



***EsoftLITE***

## **EsoftLITE    USER MANUAL**

***SYSTEM DESCRIPTION  
COMPONENTS  
CONFIGURATION AND SETUP***

***MAN-0028-001 – vers. 2021***

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## Prologue

### **Purpose of this manual**

The EsoftLITE software covers a wide range of applications such as picking carts, article sorters, order sorters for e-commerce and picking for order picking. Thanks to its structured design, low cost and wide range of possibilities, it offers the necessary flexibility to solve picking tasks. This manual contains information on how to use, configure and perform test guided for technical personnel with basic knowledge.

### **Service & Support**

In addition to documentation, we offer our technical expertise and support. Contact with the Electrotec leader if you have technical questions about the product.

### **Basic notions**

To understand this manual, basic knowledge in the field of logistics and information technology is required.

### **Documentation & information**

The EsoftLITE manual provides specific information of operation, configuration and test. In addition, the manual provides an overview of the features and picking procedures supported by the EsoftLITE.

## Product overview

The EsoftLite application offers the flexibility and power needed to control Electrotec displays for various picking solutions. Thanks to its design, flexible configuration and wide set of options, EsoftLITE is ideal for controlling a wide variety of picking applications. The way that data is managed is through CSV files.

Numerous **MANAGEMENT** functionalities are possible and are described below:

- **Picking Carts.** The application manages the cart displays making it easy for the operator to pick items from the shelf and load to the cart locations.
- **Order sorter.** This functionality allows the operator to sort items from a container/cart with a scanner and place them in a location on the shelf that corresponds to an order to be supplied.
- **Picking.** The application manages the displays from the scanning of a barcode from a box and corresponding to an order, in this picking process the operator picks the items from the shelf and places them in the box.
- **Custom Mode.** The application adapts to customer specifications.

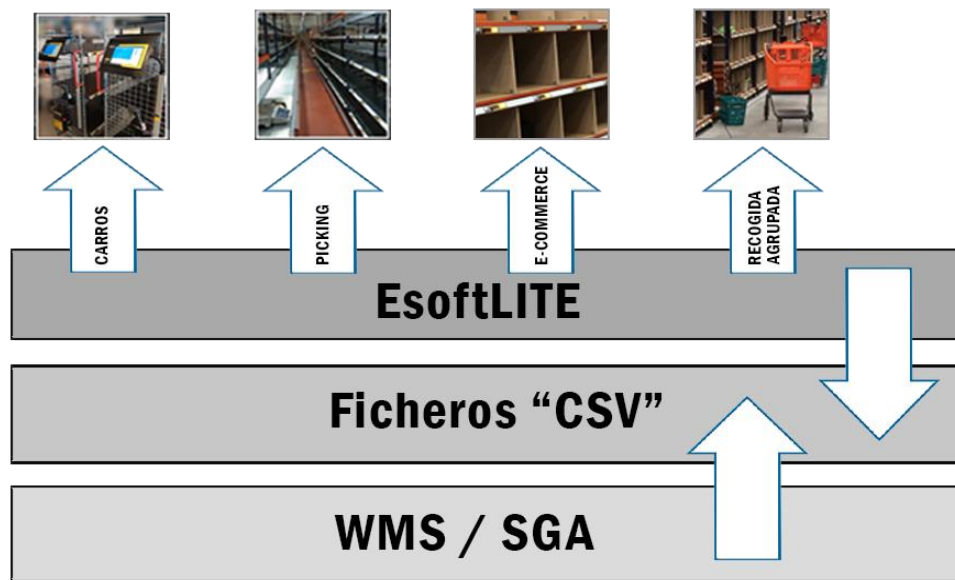
**TEST** and **SETUP** functionalities:

- **General Setup.** Allows you to configure the COM ports, users and data path.
- **Setup operating mode.** Allows to select the various operating modes, carts.
- **Setup node configuration.** Used to configure the nodes (displays) used.
- **Manual test.** Data can be sent to the displays individually or all of them at the same time.
- **Auto Test.** Displays show their node number and are used to quickly check that they are working correctly.



