ADIKnit

Pattern preparation software

(English Version)

Software version 001.011.000

Copyright

Foreword

Dear Customer,

We congratulate you on the purchase of ADIKnit and thank you for trusting our technology.

This operating manual is designed to help you make the most of the many features offered by our Pattern Preparation Software.

We wish you the greatest possible success in your work.

Release notes

Ver 001.011.000:

- It's now possible to use both sequence modules and propagation modules on the pattern at the same time.

- Added the possibility to save all created propagation modules into a library from where you can load them anytime you need them.

- Added a function that calculates the floats between 2 points and warns the user in the case it exceeds a default value.

- Added other pattern check functions to ensure the reliability of the machine file.

- Solved a bug where occasionally the software wouldn't change the stitch quality.

- Solved other small bugs in the creation of the machine file.

- Multiple tests in different situations helped us to greatly improve the reliability.

Table of Contents

1   ADIKnit pattern preparation software

ADIKnit allows you to create your patterns stitch wise, define the stitch structure and check the fabric.

This manual was conceived for ADIKnit V.001.011.000

1.   Features

- Editing of pattern sizes up to any size (depending on system memory)
- Opens any pattern file type.
- Imports picture file types BMP, JPEG, GIF, TIFF, Windows Media Photo, PNG, Zsoft Paintbrush.
- Saves patterns in LG format.
- Generates knitting-ready machine files with the "Art.tgz" format.

2.   System requirements

Component	Minimum	Recommended
Operating system	Windows 7 Pro, Ultimate, Enterprise (32 or 64 Bit) Windows 8.1 Basic, Pro, Enterprise (32 or 64 Bit) Windows 10 Home, Pro, Enterprise (32 or 64 Bit)	
Processing unit (CPU)	2 GHz, x86 or x64	
	Single core processor	Multi core processor or single core processor with two logical cores
Main memory (RAM)	4 GB	8 GB
Screen	24-bit color depth	
	1280x1024 pixels	
Hard drive (HDD / SSD)	2 GB free space	
Graphics (GPU)	256 MB graphics memory	1 GB or more graphics memory
Optical drive	CD or DVD-ROM drive	
Input devices	Mouse, keyboard	Mouse, graphics tablet, keyboard, scanner, trackball, "Kensington Expert Mouse K64325" or "Kensington Expert Mouse Pro K64245"

2   Installation and setup

1. Log on to the computer with administrator privileges.

2. Make sure to whitelist ADIKnit's installer from your antivirus or disable it momentarily.

3. Make sure you have a stable internet connection for license verification.

4. Start ADIKnit's installer.

5. Read and accept the license agreement.

6. Continue with your installation by filling all fields when requested.

7. Now that you're set you can start working with ADIKnit using the icon created on your desktop.

3   User interface

3.1   User interface customization

Some settings in the user interface can be customized, such as resolution, language and some default values. For more details check out the "Environment" settings window.

3.2   Help functions

All help functions in the interface are context sensitive, ranging from simple mouse over tooltips and a help status bar with details about the object at your pointer position, to the Help buttons which will open the user manual directly on the subject you need.

You can always use the menu bar to access the user manual from the Menu bar.

3.3   Shortcuts

Many important functions have preset shortcuts, like "F4" to pick the color at the pointer position, "F5" and "F6" to control the zoom level and "F9" to process the pattern.

These shortcuts and many others can be seen and modified from the "Environment" window.

3.4   Navigating the pattern

Pattern navigation has been made as simple as it can be, while Right clicking you can pan through the active pattern window, mouse scrolling zooms in and out at the pointer position and while pressing "Ctrl" you can scroll vertically.

Once you get the hang of the multiple ways you can move throughout the whole window with the appropriate key combinations, navigating the pattern will become a breeze.

See "Pattern window" for more details

4 Menu bar

4.1 Menu "File"

4.1.1 New

Menu Bar	*File* ▶ *New*
Shortcut	*Ctrl + N*

With the "*New*" command you can create a new pattern.

After selecting the "*New*" command in the "*File*" menu or after pressing the key combination ***Ctrl + N***,

the window "*New document*" will open.

The pattern can be created either by setting certain parameters which will then open a default pattern the user has to modify, or by using the integrated wizard.

Check our video tutorial on creating a new file.

4.1.2 Open

Menu Bar	*File* ▶ *Open*
Shortcut	*Ctrl + O*

With the "*Open*" command you can load an LG file.

After selecting the "*Open*" command in the "*File*" menu or after pressing the default key combination ***Ctrl + O***, the window "*Open pattern*" will open.

Tip: You can also use the drag and drop function: by dragging the file from its folder to ADIKnit's window and the software will automatically load it for you.

4.1.3 Reopen

Menu Bar	*File* ▶ *Open recent files*

After clicking on menu item "*Reopen*" in the "File" menu, a list of recently loaded pattern files will show. From the list in "*Reopen*" you can open recently loaded pattern files.

4.1.4 Export File

Menu Bar	*File* ▶ *Export file*

With the "Export file" command in the "File" menu, the active pattern can be exported into an image file.

- Open the "*File*" menu and select the "*Export file*" command. The window "*Save as*" will open.
- Select the image directory from directory selection menu.
- Select the desired file type from drop-down list.
- Enter the file name into field.
- Click on the "*Save*" button.

4.1.5 Import File

Menu Bar	*File* ▶ *Import file*

With the "*Import image*" command in the "*File*" menu, image files can be imported as new patterns.

The colors of imported picture are automatically replaced by the color palette currently loaded in AdiKnit using the color reduction function.

4.1.6 Close

Menu Bar	*File* ▶ *Close*

With the "*Close*" command in the "*File*" menu, the active pattern can be closed.

If the pattern has been changed since the last save, a confirmation prompt will open.

- A click on the "*Cancel*" button cancels the procedure. The active pattern remains in the drawing area.
- A click on the "*No*" button closes the active pattern. All changes since the last save are lost.
- A click on the "*Yes*" button saves the pattern to the respective LG file and closes the active pattern.

4.1.7 Save

Menu Bar	*File* ▶ *Save*
Shortcut	*Ctrl + S*

With the "*Save*" command in the "*File*" menu or by pressing the key combination **Ctrl + S**, the active pattern is saved to the current LG file.

4.1.8 Save as..

Menu Bar	*File* ▶ *Save As..*

With the "*Save as..*" command in the "*File*" menu, the active pattern can be saved to a new LG file.

4.1.9 Save area

Menu Bar	*File* ▶ *Save area*

With the "*Save Area*" command in the "*File*" menu, a selected area in the active pattern can be saved as new pattern to a LG file.

1. Select an area in the active pattern. The "*Save area*" command can only be used when an area has been selected in the active pattern.
2. Open the "*File*" menu and select the "*Save area*" command.
   - The window "*Save*" is opened.
3. Select the pattern directory from the directory selection menu.
4. Enter the file name into field.
5. Click on the "*Save*" button.

4.1.10 Insert custom preview

Menu Bar	*File* ▶ *Insert custom preview*

From the "Insert custom preview" menu you get the following options:
- Insert from file – Lets you load the preview image from a file.
- Insert from clipboard – Lets you paste the preview image from the clipboard.
- Copy to clipboard – Lets you copy the current preview to the clipboard.
- Modify – Lets you modify the current preview.
- Delete Preview – Lets you delete the current preview.

4.1.11 Acquire

Menu Bar	*File* ▶ *Acquire*

With the "Acquire" command, acquiring images from Twin compatible devices like scanners and cameras is made possible, adding endless possibilities to your pattern creation.

4.1.12 Print Setup

Menu Bar	File ▷ Print Setup

After clicking on menu item "*Print setup*" in the "*File*" menu, the window "*Print setup*" is opened.

4.1.13 Print

Menu Bar	File ▷ Print

After clicking on menu item "*Print*" in the "*File*" menu, the active pattern is printed.

4.1.14 Print Special

Menu Bar	File ▷ Print Special

After clicking on the menu item "*Print*" in the "*File*" menu, the active pattern is printed.

4.1.15 Exit

Menu Bar	File ▷ Exit

With the "*exit*" command or the "*ALT+F4*" shortcut, ADIKnit will be closed.

4.2 Menu "Edit"

4.2.1 Cut

Menu Bar	Edit ▷ Cut
Default shortcut	Ctrl + X

Copies the current selection to the clipboard and removes it from the pattern.

