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Tesira®

Tesira Ethernet Controller (TEC-1)

OPERATION MANUAL

April 2019

BIAMP SYSTEMS 9300 SW GEMINI DRIVE, BEAVERTON, OREGON 97008 U.S.A. 503.641.7287 BIAMP.COM

TEC-1s and TEC-1i are remote controls for Tesira® and TesiraFORTÉ systems. They offer a simple, intuitive interface and can be installed and configured to fit the unique needs of a particular application. The TEC-1 device connects via standard CAT-5/6/7 cabling and is powered over Ethernet, eliminating the need for custom cabling and local power sources. Multiple remote control panels can be connected over large distances using standard network technology. The TEC-1s is designed to mount to a surface and includes a molded rear chassis with accommodation for cabling and for physically attaching the entire assembly to a surface. The TEC-1i is designed to mount into a wall or surface without a rear chassis to ensure the smallest physical profile.

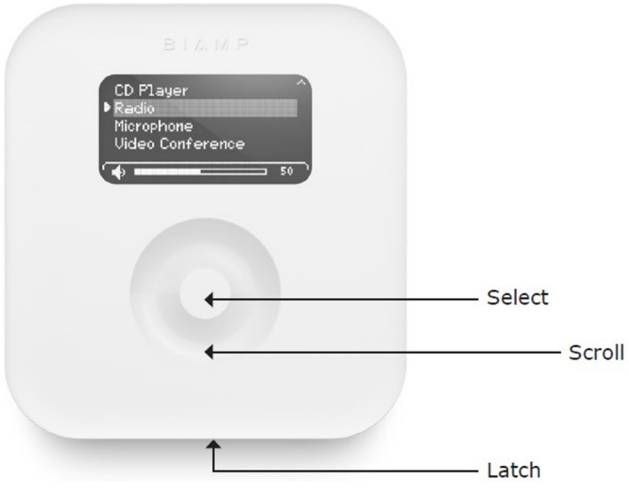
TEC-1i

TEC-1s

Setup and Use
The Tesira software provides an intuitive interface for setup and programming of the TEC-1. The information supplied by this manual relates to physical connections and device setup. For more details on software setup, please consult the Tesira Help File.

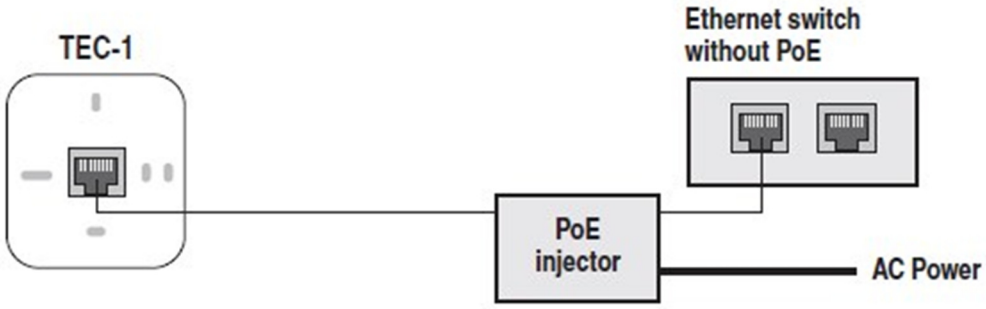
Display
A graphic OLED (Organic Light-Emitting Diode) display with white characters on a black background shows a list of all control items available from that panel, as well as the last selected item. If a control item includes a volume control assignment, the bottom of the display will show a graphical representation of a volume bar with the current level indicated to the right (percentage of maximum level).

Capacitive-touch Scroll Wheel
The capacitive-touch sensor provides a sleek interface for menu navigation and selection. The glossy-finish finger groove allows for scrolling through and selecting available control items, as well as adjusting volume.



