

# INSTALLATION INSTRUCTIONS

## 480-80 CFL FRIENDLY DINKY LINK™ IR RECEIVER

The 480-80 is a CFL (compact fluorescent light) friendly version of the 480-00 series Dinky Link IR receivers. It is specifically designed to have great immunity to CFL-type infrared interference and to have exceptional IR reception range. In addition, the 480-80 will operate in direct sunlight! They may be mounted under shelf edges, cabinet ledges, in wall speakers, etc. - anywhere an inconspicuous appearance is desired. The high sensitivity of these receivers allows placement behind speaker grilles and still receive IR commands up to 30 feet away. If longer range is necessary, 3/8-inch holes must be drilled in the grille to allow unobstructed entry of the IR signal to each of the IR receiver windows. There are two variations of this model as follows:

- 480B-80 Standard version, with black case. Has 7-foot 3-conductor ribbon cable with stripped and tinned ends.
- 480W-80 Same as the 480B-80 except with white case.

### SPECIFICATIONS & FEATURES

- Very small package, only 7/16" x 5/16" x 2-5/16".
- IR carrier input frequency reception range: 30 to 60 kHz.
- IR carrier output frequency: 38 kHz.

**NOTE: The 480-80 will not work with certain brands & models that operate at higher frequencies or that have unusual code structures. Contact Xantech Technical Support for more information.**

- IR reception range: Up to 70 feet on axis (range depends on device being controlled and levels of IR or EM interference).
- Reception angle: 55 degrees off axis with 50% range reduction.
- Red talk-back LED tests system and indicates infrared reception.
- Includes 3-Terminal Block for easy extension of 7' ribbon cable.

**NOTE: The 480-80 will not operate in 2-wire Phantom Power mode.**

- Power: 12 volts DC @ 20 mA.  
781RG Power Supply (not included) powers up to ten 480-80's.
- Maximum current output: 100 mA peak.
- Cable requirements: See "INSTALLATION" below (un-shielded OK).
- Maximum cable length: One mile with 18 gauge.
- Drives IR Emitters through Xantech Connecting Blocks, Controllers, etc.
- Dimensions: 7/16" x 5/16" x 2-5/16".
- SUN480 Sunscreen filters available separately. Order these to help with IR interference. They fit easily over the two photodiode openings

### INSTALLATION

The 480-80 is intended to be wired to the input terminals of Xantech Connecting Blocks or other devices, using the supplied 3-terminal block in the remote room location. A 3-conductor cable (24 gauge up to 200', 22 gauge up to 600', 20 gauge up to 2000', 18 gauge up to 5000'), is run to the main room. Connections are then made to a Xantech connecting block, power supply and emitters as shown in the illustration of a typical basic system on the next page.

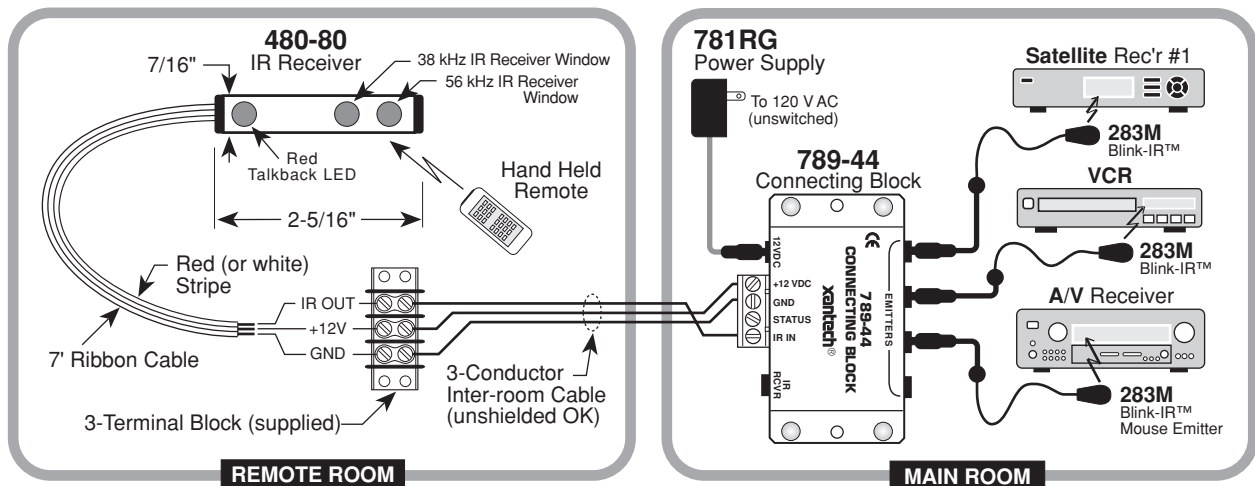


Fig. 1 A 480-80 in a basic IR repeater system.

While it is possible to make wired connections without the connecting block, it is not recommended. The connecting block reduces installation time, helps to eliminate errors, ensures equal drive current to each emitter, allows easy troubleshooting and permits easy system upgrades later, if needed.

Input connections must be made as illustrated. To extend the Emitter wires to a more distant location, you may splice in 2-conductor wire. Refer to the Connecting Block Installation Instructions for more information.

Fig. 2 illustrates the use of the 480-80 as one of the IR receivers in a larger multi-room system. Connections are made in the conventional way, with home-run cable from each remote room.

**CAUTION:** With any of these systems, be sure the power supply (in this case the 782-00) is plugged into an un-switched AC outlet. This maintains the IR control system in "standby" operation so that power-ON commands can be sent to the controlled equipment.