## 1. System description

The following chart shows the performance of EsoftLITE. It is a software that allows to manage the preparation of orders through the exchange of files in CSV format. The WMS/SGA will send formatted CSV files, with a fixed structure of fields, on the other hand EsoftLITE will interpret those files and modify them with the updated data adding the user and the date and time of the PICK.



The integrated software allows you to manage different picking options as listed below.

**Picking CARTS.** EsoftLITE allows the management of the BATCH file in CSV format previously generated by the WMS and the activation of lights and displays. The data that the user generates when making the PICK, date and time, as well as the quantity prepared, are recorded at all times. In this option several lights can be activated simultaneously, for example in the case that several orders have the same article.

**Picking.** In this option the operator scans a box and all the lights of the items corresponding to that order are activated. Usually, dynamic shelves are used that have several locations for each shelf and facilitate the operator's preparation tasks. The data that the user generates while making the PICK, date and time, as well as the quantity prepared, are recorded at all times.

**E-commerce** is an option for the classification of articles. To do the classification, a shelf is used where a box is placed in each slot. In this option the operator scans a box and activates the light of the article that corresponds to that order. The data generated by the user is recorded in the file at all times.

**Grouped picking.** This option is similar to the picking cart but without displays and only with a tablet. The tablet indicates the location to pick and the quantity, with the scanner confirms the reading of the item to pick. The file must be of type BATCH in CSV format and it is generated by the WMS/SGA.

## 2. Installation

### Software

The EsoftLITE Software installation requires the program to be running in a Windows environment, ideally Windows 10 or Windows 7. It is not needed to previously install software components.

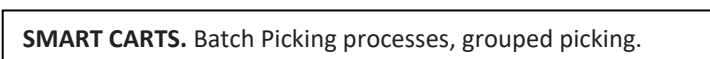
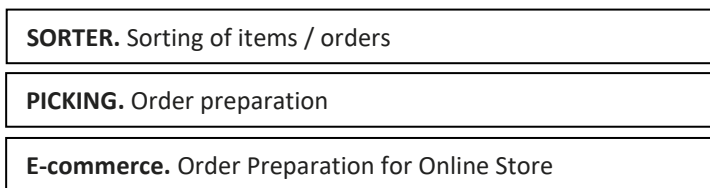
### Hardware

The EsoftLITE is designed to work with Electrotec's DPXX-ST displays, which are easy to use and have powerful advanced features. These displays are a modified version of the standard PICKBUS hardware with an interface communication capability without using the DPI interface.

The use of simple but powerful ASCII commands provides complete control over the display functions and is designed for quick and easy integration. Standard RS422 serial ports enhance communication reliability and provide optimum immunity to electrical noise even when data networks extend thousands of feet.

There are multiple ways to interface with DPXX-ST modules. Any component with an RS422 port can be connected to DPXX-ST modules to control them.

PC with a USB-RS422 converter:



## 3. Main menu and diagrams



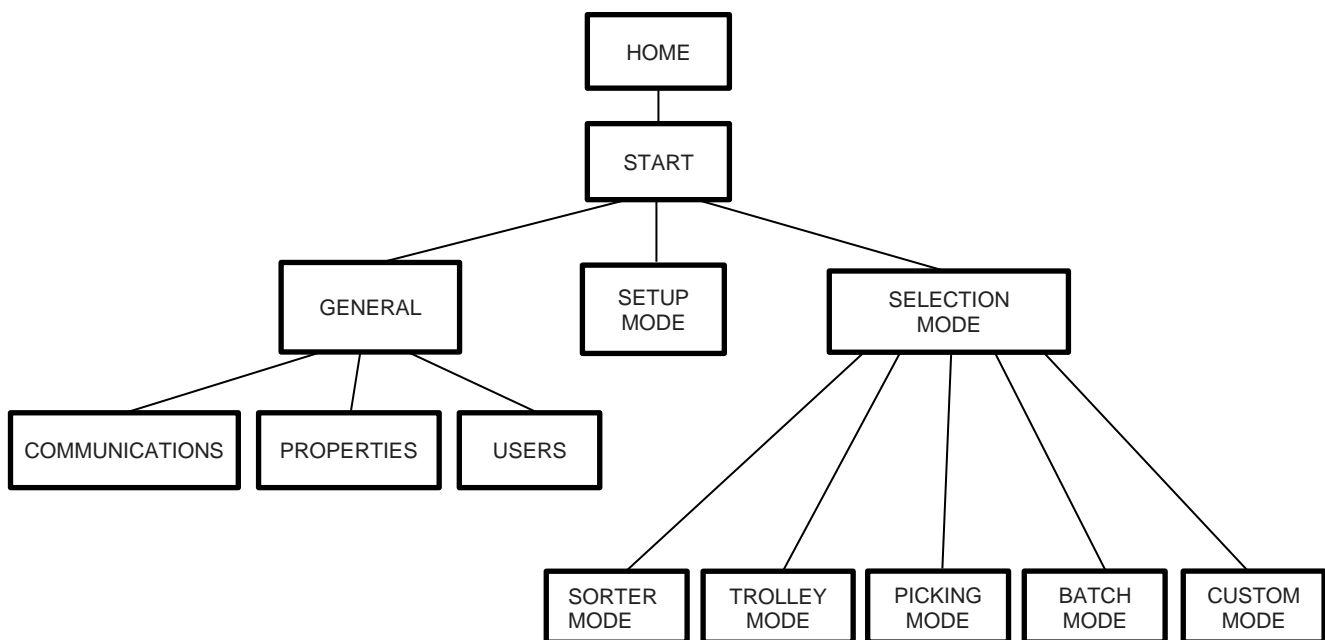
### 3.1 User login

In order to start navigating the application, you must be previously registered or logged in as an administrator.

User: Admin  
Password: Admin

SETUP function diagram.

The tree of the setup screens and sub-screens is shown below:



#### SETUP:

##### GENERAL:

COMMUNICATIONS: COM and Scanner selection  
PROPERTIES: Selection of the data source CSV files  
USERS: User administrations

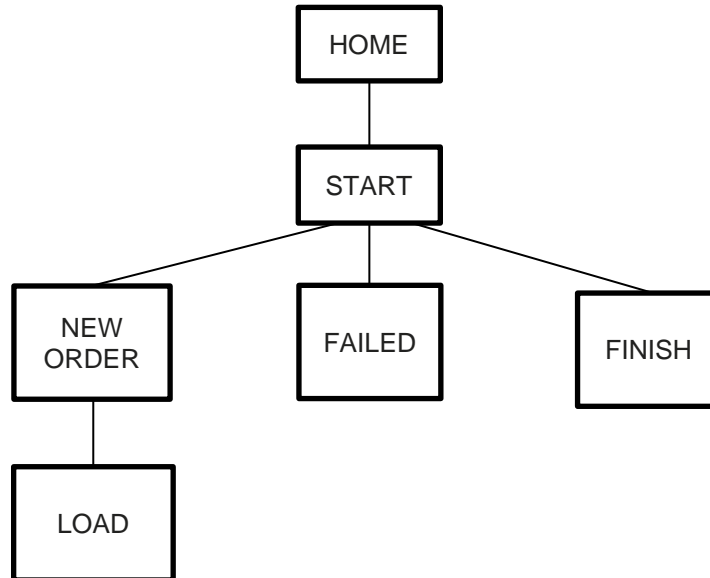
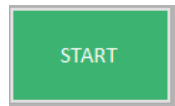
SETUP MODE: Node map configuration

##### SELECTION MODE:

SORTER MODE: Item sorter  
PICKING MODE: Picking of units  
TROLLEY MODE: Order picking with trolley with displays  
BATCH PICKING MODE: Tablet order picking without displays  
CUSTOM MODE: To be defined by the customer

### 3.2 Function START diagram

The following is the tree of the screens and sub-screens of the START functions:



**START:**

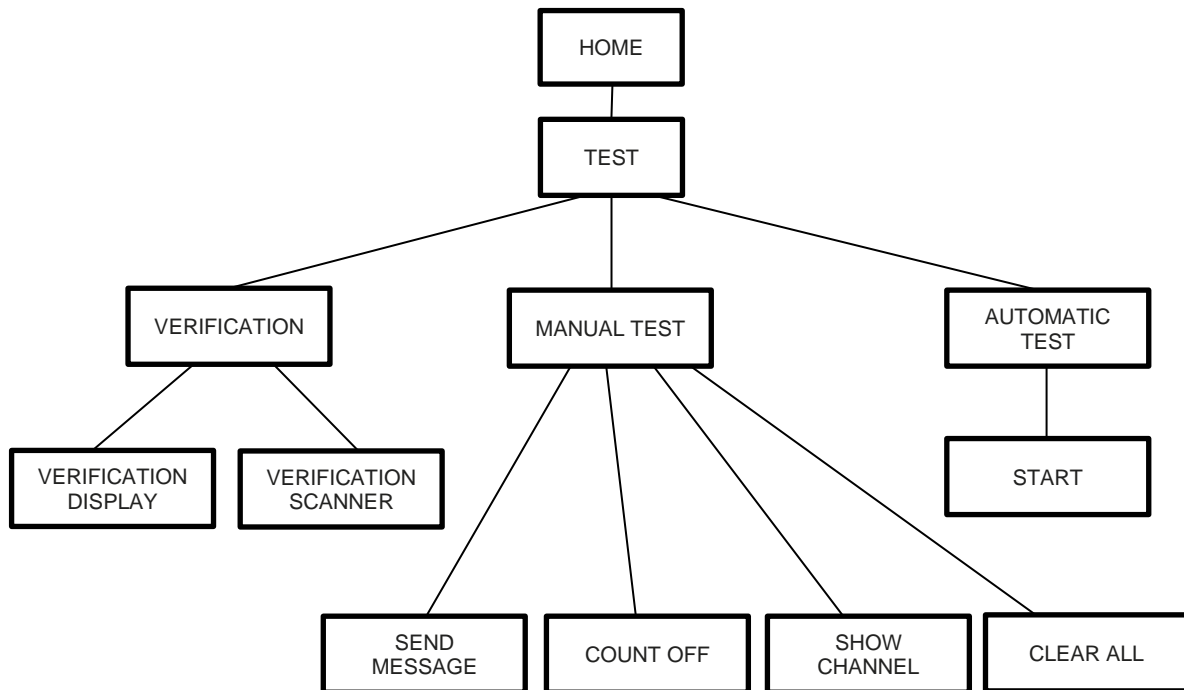
NEW ORDER: CSV file to be uploaded  
CARGAR: Load the file  
FAILED: Files containing an error that was not executed  
FINISH: Files already completed without errors



### 3.3 Test function diagram

The following diagram, is the tree of screens and sub-screens of the test functions.

TEST



#### TEST:

##### VERIFICATION:

VERIFICATION DISPLAYS: Verification of display hardware

VERIFICATION SCANNER: Verification of the scanner reading

##### MANUAL TEST:

SEND: Allows to send text to the display and color to the pilot light.

COUNT OFF: Displays the node number of each display.

SHOW CHANNEL: Not used for this software version.

CLEAR ALL: Clears texts and turns off the pilot light of all displays.

##### AUTOMATIC TEST:

START: Starts a test cycle of the installed hardware.

## 4. General setup

### 4.1 Communications

It is recommended to first choose the COM port that communicates with the displays via RS422, in case of doubt you can check the COM port through the "Windows device manager".

- > Monitores
- > Mouse y otros dispositivos señaladores
- > Procesadores
- > Proveedor de impresión WSD
- ▼ Puertos (COM y LPT)
  - ▶ Serie estándar sobre el vínculo Bluetooth (COM7)
  - ▶ Serie estándar sobre el vínculo Bluetooth (COM8)
  - ▶ USB Serial Port (COM13)
- > Teclados
- > Unidades de disco



**Save Changes:** Required when a configuration change is made.

**Test connection:** When the key is pressed, the program checks that the COM ports are connected correctly, if the TEST is OK it will be displayed in green and in red if it is not correct.

