PROFICIENT™
Infrared Systems

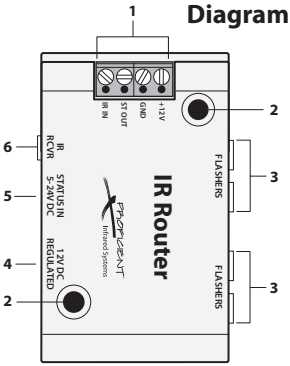
OWNER'S MANUAL

IR Router
with IR Parallel Block

The IR Router provides a convenient means of interconnecting Proficient (and industry compatible) IR products in IR repeating systems. It includes a wide bandwidth amplifier for robust operation. It has flasher drive power capability and is reverse voltage protected.

FEATURES / SPECIFICATIONS *(See Diagram 1)*

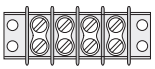
Diagram 1



1. **Screw Terminal** – Accepts wire sizes 14 to 28 AWG for connection of the following:
   - **+12V DC** – Powers connected IR Receivers, Keypads, etc.
   - **GND** – Return for Power, IR signal and Status indicators
   - **ST OUT** – Connects status voltage to Status Indicators in IR Receivers, Keypads, etc.
   - **IR IN** – Receives IR control signals from IR Receivers, Keypads, etc.
2. **Mounting Holes** – Attaches the IR Router to any flat surface using the two screws provided.
3. **FLASHERS** – Four 3.5mm jacks drive IR Flashers.
4. **12V DC REGULATED** – 2.1mm jack, center pin +, accepts 12V DC regulated power supplies to power the IR system. Calculate the current required, then use either Proficient IR Power Supply– 200mA or 1.2A. **Note:** The "no signal" current draw of the IR Router is zero.
5. **STATUS IN 5-24V DC** – 2.1mm jack, center pin +, accepts 5V through 24V DC power supplies to power system ON/OFF Status Indicators of connected IR receivers, keypads, etc.
6. **IR RCVR** – Exclusive four-circuit 3.5mm jack provides connection for Proficient direct plug-in IR Receivers. Connections are made, not only for Power, Signal and Ground, but for the Status Indicator in the IR Receivers as well.

IR Parallel Block

Diagram 2



The IR Router comes with an IR Parallel Block, which is a 4-conductor screw-down terminal strip that permits the securing of the several leads coming from the various IR receivers. A rule of thumb is to use it whenever you need to connect more than two leads to each of the Screw Terminals of the IR Router. *(See Diagrams 2 & 4)*

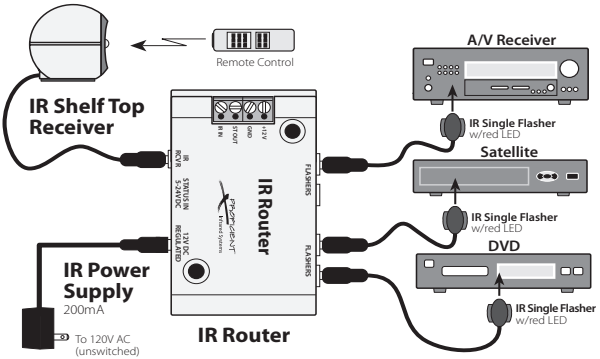
SYSTEM CONNECTIONS

The following are a few typical applications of the IR Router for IR repeater systems.

A Basic System

Diagram 3 shows a basic plug-and-play installation, such as controlling components that are behind closed cabinet doors or in a nearby closet.

