

Overview

This guide pertains to the Novara SP-08-E-US 8-Button Keypad with Ethernet (FG1312-08). The purpose of this document is to illustrate how the device is to be installed and set up in its simplest configuration by a trained technician.

What's in the Box?

The following items are included with the SP-08-E-US:

- (1) sheet of 50 pre-printed button labels

Dimensions

4 11/16" x 2 15/16" x 1 1/16" (119 mm x 74 mm x 26.2 mm)

Weight

Approximately 0.3 lbs. (0.14 kg)

Environmental Requirements

The environmental requirements for the SP-08-E-US are as follows:

- Operating Temperature:** 32° F (0° C) to 104° F (40° C)
- Storage Temperature:** 4° F (-15° C) to 140° F (60° C)
- Operating Humidity:** 5% to 85% RH

NOTE: Intended for indoor use only.

Power

You can apply power to the SP-08-E-US via any Power-over-Ethernet (PoE) injector or switch which conforms to the 802.3af standard. Before installing and mounting the Keypad, test to see that it can receive power.

NOTE: For mounting space considerations, do not use category cable with overmold.

Applying Power

Applying power to the SP-08-E-US requires category cable and a PoE injector, such as the PS-POE-AF-TC (FG423-83) available from AMX. The network must be connected through the PoE injector to send power to the keypad. The category cable should only run through a common building. (A common building is defined as: Where the walls of the structure(s) are physically connected and the structure(s) share a single ground reference.)

- Connect the PoE injector to an AC outlet (~100-240V) using a standard power cord.
- Connect the switch category cable to the Data In port on the PoE injector.
- Using a separate category cable, connect the Data & Power Out port on the PoE injector to LAN Port on the Keypad.

Button Labeling

Novara Keypads come with a set of clear plastic Key Caps, which are designed to fit tightly over the pushbuttons, and allow you to place a label on each button according to the requirements of your particular installation.

Novara Keypads also come with a pre-printed acetate sheet with a range of 50 (pre-cut) button label inserts. The button labels provided will accommodate most installations, but it is also possible to print your own button labels on acetate for custom button labeling.

Disassembling the Keypad

This procedure requires a Phillips-head screwdriver.

IMPORTANT: Before touching the device, discharge the static electricity from your body by touching a grounded metal object.

- Use a Phillips-head screwdriver to remove the three screws that secure the circuit board to the faceplate. All three screws are connected to the bottom circuit board. (see FIG. 1).

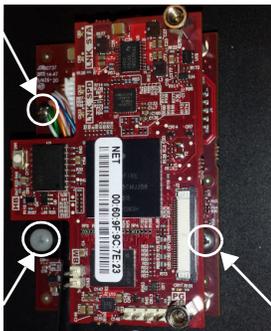


FIG. 1 REMOVE THE SCREWS TO SEPARATE THE CIRCUIT BOARD FROM THE FACEPLATE

- Carefully pull the top circuit board straight up and off the standoffs. Note the orientation of the circuit board. You must replace it with the circuit board oriented in the same direction.

Installing Acetate Button Labels

Once the circuit board has been removed, you have full access to the pushbuttons.

- Carefully pry the Key Cap off of each pushbutton that you need to re-label.
- Punch out the desired Button Label from the included acetate sheet. If you have printed your own custom button labels on acetate, cut each button label to fit inside the Key Caps.
 - Custom button labels must be cut to a **0.472" (12 mm) square** to fit securely inside the Key Caps.
 - The thickness of the acetate used must not exceed **.004" (0.10 mm)**.
- Place the Key Cap face-down, and insert the Button Label into the bottom of the Key Cap.

