status reads RUN COMPLETE. Press **DONE** to close the run screen.

Chapter 10 covers the run screen in full, including pausing, cancelling, and what happens on a fault.

4.7. After the Run

Quantities for the parts actually cut are decremented in the list and written to the `.r3d` file, and the run is added to the CUT HISTORY tab as a diagram of the stick.

What happens next depends on the OPTIONS tab settings:

- With **AUTO FIT PARTS-LOAD OUT ON RUN COMPLETE** on, the next stick is fitted automatically as soon as the run screen closes – load and press RUN again.
- With it off, press FIT PARTS & LOAD OUT for the next stick.

When the group runs out of parts, the group-finished behaviour set on the OPTIONS tab decides whether AutoList simply reports the end of the group, advances to the next group, or advances and reuses the length still left in the gage. See Chapter 7.

When the whole list is done, AutoList reports NO PARTS LEFT IN LIST.

5. Running a List in Saw Stop Mode

In Saw Stop mode the gage is a length stop rather than a pusher, and the operator drives the list one part at a time.

5.1. The Working Loop

1. Open the list and select the group, exactly as in Pusher mode.
2. On the CURRENT GROUP tab, **tap the row of the part to cut**. The gage moves to that part's length immediately.
3. Cut the part.
4. Press **PART CUT**. The quantity for that row is decremented, a paper label is printed if label printing is on, and if the row reaches zero the selection advances to the next row.

Tapping the row that is already selected re-issues the move, which is the way to recover if the gage has been moved since.

PART CUT sits in the button strip along the bottom of the CURRENT GROUP tab, alongside the group navigation buttons. It appears only in Saw Stop mode; in Pusher mode the strip carries the group controls alone.



Figure 4 - The CURRENT GROUP button strip in Saw Stop mode, with PART CUT

The PART CUT button reads **PART CUT (-n)**, where n is the stacking quantity, as a reminder of how much each press removes from the list. Pressing it when the row's remaining quantity is below the stacking quantity is refused.

5.2. Length Limits

A part whose length falls outside the machine's travel is reported rather than attempted:

- Below the low limit, the message names the length and the low limit.
- Above the high limit – the stroke – the message names the length and the high limit.

Neither case moves the gage.

5.3. Two-Hand Machines

On a machine with two-hand safety enabled, moves that bring the gage toward the operator require the two-hand control, and the prompt appears before the move runs. Two-hand machines are always in Saw Stop mode.

5.4. Fitting in Saw Stop Mode

FIT PARTS & LOAD OUT is also available in Saw Stop mode. Instead of a pusher run, it produces a sequence of stop positions for the stick and steps through them on the Saw Stop run screen, which is the same idea as the pusher run screen with these differences:

- There is no load-out step; the run begins at READY FOR LOAD.

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- On Kwik Snap machines the action prompt asks for confirmation that the Kwik Snap has cycled and retracted.
- The button that closes the finished run reads RETURN rather than DONE.

NOTE

A Saw Stop offset selector exists in the code but is not exposed in v2.12.0.2; the offset controls remain hidden regardless of configuration.

6. Quantities

Everything AutoList does is driven by the quantity remaining on each part. The QTY group in the settings strip is how that number is adjusted by hand.

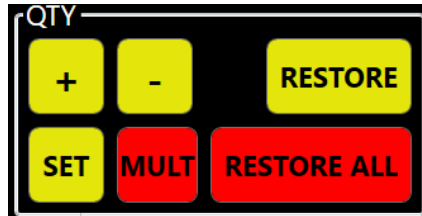


Figure 5 - The QTY controls

6.1. What the Buttons Do

Button	Action
+	Adds one to the selected part's remaining quantity.
-	Subtracts one from the selected part's remaining quantity. At zero, the selection moves to the next row instead.
SET	Tap to set the selected part's remaining quantity to a value entered on the keypad. Press and hold (or right-click) to set every part on the current tab to the same value.
MULT	Multiplies remaining quantities by an entered factor. The dialog offers Remaining – multiply what is left – or Original – multiply the original quantity from the file. Tap applies to every part on the current tab; press and hold (or right-click) applies to the selected part only.
RESTORE	Resets the selected part's quantity to its original value from the file.
RESTORE ALL	Resets quantities to their original values, after a confirmation prompt. Scope depends on the tab: on ALL PARTS it resets the entire list, on any other tab it resets the current group.

Table 7 - The QTY controls

6.2. Scope: Which Parts Get Changed

The QTY controls act on whichever grid is in front:

- On the **CURRENT GROUP** tab they act on the selected part, or on the current group for the whole-tab operations.
- On the **ALL PARTS** tab they act on the selected part, or on the entire list for the whole-tab operations.
- On every other tab the QTY group is disabled, since no part is selected.

The distinction matters most for RESTORE ALL and for press-and-hold SET, which are the two operations that can rewrite an entire list in one press. Both confirm, or take a keypad entry, before doing anything.

6.3. Original Quantity

Every part carries the quantity it had when the list was converted, held in the ORIG QTY column. That is the value RESTORE and RESTORE ALL return to, and the value MULT uses in **Original** mode. It is not changed by cutting, so a list can always be returned to its as-delivered state.

6.4. Where Quantities Are Stored

Quantity changes – whether made by hand or by cutting parts – are written back to the `.r3d` cut list file immediately. Closing the list, closing RG3, or losing power does not lose them. A list carried to another machine carries its remaining quantities with it.

A part whose remaining quantity reaches zero stays in the list, shown as done, rather than disappearing.

7. Groups

7.1. What a Group Is

A group is every part in the list that shares the same values in the columns nominated as group-by columns. If the group-by columns are MATERIAL and WIDTH, then every part that is 6063-T5 at 2.5 inches wide is one group, and every part that is 6063-T5 at 3 inches wide is another.

Groups exist because a stick of stock is one material at one size. AutoList fits and runs one group at a time, and the operator changes stock when the group changes.

The group's parts are shown on the CURRENT GROUP tab, with two running totals above the grid:

- **QTY LEFT** – the total number of parts still to cut in this group.
- **LENGTH LEFT** – the total length of those parts.

7.2. Moving Between Groups

There are two ways to change group: step to the one next door, or jump straight to any group in the list.

Control	Action
PREV GROUP / NEXT GROUP	Step to the adjacent group. The counter between them reads the current group number out of the total.
GROUPS tab, then Select Group	Jump directly to any group in the list. The GROUPS tab lists every group with its QTYLEFT and LENGTHLEFT totals.

Table 8 - Group navigation

PREV GROUP and NEXT GROUP sit in the button strip along the bottom of the CURRENT GROUP tab, with the counter between them. Stepping is the normal way to work a list front to back.