4.2.2 Copy

Menu Bar	Edit ▷ Copy
Shortcut	Ctrl + C

Copies the current selection to the clipboard.

4.2.3 Paste

Menu Bar	Edit ▷ Paste
Shortcut	Ctrl + V

Pastes the previously copied selection.

4.2.4 Confirm Operation

Menu Bar	Edit ▷ Confirm Operation
Shortcut	F9

Confirms the current operation.

4.2.5 Cancel Operation

Menu Bar	Edit ▷ Cancel Operation
Shortcut	ESC

Cancels the current operation.

4.2.6   Pick Color

Menu Bar	*Edit* ▷ *Pick Color*
Default shortcut	*F4*
Mouse	*Right-Click* ▷ *Pick Color*

Gets the stitch color at the pointer position and sets it as the active editing color.

4.3   Menu "Tools"

4.3.1   Toolbars

Menu Bar	*Tools* ▷ *Toolbars*

Here you can decide which toolbars you want to be able to see.

4.3.2   Trackball

Menu Bar	*Tools* ▷ *Trackball*

(will be implemented later in the next updates)

4.3.3   Environment option

Menu Bar	*Tools* ▷ *Environment option*

Opens the "Environment Settings" Form, in which you can customize the interface appearance by modifying the available parameters.

In the "Environment" tab you can:
- Set the max number of available "undo" commands.
- Choose the patterns destination folder.
- Turn on/off some interface settings (hovering tooltips, rulers, pattern preview when opening a file).
- Choose the axis orientation for the pointer position coordinates.
- Set the panning speed.
- Set the desired DPI for the entire AdiKnit application. It works just as windows magnifier making all software components and fonts larger.
  (WARNING: This has to be handled with care. Selecting a high DPI value on a low resolution will most likely make some components too big, therefore hiding them in part or even fully. Always try to go up by one value at a time when first trying out this function, to be sure that you do not break the interface)

In the "Toolbars" tab you can Save the current toolbars dimensions.

The "Monitor" tab lets the user choose on which monitor the forms will be shown.

In the "Grid" tab you can set the grid lines color.

In the "Language" tab you can set the display language of AdiKnit.

In the "Keys associations" tab you can:
- Set one by one every available function shortcut.
- Press the "Default" button to reset all key associations to their default setting.
- Press the "Export" button to save the current key associations settings to a .Ini file.
- Press the "Import" button to load the key associations settings from a .Ini file.

In the "New Document" tab you can set the default values that show up when creating a new pattern, such as height, width and startup background color.

In the "Backup" tab you can activate the "auto backup" option.

Its main function is to auto-save at set intervals but it also saves your work in the case of a sudden shutdown, thus preventing loss of data.

4.3.4 Made fabric

Menu Bar	Tools ▷ Made fabric

In the "Made fabric" window the user can set the number of needles and rows for every 10 centimeters. This setting allows the software to calculate the real measurements of the pattern that's being created.

4.3.5 Modify pattern size

Menu Bar	Tools ▷ Modify pattern size

In this window you can change the pattern size.

4.3.6 Colors palette window

Menu Bar	Tools ▷ Colors palette window

In this window you can choose a preset color that's not in the current color palette or define a custom one.

4.3.7 Color reduction

Menu Bar	Tools ▷ Color reduction

" Color Reduction" is a smart dithering pattern procedure that reduces the image colors and makes it "pattern compatible".

4.3.8 Unit of measure

Menu Bar	Tools ▷ Unit of measure

This menu lets you choose the preferred unit of measure.

4.3.9 Draw with Keyboard

Menu Bar	Tools ▷ Draw with Keyboard

By clicking the "Draw with keyboard" function the keyboard drawing shortcuts activate and you can start using those to manipulate your pattern. Re-clicking it will deactivate the function.

4.3.10 View used memory

Menu Bar	Tools ▷ View used Memory

In this window you can see the current memory usage and save the value.

4.4 Menu "Elaboration"

4.4.1 Machine Model

Menu Bar	Elaboration ▷ Machine Model

In this window you can select the machine model you want to work with and some of the selected machine features.

4.4.2 Apply

Menu Bar	Elaboration ▷ Apply
Shortcut	Ctrl + A

When clicking the "Apply" menu item or using the "Ctrl+ A" shortcut, a new window will show up with the currently active window expanded pattern.

4.4.3   Command columns

Menu Bar	Elaboration ▷ Command Columns

In the "Command columns" menu you can modify the currently selected area command columns by:
- Clicking "Insert standard values" and letting AdiKnit handle it by inserting the standard values inside the command columns.
- Clicking "Insert new value" and creating empty spaces for you to fill with the desired values.

For a more in-depth explanation of each column function check out the Command Columns section of our guide.

4.4.4   Yarn feeders

Menu Bar	Elaboration ▷ Yarn feeders

In the "Yarn feeders" window, you can see which yarn feeder have been used and how many there are for each one of them in the selected area. Moreover, you can use the change function to change every yarn feeder inside the area.

4.4.5   Vertical mirroring

Menu Bar	Elaboration ▷ Vertical mirroring

The "Vertical mirroring" function flips the pattern and the command columns upside down.

4.5   Menu "Level view"

4.5.1   View toolbar

Menu Bar	View toolbar ▷ View toolbar

When selected, the "View Toolbar" menu command will make the "Level view" toolbar show on top of the window, allowing the user to view the pattern levels separately.

4.6   Menu "Window"

The "Window" menu commands can automatically arrange the windows inside the drawing area. The menu also provides a function that can switch between multiple open patterns.

4.6.1   Cascade

Menu Bar	Window ▷ Cascade

After clicking on the "Cascade" command in the "Window" menu, all open windows in the drawing area will be tiled on top of each other.

4.6.2   Tile horizontally

Menu Bar	Window ▷ Tile horizontally

After clicking on the "Tile horizontally" command in the "Window" menu, all open windows in the drawing area will be arranged one next to the other.

4.6.3 Tile vertically

Menu Bar	Window ▷ Tile vertically

After clicking on the "Tile vertically" command in the "Window" menu, all open windows in the drawing area will be arranged one above the other.

4.6.4 Minimize all

Menu Bar	Window ▷ Minimize all

After clicking on the "Minimize all" command in the "Window" menu, all open windows in the drawing area are going to be minimized at the bottom of the drawing area.

4.6.5 Arrange all

Menu Bar	Window ▷ Arrange all

After clicking on the "Arrange all" command in the "Window" menu, all minimized windows will be arranged next to each other in the bottom part of the drawing area.

4.7 Menu "Help"

4.7.1 Help

Menu Bar	Help ▷ Help
Shortcut	F1

The "Help" menu provides access to the software manual and other information.

4.7.2 About

Menu Bar	Window ▷ Arrange all

After clicking on the "About" command in the "Help" menu, a window containing information on the program version and the license will open.

5   Top Toolbar

5.1   New file
Opens the "New file" window, from which you can create a new pattern.

5.2   Open file
Shows the "File Open" window, from which you can open a pattern from your local/external drive.

5.3   Save
Saves all the changes the user made to the file if there is one, otherwise, the "save as" window will pop up.

5.4   Cut
Copies the current selection to the clipboard and removes it from the source.

5.5   Copy
Copies the current selection to the clipboard.

5.6   Paste
Pastes the previously copied/cut area to the selected destination area.

5.7   New from Paste
Opens a new window with a pattern created from the previously copied selection.

5.8   Undo
With the back button you can undo your last action.

5.9   Redo
With the forward button you can redo the last undone action.

5.10   Zoom
By clicking the Magnifying glass icon, you can choose the zoom level of the drawing area.

5.11   Grid
The grid button in the top toolbar can be used to show/hide the grid and to move it in the active pattern window of the drawing area.

5.12   Ruler
The ruler button is used to show/hide the rulers in the drawing area window.
With the aid of rulers, you can perform measurements and set markers in the active pattern.

5.13   Blink
By clicking on the "Blink" button, all pixels on the pattern with the selected color will blink.

5.14   Split document
With the Split document button, the pattern window of the active pattern can be switched between single window and split window modes which allows the user to view and modify two different areas of the same pattern at the same time.

