ERIDEVICES
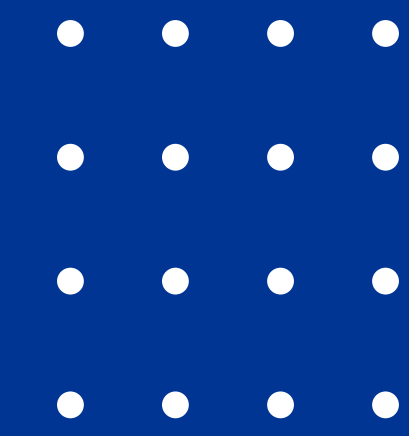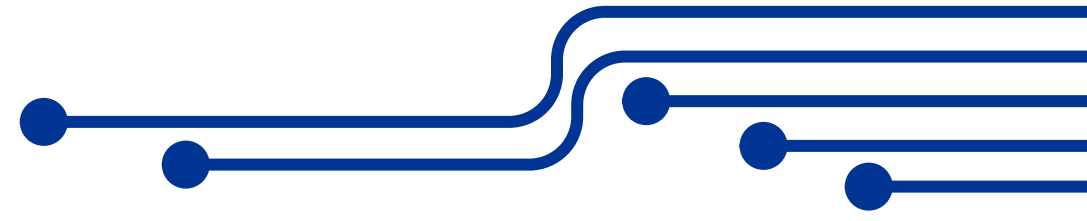
ERIWIRE
USER
MANUAL

info@eridevices.com
www.eridevices.com

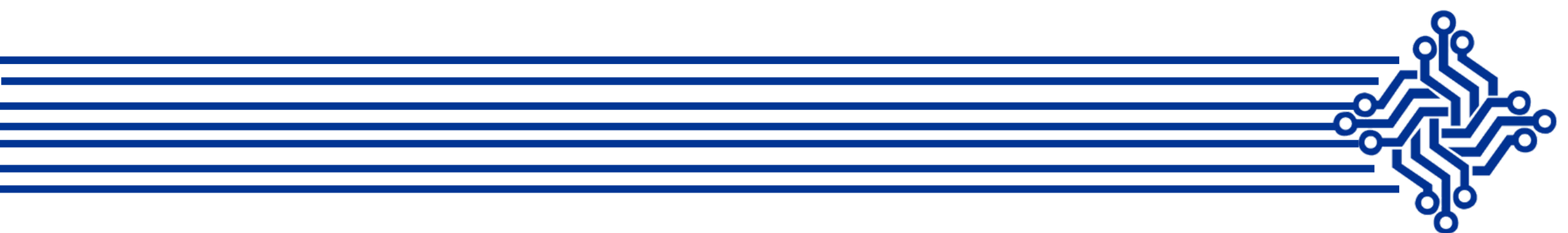# ERIDEVICES

ERIWIRE MODEL

Instruction Manual

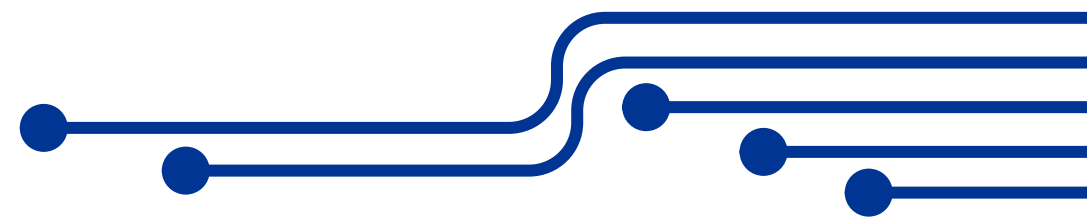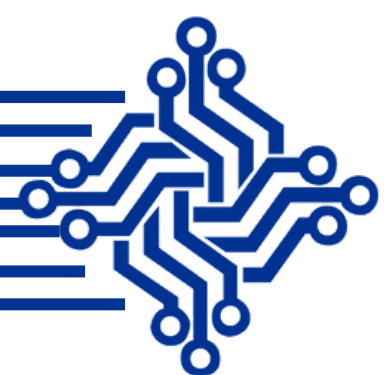## LOW VOLTAGE CABLE & HARNESS TESTER 2024 VERSION

Tijuana, B.C., Mexico

TABLE OF CONTENTS

1.1 - INTRODUCTION

The *Eriwire* low voltage cable tester is a stand-alone cable / harness tester for cables of up to 128 test points.

The *Eriwire* detects opens, shorts, and miswires within one second by comparing test results with a golden file or a baseline recording from a sample cable. Upon error detection, an error message will be displayed on the capacitive touch screen.

The tester uses a changeable universal adapter card that allows to load different connectors and a variety of pin numbers by connecting and soldering the appropriate mating connectors on the card.

With the adapter card, cables with multiple connectors on one end or cables with different types of connectors and pin numbers on each end can be tested without the trouble and cost of needing to change modules for each individual type of connector.

Test and operate the *Eriwire* is made simple through it is *user-friendly software* with easy-to-follow menu prompts and touch screen.

1.2 - FEATURES

- Fast open/short test for flat cable or any discreet wire harness up to 128 test points.
- Fast continuity test
- Fast Isolation test
- Diode Test (Polarity)
- The furnished adapter card fits all the commonly used adapters.
- Provides golden file for all pin -to- pin cable testing or learns from a known good harness assembly.
- Memory of 16 GB that stores a Wire list of thousands of cables.
- Multiple connections are checked with each point or other multiple connections.
- Test probe is included for wire identification or debugging.
- Guide assembly mode.
- Intermittent test capabilities.
- Continuous Test Mode
- Test Multiple Netlist.
- Learn function.
- Test Multiple Netlist.
- Import **CSV** Files.

OVERVIEW HARDWARE

ERIWIRE LOW VOLTAGE CABLE TESTER

The equipment has two modules or scanners with 64 test points each, the module A and the module B.

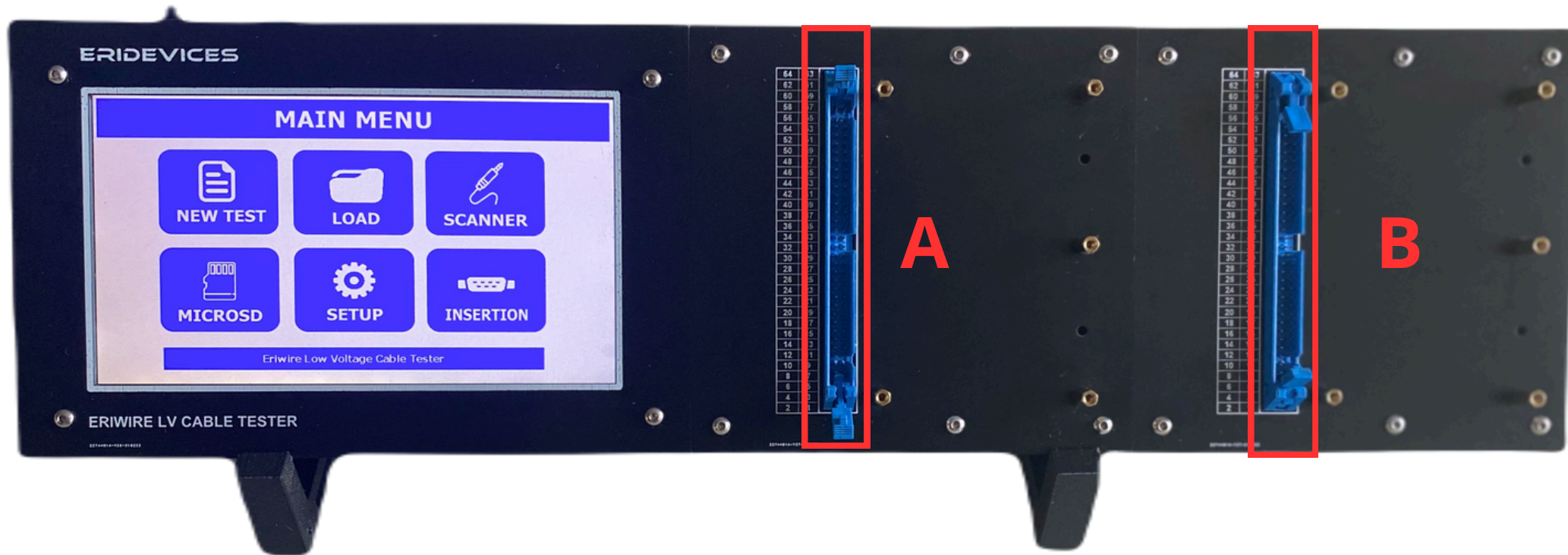| Module	Test Points
A	A1 - A64
B	B2- B64

Image 1.- Eriwire Low Voltage Cable Tester Front Panel.

Image 2.- Eriwire Low Voltage Cable Tester Top View.

1. Seven inches responsive touch display screen

2. Scanner of 64 test points.

3. Support for adapters.

4. Power button.

5. MicroSD slot.

6. Power USB type C slot.

7. Banana Jack connector.

Recommended power supply: 5V @ 2A

UNPACKING AND INSPECTION

The model *Eriwire* cable/harness tester was carefully tested and inspected both mechanical as well as electrically prior to shipment. Upon receiving the instrument, carefully unpack all items from the shipping box and inspect them for any obvious signs of physical damage that may have occurred during delivery.

Report any such damage to transit agent immediately. Save both the packing box for future use in case of re-shipment is required. After unpacking the tester, check for the following packaged items which are included in the sale:

- One Eriwire Low Voltage Cable/Harness Tester.
- One Test Probe, 1 meter long
- One AC Adapter to 5V, 2A.
- One USB cable type C, 2 meters long
- One USB Adapter type A to MicroSD slot.

INSTRUMENT IDENTIFICATION

Each Eriwire instrument has a serial number.

ACCESSORIES AND OPTIONS

The following accessories are provided with each Eridevices, *Eriwire* Low voltage cable tester unit:

- One single wire test probe with a standard banana jack.
- One 120 VAC to 5VDC adapter with output current 2A.
- One USB Cable Type A to USB Type C.
- MicroSD of 16GB.
- One USB Adapter type A to MicroSD.

TURNING THE DEVICE ON

For a start, ensure the USB Cable type C it is attached and connected to the power supply 5V @ 2A. Afterwards, automatically when press the button **ON**, the loading screen appears, the *Eriwire* verifies the scanners and performs a Selftest check.

Image 3.- Booting Screen of the Eriwire LV Cable Tester

LOGIN SCREEN

In the screen shown below you will see the login screen of the cable tester, for general use and cable testing is recommended access as an Operator user.
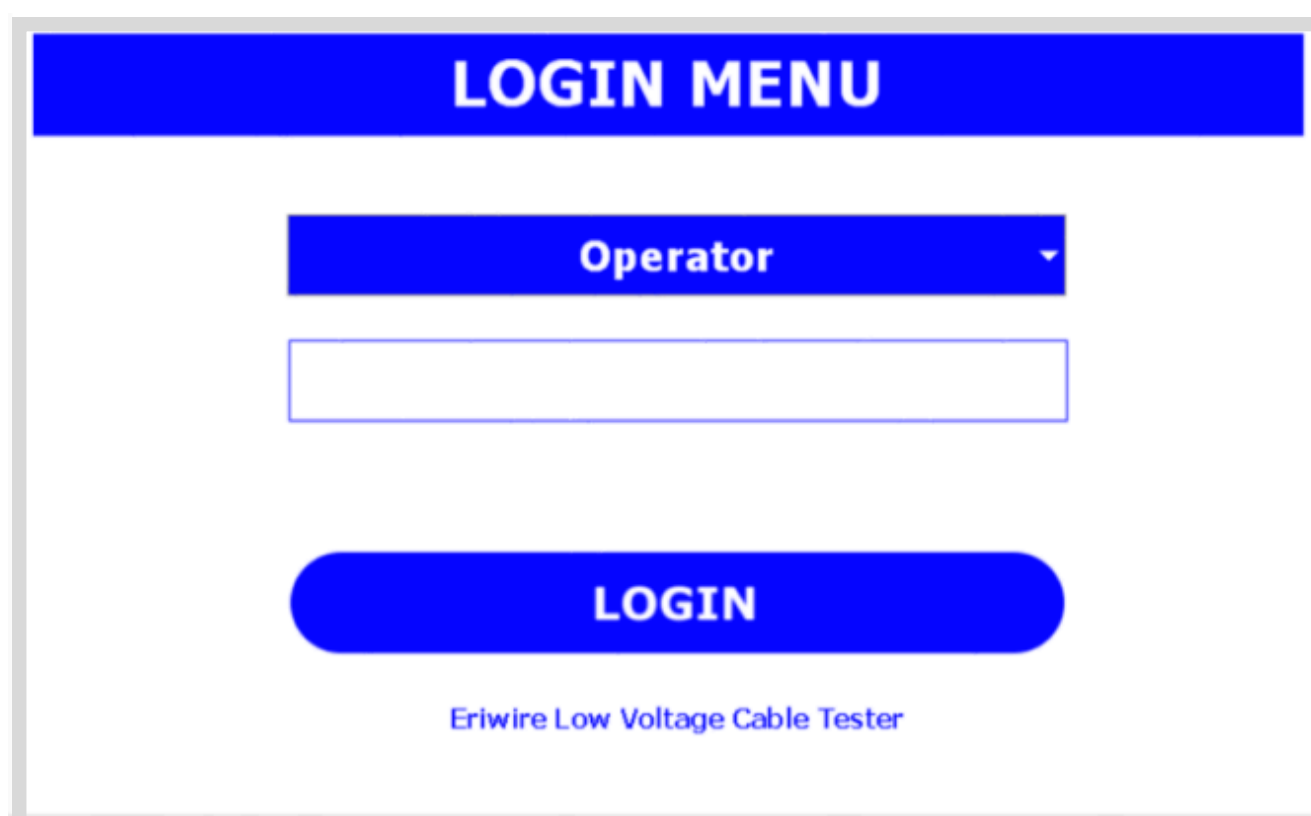**No password is required to move forward.**

