

# USER MANUAL



## SHIFT LINE OF ELECTRONIC PANELS

<b>1 – Introduction</b> .....	03
<b>2 – Warranty</b> .....	03
<b>3 – Contact and Support</b> .....	03
<b>4 – Introducing the Shift Line</b> .....	04
<b>5 – Electronic LED Panel Features</b> .....	04
<b>6 – Product Code Assembly</b> .....	06
<b>7 – Installation of Products</b> .....	07
7.1 – Electronic LED Panel .....	07
7.1.1 – Installation .....	07
7.1.2 – Holding the Panel .....	07
7.1.3 – Dimensions .....	08
7.2 – Control Unit (IHM) .....	10
7.2.1 – Installation .....	10
7.2.2 – Dimensions .....	10
7.2.3 – Electrical Connections .....	10
<b>8 – Settings</b> .....	11
8.1 – Network Configuration .....	11
8.1.1 – Network Configuration .....	12
8.2 – Preferences .....	13
8.3 – Panels .....	13
8.4 – Restricted Area .....	14
8.5 – Reset procedure .....	14
<b>9 – Transfer of Projects</b> .....	14
9.1 – Transfer via Application .....	14
9.2 – Transfer via Wifi .....	17
<b>10 – Access to Routes</b> .....	24
<b>11 – Route Search</b> .....	24
11.1 – Search by ID .....	24
11.2 – Search by Recent Routes .....	24
11.3 – Search by Name .....	25
<b>12 – Updates</b> .....	25
<b>13 – Failures and Solutions</b> .....	26

## 1. INTRODUCTION

This manual aims to provide information related to the electronic panel system of Inova Sistemas Eletrônicos, so that it is installed and used correctly, guaranteeing its perfect functioning, aiming at total customer satisfaction.

It is important that all this material is read by the user before using the products. In this way, the use of the equipment will be a pleasant and safe experience, and the understanding of each process will be easily assimilated.

Inova reserves the right to modify any information contained in this manual without prior notice to users.

## 2. WARRANTY

Inova Sistemas Eletrônico Ltda. offers warranty against manufacturing defects for a period of 1 year from the date of purchase of the equipment. It is worth mentioning that the loss of equipment, charges or expenses incurred by the user as a result of incorrect use or installation, damage caused by chemical products, accidents, maintenance and / or changes in any aspects that de-characterize the original product are not covered by the factory warranty. without the authorization of Inova Sistemas Eletrônico Ltda.

## 3. CONTACT AND SUPPORT









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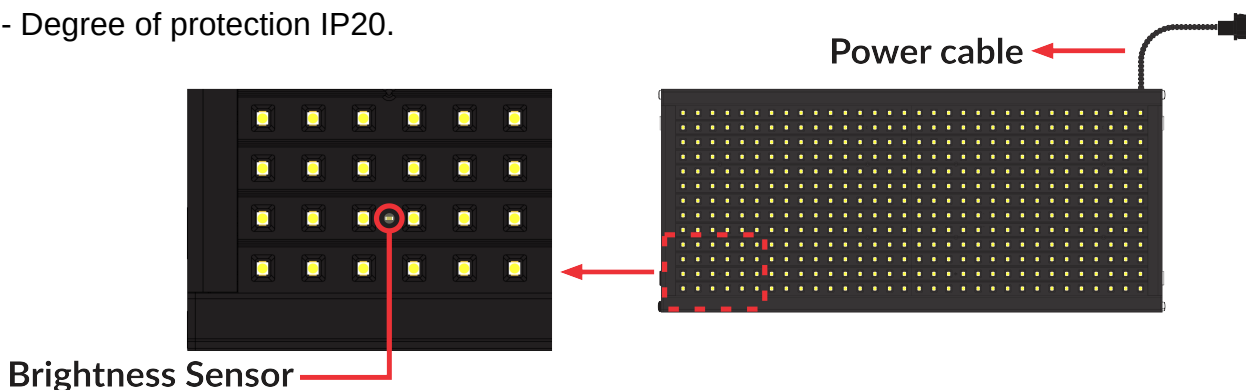
## 4. INTRODUCING THE SHIFT LINE

The Shift Line of electronic panels includes the features and quality already known of Inova's electronic panels, adding technology and new concepts aiming at a better user experience.

	<p>" This equipment is not entitled to protection against harmful interference and may not cause interference with duly authorized systems "</p> <p><b>ANATEL 02152-20-1154</b></p>
	<p>Communication between the LED Electronic Panels and the External Control Unit is carried out through wireless communication without the need for a wired network, using proprietary INOVA protocol.</p>
	<p>Inova's LED Electronic Panels use Wifi communication for the transfer messages to the HMI through any Smartfone with the Inova Ndrive app.</p>
	<p>The EPS (Extended Power Supply) system allows the LED Electronic Panels of the Innovates to be powered by any voltage between 10VDC and 30VDC. With that the equipment is protected against voltage fluctuations and interference caused by by other equipment or even by the vehicle's starter motor.</p>
	<p>The control units have the Light Key System feature, in which the keys have adjustable lighting with LEDs, which provides intuitive operation to the user, helping to guide you in the use of the Electronic LED Panel, even in environments in low light.</p>
	<p>Ndrive is the application responsible for transfer management of projects for the Control Unit of the Electronic Panels System. Search for our app within Google Play available on the Android system.</p>
	<p>The brightness of the LEDs on the Electronic LED Panel is controlled by the EBC system (Electronic Bright Control), which adjusts the brightness automatically according to the brightness through a sensor located on the front of the Electronic LED Panel.</p>
	<p>Inova produces its panels using SMT (Surface Mounting Tecnology) technology, which minimizes human intervention in the assembly process. In this way, greater reliability and increased service life due to the absence of static electricity in the assembly process, as well as reducing the weight and thickness of the panel.</p>

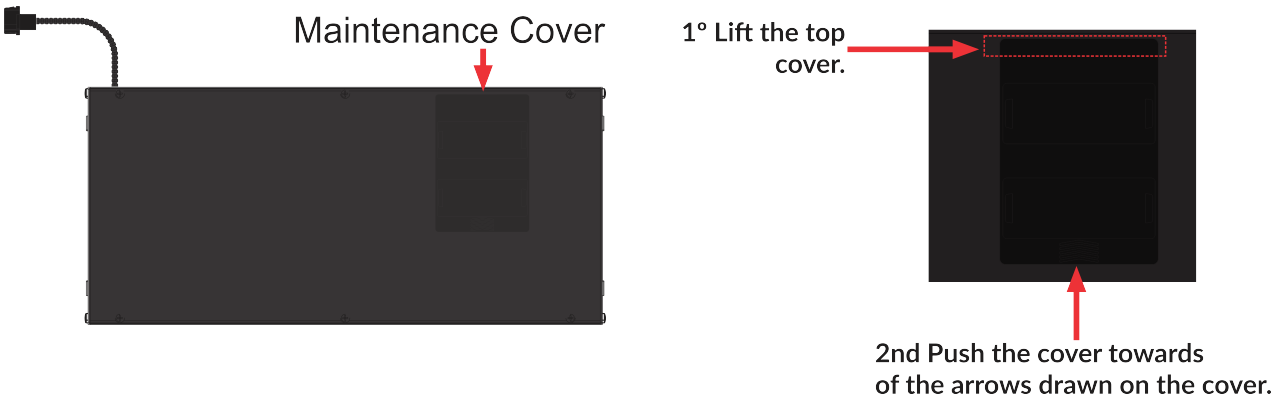
## 5. ELECTRONIC LED PANEL FEATURES

- Power supply: 10 to 32Vdc;
- Operating and storage temperature: -20 ° C to 60 ° C;
- Wireless communication (range up to 80 meters in open field);
- Automatic brightness control through ambient light sensor located on the front of the Electronic LED Panel;
- Degree of protection IP20.

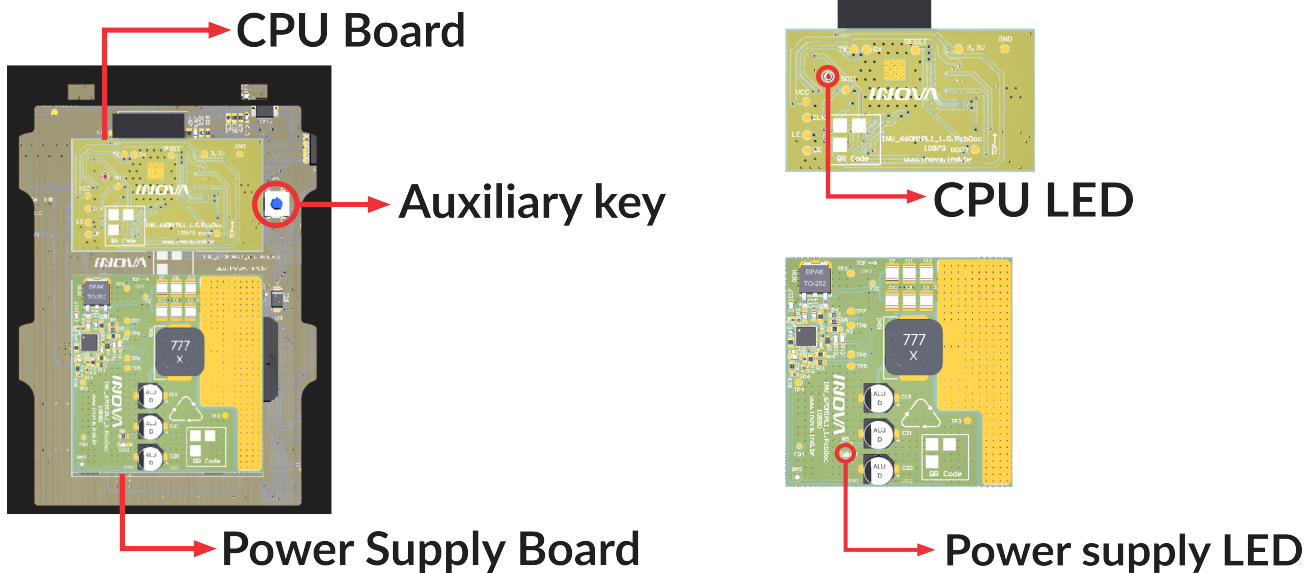




At the rear of the panel is the entry for maintenance. To access to access the CPU and Power supply boards of the panel, it will be necessary to open the maintenance cover. Follow the tips in the following steps to remove the maintenance cover:



As soon as the lid is open, it will be possible to view the previously mentioned plates, as well as the auxiliary key. The green LED on the CPU board will flash while the board is on, indicating the operation of the product. The red LED will remain on as long as the card is on, indicating the operation of the product.



