

INSTALLATION INSTRUCTIONS

INJ94 & CPL94B INJECTOR & COUPLER

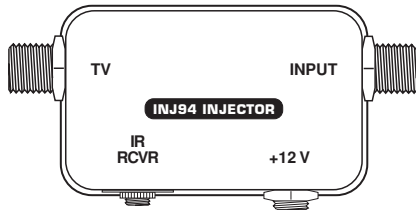


Fig.1 INJ94 Injector

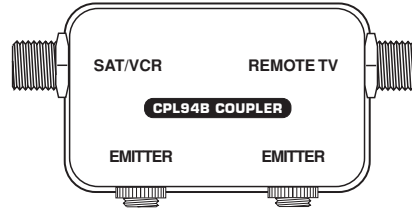


Fig.2 CPL94B Coupler

DESCRIPTION

The INJ94 injects and the CPL94B extracts IR control signals on the same coaxial cable that carries TV or other RF signals, using the patented Xtra Link™ principle.

Located in Remote Rooms, the INJ94 injects the remote control signal into the room-to-room coaxial cable (along with the TV signal) and passes it to a CPL94B or CPL10 Coupler in the Main Room or equipment area. It is designed specifically so that Xantech IR Receivers having 3.5mm stereo mini plugs may be plugged in directly to the IR RCVR jack. The 2.1mm +12 V coaxial jack also provides quick connection of the Xantech 781RG power supply.

Located in the Main Room or equipment area, the CPL94B extracts the remote control signal from the coaxial cable and passes it to the emitters that control the source equipment. Any of the Xantech single or dual emitters may be plugged directly into the 3.5mm mono mini EMITTER jacks, in any combination, for control of up to four components.

SPECIFICATIONS

INJ94 Injector:

- "F" coaxial connector jacks for **TV** and **INPUT** signals.
- 3.5mm **IR RCVR** stereo mini jack for quick connection of Xantech IR Receivers having 3.5mm stereo mini plugs.
- 2.1mm **+12 V** jack for connection of the Xantech 781RG Power Supply.
- Dimensions: 2-3/16" x 1-3/8" x 7/8" (case).

CPL94B Coupler:

- "F" coaxial connector jacks for **SAT/VCR** and **REMOTE TV** signals.
- Two 3.5mm **EMITTER** mono mini jacks, with 470 Ohm series resistors, for quick connection of two Xantech single or dual emitters.
- Dimensions: 2-3/16" x 1-3/8" x 7/8" (case).

INSTALLATION

FIG. 3 illustrates a typical installation using two INJ94's and a CPL94B in a three room system.

When configuring these types of systems, keep the following factors in mind:

1. Room-to-room coaxial cable lengths, exclusive of RF signal considerations, may be up to one mile in length, using RG-6, for successful IR signal transmission.
2. When configuring multiple rooms, be sure the RF splitters used are DC passing types, such as Xantech Models 200-00 (2-way) and 202-00 (4-way). Refer to **Figs. 3** and **4**.