5.15   Apply

The "Apply" function starts a pattern processing procedure ([see pattern processing](#)) and opens a new window in which you can see the expanded stitch pattern. Clicking on the second half of the button will open a popup menu from which you can choose different ways to process the pattern:

- Apply with Parameters (Ctrl + D): opens the "Apply parameters" window where the user can set the parameters for the pattern expansion procedure.
- Apply click auto: In the case of more than one pattern being in the same window, this option can be used to choose which pattern to view in the expanded pattern window.

Important note: in the case of more than one pattern in the same window, doing a "default apply" will expand either the most recently expanded pattern or the first pattern from the bottom if none had been expanded yet. The patterns CAN NOT be put next to each other horizontally, the software only supports vertical stacking (even if one pattern is shifted to the left/right compared to the other).

- Expanded view: The "view" command expands/re-expands the active pattern and the "close" command closes the current expanded pattern window

5.16   Mirroring

With the "Mirroring" function ([see Mirroring](#)) you can logically mirror the selected area in a way that won't break the original pattern.

5.17   Protect area

Selects all the pattern area leaving out the command columns, thus preventing the user from modifying them accidentally while performing operations like filling.

5.18   Find Module

With the "Find module" button, the module search is activated.

The module search finds the structure module that processes the selected pixel.

Important note: The module search requires an active pattern containing at least one structure module.
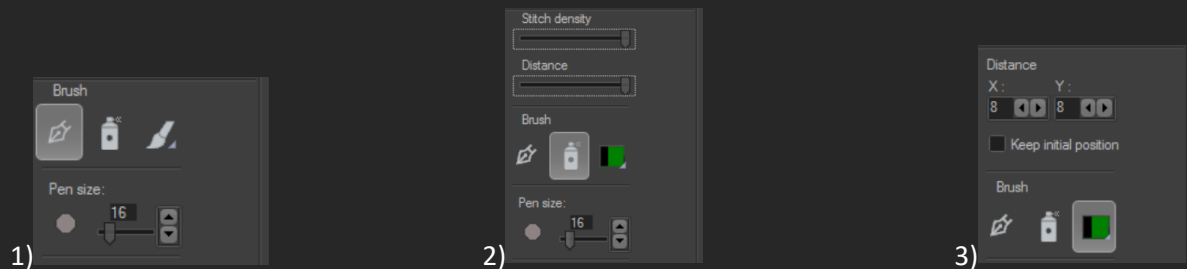
How to use:

- Click the "Find module" button.
- Left-click the pixel on the active pattern.

6   Left Toolbar

6.1   Pen/Brush Settings

Selecting specific tools from the toolbox, will enable the Pen/Brush settings box under the toolbox which contains different configuration options for the selected tool:
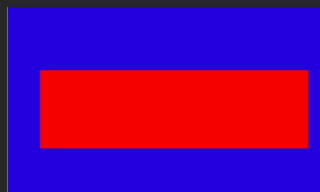

6.2   Pen tool

With Pen tools it's possible to draw freehand lines (full colors or stitches) with different tool options.

Select one of the three tools:

1) **Pen**: with the Pen tool you can draw hard-edged opaque freehand lines on the selected color (below in the yarn feeder toolbar), choosing:

   a.   the "Pen size" (in pixels);

2) **Spray**: with the Spray tool you can draw soft freehand lines on the selected color (bottom toolbar), you can also set:

   a.   the "Pen size" (in pixels);

   b.   the "**stitch density**: it's the density at which the pixels in the tool radius are colored in the selected area. The parameter can be set to values between 1, begin the lowest density, and 100, the highest density;

   c.   the "**distance**": in this case, distance means the spacing between two repetitions of the brush impressed pattern as you draw with the tool. The parameter can be set to values between 0 and 50 pixels.
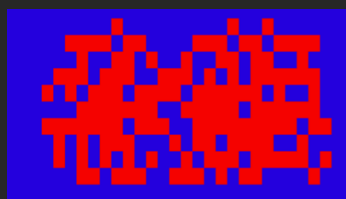
3) **Pen with area**: with the Pen with area tool you can draw unlimited repetitions of the last selected area (using "select area tool") choosing:

    a.   the "**distance**" between every repetition, using ordinate and abscissa;

    b.   "**keep the starting position**": if this box is checked the last area will be drawn evenly without overlapping.
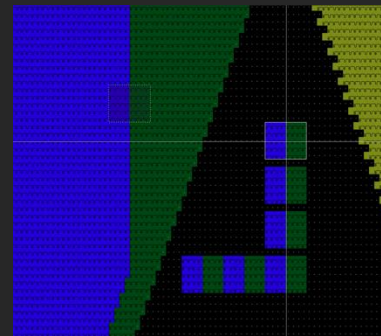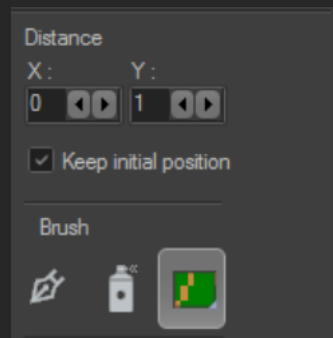
6.3   Shapes tool

With the Shapes tool it's possible to draw geometric shapes (filled circle, circle, filled rectangle, rectangle, filled diamond, diamond, polygon), full color or stitches, in the pattern with different tool options.
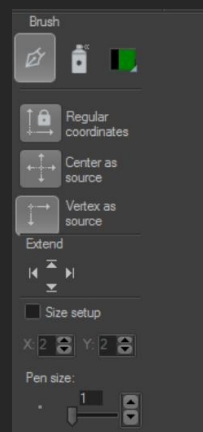

- Select "Shapes tool" from the toolbox;
- Select the type of shape you need and you'll find under the toolbox, different tool options where you can configure the shape parameters:

In the **Pen/brush settings** there are three tools to choose:

1) **Pen**;
2) **Spray**;
3) **Brush**.

There is also the possibility to choose:

1) "**Regular coordinates**": if this button is enabled, the rectangle is drawn outgoing from the anchor and the shape drawn inside it will keep a proportional aspect ratio;
2) "**Center as source**": if this button is enabled, the anchor is placed in the center of the rectangle. The rectangle is drawn around the anchor;
3) "**Vertex as source**": if this button is enabled, the anchor is placed on the point where you start drawing and the rectangle is drawn outgoing from the anchor.
4) "**Size setup**": if this box is checked, you can set the width and the height parameters, and draw a pre-fixed shape;
5) "**Pen size**" (in pixels).

In the Polygon shape type, you can choose:

1) "regular coordinates": The rectangle is drawn outgoing from the anchor and the shape drawn inside it will keep a proportional aspect ratio;
2) "Outline style": you can choose the line style
3) "Pen size" (in pixels).
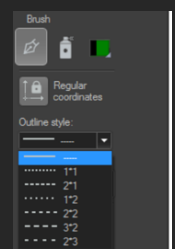
As you move the cursor to the end point of an edge (= starting point of the next edge), a real-time preview of the shape will be shown.
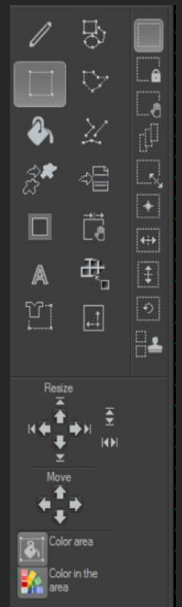
6.4 Area functions

Select area tool

With the selection area tool, it's possible to create selection areas in the pattern.

Selection areas can be done in personalized dimensions or during initial selection or later by using tool options.

- Select "Area tool" from the toolbox;
- Select the type of tool you need and you'll find under the toolbox different Parameters boxes:

Set area	Creates a selection in the pattern area
Set work area	Protects the non-selected pattern parts from changes
Move destination area	Moves the selected area
Multiple copies	Creates multiple copies of the selection
Resize destination area	Allows the resizing of the current selection for the destination area
None	Returns to the original state of the selected area
Horizontal mirroring	Horizontally mirrors the selected area
Vertical mirroring	Vertically mirrors the selected area
Free rotation	Allows a free 360° rotation of the selected area by using mouse or the fields in the parameter box
Change image	Creates unlimited copies of the selected area and gives the possibility to put them in the pattern.

The size of the area can be modified during the selection with the mouse or later by using the arrows tools:

- **Resize**: by using the "resize" arrows you will add and remove pixels to/from the selection in any direction;
  By using the horizontal and vertical arrows you will add columns and lines, specifically:

  o click the "vertical" arrows to extend the selection as a column (Height).

  o click the "horizontal" arrows to extend the selection as a row (Width).

