

## Overview

This guide pertains to the MKP-108 Massio 8-Button Keypad with Knob (FG5793-08). 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 MKP-108:

- (1) metal mounting bracket
- (1) sheet of 70 pre-printed button labels
- (4) M3.5 x 30MM screws
- (4) #6-32 x 1.25 screws

## Dimensions

4 11/16" x 6" x 1" (119mm x 152.5mm x 26mm)

## Weight

Approximately 0.35 lbs. (0.16 kg)

## Power

You can apply power to the MKP-108 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.

### Applying Power

Applying power to the MKP-108 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.)

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

## Installation

The MKP-108 mounts onto standard 2 gang US or EU back boxes. Each type of back box must adhere to its own specific safety approvals.

### Button Labeling

Massio keypads come with a set of clear plastic Button 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.

Massio keypads also come with a pre-printed acetate sheet with a range of 70 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.

**NOTE:** Install button labels before mounting the keypad. Installing button labels requires disassembling the keypad. See the *Disassembling the Keypad* section for more information.

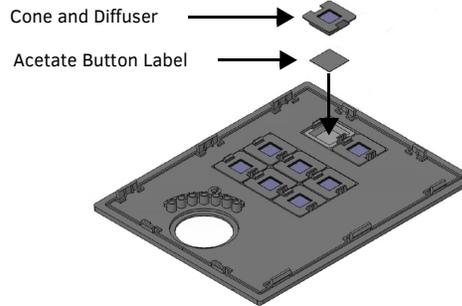
### Installing Acetate Button Labels

Follow these steps to install acetate button labels:

**NOTE:** Remove power from the Massio device, and discharge any static electricity from your body by touching a grounded metal object before performing the following steps.

1. Remove the faceplate from the frame and invert the faceplate to expose its backside.
2. Remove the cone and diffuser from the button. The cone and diffuser are adhered together and should not be separated.
3. Peel off 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 Button Caps.
  - Custom button labels must be cut to a **14mm (0.55") square** to fit securely inside the Button Caps.
  - The thickness of the acetate used must not exceed **.004" (0.10 mm)**.

4. Place the Button Cap face-down, and insert the Button Label into the bottom of the Button Cap (FIG. 1).



**FIG. 1** PLACING A BUTTON LABEL INSIDE A BUTTON CAP

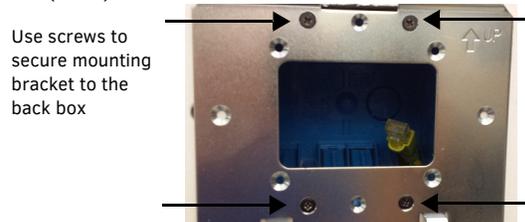
Orient the Button Label inside the Button Cap so that the two clips are located on the left and right sides of the readable text on the Button Label, as indicated in FIG. 1. Be sure to place the Button Label face-down inside the Button Cap, otherwise the label will be seen in reverse once the Button Cap is installed.

5. Place the cone and diffuser back over the button and snap the cone into place on the faceplate. Repeat steps 2-5 for any additional buttons. When finished, mount the keypad.

### Mounting the Keypad

Follow these steps to mount the keypad:

1. Install the 2-gang back box into the surface of the desired location for the keypad.
2. Once the back box is installed and secured, peel the plastic covering off of the metal mounting plate. You can discard the plastic covering after removing it.
3. Secure the metal mounting bracket to the back box using the provided screws (FIG. 2).



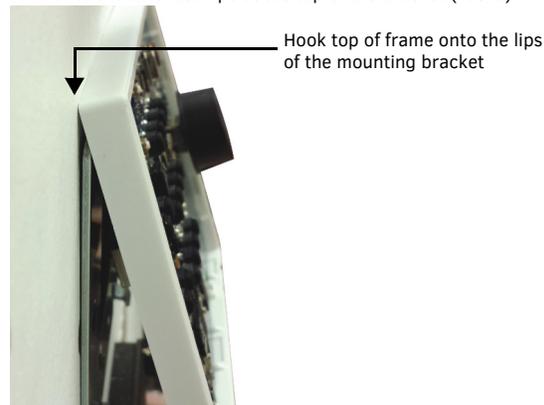
Use screws to secure mounting bracket to the back box

**FIG. 2** SECURE THE METAL BRACKET TO BACK BOX

4. Be sure to connect category cable to the LAN port to supply power to the keypad. See the *Applying Power* section for more information.

**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.

5. Attach the keypad frame to the mounting bracket by hooking the top of the frame onto the extended lips at the top of the bracket (FIG. 3).