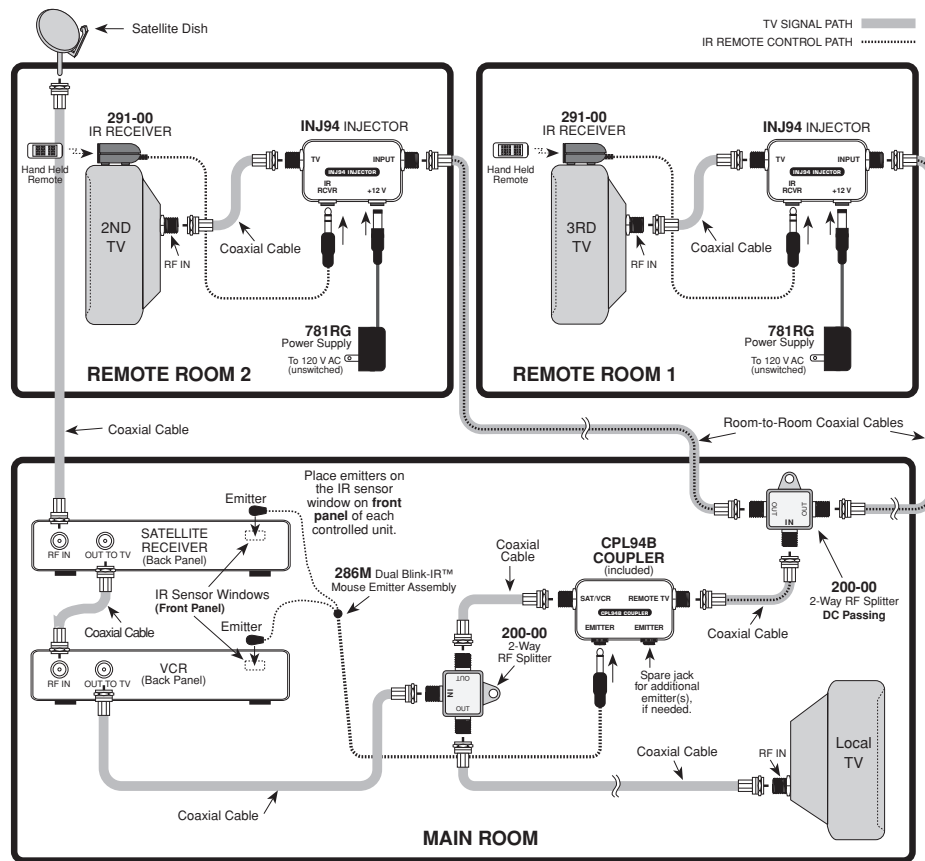


Fig. 3 A Typical 3-Room System

ADVANCED MULTIROOM SYSTEMS

Fig. 4 illustrates an advanced system using a variety of connection and control techniques typical of complex multiroom installations. It is configured as follows:

- Both INJ94 Injectors and CPL10 Couplers are used in the remote rooms with various Xantech IR Receivers.

As a rule of thumb, use the CPL10 with the CB12 Connecting Block when using Xantech 3-terminal IR receivers or keypads, such as the 480-00 Dinky Link, 730-00 Smart Pad, etc. Use the INJ94 when using Xantech IR receivers equipped with a 3.5mm quick-connect stereo mini plug, such as the 291-00 Hidden Link and the 490-30 Micro Link.

- Each IR receiver must be locally powered by a 781RG Power Supply as shown.
- IR RCVR jack connections for the INJ94. Should you wish to make your own custom connections to a mating 3.5mm stereo mini plug for this jack, follow the terminal identifications given in the table, Fig. 5.

PLUG	CIRCUIT ITEM
RING	GROUND
TIP	SIGNAL
SLEEVE	+ 12 V

Fig. 5

- Note that model 203-00 DC Blockers are used on the two coax leads going to the two TV sets in the rooms **not** having IR receivers. This is a **must** to prevent the RF inputs on the two TV sets from "shorting out" the IR control signal.
- If an RF amplifier(s) is used anywhere in the line of coaxial cable between the CPL94B Coupler and the INJ94 or CPL10 Injectors, you **must** use a Xantech BYPASS94 KIT to route the IR control signals around the amplifier(s).

Where possible, place RF amplifiers ahead of the CPL94B Coupler, as shown in Fig. 4, instead of using a bypass kit.

- Fig. 4 shows four components being controlled using two 286-00 dual emitters. This is the maximum number of components controllable with the CPL94B. If you wish to control more, use the CPL10

instead, along with a suitable connecting block, such as the 789-44 or 791-44. See the CPL10 installation instructions for details.

7. For information on how to connect and configure modulators and RF amplifiers, refer to ChannelPlus® technical information.

TROUBLE SHOOTING

1. Perhaps the most common problem is stray IR or RF interference entering IR receivers, preventing proper operation of the controlled equipment.

Examples of such interference are:

- Fluorescent, Compact Fluorescent, Neon or Halogen lights, Neon Art, or light dimmers.
- Direct or reflected sunlight.
- Infrared security sensors (active type).
- RF radiation from TV sets that may be close to IR Receivers.

It may be necessary to move either the interfering source or the IR receiver to achieve proper operation. Sometimes the Xantech Sun Filters will help.

2. If the IR receivers must operate in the vicinity of electronically ballasted Compact Fluorescent lamps or sunlight conditions, use Xantech models 291-80 or 780-80 IR receivers. These are specifically designed to reject most of this type of interference.
3. Check for shorts or opens anywhere between the IR receivers in the remote rooms and the emitters at the controlled equipment.

