WARNING!
Before use the plotter read carefully this user guide!!!
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Chapter 1

GENERAL SPECIFICATION

1.1 Technical data

- Voltage: 220v, 50Hz;
- Power supply: 200w;
- Plotter sizes: 2220×500×930 (Popjet 160); 2400×500×930 (Popjet 180);
  2600×500×930 (PopJet 200);
- Packing sizes: 2360×570×1060 (PopJet 160); 2550×570×1060 (PopJet 180);
  2750×570×1060 (PopJet 200);
- Plotting speed: plotting in two way direction = 70m²/h,
  plotting in single direction = 40m²/h;
- Maximum unidirectional deviation between horizontal plotted lines < 0.4mm;
- Maximum unidirectional deviation between vertical plotted lines < 0.4mm;
- Maximum plotted width = 1650mm (PopJet 160); 1830mm (PopJet 180);
  2020mm (PopJet 200);
- Maximum continuos plotted length = 50m;
- Origin coordinates : adjustable ;
- Plotted line width : adjustable ;
- Resolution : 150 dpi ;
- Language format : compatible HPGL ( PLT ) ;
- Interface : USB interface ;
- Writing technologie : inkjet technologie, two standard ink cartridges;
- Ink cartridge type: HP 51645A ;
- Paper type: 40 - 80 g/m², paper roll;
- Paper roll maximum diameter = 241mm (9.5”);
- Paper roll core diameter = 76mm (3”);
- Automatic system for cleaning and protect the ink cartridge.

1.2 Technical specifications

- Computer reqirements:
  Minimum: CPU P2-350M, 64M RAM, 10G HD, CD ROM drive;
  Recomandet: CPU P4-1, 7G, 256M RAM, 40G HD, CD ROM drive.
- Operating system:
  Windows 2003, Windows XP.
- Working conditions:
  Temperature: 10° - 30°C
Temperature outside this space can affect the performance of the plotter.

Humidity : 35% - 75% RH;
Emplacement: in a clean area (without dust), far from strong electromagnetics source.
The emplacement of the plotter must be made on a flat surface and after that the plane level must be checked.

1.3 Other recommendations

- Use for the plotter charging a minimum 500w UPS source;
- USB cable must be no longer than 4m;
- The paper collected to the take up reel spindle must be no longer than 50m;
- The plotter must be connected straight to computer USB port. If the USB port is password secured (password dog) the cable must be connected in other USB port (not password secured).
- Do not install on the computer antivirus applications. If on the computer is an antivirus program this thing can stop the plotting process, can affect the transmission of the data to the plotter, can get gaps between the plotted line in horizontal and vertical direction on the plotted marker, can modify the sizes of the pieces from plotted marker.
In the situation when because the well-founded reasons, on the computer is necessary an antivirus program, the option to background scanning must be disabled.

1.4 Steps to be taken for the plotter’s first installation

- Identify all components and then find how to join together all parts (see Chapter 2);
- Familiarize with the plotter charging (see Chapter 3);
- Familiarize with plotter control panel, plotter buttons and plotter light indicators (see Chapter 4);
- Learn how to mount the paper (see Chapter 5);
- Identify the print head and learn how to mount the ink cartridge on the print head (see Chapter 6);
- Learn how to install and use the software (see Chapter 7);
- Learn the plotter maintenance (see Chapter 8);
- Familiarize with the most frequent troubleshooting, and learn how to fix them (see Chapter 9).
Chapter 2

PLOTTER DESCRIPTION

Popjet 160/180/200 plotters are the overall constructions, after you open the packing case, only need to lift the plotter from the plywood board to a steady position.

2.1 Plotter components

⚠️ Do not move the print head when the plotter is in suspensive state otherwise the plotter can be serious damaged.