**FIG. 3** ATTACHING THE FRAME TO THE METAL BRACKET

6. Press the sides of the frame to snap them into place.

- Press the bottom corners of the keypad frame to snap them into place. The two metal clips on the mounting bracket should align with the open spaces located at the bottom of the frame. The clips should fit inside these spaces and lock the frame into position on the mounting bracket (FIG. 4).

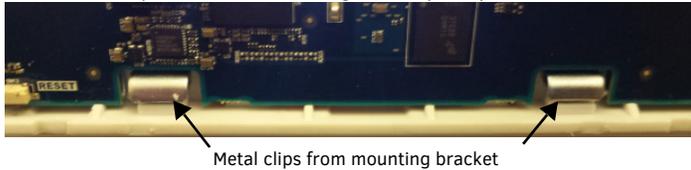


FIG. 4 METAL CLIPS FROM MOUNTING BRACKET LOCKING FRAME ONTO BRACKET

- Connect the faceplate to the frame by snapping the top corners of the faceplate into place on the frame. If connected properly, the faceplate should hold itself in place against the frame.
- Press the bottom corners of the faceplate until each corner snaps into place with the frame.

### Disassembling the Keypad

If you are replacing button labels after you have already installed and mounted the MKP-108, follow these steps to disassemble the device.

**NOTE:** Remove power from the Massio device, and discharge any static electricity from your body by touching a grounded metal object before performing the following steps.

This procedure requires a 5mm flat-head screwdriver.

- Use the flat-head screwdriver to locate the two small ridges at the bottom of the faceplate and gently pry the faceplate away from the device frame. The two ridges are located toward the sides of the MKP-108.



FIG. 5 LOCATION OF RIDGES ON BOTTOM OF MKP-108

- Lift the faceplate away from the rear panel to expose the device frame.
- Remove device frame from the mounting bracket by inserting the flat-head screwdriver below the metal clip located at the bottom center of the device frame and lifting the clip upward to unlock the device frame from the mounting bracket (see FIG. 4).
- When the device frame is unlocked from the mounting bracket, lift the device frame upward and away from the top lip of the mounting bracket.

To reassemble the keypad, see the *Mounting the Keypad* section and follow the instructions starting with step 4.

### Configuration

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

#### Locating the IP Address of the Keypad

The MKP-108 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 *Toggling 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.

- Using category cable, connect the LAN port on the keypad to your external network.
- In NetLinX Studio, select the OnLine Tree tab. You should see the MKP-108 listed among the Unbound Devices.
- Right-click the MKP-108 and select **Network Bind/Unbind Device** from the menu that appears. The Bind/Unbind Device dialog opens.
- 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.
- 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.
- Click **OK** to save changes and close this dialog.
- Select **Refresh System** (in the Online Tree context menu). The device should now appear in the Bound Devices folder.

### Keypad Layout

FIG. 6 displays the button layout and channel numbers of the MKP-108.

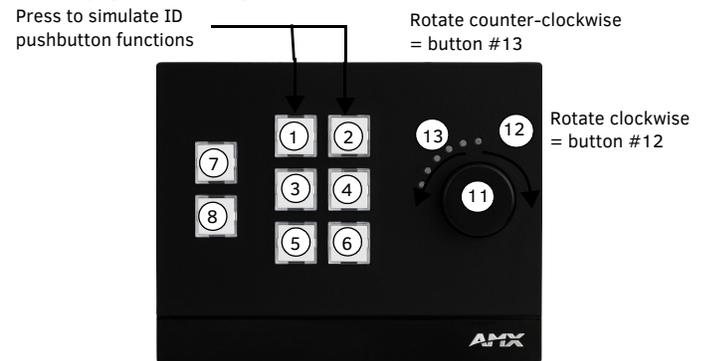


FIG. 6 MKP-108 BUTTON LAYOUT

#### 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. 6).

#### Toggling Between IP Addressing Modes: DHCP and Static IP

The MKP-108 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 **while booting**. 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 resets. 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.

#### Port Numbers, Channels, and Levels

The MKP-108 supports the following port numbers, channels, and levels:

PORT NUMBERS, CHANNELS, AND LEVELS			
Keypad Part	Port	Channels	Levels
Keypad Buttons	1	Channels correspond to the button numbers on each keypad (see FIG. 6)	None
Knob	1	clockwise = 12 counter-clockwise = 13 push in = 11	2, range is 0-255
LED Bargraph	1	None	1, levels indicate 0-255

#### Additional Documentation

Additional documentation for this device is available at [www.amx.com](http://www.amx.com). Refer to the *Massio ControlPads and Keypads Instruction Manual* for additional details on installing, upgrading, and wiring the MKP-108.

You can also access this Quick Start Guide online by using your mobile device to scan the QR code located on the rear panel of the keypad.