Image 4.- Login screen
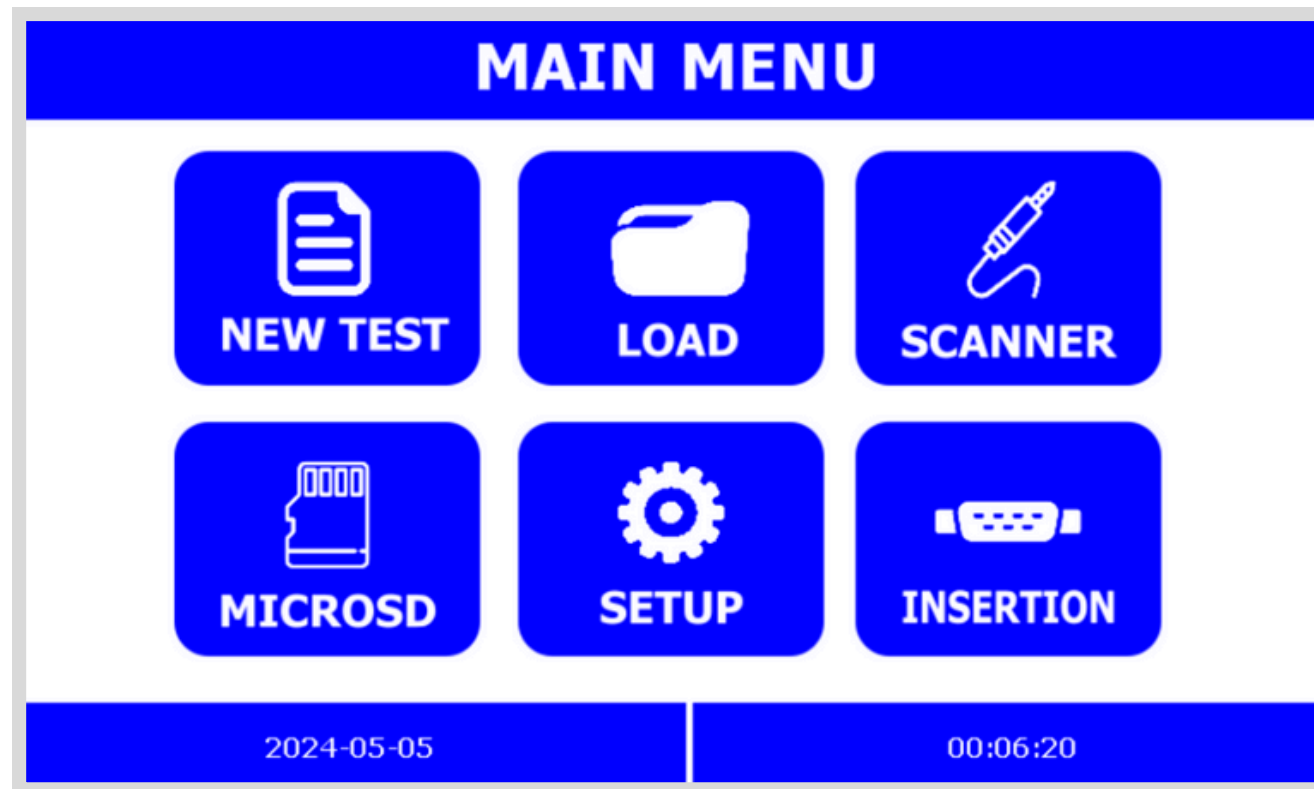
7

MAIN MENU SCREEN

Image 5- Main menu screen

- **New test.** - For creating a new test program or Learn a Cable.
- **Load.** - Allows loading the wirelist saved previously in the equipment.
- **Scanner.** - Where you can identify the pin number or connections, troubleshooting.
- **MicroSD.** - Transfer data from the MicroSD to the Equipment memory.
- **Setup.** - To modify the settings of the equipment.
- **Insertion.** - To load a connector image, guide assembly mode.

NEW TEST SCREEN

This screen allows learn a sample cable or harness. After the cable was attached to the tester, press "Learn", the equipment will automatically learn all connections detected in the scanners.

The **New Wirelist** allows to create a cable with your custom connections on the machine, this functions it is recommended only for simple cables.
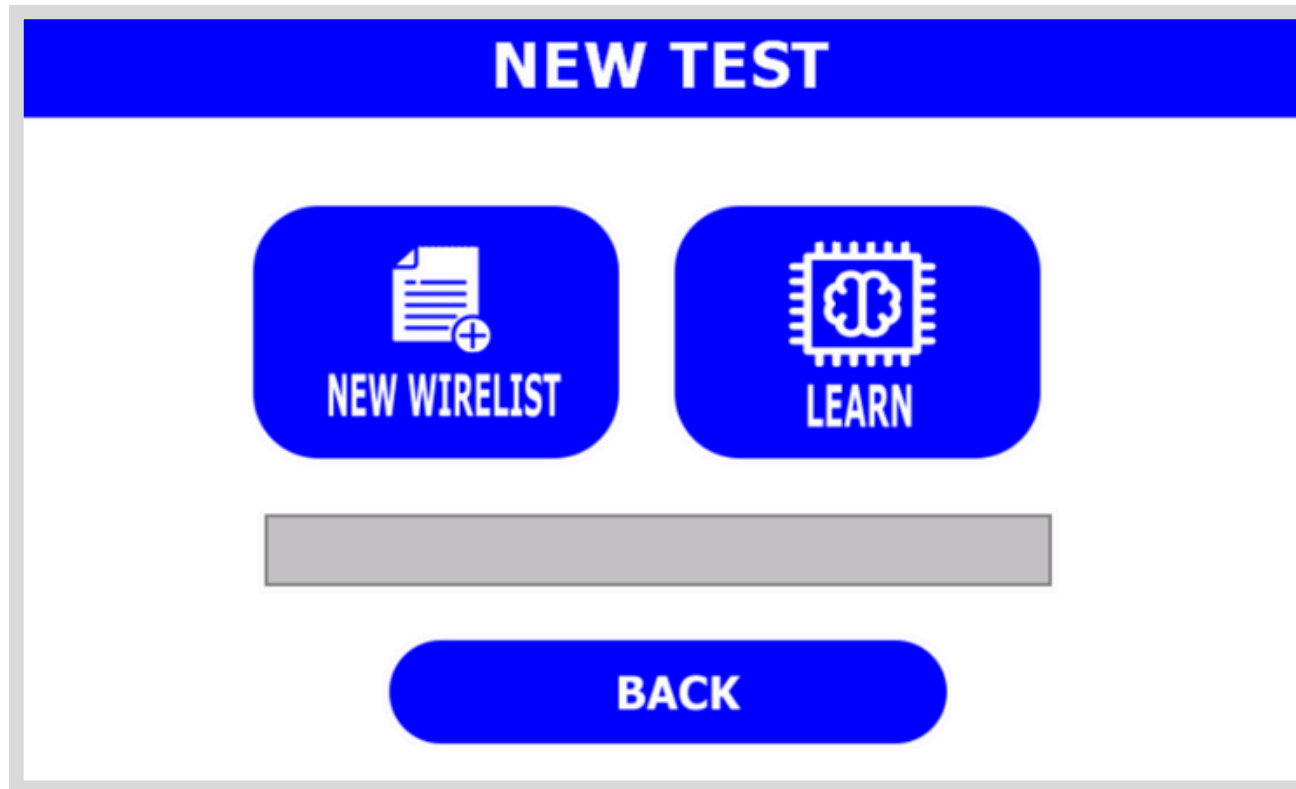

Image 6- New Test Menu Screen

LOAD MENU

Over the load menu screen we can observe all the wirelist of the tester.
When pressing the load button automatically the tester load the wirelist and load the test mode screen.
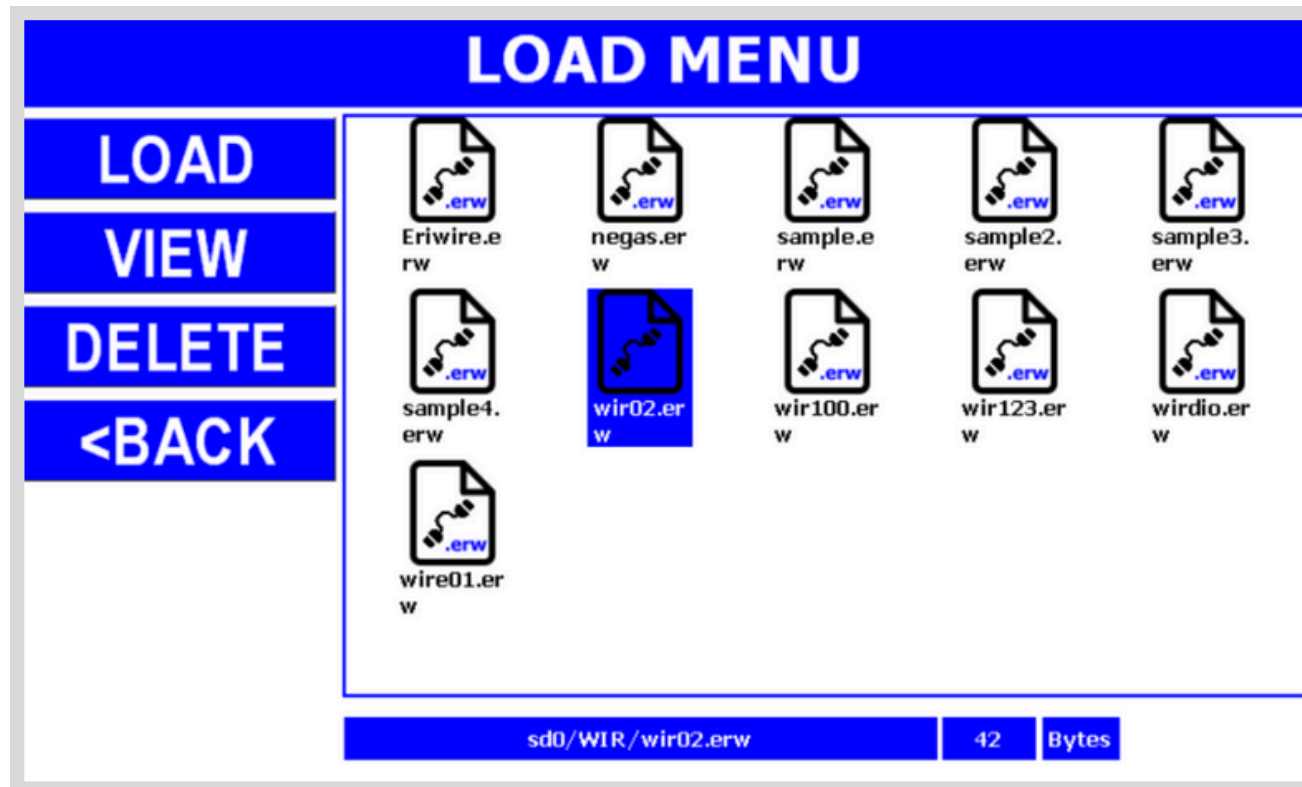

Image 7- Load Menu Screen

- **LOAD. -** This button allows to load the wirelist to the tester.
- **VIEW. -** This option allows to access the wirelist.
- **DELETE. -** Where you can delete a selected wirelist.
- **BACK. -** Press it to return to the main menu.

SCANNER MENU

This site menu allows verify the connections. To use this function, the red probe cable needs to be connected to the tester (Test Lead) and then touch the pin or test point under test.
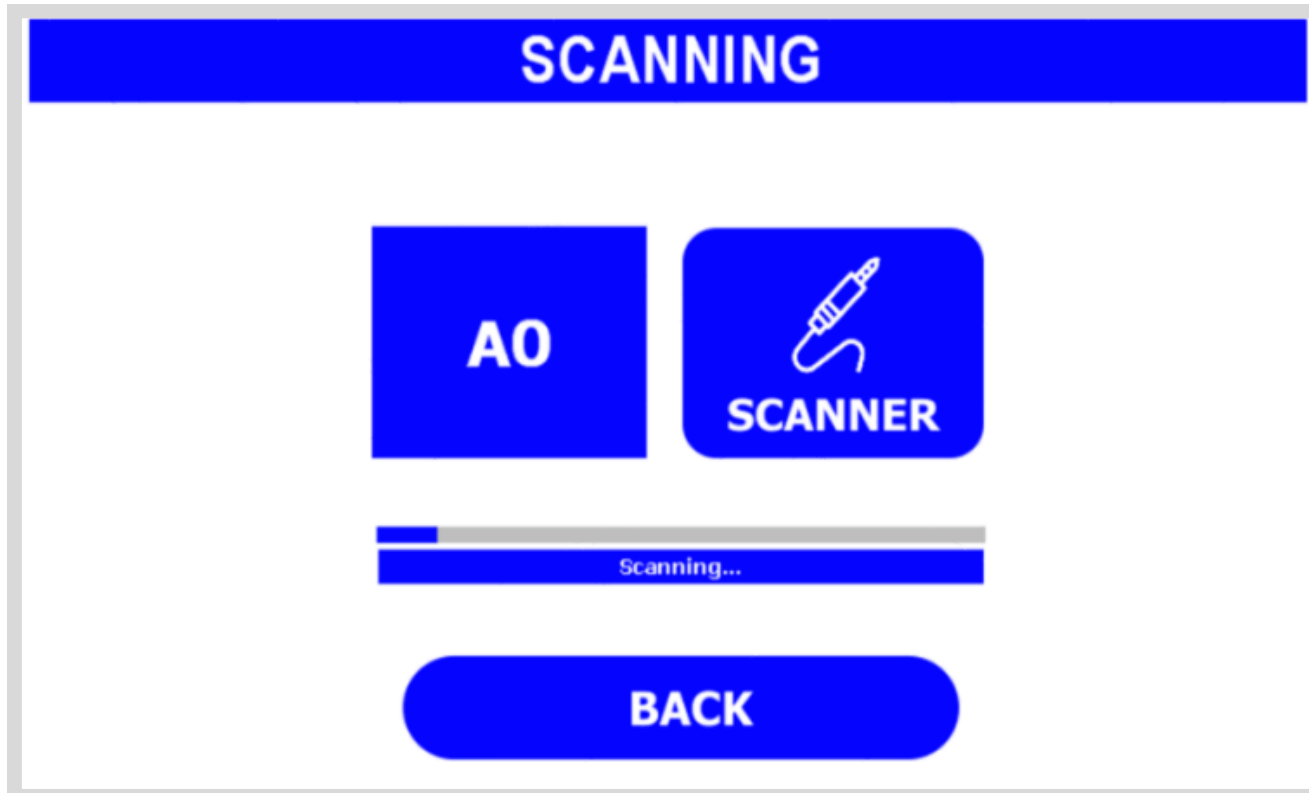

Image 8- Scanning menu

MICRO SD / IMPORT MENU

This menu is for importing data from the MicroSD card to the tester; for instance, to transfer images, you will have to press the button "**.JPG**" and it will display all the images stored in the microSD card; after that, select the desired file and press **Import Files.**
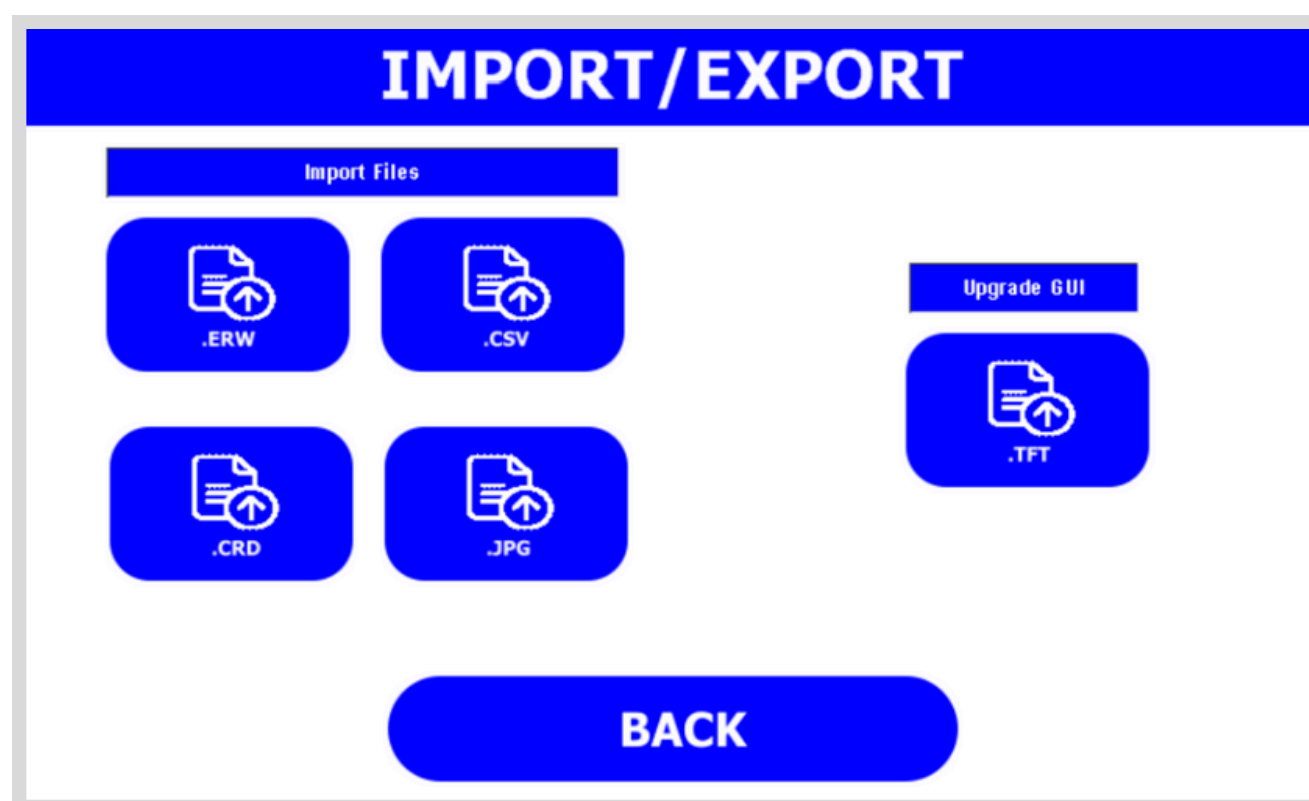The transfer process will begin.