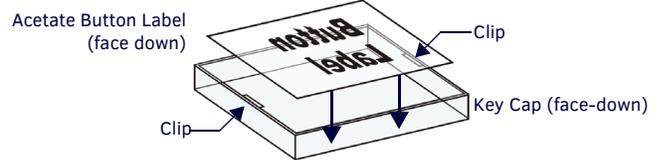
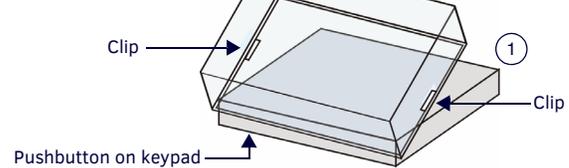


FIG. 2 PLACING A BUTTON LABEL INSIDE A KEY CAP

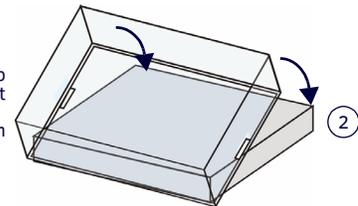
- Orient the Button Label inside the Key Cap so that the two clips are located on the left and right sides of the readable text on the Button Label, as indicated in FIG. 2.
 - Be sure to place the Button Label face-down inside the Key Cap (see FIG. 2), otherwise the label will be seen in reverse once the Key Cap is installed.
- Install the Key Cap on the pushbutton (FIG. 3):

Key Cap - tilted so that the bottom of the Cap is placed on the bottom of the pushbutton first

At this point, do not allow the clips on the sides of the Key Cap to engage



Press the top of the Key Cap down to engage both clips at once, securing the Key Cap to the pushbutton



Once the clips are engaged, the Key Cap is secured to the pushbutton

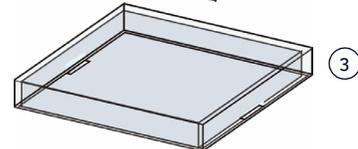


FIG. 3 INSTALLING THE KEY CAP ON THE PUSHBUTTON

NOTE: Verify that the vertical orientation of the Button Label is correct relative to the keypad.

- Gently press the bottom of the Key Cap (no clip) onto the pushbutton. Do not allow the clips on either side to engage.
- With the bottom of the Key Cap secured, gently press the top of the Key Cap. This action will engage both clips simultaneously, and the Key Cap will snap into place on the push button.

NOTE: Be careful to follow these procedures closely - the bottom of the Key Cap must be installed on the pushbutton before the Key Cap clips engage, or there is a risk of the button being misaligned.

Reassembling the Keypad

Follow the steps in reverse to re-assemble the keypad. Take care of the following:

- Be certain that the circuit boards are oriented correctly.
- Use the three screws to secure the circuit board onto the faceplate.

Installation

The SP-08-E-US mounts onto standard 1 gang US and EU back boxes. Each type of back box must adhere to its own specific safety approvals.

Minimum Internal Clearance for US Conduit Boxes

To ensure a proper fit with sufficient clearance, US-style Novara Keypads require the following minimum internal dimensions within the conduit box:

US 1-Gang (HWD): 2 7/8" x 2 1/8" x 2 1/2" (74 mm x 53 mm x 64 mm)

These minimum interior dimensions will maintain a minimum 1/16" (1.27 mm) clearance.

IMPORTANT: Before touching the device, discharge the static electricity from your body by touching a grounded metal object.

Wallbox Mounting

1. Use the cutout dimension for the wallbox to cutout the install surface.
2. Connect category cable to the LAN port on the rear of the keypad.

IMPORTANT: Use care when feeding excess cabling through the wallbox before mounting. Do not let the cable kink or tightly bunch inside the wallbox.

CAUTION: If you have connected category cable to the keypad to test whether it receives power, be sure to unplug the category cable from the PoE injector or the network switch so the keypad is not receiving power during mounting.

3. Place the keypad on the wallbox; align the screw holes with the mounting holes and fasten the keypad to the wallbox using the supplied screws.

Configuration

The following sections provide instructions on accessing and configuring the keypad.

Locating the IP Address of the Keypad

The SP-08-E-US is configured for DHCP addressing by default. The keypad uses link local addressing as a backup in case the DHCP server is inaccessible. See the *Toggle Between IP Addressing Modes: DHCP and Static IP* section for information on setting a static IP address. Verify there is an active LAN connection on the controller's LAN port before beginning this procedure.