•Remember, you must have DC continuity all the way from the IR (IR RCVR) jacks on the Injectors, through the coax cables to the IR (emitter) jack on the coupler, without shorts to ground.

- Use a Xantech **Test-IR™** plugged into the IR (emitter) jack on the coupler to verify that the IR signal is being received from each room.
- If necessary, use a multimeter in the low Ohms range to check for continuity, shorts, opens, etc.
- Check for open emitters by substituting a known good emitter.

4. If a given component still does not work, reposition the emitter. It may not be located directly over the component's IR (infrared) receiving "window". Consult the owner's manual of the unit or the manufacturer for the exact location of the infrared "window".

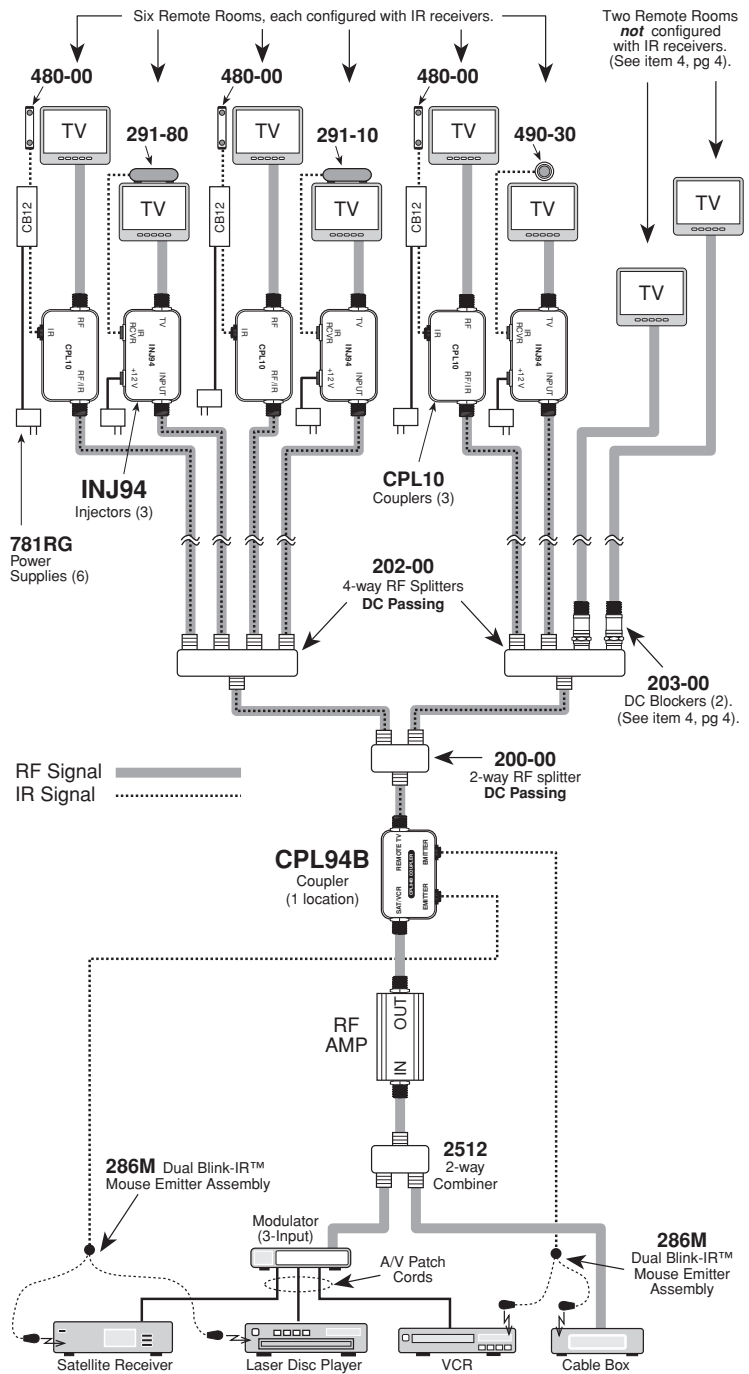


Fig. 4 Advanced Multiroom System