Jumping is for everything else – picking up a job part way through, or running the groups in whatever order the stock arrives. Open the GROUPS tab, tap the group you want, and press **Select Group**. Tapping a row only highlights it; nothing changes until Select Group is pressed, so there is no way to land in the wrong group by brushing the screen.

CURRENT GROUP	GROUPS	COLUMN DISPLAY	ALL PARTS	PRINTER	YIELD
rGroups					
MATERIAL	PART DESC	QTYLEFT	LENGTHLEFT	Select Group	
3/4 Solid Maple	Bottom Rail	67	568.428		
3/4 Solid Maple	Center	134	450.642		
3/4 Solid Maple	Left Stile	67	804		
3/4 Solid Maple	Middle Rail	67	568.428		
3/4 Solid Maple	Right Stile	67	804		
3/4 Solid Maple	Top Rail	67	568.428		
3/4 Solid Oak	Bottom Rail	67	568.428		
3/4 Solid Oak	Center	134	450.642		
3/4 Solid Oak	Left Stile	67	804		
3/4 Solid Oak	Middle Rail	67	568.428		
3/4 Solid Oak	Right Stile	67	804		
3/4 Solid Oak	Top Rail	67	568.428		
3/4 Solid Pine	Bottom Rail	66	559.944		
3/4 Solid Pine	Center	132	443.916		
3/4 Solid Pine	Left Stile	66	792		
3/4 Solid Pine	Middle Rail	66	559.944		
3/4 Solid Pine	Right Stile	66	792		
3/4 Solid Pine	Top Rail	66	559.944		

Figure 6 - Selecting a group on the GROUPS tab

Changing groups reloads the parts to be fitted, refreshes the totals, and returns to the CURRENT GROUP tab.

7.3. Choosing the Grouping Columns

The GROUPS tab carries the Grouping Options panel, which decides how the list is divided.

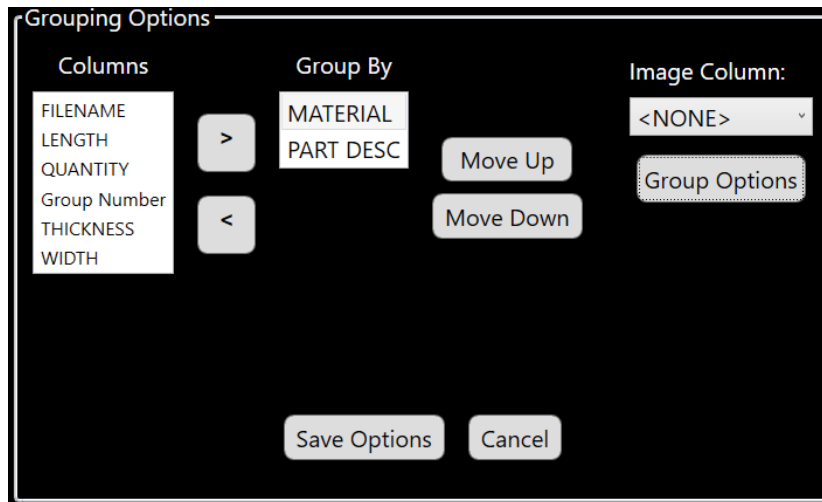


Figure 7 - The Grouping Options panel

The panel has two lists. **Columns** on the left holds columns not currently used for grouping; **Group By** on the right holds the ones that are, in priority order.

Control	Action
>	Move the selected column from Columns into Group By.
<	Move the selected column out of Group By.
Move Up / Move Down	Change the order of the Group By columns. Order determines the order groups are presented in.
Image Column	Which of the Group By columns supplies the group picture. <NONE> for no picture. See below.
Group Options	Opens the change-alert settings described below.
Save Options	Saves the grouping to the mapping and reopens the list so the new grouping takes effect.
Cancel	Discards the changes and restores the saved grouping.

Table 9 - Grouping Options controls

NOTE

Saving grouping options closes and reopens the cut list. Quantities are already saved to the file, so nothing is lost, but a run should not be in progress.

7.4. Change Alerts

Some column changes matter enough that the operator should be told about them – a change of material between groups, for instance, or a list whose material is different from the last one run.

The **Group Options** window lists the group-by columns with two checkboxes each:

- **Group** – alert when this column’s value changes as the operator moves from one group to the next.
- **List** – alert when this column’s value in the newly opened list differs from the value in the list opened previously.

When an alerting column changes, a window names the column, the old value, and the new value. Group alerts fire on group change; list alerts fire when a list is opened.

7.5. Group Images

The mapping can nominate one of the group-by columns as the image column. When it does, the value in that column for the current group is used to find a picture, which is shown at the right of the settings strip and beside the selected group on the GROUPS tab. This is a fast way for an operator to confirm the correct profile is being cut.

Images are searched for in three places, in order:

1. An `images` folder beside the mapping file, matched on the column value.
2. The global folder `C:\Cutlist Part Images`, matched on the column value.
3. An `images` folder beside the cut list, matched on file name.

The image column is chosen from the dropdown on the Grouping Options panel and saved with the rest of the grouping. When no image is found, a placeholder graphic is shown instead.

7.6. When a Group Finishes

When the last part in a group has been cut, what happens next is set by the **Group Finished Behavior** option on the OPTIONS tab:

Setting	Behaviour
DO NOTHING	A window reports that the group is finished and offers to move to the next group, or to move to the next group and use the length still remaining in the gage.
GO TO LOW LIMIT	Advances to the next group automatically and returns the gage to the low limit to clear the leftover stock. The next group starts on a fresh stick.
USE REMAINING LENGTH	Advances to the next group automatically and treats the length still in the gage as the stock for the next fit.

Table 10 - Group finished behaviour

On autoloader machines the last two options additionally start the next group’s run automatically, and their labels say so.

8. Bar Length, Trim, and Stacking

8.1. Bar Length

BAR LENGTH is the length of the stock the parts are being fitted to. Press the button and enter the length on the keypad; the value is held in the current display unit and converted automatically if the unit is changed.

The button shows one of two things:

- A **defined** length – the number entered, shown upright. This is the normal case.
- A **remaining** length – the gage's current position, shown in italics. This appears after choosing to reuse the length left in the gage at the end of a group, or after pressing USE REMAINING. The next fit uses whatever is actually left in the machine rather than a full stick.

A remaining length reverts to a defined length once it has been used, so the following stick is fitted to the full bar length again.

8.1.1. Bar Length from the List

Some parts files carry the intended stock length per part. If the mapping identifies a BAR LENGTH column and **USE BAR LENGTH ATTRIBUTE TO SET BAR LENGTH** is on in the OPTIONS tab, BAR LENGTH is set from that column each time a group is loaded, taking the value from the group's first part.

