

1 Introduction

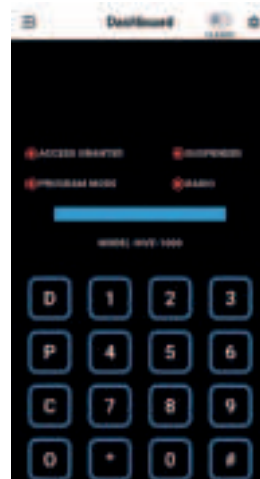


Fig.1

2 RELAY RECEIVER HIVE-1000

The HIVE-1000 receiver offers the latest technology. The receiver has a built-in Bluetooth module that allows bi-directional communication with a smartphone via the HIVE-1000 mobile App for either iOS or Android operating systems.

The App facilitates managing receiver settings and pairing transmitters. The HIVE-1000 receiver operates at both 318 MHz and 433 MHz frequencies and can do so simultaneously allowing for up to 1,024 total remotes split equally between both frequencies. (512 remotes at 318 MHz and 512 remotes at 433 MHz)



2 Technical Specifications



Fig. 2

Receiver type:	Superheterodyne.
Demodulation:	AM/ASK.
Receiver bandwidth:	330 kHz
Operating frequency:	433.92 Mhz / 318 MHz
Sensitivity (for good signal):	-116 dBm @ 433 MHz -111 dBm @ 318 MHz
Input load:	50 Ohm.
Power supply :	12 to 24 Vac/dc.
Current consumption (@12Vdc)	160 mA (max)
N° of relays:	2 x (NO / NC).
Relay contact rating:	1 A @ 30 Vdc, 0.5 A @125 Vac
Max relay switching voltage:	125 Vac / 60Vdc
Min relay contact current:	1 mA @ 5V
Transmitter Memory capacity:	512 @ 318 MHz + 512 @ 433.92 MHz
Security protocols	Linear MegaCode® Keeloq® Hopping code
Max. number of facility codes:	4
Operating temperature:	-22 to 158 °F
Dimensions (Fig. 2):	4.8 x 3.2 x 1.6 inches
Weight:	5.6 ounces

The HIVE-1000 is
bluetooth enabled
and controlled via
a smartphone app
(details in Section 7)



