FEATURES

Catapult Mini TX

1. **RJ45 OUTPUT:** Sends analog audio over Cat 5 or Cat 6 Ethernet cable.

2. **FEMALE XLR INPUTS:** Connect to balanced mic or line level sources.

Catapult Mini RX

3. **RJ45 INPUT:** Receives four channels of analog audio over Cat 5 or Cat 6 Ethernet cable.

4. **MALE XLR OUTPUTS:** Allow you to plug directly into the inputs of a mixer or recording interface.

Catapult Mini TRS

5. **RJ45 INPUT/OUTPUT:** Can be used to send or receive four channels of analog audio over Cat 5 or Cat 6 Ethernet cable.

6. **MALE TRS CONNECTORS:** Allow you to plug directly into the balanced 1/4" TRS connections of a mixer or recording interface.

All Catapult Mini versions

7. **STEEL CHASSIS:** 16-gauge powder-coated steel housing to handle any touring environment.

8. **EXPANDO MESH SHEATHING:** Provides extra durability and protects cables from damage. Heatshrink labels are color-coded to identify channels at a glance.

SPECIFICATIONS

Audio circuit type: .... Passive RJ45 to XLR/TRS

Frequency response: .... 7Hz - 20KHz

Total harmonic distortion (THD+N): 0.0005% 1KHz

Dynamic range: 140dB

Maximum input: .... +35dBu

Minimum load impedance: 100Ω

Common mode rejection: .... >103dB

Construction: .... 16 gauge steel chassis & outer shell

Chassis size: .... 4.2" x 1.32" x 1.6" (107mm x 34mm x 41mm)

Cable length: 2ft (0.6m)

Warranty: .... Radial 3-year, transferable

To meet the requirements of California Proposition 65, it is our responsibility to inform you of the following: **WARNING:** This product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.
Please take proper care when handling and consult local government regulations before discarding.

TrueToYourMusic®

CATAPULT MINI

USER GUIDE

Radial Engineering Ltd.
1845 Kingsway Ave., Port Coquitlam, BC V3C 0H3, Canada
tel: 604-942-1001 • fax: 604-942-1010
info@radialeng.com

Catapult Mini User Guide - Part No. R870 1043 10 - 03-2026 • © Copyright 2019 all rights reserved. Specifications and appearance are subject to change without notice.

Thank you for purchasing the Radial Catapult Mini modular snake, a Cat 5 analog audio snake system that is designed to clean up the stage, simplify setups and take advantage of pre-existing wire infrastructure. Although these devices are designed to be easy to use, please take a minute to read through this short manual in order to take full advantage of their functionality. If you have any questions not answered within, please visit the Catapult Mini FAQ page as this is where we post questions and answers from users along with updates. If you still find yourself with more questions, you can always reach us by email at info@radialeng.com.

OVERVIEW

The Catapult Mini RX, TX, and TRS all act like a typical four-channel analog audio snake; they allow you to send mic or line-level signals from one location to another without signal loss, noise, or interference, and without any digital audio conversion needed. The difference is that instead of using bulky and expensive multi-channel audio cable, the Catapult system makes use of Cat 5 Ethernet cable, which is widely available, lightweight, and economical. Simply connect a shielded Cat 5 cable between any two Catapult modules and they will use the cable's analog conductors to deliver four balanced audio lines to any destination. As many buildings are already pre-wired for Cat 5, you can take advantage of this to transmit audio between distant rooms without the need to install or supply new cable. And since the Catapult system is modular, you can mix and match different transmit and receive boxes to best suit your application. The Catapult Mini RX and TX both feature XLR connectors, while the Mini TRS allows you to connect to devices using 1/4" TRS plugs.

MAKING CONNECTIONS

As with all audio systems, it is good to turn volume levels down or audio systems off before making connections. This will avoid connection or power-up transients from damaging more sensitive components such as tweeters.

You can use any standard Cat 5 or Cat 6 Ethernet cable to connect Catapult modules to each other. In order to pass 48V phantom power to feed your condenser mics or active direct boxes, the cable and terminating connections must have a shield. If you are transmitting line level signals, the shield is not required due to the twisted pair configuration, but it will still be beneficial as shielded cables are less susceptible to noise.
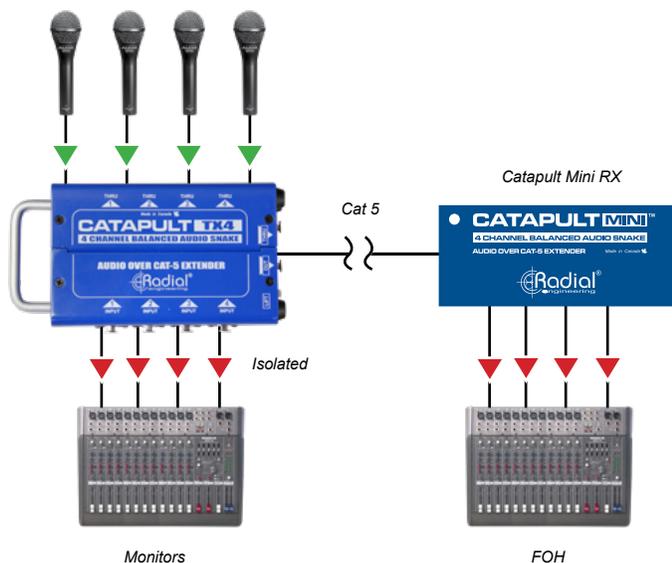
USING THE MINI TX WITH THE MINI RX