This is the right setting when the upstream software already decides which stock each part is cut from. Turn it off when the operator decides at the machine.

8.2. Trim

START and END trim reserve material at the two ends of the stick, so cuts are not attempted on a rough or out-of-square end. Both are entered on a keypad and held in the current display unit.

- **START trim** is taken from the leading end. Parts begin after it, and the first cut of the stick severs the trim piece.
- **END trim** is reserved at the trailing end. No part is placed within it.

The material actually reserved at the trailing end is the **larger** of the END trim and the machine's home offset:

$$\text{end dead space} = \max(\text{END trim, Home Offset})$$

The home offset is the distance the gage cannot physically close in on the saw. Even with END trim set to zero, that much stock remains unusable, so entering a smaller trim than the home offset has no effect. This is expected, and is the usual explanation for a leftover longer than the trim entered.

Trims apply in Pusher mode only; the Trim group is hidden in Saw Stop mode.

8.3. Stacking

The stacking quantity is how many pieces of stock are cut at each position – a stack of four sticks cut together produces four parts per cut.

Press the Stacking quantity button and enter the value. The maximum is set by the machine's configuration; the default cap is 20.

Stacking changes how the list is consumed:

- Each position cut removes **stacking quantity** from the part's remaining quantity, not one.
- Only parts whose remaining quantity is at least the stacking quantity are offered to the optimizer. A part with 3 left cannot be cut in a stack of 4.
- When parts remain but all are below the stacking quantity, the fit reports `NO PARTS WITH QUANTITY AT LEAST n WERE FOUND THAT FIT THE STOCK`. Lower the stacking quantity to finish them.

The stacking controls are hidden on Optimal, CPO autoloader, and rabbit cutter machines, which always run one stick at a time.

8.3.1. Labels When Stacking

When paper label printing is enabled, a second choice appears beside the stacking quantity:

- **Stack Only** – one label per position, for the stack as a whole.
- **Each Part** – one label per piece in the stack.

The choice is disabled unless paper label printing is turned on for the mapping.

9. Optimizers and Yield

9.1. Choosing an Optimizer

The OPTIMIZER dropdown selects how parts are packed onto the stick. The ? button beside it shows a short summary on screen; this chapter is the longer version.

Optimizer	Behaviour
First Fit	Works from the longest part to the shortest, placing each one on the stick wherever it fits, and repeating a size while it continues to fit. Fast, and good enough for most lists.
Exhaustive Enum	Searches many combinations of the available sizes to find the packing that leaves the least waste on the stick. Slower, and usually fits more parts per stick.
Sequence	Places parts strictly in the order given by the list's SEQ NUM column, stopping when the next part in sequence will not fit. Use when cut order matters more than waste – when parts must come off the saw in the order they are assembled or packed.

Table 11 - The three optimizers

The choice is saved and applies to every subsequent fit until it is changed.

NOTE

Sequence requires a SEQ NUM column in the mapping. If none is mapped, the fit reports NO SEQ NUM COLUMN IS MAPPED FOR THIS LIST. USING FIRST FIT. and proceeds with First Fit.

Lists whose mapping identifies lead or trailing angle columns are routed to an angle-aware optimizer automatically, regardless of this setting, because the three optimizers above place parts as though every cut were square. Angled cutting is covered in its own documentation.

9.2. How Kerf Is Charged

Each part consumes its own length plus one saw kerf – the material the blade removes making the cut. The saw kerf comes from the machine settings and is the same for every part on the stick.

The practical consequence is that the number of parts that fit is not simply the bar length divided by the part length. On a 144 inch stick with a 0.125 inch kerf, a 13 inch part consumes 13.125 inches, so ten parts consume 131.25 inches and leave 12.75 – not enough for an eleventh, which would need 13.125. Add trims and a mix of part lengths and the arithmetic stops being something to do in your head. This is what the optimizer is for.

Trims reduce the usable length before any of this begins: the parts are fitted to the span between the start trim and the end dead space, not to the full bar.

9.3. Cut Order on the Stick

By default parts are cut **shortest to longest** along the stick, regardless of which optimizer chose them. This keeps the longest remaining piece of stock in the machine as long as possible.

Sequence-fill runs are the exception: they cut in the order the parts were placed, which is the whole point of choosing that optimizer.

9.4. Yield

Yield is the fraction of the stick consumed by parts:

$$\text{yield} = (\text{bar length} - \text{length left over}) / \text{bar length}$$

It is reported per stick, shown in the cut history, and written to yield reports.

9.4.1. The Minimum Yield Prompt

A machine can be configured with a minimum acceptable yield. When a fit falls below it, a window appears before the run screen showing the yield achieved, the configured minimum, and a diagram of the proposed pattern, and asks whether to override.

- **Yes** runs the pattern anyway and records the run as having overridden the yield limit.
- **No** abandons the fit. Nothing is run and no quantities change.

Answering no is the opportunity to change stock, adjust trims, or add parts to the group before trying again.

Minimum yield checking is off unless enabled in the machine settings.

10. The Pusher Run Screen

The run screen opens when a fit succeeds and owns the machine until the run finishes or is cancelled. It fills the display, so nothing else can be adjusted while a stick is being cut.