The Auxiliary Key has advanced functions for adjusting the message and resetting the CPU board. Keep the product on to access these options, and make sure that only the panel ID is displayed on the screen (select message 000 on the HMI) before proceeding the following definitions:

- Rotate the message: Press the auxiliary key for approximately 12 seconds and release. The message “:ROT:” should be displayed on the panel, then press the Auxiliary Key again for another 5 seconds. The message “:ROT:” should be inverted to the new screen format as shown in the following example. After that, restart the panel to save the display configuration.



- Reset: Press the auxiliary key for approximately 12 seconds and release. The message “:ROT:” should be displayed on the panel, then press the Auxiliary Key again for another 10 seconds. The message “:RESET:” will be displayed, press and hold the key for another 6 seconds and release. The message “:RESET:” will remain on the panel screen.

After that, restart the panel or wait 40 seconds to perform a full panel reset. **This procedure will erase all data from the panel.**

## 6. PRODUCT CODE ASSEMBLY

ITSLP 11 × 96 - 13 AM VD 32 A B C  
 1            2            3            4            5            6            7            8            9            10

1 - Electronic LED Panel type identifier;

2 - Number of lines of the Electronic LED Panel;

3 - Number of columns of the Electronic LED Panel;

4 - Horizontal spacing between the LEDs (in mm);

5 - Color of the LED used in the Electronic LED Panel:

AM - yellow LED (amber)

VD - green LED

VM - red LED

AZ - Blue LED

BR - white LED

6 - If 2 colors of LEDs are used, identify the second color used, according to the table described above;

7 - If 2 colors of LEDs are used, it identifies the number of columns used in the second color, always counting from left to right. Prefix possibilities: 0, 16, 24, 32 and 48 columns;

8 - Model of the Control Unit used:

A - Without HMI.

D - Coupled unit with 3 inch LCD display.

E - External unit with 3-inch LCD display.

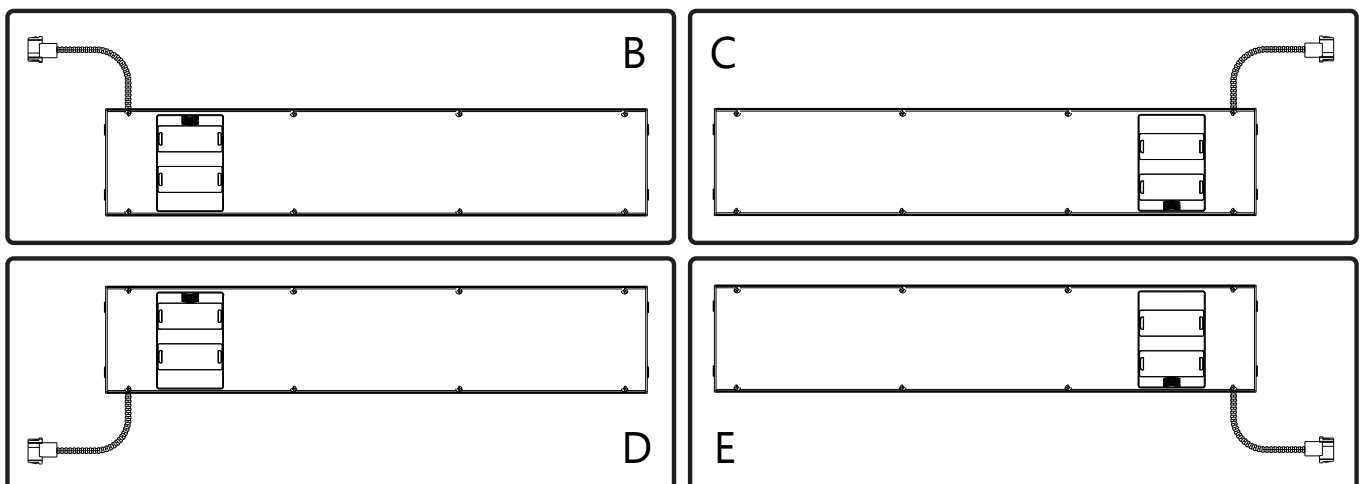
9 - Type of electrical connection:

C - Using a harness in the upper left part of the Electronic LED Panel

B - Using a harness in the upper right part of the Electronic LED Panel

E - Using a harness on the bottom left of the Electronic LED Panel

D - Using a harness at the bottom right of the Electronic LED Panel



10 - Space for special features;

## 7. INSTALLATION OF PRODUCTS

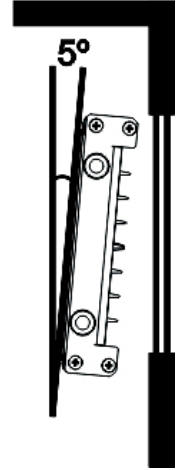
In this section we will present the necessary information for a correct installation of the products aiming at security and the best use of the system characteristics.

### 7.1 Electronic LED Panel

#### 7.1.1 Installation

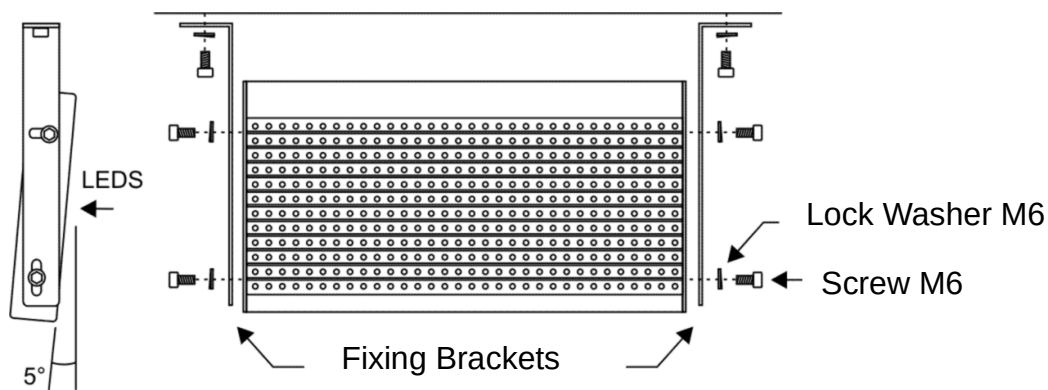
Before installing electronic equipment, check the following precautions:

- Whether the installation site meets the specified temperature requirements and whether it is protected against ingress of liquids.
- Install the protected power cables where they cannot be pressed or cut.
- Avoid using cables with different characteristics from those specified, as it may impair the performance of the installed equipment.
- To provide a better view of the information on the Electronic LED Panel, make sure that it is fixed with an inclination of approximately 5 °.



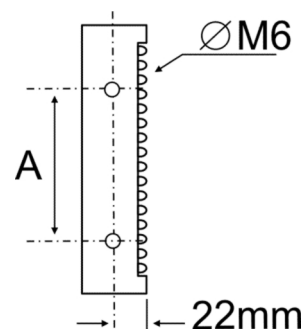
#### 7.1.2 Holding the Panel

Together with the Electronic LED Panel, a kit of brackets for fixing it can be provided. The support can be fixed with the base facing downwards or upwards and inwards or outwards of the Electronic LED Panel, according to the need and the available space. The user can choose to use another type of support more convenient for fixing the Electronic LED Panel, as long as he observes the measures presented. The installation of the fixing brackets must obey the drawing below:



The distances of the fixing screws are standardized, obeying the measurement of the external height of the Electronic LED Panel:

Panel height (mm)	A (mm)
84	55
120	80
200	140
285	200



## 7.1.3 Dimensions

LED Matrix			External dimensions		Visible Area		Model
Lines	Columns	Spacing	B	A	D	C	
8	32	10	346	132	320,4	171,6	ITSLP08x32-10
11				202			ITSLP11x32-10
13				202			ITSLP13x32-10
16				202			ITSLP16x32-10
11	32	13	442	202	416,4	171,6	ITSLP11x32-13
13				202			ITSLP13x32-13
16				202			ITSLP16x32-13
8	48	10	506	132	480,4	171,6	ITSLP08x48-10
11				202			ITSLP11x48-10
13				202			ITSLP13x48-10
16				202			ITSLP16x48-10
11	48	13	650	202	624,4	171,6	ITSLP11x48-13
13				202			ITSLP13x48-13
16				202			ITSLP16x48-13
8	64	10	666	132	640,4	171,6	ITSLP08x64-10
11				202			ITSLP11x64-10
13				202			ITSLP13x64-10
16				202			ITSLP16x64-10
11	64	13	858	202	832,4	171,6	ITSLP11x64-13
13				202			ITSLP13x64-13
16				202			ITSLP16x64-13
8	80	10	826	132	800,4	171,6	ITSLP08x80-10
11				202			ITSLP11x80-10
13				202			ITSLP13x80-10
16				202			ITSLP16x80-10
11	80	13	1066	202	1040,4	171,6	ITSLP11x80-13
13				202			ITSLP13x80-13
16				202			ITSLP16x80-13
8	96	10	986	132	960,4	171,6	ITSLP08x96-10
11				202			ITSLP11x96-10
13				202			ITSLP13x96-10
16				202			ITSLP16x96-10

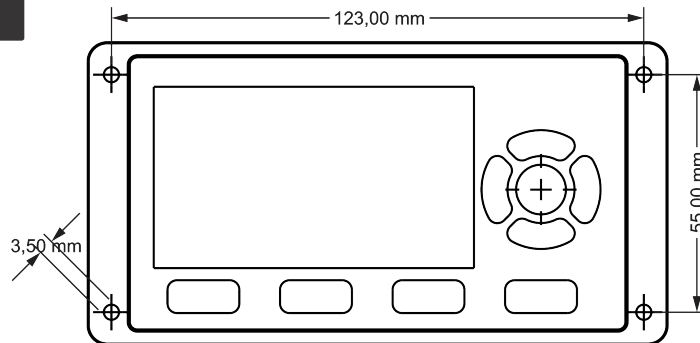
LED Matrix			External dimensions		Visible Area		Model
Lines	Columns	Spacing	B	A	D	C	
11	96	13	1274	202	1248,4	171,6	ITSLP11x96-13
13							ITSLP13x96-13
16							ITSLP16x96-13
8	112	10	1146	132	1120,4	101,6	ITSLP08x112-10
11				202			ITSLP11x112-10
13				202			ITSLP13x112-10
16							ITSLP16x112-10
11	112	13	1482	202	1456,4	171,6	ITSLP11x112-13
13							ITSLP13x112-13
16							ITSLP16x112-13
8	128	10	1306	132	1280,4	101,6	ITSLP08x128-10
11				202			ITSLP11x128-10
13				202			ITSLP13x128-10
16							ITSLP16x128-10
11	128	13	1692	202	1666,4	171,6	ITSLP11x128-13
13							ITSLP13x128-13
16							ITSLP16x128-13
8	144	10	1466	132	1440,4	101,6	ITSLP08x144-10
11				202			ITSLP11x144-10
13				202			ITSLP13x144-10
16							ITSLP16x144-10
11	144	13	1898	202	1872,4	171,6	ITSLP11x144-13
13							ITSLP13x144-13
16							ITSLP16x144-13
8	160	10	1626	132	1600,4	101,6	ITSLP08x160-10
11				202			ITSLP11x160-10
13				202			ITSLP13x160-10
16							ITSLP16x160-10
11	160	13	2106	202	2080,4	171,6	ITSLP11x160-13
13							ITSLP13x160-13
16							ITSLP16x160-13

\* Tolerance of +/- 2 mm in the described measures.