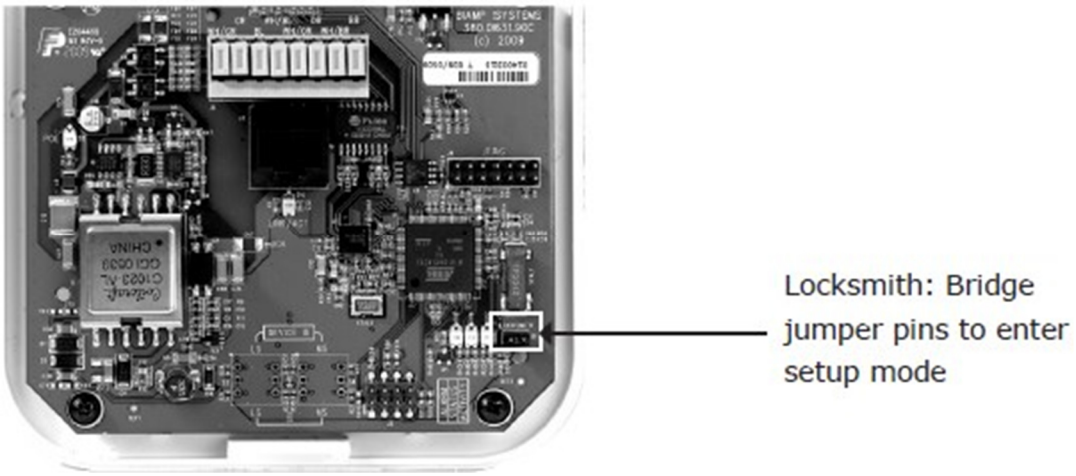
Connectors
Two Ethernet connectors—one rear-facing RJ45 and one top-facing insulation displacement connector (IDC)—are provided for connecting to the network. Only one connector may be used. The RJ45 and IDC utilize unshielded twisted pair (UTP) wiring to connect to a Tesira system. This connection is made to the Ethernet port of a Tesira unit, either directly (single station) or via a network switch, and carries control data over Ethernet.

The TEC-1 is powered using IEEE 802.3-2008 Power over Ethernet (PoE) protocol as a Class 1 device. Either a PoE capable network switch or a PoE injector is required to power the device; there are no other provisions for power inlet.



Device Setup Mode

The TEC-1 can be configured without connecting to a functional Tesira network. To enter setup mode, connect the TEC-1 to a PoE source and place the jumper or any metal object across the locksmith pins. When configuration is complete, remove the jumper and attach it to only one pin to resume normal operation. Please note: many of the configuration settings can be accessed via the Tesira software.



The cursor has two modes: select and modify. In select mode, the cursor appears as a gray box. When scrolling through the available items in the list, the gray box will highlight the current selection.

On fields that can be modified, use the Select button to transition to and from modify mode. In modify mode, the cursor appears as an outline box. Use the scroll wheel to adjust the setting up or down.

Some screens have additional buttons that are used to accept (OK), reset, or cancel changed settings. Use the scroll wheel to navigate the cursor to these buttons and press the Select button. The OK button saves the setting and exits the screen. The Reset button clears the setting and does not save it. The Cancel button exits the screen without saving the setting.

Edit Device ID

To name the unit, scroll to the ID Tag icon and press the Select button. Use the scroll wheel and Select button to select the desired characters. Scroll to the ⌫ icon and select it to delete the previous character. The default Device ID is “TEC-1ID 01”. The Device ID must match that of a corresponding block in the Tesira design. More than one unit may be identified with the same design block (same ID). Device IDs may also be assigned via Device Maintenance in the Tesira software.

Edit Network Configuration

To edit the network configuration, scroll to the Network icon and press the Select button. The default setting (Auto) allows the device to receive its network configuration from a DHCP server. This allows TEC-1 to be discovered by a Tesira device that also has default settings. The default hostname is “TEC-1-” followed by its serial number. Select the hostname to edit it in a similar way of editing the Device ID. The network settings may instead be assigned via Device Maintenance in the Tesira software.

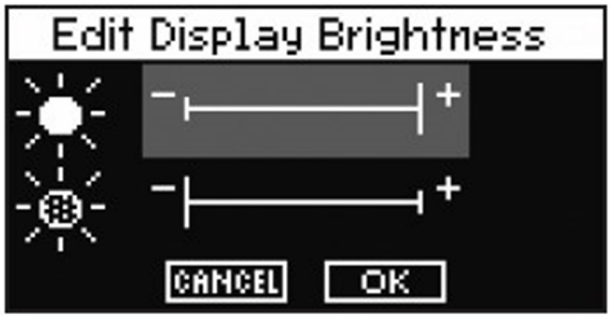
To specify a static IP address, change the “Auto IP?” to Static and select the IP address. TEC-1 will display the Edit IP Address screen where the IP address, network mask, and gateway can be edited. Resetting the IP address sets the IP address, network mask, and gateway back to 0.

Edit Unlock Code

To set password protection, scroll to the Key icon and press the Select button. Use the scroll wheel and Select button to choose the desired characters. During normal operation, holding down the Select button for five seconds will lock the unit, and the user will be prompted for the Lock Code before obtaining access. Lock Codes may also be assigned via Device Maintenance in the Tesira software.

