

Electronic project kits

Order code	Manufacturer code	Description
13-0500	n/a	KIT - INFRA RED DETECTOR

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The enclosed information is believed to be correct, Information may change 'without notice' due to product improvement. Users should ensure that the product is suitable for their use. E. & O. E.	Revision A 04/07/2003

GB**Nr. B 195** 040 797-3**GB**

Infrared Detector

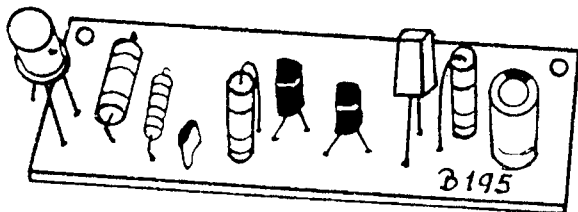
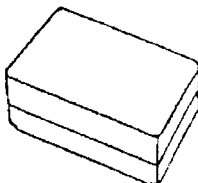
With the aid of this circuitry it is made possible to carry out functional tests of infrared remote controls used in TV-sets and video devices, etc. Whenever there is radiation of infrared beams on the Special-Sensor, the LED will light up and indicate that the infrared remote control is operated. Operating voltage: 9V. As accessories is available our kit "B 197 Relay Card". This could be connected with the Infrared Detector and it is then possible to switch through the relay contact loads up to 6 A.

Tin-plated board!

deutsch / english / español / français / greek /
nederlands / portugues / suomalainen

Price group: 2

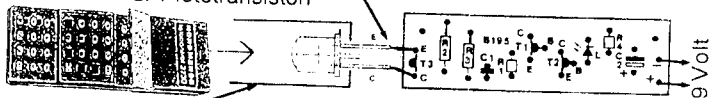
**Fitting case:
Kemo G027**



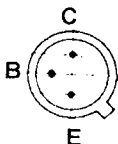
16

Kemo Germany # 08-194

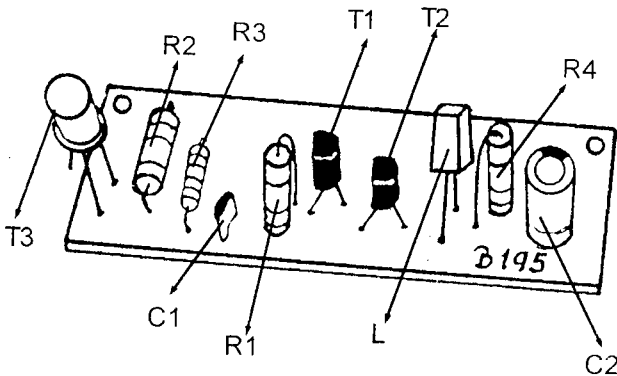
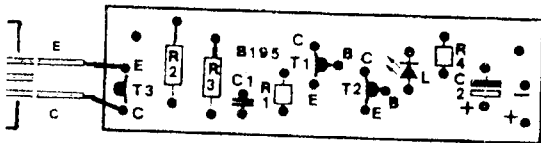
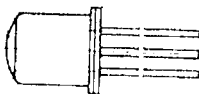
D / Fototransistor
 E / fototransistor
 F / transistor-photo
 GB / phototransistor
 NL / phototransistor
 P / fototransistor
 SF / fototransistori



D / Papphülse
 E / tubito de carton
 F / enveloppe carton
 GB / cardboard tube
 NL / papieren huis
 P / tubo de cartão
 SF / pahvihylsy



D / Linse
 E / lentle
 F / lentille
 GB / lens
 NL / lens
 P / lente



GB / Parts list:

T1, T2 : 2 transistors BC 308 (BC 307)
T3 : 1 phototransistor BPW 14
L : 1 light emitting diode
C1 : 1 capacitor 100pF
C2 : 1 elca 47 μ F 10V
R1,R2,R4 : 3 resistances 270 Ohm
R3 : 1 resistance 1M (brown-black-green...)
1 board, approx. 55 x 15 mm

NL / Stuklijst:

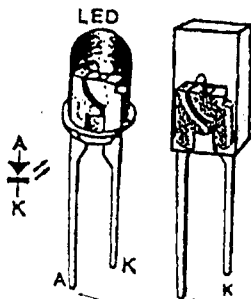
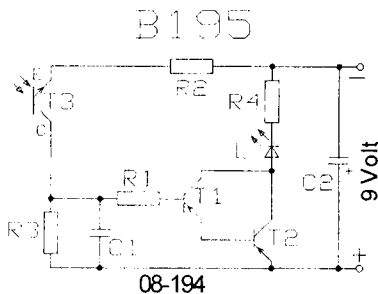
T1,T2 : 2 transistors BC 308 (BC 307)
T3 : 1 fototransistor BPW 14
L : 1 LED
C1 : 1 condensator 100 pF
C2 : 1 elco 47 μ F 10 V
R1,R2,R4 : 3 weerstanden 270 Ohm
R3 : 1 weerstand 1 M (bruin-zwart-groen...)
1 printplaat 55 x 15 mm

P / Lista de componentes:

T1,T2 : 2 Transistores BC 308 (BC 307)
T3 : 1 Fototransistor BPW 14
L : 1 Díodo emissor de luz
C1 : 1 Condensador 100pF
C2 : 1 Condensador de electrolítico 47 μ F 10V
R1,R2,R4 : 3 Resistência de 270 ohms
R3 : 1 Resistência 1M (castanho-preto-verde...)
1 Placa de circuito impresso, aprox. 55 x 15mm

SF / Osaluettelo:

- T1,T2 : 2 transistoria BC 308 (BC 307)
 T3 : 1 fototransistoria BPW 14
 L : 1 LED
 C1 : 1 kondensaattori 100pF
 C2 : 1 elektrolyyttikondensaattori 47 μ F 10V
 R1,R2,R4 : 3 vastusta 270 Ohm
 R3 : 1 vastus 1 M (rusk-musta-vihr...)
 1 piirilevy, n. 55 x 15 mm

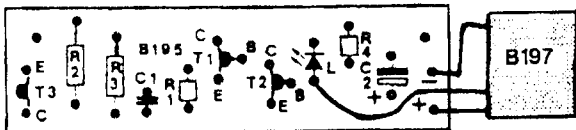


- D / längerer Draht
 E / alambre más largo
 F / fil plus long
 GB / longer wire
 GR / longer wire
 NL / langere draad
 P / perno maior
 SF / pidempi johto

F / Veiller au bon raccordement de la led et du transistor-photo. Tous deux ont des fils de raccordement de longueurs différentes (voir schéma page 11) pour repérage. Comme la lumière normale du jour et la lumière artificielle ont un haut pourcentage de rayons infra-rouges, le détecteur infra-rouges réagit donc aussi à la lumière normale. Il faudra donc le monter dans un petit cylindre en carton noir (env. 50 mm de long, Ø 4 mm), qui possède seulement une ouverture à l'avant, mais fermé à l'arrière pour empêcher l'entrée de la lumière (voir schéma page 8). Si la commande à infra-rouges émet de la lumière dans le regard lumière du transistor-photo, la led brille. Si la led brille en continu, même s'il n'y a pas de commande infra-rouges entrain de fonctionner, c'est qu'il y a soit une erreur dans le montage, soit le transistor-photo n'est pas suffisamment protégé contre la lumière parasite. Le regard lumière doit être monté derelle sorte que la lumière du jour ou artificielle ne puisse pas briller directement sur le transistor-photo. La commande infra-rouges doit se trouver à une distance d'env. 3..10 cm du transistor-photo.

GB / Please take special care when carrying out the connection of the LED and of the phototransistor. Both have been designed for better identification with differently long connecting wires (see figure page 11). Considering that the ordinary daylight and the artificial light have a considerable proportion of infrared-light, the infrared detector will also react on ordinary daylight. Therefore, it is necessary to place it into a black cardboard tube (approx. 50 mm, 4 mm), which should solely have one aperture in the front and should be protected against any effect of light from behind (see figure page 8). If the infrared remote control radiates now into the light tube of the phototransistor, the LED will light up. If the LED lights up constantly, even if the remote control isn't operated, then there may be any mistake within the circuitry or the phototransistor hasn't been protected sufficiently against external light. The light tube should never be mounted providing any direct radiation of daylight or artificial light on the phototransistor. The infrared remote control should be held in a distance of approx. 3..10 cm in front of the phototransistor.

SF / Ota huomioon fototransistorin ja LEDin napaisuus. Tunnistamisen helpottamiseksi on aina toinen liitântälanka toista lyhyempi (katso kuvat sivu 11). Koska normaalissa auringonvalossa on myös paljon infrapunavaloa, reagoi infrapunailmaisin myös tavalliseen valoon. Tämän takia on välttämätöntä sijoittaa fototransistori mustaan, (n. 50 mm pitkään Ø 4 mm) pahviputkeen, joka on avoin vain edestä ja suljettu valon sisäänpääsylvä myös takaapäin (katso kuvaa sivu 8). Kun nyt infrapunakaukosäädin "valaisee" fototransistorin valokuiluun, syttyy LED. Jos LED palaa jatkuvasti, myös silloin, kun infrapuna-kauko-ohjaimia ei ole käytössä, on joko satunut virhe kytkennässä tai sitten fototransistori ei ole tarpeeksi hyvin suojattu muulta valolta. Valokuilua ei tule asentaa niin, että auringonvalo tai keinovalo pääsee valaisemaan suoraan fototransistoriin. Infrapunakaukosäädintä tulee pitää 3...10 cm etäisyydellä fototransistorista.



D / So wird die "Relaiskarte B 197" mit dem Infrarot-Detektor verbunden.

E / Así es como se conectar la "tarjeta de relé B 197" con el detector infrarrojo.

F / Connexion entre "carte-relais B 197" et détecteur à infra-rouges.

GB / That's how the "Relay Card B 197" has to be connected with the Infrared Detector.

NL / Zo wordt de "relaiskaart B 197" met de infrarooddetektor verbonden.

P / Ligue a "carta de relé B197" como está ilustrado na figura acima.

SF / Näin liität "relekortin B197" infrapunailmaisimeen.