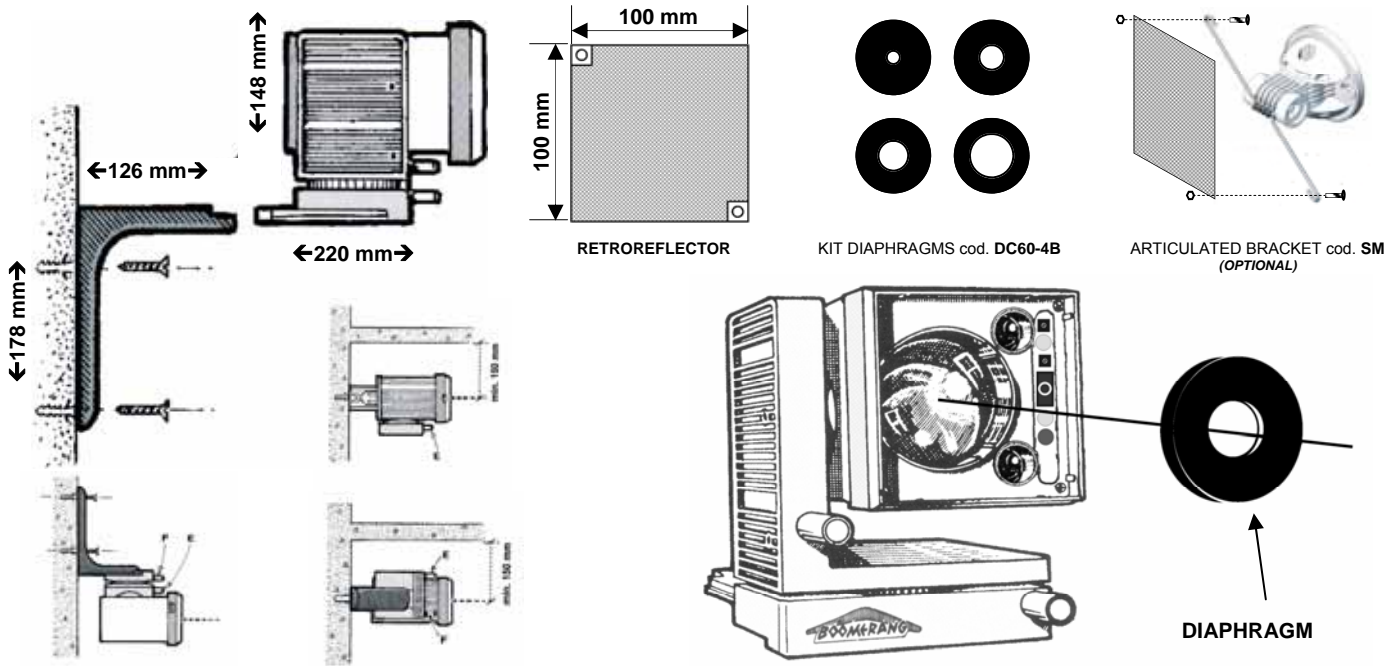
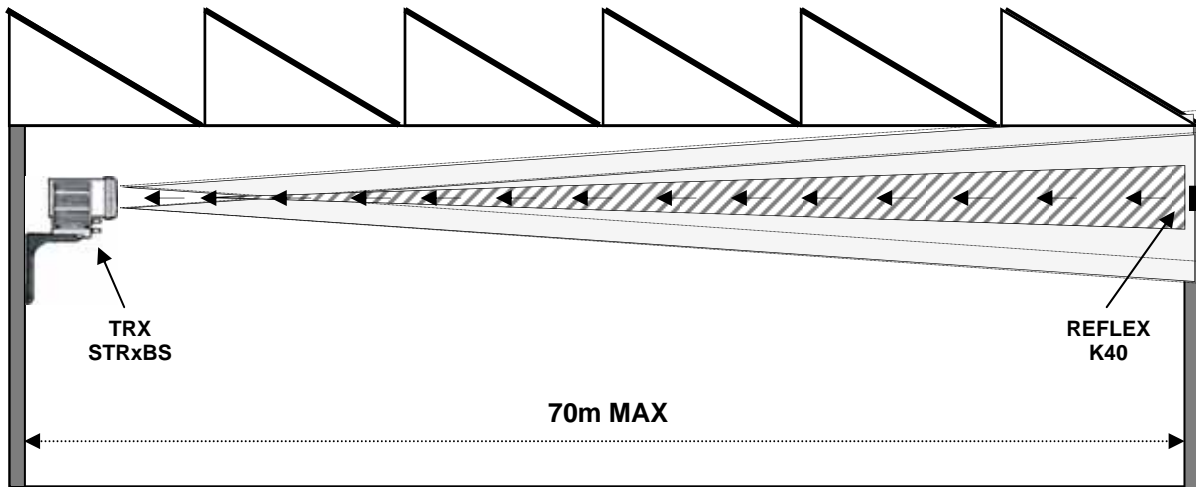