Bluetooth®



3 Mounting

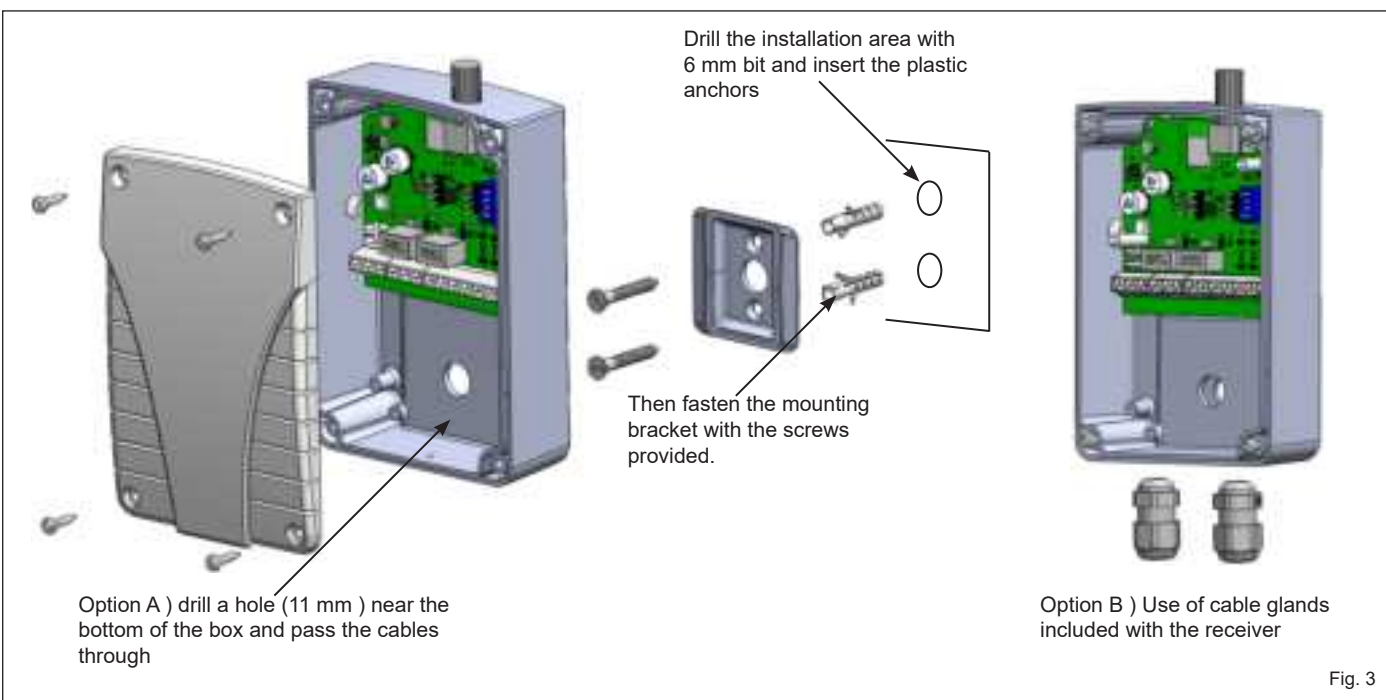


Fig. 3

4 General operation

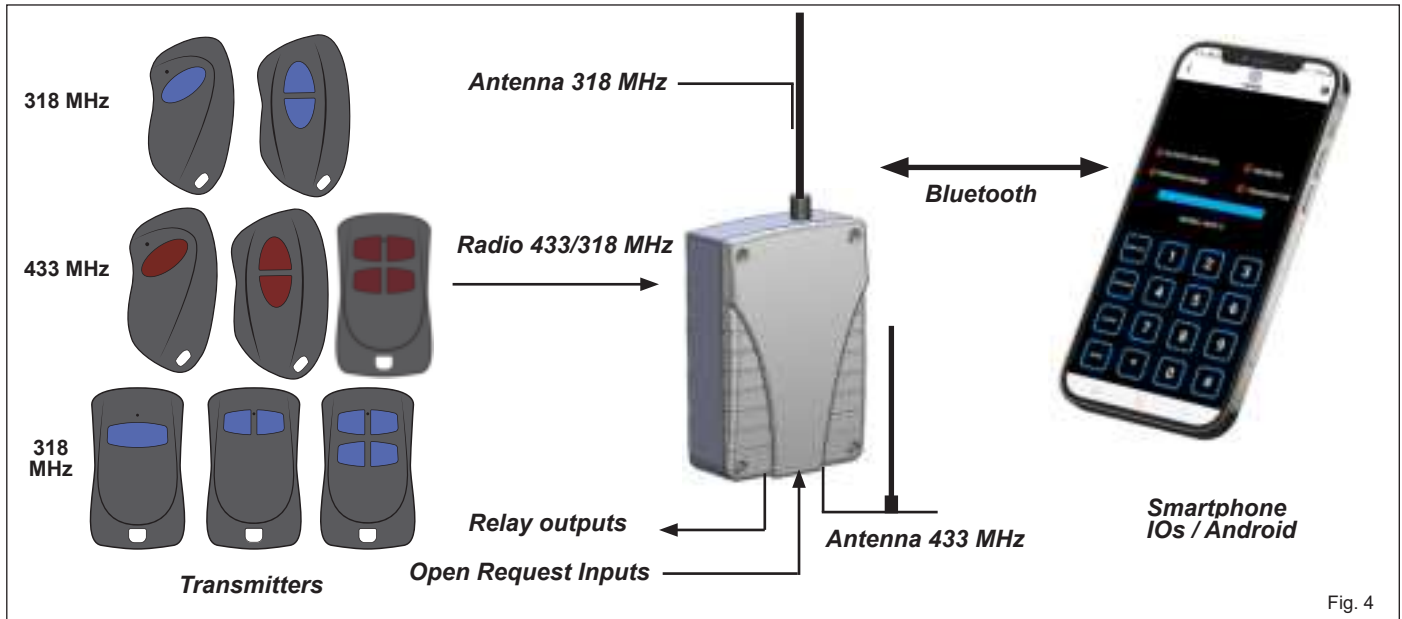


Fig. 4

5 Layout & Wiring

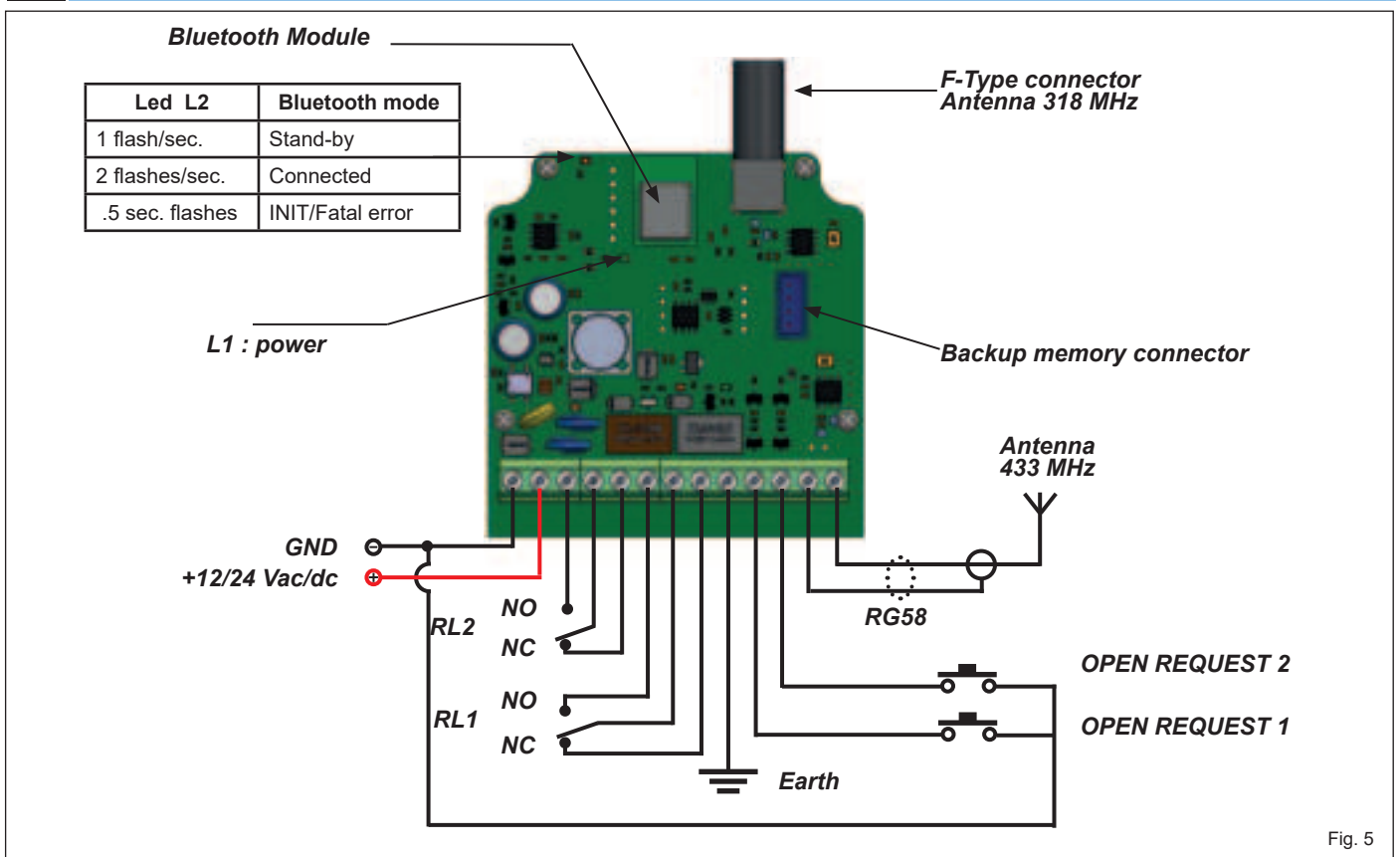


Fig. 5

6 Warnings



The receiver placement is very important for the best operation of the system. Place the receiver far from interference sources such as big magnetic fields or radio emission sources. The installation and the positioning of the antenna is very important as well. Before installing the antenna it's advisable to do on site testing.