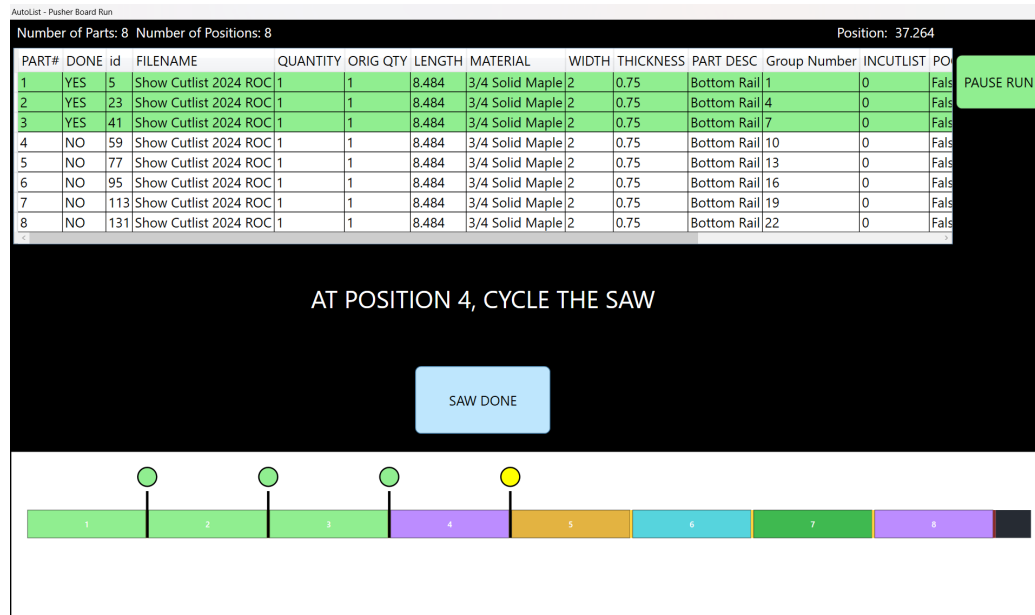


Figure 8 - The pusher run screen, part way through a stick

10.1. Layout

Area	Contents
Top left	Run information: the number of parts on this stick, the stacking arrangement if any, and the number of positions in the run.
Top right	The gage's live position.
Parts grid	One row per part on the stick, numbered in PART#, with a DONE column that reads NO until the part is cut. The remaining columns are the part's own row from the cut list – every column of it, not the subset chosen on the COLUMN DISPLAY tab – so the grid scrolls sideways on a wide list.
Status line	Large text naming what the run is doing or waiting for.
Buttons	The single button relevant to the current step, centred below the status line, plus PAUSE RUN at the right.
Bar diagram	A scale drawing of the stick along the bottom, showing every part, cut position, and trim or defect region. A circle marks each cut position: yellow for the position the run is working on, green once that cut is done. The unused remainder of the stick is drawn dark at the far end.

Table 12 - Pusher run screen layout

10.2. The Sequence of a Run

1. **READY FOR MOVE TO LOAD POSITION.** Press MOVE TO LOAD POSITION.
2. **MOVING TO LOAD POSITION**, then **LOADING PARTS, PLEASE WAIT** while the pattern is sent to the machine.
3. **AT LOAD POSITION, READY FOR RUN.** Load the stick and press RUN.
4. **MOVING TO POSITION n, FOR <tool>** between positions, then **AT POSITION n, CYCLE THE <tool>** on arrival. Cycle the saw or the named tool.
5. Parts are marked YES in the DONE column as each is completed.
6. **RUN COMPLETE.** Press DONE to close the run screen.

On machines whose tools do not report completion back to RG3, an action button appears reading **<tool> DONE**; press it once the tool has been cycled to release the run to the next position. On pipe cutter and rabbit cutter machines the saw is referred to as CUTTER in these prompts.

10.3. Pausing, Continuing, and Cancelling

PAUSE RUN stops the run where it is. The status line is replaced by RUN PAUSED and two buttons appear:

- **CONTINUE** resumes from the position where it paused.
- **CANCEL RUN** abandons the rest of the stick. The status reads RUN CANCELLED and DONE closes the screen.

Cancelling keeps every part already cut. Only the positions not reached are lost, and the parts not cut keep their quantities in the list.

10.4. Automatic Completion

With **AUTO DONE ON RUN COMPLETE** enabled on the OPTIONS tab, the run screen closes itself when the last position finishes, without waiting for DONE. Combine it with **AUTO FIT PARTS-LOAD OUT ON RUN COMPLETE** and the machine moves straight from one stick to the next, leaving the operator to load and press RUN.

10.5. Faults During a Run

A machine fault during a run pauses it and opens the fault window with the fault message. Once the fault is cleared and the window closed, the run resumes from where it stopped.

A fault during the load-out step is different: after clearing it the screen returns to READY FOR MOVE TO LOAD POSITION so the load-out can be retried.

If the connection to the machine is lost, the run screen closes and the standard no-connection handling takes over.

10.6. Printing During a Run

When label printing is enabled, labels are produced as parts are completed. If the run is an inkjet run and the printer could not be reached, the status line warns **INKJET NOT CONNECTED - PARTS**

WILL NOT BE MARKED. PRESS RUN – the run is still allowed, but nothing is marked. Inkjet behaviour is documented separately.

10.7. What Is Recorded

When the run screen closes, AutoList:

1. Decrements the quantities of every part marked done, and writes them to the cut list file.
2. Adds the run to the CUT HISTORY tab, including which parts were completed and which were not.
3. Adds the parts cut to the running part count shown on the OPTIONS tab.
4. Writes a yield report, if yield reporting is enabled and the run was not aborted part-way.

11. Column Display and Conditional Formatting

The COLUMN DISPLAY tab controls what the parts grids show and how rows are coloured. Both settings are saved to the mapping, so they apply to every list opened through it.

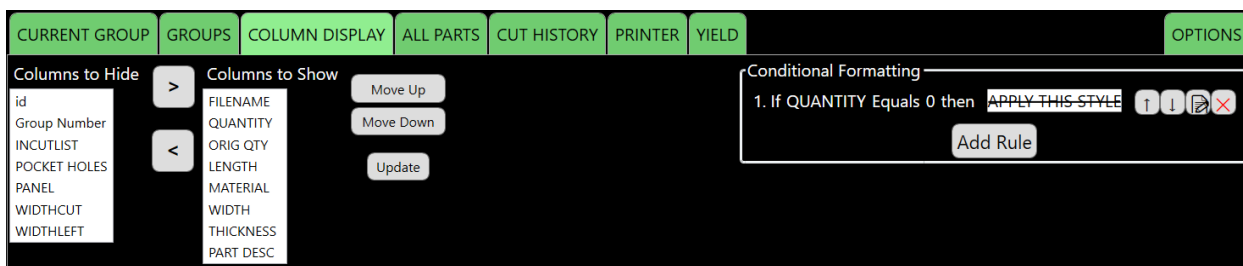


Figure 9 - The COLUMN DISPLAY tab

11.1. Choosing Columns

Two lists face each other: **Columns to Hide** on the left and **Columns to Show** on the right.

Control	Action
>	Move the selected column into Columns to Show.
<	Move the selected column out of Columns to Show.
Move Up / Move Down	Reorder the shown columns. The order here is the left-to-right order in the grids.
Update	Apply and save. A brief “Updated” confirmation fades in beneath the button.

Table 13 - Column display controls

Pressing Update also rebuilds the cut history and yield views so they use the same columns, and refreshes the sidebar entries if the machine shows them.

NOTE Column display is worth setting up once per mapping. A grid showing four meaningful columns at a readable size is far more use on a shop floor than one showing twenty.

11.2. Conditional Formatting

Conditional formatting colours rows in the parts grids according to their values – flagging long parts, a particular material, or anything else worth seeing at a glance.

Rules are listed on the same tab, numbered, each reading as a sentence: If <column> <test> <value> then <formatting>. The closing phrase is drawn in the rule’s own formatting, so the list shows at a glance what each rule will do to a row – struck through, coloured, or both – without opening it.