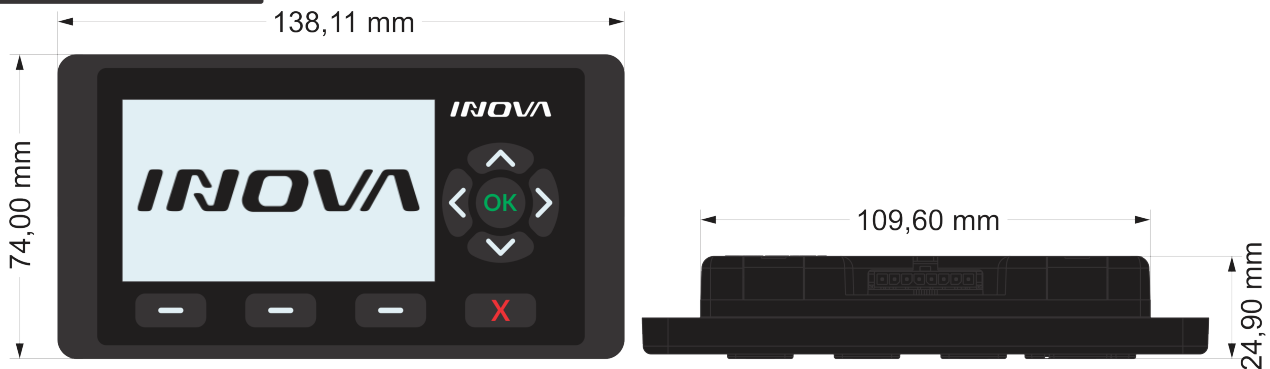
## 7.2 Control Unit (IHM)

- Power supply: 10 to 32Vdc;
- Operating and storage temperature: -20 ° C to 60 ° C;
- Wireless communication (range up to 80 meters in open field);
- Degree of protection IP20.
- 3 " graphic display;
- Transfer of projects to the Control Unit via Wifi without the need for a pendrive;

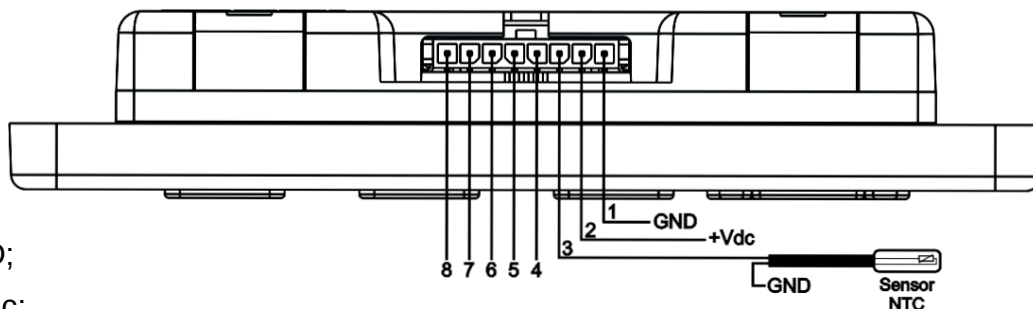
### 7.2.1 Instalation



### 7.2.2 Dimensions



### 7.2.3 Electrical Connections



**Pin 1** - GND;

**Pin 2** - + Vdc;

**Pin 3** - NTC sensor - Measurement from -30°C to 100°C. Connect the NTC to pins 3 and 1;

**Pin 4** - Can work as a digital input or speed signal (request when ordering):

- Digital Input. Use a contact between pins 1 and 4 for activation, or apply a voltage of 5Vdc to + Vdc;

- Speed signal. Use the tachograph pin B8 to connect to pin 4 of the HMI;

**Pins 5 and 6** - Communication - Available protocols (Request on request):

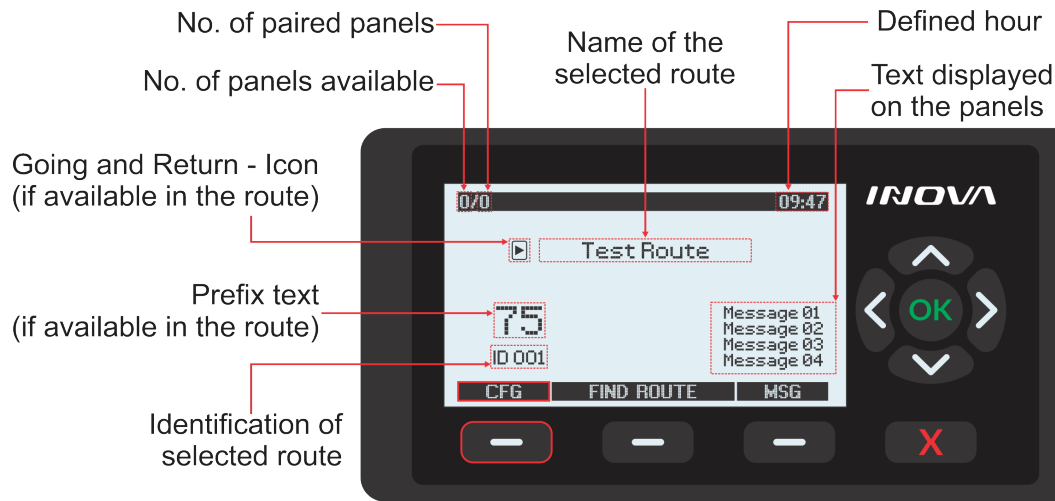
- CAN (CAN High Pin 5 - CAN Low Pin 6) or RS485 (485B Pin 5 - 485A Pin 6);

**Pins 7 and 8** - Communication - Available Protocols (Request on request):


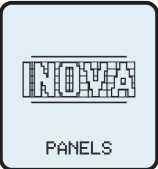

- RS485 (485A Pin 7 - 485B Pin 8) or RS232 (Rx pin 7 - Tx Pin 8);

## 8. SETTINGS

To access the product settings, press the 'CFG' menu entry key available on the home screen, and also use the arrows for navigation within the product configuration menus.



The CFG - Settings menu is the space where the different settings of the HMI are defined, as well as in relation to the panel system and message display settings. By pressing the 'CFG' key, it is possible to view the Preferences, Panels and Restricted Area options. Within the 'CFG' menu, the following options are available:

 <p>RESTRICTED AREA</p>	<p>Restricted area: To enter this menu, you will be asked for the password. The factory value password is set to "0 0 0 0", if there is a need to access the Restricted Area menu without knowing the defined password, you can use the product's master password "1 7 0 0". This item can be configured: Change password, Language, Bus ID and List of panels and ID'S (definition of the identification number of the panels).</p>
 <p>PANELS</p>	<p>Panels: In this item you can access Brightness and Extra Messages. For use of Brightness Automatic, set the Brightness value to 0 (zero), respecting the limits defined by the Maximum and Minimum parameters of the Brightness menu. If any other value is programmed, the Brightness will be Manual. The Extra Messaging settings have the following options: Duration, Date and Hour, Hour and Temperature, Temperature and Greetings. When entering the Extras Messages menu, choose which panel will be configured and choose which of the available options will be enabled or not according to the settings.</p>
 <p>PREFERENCES</p>	<p>Preferences: Clock Setting, Brightness, Contrast and IHM Volume.</p>

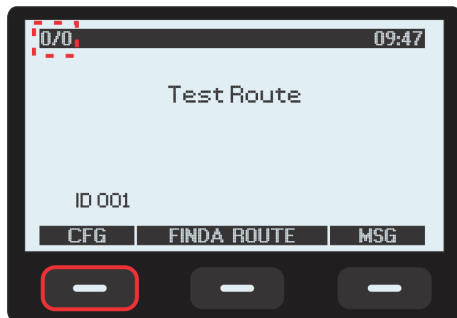
### 8.1 Network Configuration

To enable network configuration, **connect all panels and the control unit to the power supply simultaneously**. The Control Unit recognizes the panels available only with this procedure.

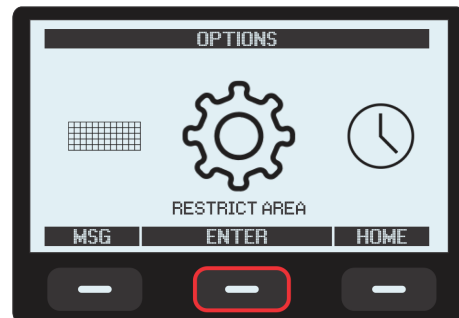
After energizing the system, it will be necessary to perform the process of pairing the panels with the Control Unit, therefore, we will check below how we can execute this process correctly.

## 8.1.1 Device Pairing

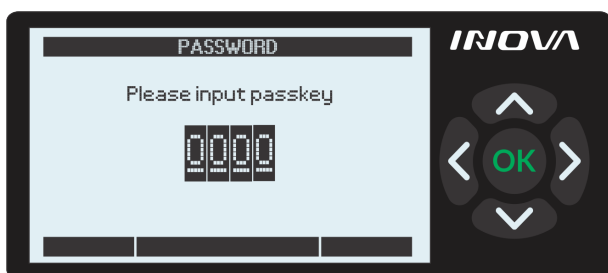
First connect all panels and the HMI to the power supply simultaneously. To start the Pairing, enter the menu "CFG" - "RESTRICTED AREA" - "List of panels and ID's" - "PAIRING". The images corresponding to this configuration are as follows:



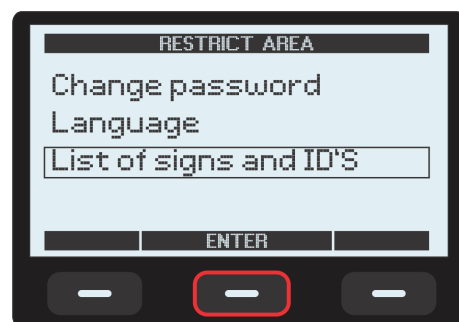
1 ° - On the home screen, press the CFG menu key.