NOTE: The distance between 2 receivers must be at least 5 ft.

- The equipment must be powered by a device that provides a safety extra low voltage (SELV) type LPS (Low Power Source);
- There must be a suitable disconnecting device to the current drawn by the receiver (160mA max @ 12Vdc).

The equipment is manufactured in compliance with the provisions of European Directive 2006/95 / EC, 2004/108 / EC, 99/05 / EC and from that stated in the standard EN 60950-1.

7 APP download and connection to the Smartphone

Management of the receiver can only be done by using a smartphone connected via Bluetooth. For this reason the first step is to download the proper App on your smartphone from the Google Play or Apple store.

Once the App is installed, the software will scan for devices within Bluetooth range of the smartphone and will initiate communication with the receiver. When the connection is made, the RED led L2 of the receiver starts flashing rapidly

The App must be downloaded from the following platforms:

Android: Link



iOS: Link



Click on the links or scan the QR codes.

7.1 Installing and permissions

Once downloaded, you will be asked to accept the “Bluetooth” permissions. Without this, the application will not be able to locate or communicate with the receiver.



Once downloaded the App, takes you to the welcome screen

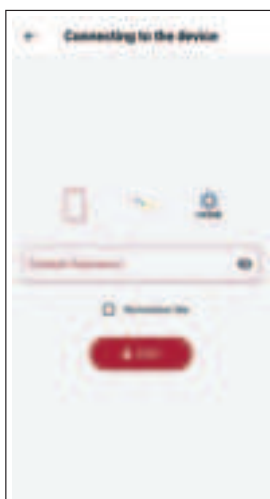
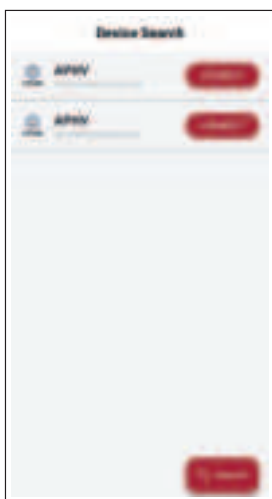


7.2 Device Connection

To connect to the device, press “Device Search” button and select receiver. The scanning range is limited by the Bluetooth technology (up to 30 meters).

Signal strength depends on the position of the receiver and whether the communication is unobstructed or passes through obstacles. **The Bluetooth communication is one-to-one, so if someone else is connected to the receiver, it is not possible to detect it with the scanning function or to connect to it.** The receiver comes from the factory with the name “APHV”. Once connected, you can change the receiver name (up to 15 characters).

Once connected, you are requested to type the login password: **Administrator or Installer**



Once the password has been changed, after the first login with the default password, you are requested to access with the new password chosen.



7.3 Passwords

Each device is protected by a password.

There are two different passwords preset on the receiver: one for the Administrator and one for the Installer. The factory default passwords are as follows:

Administrator: 11111

Installer: 00000

It is highly recommended to change the passwords after the initial activation/access of the device.

The difference between Installer and Administrator level is defined by who can change and set new password values. An administrator can set the password for himself and for the Installer, the Installer can only set a password for himself.

If “Default Password” appears in **RED**, in the password entry screen, it means that at least one of the two passwords has a factory default value.

If “Remember me” is selected, the App will store the password. The next time you connect with HIVE-1000, the App will automatically populate this password.



Fig.9: Connection and Password

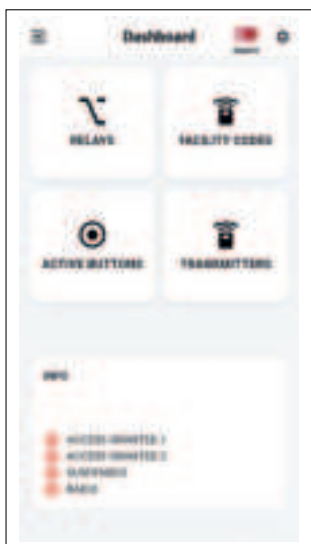
If the user has forgotten their password, they should contact Transmitter Solutions technical support

8 Device functions

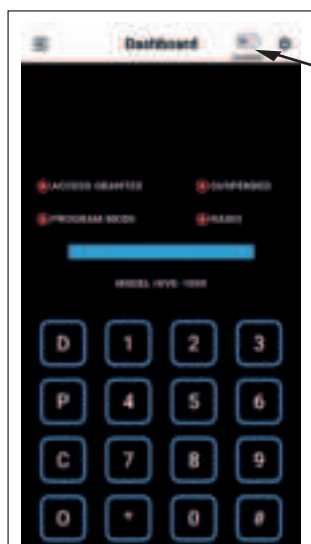
8.1 Dashboard

After a successful login the user can choose between 2 dashboards using the toggle switch indicated below.

NOTE : the default screen mode can be set in the DEVICE SETTING menu.