**Type of scanner:** We can choose between a scanner with serial port or Bluetooth connection:

**TCPServer:** via Ethernet

**COM Port:** via serial COM port

**Bluetooth:** Keyboard emulation

**Without scanner:** Operational without scanner

The communication interface to which the displays are connected must be selected:

**WIFI Gateway:** Introduce the IP + Port

**COM Port:** Click "Refresh Ports" to refresh the COM ports. Then select in the adjacent window the COM port that corresponds to the connection with the displays.

## 4.2 Properties



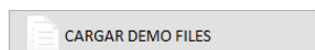
### Directorio de carga:

**BUSCAR** In this screen we can search for the Path of the data source that the program will use to load the work file.

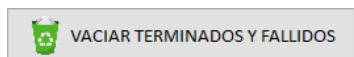
**POR DEFECTO**

**Displays PORT.** OK green / Red NO OK  
**Scanner PORT.** OK green / Red NO OK  
**Log System.** In case of a communications error with the hardware, it will be displayed in red, otherwise in green.  
**Messages** associated with the state of the communications.

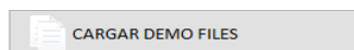
### Special functions:



**Only for test functions.** Pressing this button transfers files from the **XXXXXX** folder to the pending folder. In this way you can test and recover test files repeatedly without having to copy them from the system.



**Removes** the files of the folder ended and failed.



**Save Changes:** Required when making a configuration change.

### 4.3 Users

In this screen we can manage the users, register them, delete them and configure the level of access to the screens.

User level		Access	Yes / No
User		Setup	NO
		Test	YES
		Start	YES
Administrator		Setup	YES
		Test	YES
		Start	YES

[illegible]

## 5. Mode selector

In this screen we will select in which mode we are going to work, cart mode, sorter, Picking or Custom. Depending on the mode we choose, the configuration table of the "Setup mode" displays must be updated / modified.



The Put solution optimizes batch picking and high-speed sortation operations with a process sometimes called reverse Pick to Light. With the put to light system, operators scan an item and locations are illuminated that represent a store or customer in need of that item. The Put solution offers options that maximize speed and accuracy.



The Pick by Light solution is the best-known option for executing order unit sorting operations. This solution increases product picking productivity, accuracy and cost efficiency of this labor-intensive process. It increases productivity by over 40% and can reach up to 200%.



Mobile picking carts combine a variety of technologies and ensure fast and accurate placement during the picking process. These systems **automate the picking of multiple orders simultaneously**. They ensure that the correct quantity is loaded / picked and also the correct location. Mobile pick carts can significantly **increase picking speed by up to 200%**.



The proposed solution is to use a trolley with a Tablet and a scanner. The operator performs a grouped collection of items by the warehouse and then can be sorted on a shelf SORTER.



File uploads from the WMS to EsoftLITE can be automated making it easier for the operator to avoid having to perform file upload tasks manually.

## 5.1 Cart mode

There are two options for working with the trolley, one is with automatic box assignment and the other is with manual box assignment.

### 5.1.1 Automatic assignment



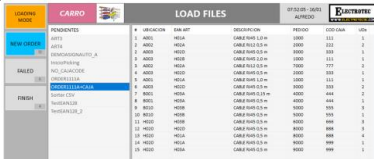














In this option, the operator loads the boxes in the cart bins without label and the program assigns the order number to the cart bins automatically. Below, the step-by-step procedure is detailed.