11.2.1. Adding and Editing Rules

Add Rule opens the rule editor; the pencil icon on an existing rule reopens it for editing.

A rule has four parts:

Field	Meaning
Column	The column to test.
Test	One of Contains, NotContains, Equals, NotEquals, <, <=, >, >=. Numeric tests apply when both the cell and the value parse as numbers.
Value	The literal to compare against.
Formatting	Background colour, foreground colour, and strikethrough. A Case Insensitive option applies to the text comparisons.

Table 14 - Conditional formatting rule fields

11.2.2. Rule Order

Rules are evaluated in list order and later matches win, so a rule further down the list overrides one above it for a row that matches both. The up and down arrows on each rule change its position; the **x** deletes it.

Changes take effect immediately and are saved to the mapping as they are made.

12. Cut History

Every stick run against a cut list is recorded in that list's own file and shown on the CUT HISTORY tab. The history travels with the .r3d, so a job opened on another machine still carries its record.

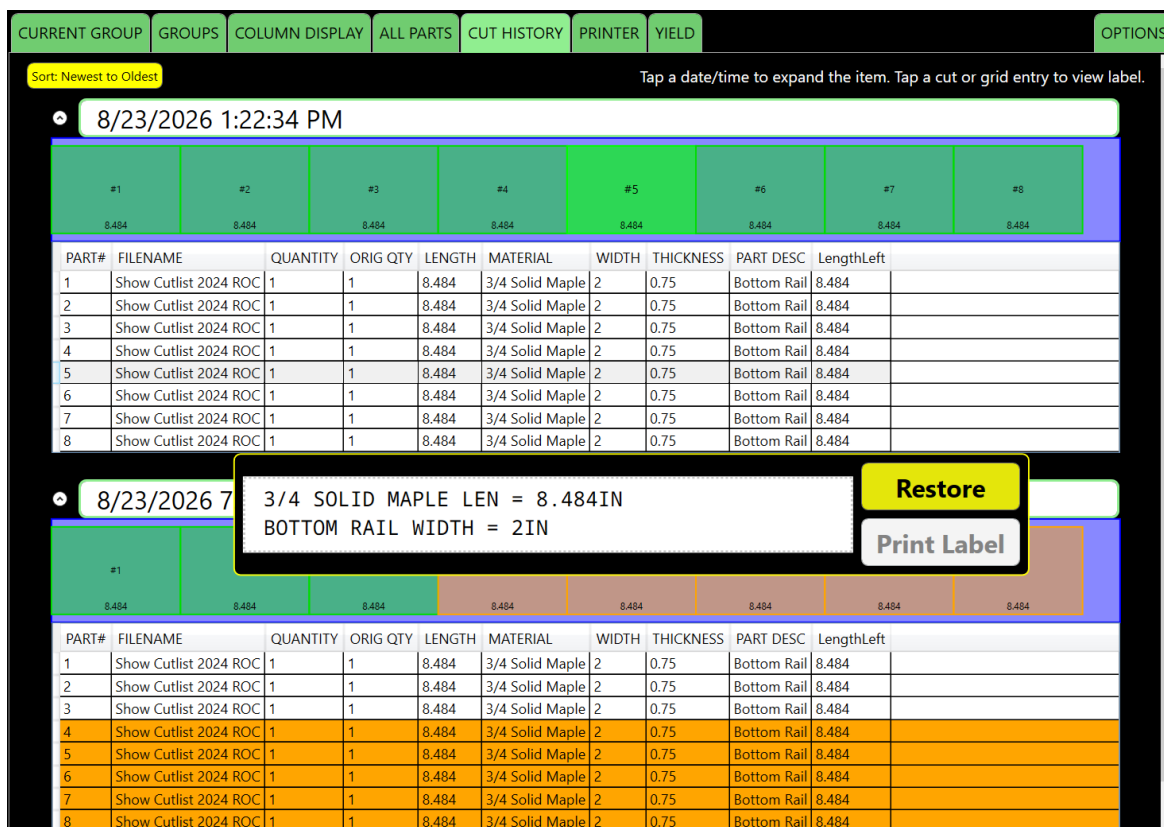


Figure 10 - The CUT HISTORY tab, with a label preview open

12.1. Reading the History

Each run is one collapsed entry headed by the date and time it started. Tapping the header expands it to show a scale diagram of the stick and, below it, a grid of the parts that were on it:

- Each part is drawn to length in its position along the bar.
- Trim and defect regions are drawn as dead space.
- Parts not completed – because the run was cancelled or faulted out – are drawn in a different colour from those that were.

The grid rows carry the same information as a colour:

Row colour	Meaning
White	The part was cut and has not been restored.
Orange	The part was not cut. The run ended before reaching it.
Light green	The part was cut and its quantity has since been restored to the list.

Table 15 - Cut history row colours

Sort: Newest to Oldest toggles to **Sort: Oldest to Newest** and back.

What each part shows in the diagram is set by the **Cut History Display** options on the OPTIONS tab: SHOW PART NUMBER, SHOW LENGTH, and SHOW RAZARRAY BIN.

12.2. Label Preview and Restoring a Part

Tapping a part – either in the bar diagram or in the grid – opens a small window showing the label for that part as it was configured, with two buttons:

- **Print Label** reprints that part's label – the answer to a label that jammed, smeared, or was lost. It is available only when the mapping is set to paper label printing; with printing off, or set to inkjet, the button is greyed out.
- **Restore** adds the part's quantity back into the list, for a part that was cut but has to be remade. It is available only for a part that was actually cut and has not already been restored – so a part the run never reached, or one already given back, cannot be restored by mistake.

Restoring adds the stacking quantity that was in force for that run, not necessarily one, and turns the part's row light green.

12.3. Clearing the History

CLEAR CUT HISTORY, at the bottom of the OPTIONS tab, deletes every history entry for the open list after a confirmation prompt. It does not change any quantities.

13. Printing and Labels

The PRINTER tab configures label printing for the open list's mapping. Because it belongs to the mapping, the layout designed here is reused by every list opened through that mapping.

13.1. Turning Printing On

Printing is enabled per mapping and has a type:

Printer type	Meaning
None	No printing.
Paper Label	Labels are printed on the paper label printer as parts are cut.
Inkjet	Parts are marked directly by the inkjet board marker during the run. Configuration and behaviour are covered in the inkjet documentation.

Table 16 - Printer types

Each type has its own layout page on the tab, and the mapping stores them separately – switching between paper and inkjet does not disturb the layout of the other.