“SMART” Dashboard



“CLASSIC” Dashboard

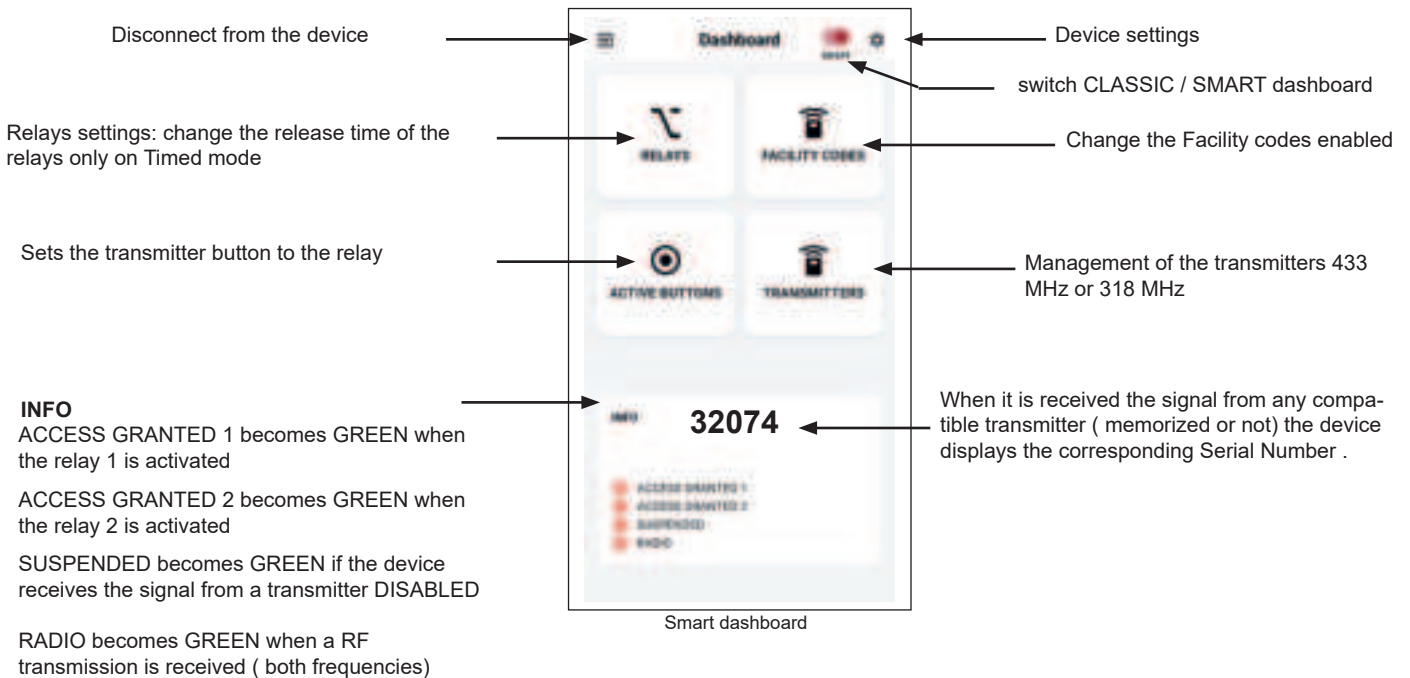
This switch allows the user to toggle between the SMART and CLASSIC Dashboards.

- The SMART dashboard allows the management of both 318 MHz and 433 MHz remotes controls and more settings of the receiver.
- The CLASSIC dashboard shows Commands, symbols and procedures to do manual entry.
-

8.1.1 SMART Dashboard

The SMART Dashboard allows:

- management of remote controls 318 MHz Linear MegaCode
- management of remote controls 433 Mhz (Keeloq® hopping code
- setting of relays operating mod
- setting of the device name
- back/restore of the remote controls database
- change of th Administrator and Installer password
- restore the device to factory setting



8.1.2 CLASSIC Dashboard

Press "P" button for 3 sec. to enter in the program mode and follow the physical manuals.

The CLASSIC Dashboard operates as shown below:

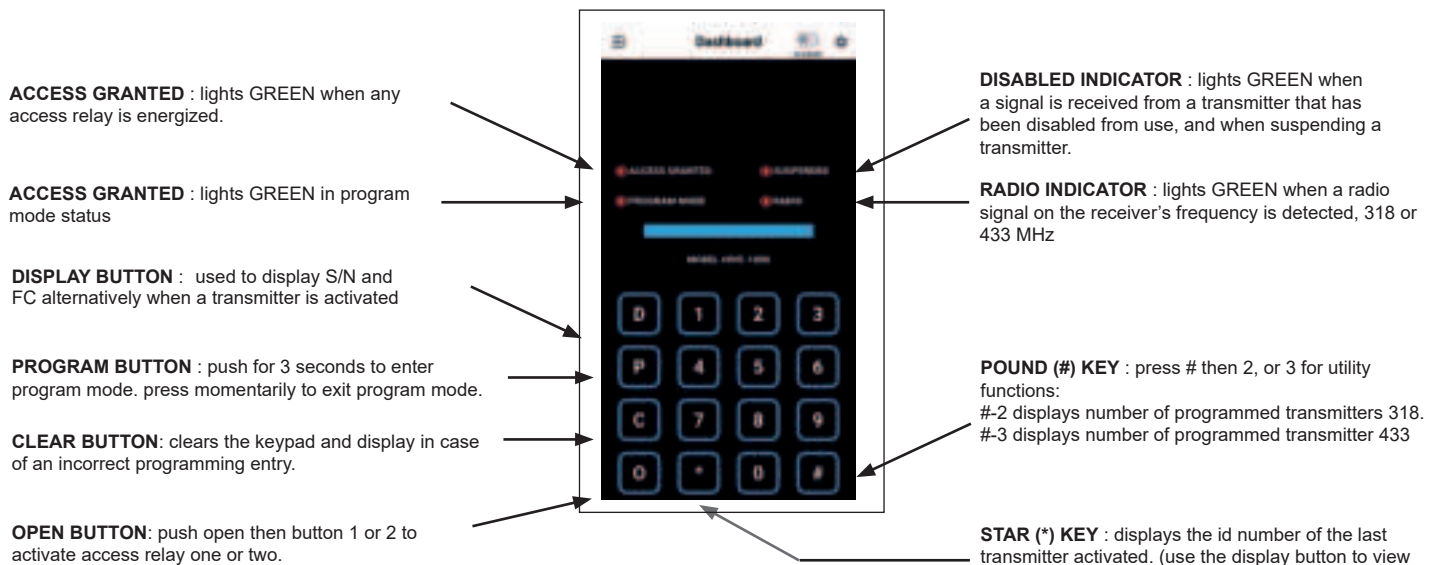


Figure 12: HIVE-1000 Home

8.2 RELAYS



The operating mode of the relays is TIMED or TOGGLE.

For transmitters operating in “Timed mode” use the 2 options to set the release time of the relay (1 or 2)

Time range : 1 - 120 sec.

8.3 FACILITY CODES



The option Facility codes allows to set up to 4 different Facility codes.

Range : 0 - 255.

This setting creates a filtering that allows the relays activation only to transmitters with the proper Facility code.

If the 4 values are 0, there is no filtering enabled.

8.4 ACTIVE BUTTONS



The Active buttons function assigns to the button of the transmitter the corresponding relay.

The example shows the following assignment:

- Button A : activates Relay 1
- Button B : activates Relay 2
- Button C : activates Relay 1
- Button D : activates Relay 2.