Step	Task to do	Description
1		Press START to access the file upload menu.
2	 Manually select the work file	
3		Press to load the selected file.
4	  	<p><b>PICKING ARTÍCULO</b></p> <p><i>Dirígete a la ubicación [A001] y Escanea el artículo [H01A]</i></p> <p><b>Follow the screen prompt. Go to the location where the article is hosted.</b></p> <p><b>Optional:</b> If we do not want to run the collection of the location we have on the screen, we can press the "Skip Step" key and it will go to the next location.</p>
5	  	<p>UBICACION: <b>A002</b> UNIDADES: <b>3</b> CABLE RJ12 0,5 m</p> <p>TABLA LOG PROGRESS: 20% 4/17 EAN BOX: PEDIDO:</p> <p><b>Scan.</b> The screen displays the order and item information as well as what is still to be delivered.</p> <p><b>Optional.</b> In case the item does not have a barcode, we can press the "ENTER EAN" key, which replaces the scanner.</p>
6		<p><b>COLOCA ARTÍCULOS</b></p> <p><i>Deposita la cantidad indicada en el display encendido. Usa la tecla [V] para validar.</i></p> <p>operator picks the items from the shelf indicated by the display, places them in the location and then presses the "V" key on the display. Pressing the "V" key confirms that the location has been completed and repeats this operation until all the lights are turned off. At this point there will no longer be any pending items in this location on the shelf.</p>
7		<b>Repeat steps 4,5,6</b> until the grouped order is completed.
8		<b>End Pickup.</b> When all the orders in the cart have been completed, the LEDs of the locations light up, the green LEDs indicate that they are complete, the red ones indicate that they are incomplete. The order number is also indicated on each display so that the label can be placed on the box.
9		<b>Finalizes the BATCH</b> , whether there are still items to be sorted or all items have been completed. Saves the file to the "FINISHED" folder and turns off all lights on the trolley displays. It can also be ended by pressing the "V" key on the information display.

## 5.1.2 Manual box assignment

In this option the application indicates on the screen that the operator reads the barcode of the cash register label XXX, places the cash register in the desired location and confirms this location with the display. The operator repeats this operation until the cash box assignment is complete. Below, the step-by-step procedure is detailed:

Step	Task to do	Description
1		Press START to access the file upload menu.
2	 Manually select the work file	
3		Press to load the selected file.
4	 	<b>ASIGNACIÓN MANUAL</b> <i>Escanea el código de caja [111]</i> <b>Optional.</b> In case the item does not have a barcode, we can press the "ENTER EAN" key, which replaces the scanner.
5		<b>ASIGNACIÓN MANUAL</b> <i>Coloca la caja en la ubicación deseada y pulsa [V].</i> The operator <b>places the box</b> in a free location and presses the "V" key on the display. The light for that location will be illuminated.
6		Repeat steps 4 - 5 until the last box is in place.
7	 	<b>PICKING ARTÍCULO</b> <i>Dirigete a la ubicación [A001] y Escanea el artículo [H01A]</i> <b>Optional:</b> If we do not want to run the collection of the location we have on the screen, we can press the "Skip Step" key and it will go to the next location.
8	 	 <b>Scan item.</b> The screen shows the information of the order and the item as well as what is still to be delivered. In case the item does not have a barcode, we can press the "ENTER EAN" key, which replaces the scanner.
9		<b>COLOCA ARTÍCULOS</b> <i>Deposita la cantidad indicada en el display encendido. Usa la tecla [V] para validar.</i> <b>Loading operation.</b> The "PUT" lights are activated on the trolley and the quantity is indicated on the display. The operator picks the items from the shelf indicated by the display, places them in the location and then presses the "V" key on the display. Pressing the "V" key confirms that the location has been completed and then, this operation will be repeated until all the lights turn off. At this point, there will no longer be any pending items in this location on the shelf.
10		Repeat steps 7, 8, 9 until the grouped order is completed.
11		<b>End Pickup.</b> When all the orders in the cart have been completed, the location lights turn on, green lights indicate that they are complete, red lights indicate that they are incomplete.
12		<b>Finalizes the BATCH</b> , whether there are still items to be sorted or all items have been completed. Saves the file to the "FINISHED" folder and turns off all lights on the trolley displays. It can also be ended by pressing the "V" key on the information display.