In this situation the power from the plotter must be turned off, the plotting application must be closed, the power to the plotter must be switched on after minimum 10 seconds.
Chapter 3

PLOTTER CHARGING

- The power cable must be plugged in a socket which has reliable ground conductor;
- The voltage power must no vary more than $\pm 5\%$;
- To prevent voltage variation use a minimum 500w UPS source;
- Be sure that the power On/Off plotter button is in the off position, before you plug in the charging cable;
- Switch the power On/Off button on the “1” position. On the control panel of the plotter the power light indicator will light and you will hear a short duration sound.

⚠️ When the power button is switched to ON position, or the plotting process is finished, will hear a short duration sound, which will indicate that the self test of the plotter is finished and the plotter is OK. If no short duration sound will hear, the plotter must be turned off and restarted after minimum 10 seconds.

If the plotter is switched off from the power On/Off button, the plotter must be restarted after minimum 10 seconds.

If there are voltage variations or the power socket have no reliable ground conductor the plotter can suffer important damages.

It is recommended to connect the computer and the plotter in the same power socket.

Never connect the USB cable if the plotter is power on. Turn off the power from the plotter, connect USB cable to the computer and the plotter and after this turn on the power to the plotter.
Chapter 4

CONTROL PANEL

4.1 Light indicators

- **Power** light indicator: show the presence of the voltage power through a green light;
- **Pause** light indicator: show the suspensive state of the plotter through a green light;
- **Error** light indicator: show the presence of an error installed to the plotter, through a red light. When this light indicator is on, the malfunction of the plotter must be fixed and after this the plotter must be restarted;
- **Ink Out** light indicator: show that the level of the ink from the ink cartridge is minimum, through a red light. When this light indicator is on, the ink from the ink cartridge is finished and the ink cartridge must be replaced.
4.2 Buttons

**PAUSE**: This button is used in making the plotter enter or exit the suspensive state. When the button is pressed for the first time (for 2-4 seconds), the plotter will enter the suspensive state and the indicator light of pause will be on. When the button is pressed again, the plotter will exit the suspensive state and the indicator light of pause will be off.

**DOWN**: When the plotter is in the pause state, pressing this button leads to paper feeding in the forward direction. Releasing the button will stop paper feeding.

**UP**: When the plotter is in the pause state, pressing this button leads to paper unloading. Releasing the button will stop paper unloading. When you press the button for 3-4 seconds or longer, the plotter will enter the state of paper unloading at a high speed. Under such a circumstance, paper unloading will be speeded up. Even if the button is released, paper unloading will continue at a high speed. You may stop the state of paper unloading at a high speed only by pressing the button of paper feed or pause.

**Warning**: The pause period during the plotting should not be over 2 minutes, or the cartridge may be damaged. It is normal that the color may be faded as the plotter is restarted after a pause.
Chapter 5

How to mount the paper

⚠️ Do not use wet paper, unsmooth paper, or paper with unstraight ends. Do not use paper with holes, with black points or deformations. Use only smooth paper, of 40 ÷ 100 g/m² and the weight of the paper roll must be no more than 35 kg.
5.1 Loading of a new feed roll

Switch off the plotter, stand behind and face the plotter, and pull the feed roll to the left by hand with a little strength. As the right side of the feed roll is separated from the coupling, lift up the feed roll and take it off. Loosen the internal hexagonal screws on the paper hub of the feed roll with a 5mm internal hexagonal wrench and take off the old paper roll. Load a new paper roll, install the paper hub, grip the paper roll tightly and beat it gently until it is not loose between the paper hub and the paper roll. Move the paper roll (together with the paper hub) and make the plotting paper in the middle of the feed roll. Then tighten the internal hexagonal screws on the paper hub with the internal hexagonal wrench. Install the feed roll to the plotter.

5.2 Paper loading of the take-up roll

Switch on the power, make the feed roll unload some paper (about 1m), and then switch off the power. Open the cover of the plotter to a steady position. Pull paper between the encoder-roller and the main beam, hold the edge of paper and rock it gently to the left and to the right, until the paper is level on the whole. Then cut surplus paper according to the position of the take-up roll. Prepare 3-5 rubberized tapes and each is of 3cm-4cm in length. At first, stick a rubberized tape on the center of paper and pull the tape to stick on the take-up roll with a little strength. Then stick on other prepared tapes from the center to both sides in proper order. After that, check whether the paper is level. Switch on the power of the plotter, use the tension roll to press paper and put it to the slide slot. Press the encoder-roll

Up to this point, paper loading of the take-up roll is complete and the plotter is ready for plotting.

