# Barix 500
# Installation



1. Connect the provided audio breakout cable to the rear panel **Balanced Stereo Analog IN & Out** connector.    The broadcast is a mono feed but be present on both left and right male XLR's.

2. Next you'll need to connect the contact closure wiring (only 3 contact closure needed for ECU broadcasts).   Using two the provided six position screw terminal plug-in blocks on the left rear of the Barix decoder, identify and move the contact closure wiring…
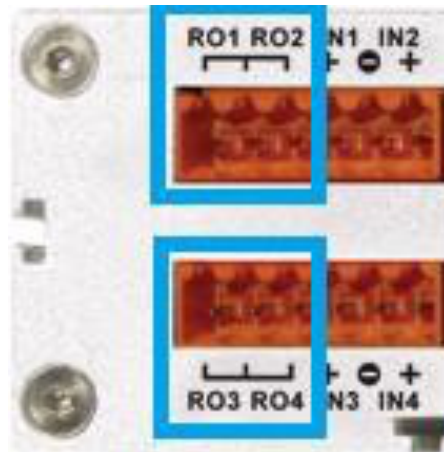


**R01**: Relay #1 Barix upper left connector pins 1 & 2 – Local Break Start
**R02**: Relay #2 Barix upper connector pins 2 & 3) – Legal ID Note: there will be two wires on Barix connector pin #2
**R03**: Relay #3 Barix lower connector pins 1 & 2) – End of Game
**R04**: Relay #4 Barix lower connector pins 2 & 3) – Future: there will be two wires on Barix connector pin #2

Connect an Ethernet cable from your station network to the **ETH 1** connector on the rear panel.  The receiver is set to receive an IP address from your network via DHCP.  Plug the receiver power cube connector into the **POWER** jack on the rear panel then plug the power cube into a power outlet.

HINT: Listen to the audio output from the receiver when you power it up for it to audibly announce the IP address of the receiver.  Use this IP address to access the unit's configuration using a web browser.

Next to the ETH-1 connector are a yellow and green LED.  Green indicates status of the Ethernet link, yellow indicates activity (data) on the network…

On the front panel, normally the green LED is solid with a blink every three seconds. The red LED will illuminate and blink during booting of the unit, but once the unit has booted if the red LED stays on or is blinking, it indicates a problem locking onto the audio stream and/or with the unit configuration.

The four LED's labeled 1, 2, 3, and 4 illuminate for the duration of any associated contact closure received from the network (#1 is local break, etc.).



If you think the unit needs power cycled, unplug the power cube from the AC power outlet for about 30 seconds, then plug the power brick back in. Do not plug any cables or devices into the front panel EXT (USB) jack as this could force a configuration change.

(The rear panel RS-232 connector is not used.)


**Receiver Configuration**
For the unit to connect to the network encoder you'll need to do the following:
- Use the IP address given by the unit to access the configure settings via a web browser.
- Click "Location" to confirm that Site Type is "Transmitter Decoder". If not pull down to decoder and "Apply"
- Click "Configuration" then "I/O and Control".
- Enter the following for URL and Port: 173.219.102.190  4040 and "Apply"
- After reboot your unit should connect to the network encoder


**Relay Configuration**
For the unit to signal that it has detected a relay closure make the following changes:
- Use the IP address given by the unit to access the configure settings via a web browser.
- Click "Configuration" and change Stream Method to "Pull(BRTP)"
- Select "Relay State" for Front Panel LED setting
- Select "ON while remote Input 1 ON" for Relay 1 Mode. (do the same for Relay 2, 3 & 4) and "Apply"
- After reboot your unit should be configured receive and display network relay closures.

     **R01**: Relay #1 Barix upper left connector pins 1 & 2 – Local Break Start
     **R02**: Relay #2 Barix upper connector pins 2 & 3) – Legal ID
     **R03**: Relay #3 Barix lower connector pins 1 & 2) – End of Game
     **R04**: Relay #4 Barix lower connector pins 2 & 3) – Future

**Tech Installation Notes for your I.T./Engineering Staff**

- The decoder pulls a DHCP assigned address from your station Internet network.  Static and/or public IP's are not necessary.  Firewalls should be programmed to be open for all ports to/from the Barix, both UDP and TCP for full functionality.


- The unit is most efficient pulling a DHCP address if the Ethernet is fully connected before powering up the Barix unit (opposed to powering up then plugging in the Ethernet).

- Both audio outputs announce the IP address of the unit within a minute after powering up as a confirmation DHCP is working, and audio is connected properly.

- The relay connections on the rear of the Barix are dry relay contacts, each set of two share a common connection.

- We are using 128K bandwidth for each channel (up from 56K the satellite system used).  With control signal overhead one Barix decoder will use less than a quarter meg of your inbound Internet bandwidth (for example if your inbound bandwidth is 10 meg, one Barix decoder will use under 2% of that bandwidth).