## 5.2 Batch Picking mode

In this case we have a cart with a Tablet and a scanner to read the articles. On the Tablet, once the "CSV" file has been selected, it will indicate step by step the task of collecting the grouped articles. The scanner confirms that the article is the correct one. The procedure is listed below:



Step	Task to do	Description
1		Press START to access the file upload menu.
2	 Manually select the work file	
3		Press to load the selected file.
4	  	<p><b>PICKING ARTÍCULO</b></p> <p><i>Dirígete a la ubicación [A001] y Escanea el artículo [H01A]</i></p> <p><b>Follow the indication on the screen.</b> Go to the location shown on the screen.</p> <p><b>Optional:</b> If we do not want to run the collection of the location we have on the screen, we can press the "Skip Step" key and it will go to the next location.</p>
5	  	<p>UBICACION: <b>A002</b> UNIDADES: <b>3</b> CABLE RJ12 0,5 m</p> <p>TABLA LOG PROGRESS: 25% 4/17 EAN BOX: PEDIDO:</p> <p><b>Scan.</b> The screen displays the order and item information as well as what is still to be delivered.</p> <p><b>Optional.</b> In case the item does not have a barcode, we can press the "ENTER EAN" key, which replaces the scanner.</p>
6		Repeat steps 4, 5 until the grouped order is completed.
7		<b>Finalizes the BATCH</b> , whether there are still items to be sorted or all items have been completed. Saves the file to the "FINISHED" folder and turns off all lights on the trolley displays. You can also finalize with the "V" key of the information display.





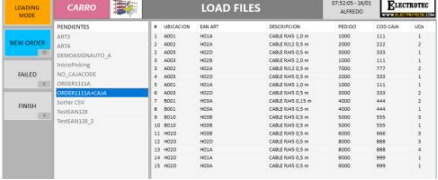








## 5.3 Modo Sorter

Order picking is done by a mobile cart that allows the integration of several components of the grouped order. The computer system, via a mobile terminal, informs the operator of the optimal picking route, saving the operator's travel time. Once the grouped order is completed, the operator moves to the sorting rack.



### Item sorter

This operation is based on item sorting in which operators scan an item and locations are illuminated that represent a store or customer needing that item. When an order has been completed, the display light is activated indicating that the order has been completed. The location is released when the box is removed and the confirmation "V" is pressed.












Step	Task to do	Description
1		Press START to access the file upload menu.
2	 Manually select the work file	
3		Press to load the selected file.
4	 	<p></p> <p><b>Scan item.</b> Choose an item from the cart and scan it.</p> <p><b>Optional.</b> In case the item does not have a barcode, we can press the "ENTER EAN" key, which replaces the scanner.</p>
5		<p><b>COLOCA ARTÍCULOS</b></p> <p><i>Deposita la cantidad indicada en el display encendido. Usa la tecla [V] para validar.</i></p> <p>On the shelf, the light on the display where the "PUT" has to be done is activated and, also, the quantity is indicated on the display. The operator takes the item(s) and places them in the location. Then, it presses the "V" key on the display, confirming that the loading of that location has been completed.</p>
6		<b>Repeat steps 4, 5</b> until the grouped order is completed.
7		When an order has been completed for a location, the front light on the display will illuminate, indicating to the operator that the location has not been completed.
8		Finalizes the file, whether there are still items to be sorted or all items have been completed. Save the file to the "FINISHED" folder and turn off all display lights.

## 5.4 Picking Mode

We have a shelf in which displays are installed on the front face. In each location will be placed items that correspond to the same article, so that we will have as many locations as there are different articles.

It is based on the fact that the operator scans the order code of the box and all the locations corresponding to that order are illuminated. The operator picks the items indicated on the illuminated display, places them in the box and presses the "V" key on the display to confirm the pick. The process is repeated until none of the displays are illuminated.



