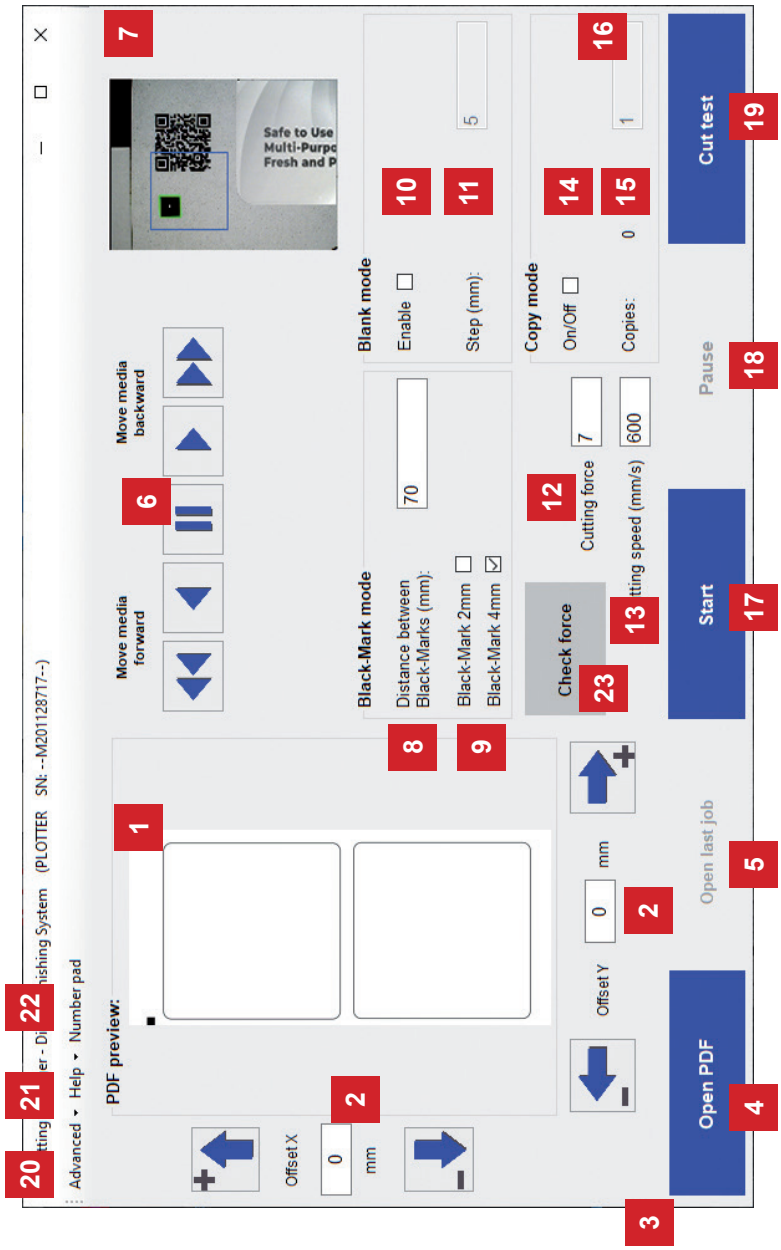
USER MANUAL

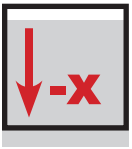
Cutting manager

(for units with single plotter)


Advanced
Help
Number pad
PDF preview:
Move media forward
Move media backward
Black-Mark mode
Distance between Black-Marks (mm):
70
Black-Mark 2mm
Black-Mark 4mm
Blank mode
Enable
Step (mm):
5
Copy mode
On/Off
Copies:
0
1
Cutting force
7
tting speed (mm/s)
600
Check force
Offset X
0
mm
Offset Y
0
mm
Open last job
Pause
Open PDF
Start
Cut test
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23

1. Cutting file preview.

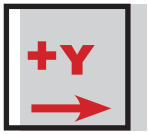
2. Alignment adjustement controls.