Image 9- Import menu

SET UP MENU

This site is where you can customize your experience using Eriwire, such as: changing the volume and the brightness of the screen.

It is also possible to change the testing mode. The device has two testing modes:

- Cable attached or
- pressing manually the Test button

If the **Cable Attached** option is activated, the test will begin automatically when a cable is attached to the scanners boards is detected.

Image 10- Set up menu

- **Test Settings. -** Select the test mode of your preference: automatic, when Cable Attached is detected or manually, while pressing the Test button.
- **Date / Time. -** Allows you to adjust date and time.
- **Vol / Brightness. -** Where you can regulate volume and brightness.
- **SAVE. -** When you press it, it saves all the changes made and return you to the main menu

ADJUSTING VOLUME AND BRIGHTNESS

- **Volume. -** The user can adjust the volume of the tester / Swipe left to reduce the volume or swipe right to increase it.
- **Brightness. -** It is possibly to modify also the brightness of the display swiping left or right to the desire intensity.
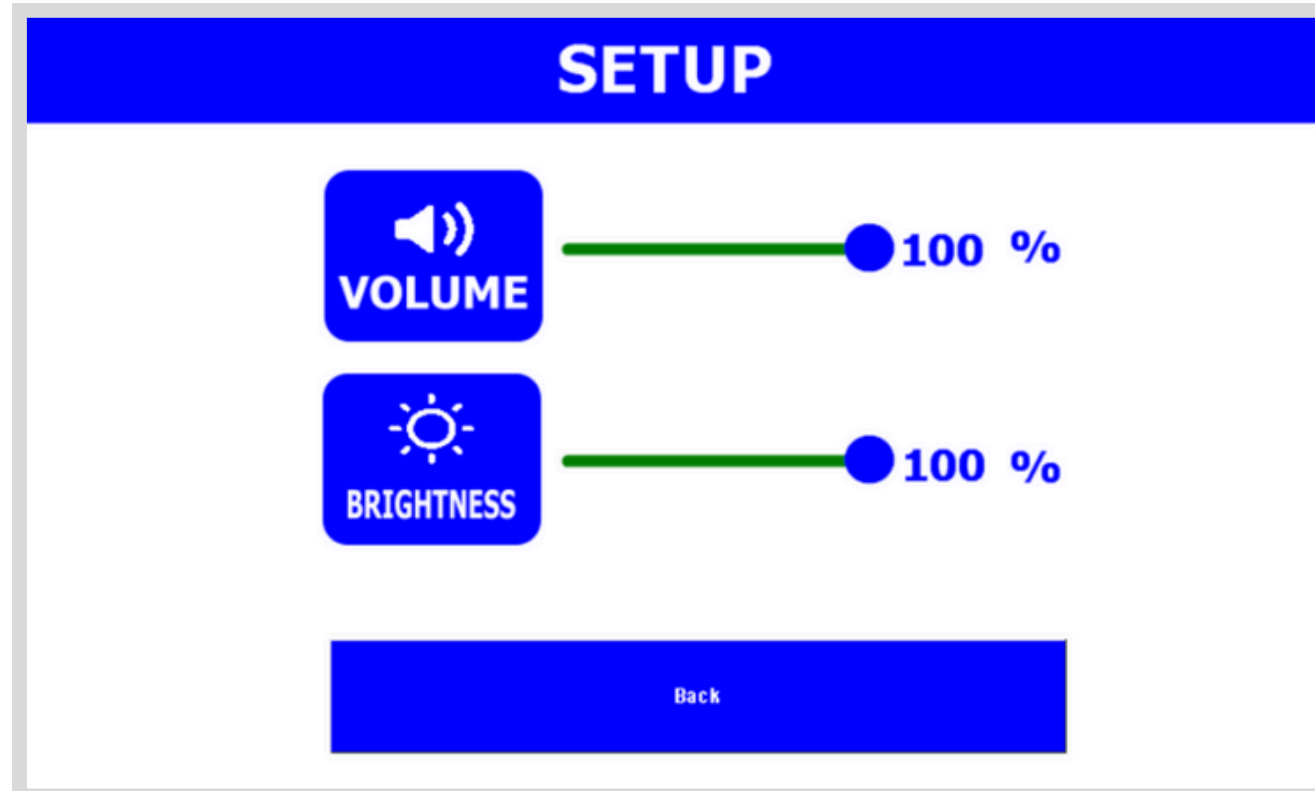- **Back. -** Press **"Back"** button to exit and all settings will be saved.

Image 11- Volume & Brightness menu.

ADJUSTING DATE AND TIME

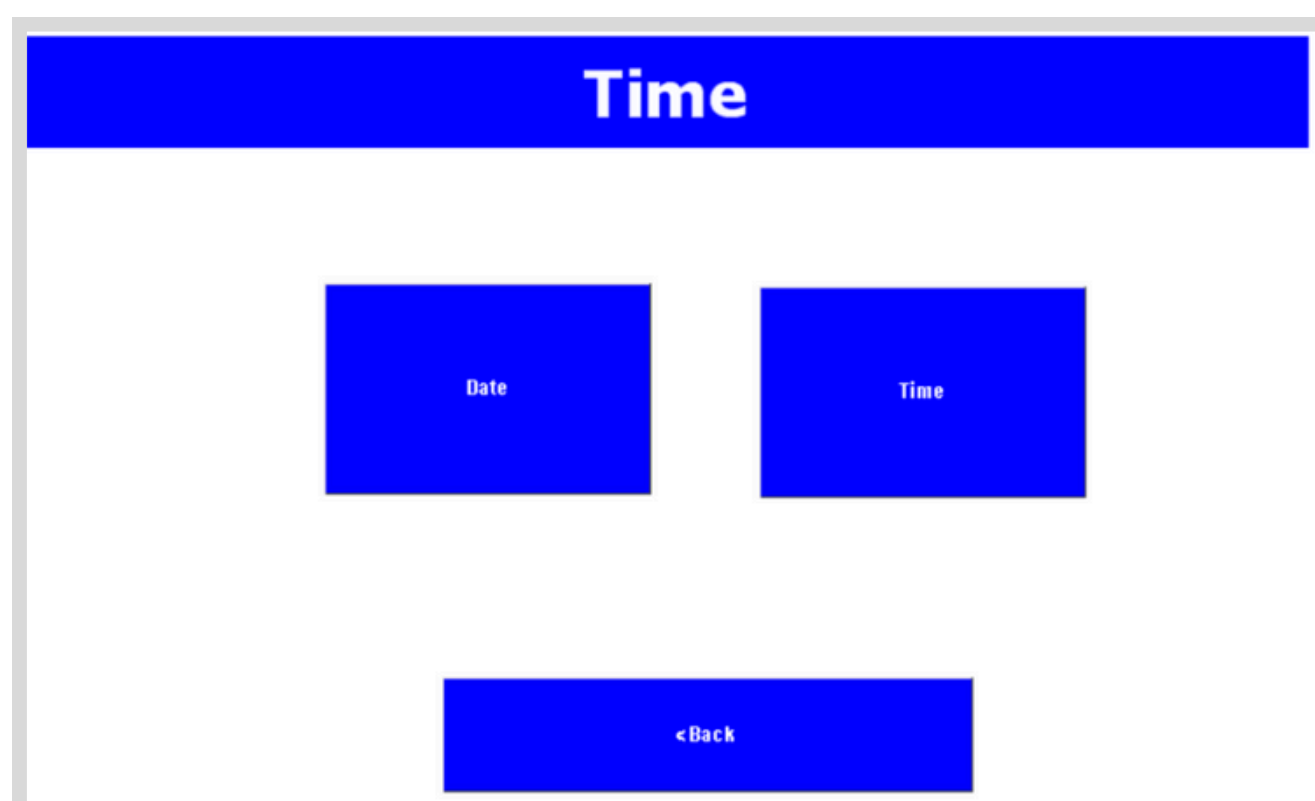Customize date and time on this option

Image 12- Date & Time window.

ADJUSTING DATE

To adjust the date only scroll up or down and select the correct Month, Day or Year, then press the button **"Adjust Date / Close".**

Image 13- Adjusting Date window.

ADJUSTING TIME

To adjust time, scroll up or down and select the right hour, day or year, then press the button **"Adjust time".**

Image 14- Adjusting Time option

LEARNING A CABLE

In this section it is recommended creating the right fixtures or interconnections, verify that the cable or golden sample comply with the specifications; in practice what matters is the number of connections, netlists or diodes.

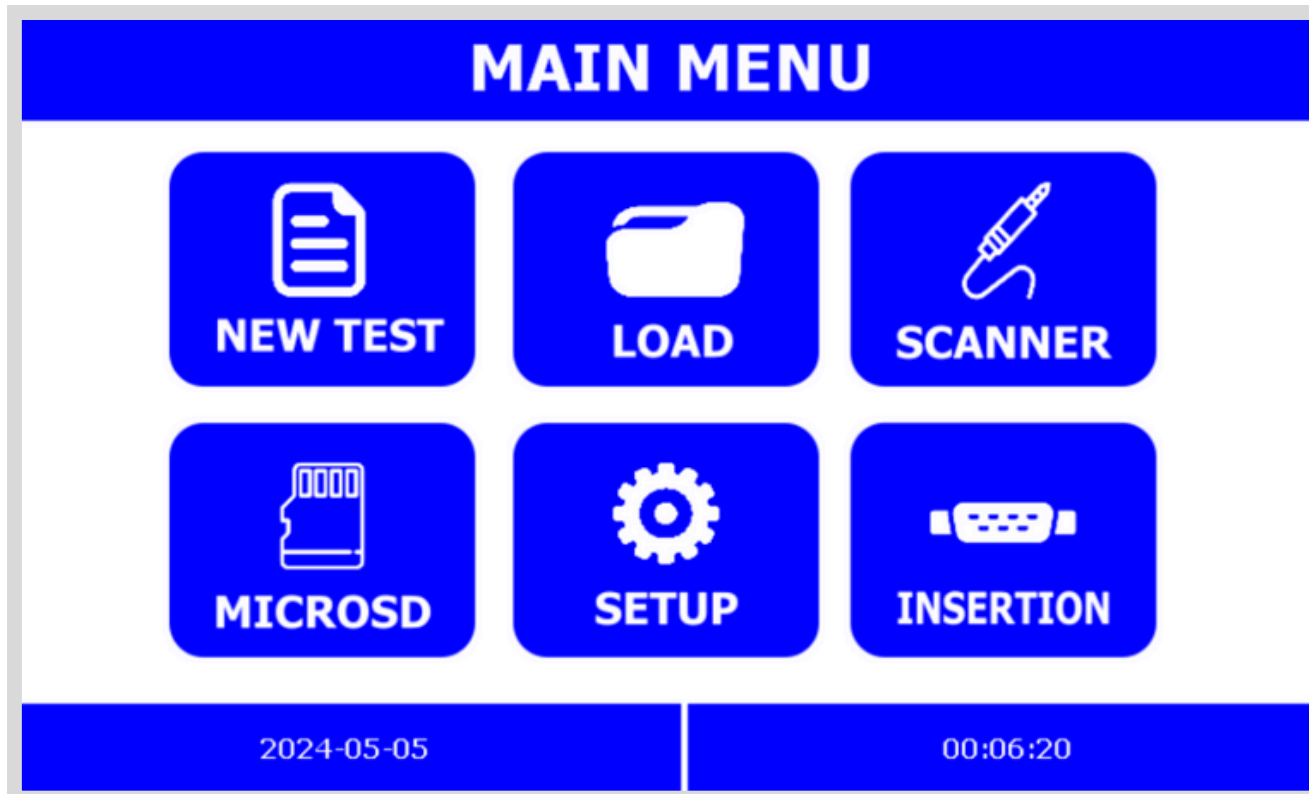**Step 1.-** At the main menu, press the button **"NEW TEST"**.

