

QUICK-START INSTALLATION GUIDE

TELOS HX1 / HX2

DIGITAL HYBRID TELEPHONE INTERFACE



THANK YOU FOR PURCHASING THE TELOS HX1 / HX2 DIGITAL HYBRID TELEPHONE INTERFACE.

We have made these Telos Hybrid Systems easy to set up and configure. This quick-start guide will take you through the basic steps to configure your new Hx1 or Hx2 to start delivering clean, clear caller audio to your show in no time. Before we get started, let's make sure you have what you need.

REQUIRED EQUIPMENT, CABLES, AND ACCESSORIES:

There are a few additional items required for a successful installation. Check the list below and make sure you have what you need.

Included items:

- Telos Hx1 or Hx2 Digital Hybrid Telephone Interface
- AC Power Cable
- Rack Mount Hardware
- RJ-11 cable for POTS Line

Items you need to supply:

- An available 1RU 19 inch rack mount enclosure slot
- POTS Phone Set
- Regular analog POTS line from the Telco

INITIAL SET UP



PHYSICAL CONNECTIONS

1. **Install** your Hx1 / Hx2 in a 1 RU high space on a standard 19" rack.
2. **Connect** your POTS line to the "LINE" RJ-11 jack (A) with a supplied RJ-11 cable.
3. **Connect** your POTS Phone to the "PHONE" RJ-11 jack (B) with an RJ-11 cable.
4. **Hx2 users:** To establish connections for HYBRID #2, **connect** your POTS line to the "LINE" RJ-11 jack (C) and **connect** your POTS Phone to the "PHONE" RJ-11 jack (D) for HYBRID #2 with an RJ-11 cable.

CONTINUE TO AUDIO CONFIGURATION

The initial connections for your Hx1 / Hx2 are complete and ready to be configured for audio input. Continue to the "Audio Configuration" instructions.

AUDIO CONFIGURATION

ESTABLISH A MIX MINUS OUTPUT ON YOUR CONSOLE

1. A mix minus is the mix of all the sources you want the caller to hear, minus the caller. The caller can already hear themselves on the phone (side-tone), so it is not necessary and undesirable to send the caller's audio back to the caller.
2. Based on your model, proceed to the appropriate steps to set up either your Hx1 or Hx2.

HX1 AUDIO CONFIGURATION



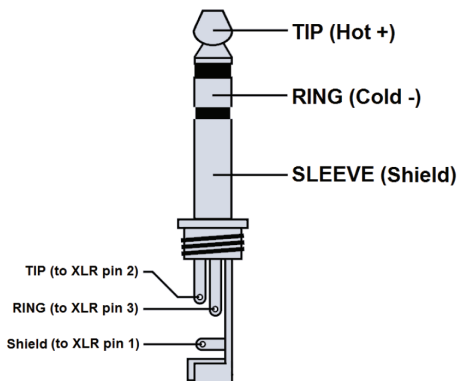
to phone bus line output
of your console

to line input for the channel designated
for callers on your console

- a. **Connect** one cable to the SEND IN XLR jack (E). **Connect** the other end of the cable to the phone bus line output of your console.
- b. **Connect** one cable to the RCV OUT XLR jack (F). **Connect** the other end to the line input for the channel designated for callers on your console.

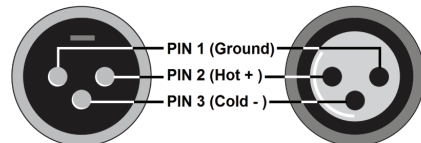
MAKING YOUR OWN CABLES?

If it is necessary to make your own cables to patch the system into your console, please refer to the illustration below for proper configuration.



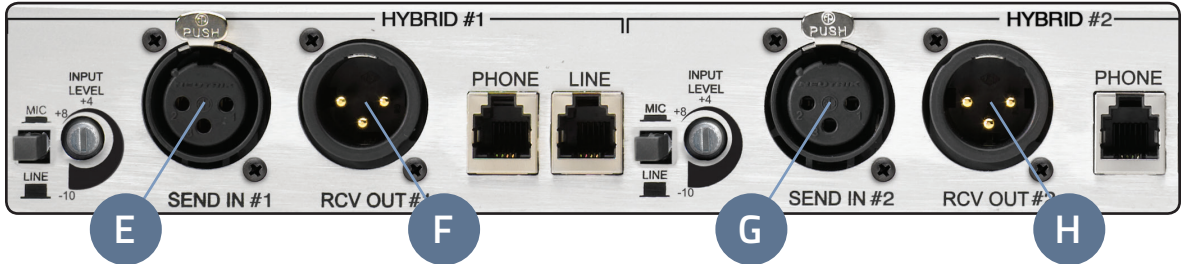
MALE XLR

FEMALE XLR



Telos recommends connecting your Hx1 / Hx2 to professional-grade audio equipment with balanced audio connections. If your Hx1 / Hx2 must connect to semi-pro "unbalanced" audio inputs or outputs, we recommend using a two-way, external balanced / unbalanced line level converter. Common models include the "Matchbox", "ProMatch", and "CleanBox Pro", as well as other model names.