MOVE DOWN
THE CUTTING FILE

MOVE UP
THE CUTTING FILE

MOVE TO THE LEFT
THE CUTTING FILE



MOVE TO THE RIGHT
THE CUTTING FILE

3. Status bar.

4. Selects the cutting file.

5. Open the last cutting file.

6. Controls to move the media forward or backward.

7. Camera preview.

8. To set the distance between the base of each black-mark.

9. To set the size of the black-marks.

10. Enable or disable blank mode.

11. To set the distance between each label.

Any extra border on the bottom of your cutting file is added to the step.

12. To set the Graphtec's blade strength and increase the cutting depth. Its value can be from 1 to 31. The most common values in label cutting are from 7 to 9.

13. To set the cutting speed. Its value can be from 50 to 600. The most common value in label cutting is 600. If you have a cutting force major than 9, you may need to decrease the cutting speed to have a proper precision.

14. Flag to determined number of copies to cut during a cutting job launched with the "Start" button, otherwise the plotter will continue and stop at the end of the media.

15. Counts the number of copies cut since pressing the "Start" button.

16. Section where to put the number of copies needed to be cut.

17. Start/Cancel button. Used to launch or stop a cutting job.

18. Pause/Resume button. Used to pause or resume the cutting job.

19. Used to launch a single cut to let the user check the cutting parameters.

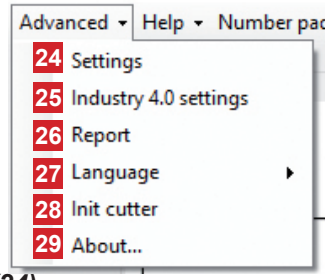
20. **Advanced controls.**

21. Help: here you can find a path to open the user manual, and useful video guides.

22. Pad number: screen pad number useful for touch screen.

23. Check force: If you click this button the plotter will make 5 squares each one with a different cut force. A number inside the square will show how much the force is increased or decreased. This is useful to find quickly the most proper force value for your material. however we suggest to start with little values, in order to don't damage accidentally the cutting mat with the high force squares.