Note: as you click on the arrows, a real-time preview of the changed selection frame will be shown on the pattern.

- **Move**: by using the "move" arrows you will freely move the selection on the pattern (as you click on the arrows, a real-time preview of the changed position of the selection frame will be shown on the pattern).

6.4.1 Set area

With "Set area" tool you can create a selection area in the pattern.

- **Resize and move arrows:** described above.

The colors in the area can be changed by using the following area color tools:

- **Color area**: click the button "color area" and the selected area will be filled with the color selected from the bottom toolbar below (see bottom toolbar);
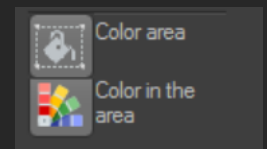
- **Color in the area**: click the button "color in the area" and you will get a window:

  This window shows the list of colors used in the selected area, in particular:

  o If the "**structure**" button is enabled, you can see all structure symbols in the selected area (you can enable "%" button to see each structure symbol percentage);

  o If the "**yarn feeder**" button is enabled, you can see all yarn feeders in the selected area (you can enable "%" button to see each yarn feeder percentage);
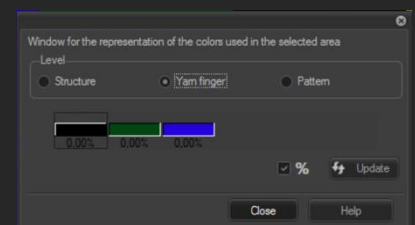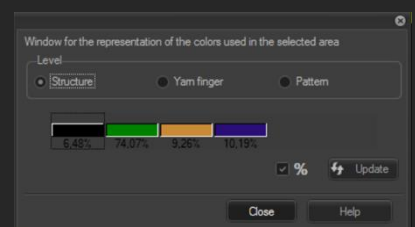
6.4.2   Set work Area

With the "Set Work Area" tool you can set the current selection frame as a working area. This allows to protect all the areas outside this working area, with the possibility of making changes only in the working area.

Select "Set Work Area" and you'll find the **Parameters box**. On the side, you'll also find a small window showing that the current selection is protected.

If the button "**Invert area**" is enabled, the current selection will be inverted with the rest of the pattern. This operation can be repeated multiple times to switch between the area you worked with before and the one you didn't.

If you click the "**x**" button in the small window, the protected area will be released.
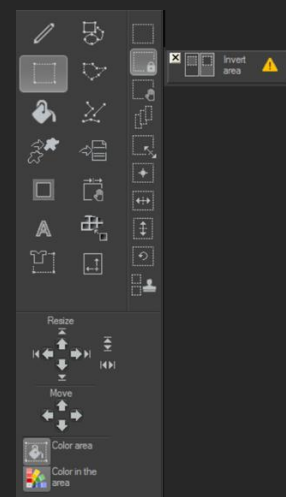
6.4.3   Move destination Area

With the "Move Destination Area" tool you can move and resize the current selection inside the pattern.

Select "Move Destination Area" and you'll find a dedicated **Parameter box**.

You can use the following tools:

- **Resize**: by using the "resize" arrows you can resize and modify the current selection, **including pattern inside**. In particular, the pattern in the selection will be stretched into more columns (with horizontal arrows) or rows (with vertical arrows).
- **Move**: by using the "move" arrows you will move the selection in the pattern **including pattern inside**.
- **Delete source**: if the "Delete source" box is checked the selected area will be deleted when positioning the selection into the destination area.
- **Transparent black**: if the button "Transparent black" is enabled, you can use the Resize or Move tools and modify the selected pattern area without including black (no yarn feeder selected) parts;
- **Rotation (Mirror)**: if you click the button under "Rotation (Mirror)" you will have three choices:
  - **None:** you will not apply any rotation (mirroring);
  - **Horizontal mirror:** this function will apply the "horizontal mirroring" procedure to the current selection **including the pattern inside;**
  - **Vertical mirror:** this function will apply the "vertical mirroring" procedure to the current selection **including the pattern inside;**

- **Transparent color**: if you click the "Transparent color" button you will find a window for the settings of the transparent and protected colors.
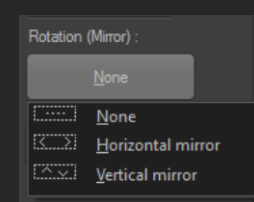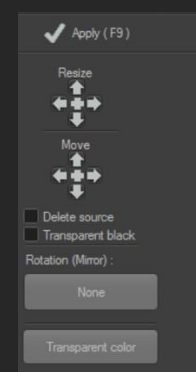
In particular, you will find two sections:

- In the first section you can choose one or more colors from the current selection and set it as **transparent** (this allows you to move/copy the current selection without copying colors set up as transparent) or set it as **colors to copy** (this allows you to move/copy the current selection including only selected colors);

- In the second section you can choose one or more colors from the current selection and **protect** it, this allows you to keep those colors always protected in case of any modification to the pattern
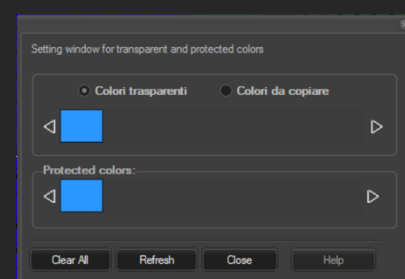
6.4.4   Multiple copies

With the "Multiple copies" tool you can create an infinite number of copies of the current selection in a semi-automatic way.

Select "Multiple copies" and you will find a dedicated **Parameter box**.
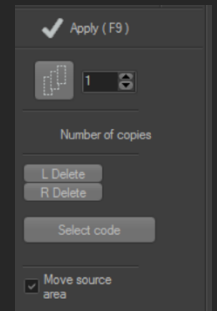
6.4.5   Resize destination Area

With the Resize Destination Area tool, you can resize the current selection area using Move and Resize arrows described above.

6.4.6   Horizontal mirror

With the Horizontal Mirror tool, you can horizontally reflect the current selection in the pattern area.

6.4.7   Vertical mirror

With the Vertical Mirror tool, you can vertically reflect the current selection in the pattern area.

6.4.8   Free rotation

With the Free Rotation tool, you can use a dedicated parameter to rotate the current selection area; this parameter shows also the actual degrees of the rotation.
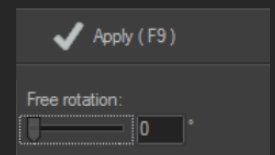
6.4.9   Change image

With the Change Image tool, you can select and move a duplicate of the current selection and put it in any other position in the pattern area.

6.5   Free selection area functions

Free selection tool

With the Free Selection tool, it's possible to create free manual selection areas in the pattern.

- Select "Free Selection" from the toolbox;
- Select the type of tool you need and you'll find under the toolbox different **Parameter boxes**:
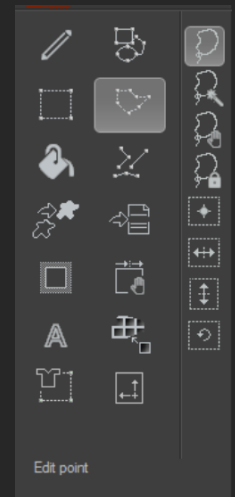
6.5.1   Define Area

With the Define area tool you can create a selection area encircled by a line in the pattern area.

Select "Define Area" and you will find a dedicated **Parameter box**.
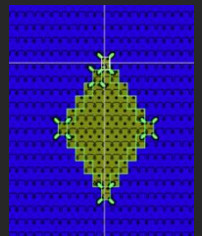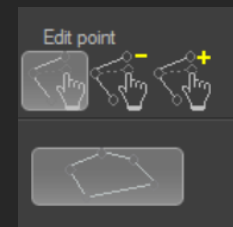
You can use the following tools:

- **Move nodes**: if the "Move nodes" button is enabled, you can move around the nodes of the current selection line;

- **Remove nodes**: if the "Remove nodes" button is enabled, you can remove nodes from the current selection line;

- **Add nodes**: if the "Add nodes" button is enabled, you can add nodes in the current selection line;

- **End selection**: if the "End selection" button is enabled, the current selection is considered closed. If not, you can continue with selecting the area in the pattern.

As you move the cursor to the end point of a line (= starting point of the same and next line) you will see a real-time preview of the actual selection area.