HX2 AUDIO CONFIGURATION



to phone bus line output
of your console

to line input for the
channel designated for
callers on your console

to phone bus line output
of your console

to line input for the
channel designated for
callers on your console

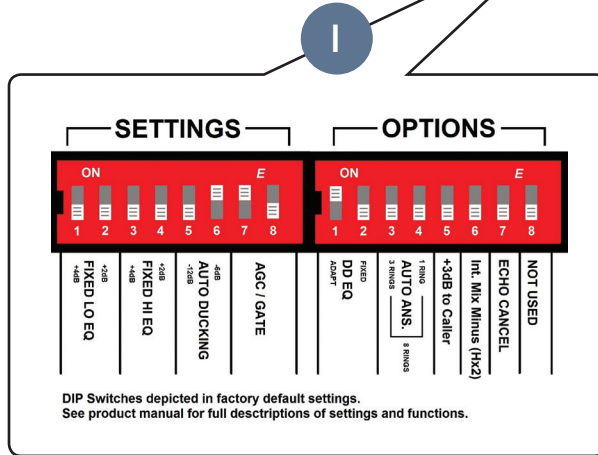
- Connect** one cable to the SEND IN #1 XLR jack (E). **Connect** the other end of the cable to the phone bus line output of your console.
- Connect** one cable to the RCV OUT #1 XLR jack (F). **Connect** the other end to the line input for the channel designated for callers on your console.
- Connect** one cable to the SEND IN #2 XLR jack (G). **Connect** the other end of the cable to the phone bus line output of your console.
- Connect** one cable to the RCV OUT #2 XLR jack (H). **Connect** the other end to the line input for the channel designated for callers on your console.

Hx2 TIP: If only one mix minus can be sent from your console, don't fret! You can set up an internal mix minus by setting the OPTIONS DIP #6 Switch on the rear panel to the ON position. When this is done, the signal at SEND IN #1 will be sent to both callers and each callers' audio will be sent to the opposite hybrid for conferencing.

CONTINUE TO DIP SWITCH CONFIGURATION

The audio configurations for your Hx1 / Hx2 are complete. Continue to the "DIP Switch Configuration" instructions.

DIP SWITCH CONFIGURATION



REAR PANEL DIP SWITCH CONTROL

- NOTE:** If you are using the Hx1 or Hx2 outside of the United States of America, please refer to the "Country Specific Configuration Settings" Section in the manual for instructions and tables for setting the internal DIP SWITCHES to the proper Telco Country setting.
- On the rear panel of the Hx1 and Hx2 hybrid are two banks of DIP switches (I) labeled SETTINGS and OPTIONS. The SETTINGS bank of DIP switches (SW1 & SW2) allows you to control the operational levels of various signal processing stages of the hybrid unit.
- The illustration (I) depicts the factory default setting for the Hx1 and Hx2. Please refer to the product manual for full descriptions of settings and functions.
- If no special settings are required, make sure DIP switches are in the default position.

CONTINUE TO TEST YOUR CONNECTION

The Hx1 / Hx2 is configured and ready to make or receive calls. Continue to the "Test Your Connection" instructions.

INSTALLATION HELP

For more details on other configuration options, or for additional information about configuring an Hx1 or Hx2, please access the full manual online at <https://www.telosalliance.com/Telos/HX>.

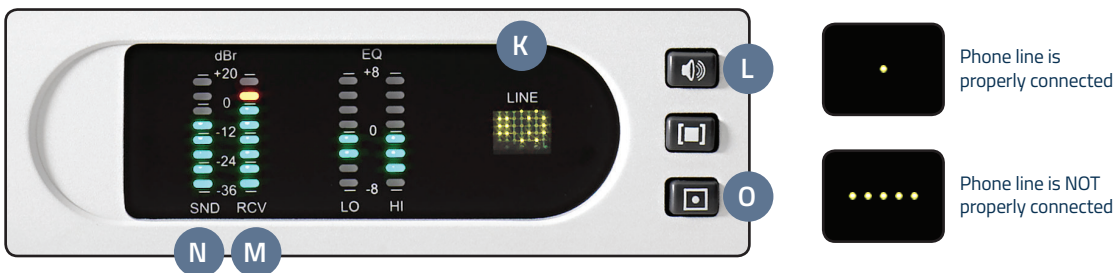
If you have more questions, call the Telos Alliance 24/7 Support Team at **+1 (216) 622-0247**, or email us at support@telosalliance.com, we'd be happy to help you out.

TEST YOUR CONNECTION



PERFORM AN OPERATIONAL TEST

1. **Connect** the Hx1 or Hx2 to AC Mains (J).
2. The unit will complete a self test.



3. A dot should be present on the front of the display (K) if the phone line is properly connected. If a minus sign is displayed, the unit does not detect the line voltage and your wiring should be checked. If you are testing an Hx2 with two POTS lines connected, make sure a dot is visible on both displays.
4. **Press** the Hybrid ON button (L). A dial tone should be present on the hybrid's output and RCV bargraph meter (M). If you are testing an Hx2 with two POTS lines connected, this step should be performed for each line independently.
5. **Verify** correct mix minus operation at this point by noting that the RCV bargraph (M) shows the dial tone at a nominal level, and that the SND bargraph (N) shows only the microphone or audio present on the device feeding the Hx SEND IN. You should only see dial tone on the RCV meter. If you see dial tone on both SEND and RCV meters, check your mix minus.
6. **Press** the Hybrid OFF button (O) to end the test.

YOUR SETUP IS COMPLETE!

That's it! You are now ready to experience the Telos Hx1/Hx2 for optimal caller audio quality.

USING THE ATTACHED PHONE

1. To make an outgoing call, make sure that the hybrid is off (dot on the display (K)). Using the POTS phone attached to the PHONE jack, seize the line, wait for a dial tone, and dial the desired number. When you are ready to place the caller on the hybrid, press the ON button (L), wait for the hybrid to take the caller and hang up the POTS phone.
2. To screen an incoming call, simply answer the call on the POTS phone attached to the PHONE jack on the rear of the Hx. When you are ready to place the caller on the hybrid, press the ON button (L), wait for the hybrid to take the call, and hang up the POTS phone.