Diagram 3

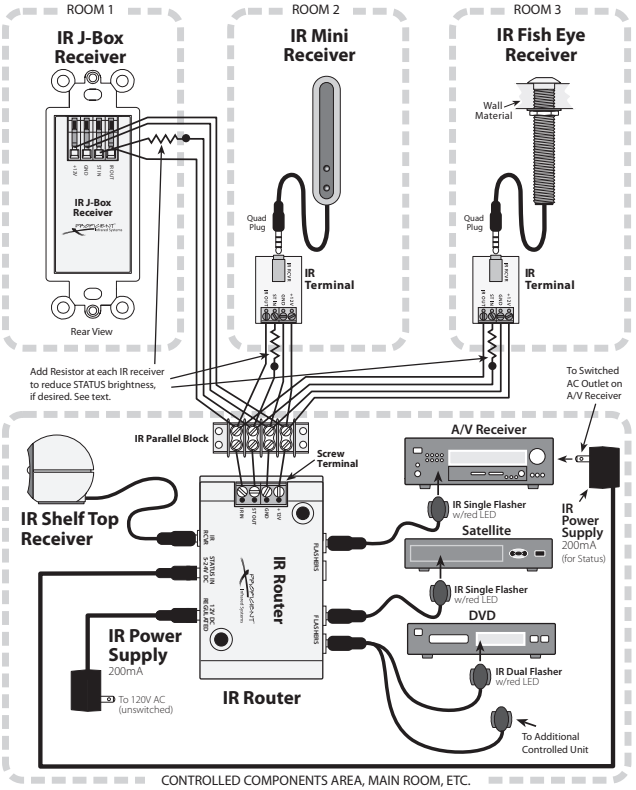


1. Plug in the IR Receiver and IR Flashers as shown. **Note:** Since the IR Router employs emitter current sharing, you may use any combination of Proficient IR Single or Dual Flashers in any combination you wish.
2. Plug in the IR Power Supply.
3. The IR Router system should now control the components.

A Multi-Room System

Diagram 4 is an example of a multi-room (not multi-zone) system. Proficient IR receivers in each room, plus a local IR receiver, control the various components in the main room or equipment area.

Diagram 4



1. Pull 4-conductor wire from each room (home runs) to the IR Router near the controlled components. **Note:** Use 24 gauge unshielded solid or stranded copper wire up to 1200' (Cat. 5e ok), 22 gauge up to 2000', 20 gauge up to 3000' and 18 gauge up to 5300'. ***Total lengths include all wire runs from each***

room added together, not just the longest single run. If using shielded wire, these lengths would be reduced by approximately 30%.

2. Connect IR receivers in each room to the 4-conductor home runs as shown, using the IR Terminals supplied.
3. Connect the home run wires to the correct Screw Terminal on the IR Router. **Note:** You may use the IR Parallel Block included with the IR Router to help connect the many paralleled home run wires to the IR Router's Screw Terminal.
4. Install and plug the various IR Flashers into the IR Router.
5. Plug the local IR receiver into the IR RCVR jack.
6. Plug in the IR Power Supply–200mA into the 12V DC Regulated jack.
7. The IR Router system should now control the components.

Power Supply Note: The Proficient IR Power Supply–200mA is adequate for this application and for most installations using only Proficient IR Receivers. However, if you use one or more keypads in the system, be sure to add up all the currents for each keypad, IR Receiver and IR Flasher to determine the total current (see specifications for the keypads, IR Receivers, etc.). If the total current exceeds 200 mA, then you will need to use Proficient IR Power Supply–1.2A. An example may serve to illustrate: Suppose you have two keypads (80 mA each), four IR Receivers (6 mA each) and four IR Flashers (15 mA each). The total current is: 2x80 + 4x6 + 4x15 = 244 mA. Therefore, the IR Power Supply–1.2A would be necessary. **CAUTION:** Never connect regulated power supplies in parallel! If you need more current, always step up to a higher current supply, as in this example.

STATUS Brightness

Diagram 4 also shows how an external resistor can be added to reduce the brightness of the Status LEDs on Proficient IR Receivers to any desired level. In this example, a Proficient IR Power Supply–200mA is used as the voltage source to indicate ON/OFF status of an A/V Receiver. Choose a resistor value that achieves the brightness you desire (about 2.2k to 12k, 1/8 W). Connect it in series with the STATUS terminal on each IR receiver desired, as shown.