6.5.2   Define area on color

With the Define area on color tool you can automatically create a selection area from monochromatic and contiguous image in the pattern area.

Select "Define Area on color" and you will find a dedicated **Parameters box**.

You can use the following tools:

- **Add selection**: if the "Add Selection" button is enabled, you can continue to add monochromatic and contiguous areas to the current selection without deleting previous ones;

- **Remove selection**: if the "Remove Selection" button is enabled, you can de-select monochromatic and contiguous areas from the current selection.

6.5.3   Move area

With the Move area tool, you can move the current selection in the pattern area. Select "Move Destination Area" and you'll find a dedicated **Parameter box** for the Resize and Move parameters.
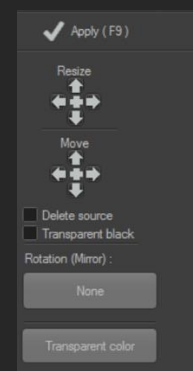
6.5.4   Define work area

Select "Define Work Area" and you'll find the **Parameter box** described above.

You'll also find a small window showing that the current selection is protected.

If the button "**Invert area**" is enabled, the current selection will be inverted with the rest of the pattern. This operation can be repeated multiple times.

If you click the "**x**" button in the small window, the protected area will be released.
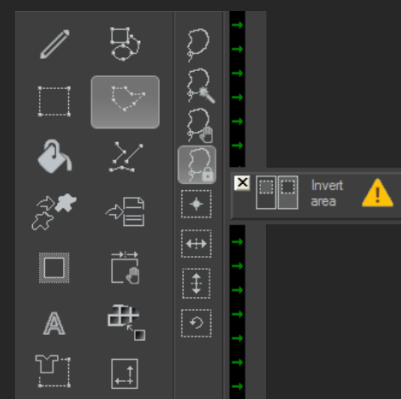
6.5.5   Horizontal mirror

With the Horizontal Mirror tool, you can horizontally reflect current selection in the pattern area.

6.5.6   Vertical mirror

With the Vertical Mirror tool, you can vertically reflect current selection in the pattern area.

6.5.7   Free rotation

With the Free Rotation tool, you can use a dedicated setting to rotate current selection area; this parameter also shows the actual degrees of the rotation.

For visual examples of all area functions check our video tutorials.

6.6   Fill functions

With the Fill tool, it's possible to fill areas with colors in the pattern.

- Select "Fill" from the toolbox;
- Select the type of tool you need and you'll find under the toolbox different **Parameter boxes**:
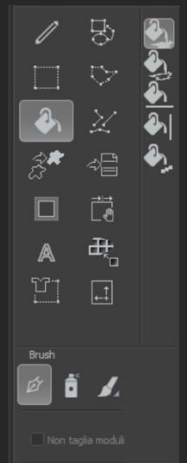
6.6.1 Standard fill

With the tool "Standard fill" you can fill with a color (selected in the bottom toolbar) an area in the pattern. This area can be a protected selection or a monochromatic and contiguous image in the pattern area.

Select "Standard Fill" and you will find a dedicated **Pen-Brush Setting Parameter box.**

Moreover, you will find other parameters:

o   Do not cut modules: the selected area will be filled with modules as long as each module remains complete.
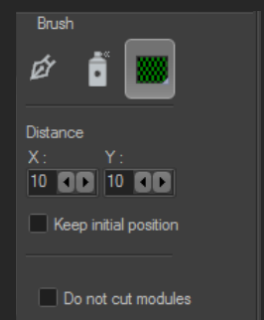
6.6.2 Border fill

With the tool "Border fill" you can fill borders of an area in the pattern. This area can be a protected selection or a monochromatic and contiguous image in the pattern area.

Select "Border Fill" and you will find a dedicated **Pen-Brush Setting Parameters box** and other parameters:

In particular, you can select:

- **Delimitation color**: which means the color where you want to stop the filling procedure;
- **Destination color**: the color you want to use to fill an area in the pattern until it finds the delimitation color.
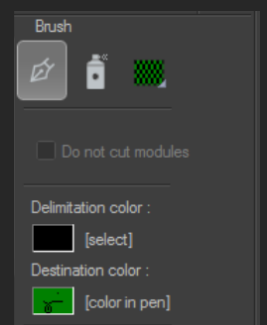
6.6.3 Horizontal Fill

With the tool "Horizontal fill" you can fill a full and color-contiguous horizontal line, using the Pen-Brush Settings.

6.6.4 Vertical Fill

With the tool "Vertical fill" you can fill a full and color-contiguous vertical line, using the Pen-Brush Settings.

6.6.5 Oblique Fill

With the tool "Oblique Fill" you can fill all areas connected by oblique pixels (not only by vertical and horizontal connections as the standard fill).
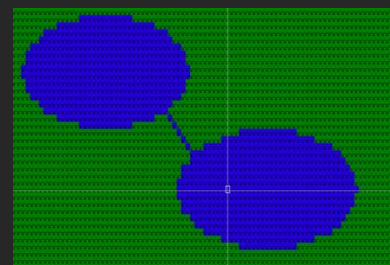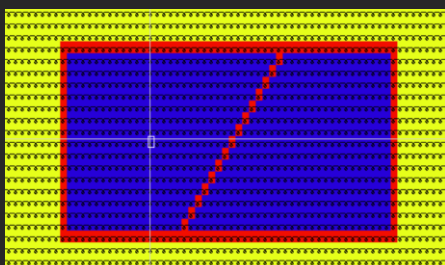
6.7   Line drawing

With the "Line drawing" functions you can draw lines on the currently active pattern

There are three types of line you can draw:

- Line: It's a standard line function which draws a line from point A (first click) to point B (second click) with the currently selected color.
- Continuous line: It basically does the same as the normal line function but allowing continuous drawing by linking as many lines as the user creates.
- Curved line: again, the curved line function does the same thing the Continuous line function does but when linking it bends the lines when a change of direction is detected.

Hint: Each one of these functions has its own parameter box from which you can adjust the draw method and size to fit your need.

6.8   Change/Exchange color

With the "Change/Exchange color tool the user is able to change/exchange all selected colors in the current work area in one go. When clicking on the function button the relative parameters box will show up.

In the two-column list view inside the parameters box the first column represents the color you want to change/exchange while the second is the color that will take its place in the current active pattern selected area.

The color list also has a save to file, load from file and a clear function

This procedure has two main functions:

- **Change color:** Selecting this function will replace the colors in the first column with the colors in the second, throughout the whole selected work area.
- **Swap color:** Selecting this function will swap the colors in the first column with the colors in the second throughout the whole selected work area.

Ticking the "Execute on 'click' "option will instantly change/swap colors when clicking on the pattern; the currently selected color will act as the second column color whereas the first column color will be the one you clicked.
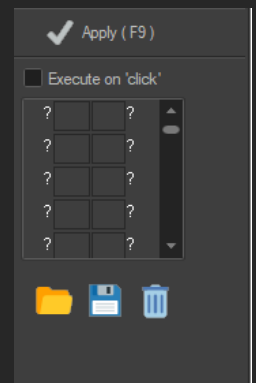
6.9   Pattern lines manipulation

With the Pattern lines manipulation functions you can alter the number of column and rows inside the currently active pattern, there are 4 types of pattern lines manipulation types :

- Open rows: with this function you can add a row into the pattern at the position of the cursor click.
- Open needles: with this function you can add a column into the pattern at the position of the cursor click.
- Close rows: with this function you can remove a row into the pattern at the position of the cursor click.
- Close needles: with this function you can remove a column into the pattern at the position of the cursor click.

Each one of these functions' behavior can be altered from the parameter box:

- the number of needles/courses parameter sets the number of rows that'll be added/removed.
- the pause parameter will set the interval at which a row will be skipped before adding/removing another.
- the repeat parameter will set how many times the entire procedure will be executed
- with the up/down radio buttons you choose in which direction you want to apply the function
- by checking the "Change window size" box, when using these functions, the window will resize according to the new size of the pattern.
- By checking the "Insert with background color" box the rows and columns inserted/removed into/from the pattern will have the default background color, otherwise the row will have the same color as the row/column after or before based on your up/down or left/right parameter selection.
- By checking the "Insert along a line" box you can insert/remove the row/column along a line you can freely draw inside the pattern, allowing nonlinear insertions/removals.
  An additional parameter box will show up to help you with the line manipulation.

