

keene electronics IRBKIT

Overview

The Keene IR Distribution Amplifier enables IR control to be used on equipment that is located in positions where your remote wouldn't normally work. For example, equipment placed inside cabinets with closing doors or located on shelves behind you or around a corner. The unit is very flexible, allowing for a number of configurations that will solve almost all IR control problems.



Connection sockets and basic operation

IR IN - is the Infrared input where the unit receives the IR signal to be distributed. This is normally connected to either a standard or wideband IR receiver. It can also be connected to the IR output from Keene CAT5 AV systems and wireless IR systems such as the Powermid (see diagram overleaf).

(IMPORTANT please do not connect an output Wand to the IR input! There are pictures of each item overleaf if you're unsure).

Std OUT - These are sockets for connecting the wands that output the IR signal. There is a choice of wands for these sockets, either **Blinking, Low Power, Dual Blinking** or **Side Firing**. A **High Power** wand can also be used in this socket in low power mode if desired.

High OUT - This socket is for connecting to a **High Power** wand only.

The **Activity** LED flashes to confirm receipt of an IR signal

Hints and tips for using the IR Distribution amplifier

Wands: The high power wands will work in either the high power or the standard power sockets, but the Low Power, Blinking and Side Firing emitters will operate in the std sockets ONLY.

Wiring: If wiring up your own extension for the emitters always make all three connections so it will work with either the std or the high power emitters. The standard socket is wired anode to the tip of the 3.5mm plug and cathode to the barrel while the high power socket is wired anode to the ring on the 3.5mm plug and cathode to the barrel. For the receiver wiring the tip is 5v data (TTL), the ring is 5v supply, and the barrel is ground.

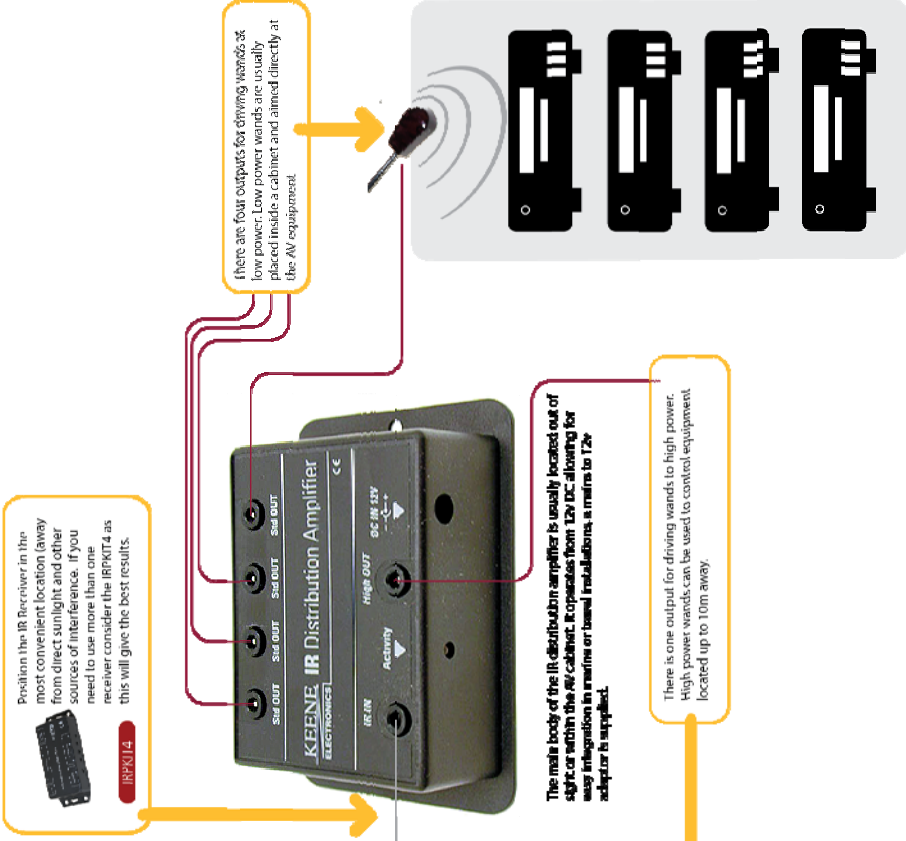
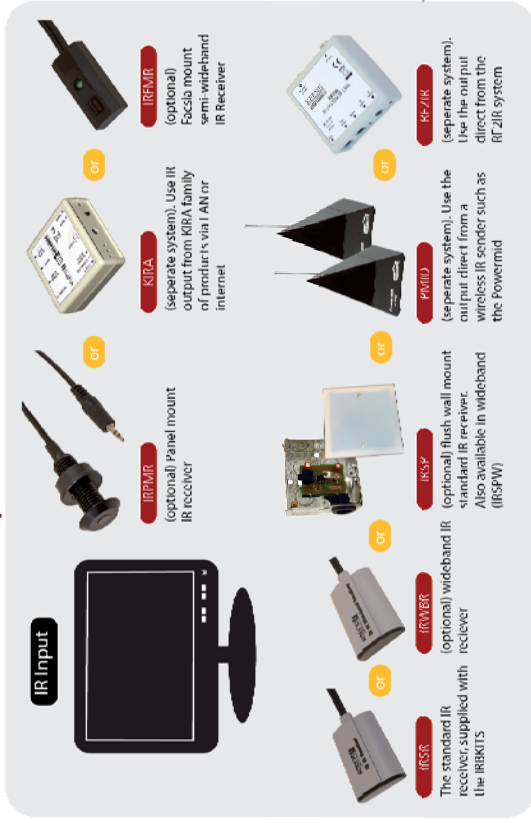
Multiples: It is permissible to use more than one IR receiver into the distribution amp, but only one can be receiving a signal at anyone time, otherwise the signals will mix and confuse the unit that you are trying to control. i.e. you can't put a wide band and a standard receiver next to each other and feed both to the distribution amp as you will get a garbled result.