2 ° - Navigate to the RESTRICTED AREA menu and click on ENTER.



3 ° - To access the RESTRICTED AREA menu, the password must be entered. Default password "1234". Master password "1700".



4 ° - Within the RESTRICTED AREA menu, select the item List of panels and ID's.

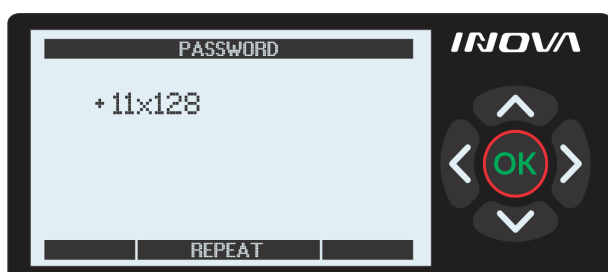


5 ° - Press the indicated key to start the PAIRING process.



6 ° - After recognizing the pairing process, the message "+?" Will be displayed on the panels, as shown in the image above, indicating that the corresponding panel ID number must be selected.

Check that this number must be in accordance with the definitions made in the draft script, if it has already been registered previously.



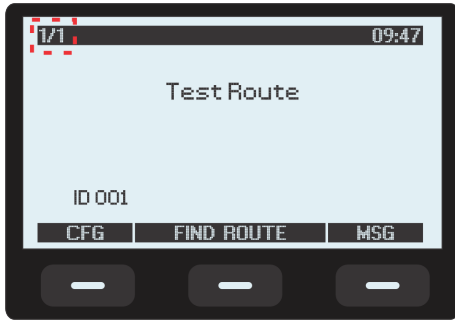
6 ° - After the search process indicated on the Command Unit screen, the panels that were found will be listed. Then press the OK key.



7 ° - Select the ID (identification address) for each panel that will be used and then press OK again to confirm the selected ID's. It is possible to check the ID number both on the Control Unit next to the size of the panel found, as well as on the LED's panel while it is in the process of setting the address.

It is important to note that the ID's must be compatible with those defined within the project so that the messages are displayed properly according to the text sizes stipulated in the ISI.





9 ° - In the initial screen, the number of available panels and the number of panels paired by the Control Unit will be displayed in the upper left corner respectively.



10 ° - After the end of the process, it is possible to check on the panels which identifications were saved. To do this, select the ID000 script - Panel without message in the Control Unit and the saved address configuration as shown in the image above will be displayed on the panels.

## 8.2 Preferences

Configuration	Description	Adjustment
Clock	Setting the date and time adopted by the system.	-
Brightness	Setting the brightness of the Control Unit display.	0 to 10
Contrast	Contrast display setting for the Control Unit.	0 to 10
Volume	Setting the ring volume and Control Unit alerts.	0 to 10

## 8.3 Panels

Configuration	Description	Adjustment
Brightness	<p>Defining the brightness of the panels. By setting the parameter 'Brightness' within this menu to 0 (zero) the brightness of the panels will be automatic depending on the panel's luminosity sensor, respecting the settings of the Maximum and Minimum parameters.</p> <p>For any above 0 (zero) in the parameter 'Brightness' the brightness will be manual.</p>	Automatic or 0 to 100
Extra Messages	<p>In this parameter, one must first choose which of the panels will be configured, and then the following options will be presented respectively.</p> <ul style="list-style-type: none"> <li>- <b>Duration:</b> Display time of messages enabled for display (from 0 to 60 seconds);</li> <li>- <b>Greeting:</b> Displays the Good Morning, Good Afternoon or Good Night greeting depending on the time of day;</li> <li>- <b>Date and Time:</b> Displays the programmed date and time;</li> <li>- <b>Time and Temperature:</b> Displays the programmed time and the temperature value read by the corresponding input of the Control Unit;</li> <li>- <b>Temperature:</b> Displays the temperature value read by the corresponding input of the Control Unit;</li> <li>- <b>Speed:</b> Displays the value of the speed signal read by the corresponding input of the Control Unit;</li> <li>- <b>Extra message script:</b> displays the extra message script if it has been previously registered in the project generated by the ISI software;</li> </ul>	-

## 8.4 Restricted Area

To enter this menu, it is necessary to enter the system configuration password. The programmed default password is “0 0 0 0”. If there is a need to configure it without knowing the defined password, the master password “1 7 0 0” can be used.

Configuration	Description	Adjustment
Change Password	Setting the system configuration password.	-
Language	Setting the system language.	English (US) English (other) Portuguese Spanish
Bus ID	Bus identification number when using Ncloud. If this parameter is equal to “00000”, this function is deactivated.	-
List of panels and ID's	Pairing configuration and setting the ID's of the paired panels. To enable the pairing of panels to the Control Unit, the entire system must be turned on simultaneously and then, enter this configuration menu to register the ID numbers of the panels.	-
Minimum speed	Defines which value of the minimum speed signal will be read by the corresponding input of the Control Unit.	0 a 50 km/h

## 8.5 Reset procedure

To reset the control unit, initially, with the unit off, press the “DOWN” and “CANCEL” keys simultaneously, as shown in the following image:



With the keys pressed, switch on the control unit keeping the keys pressed. Keep the keys pressed for 12 seconds. After this time release the keys and then press the “OK” key.

Keep this key pressed until the control unit automatically restarts. **It is worth mentioning that this procedure will erase all data from the Control Unit.**

## 9. TRANSFER OF PROJECTS

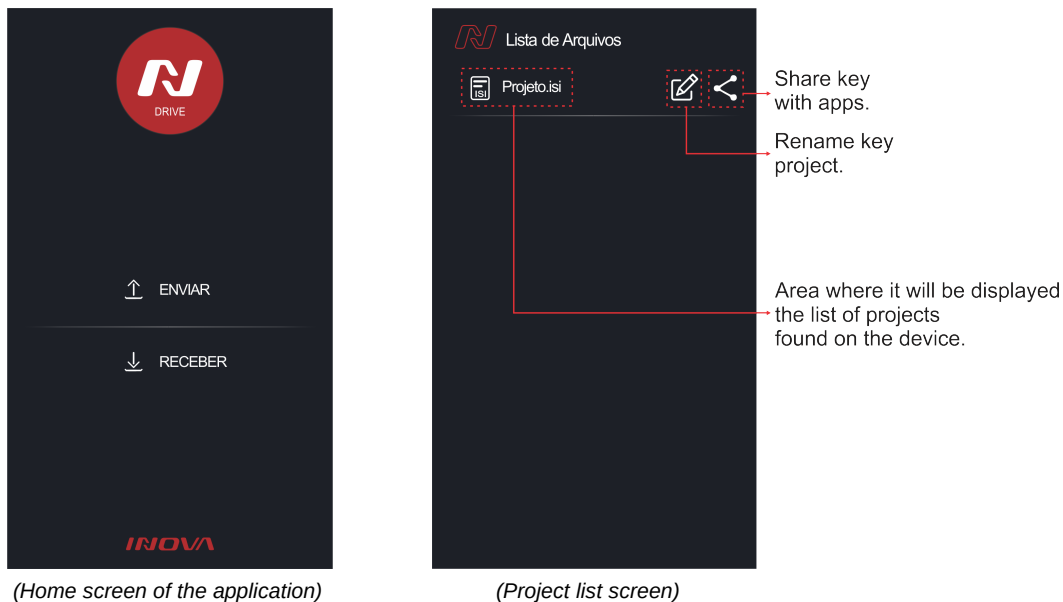
### 9.1 Transfer via Application

Inova **NDrive** is responsible for managing the transfer of projects to the Control Unit of the Electronic Panels System. **Search our application at Google Play available on Android and at Apple Store for IOS.**



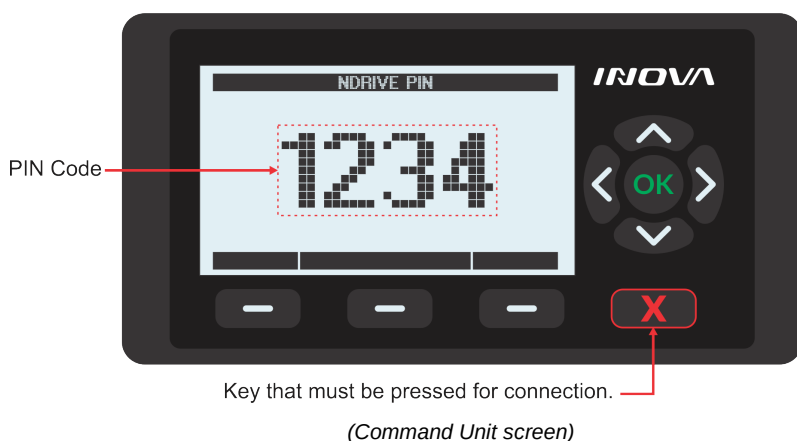
When opening the application, the initial screen will be displayed with the options of **Send**, **Receive**. Clicking on the Send button will list all projects available on the cell phone compatible with the system by the application. Clicking the Receive button will request the PIN and display all files available on the HMI.

The following images demonstrate the home screen and also the project list screen:



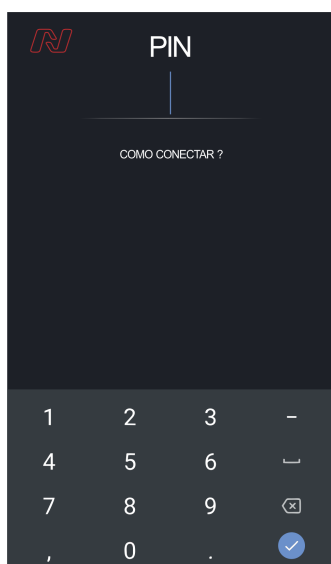
By clicking on the “share” button, you can send projects to your contacts using your messaging and email applications. When clicking on the button sent to the Control Unit (IHM), the PIN code will be requested to enable the connection between these devices.

- To make the connection, press the *Exit/Cancel* key for 5 seconds.