6.10 Border function

With the "Border" function you can create borders in your active pattern
There are two ways of creating borders:

- **Encircle area:** With the "Encircle area" tool, you can create the border around a contiguous, monochromatic area.

- **Border between colors:** With the "Border between colors" tool, you can create the border between all contact lines of two different colors.

    The color of the border can be chosen from the color palette in the bottom toolbar.

    For a visual explanation see our video tutorial on this tool.

6.11 Pattern shift

The "Pattern shift function" allows the user to shift the pattern inside the pattern borders.
Use the shift options in the parameters box to shift the pattern in every way you need.
Pattern sections that are shifted outside a pattern border reappear on the opposite side.

Hint: You can also use the shift function with the mouse by clicking on the pattern and dragging towards the direction you want the pattern to shift (using the vertical/horizontal shift buttons to enable only the one you want to work with is highly recommended)

Note: If a working area is set in the active pattern, the pattern is only moved inside the working area.

6.12 Insert text

With the "Insert text" function you can insert text lines into the active pattern.

When activated a parameter box with all text options will appear, here you can set different things like:

- Text: The text you want to insert into the active pattern.
- Text size: Here you can set the font size.
- Free rotation: with this setting you can rotate your text line however you want.
- Font type: when clicking the "font type" button a font dialog window will pop-up from which you can set your text line appearance.

When you're ready, select the text color from the palette and place your text by clicking on the pattern.

For a visual explanation see our video tutorial on this tool.

6.13 Propagate on color

With the Propagation tool, it's possible to propagate modules in the pattern area choosing various parameters.

- Select "Propagation" from the toolbox;
- Select the type of tool you need and you'll find under the toolbox different **Parameter boxes.**
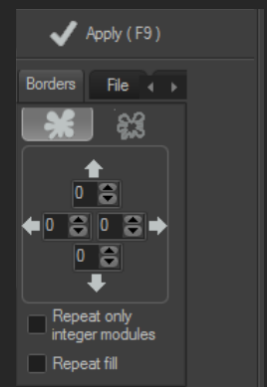
6.13.1 Borders

You can fully propagate the selected modules on a color in the pattern with some rules:

- You can select the distance between each module propagated in any direction (right, left, up and down);
- "Repeat only integer modules": you can propagate modules selected on a color in the pattern as long as they are complete, if they're not, the propagation stops;
- "Repeat fill": if this option is checked you can propagate the selected modules in a color-contiguous area.

Using the tool in the red circle you can choose to start the propagation after leaving an untouched border in the selected area; by using the tool in the green circle you can choose to propagate the area only in the border's proximity.
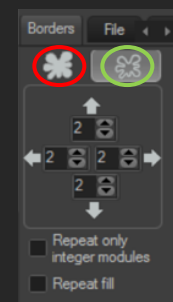
You can set the values and the procedure will automatically create a border in the selected area using the set dimensions just like in the image below.
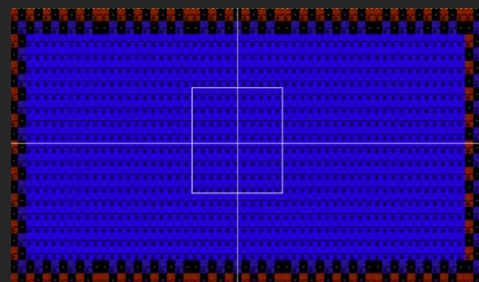
6.13.2 Shift

You can shift the propagation, using the arrows.
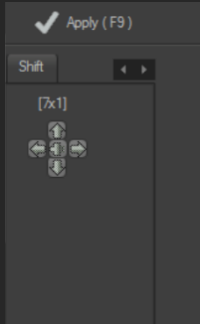
6.13.3 File

You can save modules selected in the current pattern, and then load and use them again.
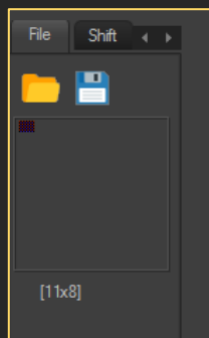
6.14 Closing for fabric view (not yet implemented)

6.15 Relative coordinates

This simple function allows you to see the cursor coordinates starting from a previously set point in the pattern.

7　Bottom Toolbar

7.1　Selecting colors, yarns and structures

The color bar is used to select the pattern layers and to select colors, yarns and structures when using drawing tools. All selectable colors, yarns and structures form a palette which can be edited, imported and exported using the palette bar.

Both the structure and the yarn feeder layer view can be disabled, allowing the user to concentrate on one layer at a time when creating or modifying the pattern.

By clicking the button circled in the image below, you can keep the system you're currently working on always centered, making the pattern design procedure easier and only having to remember that when in alternated motion, you have to leave either the first or the last needle of the row empty in order to avoid out of range needle selections.

To better understand the multi-layer and needle selection range ideas watch our video tutorials on the respective subjects.

7.2　Palette panel

All selectable colors, yarns and structures form a palette. Management and editing of palettes are done in the palette bar.

Selection and management of palettes is done via the palette menu. ADIKnit contains a default read-only palette. In addition, custom palettes are supported through palette files clicking the "read palette from file" in the pop-up menu.

A loaded palette can be defined as the default palette by clicking the "save palette as default" option in the pop-up menu, this will automatically set it as the active palette for each new pattern created.

In the color definition area, you can edit the RGB values of the selected color or yarn by using the three sliders. The changes are immediately displayed on the color bar and in the pattern.

After modifying a palette, you can save the changes to a palette file by clicking the "save palette to file" option in the pop-up menu.

7.3　Status bar

The status bar is split into 3 different areas each containing context-sensitive information:

- The first and largest area contains a brief help text explaining the element below the cursor is shown.
- The second area contains the pointer coordinates.
- The third area contains the current selected area width and height.

8   Right Toolbar

8.1   Modules

By clicking the "Modules" tab in the right toolbar, a library showing all currently created and loaded modules will show up.

8.2   Pre-Styles

By clicking the Pre-Styles tab in the Right Toolbar, a window showing all preset styles will pop-up showing various categories of premade pattern pieces, which the user can insert into the currently active pattern design project.

In this tab you can also find the library from which you can load all previously saved propagation modules.

9   Drawing area

9.1   Window control elements

9.2   Pattern window

9.3   Command columns

9.3.1   Left Command Columns

The left command columns area is delimited by two edge columns in position 1 and 34 and contains two main areas: The red area (3..22) is dedicated to machine macros and the green area (25..33) is for module specific commands; the empty columns in position 2 and 24 serve no function besides separating the areas.

1 – Fixed color margin (Edge): This column acts as the right margin for the left command columns area.

2 – Empty*

3..22 – Macro: Each value inside these command columns contain a set of commands the machine has to execute, right clicking this area and then the option named "Command Columns" opens the macro window, where the user can choose from the preset list a macro and set its values before inserting it into the clicked position.

23 - Macro Link: (yellow area - not used)

24 – Empty*

25 – Module link: This column contains the index of the module that has to be applied in the current row. For a more detailed explanation of the applying procedure click here. (da fare hyperlink)
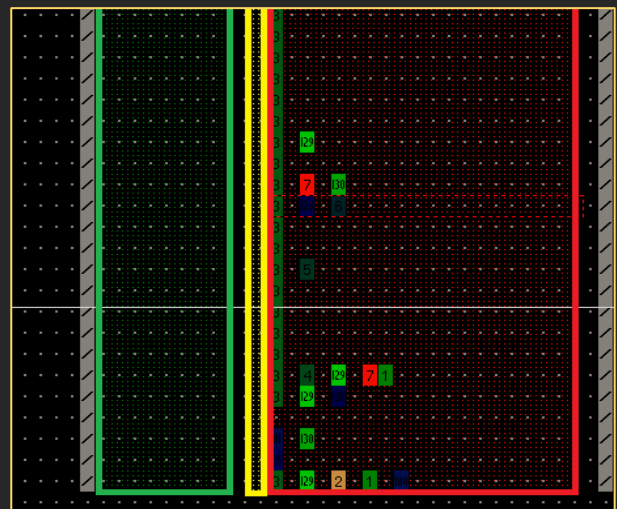
26 – Module link level 0: (not used)

27..29 – Free

30 – Row to be closed and moved in the layer: (not used)

31 – Module row increment: Increments the pattern row in which the module will be applied.

