

# keene electronics IRBKIT MINI v2

## Overview

The Keene IRBKIT MINI is a compact IR Distribution Amplifier. It allows you to use your remote control on equipment 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. Because of the compact size and light weight the IRBKIT mini can also be attached to the rear of a wall mounted display. The unit is very flexible, allowing for a number of configurations that will solve most IR control problems.



## Key Features:

- USB Power Connection.
- Compact Size
- Twin IR Wand Emitter Outputs
- IR Receiver Input

## USB Power connection

The power to the USB IR distribution amplifier can be obtained from anything capable of supplying 5V USB power @ 0.5A. This can be a PC or Set Top Box or dedicated 5V USB supply, as typically supplied with some mobile phones etc. The connector is a 1.3mm DC socket, centre positive.

## Compact size

Not much bigger than a box of matches (60mm x 35mm x 20mm) this small, smart, and discreet design means it can be easily hidden behind equipment. The fire retardant ABS box is extremely robust and has flanges that allow the box to be fitted to whatever surface you have available. Attaching it firmly to a surface means that leads stay put, resulting in a tidy installation.

## Dual outputs

There are two outputs on this distribution amplifier. Both outputs are capable of driving any of the Keene IR emitters. The total output is electronically limited and short circuit proofed so as not to overload the USB connection. The output is ESD (electrostatic discharge) protected.

## Receiver input

The IRBKIT MINI has one standard IR input for use with any Keene IR Receiver.

## Connections



**Connections in detail**

**IR Input:** Any Keene branded IR receiver may be connected to this input.

Technical information - 3.5mm stereo jack socket  
 Tip = normally low positive data with carrier  
 Ring = 5v supply current limited @ 30mA - for the IR receiver  
 Body / Barrel = 0V common Ground

**IR Outputs:** The Two output sockets are identical and emitter wands may be connected to either (or both) sockets as desired. The sockets are compatible with both single, dual and high power emitter wands.

Technical information - 3.5mm stereo jack sockets  
 The body / barrel of the socket is the ground or negative connection. Both the tip and the ring are connected to the output via small current limiting resistors. A blaster – IR emitter diode – may be connected to either the tip or to the ring connection or to both for a higher output. It is highly recommended that a stereo plug be used for the output connection but a mono plug may be used but will waste a lot of the output as the ring connection gets shorted to ground. The total output across all four output connections is limited to approx 400mA peak. The output drive of 5V is sufficient to drive 2 diodes in series as is typical of the twin blinking emitters. IR emitter diodes should never be operated in parallel without a series current limiting / balancing resistor.

**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 universal wands and close range blinking wands are designed to be affixed directly to the equipment fascia. 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. The Universal wands can also shelf mounted up to about 2 metres away BUT the diode must point at whatever you want to control.

**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. 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.

**Splitters:** The IRBKITM will NOT function correctly if signal splitters are used on either input or output. If more inputs or output are needed then use in conjunction with (or replace with) another Keene IR Distribution amplifier such as the IRBKIT or IRCM.

**Useful product codes**

Code	Description
IRBW1	Standard IR emitter wand
IRLPW	Low power IR emitter wand
IRHPW	High power IR emitter wand
IRSFW	Side firing IR emitter wand
IRBW2	Dual Blinking wands
IRSR	Standard receiver for most domestic equipment (40KHz)
IRWBR	Wideband IR receiver for equipment up to 100KHz
IRFMR	Fascia mount semi-wideband IR receiver for equipment up between 20KHz and 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
IRPMR	Panel mount IR Receiver (black)
IRPMRW	Panel mount IR Receiver (white)
KLDE6M	3.5mm jack to 3.5mm jack cable to couple IR Blaster outputs to the direct input on the IRBKITM
KLDE10M	2.5mm jack to 3.5mm jack cable to couple IR Blaster outputs to the direct input on the IRBKITM
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 pair of short (25cm) line adaptors 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.