If it is selected the option “disable” the transmitter does not activate any relay.

8.5 TRANSMITTERS

Select the option “Transmitters” to manage the transmitters choosing 433 MHz or 318 MHz. The software displays the list of the transmitters memorized, showing serial number (S/N), relay activated and the operating mode of the relay (Timed or Toggle).



Press to switch to delete multiple transmitters upon their S/N

Press to delete the single transmitter.

Press to change the operating mode of the relay from timed to toggle

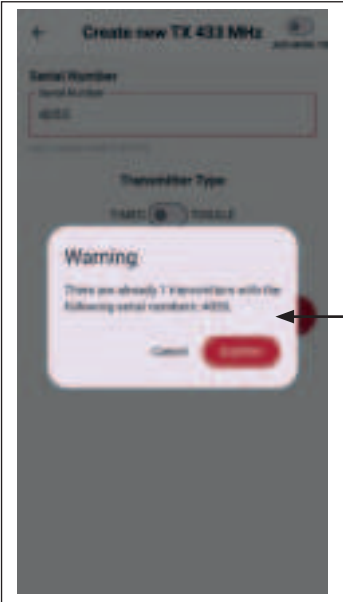
Press to disable the transmitter

Press [+] to add more transmitters

8.5.1 ADD TRANSMITTERS



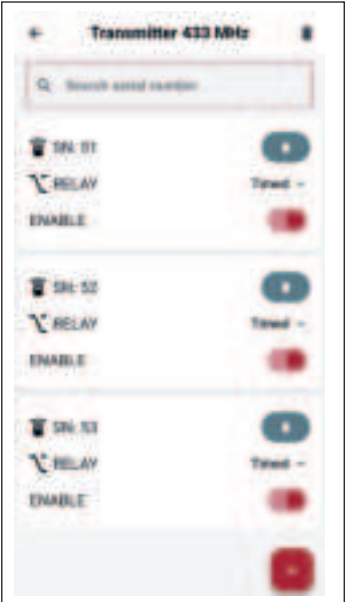
- Switch for enable block enroll
- Type the Serial Number of the transmitter to add [0 - 65535]
- Specify the operating mode of the relay: timed or toggle
- Confirm button



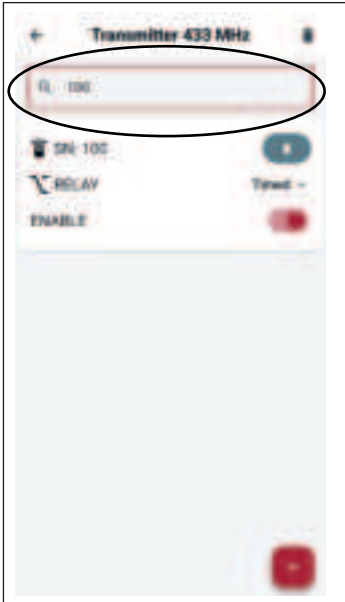
Warning message displayed when trying to store a transmitter already in memory

8.5.2 SEARCH BAR

The search bar allows to list and display the transmitters memorized typing their serial number, both for 433 and 318 MHz



Searching tx with S/N=100

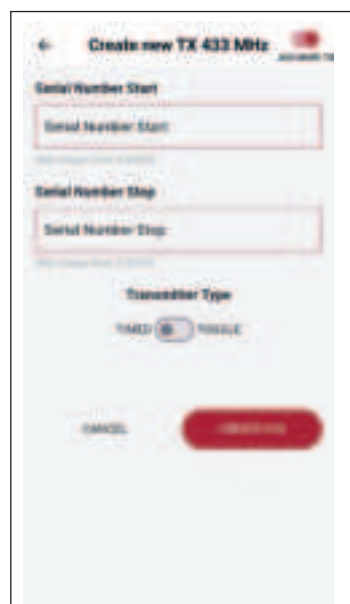


Searching tx with S/N=4660



8.5.3 BLOCK ENROLL


Allows to enroll a block of many transmitters typing the first and the last serial number of the block



Annotations for the 'Create new TX 433 MHz' screen:

- Switch active
- Type the Serial Number of the **first** transmitter to add
- Type the Serial Number of the **last** transmitter to add
- Specify the operating mode of the relay: this will be valid for the full block of transmitters
- Confirm button


8.5.4 REMOVE SINGLE TRANSMITTER (433 MHz or 318 MHz)



Annotations for the 'Remove TX 433 MHz' and 'Remove TX 318 MHz' screens:

- Switch to enable block delete
- Type the Serial Number of the transmitter to remove
- Confirm button

8.5.5 REMOVE A BLOCK OF TRANSMITTERS (433 MHz or 318 MHz)



Annotations for the 'Remove TX 433 MHz' and 'Remove TX 318 MHz' screens (Block Removal):

- Switch active
- Type the Serial Number of the **first** transmitter to delete
- Type the Serial Number of the **last** transmitter to delete
- Confirm button

8.6 DEVICE SETTINGS



Type the name of the device

If the receiver is battery powered, set the system in Battery mode.

BATTERY MODE: when selected, the system considers 2 threshold levels for the power under which the receiver stops working, to avoid instable situations.

Power supply 12 Vdc ----> Threshold = 11,2 Vdc

Power supply 24 Vdc -----> Threshold = 20 Vdc

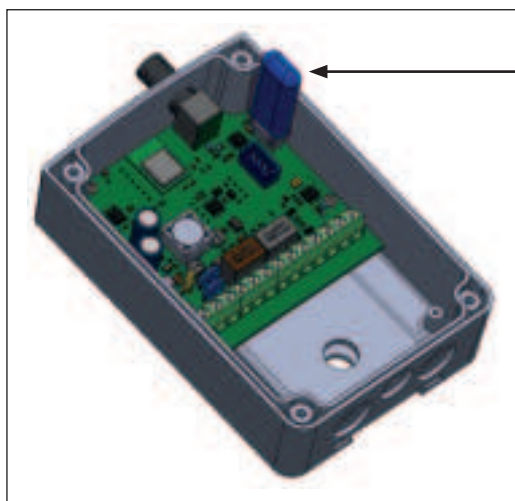
Set the Default screen mode after the login (Classic or Smart)

Press the button to save the settings.

