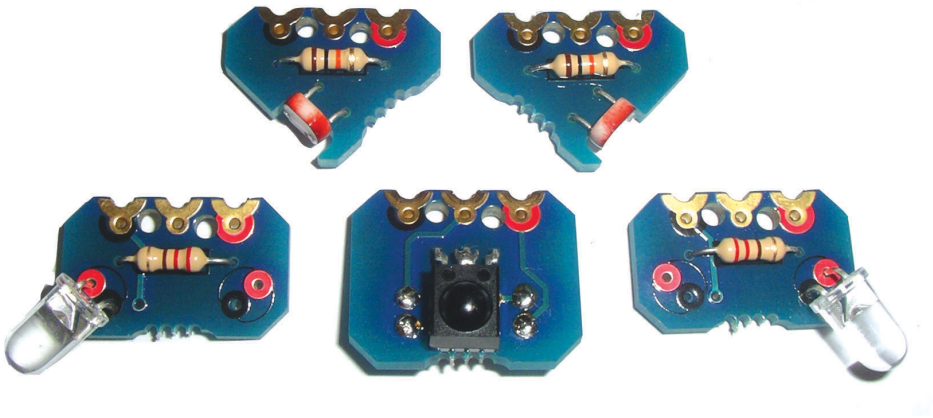
BOT121 Microbot Sensors Pack

BOT121 Microbot Sensors Pack (self assembly kit)
BOT121A Microbot Sensor Pack (pre-assembled, no soldering)



Qty	Description	Replacement order code
1	*PCB panel containing:*	
	LDR Light Sensor (Left)	BOT121
	LDR Light Sensor (Right)	BOT121
	Infra-red Rceeiver (IR RX)	BOT121
	Infra-red Tranmsitter (IR TX) x 2	BOT121
2	Microbric	BOT125
6	bolts	BOT125
6	nuts	BOT125
1	Infra-red Receiver	LED020
2	LDR light sensors	SEN002
2	Infra-red LEDs	LED021
2	10k resistors (brown black orange gold)	RES-10K
2	220 resistors (red red brown gold)	RES-220
2	33 resistors (orange orange black gold)	RES-33

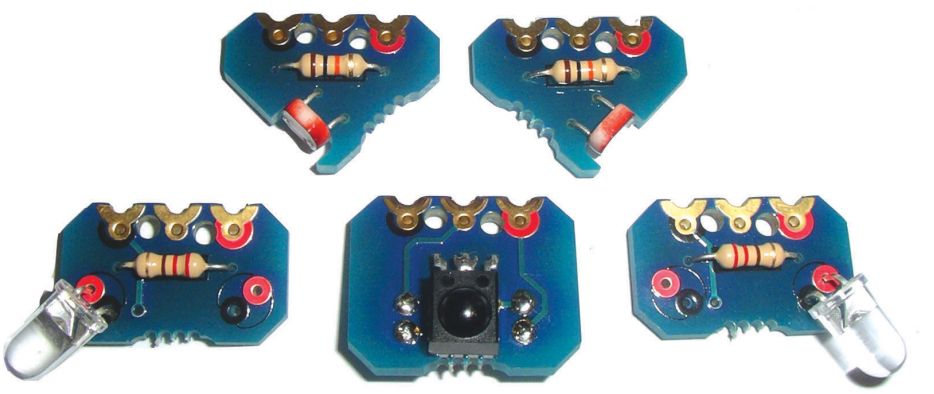
Optional (not included, purchase separately)

1	Infra-red TV style remote control	TVR010A

The circuit boards of the BOT121 Microbot Sensor Pack require a small number of components to be fitted and a small amount of simple soldering. All components required are supplied.

If you do not know how to solder a pre-sassembled kit, part BOT121A, is also available.

Assembly Instructions:
Carefully remove all PCBs from the panels by applying a gentle rocking motion to the PCBs until they snap out of the panel. Note that in each case the bottom of the PCB is marked with the gold text label (e.g. IR RX).



Infra-red Receiver (IR RX)

Important - please note the resistors and infra-red receiver are physically mounted on opposite sides of the module.

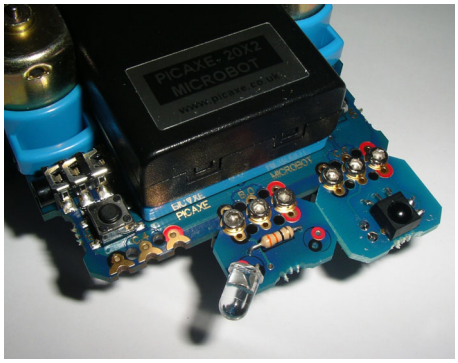
Place the two 220 resistors (red red brown gold) over the black text on the bottom of the board so that the legs come out the solder pads on the top of the board. Resistors can be placed either way around. Solder in position and cut the legs short.
Bend the infra-red receiver legs at 90 degrees so that it can lie flat on the top of the PCB between the resistor solder joints. Solder the 3 receiver legs on the other side of the PCB and cut the legs short.

LDR Left and LDR Right
Place the 10k resistor (brown black orange gold) over the black text on the top of the board so that the legs come out the solder pads on the bottom of the board. Resistors can be placed either way around. Solder in position and cut the legs short.
Carefully bend the legs of the LDRs so that it lies in the slot on the PCB with the legs lying over the rectangular gold pads and then through the holes. LDRs can be placed either way around. Solder in position and cut the legs short.

Infra-red Transmitter (IR TX)

Note you may only require one IR TX (although two are provided). In this case you may decide to use a coloured LED (not supplied) instead of the infra-red LED on the second board to make a different 'home made' output module.
In this case always use the IR LED in the position nearest the black terminal on the bric connector. This is so that it fits correctly on rear connectors C.4 or B.0

Place the 33 resistor (orange orange black gold) over the black text on the top of the board so that the legs come out the solder pads on the bottom of the board. Resistors can be placed either way around. Solder in position and cut the legs short.
Carefully bend the legs of the LED so that it points out at 45 degrees to the PCB. The IR LED on the first board should always be in the position nearest the black terminal on the bric connector point. If using two IR LEDs make sure they point in opposite directions on the two boards. The long leg (anode) of the LED must be placed in the red hole. Solder in position and cut the legs short.



The full assembly instructions and program examples are found in the Microbot manual which is a free download from:

www.rev-ed.co.uk/docs/bot120.pdf