Image 15- Main menu

Step 2.- At the **New Test** menu, press the button **"Learn".** The cable should be attached on the tester already.
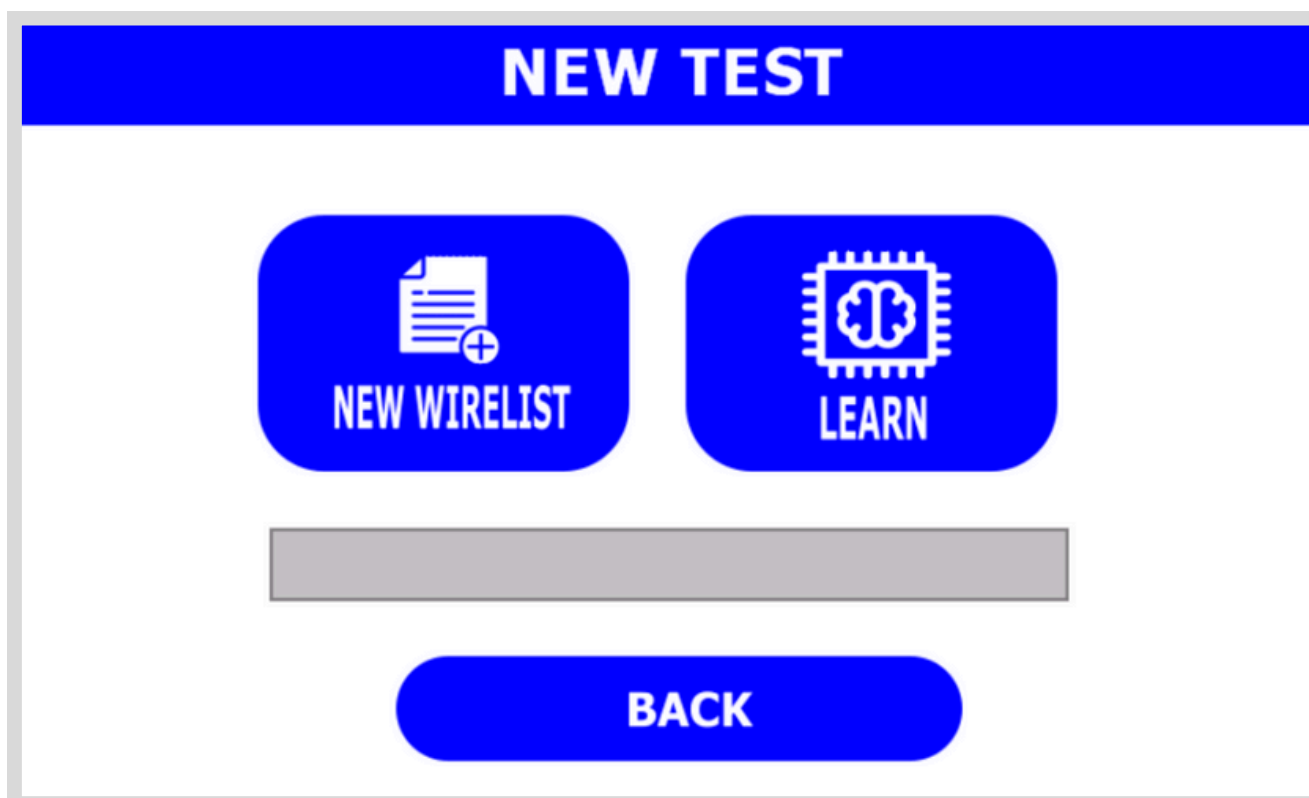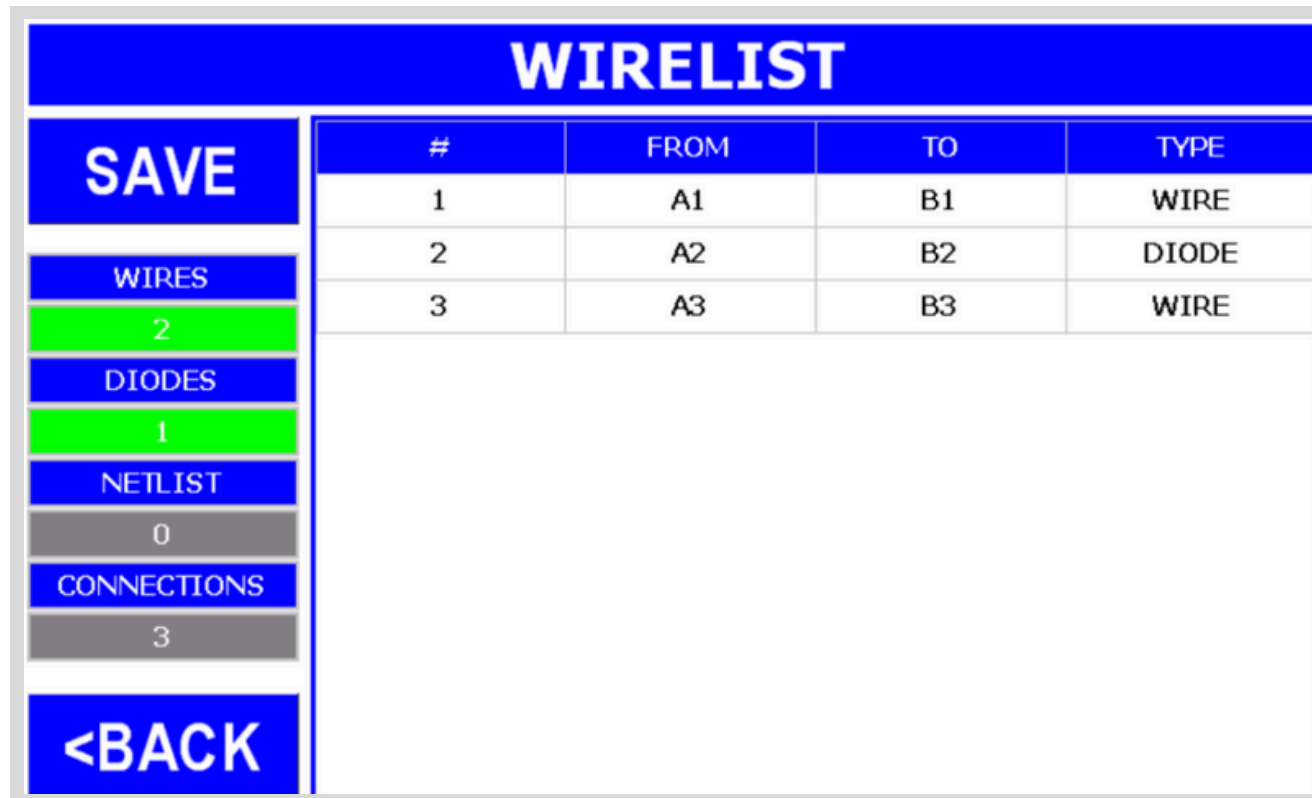

Image 16- New Test Menu

Step 3.- The equipment will show all the connections. The first column is the number of the connection, second column is the "FROM", "TO" and type of connections the Eriwire it's able for testing: *WIRE, DIODE and NETLIST.*

On the figure 17 you can observe the number of connections.
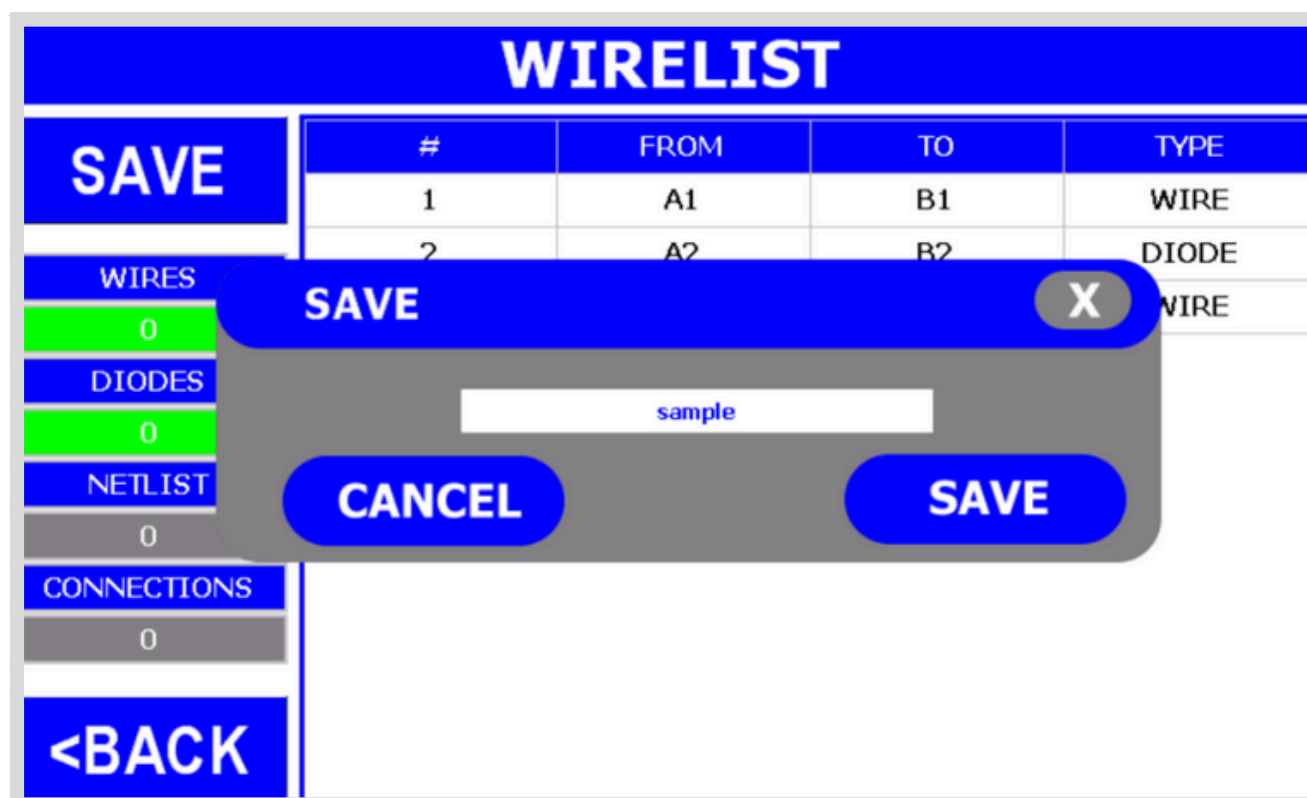
Image 17- Wirelist window

Step 4.- Verify if the connections it is according to specifications and then press the button "SAVE".

Image 18- Wirelist window

Step 5.- Type the name (for instance: "sample") of the new Wirelist, and press the button SAVE.

Note: all the wirelist automatically will be saved in the **LOAD** folder as a *.wir* file.

LOAD & TEST

Step 1. - For loading a cable previously learned, we need to go to the main menu, then press the "Load" button.
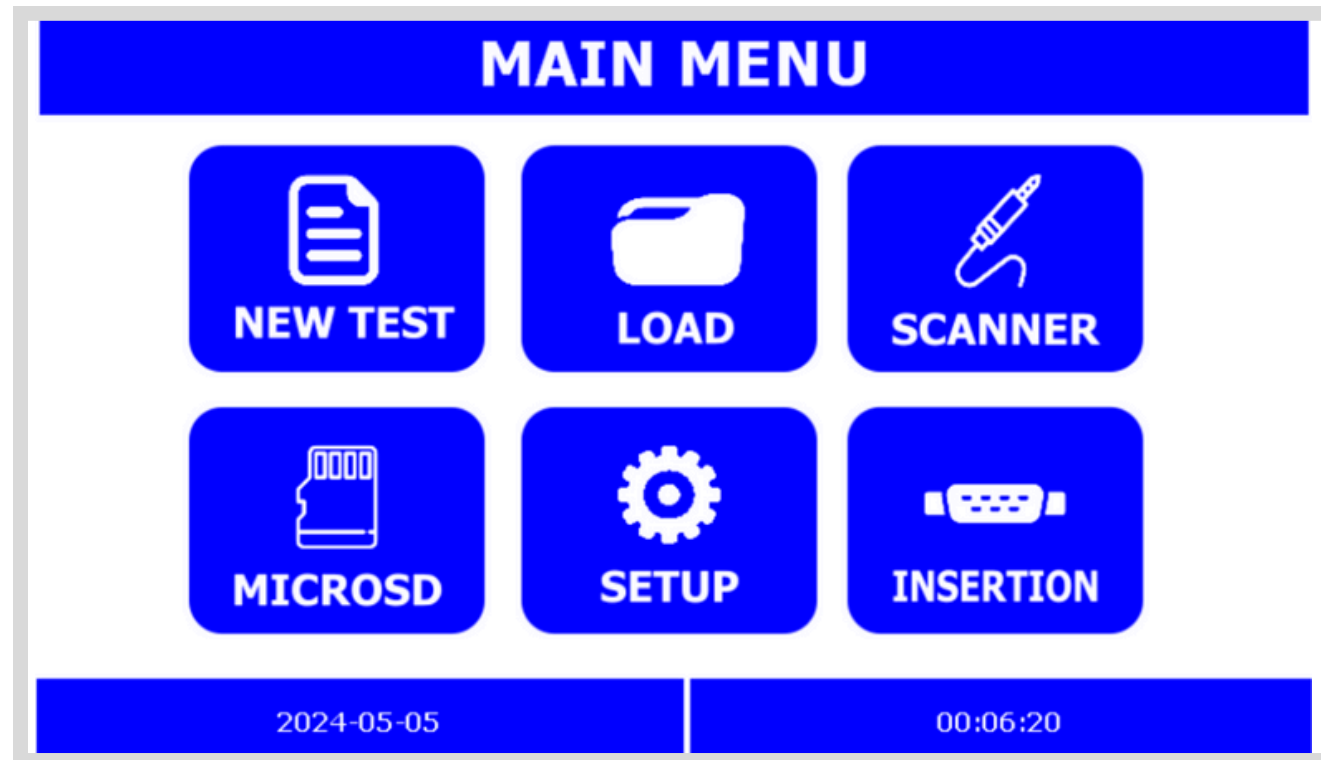

Image 19- Main menu / Load

Step 2. - Select the desired wirelist (2) and then press the load button (3). The loading screen will appear.
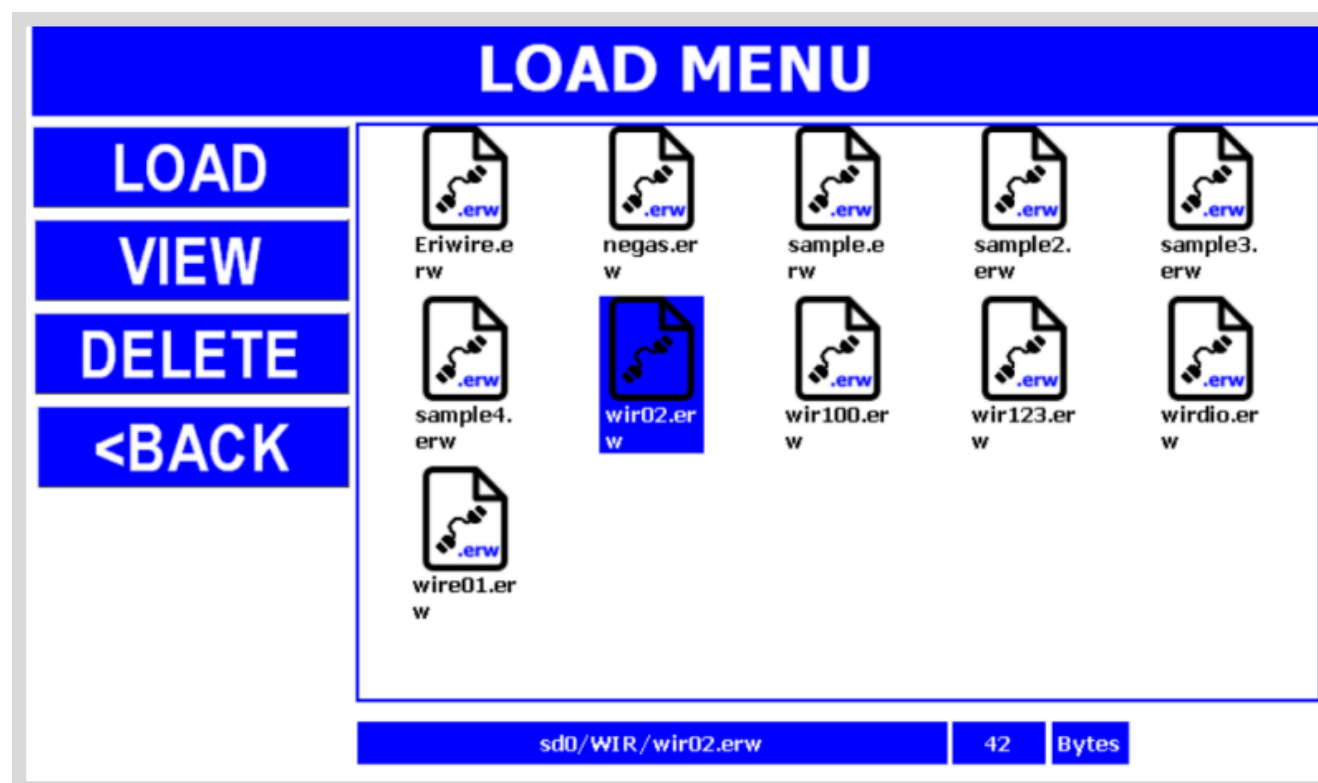