Bi-Directional IR Control & Flasher Expansion

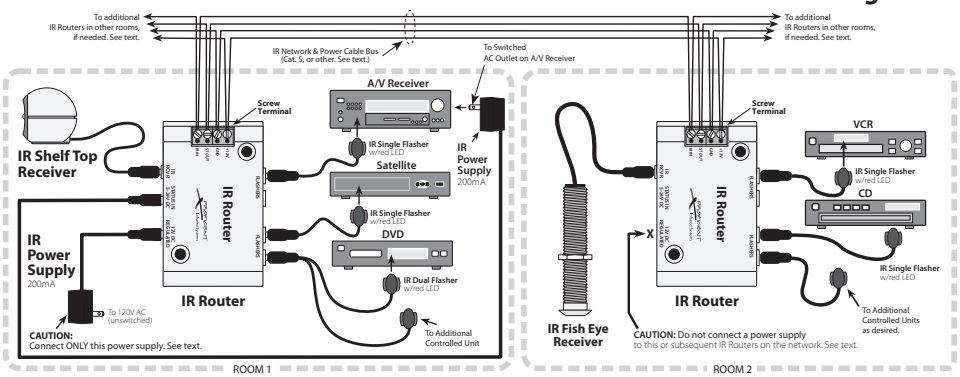
Diagram 5 is an example of a 2-room system using two IR Routers for Bi-Directional control on a common IR Network. This type of connection permits IR Receivers (or keypads if used), located in each room, to control the various components in both rooms, whether local or remote. You may also use this type of configuration to connect additional IR Routers for IR Flasher expansion so that additional components may be controlled.

1. Pull 4-conductor wire between each room and connect them to the IR Routers, as shown.
2. Plug the local IR Receivers in each room into the **IR RCVR** jacks on the IR Routers, as shown.
3. Install and plug the various IR Flashers into both IR Routers, as shown.
4. Plug an IR Power Supply into ***only one*** of the IR Routers.

All components should now be controllable from either room.

Note: Additional IR Routers may be wired into other rooms on the same IR Network, up to about 10 IR Routers maximum.

Diagram 5



LIMITED 5-YEAR WARRANTY

Proficient warrants to the original retail purchaser only that this Proficient product will be free from defects in materials and workmanship, for a period of 5-years, provided it was purchased from a Proficient Authorized Dealer. Defective products must be shipped, together with proof of purchase, prepaid insured to the Proficient Authorized Dealer from whom they were purchased, or to the Proficient factory at the address listed on this installation instruction manual. Freight collect shipments will be refused. It is preferable to ship this product in the original shipping container to lessen the chance of transit damage. In any case, the risk or loss or damage in transit is to be borne by the purchaser. If upon examination at the Factory or Proficient Authorized Dealer it is determined that the unit was defective in materials or workmanship at any time during this warranty period, Proficient or the Proficient Authorized Dealer will, at its option, repair or replace this product at no additional charge, except as set forth below. If this model is no longer available and can not be repaired effectively, Proficient, at its sole option may replace the unit with a current model of equal or greater value. In some cases where a new model is substituted, a modification to the mounting surface may be required. If mounting surface modification is required, Proficient assumes no responsibility or liability for such modification. All replaced parts and product become the property of Proficient Products replaced or repaired under this warranty will be returned to the original retail purchaser, within a reasonable time, freight prepaid. This warranty does not include service or parts to repair damage caused by accident, disaster, misuse, abuse, negligence, inadequate packing or shipping procedures, commercial use, voltage inputs in excess of the rated maximum of the unit, or service, repair or modification of the product which has not been authorized or approved by Proficient. This warranty also excludes normal cosmetic deterioration caused by environmental conditions. This warranty will be void if the Serial number on the product has been removed, tampered with or defaced. This warranty is in lieu of all other expressed warranties. If the product is defective in materials or workmanship as warranted above, the purchaser's sole remedy shall be repair or replacement as provided above. In no event will Proficient be liable for any incidental or consequential damages arising out of the use or inability to use the product, even if Proficient or a Proficient Authorized Dealer has been advised of the possibility of such damages, or for any claim by any other party. Some states do not allow the exclusion or limitation of consequential damages, so the above limitation and exclusion may not apply. All implied warranties on the product are limited to the duration of this expressed warranty. Some states do not allow limitation on the length of an implied Warranty. If the original retail purchaser resides in such a state, this limitation does not apply.

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