32 – Use module only in the relative direction: If set, this column will indicate in which direction the machine has to turn to apply the module.

33 – Merge row before: If set, this column contains a command that merges in the module the current row with the one beneath it.

34 – Edge: This column acts as the left margin for the left command columns area.

9.3.2 Right Command Columns

The Right command columns area is delimited by two edge columns in position 1 and 46.

It has 4 colored areas:

- The green area contains a set of rules and settings.
- The yellow area contains yarn supplier management commands.
- The red area contains the "yarn in" commands.
- The blue area contains the "yarn out" commands.

Apart from the columns in position 2 and 3, the other empty columns serve no purpose besides separating the areas.

1 – Fixed color margin (Edge): This column acts as the left margin for the right command columns area.

2 – Direction: Command column containing the Direction in which the machine is currently moving.

3 – System number: Command column containing the system number of the one which the machine is currently working with.

4 – Empty*

5 – Pistons: Activates both fabric-widening pistons by using code 5 inside this command column.

6 – Terry: uses different values to control the terry

movements:

2: Alternated motion terry outward.

3: Alternated motion terry return.
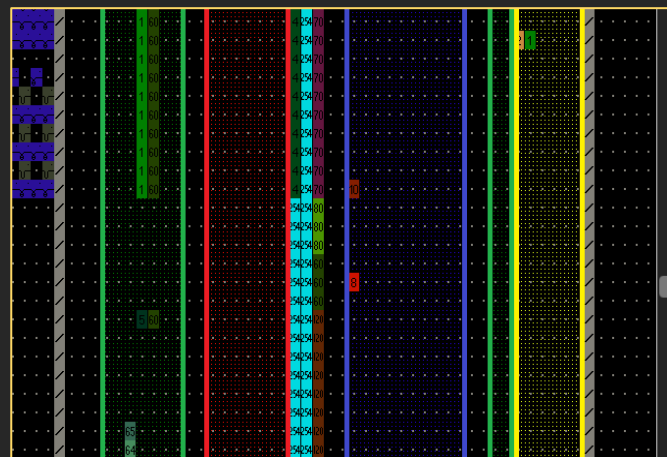
4: Alternated motion terry exclusion.

8: Circular motion full terry.

9: Circular motion half terry.

10: Circular motion terry exclusion.

32: Automatically manages the terry cams with alternated motion.

40: Automatically manages the alternated motions of the terry cams (Once).

7 – Exclusions**

8 – Fabric Settings: Insert into this command column the screw code.

9 – Fabric Setting value: Insert into this command column the desired fabric setting value (stitch density).

10 – Economizer: Insert into this column the starting point (value=2) or the finish point (value=3) of the

 desired economizer.

11 – Economizer value: Insert into this column the repetition number (2..255) next to column 10 starting

 point.

(Alternatively, you can set this column value and leave column 10 empty, the software will automatically set the starting point where column 11 has been filled, and the finishing point by counting down the inserted value.)

12..13 – Empty*

14..20 – Yarn In: Insert into the columns the code of the yarn you want the machine to pull and start knitting with.

21 – Intarsia area: This command column indicates if the machine is working in circular or

alternated mode.

22 – Free: free column always fully filled with the 254 value by default.

23 – Machine speed: This column indicates the machine's speed at the current row.

24..25 – Empty*

26..35 – Yarn Out: Insert into the columns the code of the yarn you want the machine to release and stop knitting with.

36..37 – Empty*

38..39 – Exclusions**

40 – LG Motors - Motors

41 – LG Motors - Table

42 – LG Motors - Value

43 – LG Motors - Motors

44 – LG Motors - Free

45 – LG Motors - Free

46 – Edge: This column acts as the right margin for the right command columns area.

*Empty command columns act as separators between the different areas.

**Exclusions command column codes – Command columns used for mechanical functions commands.

here follows a list with all possible exclusion codes:

- 20 = Elastic entry + motor screw n2
- 30 = Elastic entry + motor screw n3
- 40 = Elastic entry + motor screw n4
- 62 = Vent
- 63 = Vent Blow
- 64 = Stop vent blow
- 65 = Vent down

10   Pattern processing

10.1   Mirroring

10.2   Apply

10.2.1   Test Window

1. **Errors and warnings log**

   In this part of the test window the user can see all pattern errors and warnings.

   Errors are messages generated when there's something wrong in the active pattern, they can sometimes be serious enough that the "Create machine file" procedure won't be available or less serious and leave everything available and at the user discretion.

   Warnings are messages generated when the software wants to be sure the user checks something before proceeding but they won't disable and/or block any function.

   Clicking on the error/warning will point the user both in the pattern window and the expanded view at the row where the error/warning generated.

2. **Toolbar**
   - **Expanded pattern**

   Clicking on the "Expanded pattern" button will refresh the current active expanded pattern.
   - **Create machine file**

   Clicking on the "Create machine file" button will start the conversion procedure of the pattern file to the machine file. The conversion procedure has been optimized to both keep the integrity of the file and compress its size to optimal dimensions.
   - **Vertically tile windows**

   Clicking on the "Vertically tile windows" button will tile the active pattern window and the expanded pattern window vertically.
   - **No empty rows**

   Checking the "No empty rows" parameters in the expanded view window will remove the empty rows created during the pattern expansion procedure giving the user a more compact view of the expanded pattern.
   - **Steps**

   In the "Steps" field, you can see the number of machine steps needed to finalize the article.
   - **View propagation**

   The "View Propagation" function shows the active project propagation modules directly on the pattern.
   - **Report**

   Clicking on the "Report" button will make the Report window show up. In this window the user can fill out a form with details about the active pattern, like the article name, customer name, yarn type, elastic type and a "note" field for annotations. Other fields like the estimated production time, machine steps, average speed and yarn consumption will automatically be calculated and filled out on the report.
   - Clicking "Ok" stores the filled fields data, so that when opening the form a second time you won't have to start over.
   - Clicking "No" will close the form and won't store the data, the next time the form opens all fields will be empty (besides the automatically filled ones).
   - Clicking "Clear" will allow you to start over without having to click "No" and reopen the form.
   - Clicking "Print" will make the print dialog window show up.

10.3   Propagation modules

Propagation modules are used to make the pattern more readable and uniform, but at the same time allow the user to have many different possibilities when creating the pattern design. The modules are essentially a small pattern that will get propagated on the set index when it's read during the pattern expansion procedure. The trigger index can be seen on top of the module with <Image A> being the structure index and <Image B> being the yarn feeder index.
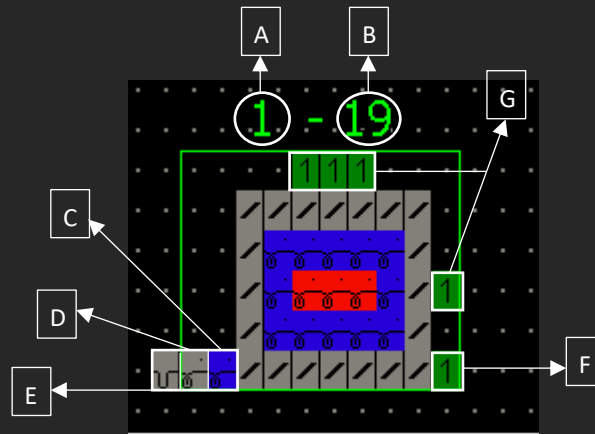
Tip: For a graphic example of the following types of propagation watch our graphic tutorials on the propagation procedure.

10.3.1   Default propagation

The "basic" way to use the propagation modules is by only setting which index (Image C) triggers the propagation. This will propagate the module every time it finds the set "trigger" without any other parameter.

10.3.2   Shifted propagation

The "Shifted propagation" method applies the propagation procedure by starting from the selected index point (Image E) in the corresponding module. The "skipped" part of the module will be put at the end of it.

10.3.3   Propagation of modules with borders

Using this method to apply the propagation procedure makes assigning borders to the modules possible; this means that when the module has to propagate in proximity of the propagation area borders, it will start propagating with his corresponding border and when propagating the internal area, it will propagate with his area. To apply borders to the module you have to set any index <> 0 in the fields you want to represent its internal area (Image G).

Hint: More than one propagation method can be applied at once to the same module allowing multiple combinations and any type of variation to your pattern design

10.4 Sequence modules

Sequence modules are smaller patterns which the software will expand when finding the triggering sequence inside the full pattern row where it's been called. Through them you can compress the pattern and make the pattern designing faster.

