

Specifications

Model: 92-180A

IR Distribution Block:

- **Power:** 1 x 2.1mm 12Vdc power jack, 1 x USB Type 'B' Jack for (5Vdc Power)
- **Power L.E.D.'s:** 12Vdc (Red L.E.D.), 5Vdc (Red L.E.D.)
- **Signal L.E.D.:** (Green L.E.D.)
- **IR Receiver Jacks (3 Inputs):** 1 x 3 conductor 3.5mm TRS jacks
- **IR Emitter Ports:** 6 x 2 conductor mono 3.5mm IR emitter jacks
- **Dimensions:** L-4.29" x W-2.18" x H-1.02"
- **Color:** Black

IR Receiver:

- Each system needs a minimum of one IR Receiver (maximum of 3). You can use an extra IR Receiver to operate your A/V equipment from another room. Additional IR Receivers, Part No: 92-181.
- **Frequency Range:** 25-60KHz
  - **IR Reception range:** ±10 meters
  - **IR Signal Indication:** Green L.E.D.
  - **IR Reception Angle:** 90° (+45°/-45° from center)
  - **IR Receiver Connection:** 3.5mm TRS Stereo Male
  - **IR Receiver Cable Length:** 4.5 ft., extendable up to 200 ft. max using Cat5e, Cat6 cabling using the 3.5mm to terminal male and female adapters (Included).
  - **Dimensions:** L-.985" x W-.55" x H-.355"

IR Emitters:

- **Connection:** 3.5mm plug (mono)
- **Non Flashing IR LEDs:** 3 x Dual IR emitters
- **Cable length:** 6 ft.
- **Peak forward current:** 100mA
- **Forward voltage max:** 1.5V
- **Peak wavelength:** 940nm
- **Emitter dimensions:** L-.50" x W-.32" x H-.21"

AC Power Adapter

- **Input:** AC100-240V
- **Output:** 12Vdc/250 mA
- **DC Plug:** 2.1mm I.D. x 5.5mm O.D.
- **Cable length:** 6 ft.

Optional Accessories:

- **92-181 IR Receiver Module**
- **92-154 Dual IR Emitters (Non Flashing)**
- **92-151 Single IR Emitter (Flashing)**

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92-180A  
IR Repeater System

Introduction:

The **92-180A** IR repeater system extends IR (Infrared) remote control signals from one location to another. The IR receiver is typically located on a TV display and receives IR signals from remote controls up to 33 ft. and retransmits them to the 6 Port IR distribution block. The 6 x standard IR emitter ports re-transmits the IR signals to multiple pieces of individual equipment using 3 x dual non-flashing IR emitters. The IR distribution block requires a 12Vdc power supply (included) or can work through the optional USB type 'B' port. See Diagram 1A on page 3 for typical configuration and hookup. Two Additional IR receiver ports are available for adding two additional IR receivers for multi-room control, Calrad part number 92-181.



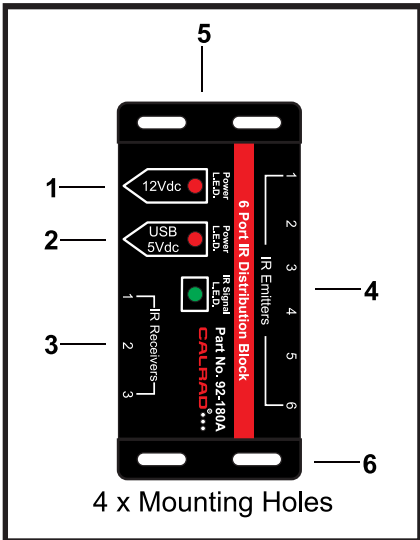
Contents of the package:

IR Distribution Block:

The IR Distribution Block is the main component where the 12Vdc power supply, IR Receiver-Receivers and IR Emitters connect to.

Connectivity Layout:

1. **POWER + 12V DC:** Input: AC 100-240V; Output: 12V DC/500 ma; DC plug 2.1 x 5.5 mm
2. **POWER + 5V DC:** USB Type 'B' Jack
3. **IR RECEIVER INPUTS:** Supports three IR Receivers with 3 conductor 3.5mm input jacks. See Diagram (B).
4. **IR EMITTER PORTS 1-6:** 3.5mm mono jack outputs for connecting single or dual IR emitters.
5. **L.E.D. INDICATORS:** 1 x 12Vdc (Red), 1 x 5Vdc (Red), 1 x IR Signal (Green)
6. **MOUNTING TABS x 4:** Mounting Hardware not Included.