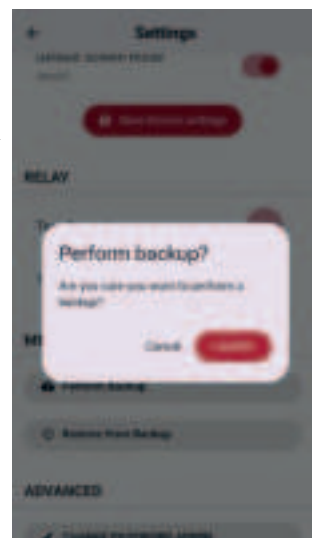
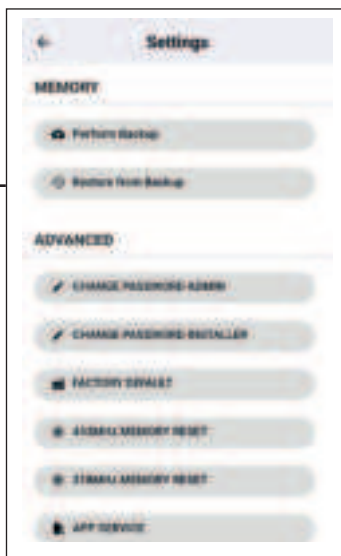
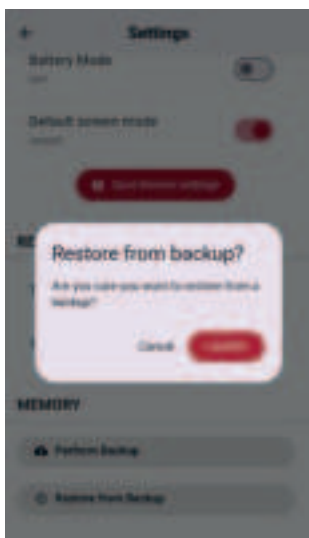
Commands to test the operation of the relays: Click to activate, click again to deactivate

8.7 MEMORY BACKUP / RESTORE

The full data-base containing the s/n of the remote controls memorized and all the settings of the receiver can be saved into an external memory or restore from an external memory that must be plugged-in on the proper 4-pin connector on the receiver.



Plug-in memory



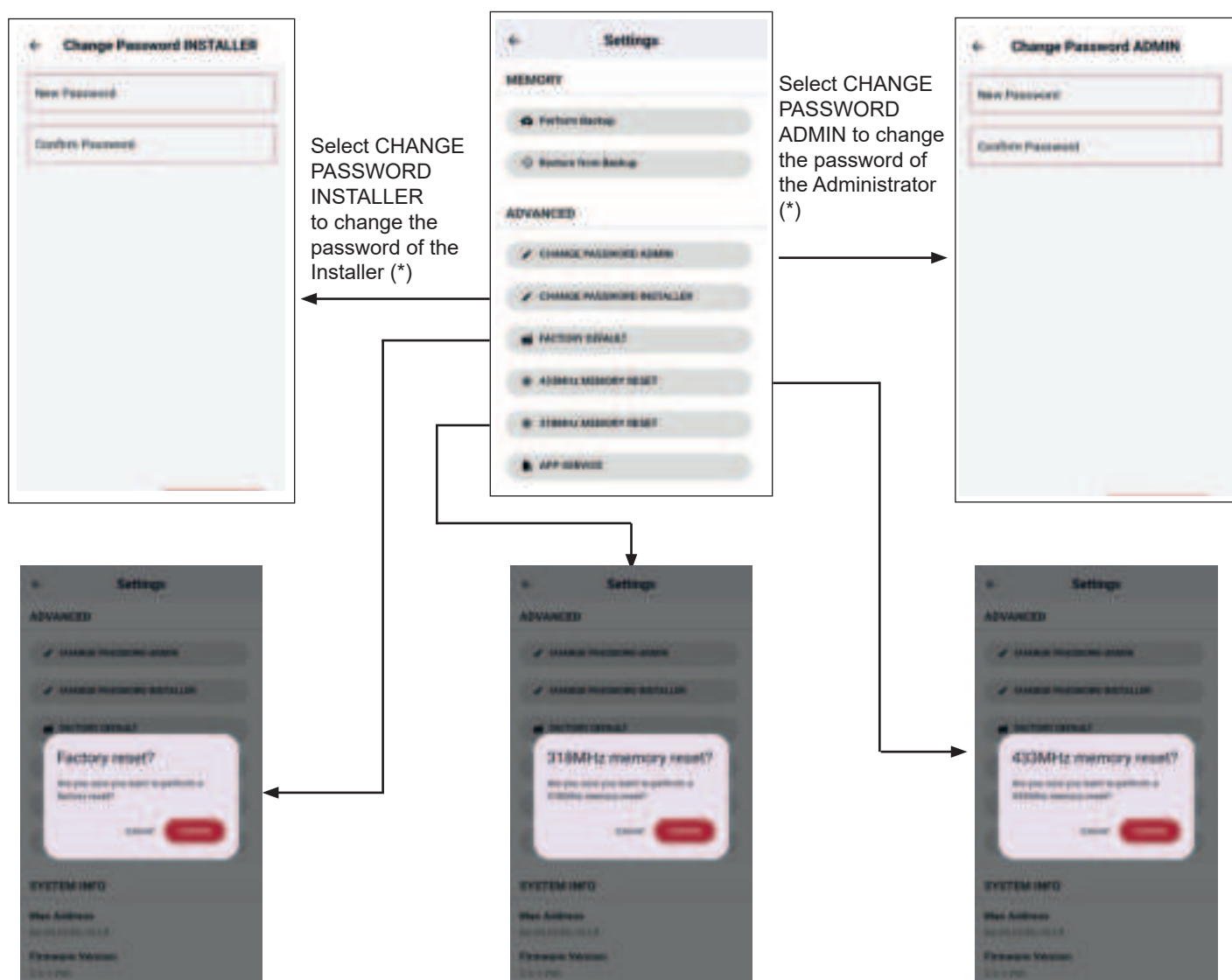
Press "Restore from Backup" to upload the data from an external plug-in memory.