Image 20- Load Menu

READY TO TEST

The screen shown below is from a testing sample; in this case, the user has not attached the cable to the cable tester yet, that is why the **_Ready_** button looks unable; after the user attach the cable to the equipment, the ready button will be activated in a green color.
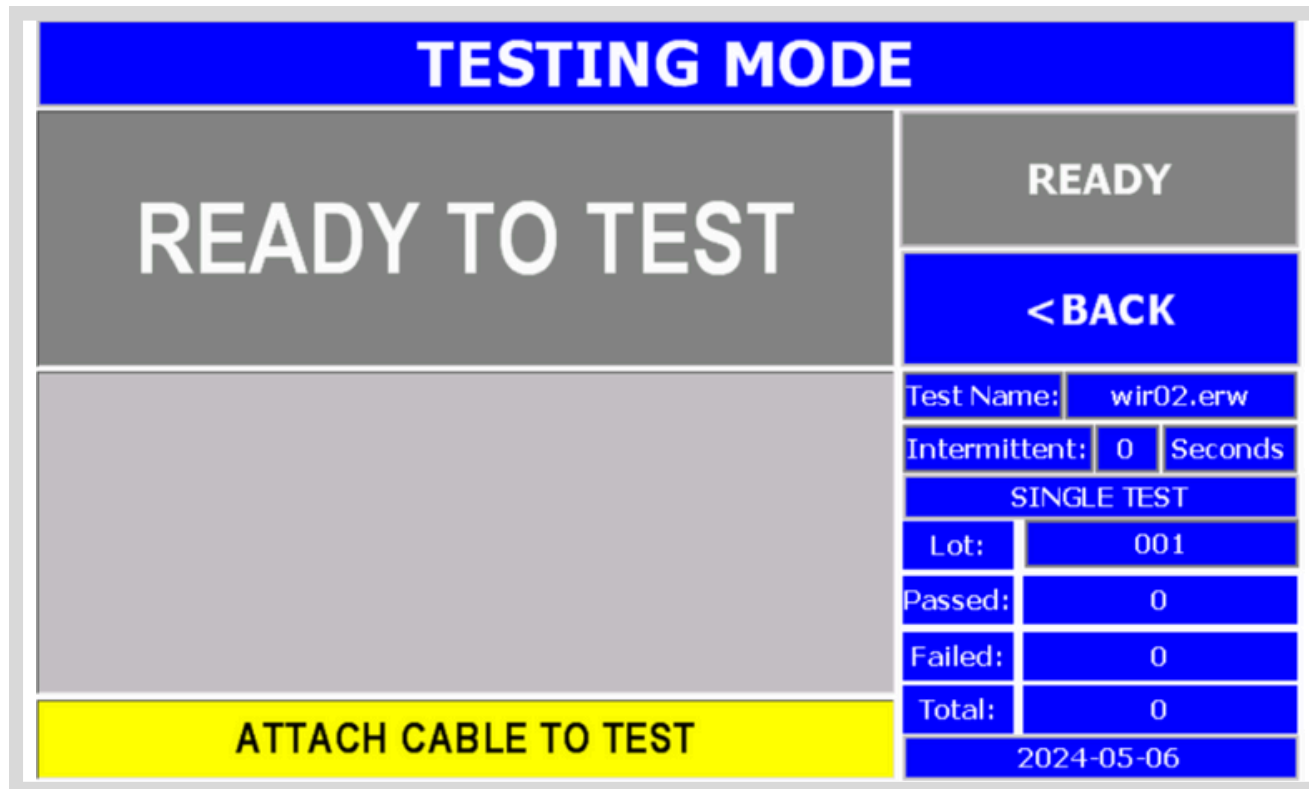

Image 21- Test menu

For testing the user will need to press the button **"TEST",** the device begins to test the low voltages. If the tester founds an error, automatically will display the errors in the screen.

Remember it's possible to change the *Start Mode;* wether manually, pressing directly the Test button to begin; or choose to begin testing automatically when detected a cable connected by selecting the **Cable Attached** option on the Test Settings menu. For more information review the **setup screen** section.

The equipment performs the test in sequence, for example always test continuity first, then isolation and finally verify any extra connection in the scanners.

- **Test name. -** The name of the test wirelist.
- **Intermittent. -** The seconds of intermittent
- **Passed. -** The number of cables passed on the test session.
- **Failed. -** The number of cables failed on the test session.
- **Total. -** The total of cables tested passed and failed on the test session.

CREATING A NEW WIRELIST

The *Eriwire* is capable of creating a Wirelist on the standalone mode; in this case, it is not necessary a cable to be attached to the device in order to create a test setup. For instance, if you want to create a connection, scroll down or scroll up, then press the button with the symbol ">>".

- From = A1 (TestPoint)
- To = B1 (Testpoint)
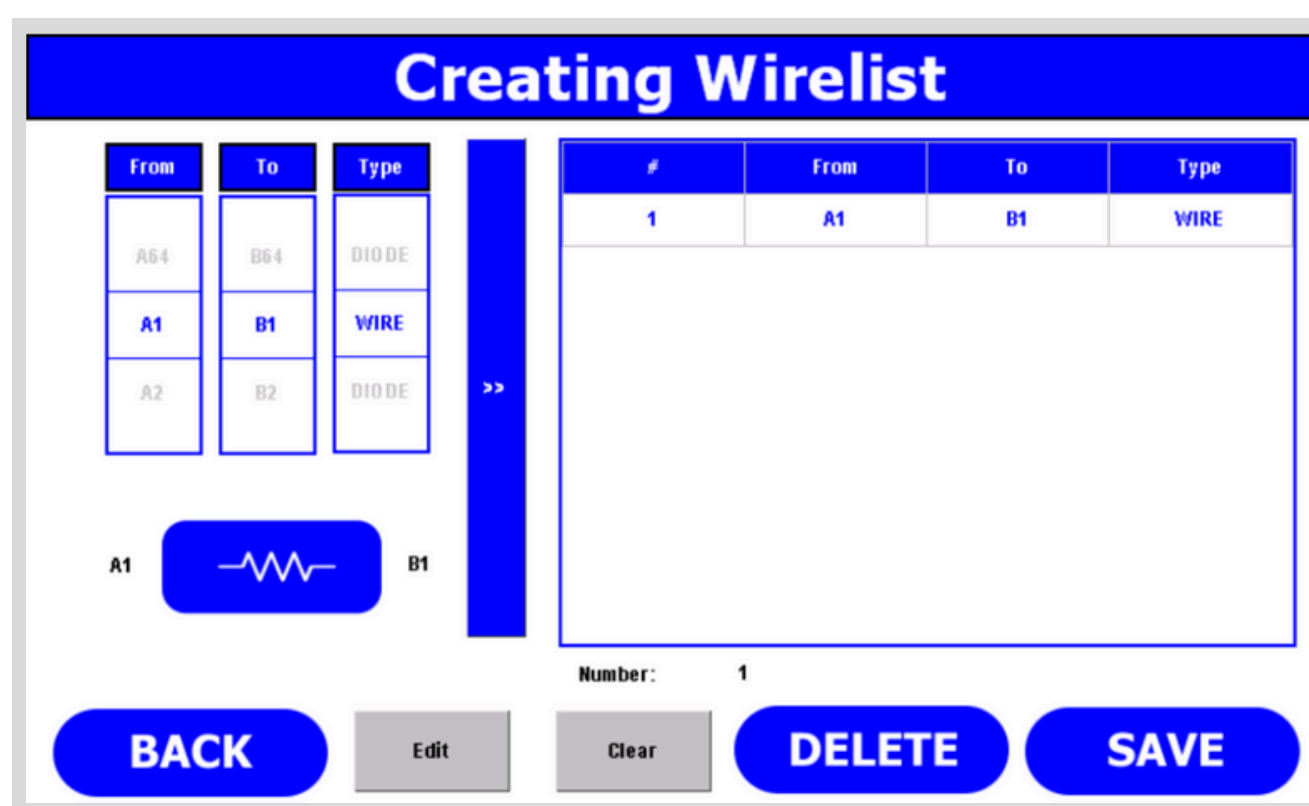- Type = WIRE (Component)

Image 22- Creating a Wirelist window

CREATING A WIRELIST

This option is recommended for simple cables, like ones without a netlist or complex harness.

After the wire list has been completed, press the button **"SAVE"**, then type the name for the new cable or harness.

INSERTION (GUIDE ASSEMBLY)

This site allows the user to select the connector image and load all settings. The *Eriwire* is capable of helping the user as a guide assembly or to insert a pin correctly.

Unlike other cable testers on the market, *Eriwire,* doesn't need an external computer to perform the guide assembly, the only accessories required are the electrical fixture and the red probe.

Image 23- Connector menu

LOADING A CONNECTOR
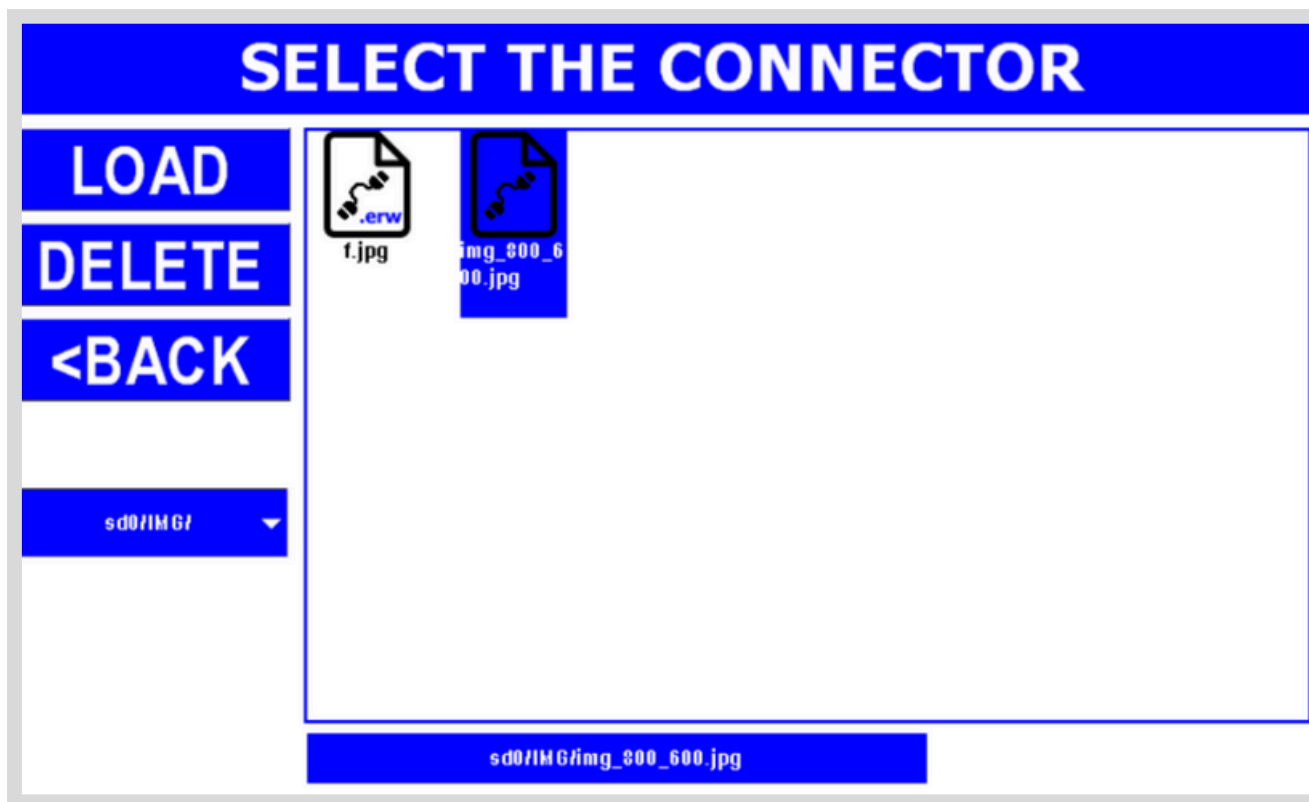
This menu is useful to insert correctly the first time the terminal to the connector, the user needs to touch the red probe to the one side of the cable and the *Eriwire* will show the pin where it should be connected, this process needs to be done with the rest of the cables, when the insertions are done, it is recommended to perform a low voltage test.

Image 24- insertion mode

GUIDE ASSEMBLY MODE/SETTINGS

The guide assembly mode helps the user with the insertion on a side of connector, this option comes in handy when a cable has multiple connections with the same colors, for instance, multiples red cables. It is easy to connect the A side of the cable, but the other side, in some cases, the operator uses a DMM or buzzer to verify the correct insertion which leads to increase the time of insertion and multiple issues or quality problems.

Before continuing, transfer all relevant data to the tester, for example, import insertion file and image file to the equipment.

To performs guide assembly mode, it's necessary:

- Image file format JPG (dimensions 800x480).
- Insertion file format (.ins)

IMPORT FILES TO THE TESTER

Step 1. - The tester has a *microSD* ready to use, just verify if the files are on the right folder.