Do not use paper which is moist, torn or crumpled. Do not use paper with holes or dirty dark spots which may lead to unclear printing result. Please use smooth plotting paper of 40g-100g/m2 and the weight of paper roll shall be less than 35~40kg.
Chapter 6

PRINT HEAD

The print head is a mobile ensemble where are fixed the ink cartridges. The printing head have two ink cartridges.

6.1 Ink cartridges

- **Ink cartridge type:** HP 51645A
- The ink cartridge can be buyed from any HP dealer;
- The ink cartridge can be refilled ;
- The ink cartridge has a green indicator of ink level. When the ink from the cartridge is to a minimum level the color of the green indicator is changed in other color.

Green indicator of ink
6.2 Replacing the ink cartridges

The cartridges can be replaced under two circumstances:
1. The plotter power status is ON. Under such a circumstance, press PAUSE on the control pad to make the plotter paused. After that, open the fixing cover of the cartridge by lifting up (see picture), pull out the empty ink cartridge and replace the cartridge with a new one, fix the new ink cartridge with the fixing cover, press the PAUSE button to exit the suspensive state and make the plotter to be in the normal status.

**Note:** The insertion of cartridge must be gentle, if you feel any resistance while pushing down the lock lever, stop. Otherwise the cartridge may be damaged. Push down the lock lever of the cartridge.

**Attention:** It’s better that to replace a cartridge while plotter power status is OFF to avoid any damage to cartridge.

⚠️ Do not touch the nozzle area and the golden contacts from the ink cartridge.

Changing of the ink cartridge in the plotting process can damage the print head (the electronic plate of the print head). It is recommended to change the ink cartridge with voltage power of the plotter turned off.

6.3 Cleaning of the ink cartridge:

The Popjet 160/180/200 plotter is made with automatic cleaning and ink cartridge protection system. However, after a function period and in some working condition the ink cartridge must be manually cleaned.

When some points or lines from the plotted marker are white, the ink cartridge must be manually cleaned.

The cleaning of the ink cartridge must be done in this way:
- Pull out the ink cartridge from the print head;
- Clean the nozzle area from the ink cartridge gentle, using a smooth cloth without lints. The cloth can be weted in a mixed solution made by water and liquid detergent.
- Pull in the ink cartridge and check the quality of the plotting process. If still are problems pull out the ink cartridge and clean it again until the plotting process is perfect.
- Other method to clean the ink cartridge is to place the nozzle area in a special cleaning solution, which can be bought from any HP refill ink cartridge dealer.

6.4 Adjustment of the print head deviations:

When in the plotting process between the plotted lines are deviations (like in the previous picture) the adjustment of the print head deviations must be done. This thing can be done from the plotting application and will be describe on the next chapter.

**Warning:** Changing the cartridge in the plotting process may damage the nozzle, please do not change the cartridge during the plotting.
Chapter 7

INSTALL AND USE THE SOFTWARE

On the accessory box, delivered with the plotter, is the CD with the driver and the plotting program from the plotter.

7.1 How to install the plotter driver and the plotting program

⚠️ Before the installation of the driver and the plotting program for the plotter close all the opened programs on the computer and the antivirus programs. If on the computer are installed old version of the plotter driver or the plotting application, first uninstall the old versions and after this install the new versions.

Instalation of the plotter driver:
- Place the CD on the computer CD unit;
- Connect the USB cable to the plotter and to the computer;
- Turn on the voltage power to the plotter;
- The computer will show you that is founded a new hardware component and will automatically open a installation window named "Add New Hardware Wizard";
- Must be follow the steps asched by the Windows;
- Select "Install from a list or specific location", then click Next;
- Select "Include this location in the search", then click Browse;
- Enter the path of the computer CD unit and open the folder: USB DRIVER, win2k_xp;
- Click OK, NEXT and Finish following the Windows instructions.