LINEAR OPTICAL REFLECTING BEAM SMOKE DETECTOR



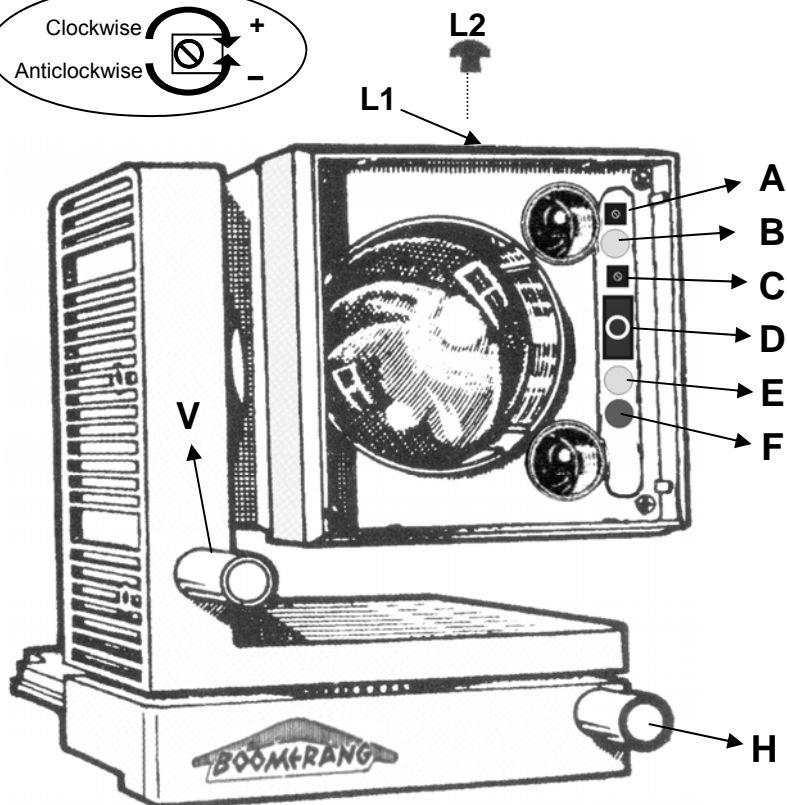
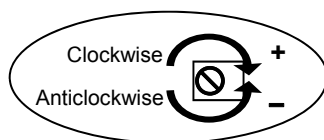
ATTENTION MODEL REQUIRES INTERFACE INT8BA

- ☞ Before installing the detectors, check the wall or surfaces on which the TRX brackets and retroreflector or swivel are mounted. They must not be in any way subjected to movement or vibrations during the operation of the units.
- ☞ Before installing the units check whether there are any shiny or reflective surfaces crosswise between the beams along the IR beam path between the TRX and the retroreflector. If there are, check whether they interfere with the retroreflector response. If a part of IR light is reflected back by surfaces other than the retroreflector, different TRX positions should be selected.
- ☞ Do not place this model of detector in warehouses where the goods stored are closer than 1,20m to the ceiling or roof. Keep the whole path whole detector path distance between the TRX and reflector device as clear as possible.
- ☞ Avoid detector placement in front of or near to strong electric lights or bright sunlight.
- ☞ If the installed distance between TRX and retroreflector is between 10m and 50m insert the indicated diaphragm that is included as accessories (cod DC60-4B) in the package as shown in the below table form.