Folder's structure:

- **FIRMWARE. -** This folder contains all data necessary to upgrade the firmware of the tester.
- **IMG. -** This folder contains the image of the connectors, like *.jpg* files.
- **INS. -** The folder keeps the insertion file extension *.ins.*
- **WIR. -** Where you can find the *.wir* extensions.
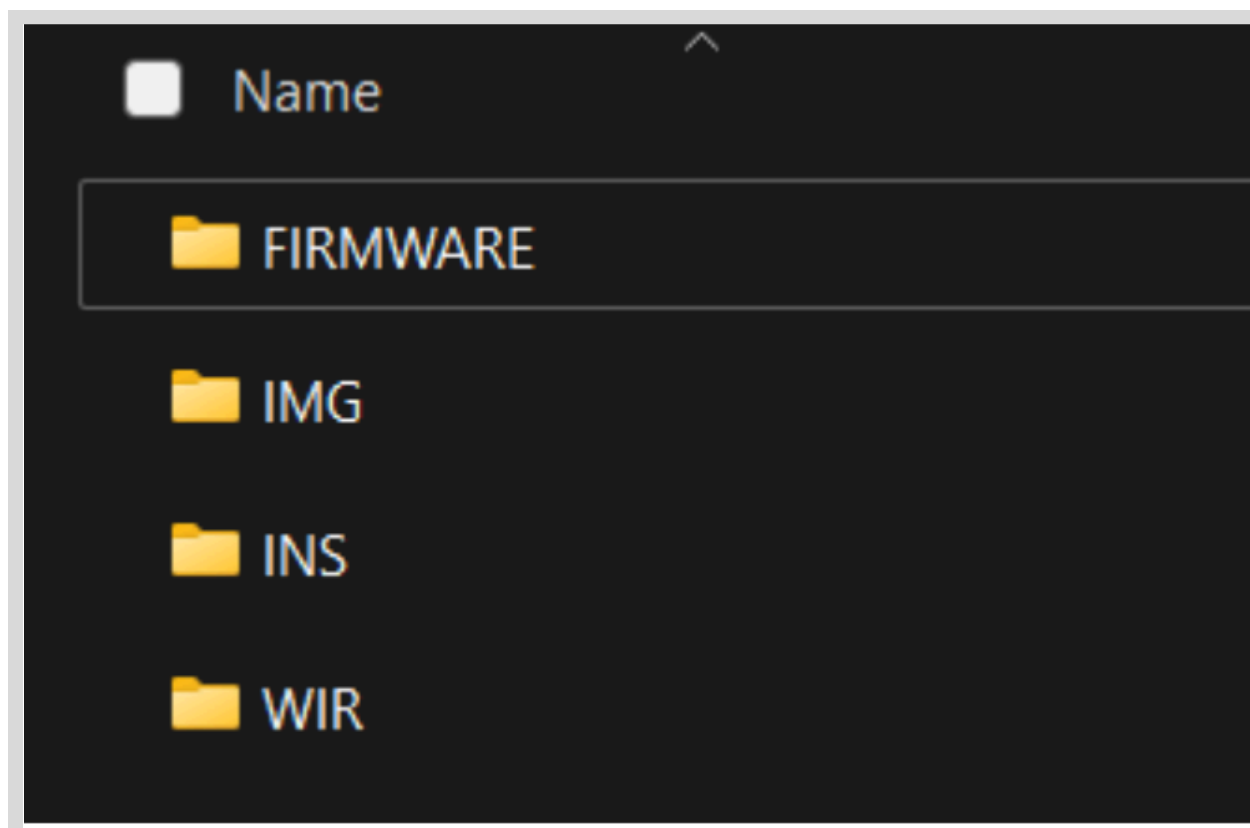- **CSV. -** The folder holds the *.csv* extensions files.

Image 25- MicroSD structure

INTRODUCTION TO THE GUI EDITOR CONNECTOR

The *Eriwire Low Voltage Cable Tester* has the capacity to test Continuity, Isolation, extra connections, and diodes (polarity), besides the useful *Guide Assembly* mode.

To perform the Guide Assembly mode it is necessary to install the software "GUI Connector". In order to create a connector, it will be required to use the "GUI Connector Editor" program, **which you can find it free to download on our webpage https://eridevices.com, under the section downloads.**
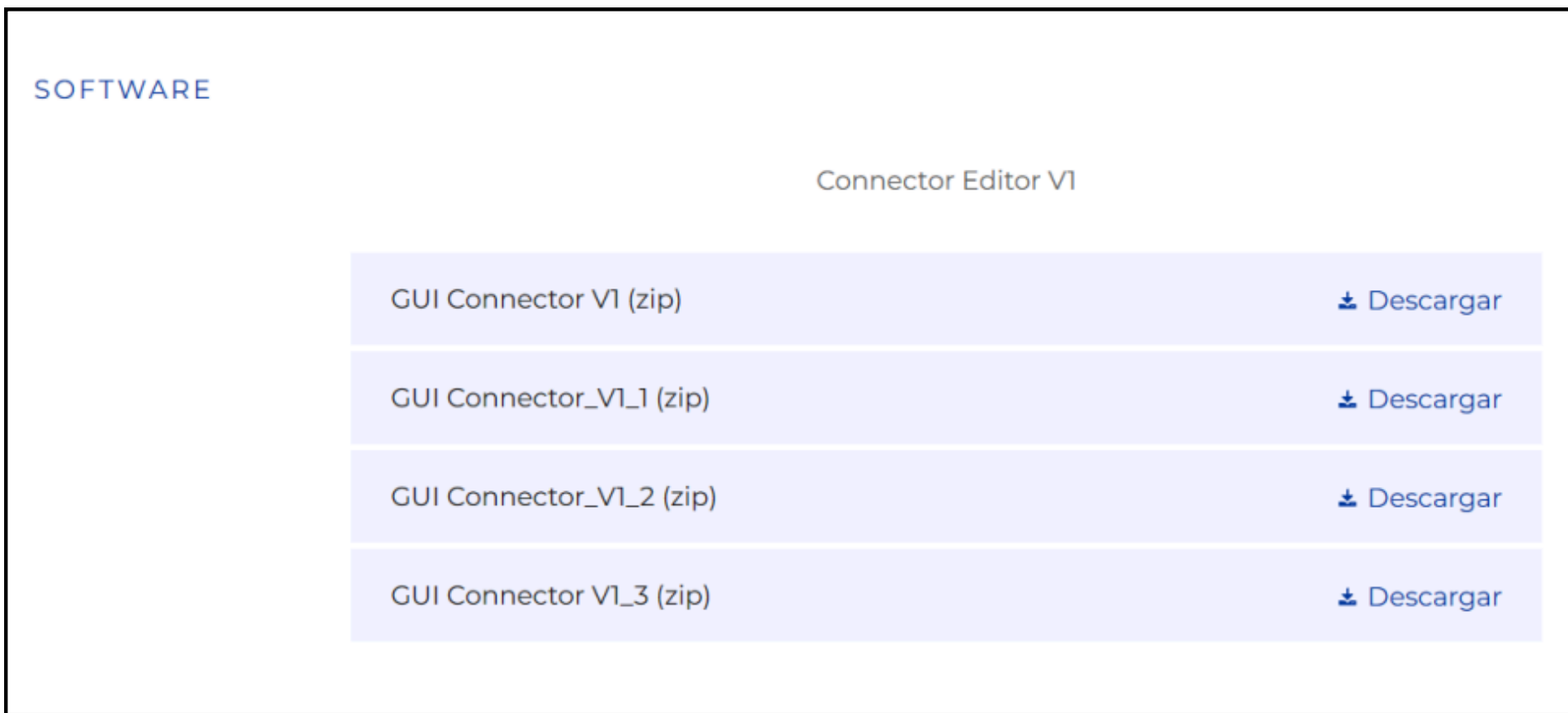

Image 26- Eridevices webpage, downloads section for GUI Connector

INSTALLATION OF THE GUI CONNECTOR SOFTWARE (WINDOWS)

- **Step1. -** Download the GUI Connector (recent version) file, once you went to the eridevices.com webpage, Downloads section.

- **Step2. -** Extract all files.

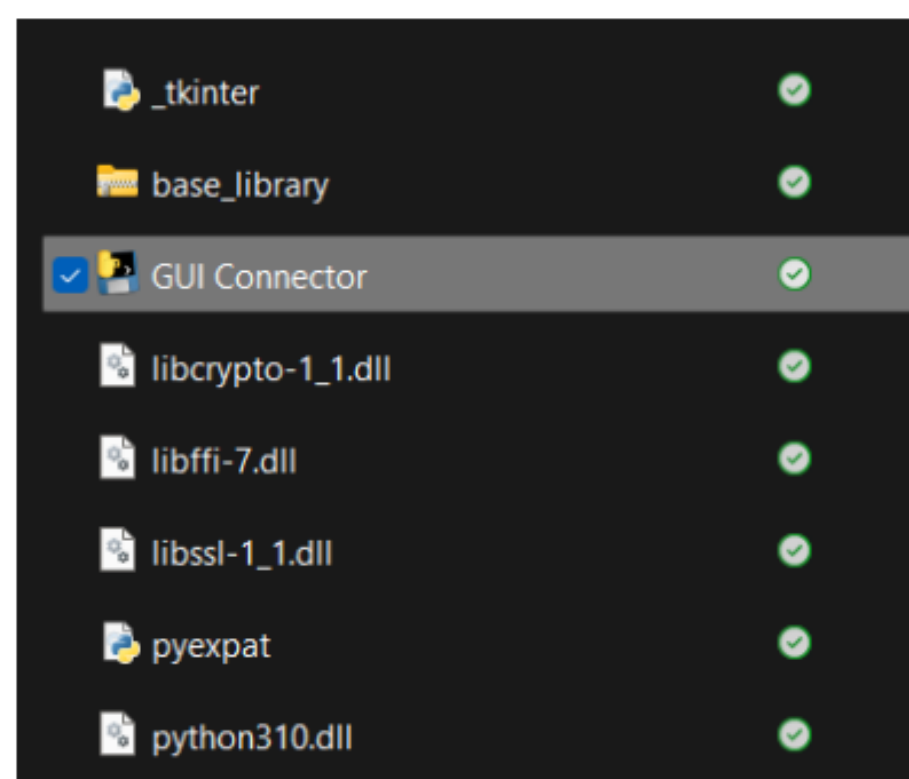- **Step3. -** Double click on the Icon GUI Connector.

Image 27- GUI Connector icon
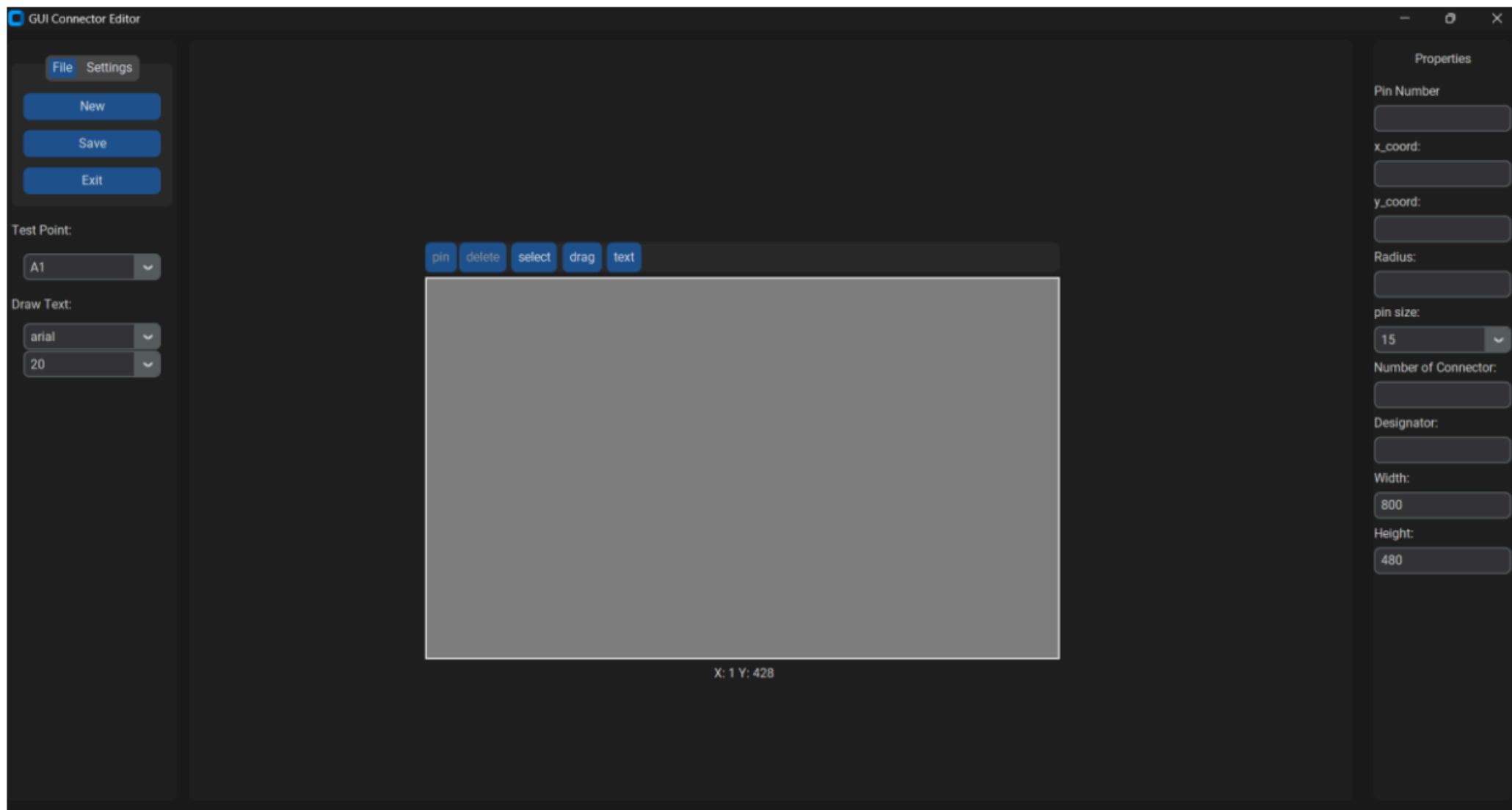
USING THE GUI CONNECTOR SOFTWARE

Image 28- GUI Connector Editor main menu screen

CREATING A CONNECTOR
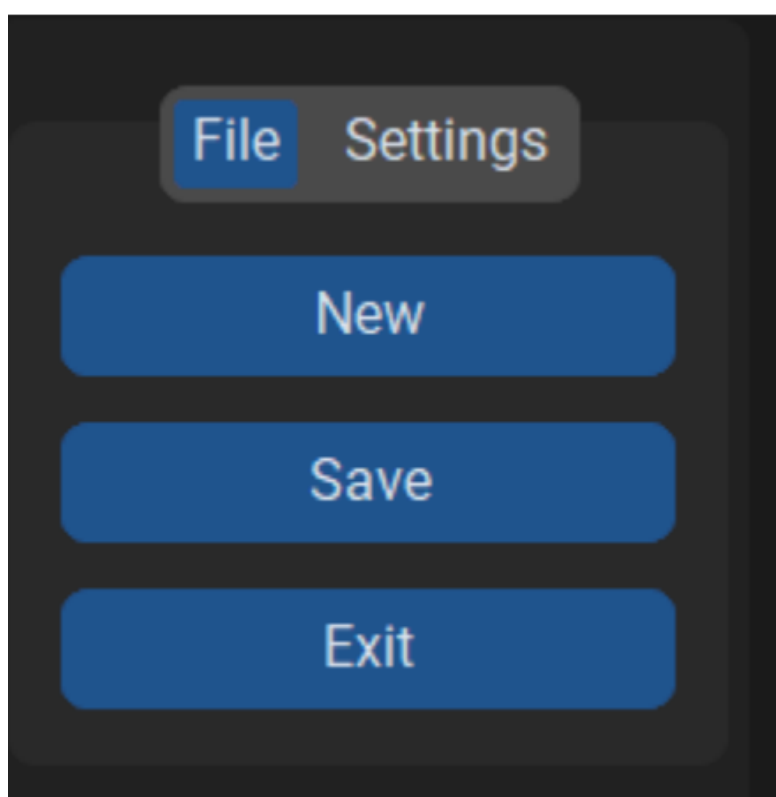
- **Step 1. -** Press the button **"New"**

Image 29- GUI Connector left tool bar

- **Step 2. -** A new connector window will pop up. Here, you can add the designator name and change the size of the picture. In this example, a connector with the size "300 x 300" will be created, under the designator name "J1".