13.2. The Simple Paper Label

A simple paper label is four lines. Each line is built from three **field** slots interleaved with four **static text** slots:

STATIC 1 – FIELD 1 – STATIC 2 – FIELD 2 – STATIC 3 – FIELD 3 – STATIC 4

A static slot is text typed in once and printed on every label. A field slot takes its value from the part's own row in the cut list, so it changes from part to part. Leaving a slot blank simply closes the gap.

This covers the common case – a part description, a length, a job name – with no design work at all.

The screenshot shows the PRINTER tab configuration interface. At the top, there are tabs: CURRENT GROUP, GROUPS, COLUMN DISPLAY, ALL PARTS, CUT HISTORY, PRINTER (selected), YIELD, and OPTIONS. The PRINTER tab is active, showing a configuration panel. The panel includes a checkbox for 'Printing Enabled' (checked), a 'Printer Type' dropdown set to 'Paper Label', a 'Label Layout' section with 'Simple' selected and 'Custom' unselected, and a 'Label Size' section with 'Width: 4' and 'Height: 1.5'. Below these are 'Font Size: 20', 'Offset X: 0', and 'Offset Y: 0'. A 'Print Test Label' button is in the top right. The main area is a table with 4 lines and 7 columns: STATIC TEXT 1, FIELD 1, STATIC TEXT 2, FIELD 2, STATIC TEXT 3, FIELD 3, and STATIC TEXT 4. The table content is as follows:

	STATIC TEXT 1	FIELD 1	STATIC TEXT 2	FIELD 2	STATIC TEXT 3	FIELD 3	STATIC TEXT 4
LINE 1	MAT:	MATERIAL		EMPTY		EMPTY	
LINE 2	DIM:	LENGTH	x	WIDTH	x	THICKNESS	
LINE 3		PART DESC	x	QUANTITY		EMPTY	
LINE 4		TIMESTAMP	RazorGage Test	EMPTY		EMPTY	

Below the table is a 'Preview' section showing a sample label layout with the following text:

```

MAT: 3/4 Solid Maple
DIM: 12in x 2in x 0.75in
Left Stile x 1
1:50 PM 8/23/2026 RazorGage Test
  
```

Figure 11 - The simple paper label layout

13.3. What Can Go in a Field Slot

A field slot holds either a column from the cut list or one of three special values:

Field	Value printed
Any column name	That column's value for the part being cut.
TIMESTAMP	The current date and time, in short form.
SERIALNUMBER	The machine's serial number.
EMPTY	Nothing. The default, and the way to leave a slot unused.

Table 17 - Field slot choices

The length, width, and thickness columns are formatted using the printing preferences on the **OPTIONS** tab – unit, fractional or decimal, and whether the unit is abbreviated – rather than printed as raw numbers. Every other column prints as it appears in the list.

13.4. Label Size, Preview, and Testing

On the paper label page, the tab carries the label width and height, a font size for the whole label, and offsets for nudging the printed result into position on the stock. Below them a preview shows the label built from the first row of the open list, so it is real data rather than placeholder text – fields resolved, lengths formatted, and static text in place.

Print Test Label sends the current design to the printer so it can be checked against real stock before a run.

13.5. Viewing a Label Before Cutting

The **VIEW LABEL** button on the **CURRENT GROUP** tab shows the label for the selected part exactly as it will print. This is the fastest check that the field slots are pulling the right columns for a specific part rather than for the preview row.

13.6. Labels and Stacking

When paper printing is on and a stacking quantity above one is in use, the Stacking group offers **Stack Only** – one label for the stack – or **Each Part** – one label per piece. See Chapter 8.

13.7. The Simple Inkjet Mark

The inkjet layout works the same way but is two lines rather than four, since it is marking the stock itself rather than a label. Everything is printed in capitals regardless of how it is typed in.

The page carries none of the paper controls – there is no label to size, and nothing to offset on it. In their place is an **Inkjet Settings** button, which opens the marker's own configuration. That, and everything else about running the inkjet, is covered in the inkjet documentation.

Figure 12 - The simple inkjet layout

13.8. The Custom Label Designer

The Custom Label Designer is a separately activated option with its own manual. Without it, the simple layout above is what the machine prints, and it remains fully available. What the option adds is described here; the manual covers how to use it.

The simple layout is four lines of text, in one size, in one place. When a label has to do more than identify a part to the operator who just cut it, the Custom Label Designer is the tool for it.

A custom label is a canvas of whatever size the stock demands, holding as many elements as the design needs. Each element is placed at its own coordinates, anchored to any of the four corners of the label – so a part number can sit hard against the top left while a barcode stays pinned to the bottom right, whatever the label size. Each element carries its own font and size, and can be given a border while the design is being laid out.

What an element can be	Why it earns its place
Text	Any size, any of the available fonts. Several text elements at different sizes turn a flat four-line label into one with a headline and detail.
Code 39 and Code 128 barcodes	The part goes into the next process by scan rather than by eye. Barcode text can be shown beneath the bars or suppressed to save room.
QR codes and Data Matrix codes	Far more data in far less space than a linear barcode, and readable by phone. The natural choice when a label is small or the payload is long.
Static images	A company logo, a certification mark, a handling symbol – anything that belongs on every label the shop produces.
Field images	A different picture per part, chosen by a column in the list. A profile drawing or an assembly photo travels with the part to the bench.

Table 18 - Custom label element types

Every element draws its content from one of three sources: text typed in once, a single column from the cut list, or a **template** – a line of text with column names in braces, so {PART DESC} – {LENGTH} prints the description, a dash, and the formatted length. Templates also reach {TIMESTAMP}, {SERIALNUMBER}, and {EMPTY}, and they are what let one element combine fixed wording with live data instead of consuming a slot for each.

RAZORGAGE

Like the simple layouts, the designer previews against a real row from the open list, so an intricate design is checked with real part numbers and real lengths in it – not placeholder text – before any stock is marked. The preview has a zoom selector, which fine placement work needs and the simple page does not have.

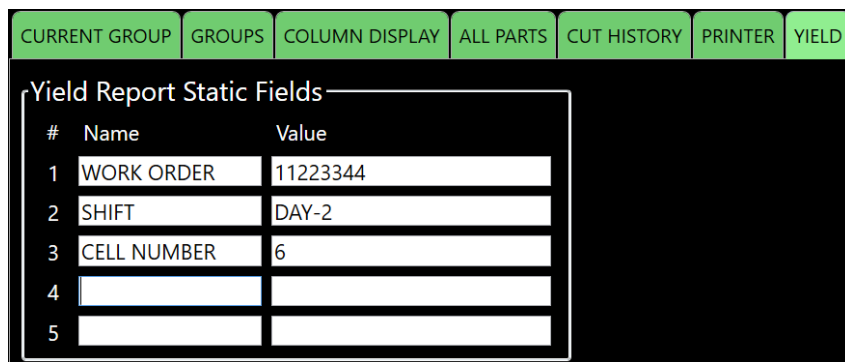
14. Yield Reporting

AutoList can write a report for every stick run, recording what was cut, how much stock was used, and how much was scrapped. The reports are a separate subject with their own specification; this chapter covers only the part of the feature that lives on the AutoList page.