ADVANCED OPTIONS



24. Settings

25. Settings for the industry 4.0

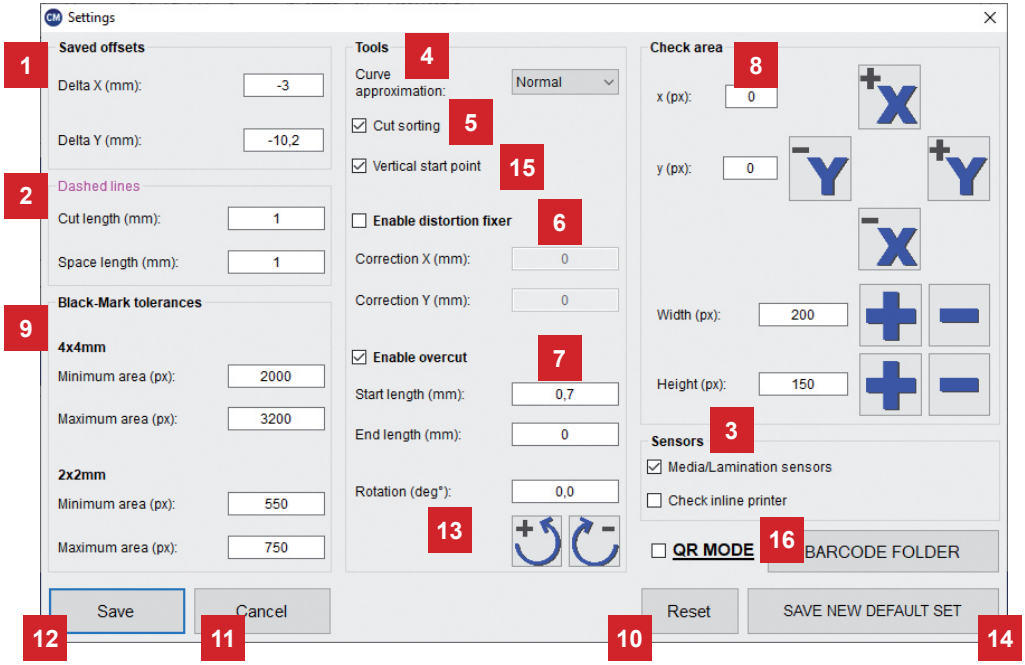
26. List of cut logs

27. Set interface's language

28. Restore of the plotter's settings

29. Additional information

Settings (24)



1. When you launch a cut with new offsets, they will be added to the deltas. The deltas store the saved offsets.

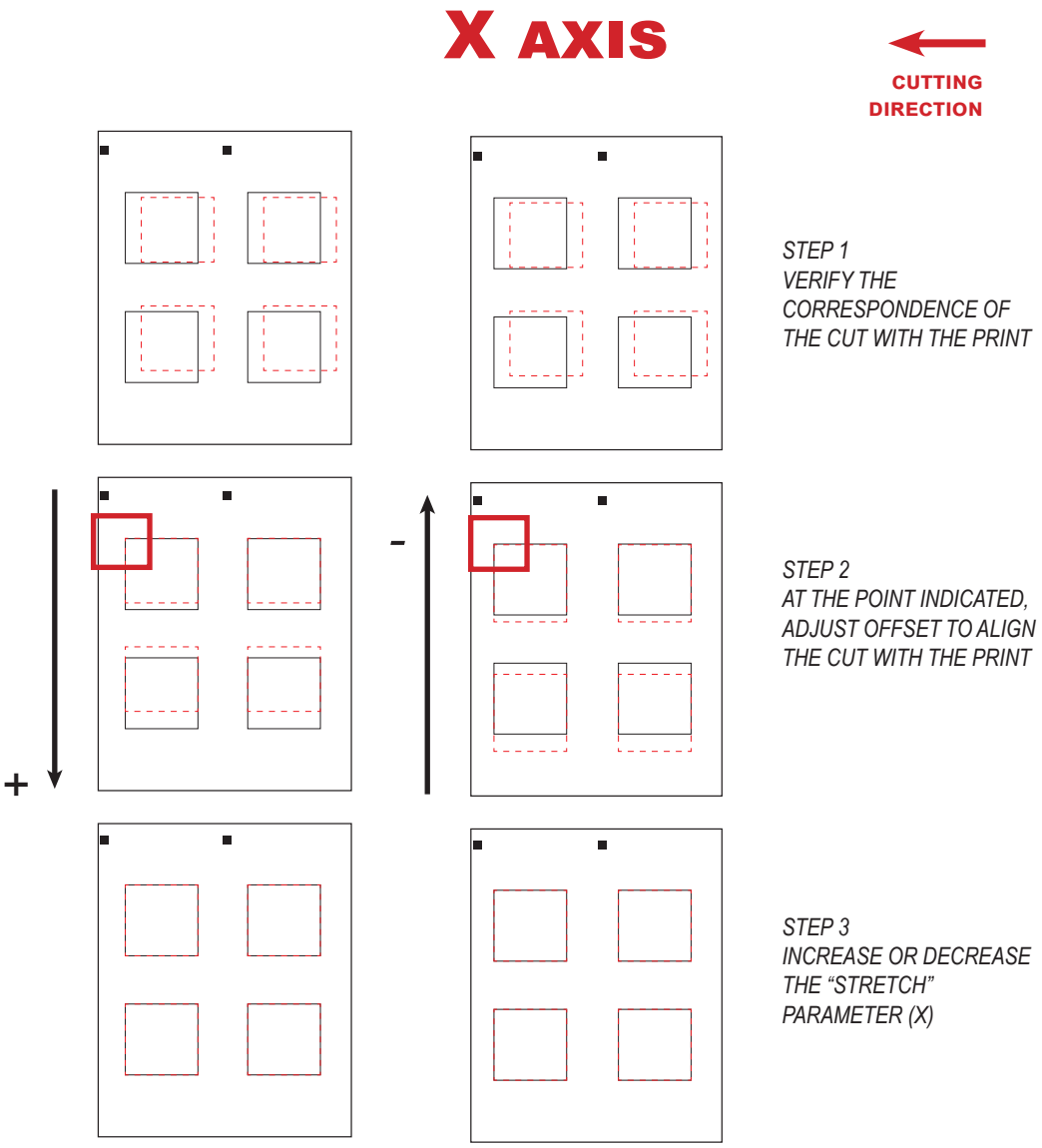
2. All the 100% magenta lines in your cutting file will be recognized as dashed. Here you can set the cut length and the spacing between each on of them. They must be at least 0.1mm, and not more than 819mm.