Instalation of the plotting application:
- Place the CD on the computer CD unit;
- Open the Gemini PLT Spooler folder;
- Press "setup.exe" and install the plotting application following the steps asked by the Windows;
- Restart the computer.

⚠️ Must be respected the installation succession presented previously (driver, plotting application, computer restart), otherwise is possible that the driver or the plotting application to have malfunctions.
7.2 How to use the Gemini PLT Spooler plotting application

7.1.1 General presentation

- The Gemini PLT Spooler plotting program is an application which prints on the plotter HPGL (PLT) and CUT (RS274D) files;
- Work in spooler mode: wait for files in a dedicated folder, transfer the files to the plotter and then move the files to another folder.
- Once the computer is started, the Gemini PLT Spooler application starts automatically (is activated) and its icon can be seen on the right side of the computer display (system tray). Accessing the application (main window opening) can be done by pressing the program icon. The program closing can be done by right-clicking on the program icon in the system tray and then clicking on "close". Pressing on "x" in the program main window does not close the program, just minimize the program main window (hide the program main window).

7.2.2 Gemini PLT Spooler main window

When the computer is started, the Gemini PLT Spooler program icon is visible on the system tray. Clicking on the program icon will open the "Gemini PLT Spooler" main window.
The main window of the program is organized in this way:

- On the left up side is the Menu bar witch is structured on Plotting, Tools, Settings and Help menus.
  - Plotting menu: by accessing this menu will be open a list with more option like next: bringing a new folder to plot, print to a printer, export in other format, close the data transmission, close the program.
  - Tools menu: by accessing this menu will be opened a list with different tools who can be seen in file preview area, like horizontal centimetre, vertical centimeter and zoom.
  - Settings menu: by accessing this menu will be opened the “Gemini PLT Spooler – General settings” window. In this window can be entered the path of the files to be plotted and the plotted files, the time between two program check if there are new files in the files to be plotted folder, the step of zoom in / zoom out of a preview level in the file preview area, plotter type, scaling options, delete options from plotted files, text optimization options, drawing options, application language.
  - Help menu: give informations about the installed application version.

- On the half left up side is the Files to be plotted list;
- On the half right up side is the Plotted files list.
- On the half middle up side is the Control panel, where are the following buttons: command of the transmission data to the plotter buttons, buttons for moving a file from the “Files to be plotted list” to “Plotted files list” or reverse, buttons for changing the selected files position in the belonged list and buttons for delete the selected file from the list.

  By pressing the Play button this will become activate (pressed), of green colour and the first file from the “Files to be plotted list” will be send to the plotter. If is pressed again the Play button, this will change the button colour in black and after the file which are transmitted to the plotter are finished, the transmission of the data to the plotter will be stoped.

  Using the Pause button will be stoped for a wished period the transmission data to the plotter. Pressing the Pause button, the button colour become green and the transmission data to the plotter is temporary stoped. Pressing again the Pause button, the button colour become black and the transmission data to the plotter is restarted.

  Pressing the Stop button the transmission data to the plotter will be definitive closed and the file who is in the transmission process will be mouved in the “Plotted files list”.

- On the half down side of the main window is the Files preview area, where can be seen the selected file and are displayed information of the selected file state.
7.2.3 Set up the program

• General program set up

By accessing the Settings menu from the Menu bar, of the program main window, will be open a new window named Gemini PLT Spooler-General settings.

In this window is the Program settings menu and the plotter type menu. In our situation on the box “Plotter type” will be selected the plotter: Popjet (160/180/200).

In the Program setting menu from this window will be entered parameters like the following: the path of the files to be plotted and the plotted files, the time between two program check if there are new files in the files to be plotted folder, the step of zoom in / zoom out of a preview level in the file preview area, plotter type, the space between two markers, scaling options, delete options from plotted files, text optimization options, drawing options, application language.