Image 30- Adding Connector window

- **Step 3. -** Press the button **"Load Connector"** to continue to browse a file. Select the desired picture with the extension *JPG*, then press the button **open**.
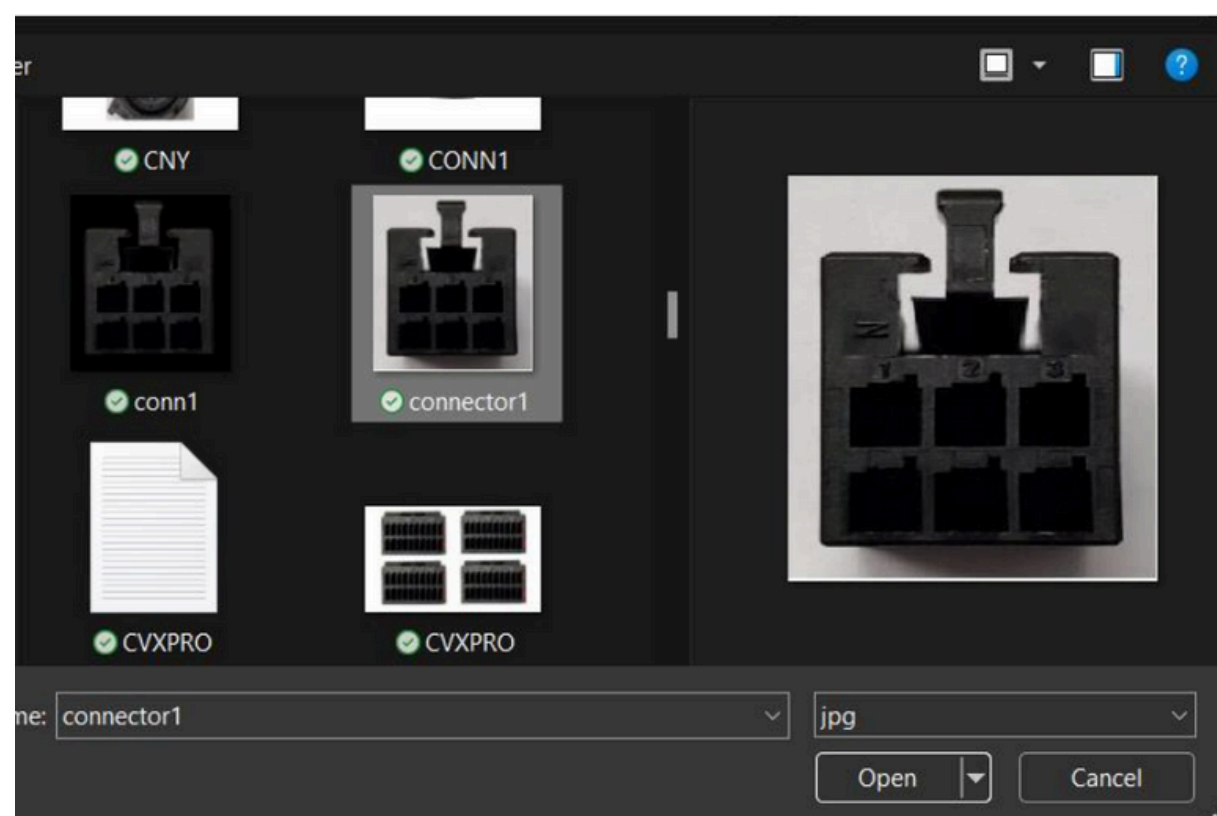

Image 31- GUI Connector left tool bar

- **Step 4. -** Repeat the step 3, if it is necessary to add more connectors. The clear gray area it is the display with the dimensions 800x480 pixeles of the *Eriwire LV Cable Tester*.
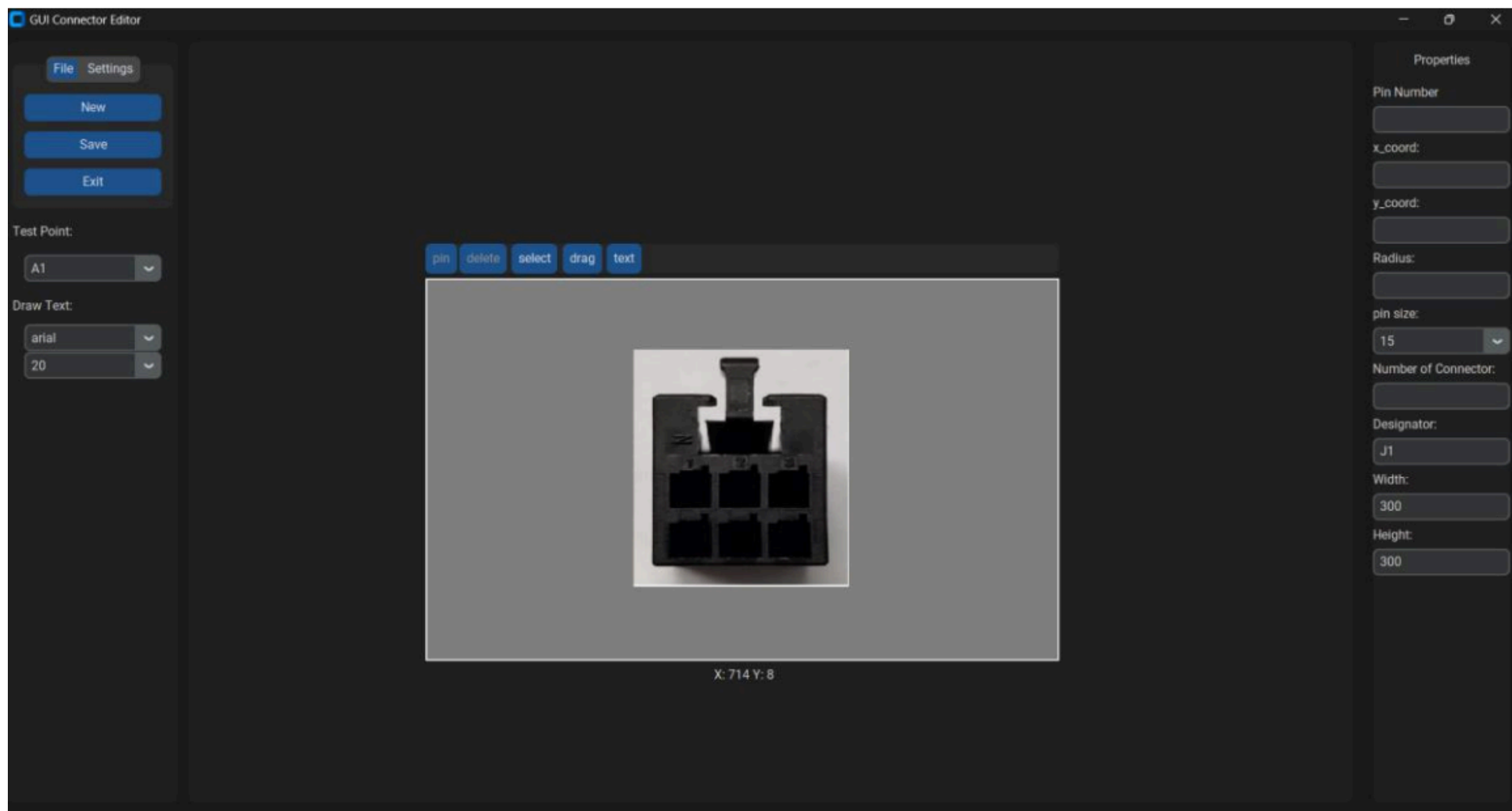

Image 32.- Adding a connector to the editor.

- **Step 5. - To add pins,** select the image of the connector with the mouse, then press the button **"Pin".** The pin has different options, it coordinates X, Y radius and test point. Click on the pin for dragging it. Change the test points to a different pin.

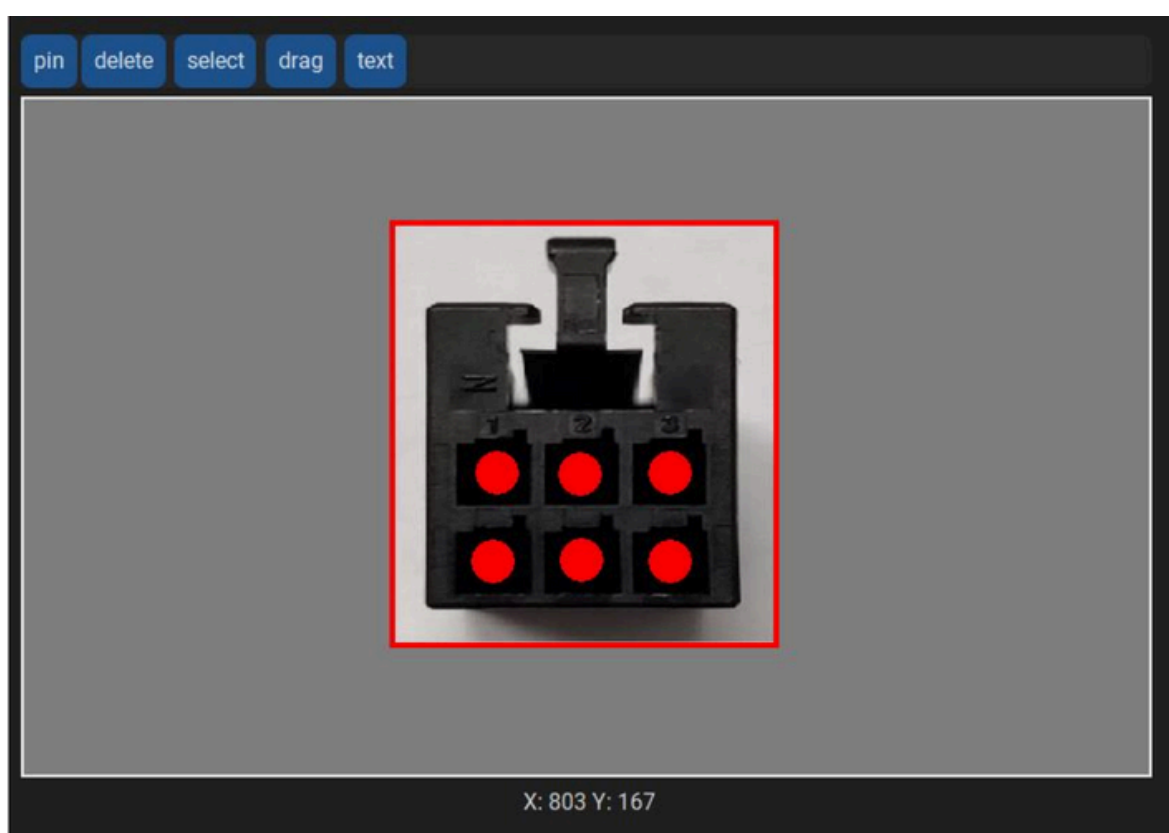*Image 33- Adding a pin into the connector*

Image 34- Adding more pins to the connector

- **Step 6. -** Repeat step 5 if it's necessary to add more pins.

- **Step 7. -** **Adding text.** Press the button "text", a window will pop up, type the name of the connector, usually the designator's. Then, press the button **"Draw Text"**. Press the Text button again to add more texts if needed; for instance: part number or number of pins.

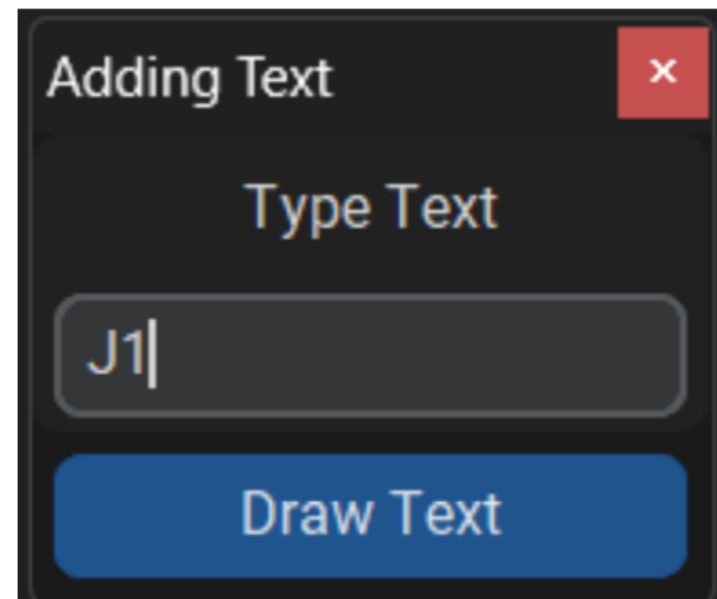*Image 32.- Adding a connector to the editor.*

- **Step 8.-** Finish the connector adding a designator name and the part number.
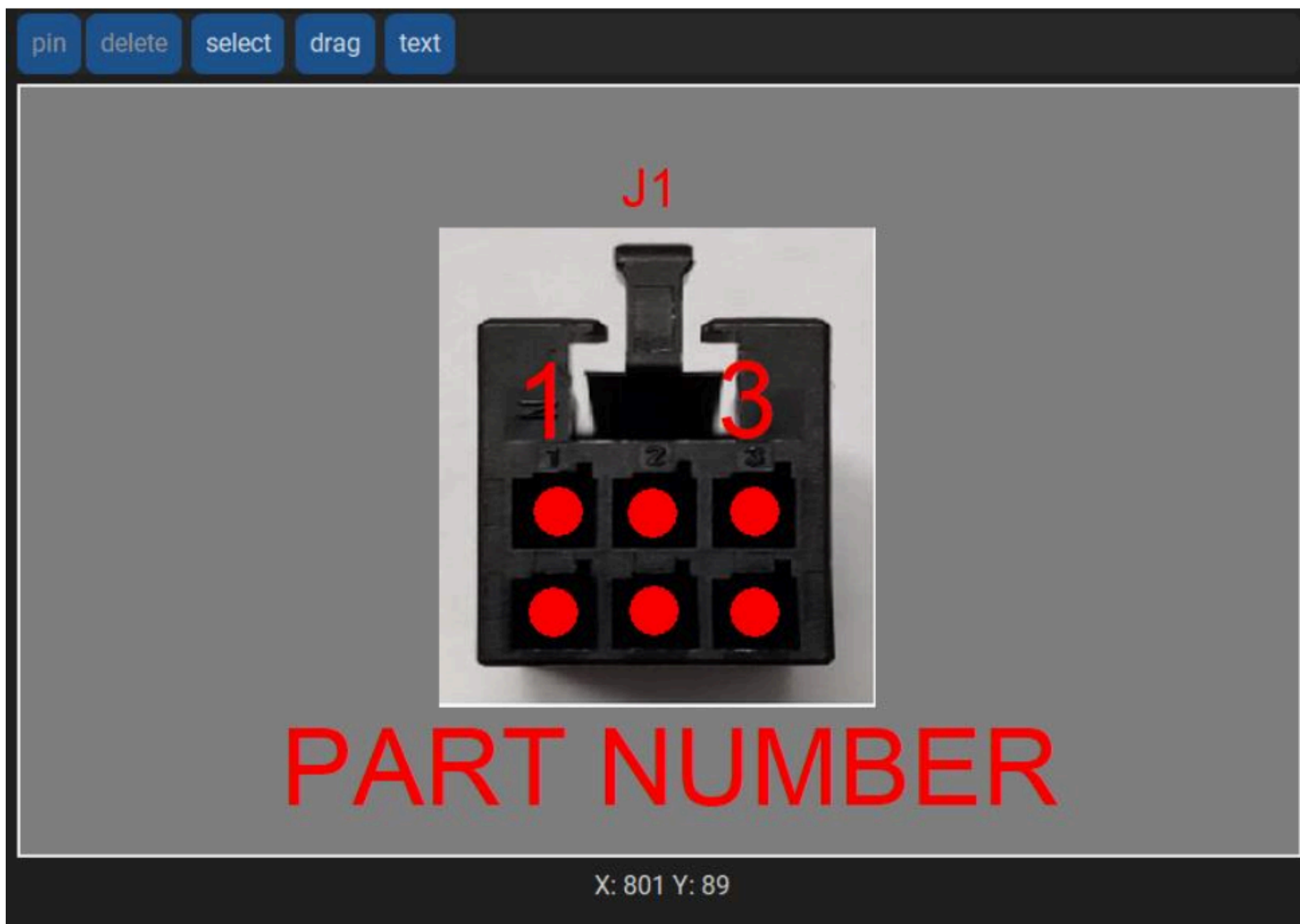