Cod. DIAPGHRAGM	Ø HOLE	OPERATING DISTANCE
DC6008B	8 mm	> 10 ≤ 20m
DC6014B	14 mm	> 20 ≤ 30m
DC6018B	18 mm	> 30 ≤ 40m
DC6030B	30 mm	> 40 ≤ 50m

TRX UNIT BOOMERANG S 5P70

- L1 Front eject slot
- L2 Plastic front eject slot cup
- A IR intensity adjustment trimmer
- B Smoke Led (RED)
 - * On forewarning
 - * Blinking alarm
- C Smoke threshold adjustment trimmer
- D UTA Jack socket
- E IR intensity level Led (YELLOW)
 - * On IR intensity level too low
 - * Off Normal operating IR power
 - * Blinking IR intensity level too high
- F Power ON Led (GREEN)
- V Vertical movement knob
- H Horizontal movement knob



REFLECTION DEVICE MODEL 5P70

In this model the reflection device is a retroreflector fixed on the opposite wall, or a retroreflector placed on the articulated bracket cod. SM (optional).

BOOMERANG S 5P70 ASSEMBLY AND SETTING UP PROCEDURE

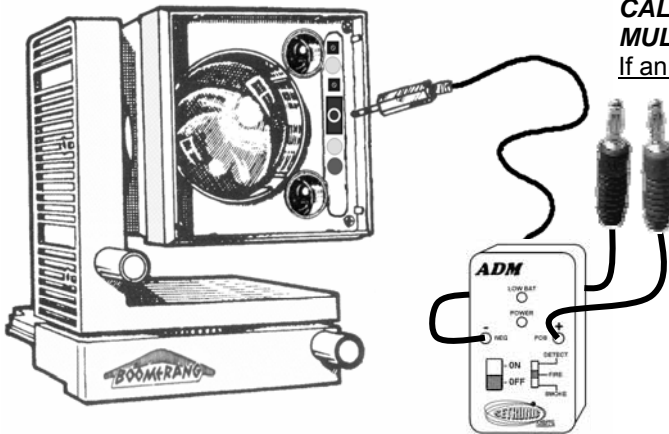
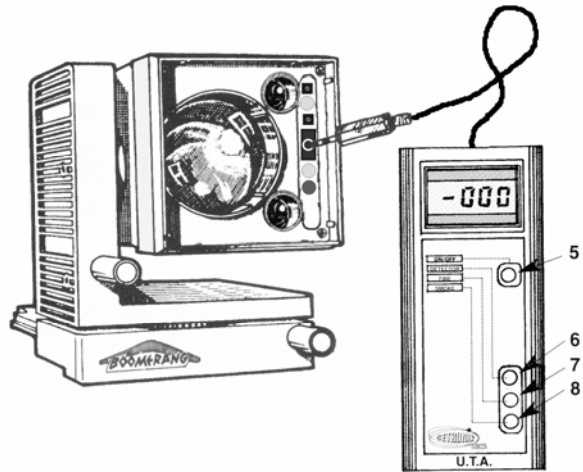
1. Fix the TRX mounting bracket and plug in the TRX device. Aim it roughly in the direction of the selected retroreflector opposite.
2. Fix the retroreflector, or its swivel, on the opposite side and aim it roughly in the direction of the TRX.
3. Connect the wires as in the wiring diagram in the INT8BA and the TRX. Switch on the system and rotate trimmer "A" 18 turns in a clockwise direction. The Yellow Led can be in one of three possible states: either flashing, or ON, or OFF. The **Led ON** means the IR return light beam is too low; if the **Led is flashing** the IR reflected beam is too high; if it is **OFF** the IR light beam reflected is roughly acceptable. This condition could be a fault in this phase.
4. Align the TRX device using the adjustment knobs "V" and "H". The required state at the end of this phase is with the yellow led flashing.
5. Rotate the TRX using adjustment knob "H" in the horizontal plane to the right until the yellow led "E" stops flashing and goes out. Counting the number of turns of the knob turn back to the left side turning and counting until the yellow led stops flashing and goes out. During operation the Smoke red flashing led can light up in alarm mode. This is normal. Reset by removing the connector to the TRX for min. 3 seconds.
6. Divide the number of turns two and turn by that amount towards the middle. You have now found the centre of the IR beam in the horizontal plane. Repeat the above procedure using knob "V" for finding the centre of the IR beam in vertical plane. In this situation the yellow Led must be flashing and the trouble interface relay will also operate ON/OFF intermittently. This state is essential in this phase.
7. The retroreflector device on the opposite side must also be adjusted by hand if placed on the swivel device.
8. Now cover the reflector with a piece of card or paper. Looking toward the TRX unit, the yellow Led will flash without covering. When you cover the retroreflector the TRX switches off the flashing yellow led and **lights ON permanently**. After removing the obstacle from the retroreflector the yellow led will flash again. If does not, check whether is any shiny reflecting surface along the IR path between the TRX and reflector device. In the event of unwanted reflections along the IR path, select a different TRX position or different positions for both devices.
9. When both device are aligned and the yellow led is flashing, rotate the trimmer "A" anticlockwise until it stops flashing and goes out, When the led switches off it means the IR strength is accepted by the TRX. Half turn the trimmer "A" clockwise with the led OFF before replacing the front cover and the slot cup.