Edit Display Brightness

To change the brightness of the OLED panel, scroll to the Display Brightness icon and press the Select button. Use the scroll wheel and Select button to make adjustments. The first setting represents the normal operational display brightness, and the second setting represents the dim display brightness. Display brightness cannot be assigned via Device Maintenance in the Tesira software.



Edit Timeouts

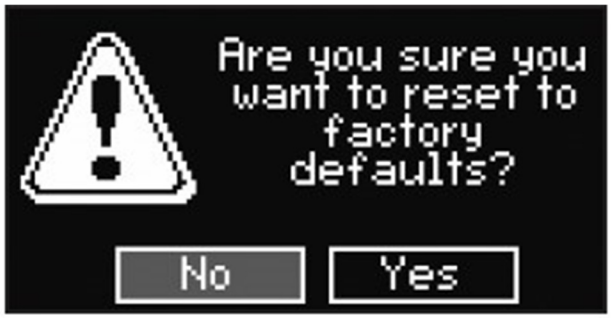
To change the lock, dim, and sleep timeouts, scroll to the Timeout icon and press the Select button. Use the scroll wheel and Select button to make a selection. The Timeout can range from 5 seconds to 30 minutes or none for the lock and dim timeouts; the sleep timeout cannot be none. Timeouts may instead be assigned via Device Maintenance in the Tesira software.

View Device Information

To view information regarding the specific unit, scroll to the Information icon and press the Select button. The Serial Number, MAC Address, Firmware Version, Hostname, IP Address, network mask, and gateway are displayed. This is non-editable information. The Serial Number is helpful in identifying physical units/locations when naming them via Device Maintenance in the Tesira software. The IP address information is useful only when TEC-1 receives an IP address automatically to indicate what IP address it received. Use the scroll wheel to navigate through the list of information. Press the Select button to exit this screen.

Reset to Factory Defaults

To reset to factory defaults scroll to the reset icon with the exclamation point and press the Select button. To confirm, scroll to the Yes button and press the Select button. Otherwise selecting No will return back to the device setup screen. Resetting to factory defaults clears all device maintenance parameters and restores them to their default values. When resetting to factory defaults the firmware version remains unchanged.

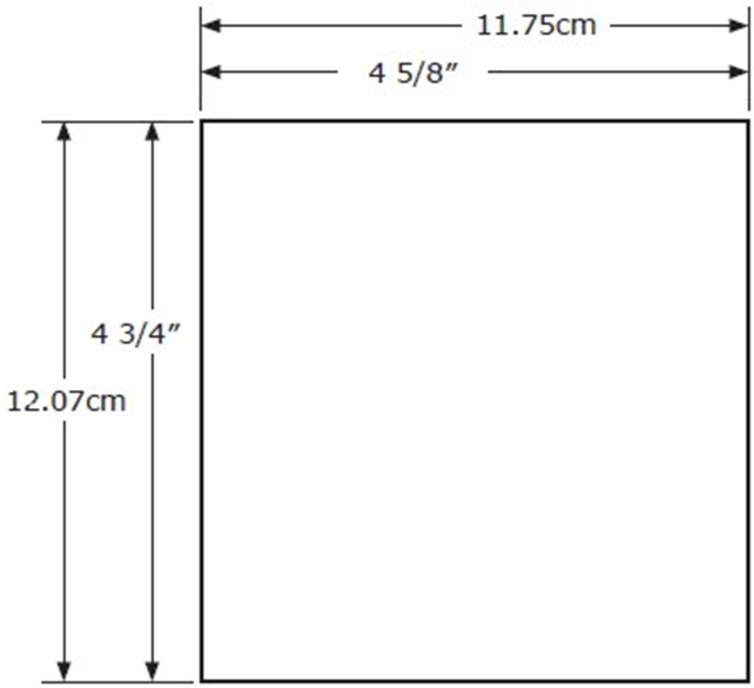


Exit

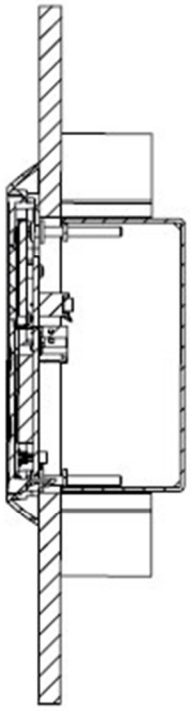
To exit the setup screen, scroll to the Exit Door icon and press the Select button.