14.1. The YIELD Tab

The YIELD tab holds five **static fields** – a name and a value each – that are written into every yield report produced on this machine. They exist to carry shop-specific information the report has no other way to know: a work order, a shift, a cell number, a customer.

Both the name and the value are free text. A field left blank is simply omitted. Values persist until they are changed, so a field set to the current work order stays with every report until the next job.



#	Name	Value
1	WORK ORDER	11223344
2	SHIFT	DAY-2
3	CELL NUMBER	6
4		
5		

Figure 13 - The YIELD tab static fields

14.2. What Else Goes Into a Report

Beyond the static fields, a report records the machine serial number, the cut list name, the operator, the units, the grouping criteria for the run, the bar length, the length used and scrapped, the yield and the configured yield limit, whether that limit was overridden, the stacking quantity and part count, the trims, the saw kerf, the home offset, the start and end times, and the stock width and thickness.

Reports are written when yield reporting is enabled in the machine settings, and only for runs that completed – a run cancelled part-way does not produce one. They are written either beside the cut list or into a single dedicated directory, depending on the machine settings.

NOTE For the report file format, field-by-field definitions, and the settings that control where reports are written, see the **Yield Reports Specification**.

15. Options Reference

The OPTIONS tab holds the machine-side AutoList preferences. These are settings for this machine, not for the open list – they persist across lists and across restarts.

Figure 14 - The OPTIONS tab

15.1. AutoRun

Option	Effect
AUTO DONE ON RUN COMPLETE	The run screen closes itself when the last position finishes, instead of waiting for DONE.
AUTO FIT PARTS-LOAD OUT ON RUN COMPLETE	The next stick is fitted automatically as soon as a run finishes, so the operator only loads and presses RUN.
DEFECTING - PUSH TO SCAN START AFTER RUN COMPLETE	On defecting machines, returns the pusher to the scan start position after each run. See the defecting documentation.
AUTO LOADER	Enables autoloader behaviour on machines fitted with one, and shows the USE REMAINING button. See the autoloader documentation.

Table 19 - AutoRun options

15.2. Group Finished Behavior

DO NOTHING, GO TO LOW LIMIT, or USE REMAINING LENGTH – described in Chapter 7. The group is hidden on Optimal machines, which handle group completion differently.

15.3. Cut History Display

SHOW PART NUMBER, SHOW LENGTH, and SHOW RAZARRAY BIN control what is drawn inside each part in the cut history bar diagrams. Turning some off is worth doing when parts are short and the labels crowd each other.

15.4. Part Cut Count

A running total of parts cut by this machine through AutoList, incremented as parts complete. **ZERO PARTS CUT** resets it – useful as a per-shift or per-job tally.

15.5. EDIT PART ATTRIBUTES

Opens the part attributes editor for the current mapping. See Chapter 2.

15.6. RazorOptimal

SHOW POCKET HOLE DRILL POSITION WARNING prompts when the part width changes between groups on a pocket-hole machine, as a reminder that the drill positions may need checking.

15.7. Printing Preferences

Option	Effect
DISTANCE UNIT	How lengths are rendered on labels and in printed output – decimal, fractional, feet and inches, and so on.
USE UNIT ABBREVIATIONS	Print <i>in</i> rather than <i>inches</i> .
FRACTION DENOMINATOR	The denominator fractional lengths are rounded to, from 2 to 64. Available only when DISTANCE UNIT is one of the fractional formats; with a decimal unit selected it is greyed out, since nothing is being rounded to a fraction.

Table 20 - Printing preferences

These affect printed output and the length placeholders in label templates. They do not change the unit used on screen, which is set on the main page.

15.8. List Options

Option	Effect
DELETE RAW CUTLIST AFTER CONVERSION	Deletes the original parts file once it has been converted to an .r3d. On by default.

Option	Effect
USE BAR LENGTH ATTRIBUTE TO SET BAR LENGTH	Sets BAR LENGTH from the list's bar length column when a group is loaded. See Chapter 8.

Table 21 - List options

15.9. UI Options

GRID FONT SIZE sets the text size in the parts grids. Larger is easier to read across a machine; smaller fits more rows.

15.10. CLEAR CUT HISTORY

Deletes the cut history for the open list, after confirmation. See Chapter 12.

16. Machine Settings That Affect AutoList

These live on the SETTINGS page rather than in AutoList, but they change what AutoList does. They are machine configuration and should be changed with care.

Setting	Effect on AutoList
Saw Kerf	The material each cut removes. Added to every part when fitting, so an incorrect kerf makes the last part on each stick either short or unmakeable.
Home Offset	The distance the gage cannot close in on the saw. Sets the floor for the end dead space, so a trim smaller than it has no effect. See Chapter 8.
Load Offset	Extra distance added when moving to the load position, so there is room to get the stick in.
Stroke, low and high limit	The travel available. A pattern needing a position beyond the stroke is refused with <code>Maximum Razor Gage position exceeds the Stroke</code> .
Preclamp Offset	Where the clamp closes relative to the end of the stock on machines with a preclamp.
Enable Minimum Yield / minimum yield value	Turns on the low-yield prompt and sets the threshold. See Chapter 9.
Enable Yield Reports	Turns on report writing after each completed run. See Chapter 14.
Output Yield Reports to Dedicated Directory, and its path	Writes every report into one folder instead of beside each cut list.
Append Grouping Criteria to Report	Adds the current group's criteria to the report file name.
Show Sidebar Entries	Shows values from the selected part's row in the main sidebar, taken from the sixth through eighth displayed columns.
Maximum stacking quantity	Caps the stacking keypad. Defaults to 20.
Global part images path	Where group images are searched for. Defaults to <code>C:\Cutlist Part Images</code> .
Pocket hole and secondary tool configuration	Determines which tools AutoList emits positions for, and whether pocket hole columns are read from the list.

Table 22 - Machine settings that affect AutoList

17. Messages and Prompts

The messages below are the ones an AutoList operator meets regularly.