Receiver 3.5mm Wiring Connectivity



Tip = IR Signal  
Ring = +5Vdc  
Sleeve = Ground

IR Emitter 3.5mm Wiring Connectivity



Tip = IR Signal  
Sleeve = Ground

Installation

Model: 92-180A

1. (**Power Options**) **A.)** Connect the 12vdc power supply to the 'POWER +12Vdc' jack on the IR distribution block and plug the adapter into a socket (100-240V 50/60Hz) outlet or option **B.)** Connect power using a USB type 'A' to Type 'B' USB cable (Not Included) to the 5Vdc USB power port on the distribution block.
2. Now connect the IR Receiver directly to the IR distribution block, if you need to extend the IR receiver, use the 92-185 solderless male and female terminal block adapters, double check the connectivity and wiring when connecting them in your installation for proper termination.
  - Place the supplied IR receiver in such a way that it is visible for your infrared remote control and if possible not in the vicinity of potential sources of disturbance like direct sun light, energy saving lamps etc, L.E.D. lighting. The green L.E.D. indicator on the IR receiver lights up or flashes when it receives an infrared signal from a remote control. Use the L.E.D. indicator to place the IR receiver in the place with the least interference (L.E.D. indicator is not activated or only faintly lights up).
  - Because of the supplied self-adhesive strip installation is possible almost everywhere, experiment for the correct place before you attach the IR receiver permanently.
  - The adhesive strip can cause discoloration on certain surfaces or leave glue remnants by removal, this can easily be removed by using a small amount of WD-40.
3. Mount the IR Distribution Block in an accessible place behind you're A/V equipment, in the vicinity of a AC electrical outlet (100-240V 50/60Hz). Make sure you take the cable length of the IR Extender Emitter Cables into account and try to ensure that the connections remain as accessible as possible and that they can reach all the equipment. Plug the required IR emitter cables with IR Emitters into the IR distribution block via the 3.5mm male plugs. Route them to the appropriate pieces of equipment to be controlled.
4. Once the IR emitter locations are determined, peel the self-adhesive film off of the back of each IR Emitter. Now you can easily affix them over the IR receiving windows of each piece of equipment to be controlled. The IR receiving windows can easily be located by shining a light or flash light on the smoked plastic face of each piece of equipment, looking for a small round or rectangle opening where the IR receiver is located.

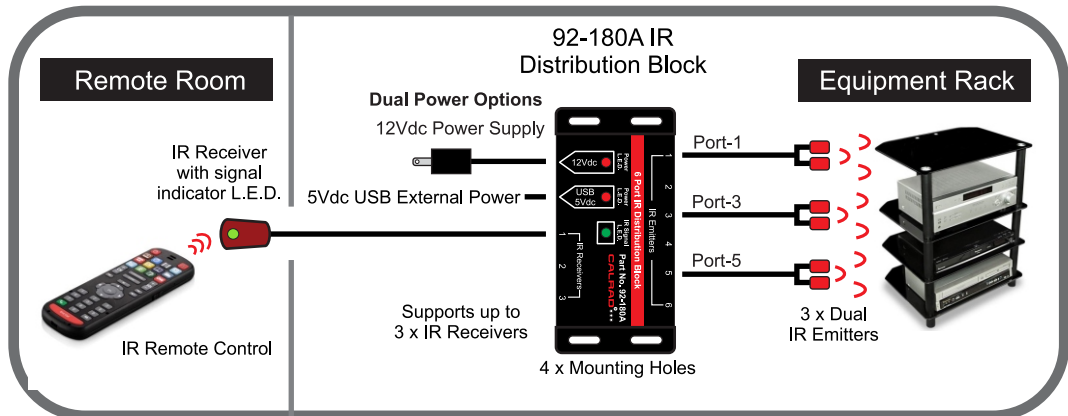
Troubleshooting:

Bad (or no) infrared signals from the IR Receiver, emitters, blaster

- IR Receivers have reception sensitivity of around 10 meters with an aperture angle of 90 degrees. The IR Range is also dependent on the type of remote control used. The IR L.E.D. reception indicator in the IR Receiver will light up blue when it receives an IR signal.
- Check whether the power adapter is connected to the IR distribution block.
- Ensure that the IR Receiver is wired correctly and if you extended the cable that all connections are wired correctly.
- Try to avoid as many sources of IR signal disruption as possible, eg. direct sunlight, fluorescent lighting, energy-saving L.E.D. lighting. These may have a negative impact upon the effectiveness, reliability and range of the of the IR Receiver. Move the IR Receiver if necessary.
- Some IR windows from set-top and satellite boxes are very sensitive and can be easily disrupted. These devices may receive too little or too much infrared light from the emitter and will either work intermittently or not work at all, try adjusting the location of where the IR emitter is placed. Relocate the IR emitter or IR Blaster so that less infrared light is received via the IR window.
- Verify that the Green Power L.E.D. on the IR distribution block is on.

Technical Assistance: Contact us at (323) 465-2131. M-F, 8:00am to 4:00pm

Typical Application Diagram 1A. Model: 92-180A



The IR receiver located in a remote room provides a user the ability to control audio/video equipment from a location where the remote control no longer has the ability to send IR commands by direct line-of-sight. Using Cat5e/6 cable allows the Receiver to be located up to 200 ft. away from the distribution block.

It is recommended you extend the +12V DC using one pair, the IR and GND signals using a second pair of the Cat5e, Cat6 cable. Please see the wiring Diagram below for details.

Wiring Diagram:

Pin:	Pin:	Color:	Signals:
1	1	Orange-White	Tip
2	2	Orange	Tip
3	3	Green-White	Unused
4	4	Blue	Sleeve
5	5	Blue-White	Ring
6	6	Green	Unused
7	7	Brown-White	IUnused
8	8	Brown	Unused



92-185 Solderless male and female 3.5mm to terminal block adapters (Included)