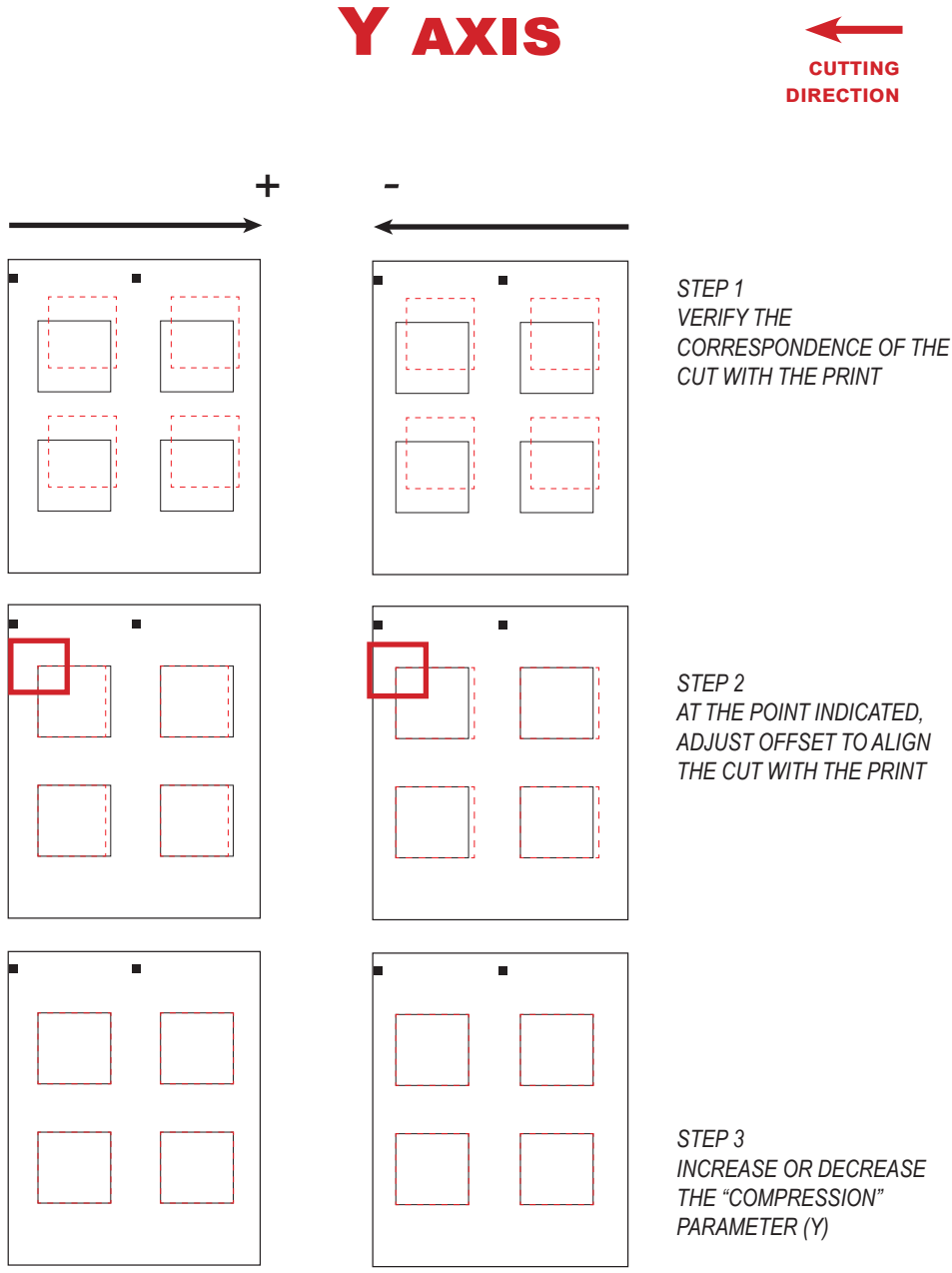
3. Here you can choose to enable or disable the media or lamination sensors. If "Media/ Lamination sensors" is checked, when the material ends, the software stops the cut and will give you an alert.