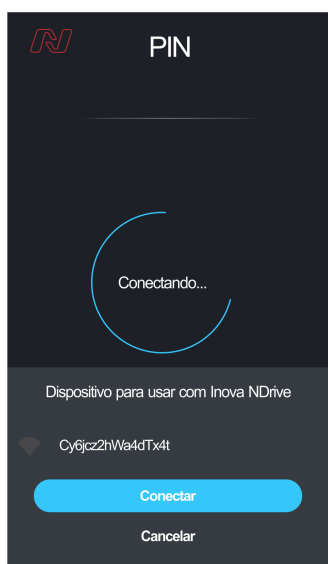


It is important to inform that the connection will be lost by closing the application, and can also be canceled by pressing the Disconnect key on the initial screen of the application.

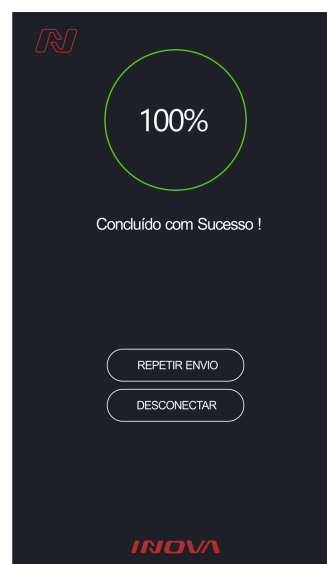
- Enter the PIN code shown on the display of the Control Unit into the application.



(PIN entry screen)



(Connection screen with the HMI)

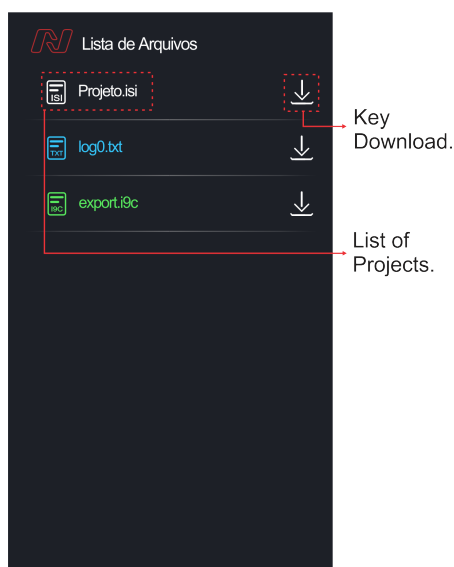


(Shipping confirmation screen)

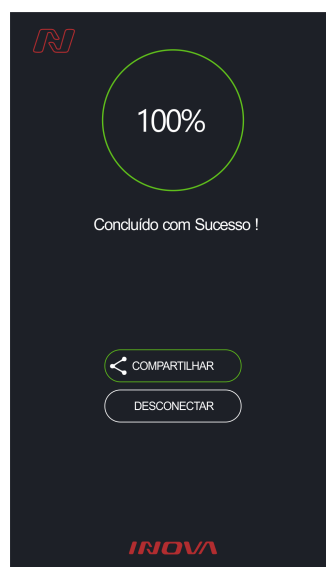
When the validation of the connection is complete, the selected project will be automatically sent to the Command Unit and the completion of the sending process will be indicated on the application's display. Click DISCONNECT after the submission is complete so that the Command Unit can be updated. Remember to keep the location (GPS) always on so that communication problems do not occur.

The Command Unit will automatically restart to enable the use of the new project submitted. Check on the Command Unit screen that the name of the project corresponds to the one previously selected in the application for use.

- To receive files from the HMI, select the RECEIVE button on the home screen and start the connection process as described previously.



(File list screen on the HMI)



(Application download confirmation screen)

Click on the desired item to save this file to your phone. After receiving the receipt, click DISCONNECT. The project files used by the Electronic Panel System have the extension “.isi”, as shown in the previous image “Project.isi”.

The log.txt files with the “.txt” extension are used only by INOVA and the files named export.i9c with the “.i9c” extension contain the Command Unit (HMI) settings such as Brightness, Contrast and Volume and can be sent for other Command Units.

## 9.2 Wifi data transfer

Inova Sistemas Eletrônico's NCloud platform is responsible for fleet management and control. In order to monitor and update the roadmap projects used in Inova's Shift line panels, NCloud is an objective and easy to use tool.



After receiving our email requesting registration on the platform, define your username and password using the link indicated in our email. After completing this initial registration, remember to save this data so that access to NCloud is possible.

### Fleet Registration

We will initially present the initial screens of the platform and describe their respective characteristics to facilitate the understanding of the system and its functionalities.

#### 1° - Login

First visit <https://nfrota.inova.ind.br> to access the homepage of our platform and log in.



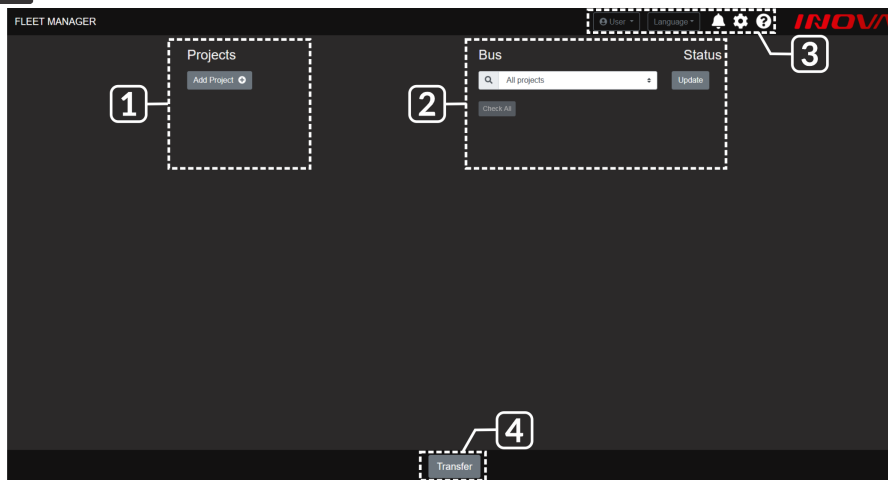
1 - System Login Area / Language Choice: Enter your username and password to access the platform and click on "Login". Using the selection bar, set the desired language.

2 - Help contact: click on the button to be directed to the call center of our technical support area.

Clicking on the Whatsapp application icon will open a conversation within the application on your phone if you are accessing our platform via cell phone. If you are using a computer, clicking on the icon will open a new tab in your browser using Whatsapp Web.

In the new tab, look for the "Start conversation" link and click on this link. This link will open a conversation on our support team if your contact is previously logged into the Whatsapp Web platform.

## 2° - Main Screen



1 - Include Project: Allows you to add a project so that it is possible to send through the platform. It is worth mentioning that the file with the extension “.isi” must be added in order to be recognized by NCloud.

2 - Registered Bus Control: In this area, cars that have already been connected with the NCloud platform will be displayed. It will also be possible to apply design filters to the selection bar and monitor the update status of the fleet buses.

3 - Notification and Settings: Allows access to information according to the selected icon:

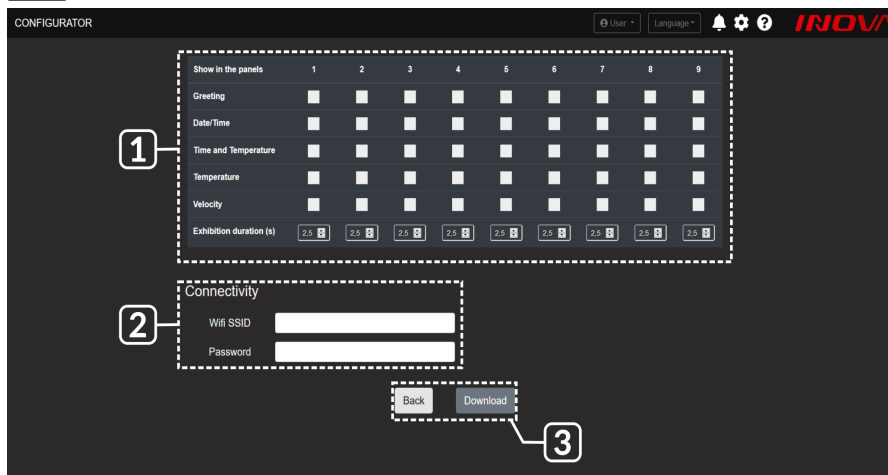


- Allows you to access the Configurator page, where we can configure the display settings for extra dedicated system messages and configure the login and password of your Wifi internet network.

4 - Transfer: Allows the transfer of the respective projects selected for updating the panels to the selected cars.

## 3° - Configurator

Press the icon  on the main screen to access the configurator screen.



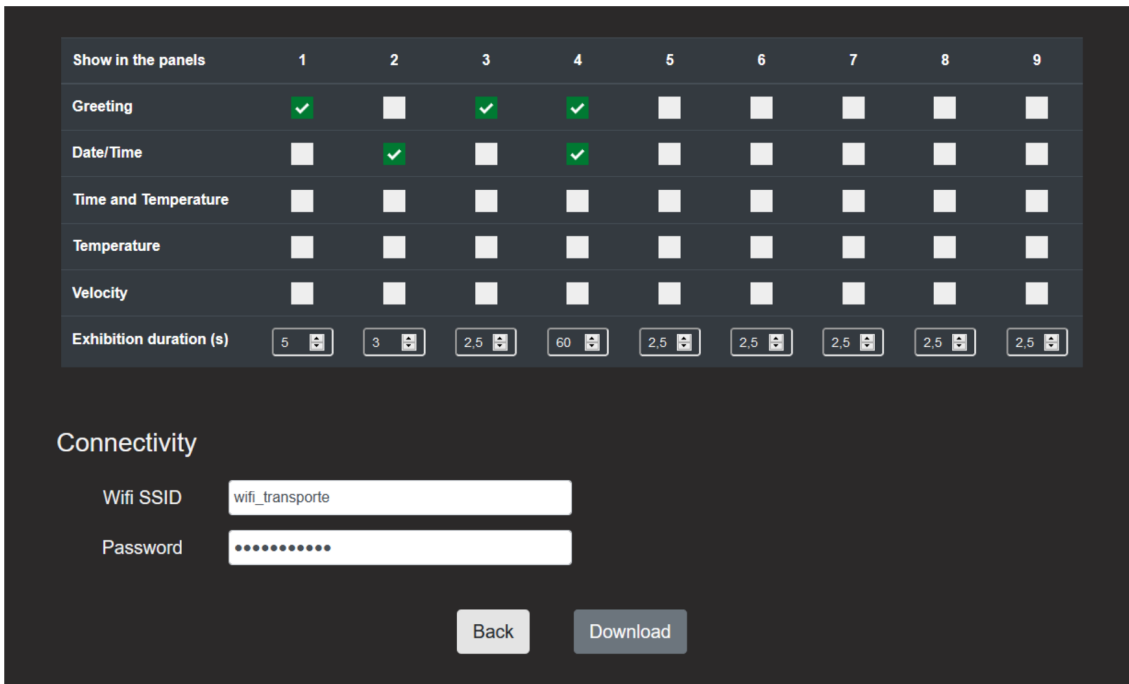
1 - Extra Messages: Allows you to select, if necessary, the extra dedicated messages of the system that will be displayed on the panels, as well as the time for displaying the messages. It is worth mentioning that this configuration panel is organized according to the panel ID number defined in the project file. Check the correspondence of this number with the numbers at the top of the configuration panel and Extra Messages.