Image 33- Connector with pins and text

- **Step 9. -** **Saving the connector.** Press the button SAVE on the left side menu and a browser window will appear, type the name of the connector and then press SAVE.
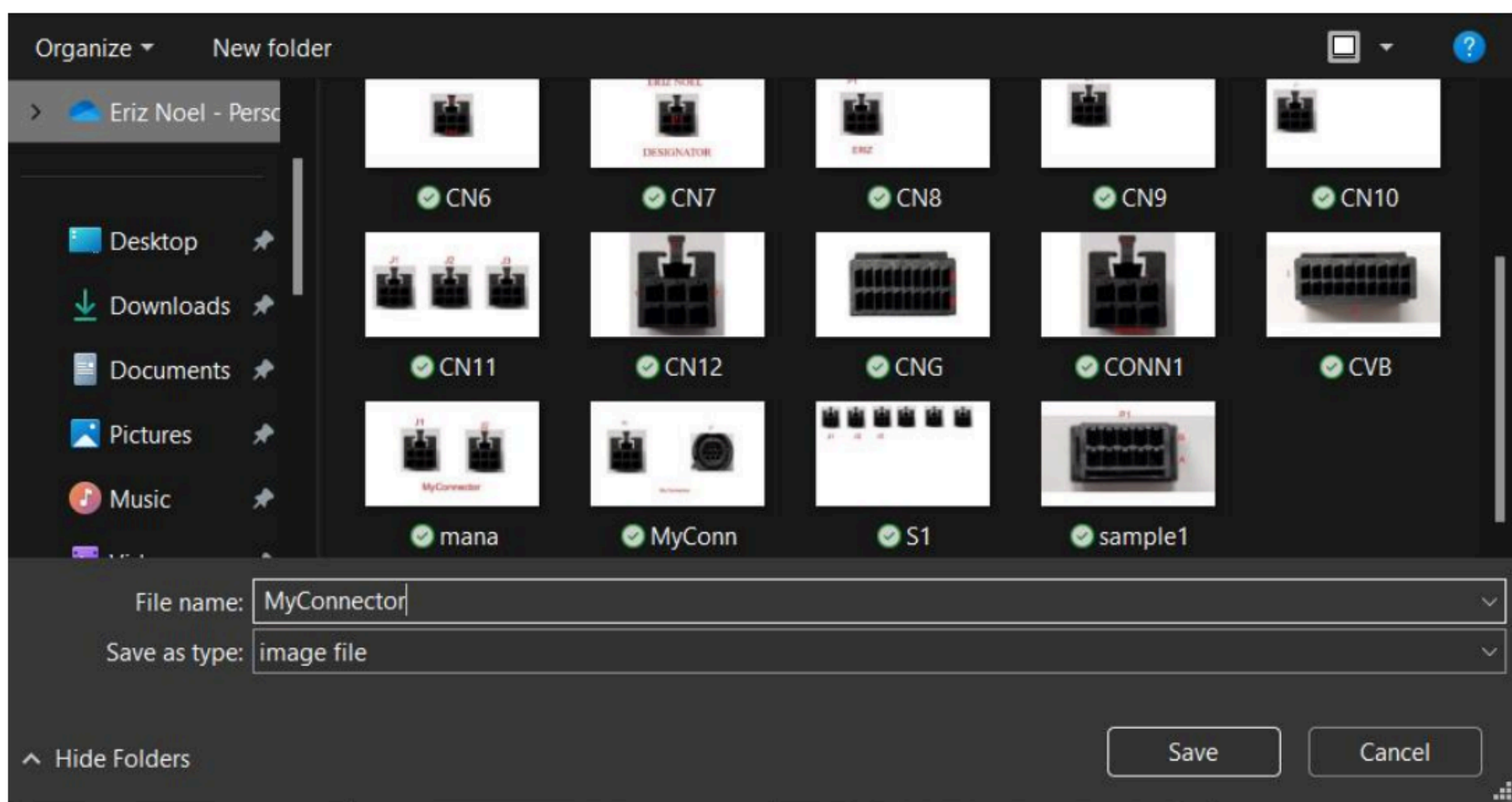

Image 34- Browser window for saving a file

- **Step 10. -** The GUI Connector Editor output has two files:

-ins > Insertion file, this file has the setup for the connector.

-jpg > image ready to import to the *Eriwire.*

- **Step 11. - Save these files to the MicroSD.** Save the file with the extension *.ins inside the folder named INS;* and for the file with the extension *.jpg* save it inside the *IMG folder.*
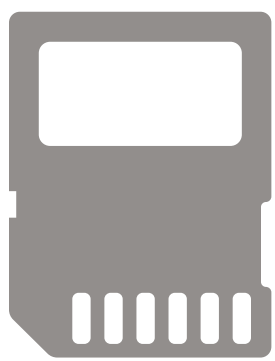
Step 12.- Disconnect the *MicroSD* of the computer and insert it to the *Eriwire.*

- **Step 13.-** Import the files on the *Eriwire.* On the main menu of the equipment press the button **"MicroSD"**

- **Step 14. - To import the** *.ins* **files** press the button **CRD**. After that, search the name of the file you wish to import and then press the button **Import**. Make the same process for the *jpg* file.
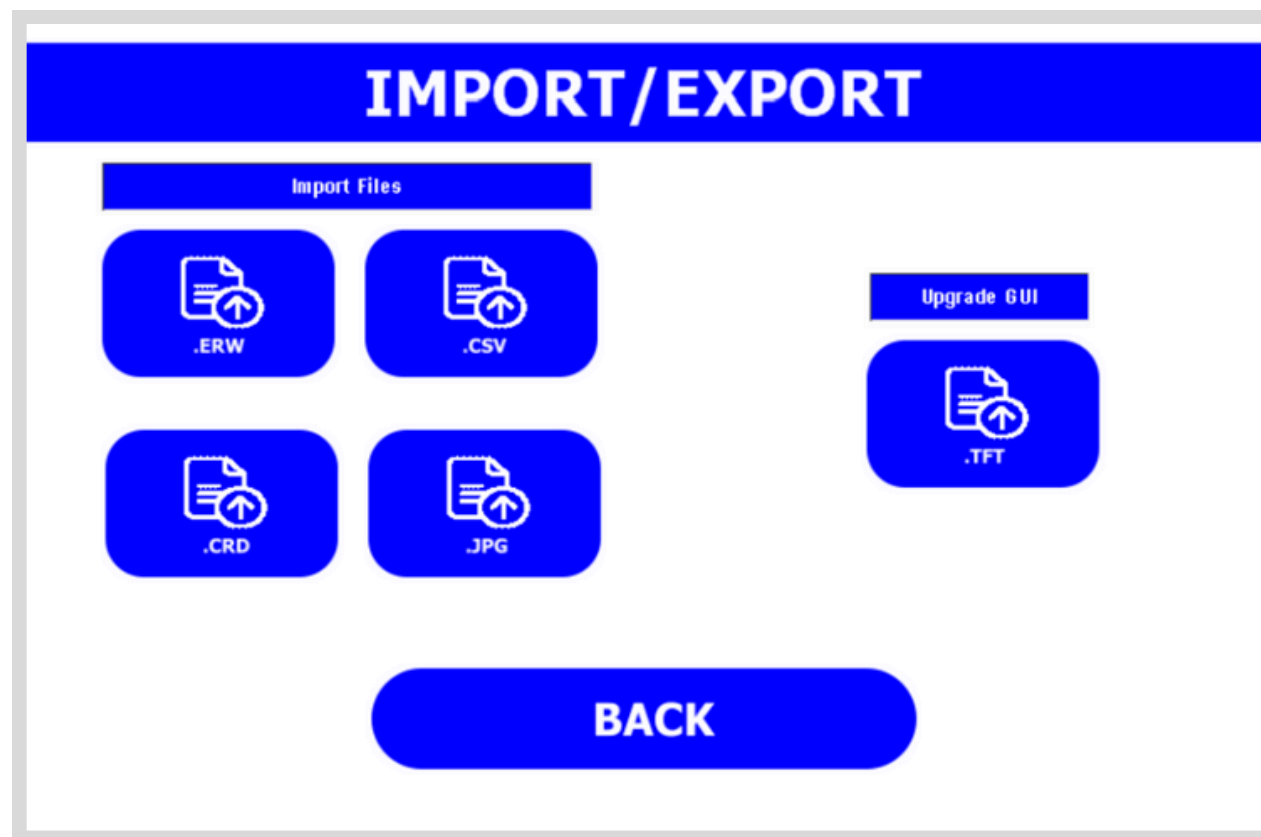

Image 35- Import/ Export menu from the Eriwire

ERIWIRE SPECIFICATIONS

Model	Eriwire
Testing	Continuity, isolation, Netlist, Polarity diode
# of Test Points	128
# Maximum Test points per Netlist	32
Adapters	Yes
Expandable	No
Maximum current for test	1mA
Maximum Voltage for test	5VDC
Current	340mA
HIPOT	No
4 wire	No
Diode	Polarity Only
Memory	16 GB (FAT32)
Display type	Capacitive
Dimensions Display	Seven inches
Resolution Display	800x480
Maximum input voltage	5VDC
Dimension Equipment (Width, height, length) cm	16x5.6x50
Weight (kg)	1.60
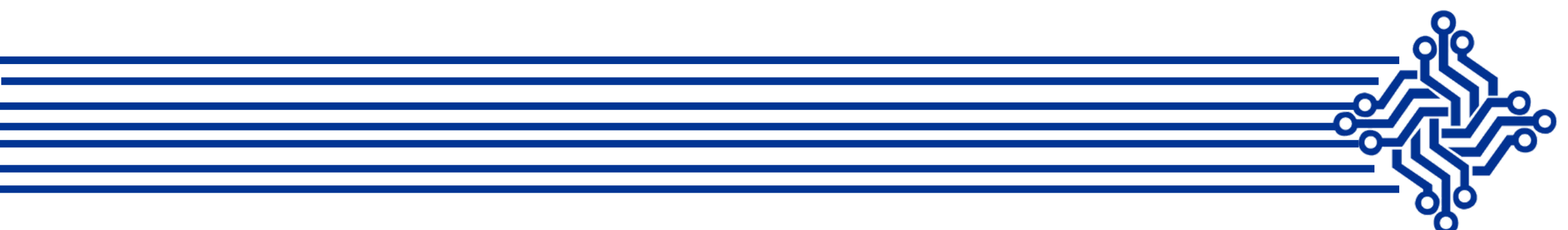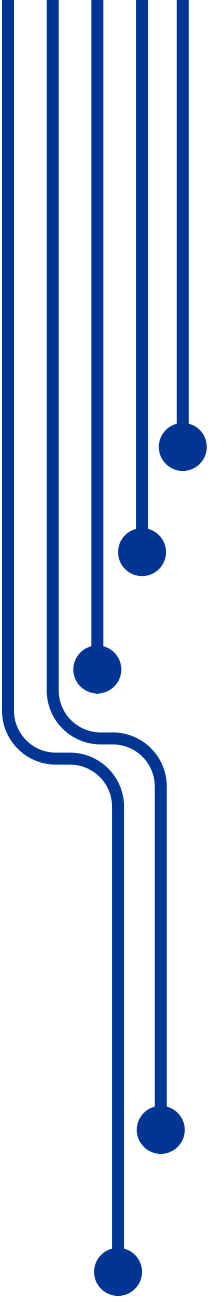
MAINTENANCE

The maintenance of the *Eriwire* equipment is minimal, but is recommended to: clean the frames every now and then, also verify the correct functionality of the power button and review if both scanners boards, A & B, as well as any pin of the connectors look damaged.

CALIBRATION

Perform a verification each year with a 64 connections IDC cable or with the verification board, as follow: connect and IDC Cable from the scanner board **A** to the board **B**, and learn the cable, verify the equipment has succesfully learned 64 connections.

For more information, contact us at info@eridevices.com , review or website Eridevices or follow us on social media for more details.

LIMITED ONE YEAR WARRANTY

Eridevices guarantees to the original customer who bought the device, that it is product and, therefore, the included components, will be free from defects in workmanship and materials for a period of one year from the date of purchase.

Eridevices will, without a charge, repair or replace, at it is option, defective product or component parts.

Returned products must be accompanied by a proof of the purchase date in the form a sales receipt.

Exclusions: This warranty does not apply in the event of misuse or abuse of the product or as a result of unauthorized alternations or repairs. In case of receiving a product or equipment with an alternated serial number, defaced or removed, will be automatically invalid.

Eridevices shall not be liable for any consequential damages, including without limitation damages resulting from loss of use. Some countries do not allow limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

Model of the Equipment: _____
Serial Number of the Equipment: _____
Purchased date: _____

UPGRADING THE GUI FIRMWARE

Ocassionally, the *Eriwire Low Voltage Cable Tester* needs to upgrade the GUI firmware, it is recommended to be update it to the most recently firmware.

STEPS TO UPGRADE THE FIRMWARE

- **Step 1. -** Download the most recent version of the firmware on our website https://eridevices.com
- **Step2. -** Copy the ***tft*** *file* to the MicroSD in the folder FIRMWARE.
- **Step3. -** Insert the MicroSD to the Eriwire tester. At the main menu, press the button "MicroSD" and then press the button **". TFT"** Upgrade the GUI.
- **Step 4. -** wait for the file to be transfer from the MicroSD to the GUI. After the load has finish, the screen will close.
- **Step 5. -** Turn off the tester.
- **Step 6. -** Turn on the tester.
- **Step 7. -** The tester automatically will begin to upgrade.
- **Step 8. -** The tester will reboot and then initialize normally.

END UPGRADING.

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THANK YOU FOR YOUR PREFERENCE

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