4. Approximation of the cut curves.

5. If cut sorting is enabled, the software will automatically select the order of the cut of all the shapes on the file. Otherwise, the cut will follow the .pdf layers order.

6. When you print your rolls, sometimes you may have distortion on your output. In that case, even with a correct set of the offsets, the cut may not match your print. You will have to enable the distortion fixer, and set the corrections. A positive value will stretch the cut on that axis, otherwise with a negative one, the cut will be more compressed.





7. With thin materials the cut may not be closed. To fix this, enable the overcut, and set how much you want the blade to start early, or end later. You can anticipate or delay the end of the cut up to 0.9mm for each one.

8. Check area parameters lets you change the position of the Black-Mark's checking area, which is the blue square shown in the camera preview while the blank mode is disabled.

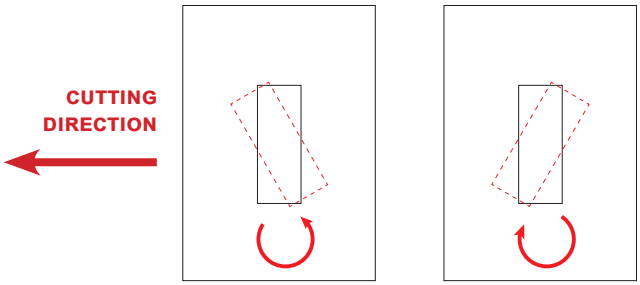
9. In case your print has distorted the output of your blackmark, you can change the tolerances to let the cam recognize it. The tolerances must be positive values.
If your blackmark side is smaller than 4mm (for 4x4mm) or 2mm (for 2x2mm), you will have to reduce the minimum area by 100, until the blackmark is recognized. If your blackmark side is higher than 4mm (for 4x4mm) or 2mm (for 2x2mm), you will have to increase the maximum area by 100, until the blackmark is recognized.

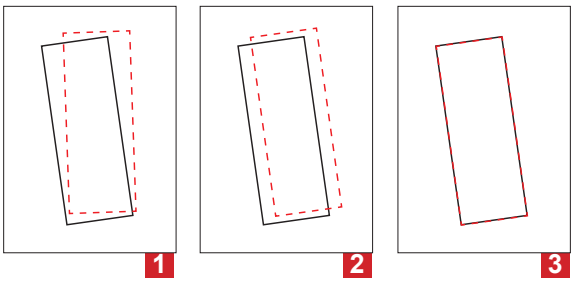
10. Click to restore the default settings.

11. Discard the changes and closes the window.

12. Save the changes and closes the window.

13. <u>Your artwork may be not printed straight</u>.
When this happens, the cutting lines will have a different grade from your artwork. To fix this you can rotate your cut.
The arrow near the textbox shows you towards which direction will be rotated your cut. *<u>Usually the artwork should not be too much rotated</u>*. When you check the cutting rotation we suggest you to change by 0.1 degrees with the arrows your value, and then proceed with a cut test.