Sources: It is also possible to confuse the IR receiver on the equipment you want to control by having 2 sources of IR. for example having a standard emitter on the front of a DVD Player and a high power emitter pointed at the same item would result in two conflicting signals and could result in mis-operation.

Positioning emitters: All the emitter diodes are directional (rather like a narrow torch beam) and this should be borne in mind when positioning the emitters. The supplied Blinking Emitter is designed to be mounted directly onto the device's fascia by means of the small sticky pad. A small red LED 'blinks' each time an IR signal is emitted as confirmation that the command has been sent. It can also be mounted on the shelf provided that it is positioned in close range (approx 30cm) to the equipments IR receiver window. The high power emitters can be positioned up to 10 meters away from the device to be controlled and must be pointed directly at it.

Positioning receivers: Take care when positioning the receiver. The wideband receiver can be affected by IR interference from TV scan coils, LCD panels, fluorescent lights and direct sunlight. Any interference will be noticeable because the IR distribution amp light will be flickering. Because of the effects of filtering a wider bandwidth results in a poorer sensitivity. This means that the Standard receiver has limited bandwidth but a very good range (distance) and conversely the wide band receiver has a good bandwidth but poorer range. **In general the standard receiver will give the best performance and the wide band should only be used if you have equipment that doesn't operate in the 40Khz band.**

Keene IRBKIT IR Distribution Amplifier Schematic



Useful product codes

Code	Description
IRBKIT	Basic IR Distribution Amp kit containing 2 universal wands, Distribution amp and power supply
IRBKITS	Basic IR Distribution Amp kit containing IR Standard Receiver, 2 universal wands, Distribution amp and power supply
IRBKITSH	Basic IR Distribution Amp kit containing IR Standard Receiver, 1 universal & 1 High Power wand, Distribution amp and power supply
IRBKITPW	Basic IR Distribution Amp kit containing Panel Mount Receiver (white), 2 universal wands, Distribution amp and power supply
IRBKITPB	Basic IR Distribution Amp kit containing Panel Mount Receiver (black), 2 universal wands, Distribution amp and power supply
IRCM	Advanced IP network capable IR Distribution Amplifier with multiple inputs and outputs
IRBW1	The IR Blinking Wand gives visual confirmation as IR is emitted. Can be fascia or close range shelf mounted.
IRLPW	Low power wand
IRHPW	High power wand
IRSFW	Side firing wand
IRBW2	A single jack plug to two IRBW1 emitter wands
IRSR	Standard receiver for most domestic equipment (40KHz)
IRWBR	Wideband IR receiver for equipment up to 100KHz
IRSP	Flush mounted single gang wall plate containing a standard IR receiver
IRSPW	Flush mounted single gang wall plate containing a wideband IR receiver
IRFMR	Small Fascia Mount Receiver
IRPMR	Panel mount IR Receiver (black)
IRPMRW	Panel mount IR Receiver (white)
IRPMRB	Panel mount IR Receiver (brass)
IRPMRC	Panel mount IR Receiver (chrome)
KLDE6M	Couples the Powermid IR output directly to the IR distribution amp input (3.5mm jack to 3.5mm jack)
KLDE10M	Couples the 2.5mm IR output from other manufacturers equipment directly to the IR distribution amp input (2.5mm jack to 3.5mm jack)
KLD40	3 metre extension lead for input or output
KLD405	5 metre extension lead for input or output
KLD4010	10 metre extension lead for input or output
KA175	A short (25cm) line adaptor with an RJ45 line socket to a 3.5mm stereo jack plug. Allows use of standard CAT5 network cables to extend the distance between the IR receivers and the Keene IR distribution systems. Works up to 100m.
KA175XLE	A short (25cm) line adaptor with an RJ45 line socket to a 3.5mm stereo jack plug. Allows use of standard CAT5 network cables to extend the distance between the IR receivers and the Keene IR distribution systems. Works up to 305m.