Flush Mount Installation

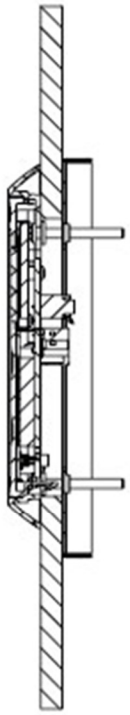
The TEC-1i may be flush mounted using the retrofit plate (provided with the product) or a Raco® 254 box (purchased from an electrical distributor). To install the TEC-1i, a hole must be cut in the wall to accommodate the Raco 254 box or to use the retrofit plate. See the figures below.



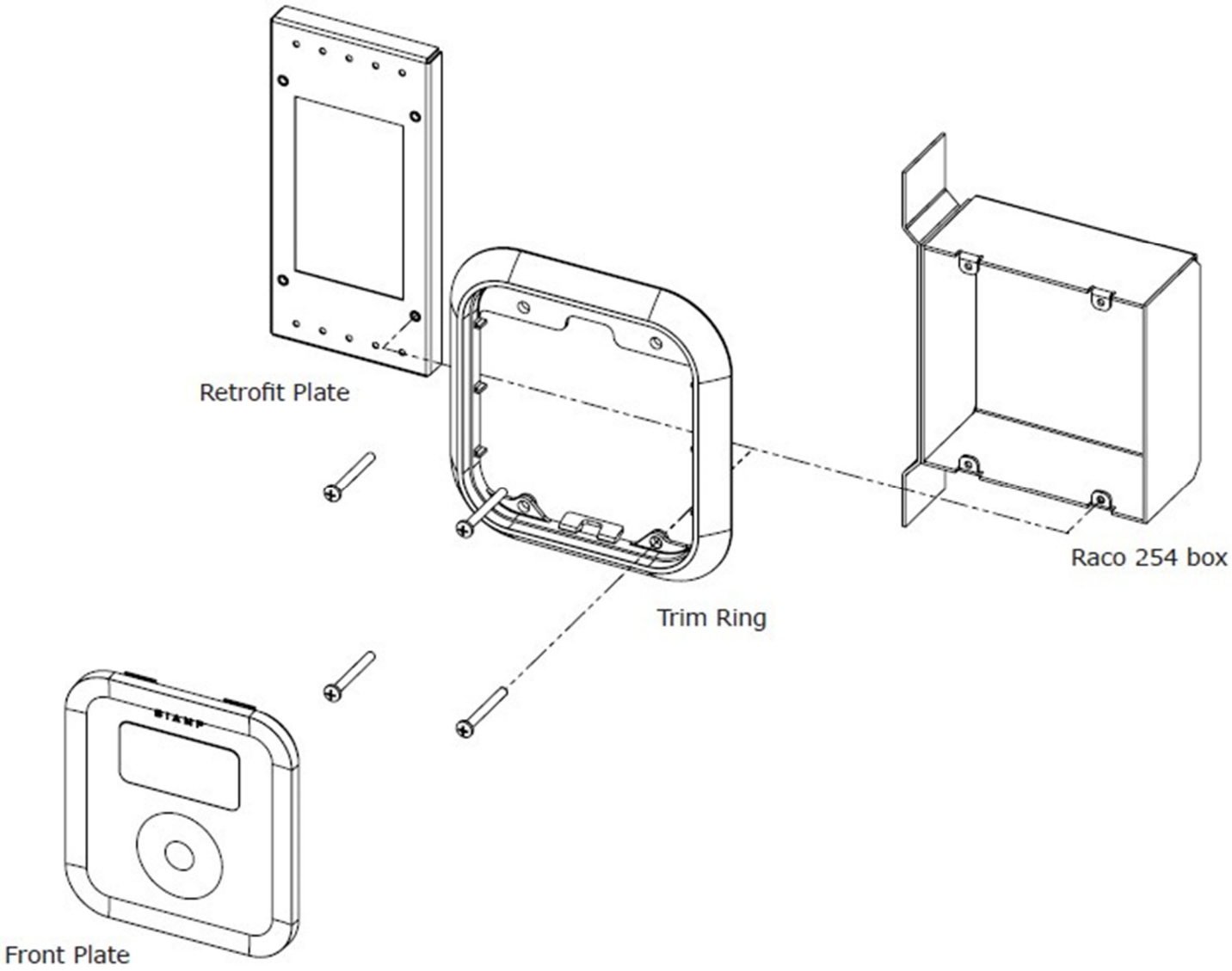
Wall cut out dimensions



Mounting using a Raco 254 box



Mounting using the retrofit plate

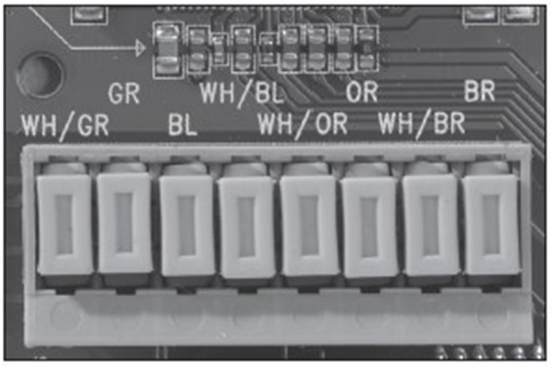


Exploded view showing pieces required for mounting to the retrofit plate or the Raco 254 box

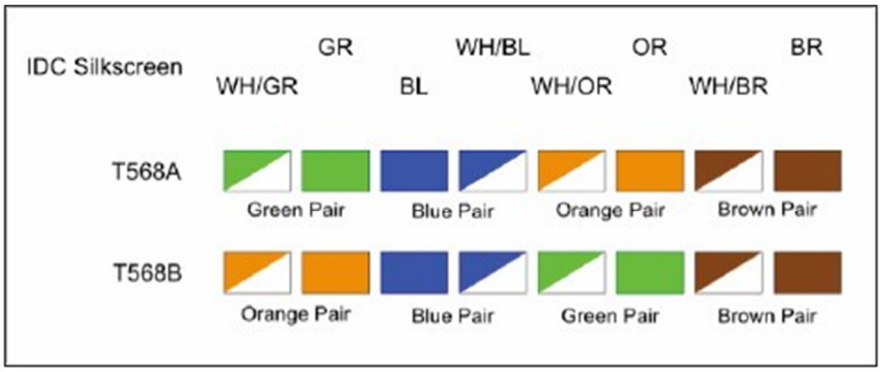
When installing the TEC-1i using the retrofit plate or the back-box, fasten the trim ring using the four screws provided to either the retrofit plate or the back-box. Once the trim ring has been fastened to the retrofit plate or the back-box, guide the TEC-1i front plate at an angle into the top of the trim ring to seat the tabs on the top of the front plate. Once this has been done rotate the bottom of the front plate towards the bottom of the trim ring until it is seated in the trim ring via the bottom clip.