17.1. When Fitting

Message	What it means
NO CUTLIST IS OPEN.	FIT PARTS was pressed with no list open.
NO PARTS WERE FOUND THAT FIT THE STOCK.	Every remaining part is longer than the usable span. Check bar length and trims.
NO PARTS WITH QUANTITY AT LEAST n WERE FOUND THAT FIT THE STOCK.	Parts remain but all have fewer than the stacking quantity left. Lower the stacking quantity.
NO PARTS LEFT FOR THE CURRENT GROUP.	The group is complete. Move to the next group.
NO PARTS LEFT IN LIST.	Every group is complete.
START TRIM / END TRIM can not be evaluated as a number.	The trim entry is not a valid number. Re-enter it.
NO SEQ NUM COLUMN IS MAPPED FOR THIS LIST. USING FIRST FIT.	Sequence was selected but the mapping has no SEQ NUM column.
Maximum Razor Gage position exceeds the Stroke.	The pattern needs a position beyond the machine's travel. Use a shorter bar length.
This run has a yield of x. The minimum yield for this machine is y.	The minimum yield prompt. See Chapter 9.
INKJET PRINTING IS NOT SUPPORTED ON ANGLED PARTS.	The group contains angled parts and inkjet marking is on. Turn inkjet printing off to run the group.

Table 23 - Messages while fitting

17.2. While Running

Status line	Meaning
READY FOR MOVE TO LOAD POSITION	Waiting for the load-out to be started.
MOVING TO LOAD POSITION	The gage is moving clear.
LOADING PARTS, PLEASE WAIT	The pattern is being sent to the machine.
AT LOAD POSITION, READY FOR RUN	Load the stick and press RUN.
MOVING TO POSITION n, FOR <tool>	Moving between cut positions.
AT POSITION n, CYCLE THE <tool>	In position. Cycle the named tool.
AT POSITION n, WAITING FOR <tool>	In position, waiting for the tool to report back.
RUN PAUSED	Paused. CONTINUE or CANCEL RUN.

Status line	Meaning
RUN CANCELLED	The run was abandoned. Press DONE.
RUN COMPLETE	Every position finished. Press DONE.
INKJET NOT CONNECTED - PARTS WILL NOT BE MARKED. PRESS RUN	The board marker could not be reached. The run may proceed unmarked.

Table 24 - Run screen status messages

17.3. When Opening a List

Message	What it means
ERROR: File not found.	A file chosen from the recent list no longer exists. It is removed from the list.
Can not open file with extension .rdb	A previous-generation RazorGage file. Re-export it as a parts file.
The file extension for the file selected does not match the parts file extension for the mapping	Wrong file type for this mapping, or the wrong mapping is in effect.
ERROR: Could not find RG3Mapping.db file	No mapping beside the file and no global mapping available.
The cutlist converted with n warning(s)	Rows were skipped or values could not be read. Read the list of warnings.
The conversion of <file> to an r3d cutlist failed.	The parts file could not be converted. The reason follows the message.
Part WIDTH has changed! Check pocket hole drill positions!	Group change on a pocket-hole machine where the part width differs.

Table 25 - Messages when opening a list

Appendix A - Files and Storage

What	Where
Cut list (.r3d)	Wherever the operator keeps jobs. Holds the parts table, live quantities, original quantities, and the cut history for that job.
Mapping (RG3Mapping.db)	Beside the cut list if present, otherwise the global mapping configured for the machine. Holds column attributes, grouping, display columns, conditional formatting, label design, and part attributes.
Yield reports	Beside the cut list, or in the dedicated reports directory when that option is enabled.
Group images	An <code>images</code> folder beside the mapping, <code>C:\Cutlist Part Images</code> , or an <code>images</code> folder beside the cut list.

Table 26 - Where AutoList keeps things

Appendix B - Control Index

Control	Where	What it does
OPEN FILE	Top bar	Open a parts file or cut list. Chapter 2.
Recent files arrow	Top bar	Reopen a recently used file. Chapter 2.
CREATE MANUAL PARTS	Top bar	Build a small list by hand. Chapter 2.
CLOSE FILE	Top bar	Close the open list.
Switch to ... Mode	Top bar	Swap Pusher and Saw Stop mode, where the machine allows it. Chapter 1.
+ / -	QTY	Adjust the selected part by one. Chapter 6.
SET	QTY	Set one part, or all parts on the tab. Chapter 6.
MULT	QTY	Multiply quantities. Chapter 6.
RESTORE / RESTORE ALL	QTY	Return quantities to original. Chapter 6.
START / END	Trim	Material reserved at each end. Chapter 8.
BAR LENGTH	Settings strip	Length of the stock. Chapter 8.
OPTIMIZER	Settings strip	Choose the packing method. Chapter 9.
?	Settings strip	Optimizer help popup. Chapter 9.
FIT PARTS & LOAD OUT	Settings strip	Fit the group and open the run screen. Chapters 3 and 4.
USE REMAINING	Settings strip	Fit to the length left in the gage. Autoloader machines. Chapter 8.
SCAN-RUN / SCAN-VIEW / PUSH TO SCAN START	Settings strip	Defecting. See the defecting documentation.
Stacking quantity	Stacking	Pieces cut per position. Chapter 8.
Stack Only / Each Part	Stacking	Labels per stack or per piece. Chapters 8 and 13.
PREV GROUP / NEXT GROUP	CURRENT GROUP	Step between groups. Chapter 7.
PART CUT	CURRENT GROUP	Record a cut part in Saw Stop mode. Chapter 5.
VIEW LABEL	CURRENT GROUP	Preview the selected part's label. Chapter 13.
Select Group	GROUPS	Jump to a group. Chapter 7.
Group By list and arrows	GROUPS	Choose grouping columns. Chapter 7.

Control	Where	What it does
Group Options	GROUPS	Change alerts. Chapter 7.
Save Options / Cancel	GROUPS	Save or discard grouping changes. Chapter 7.
Columns lists and arrows	COLUMN DISPLAY	Choose and order displayed columns. Chapter 11.
Update	COLUMN DISPLAY	Apply column changes. Chapter 11.
Add Rule	COLUMN DISPLAY	Conditional formatting. Chapter 11.
Sort	CUT HISTORY	Reverse the history order. Chapter 12.
Print Label / Restore	CUT HISTORY	Reprint a label, or give a quantity back. Chapter 12.
Printer Type	PRINTER	None, Paper Label, or Inkjet. Chapter 13.
Simple / Custom	PRINTER	Label layout style. Chapter 13.
Print Test Label	PRINTER	Send a test label. Chapter 13.
Static fields 1-5	YIELD	Values written into yield reports. Chapter 14.
ZERO PARTS CUT	OPTIONS	Reset the part counter. Chapter 15.
EDIT PART ATTRIBUTES	OPTIONS	Edit part attributes in the mapping. Chapters 2 and 15.
CLEAR CUT HISTORY	OPTIONS	Delete the open list's history. Chapter 12.

Table 27 - Control index