To use the Catapult Minis in their simplest form, connect the Mini TX and the Mini RX together using a Cat 5 cable. As the twisted pairs within an Ethernet cable are tightly wound together in a compact jacket, it's a good idea to send signals of a similar level together over the same wire as this will reduce crosstalk from higher signal levels (such as +4dB line levels) bleeding into lower volume signals (such as -30dB mic levels).

*Catapult Mini TX*   *Cat 5*   *Catapult Mini RX*
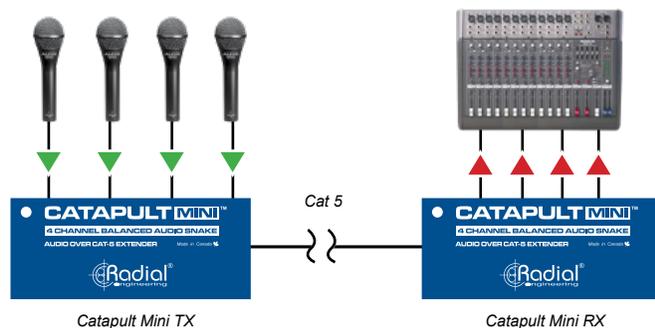
USING THE MINI RX WITH THE CATAPULT TX4/TX4M/TX4L

You can use the Catapult TX4 with the Mini RX to send audio signals from a live stage to the FOH console. The Catapult TX4 provides a robust stage box to plug your microphones into, while the Mini RX is small enough to fit in the dog house of a mixer case, with the XLR outputs plugged directly into the mixer. To split the mic signals to a monitor mixer located beside the stage, the TX4M can be employed, as it features isolation transformers optimized for mic-level that will eliminate hum and buzz from ground loops between the two mixers. For splitting line-level signals at the source, the TX4L is also available.

Catapult Mini RX

Cat 5

Isolated

Monitors   *FOH*

USING THE MINI TX WITH THE CATAPULT RX4/RX4M/RX4L

The Mini TX can be paired with the Catapult RX4 to feed the outputs of a console to a distant rack of power amps. To block stray DC voltages and avoid noise through the system, the RX4L has line-level isolation transformers to eliminate hum and buzz, as well as four direct XLR outputs to also feed another device such as a recording interface. If microphone splitting is required at the destination, the RX4M has transformers optimized for this task.

FOH

Power Amp to Speakers

Isolated

Cat 5

Catapult Mini TX

Recording interface   *Direct*
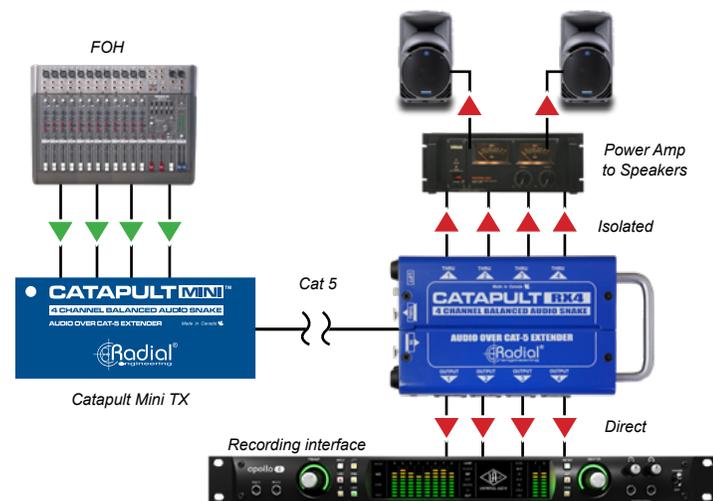
TAKE ADVANTAGE OF PRE-EXISTING CAT 5 WIRING

Use the Ethernet cables already wired throughout a building to send audio from one room to the other without additional installation or messy cables. *Note that the signals between two Catapult modules cannot pass through a network switch, as it will block the analog audio signal.*

Room 1   *Room 2*

Catapult Mini TX   *Cat 5 Wall Plate*   *Catapult Mini RX*