If the front plate needs to be removed use a screw driver or other suitable tool to engage the latch at the bottom of the TEC-1i to detach from the trim ring.

Connect the wire according to the color code silkscreened as text next to the Insulation Displacement Connector (IDC) or as shown on the label on the back enclosure (see figure below). The color code uses the T568A standard for wiring. When using the T568B wiring scheme, please note that the orange wire pair (OR and WH/OR) and green wire pair (GR and WH/GR) need to be swapped. After inserting the wires, press the tabs until the insulation is punctured with an audible click. No wire stripping is necessary.

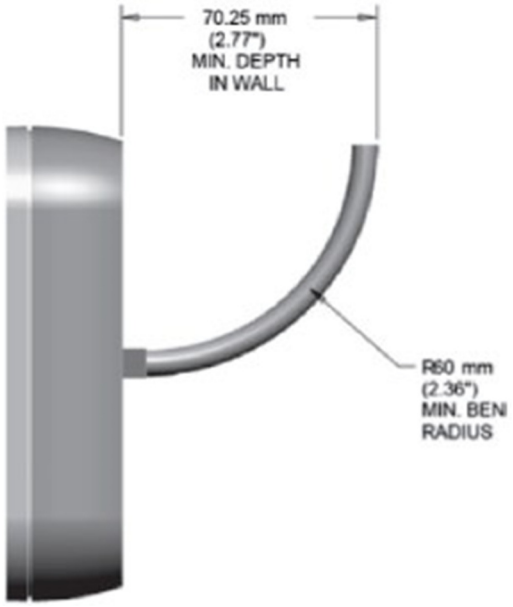


Insulation Displacement Connector (IDC)



IDC wiring scheme

Note the appropriate bend radius requirements for category cables as shown in the figure below.



Software support in Tesira configuration software Version 1.1 or later provides user programming of all remote functions, network setup, device naming, and device maintenance.

Visit www.biamp.com to obtain firmware and software updates related to this product. To speak with an Applications Engineer, please call 1.503.641.7287 or email support@biamp.com.