CALIBRATION PROVIDED BY UTA CONTROL DEVICE

The Boomerang TRX device must be adjusted by mean of UTA control device or an ADM adapter and multimeter. The sensitivity **smoke threshold** is set up in the factory at **600 divisions**. Because building noise can be associated with various sensitivity levels, and in order to avoid any unwanted alarms, the correct calibration procedure must be followed using the devices suggested.

If you use UTA calibration meter:

- Insert the jack plug in the TRX socket. Switch on the **UTA** device and select "**detector**" mode (6).
- Wait for some minutes and read the LCD's peak noises value displays. This procedure must be carried out while all the interference factors (hot air movements, airborne dust, lights etc) are present in the building.
- If the peak values read on the UTA give less than 50 divisions, the TRX smoke threshold normally set in the factory (600 divisions) can be accepted. If the peak levels are higher, the smoke threshold has to be increased to 100 divisions plus every 50 divisions over the first 50 division. (e.g. if there are 100 'noise' divisions read on the UTA in the detector mode you must raise 100 divisions in the smoke threshold $600+100=700$. Noise at 150 divisions ($600+200=800$). Noise at 200 divisions ($600+300=900$). Noise at 250 divisions ($600+400=1,000$).
- In order to raise the threshold select UTA device in **smoke mode** (8). Turn the trimmer smoke "C" in a clockwise direction on the TRX device until it reads the UTA values in accordance with the instructions given in "c" above. Threshold values over 1000 are not suggested unless you have first consulted with out authorised services.
- Switch OFF and disconnect the UTA Jack plug, store the instrument in a cool dry place without its batteries.

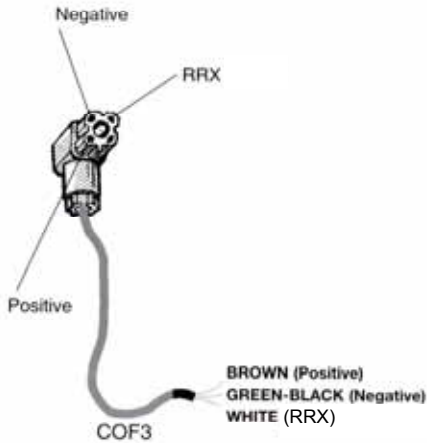


CALIBRATION PROVIDED BY ADM DEVICE AND MULTIMETER

If an ADM is being used:

- Insert the **ADM** jack plug in the TRX socket. Switch on ADM and select "**detector**" mode. Insert the ADM's plugs in to multimeter respecting the polarity. Set the multimeter scale to millivolt.
- Wait for some minutes and read the multimeter's peak noise values in millivolt. This procedure must be carried out while all the interference factors (hot air movements, airborne dust, lights etc) are present in the building.
- If the peak values peak read on the multimeter are less than 50 millivolt, the TRX smoke threshold normally set in the factory (600 millivolt) can be accepted. If the peak levels are higher, the smoke threshold has to increase 100 millivolt plus every 50 millivolt over the first 50 millivolt. (e.g. if there is a 100 millivolt noise reading on the ADM in the detector mode you must raise 100 millivolt in the smoke threshold $600+100=700$. Noise at 150 millivolt ($600+200=800$). Noise at 200 millivolt ($600+300=900$). Noise at 250 millivolt ($600+400=1,000$).
- To adjust the threshold select the ADM in smoke mode. Turn the trimmer smoke "C" in a clockwise direction on the TRX device until it reads the multimeter values according to the instructions given in "b" above. Threshold values over 1000 mV are not suggested unless you have first consulted with out authorised services.
- Switch OFF and disconnect the ADM Jack plug. Store the ADM in a cool dry place without its batteries.