After creating the sequence module as shown in our video tutorial, you can use it as many times as you want across the pattern, saving time and making the pattern easier to manipulate.

If a sequence module code is set for the current row (A), the software will transfer into the pattern (B) the expansion dictated by the module (C) when the matching index is found (D).
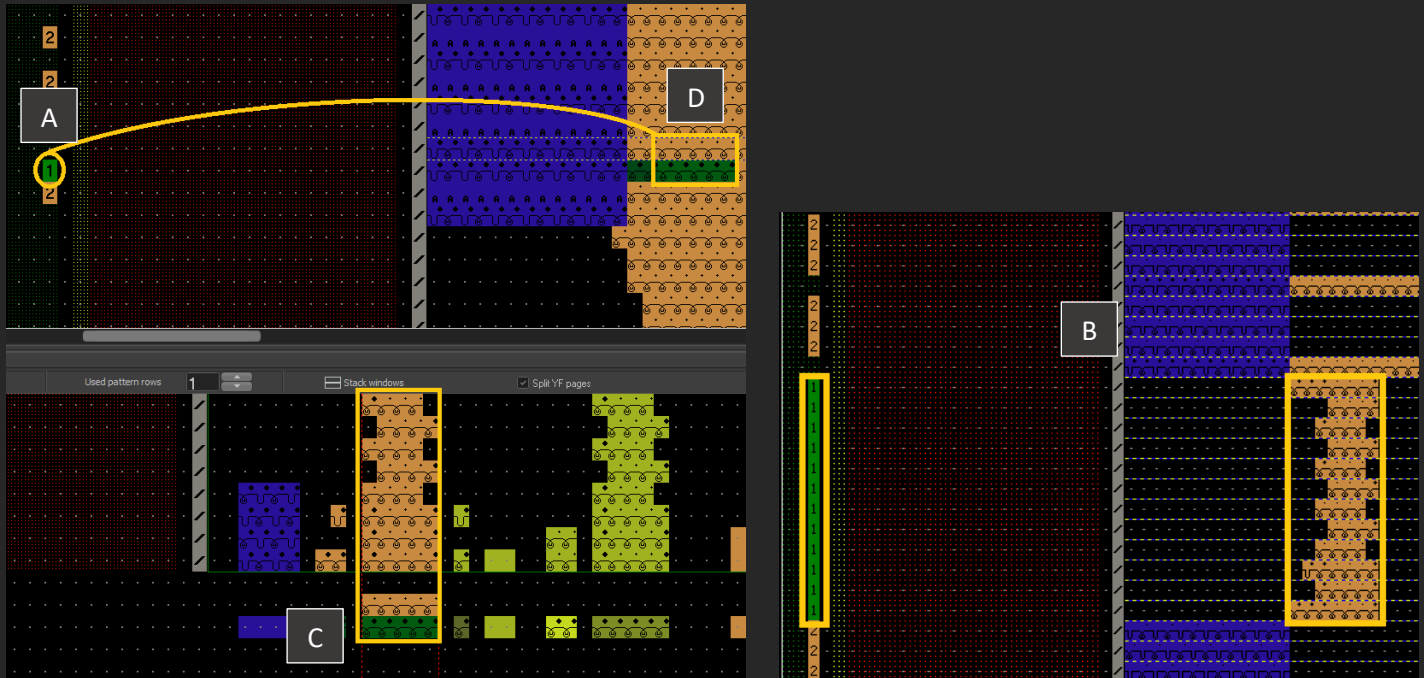
11   Machine hints

Alternating motion explanation

When working in the alternating motion mode the machine always spins a full circle both in the outward and return directions, this implies that the same number of needles will pass in front of each system.
In circular motion mode the machine can select all 120 needles, while in reciprocating motion it can only select 60 (half cylinder).

Each system has a 60 needles optimal selection range:

- Sys1: needles 30 to 90;
- Sys2: needles 1 to 60;
- Sys3: needles 90 to 120 and needles 1 to 30;
- Sys4: needles 60 to 120;

Note: The machine is actually capable of passing all 120 needles in front of each system by adding a ¼ cylinder (30 needles) turn both at the start and the end of the step, however this greatly reduces the overall productivity.

Warning: be careful when using this function, each system has a limit on the 120th worked needles, this point has to be empty in the pattern otherwise the generated error won't let you create the machine file:

- Sys1: needle 1/120;
- Sys2: needle 90;
- Sys3: needle 60;
- Sys4: needle 30;

Watch our video tutorial to better understand how and when the error manifests, how to avoid it and how to draw in the most efficient way possible by respecting the optimal selection range of each system.

12 Errors and warnings

1) "**Command Columns not found**": this message indicates that the software hasn't found any "command columns" area inside the current pattern.
2) **Yarn feeder in wrong direction**:(not used)
3) "**Erroneous value in command columns**": This warning indicates that an erroneous value has been inserted into a command column.
4) "**Economy set on one course only**"
5) "**Consecutive tuck on the same needle**": This warning indicates that there's been more than x consecutive tucks on the same needle. This could cause the needle to break so it's a very dangerous warning you should never overlook.
6) "**The current machine model cannot execute the processing of this pattern row**": This error indicates that there's a command which is not possible to execute on the current machine model.
7) "**Pattern ends in the wrong direction**": This warning indicates a mistake in designing which is automatically corrected by the software; the message only serves the purpose of warning the user about the correction.
8) "**Intarsia area too wide**": This error indicates that the maximum working area of a system has been exceeded. Each system can work with a set range of needles, but either the first or the last position of this range has to be empty otherwise the intarsia area will be too wide.
9) "**Max number of areas for the propagation reached**": This error indicates that the maximum number of areas for the propagation has been reached.
10) "**Module link for odd rows**"
11) "**Warning! Too many floating needles... on system: < > YF: < >**":
This warning indicates that there's too much space between the last working needle of the last step and the first working needle of the current step, this creates a floating yarn.
If this wasn't intentional the solution would be to either reduce the space between the two needles or insert a yarn-out command for the last working needle of the last step and a yarn-in command for the first working needle of the current step.
15) "**The width of the pattern must be equal to the machine needle number**": this only happens when selecting the wrong machine model or when inserting/removing columns thus making the pattern width larger/smaller than the machine needle number.
16) "**YF exit in the wrong machine direction**": This message indicates that there's a yarn-out command while the machine is turning in the wrong direction
17) "**Intarsia area height must be pair**": This error indicates that the height of the intarsia area is not even. When creating an intarsia area from the command columns, it's height always has to be an even number.

13   Tutorials

13.1   Quick start guide

To quickly start creating your first pattern machine file, you can either start from scratch by creating a new pattern (File menu - New), or use the file open function to start from a pattern you already created (File menu - Open). To modify the pattern, use the graphic tools described in the "Left toolbar" and "Bottom toolbar" sections of this guide (Check our dedicated guide section for a detailed explanation of every tool function). When you're done modifying the pattern, it's time to save the machine file; in the test window that pops up after processing the pattern ("Apply" button) you can check all the warnings and errors generated and when ready you can save the machine file by clicking the button.

13.2   Graphic pattern tutorials

13.2.1   How to work with one layer at a time ▷

13.2.2   Free area select functions ▷

13.2.3   Propagation modules

How to create propagation modules (Manually)

- Default propagation ▷
- Shifted propagation ▷
- Propagation of modules with borders ▷

How to create propagation modules (Automatically) ▷

How to save and load modules from the library ▷

13.2.4   Sequence modules

- Module creation and application ▷
- Module row increment ▷
- Module used pattern rows ▷

13.2.5   Fill functions ▷

13.2.6   Pattern lines manipulation ▷

13.2.7   Color Change-Switch function ▷

13.2.8   Border functions ▷

13.2.9   Relative coordinates ▷

13.3   Machine tutorials

13.3.1   How to create a new pattern with the wizard ▷

13.3.2   Automatic intarsia connection ▷

13.3.3   How to set an economizer ▷

13.3.4   How to set the stitch quality ▷

13.3.5   How to set the machine speed ▷

13.3.6   How to set a reciprocating motion area (Intarsia area) ▷

13.3.7   How to add pre-styles to the pattern ▷

13.3.8   Make the pattern easier to read using the shift function ▷

13.3.9   How to create an efficient pattern and avoid range errors ▷