Also in the Gemini PLT Spooler- General settings window are three options for disconnect the transmission data to the plotter:
- “Disconnect after plotting a file”; by marking this option, after a file is plotted, the transmission data to the plotter is stopped, even in the “Files to be plotted list” there are another files.
- “Disconnect after plotting all files”; by marking this option, the transmission data to the plotter is stopped after all the files from the “Files to be plotted list” are plotted.
- “The plotter remains connected”; by marking this option, after the Play button (start the transmission data to the plotter) is pressed this will remain activated and the transmission data to the plotter will be done in continuous mode. After the files from the “Files to be plotted list” are plotted, the Play button remain pressed and when in the list appear a new file, these is automatically send to the plotter.

On the down side of the window are 4 buttons:
- **Edit**: if this button is pressed you can edit the files to be plotted extensions;
- **Reset settings**: this button makes the program to load the default settings;
- **Accept**: this button is for save the user entered parameters;
- **Cancel**: quit.

- **Plotter configuration**

In order with the plotter type which will be used on the **Gemini PLT Spooler-General settings** window must be selected the proper plotter type. In this way from the Popjet (160/180/200) plotter on the window will appear the **Popjet (160/180/200)** menu.
On this menu must be entered parameters about:

- **Width** of the paper roll which will be used; the maximum value accepted is 1650mm (PopJet 160), 1830mm (PopJet 180), 2020 (PopJet 200);
- **Print line width**; the value of this parameter can be selected in $1 \div 10$ interval, where one unit is approximate 0.2 mm;
- **Space between two lines**; represent the paper step adjustment so that the plotted lines between two passing shall be perfectly united (must no be spaces or overlaps between two consecutive plotted lines). The adjustment can be done in the interval $-27 \div 27$ units.
There are spaces between the plotted lines on the left/right print head motion. In this situation the adjustment of the paper step between two print head motions must be done.

There are overlaps between the plotted lines on the left/right print head motion. In this situation the adjustment of the paper step between two print head motions must be done.

- **Print speed**: the value of this parameter can be selected in the interval \(1 \div 9\) units.
- **Print origin**: represent the start point of the printing process. This parameter can be selected in the interval \(1 \div 100\), where a unit is 1 cm.
- **Bidirectional printing**: Usually the plotter is set up to unidirectional plotting but if the **Bidirectional printing** box is checked, the plotter will plot bidirectionally, in this way the plotting process speed is increased, but with a gentle reducing of the plotting quality.

Once this option is marked will be automatically activated three set up boxes:

  - **Ink cartridge 1 positive deviation**: represent the deviation between the left/right print head motion in the plotting process, on the left side of the plotted marker, for the right cartridge. This parameter can be adjusted in the interval \(-99\div99\) units.
? **Ink cartridge 1 negative deviation**; represent the deviation between the left/right print head motion in the plotting process, on the right side of the plotted marker, for the right cartridge. This parameter can be adjusted in the interval \(-99 \div 99\) units.

? **Ink cartridge 2 positive deviation**; represent the deviation between the left/right print head motion in the plotting process, on the left side of the plotted marker, for the left cartridge. This parameter can be adjusted in the interval \(-99 \div 99\) units.

? **Ink cartridge 2 negative deviation**; represent the deviation between the left/right print head motion in the plotting process, on the right side of the plotted marker, for the left cartridge. This parameter can be adjusted in the interval \(-99 \div 99\) units.

? **Print head**; those settings allow the user to select which ink cartridges to be used right, left or both.

**Attention!** Those three parameters depend on one of the other, that means when you choose a value for one parameter the other two parameter are influenced, so these three parameters must be carefully set up.