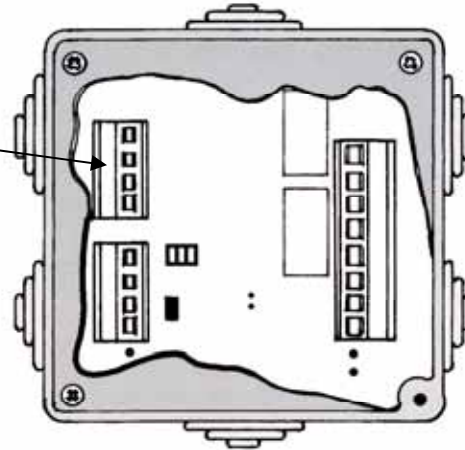
UNIVERSAL INT8BA INTERFACE IN PLASTIC IP 55 BOX



TERMINALS NOT USED IN BOOMERANG MODELS

TRX UNIT

RRX	9
Positive	10
Negative	11
Shield	12



1	24V	24V
2	GND	
3	NO	Fault relay
4	C	
5	NC	
6	NO	Alarm relay
7	C	
8	NC	

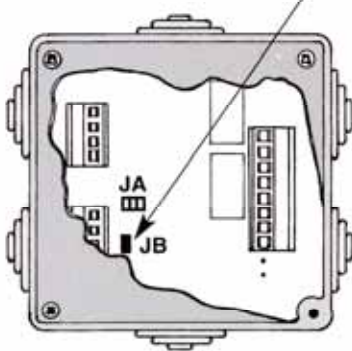
FIRE ALARM RELAY STATUS

The fire alarm relay is not normally energised and in this condition it cannot be altered.

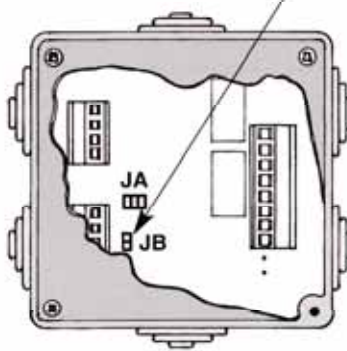
FAULT (ANOMALY) RELAY OUTPUT CONDITIONS

The fault relay can normally be energised or non energised according to a selection on Jumper «B», as shown in the figures below. By NORMALLY we mean that the Receiver unit is in normal working mode.

FAULT RELAY NORMALLY NOT ENERGISED «JB» inserted



FAULT RELAY NORMALLY ENERGIZED «JB» not inserted



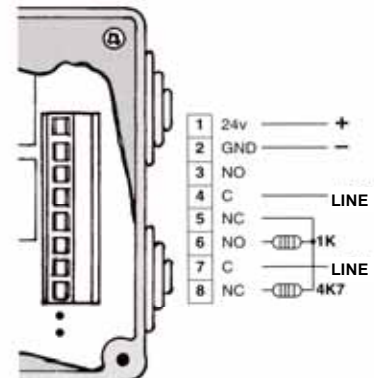
TIMER FAULT OUTPUT OPTIONS FOR INTERFACE INT8/BA

Many control units on the market can also have a fault memory with a linked sounder at the control unit and possibly also remote sounders. To avoid unnecessary fault episodes Control unit can have timer delay devices, especially useful where fault episodes

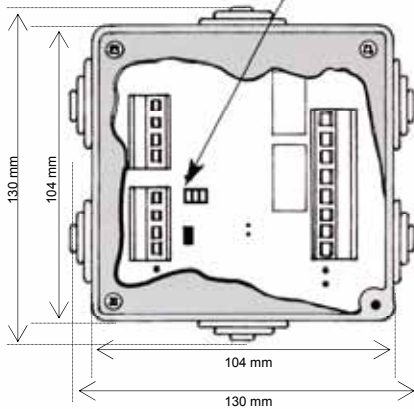
occur frequently because of obstructions between Transmitter and Receiver, Timer delay for fault output depends on the position of the Jumper «A».

POSITION 1	POSITION 2	POSITION 3	POSITION 4
Immediate	Delay 30"	Delay 60"	Delay 90"

CONVENTIONAL CONNECTION TO CONTROL UNIT (Example)

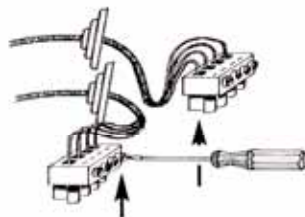


For suitable resistive values, see the control unit's specifications (make, type etc.)



EXTRACTABLE TERMINALS

The terminals can simply be pulled out and replaced by pressing in.



Mod. Boom S70-Uk rev. 01

ABSORPTION MAX @ 24 VOLT interface included	mA MAX	
	JB IN	JB OUT
NORMAL WORKING	65	78
TROUBLE	87	72
ALARM	78	91



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