2 - Connectivity - Garage: Allows you to set your Wifi network login and password to enable the connection of the Control Units (IHM) of the Inova panel system.

3 - Back / Download: Back: return to the Main Screen page. Download: Enables you to download the “**import.i9c**” file that contains the information defined on the Configurator page (the settings for extra messages and your wifi network login)

It is important to inform that the maximum value that can be assigned in the “Display time” field is 60 seconds, and the minimum value is 0.5 seconds. For this function, time increases and decreases every 0.5 seconds.

**Configuration example:**

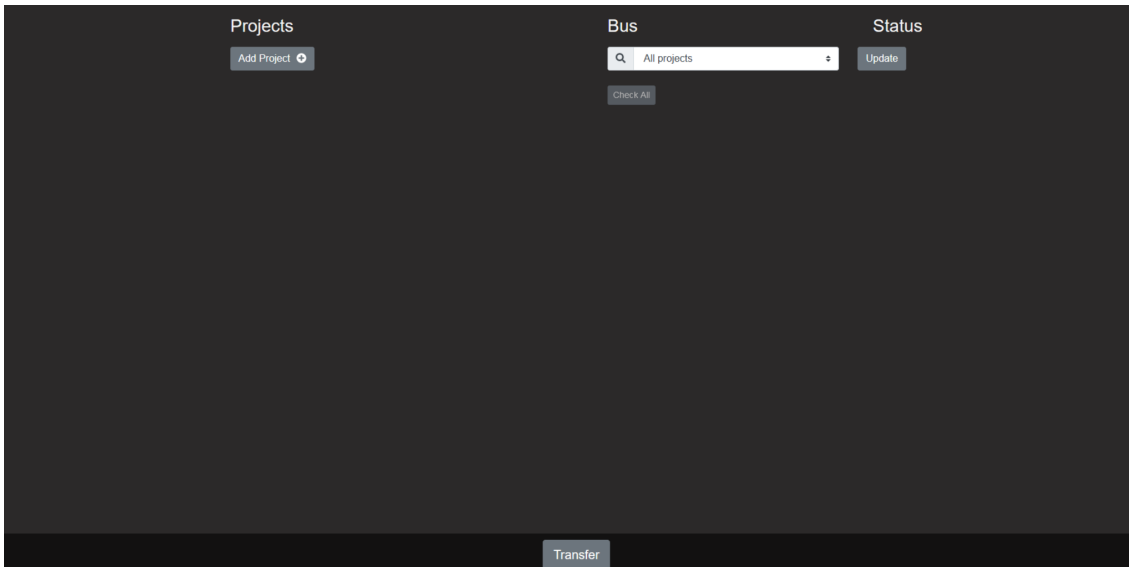


**IMPORTANT:** to enable the connection of the Control Units with the NCloud platform, it is necessary to define the login and password of the wifi network where there will be the possibility of connecting the system to the network and press the Download button.

The file “import.i9c” will be saved on your phone or computer, which must be sent to the Command Unit via the **NDrive** application (for more information about our file transfer application and how to use it, access the Quick Use Guide of the Shift line of electronic panels, or the complete line manual).

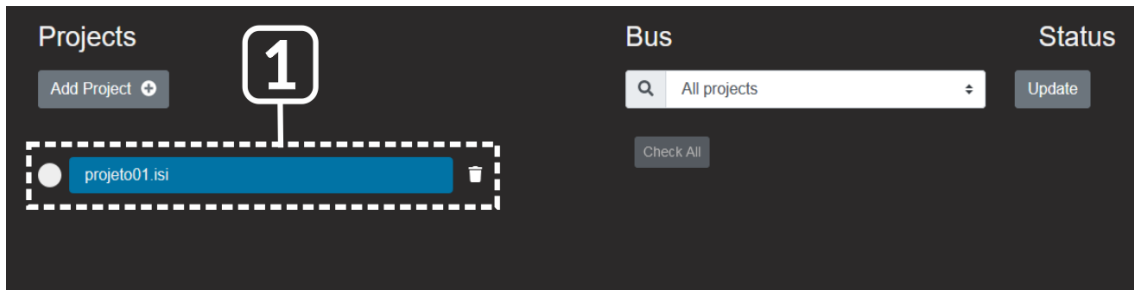
## Adding a Project

The process of adding projects has the purpose of saving these files previously created within Inova's ISI message editing software and enabling the transfer of these projects to the Control Units via Wifi.



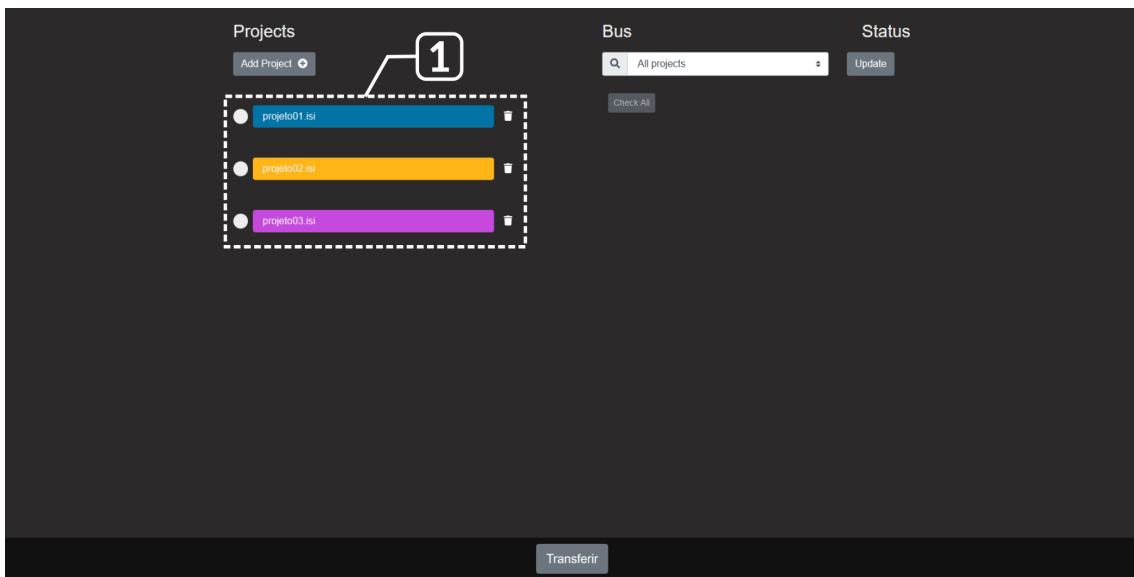
On the Fleet Manager main screen, click on the "Add Project" button. A search screen will open on the screen, in this new window click on the "**Browse ...**" button to start the search for the file with the extension ".isi".

After selecting the desired file, click on "Save" so that this file is displayed on the system's home screen. The selected project will be displayed on the home screen with your name and a highlighted color to make it easier to see the projects.



1 - Example of a project saved on the platform.

It is worth mentioning that each project added to NCloud will receive a distinct color assigned to characterize it and that these colors remained alternating with each new project added to the file list.



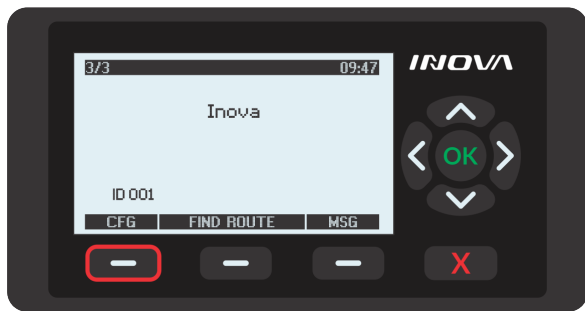
1 - Example using three project files.

## Setting the Bus ID

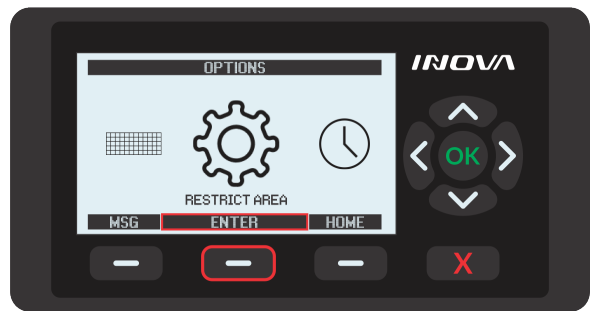
In order to make it possible to connect the cars to NCloud, in addition to sending the ".i9c" file to the Control Unit, we also need to define the Bus ID on which this Control Unit is installed.

To perform this process we need to enter the configuration menu under the ID number within the advanced settings of the Control Unit (HMI). Follow the screens below to set the desired Bus ID:

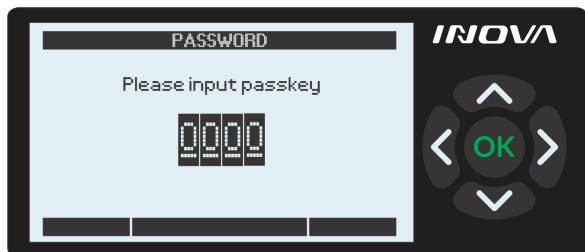




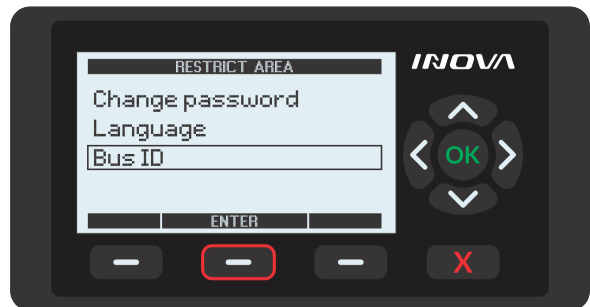
1 ° - On the home screen, press the CFG menu key.