In this window are 4 buttons with the next designations:

- **Reset settings**: this button makes the program to load the default settings;
- **Accept**: this button is for save the user entered parameters;
- **Cancel**: quit;
- **Calibrate**: this button is for plotter calibration.
7.2.4 Plotter calibration

On the **Popjet (160/180/200)** menu from the **Gemini PLT Spooler-General settings** main window is the **Calibrate** button which is use for plotter calibration. Plotter calibration must be done on the first starting of the plotter, after plotter mounting or in the situation when the dimensions of the plotted marker are not the same with the dimensions of the projected markers.

When the **Calibrate** button is pressed will be open a window named „**Calibrate plotter**“, like in the next figure:

![Calibrate plotter window](image)

Must be followed the steps from the **Calibrare plotter** window in the indicated succession.

On the “Step 3” to the „**Length**“ and „**Width**“ boxes must be entered, in mm units, the measured values from the plotted rectangle. After that the software will automatically change the scale factors to the “Step 4”. Press the **Accept** button to save the new calibration factors.

It is recommended, for a precise measurement, to pull out the paper from the plotter and the measurement to be done on a plate surface.

After the measured values are entered, the rectangle must be plotted again and the plotted rectangle must be measured again. If the measured dimensions of the plotted rectangle are **2000 mm x 700 mm**, the plotter is calibrate and ready to work. Press again **Accept** button.

⚠️ For a good learning of the program configuration use the **Gemini PLT Spooler-User guide**.
7.2.5 Effective plotting

The effective plotting can be done following the next steps:
- Connect the USB cable to the plotter and the computer;

⚠️ USB cable can be connected just if the voltage power to the plotter is turned off. Otherwise the plotter or the computer can be damaged.

- Turn on the plotter power from the plotter On/Off button;
- Open the main window of the Gemini PLT Spooler program by clicking on the program icon, which can be finded on the down bar of the computer display (system tray);
- Select the file which must be plotted;
- Press the Play button. In this moment the plotter start to plot, the button remain activate and his colour is green. In the same time over the Play button will apear the transmission data to the plotter progress indicator.

⚠️ It is recommended that in the time when the data are transmited to the plotter (the transmission data to the plotter progress indicator is present and in fill process) to not use in the same time another application on the computer. Otherwise is possible
that the plotter to loose data or the plotting process to be blocked and the plotted file to be unusable.

- After the transmission data to the plotter is finished, the transmission data to the plotter progress indicator is desapear, the Play button is no more activate, his colour become black and the plotter is stoped.

**Chapter 8**

**MAINTENANCE**

8.1 Cleaning and lubricating

Clean and lubricate the contact surface between the paper and the plotter using a soft cloth weted with PTFE (GPL 1506) oil. This thing must be done on each two weeks or everitime when the contact surface is dirty.

Lubricate the bearings and the couples of the feed and take up spindles, using a fine mechanism oil on each two weeks or everitime is needed.

The plotter must be regulary cleaned from dust and manteined in a perfect cleaned state.

8.2 Ink out

When are frecvently gaps on the plotted lines and this thing persist after the cleaning of the ink cartridge process, the ink cartridge must be replaced.

When Ink Out indicator from the ink cartridge is changed his colour from green to other colours, the ink cartridges must be replaced.

When the Error light indicator is on for 2 seconds and off for one second and in the same time the Ink Out light indicator is on, the plotter is stoping and in the same time will hear a sound, the ink cartridge must be replaced.

8.3 Plotter recalibrating

The plotter must be recalibrating once per month, or everitime when the dimension of the ploted files are not the same with the dimension of the projected files.
8.4 Cheking the plotting quality

Each plotted file must be visually checked before to be send to the production. After each file is plotted the contour of the marker must be measured and the contour dimensions must be compared with the projected dimensions. If the dimensions of the marker contour are like the projected dimensions the plotted marker can be send to the production.