Step	Task to do	Description
1		Press START to access the file upload menu.
2	 Manually select the work file	
3		Press to load the selected file.
4	 	<div>SCAN EAN CODE ORDER</div> <div>Scan ORDER</div> <div>Optional. In case the item does not have a barcode, we can press the "ENTER EAN" key, which replaces the scanner.</div>
5		<div>PICK ARTICLE XXXXXXXX AND PUT IT IN THE BOX XXXXXXXXXXXXXXXX</div> <div>The operator removes the items from a location on the shelf where the display is illuminated and the quantity to be picked is indicated on the display screen.</div>
		The operator loads the items into the box and then presses the "V" key on the display. Pressing the "V" key confirms that the loading of that location has been completed and the display light turns off.
6		Repeat steps 5,6 until the items are completed and the displays are turned off.
10		When an order has been completed, all display lights will turn off. Waiting for the reading of a new order.
11		Finalizes the file, whether there are still items to be sorted or all items have been completed. Save the file to the "FINISHED" folder and turn off all display lights.

## 6. Test functions

The TEST functions allow the user to verify the installation of the displays and check their correct operation at any time. We can perform an automatic test of the displays and the scanner reading, as well as an individualized manual test mode.

### 6.1 Verification test

Pressing "START TEST" the installed hardware is checked, verifying the display map that has been configured in the SETUP MODE and that it corresponds to what is actually connected.

#### TEST DE VERIFICACIÓN DEL HARDWARE

Realiza un test de comprobación de la conexión/comunicaciones con los dispositivos configi

Displays configurados: 9

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Leyenda **OK** **KO** **STANDBY**

#### VERIFICACIÓN DISPLAYS

INICIAR TEST

STOPPED

#### Resultados

Network ☐

Displays ☐

It is a tool that allows us to check the installation map of the displays, identifying with green color those that are connected and in red those that are missing.

#### VERIFICACIÓN SCANNER

Escanea el código de barras para verificar la correcta lectura.

Tipo de Scanner **COM : COM7**

Scanner verification ☐



HORA	EVENTO



**If this green "Scanner verification" led is not activated, it will not be possible to work in any Picking, Trolley, etc. mode.**

To perform a scanner verification, the barcode must be read. The reading will appear in the event area and the green "Scanner verification" led will be activated.

The text read by the scanner is displayed.

## 6.2 Manual test

In this TEST option we can test the different functionalities that a display has and verify that it works correctly. We can test the colors of the pilot, the keys and the digits. We can also perform a test so that the displays show their numbering and location. This test is very useful to know which node number corresponds to each location. We can also clear the messages that appear in the displays and turn off all the lights.

TEST MANUAL

### MENSAJE MANUAL

Canal: 0

Nodo: 000 ☐ Todos los nodos

Texto: Hello world!

Led: Red NoBlink

Zumbador: OneBeep ☐ KeySound

Flechas: None

Red: Red

OneBeep

None

None

LeftUp

RightUp

LeftDown

RightDown

Left

Right

Up

Down

By checking the box, we can perform the test functions to all nodes at once.

Introduce the node number from 1 to 100 at most.

We can manually enter a text so that it can be seen in the node of our choice.

We can select 3 types of blinking.

If we want the buzzer to be on when a key is pressed.

We can select up to 7 colors for the display pilot light.

We can select up to 4 sounds.

We can select different arrows in the DPA2 display.

ENVIAR

Pressing this key sends all the selected options, such as text, color blinking, etc.

NUMERAR

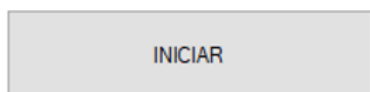
When this key is pressed, all displays will show the node number and its red led will turn on. This option is very useful to know for each location, which node number is associated.

BORRAR  
TODO

Press this key if you want to clear the text from all displays and turn off the pilot light.

### 6.3 Automatic test

The automatic test is used to visualize the node number of each location and the pilot light of the display is switched off. If we want to check the functionalities and perform an exhaustive test, we can go to each display and press the keys such as "V", "+", "-", "F" and the keys pressed will be displayed on the screen and the colors and segments of the digits can also be verified. This type of test is used for maintenance and revision of the displays as it allows to check the correct operation of the digits and the keys of each display individually.



The test can be started by pressing the "START" key or by reading the barcode "DemoTest".