**Mounting:** The 480-80 can be mounted to any flat surface, using the 3/8" x 1-3/4" two-sided adhesive tape supplied. Two screws are included for mounting the 3-terminal block.

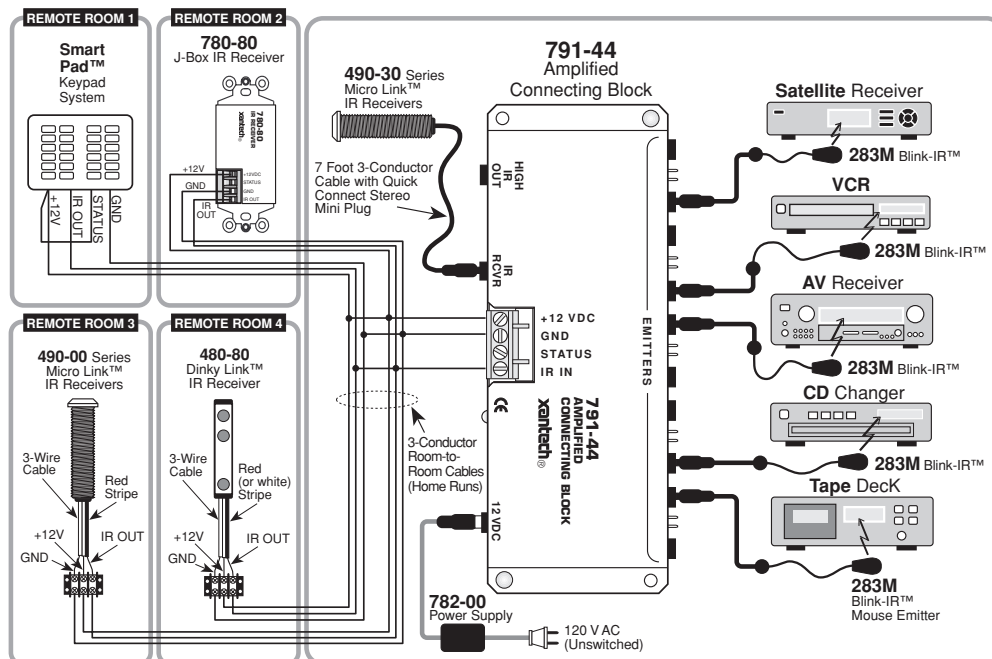


Fig. 2 A 480-80 in a typical multi-room system.

## APPLICATION PRECAUTIONS

The 480-80 is designed with special circuitry so that it has great immunity to infrared interference caused by CFL (compact fluorescent light) and other types of high frequency electronically ballasted fluorescent lights. Because of this, the following precautions must be taken into consideration when using these special IR receivers:

**1. Do not use more than one 480-80 in a given room or area!**

If two or more 480-80's, (or other Xantech CFL friendly IR receiver) receive the same IR signal simultaneously, the system will not respond.

**2. The 480-80 (or other CFL friendly IR receivers) will not operate with older Xantech products that use 679 and RC16 Programmer commands!**

This includes models 670, 671, 676, 677, 680, 686 and RT16. For installations using these products, use standard Xantech IR Receivers, such as the 291, 480, 490, and 780-10 series.

**3. The 480-80 (or other Xantech CFL friendly IR receivers) do not have much improvement in operation over the standard Xantech IR Receivers in the presence of magnetically ballasted (60 Hz) fluorescent lighting.**

You may choose to use the CFL friendly units in most applications anyway, since they will have superior rejection to other types of IR interference that may exist in the same installation.

**4. The 480-80 will not operate in 2-wire Phantom Power mode.**

## TROUBLE SHOOTING

1. The 480-80 has been designed to have high rejection of IR Interference from High Frequency Ballasted Overhead or Compact Fluorescents and Direct or reflected sunlight. However, in the presence of extremely intense interference from such sources, you may experience a reduction in range between the hand-held remote control and the 480-80. The reduction may be from over 50 feet to 15 feet or so.

Other sources of interference may be from:

- Neon or Halogen lights, Neon Art, light dimmers.
- Infrared security sensors (active types).
- RF radiation from TV sets that may be close to the 480-80 IR Receiver.

2. To improve the range under interference conditions, you need to confirm the source of the interference. Do this by temporarily turning off TV sets, etc., reducing the exposure of the 480-80 IR Receiver to direct sunlight and turning off all lights, light dimmers and Infrared security systems. Then check to see if the range improves.

When you have isolated the interfering source, it will be necessary to move either it or the 480-80 IR Receiver to improve operation.

3. If the red Talk-Back LED on the 480-80 does not blink when you are sending IR commands from a remote control, check the following:

- Make sure the power supply is plugged securely into a live 120V AC wall outlet.
- Be sure the +12V, IR OUT and GND leads are correctly connected to the respective +12VDC, IR IN (or SIGNAL) and GND terminals on the connecting block.
- Check to see that all the emitters you are using are good, by substituting known good emitters.
- Models 283 and 286 series emitters will flash when the remote signal is sent, when the system is operating correctly; Models 282 and 284 series will not. Use Xantech Model 179-99 Test IR to test for presence of signal when using the 282 and 284 series emitters.

4. If you are sure the emitters are OK, but the components do not respond, reposition the emitter(s). They may not be located directly over the component's infrared receiving "window". Consult the owner's manual of the component or the manufacturer for the exact location of the infrared "window".

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