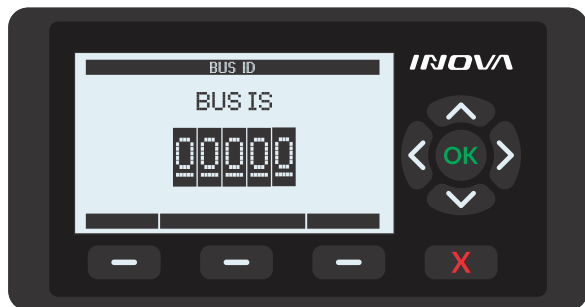
2 ° - Navigate to the RESTRICTED AREA menu and select ENTER.



3 ° - To access the RESTRICTED AREA menu the password must be entered. Default password "1234". Master password "1700".



4 ° - Within the RESTRICTED AREA menu, select the Bus ID item.



5 ° - Using the arrows, type the desired ID value and press "OK" to confirm. The configuration will be validated the next time the Control Unit is powered up, so, after confirming the ID value, restart the device to validate the process and make it possible to connect to the NCloud platform.

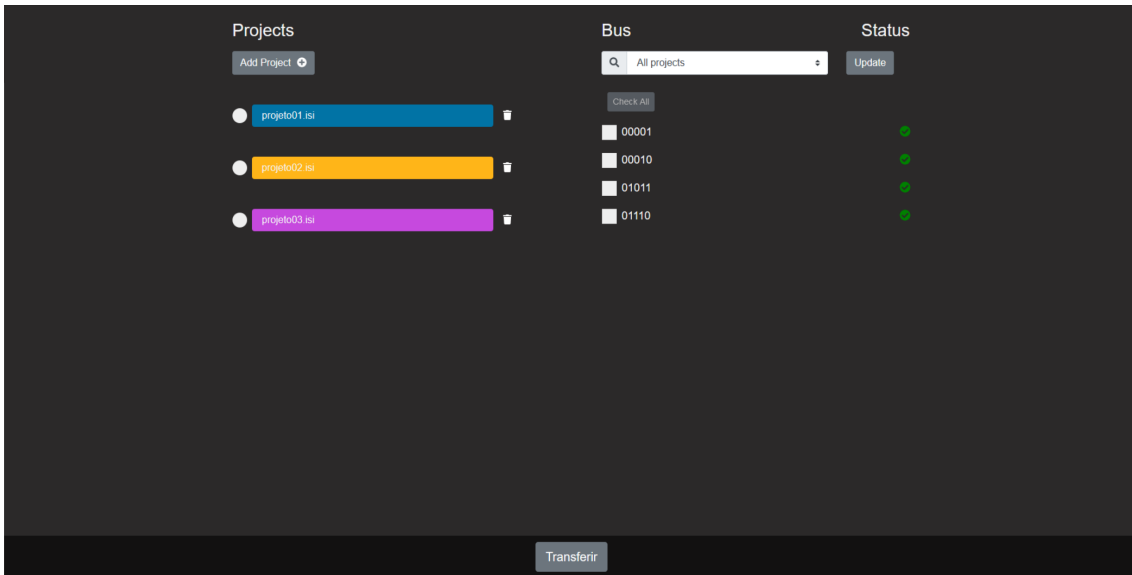


6 ° - This screen will be displayed whenever the Control Unit is connected to the Wifi network registered on the platform previously.

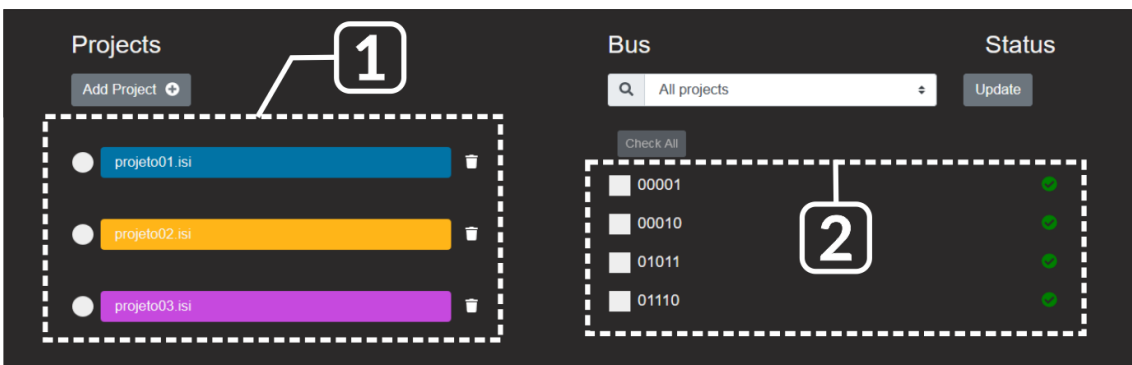
## Project Transfer

After executing the process of defining the ID number for all cars that must be presented in the Fleet Management system, we can then execute the project transfer process.

As soon as the Control Units connect to the registered Wifi network, they will be displayed on the home screen with their respective ID numbers as shown in the following images:



(Home screen of the platform with registered projects and cars)

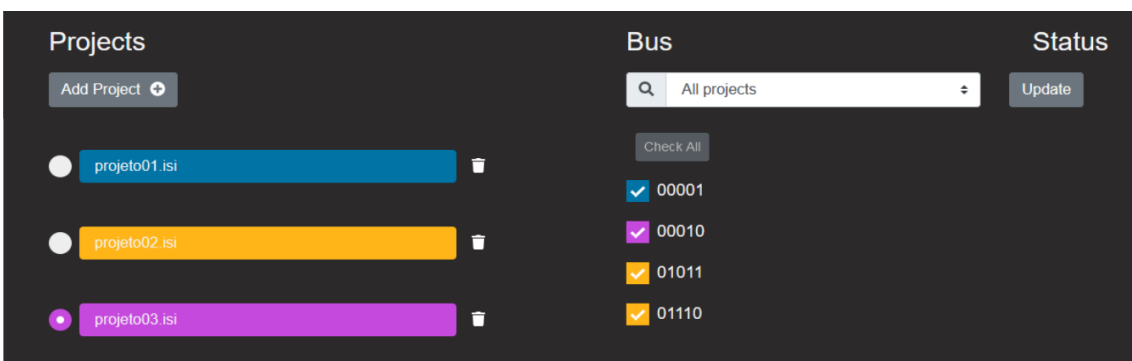


- 1 - Projects saved for transfer.
- 2 - Registered buses and their respective ID numbers.

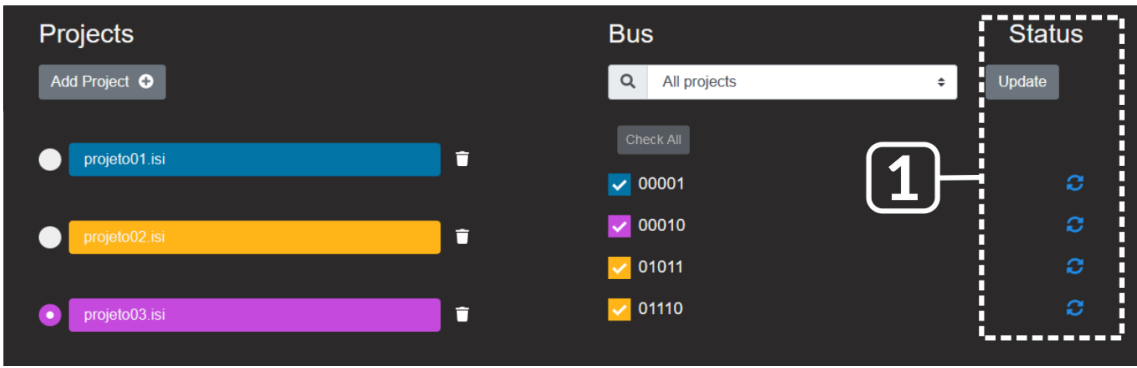
To transfer the project, select the desired project by clicking on the icon to the left of the project in question, and then select the bus to which you want to send the project file by clicking on the box to the left of the bus ID number.

Note that clicking on the ID number box will assign the same color as the project selected for sending. This will happen to facilitate the visualization of the projects that are running in your fleet even after the completion of the project transfer process, this information will be kept saved within the system.

We can see this process in the image below:

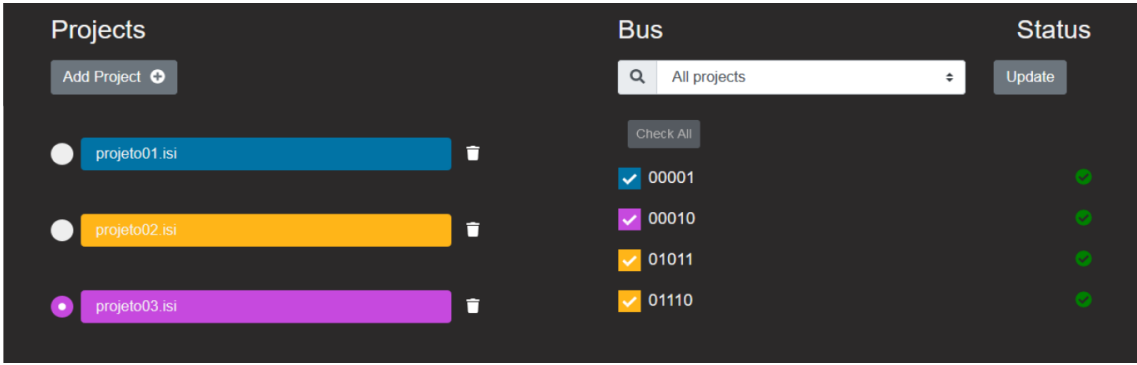


When you have finished selecting the projects you want to send to the HMI, press the "Transfer" button located in the center at the bottom of the Fleet Manager screen. The Status area will indicate the change of state of the selected cars according to the image in the example below:



1 - Update of the status of projects for buses in the registration list.

As soon as the project is transferred, it will also be indicated in the status area when each Control Unit has finished updating the project. The Status area will indicate the change of state of the selected cars as shown in the example image below:



In the same way, it will be possible to observe the indication of connection to the Wifi network in the Command Unit, and immediately afterwards, the screen that indicates the update of the selected project. The unit will restart and automatically start transmitting data according to all parameters that were defined when using the systems.

**The Control Unit (HMI) will connect to the registered wifi network 1 minutes after being turned on and after 1 in 1 hour, outside of that time the HMI will be disconnected from the wifi network.**

The image below shows the screen for completing the transfer process indicated by the Command Unit:



## 10. ACCESS TO ROUTES



Use the arrows to select the route and press OK to display it.