WARNING: The operation will overwrite the data base

Press "Perform Backup" to save the full data base on the external plug-in memory

8.8 ADVANCED SETTINGS

The password of the Administrator can be changed **only** by the administrator.
The password of the Installer can be changed by the Administrator or by the Installer.

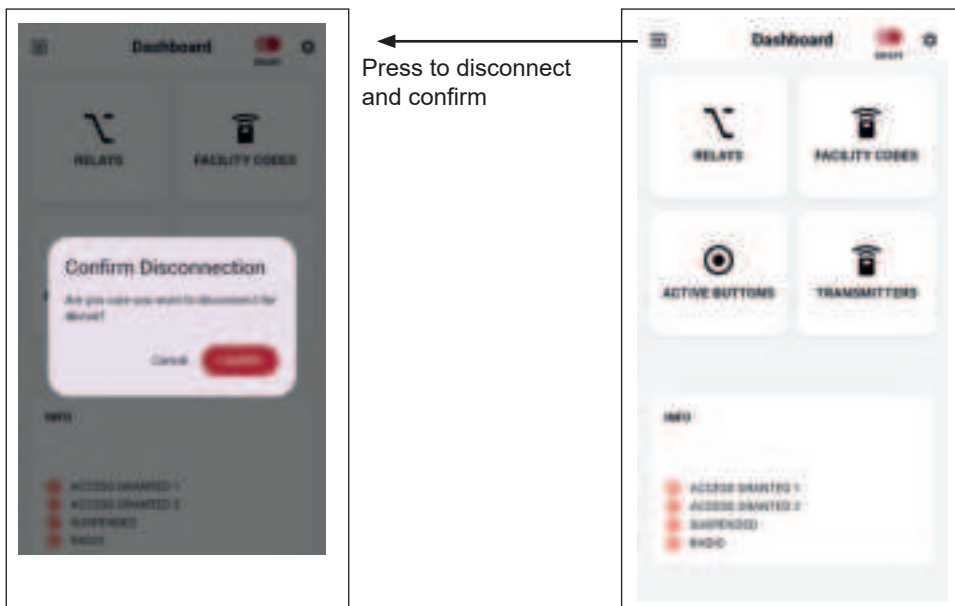


Factory reset brings the device to the factory settings with the exclusion of the passwords (see paragraph 7.3.1) and the transmitter data-bases for which there are specific deleting commands (see next images).

Deletes all the transmitters 318 MHz

Deletes all the transmitters 433 MHz

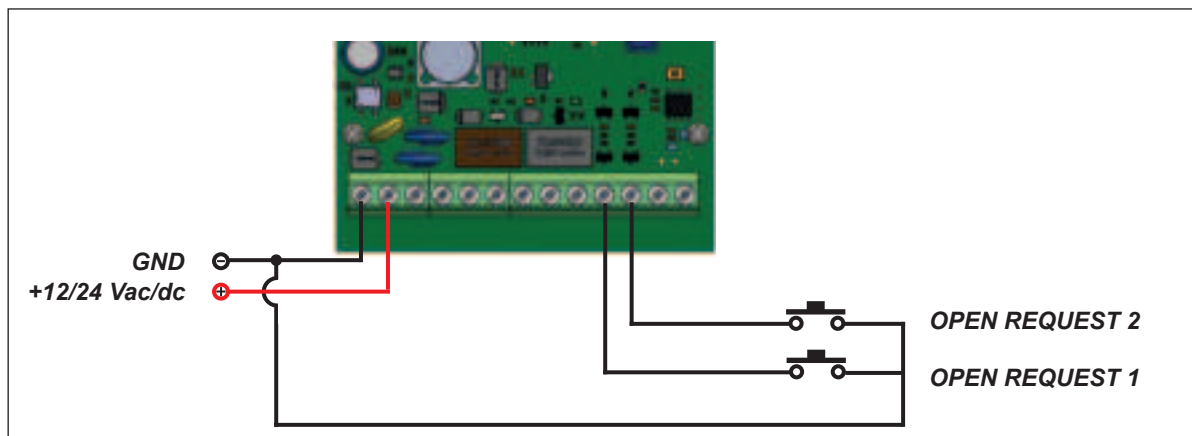
8.9 DISCONNECTION



9 Open Request

The 2 inputs (C-NO) of open request, activate directly the 2 relays if the contacts are shorted to GND:

- Open Request 1 activates Relay 1
- Open Request 2 activates Relay 2



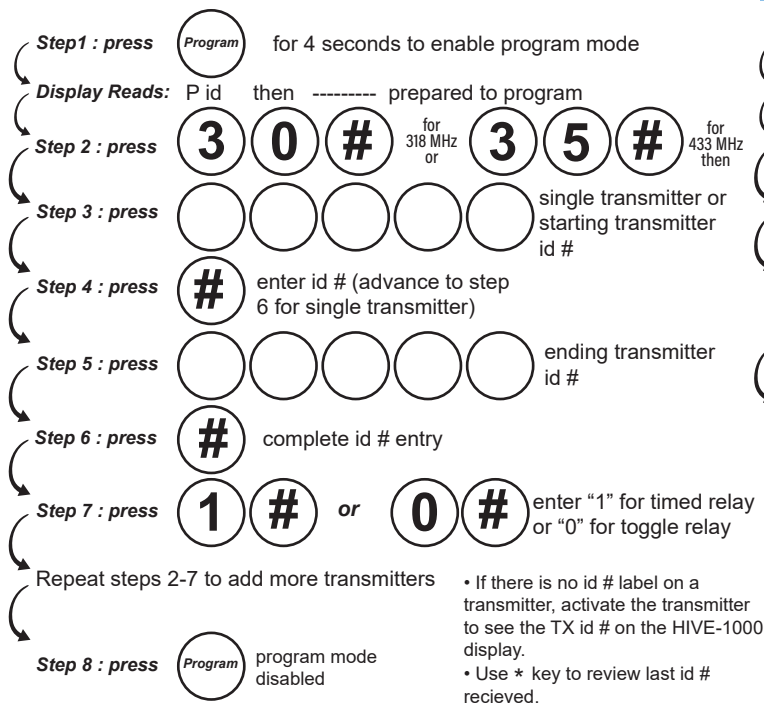
There are two separate programming methods to assist the user in programming the HIVE-1000 receiver: Classic Programming and Simplified SMART Programming.