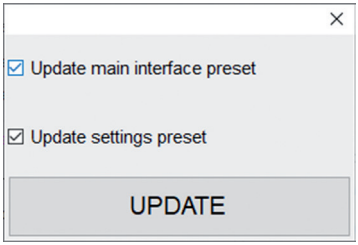
STEP
1. Check the match between the cut with the print.

2. Rotate the die-cut to find the correct inclination (until the cut lines and the printed lines are parallel).

3. Adjust the offsets to match the cut lines to the printed lines

14. This button allows you to set the current values in your interface as the new preset for any time you will load a new file.

When you click it one window will appear. Through it you can choose to update the main interface preset, the settings preset or both of them



15. This button determines wheter the cut starts in the middle of a vertical side, or not.

QR mode (16)

With qr code enabled, the camera will scan the barcode and load automatically the cut file and marks distance.

The files to be picked by the software must be contained inside the barcode folder (default location *C:\Cutting Manager\Barcode files folder*).

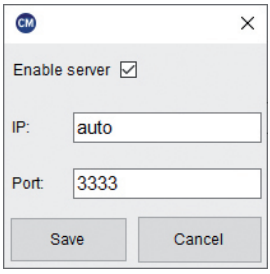
Once it has been done, the user to cut has just the press start or cut test.

> ***Barcode folder***
> Opens the barcode folder to place inside the cut files while working with qr mode

Buttons 1 and 2 (17)

Select which plotter to use and adjust its parameters

Industry 4.0 settings (25)

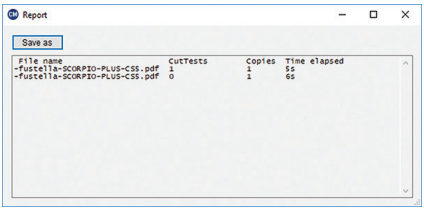


Here are all the settings necessary for the industry 4.0 communication (TCP/IP).

Once you enable the server, the machine will start to be available on the network.

After that you can set the IP (if set to “auto” it will automatically be the same of the last network ethernet adapter) and the port.

Report (26)



Report will display the cuts run by the Cutting Manager system.

Each session report is automatically added and saved into the history report when cutting manager is closed.

You can find the complete report history file of all the jobs run since cutting manger has been installed to this path "*C:/Unit Cutting manager/Report/CutHistory.txt"*

Clicking on "*SAVE AS*" will save which ever work session report you choose to save

Cutting parameters are saved after every completed job.
So the next time you will re-open the software, you will have automatically added to the interface the settings you have used with the file selected (force, speed, cutting mode,...)

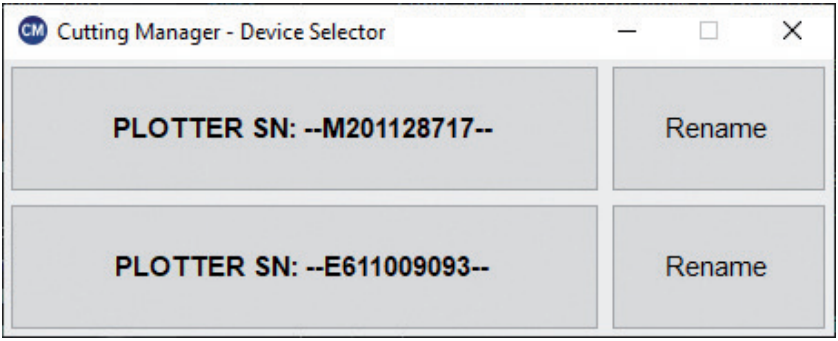
HOW TO UPDATE SOFTWARE

1. Go to Panel control.
2. Unistall Unit Cutting Manager.
3. Download from the website the new Cutting Manager release and run the installation.

DEVICE SELECTOR

Whenever you plug two units (YOU CANNOT USE MORE AT THE SAME TIME) to the pc, the device selector window will show up, and it will allow you to select which machine run.