Chapter 9

TROBLESOOTINGS

9.1 Common troubleshootings

<table>
<thead>
<tr>
<th>Problem</th>
<th>Possible cause</th>
<th>Possible solution</th>
</tr>
</thead>
</table>
| AC Power light indicator is off | The plotter is disconnect from the voltage power | 1. Check if the charging cable is connected to the power socket and to the plotter socket  
2. Check if the plotter On/Off button is to On position  
3. Check the fuse and replace it if is necessary. |
| No short sound will hear (plotter test OK) when the plotter is turned on | The plotter was turned off and on imediatly | Turn off the plotter and turn it on again after minimum 10 seconds |
| The file to be plotted was send to the plotter but nothing is happend | 1. The plotter is not turned on  
2. There is no communication between the plotter and the computer | 1. Check if the plotter is in normaly working state (short sound must be heared)  
2. Check if the USB cable is connected to the plotter and computer |
| Sending of the files to the plotting is stopped | The plotter is in suspensive state | Check if the Pause light indicator is on and leave the suspensive state. |
| The files to be plotted can not be ploted | 1. The USB port have a security paswor  
2. The plotter type was wrong selected in the program | 1. Unsecure the USB port  
2. Select the write plotter type on the program |
If the problem can not be solved after reading the previous tabel contact the Service Departament.

### 9.2 Software troubleshootings

<table>
<thead>
<tr>
<th>Problem</th>
<th>Possible cause</th>
<th>Possible solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>The plotting application can not be started</td>
<td>Program installation failed</td>
<td>Reinstall the program</td>
</tr>
<tr>
<td>Error message is received when try to send files to the plotter</td>
<td>The computer don’t “see” the plotter</td>
<td>1. Turn on the voltage power to the plotter 2. Connect the USB cable to the plotter and the computer 3. Reinstall the dryver of the plotter</td>
</tr>
</tbody>
</table>

If the problem can not be solved after reading the previous tabel contact the Service Departament.

### 9.3 Error light indicator

<table>
<thead>
<tr>
<th>Problem</th>
<th>Cause</th>
<th>Possible solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Error light indicator is on for 1 second and off for 2 seconds</td>
<td>1. Motor protection for movement in X direction is activate and the motor is stoped 2. The print head can not mouve in the left/right direction</td>
<td>1. Check if is any obstacle in the way of the print head and pull it out 2. Check if the print head can be mouved with the hand 3. Turn off the plotter and turn it again on after minimum 10 seconds</td>
</tr>
<tr>
<td>Error light indicator is on for 2 seconds and off for 1 second</td>
<td>Errors received to the transmission of the data</td>
<td>1. Check if the USB cable is correctly connected 2. Check if the files to be plotted are correctly</td>
</tr>
<tr>
<td>Error light indicator is on for 5 seconds and off for 5 seconds</td>
<td>The length and the width of the file to be plotted are too big for internal plotter buffer</td>
<td>Check if the file to be plotted is correct and if the width of the marker is passing the plotter limit</td>
</tr>
<tr>
<td>Error light indicator is on for 2 seconds and off for 1 second. In the same time the InkOut light</td>
<td>Short on the ink cartridge</td>
<td>Replace the ink cartridge</td>
</tr>
</tbody>
</table>
When the Error light indicator is on the plotter will make a sonor signal for attention.

### 9.4 Plotting quality troubleshootings

<table>
<thead>
<tr>
<th>Problem</th>
<th>Cause</th>
<th>Possible solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>There are gaps in the plotted lines</td>
<td>The ink cartridge is dirty</td>
<td>Clean the ink cartridge</td>
</tr>
<tr>
<td>There are left and right deviations between the plotted lines (on X direction)</td>
<td>No adjustment of the deviations from the plotting program</td>
<td>Adjust the deviations on the plotting program</td>
</tr>
</tbody>
</table>
| There are spaces or overlaps between the plotted lines (on Y direction) | 1. Too much paper collected on the take up spindle  
2. No adjustment of the paper step from the plotting program | 1. Pull out the paper from the take up spindle (on the take up spindle must be maximum 40m of loaded paper)  
2. Adjust the space between two lines on the plotting program |
| Dimensional difference between the plotted file and the projected file | The plotter is not calibrate                   | Calibrate the plotter                                                             |