1. Using category cable, connect the LAN port on the keypad to your external network.
2. In NetLinx Studio, select the OnLine Tree tab. You should see the SP-08-E-US listed among the Unbound Devices.
3. Right-click the SP-08-E-US and select **Network Bind/Unbind Device** from the menu that appears. The Bind/Unbind Device dialog opens.
4. By default, the selected keypad appears in the Device to Bind/Unbind menu at the top of the dialog. If there is more than one Unbound device in the system, click the down arrow to select which device you want to bind.
5. Select the check box next to the Master to which you want to bind the keypad. If there is more than one Master in the system, check the specific Master to which you want to bind the keypad.
6. Click **OK** to save changes and close this dialog.
7. Select **Refresh System** (in the Online Tree context menu). The device should now appear in the Bound Devices folder.

Keypad Layout

FIG. 4 displays the button layout of the keypad.

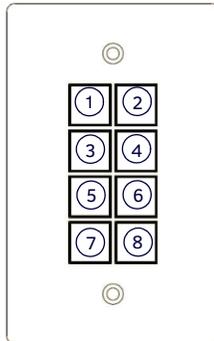


FIG. 4 NOVARA SP-08-E-US 8-BUTTON KEYPAD BUTTON LAYOUT

Simulating the ID Pushbutton

You can press buttons 1 and 2 simultaneously on the keypad to simulate the functions of a NetLinx device's ID pushbutton (see FIG. 4).

Toggle Between IP Addressing Modes: DHCP and Static IP

The SP-08-E-US supports both DHCP and static IP addresses. You can use a static IP address which you can set via a Telnet command (SET IP), or you can use the factory default static IP address (192.168.1.2).

With the keypad powered and booted up (or in ID Mode), you can toggle between the DHCP and Static IP modes by pressing and holding buttons 1 and 2. The LEDs on buttons 1 and 2 blink while you keep them pressed. Hold them until the LEDs begin blinking at double the rate (approximately 10 seconds), then release the buttons.

When you release the buttons, the keypad toggles either from static to dynamic (DHCP) IP addressing or vice versa and remains in that mode until you use the buttons to toggle the IP mode again or you perform a factory reset. The keypad automatically reboots to complete the process.

NOTE: You must wait until the keypad is finished booting before toggling the IP address. Pressing the buttons while booting will cause the keypad to restore its factory default settings.

Resetting the Keypad

To perform a factory reset of the Keypad, press and hold buttons 1 and 2 for approximately 10 seconds **during the boot process**. The LEDs on buttons 1 and 2 blink while you keep them pressed. Hold them until the LEDs begin blinking at double the rate (approximately 10 seconds.) Release the buttons and the keypad will reset. During factory reset, the backlight turns off for all buttons, but all buttons should be back online after 1-2 minutes. If you do not hold in the reset button until the LEDs begin blinking faster, the reset does not occur. (There is no soft reboot with the Reset button, but you can perform a soft reboot from the web pages.)

NOTE: When you reset a keypad, the keypad is restored to the factory default, so you will lose all configuration data as the defaults are restored.

Resetting the Factory Image on the Keypad

To restore the factory image on the keypad, press and hold buttons 1 and 2 for approximately 20 seconds **during the boot process**. The LEDs on buttons 1 and 2 blink while you keep them pressed. Hold them until the LEDs begin blinking at double the rate (approximately 20 seconds.) While pressing the buttons, disconnect and reconnect the cable from the LAN port on the rear panel of the keypad to restore the factory image firmware.

Channels

Channels on the SP-08-E-US keypads correspond to the button numbers on each keypad as indicated in FIG. 4.

Port Numbers

The SP-08-E-US appears as port 1.

Additional Documentation

Additional documentation for this device is available at www.amx.com. Refer to the *Novara Ethernet Keypads Instruction Manual* for additional details on installing, upgrading, and wiring the SP-08-E-US.