WHILE WORKING WITH TWO UNITS AT THE SAME TIME, PLEASE USE A USB 3.0 HUB (ALSO PLUGGED TO A USB 3.0 PORT)



COMMUNICATION SPECIFICATIONS

The user application must communicate with the Unit server by using tcp/ip.
By default the server ip is the same of the network plugged to the ethernet port, and the server port is the 3333.

You can't send to the server more than 65MB of data.

The (), +, "", and ... characters in this documentation are used just to simplify the understanding, and they are not part of the commands.

Each command sent or received ends with "!", used as terminator. If you send unrecognized command, the server will return "Unknown command sent!"

OBTAIN UNIT STATUS

Command: GET_STATUS!

Description: With this command you get the status of the Unit and its jobs. Each block of data containing Unit status or job data, ends with a 0x17 hexadecimal character.

Return data:
(Unit STATUS)
Unit STATUS: not cutting/cutting/paused + 0x17 (end of Unit status data) +

(JOB1)
N:(job code),STJ:(job status),FD:(number of files completed),FTD:(number of files to do),C:(customer),TS:(job start time) +
; (end of JOB1 data) +

(FILE_A OF JOB1)
F:(file name),ST:(file status "not cutting/cutting/paused/suspended/completed"),M:(material),CT:(cut tests done),LD:(layouts done),LTD:(layouts to do),TL:(total of labels done),TE:(time elapsed in seconds),MS:(material speed "x m/min/start and stop/sheets"),FS:(file start at) + ; (end of FILE_A data) +

(FILE_B OF JOB1)
F:(file name),... + ; (end of FILE_B data) + 0x17 (end of JOB1 block of data) +

(JOB2)
N:(job code),... + ; (end of JOB2 data) +

(FILE_C OF JOB2)
F:(file name),... + ; (end of FILE_C data) + 0x17 (end of JOB2 block of data) + ! (terminator)

Example of returned data (line feed and carriage return are shown here, and they are not actually returned):

(if after the commands code there isn't any data, it means that this value is not set yet. For example if after TS: there isn't anything, it means that the job is not started yet)

Unit STATUS:cutting(0x17)
N:001,STJ:cutting,FD:0,FTD:2,C:Customer 1,TS:dd-mm-aaaa H:mm;
F:file1,ST:cutting,M:paper label,CT:3,LD:100,LTD:2000,TL:300,TE:3500,MS:16 m/min,FS:dd-mm-aaaa H:mm;
F:file2,ST:not cutting,M:paper label,CT:0,LD:0,LTD:3000,TL:0,TE:,MS:,FS:;(0x17)
N:002,STJ:not cutting,FD:0,FTD:1,C:Customer 2,TS:;
F:file3,ST:not cutting,M:plastic label,CT:0,LD:0,LTD:2000,TL:0,TE:,MS:,FS:;(0x17)!

JOB ENDED NOTIFICATION

Description:
Every time a job ends (so whenever the layouts to do for each file are completed) the server will remove it from the queue, and provide to each connected user a report.
The Unit software also stores a report of any completed job in C:Unit Cutting Manager\Report\Queue jobs completed report.txt

Return data:
(JOB1)
N:(job code),STJ:(job status),FD:(number of files completed),FTD:(number of files to do),C:(customer),TS:(job start time) + ,TF:(job end time) + ; (end of JOB1 data) +

(FILE_A OF JOB1)
F:(file name),ST:(file status "not cutting/cutting/paused/suspended"),M:(material),CT:(cut tests done),LD:(layouts done),LTD:(layouts to do),TL:(total of labels done),TE:(time elapsed in seconds),MS:(material speed "x m/min/start and stop/sheets"),FS:(file start at) + ; (end of FILE_A data) +

(FILE_B OF JOB1)
F:(file name),... + ; (end of FILE_B data) + ! (terminator)