The "CLASSIC" programming screen will be beneficial for those familiar with the programming of the Linear AP-5 receiver.

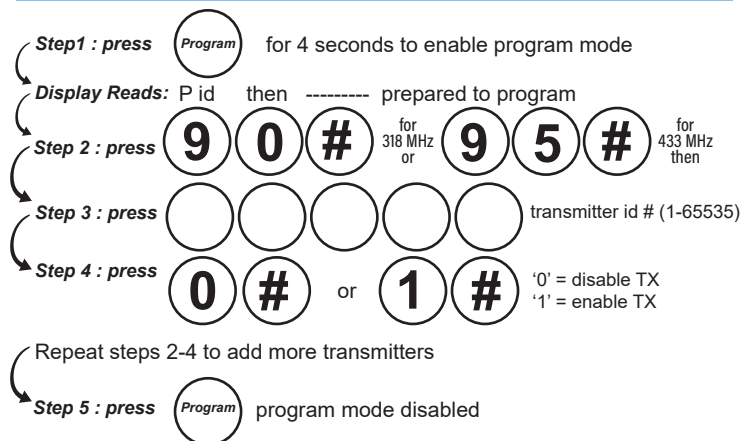
The "Simplified SMART" programming screen allows the user a more intuitive and efficient option in programming the HIVE-1000 receiver.

10.1 Programming Classic

Adding 318/433 MHz TX



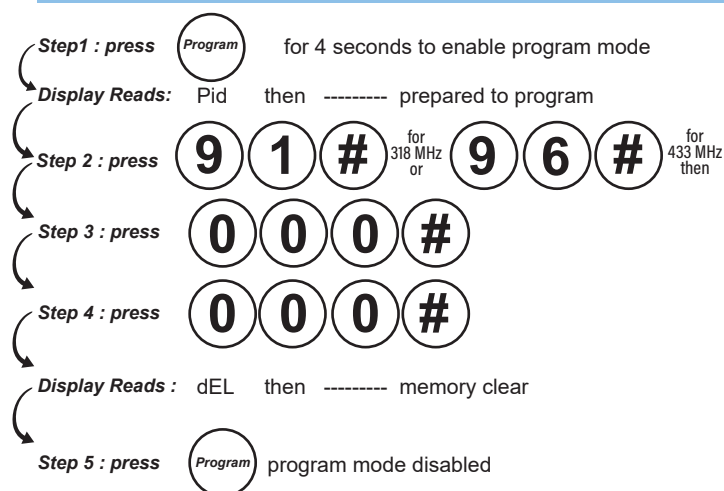
Enable/Disable 318/433 MHz TX



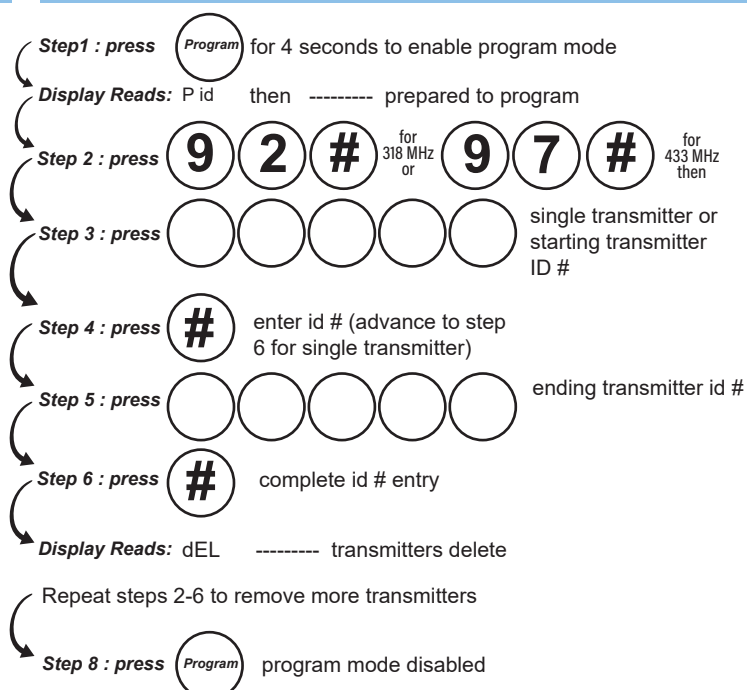
NOTES:

- 1: Disabled transmitters will not trigger any access relay, the disabled led will light instead
- 2: Activated transmitters can trigger any access relay














Delete 318/433 MHz TX



Delete all 318/433 MHz TX
















Relay activation time

- Step 1 : press**  for 4 seconds to enable program mode
- Display Reads:** Pid then ----- prepared to program
- Step 2 : press**    relay activation time function number
- Step 3 : press**   or   '1' = relay K1
'2' = relay K2
- Step 4 : press**     enter '1' to '120' seconds for the relay activation time
- Repeat steps 2-4 to program another relay
- Step 5 : press**  program mode disabled

NOTES:

2 seconds is factory default relay activation time












Set transmitter buttons

- Step 1 : press**  for 4 seconds to enable program mode
- Display:** Pid then ----- prepared to program
- Step 2 : press**    transmitter button function number
(21 for 'A', 22 for 'B', 23 for 'C', 24 for 'D')
- Step 3 : press**   or   '1' + # = activate relay K1
'2' + # = activate relay K2
- Step 4 : press**   or   enter '1' to enable button
enter '0' to disable button
- Repeat steps 2-4 for programming another button
- Step 5 : press**  exit program mode

NOTES:

1. The factory default setting only allows the 'A' transmitter button to activate relay K1
2. The button settings will be used by all programmed transmitters

Set facility codes

- Step 1 : press**  for 4 seconds to enable program mode
- Display:** P id then ----- prepared to program
- Step 2 : press**    facility code function number
- Step 3 : press**   enter receiver facility code location (1-4)
+ # key
- Step 4 : press**     enter transmitter facility code number (from 1 to 255 + # key;
0 ignore facility code)
- Repeat steps 2-4, as needed, for each of the four receiver facility code locations
- Step 5 : press**  program mode disabled

NOTES:

1. Factory default setting is '0'. A facility code setting of '0' allows receiver to accept all transmitters regardless of their facility code