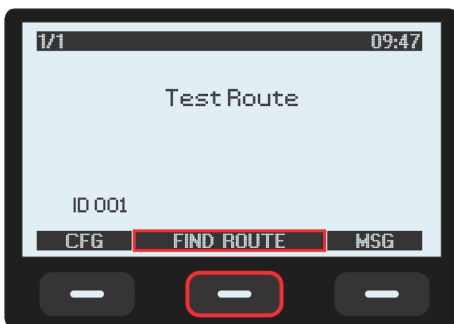


Use the RIGHT and LEFT arrows to select the ROUND and BACK modes respectively if available on the selected route.

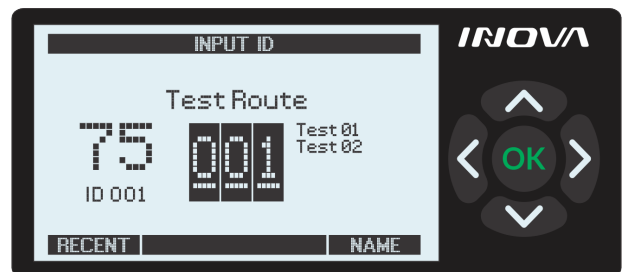
## 11. ROUTE SEARCH

To find a route, you can use the route ID number, the route name, or even the recent history of the last routes that were selected.

### 11.1 Search by ID

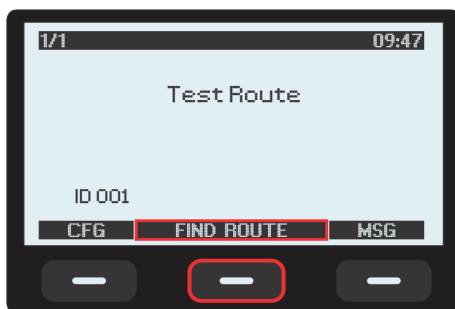


1 ° - In the home screen, press the SEARCH ROUTE key.

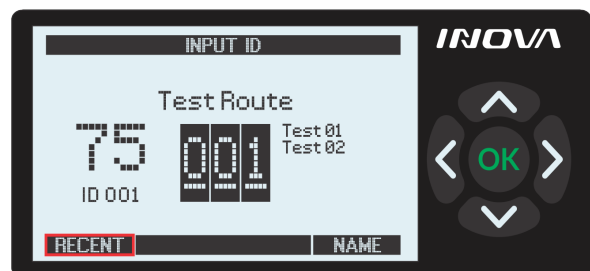


2 ° - Using the navigation keys, select the desired route ID and then press the OK key.

### 11.2 Search by Recent Routes



1 ° - In the home screen, press the SEARCH ROUTE key.



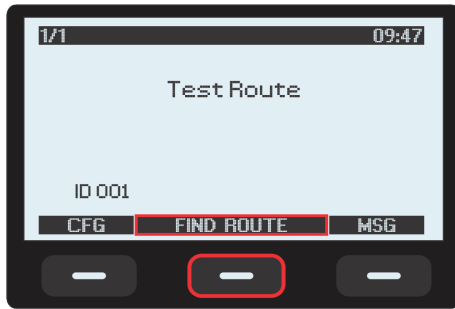
2 ° - Press the RECENT key.



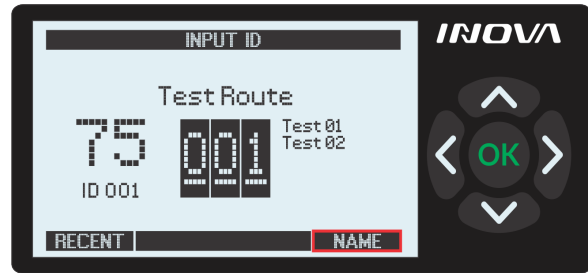
3 ° - Using the navigation keys, select the desired route and then press the OK key.

\* The last 10 routes used will be displayed.

## 11.3 Search by Name



1 ° - In the home screen, press the SEARCH ROUTE key.



2 ° - Press the NAME key to view the list of routes by the name of each route.



3 ° - If desired, press the KEYBOARD key within the NAME menu to enter the name of the route.

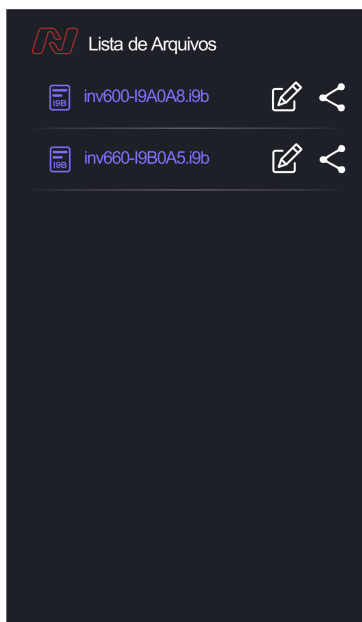


4 ° - Using the navigation keys, select the desired route and then press the CONFIRM or OK key to select the route.

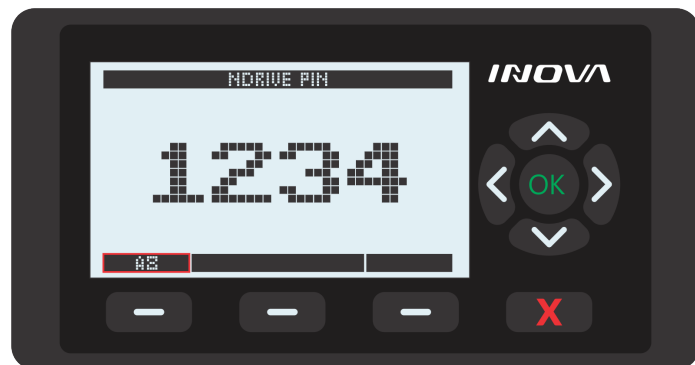
## 12. UPDATES

It is possible to update the Control Unit (HMI) and the panels, requesting INOVA the updated firmware and through Ndrive send to your equipment. The firmware files have “.i9b” extension, being “inv600-I9A0Ax.i9b” intended for updating the Command Unit (HMI) and “inv660-I9B0Ax.i9b” intended for updating panels. It is important that all panels are paired in order to be updated.

The version number of the firmware installed in the Control Unit (HMI) is at the bottom left when the “NDrive PIN” is accessed and the version number of the firmware installed in the panel is visible when recently connected.



(Screen with the firmwares)



(Screen indicating the firmware version on the HMI)

After sending the firmware to the Control Unit (HMI) you will be asked to install as shown in the image below. After being installed it will be necessary to restart and will display the message “Update installed”.

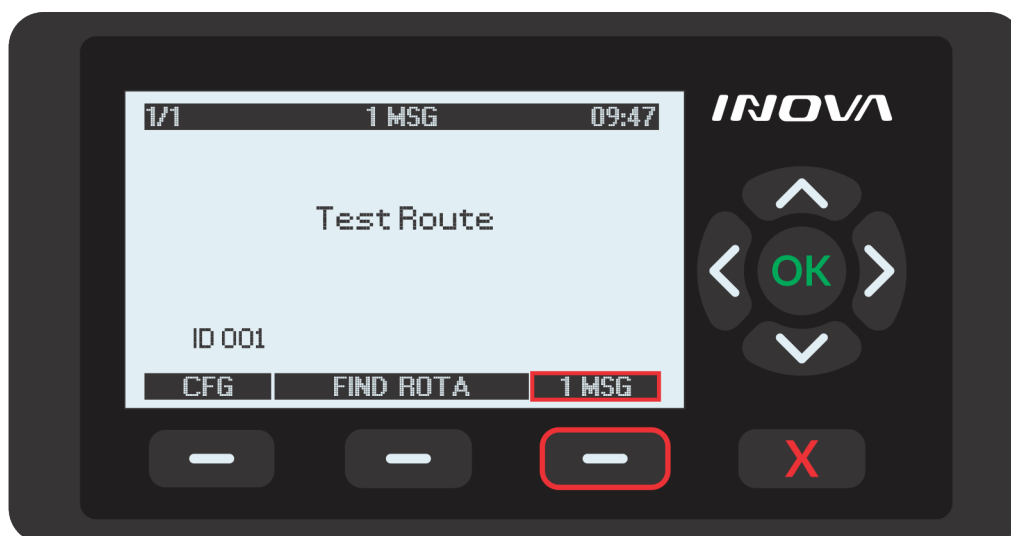


(Firmware installation screen)

### 13. FAILURES AND SOLUTIONS

During the use of the Electronic Panel System, flaws may arise indicating that there are non-conformities that may prevent the proper use of the equipment. To facilitate the communication and the visualization of these possible faults, the “MSG” menu is available in the system's Control Unit, where these faults will be stored, remaining in this way until the indicated problem is solved.

The number of errors found will be indicated in the MSG menu icon, as well as at the top of the display. To view the error menu, select the corresponding button on the Control Unit's home screen.



(Control unit home screen - MSG menu)

- “Script file failure. Upload a new file ”:

This fault will be displayed when the Control Unit does not recognize any available project files. Run the connection process and send a project file (.isi) to the Electronic Panel System control unit.

- “The panels do not display messages”:

In case the panels do not display messages even after the system initialization, proceed as follows:

- Open the plastic maintenance cover on the back of the panel;
- Check if the red light is on;
- Check that the green light is flashing intermittently;
- Restart the system again and observe the items above;

- “Pairing does not find all panels available on the network”:

If the control unit does not find all the available panels, proceed as follows:

- Check that the panel that is not being found is connecting with the others during the system initialization;

- Open the plastic maintenance cover on the back of the panel;
- Check that the green light is flashing intermittently;
- Restart the system again and observe the items above;

- “Communication failure with panels”:

This fault will be displayed when a panel that has already been paired with the system is no longer recognized by the Control Unit. Within the fault menu, which panels were no longer found during the initial check of the Control Unit will be displayed.

- Open the plastic maintenance cover on the back of the panel;
- Check if the red light is on;
- Check that the green light is flashing intermittently;
- Restart the system again and observe the items above;

If the fault persists, turn off all panels, perform the pairing process again with the panels disconnected. “0/0” panels should appear on the Command Unit's home screen.

- Restart the system with all panels again and perform the pairing process for the Control Unit to recognize the panels again.

For more information and assistance in using the system, contact our technical assistance, or even more information is available on our website!

[www.tecmov.com](http://www.tecmov.com)



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