Example of returned data (line feed and carriage return are shown here, and they are not actually returned):

N:001,STJ:completed,FD:2,FTD:2,C:Customer 1,TS:dd-mm-aaaa H:mm,TF:dd-mm-aaaa H:mm;
F:file1,ST:completed,M:paper label,CT:2,LD:1000,LTD:1000,TL:3000,TE:2000,MS:16 m/min,FS:dd-mm-aaaa H:mm;
F:file2,ST:completed,M:paper label,CT:2,LD:2000,LTD:2000,TL:8000,TE:3000,MS:start and stop,FS:dd-mm-aaaa H:mm;

APPEND JOB TO QUEUE:

Command:

APPEND:N:(job code),C:(customer);(FILE_A->)F:(file name),M:(material),LTD:(layouts to do (number or “u” for unlimited));(FILE_B->)F:(file name),...;!.

Description:

This command allows you to append a new job to the queue.
YOU MUSTN’T USE FILES WITH THE SAME NAME AMONG THE JOBS. FOR EXAMPLE YOU CAN’T ADD FILE_A TO BOTH JOBS N:001 AND N:002, OR ADD IT TWO TIMES TO THE SAME JOB.

Example of sent data:

APPEND:N:001,C:Customer 1;F:FILE_A,M:paper label,LTD:300;F:FILE_B,M:plastic label,LTD:200;!

Return data:

If the command syntax is correct it returns “Job appended to queue with success!”.
Otherwise it returns “The APPEND request syntax is not correct, it should be ”APPEND:N:job_code,C:customer;F:file_1,M:material,LTD:layouts_to_do;F:file_2,M:material,LTD:layouts_to_do;...(terminator)!”

REMOVE JOB FROM QUEUE:

Command:

REMOVE:N:(job code/all);F:(file name 1,file name 2/all)!

Description:

This commands allows you to remove jobs or files from the queue.

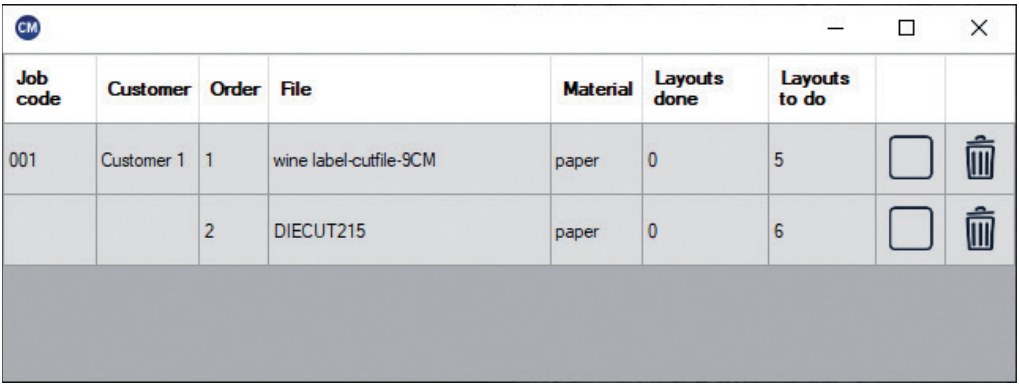
Example of sent data:

(REMOVE ALL JOBS)	REMOVE:N:all!
(REMOVE ALL FILES OF A JOB)	REMOVE:N:001;F:all!
(REMOVE SPECIFIED FILES)	REMOVE:N:001;F:FILE_A,FILE_B!

Return data:

If the command syntax is correct it returns “Files removed with success!”.
Otherwise it returns “Remove didn’t go properly:(list of errors)!”.

JOBS QUEUE WINDOW



Description:
Each time a job is appended to the queue, it gets shown in this window.

The user can see for each job which files needs to open, their order, the type of material, the layouts to do.

The user can even choose to delete the files from queue, by clicking on the trash can icon on the right.

Whenever a job gets completed the layouts to do for each file, the job will be considered ended and removed from the window.