The JA-60IR wireless optical barrier

The JA-60IR optical infrared barrier is designed to protect areas such as doors, windows, balconies etc. within a range of 5 meters. The detector consists of two electronic units and two IR bars. The IR bars consist of an IR transmitter (TX) and an IR receiver (RX) respectively with four infrared beams built-in, protecting the area between them. A JA-60N transmitter is implemented in the RX part for wireless communication with Jablotron systems series JA-6x, receivers UC-216, 260 etc. The electronic units can be placed directly on the bars or they can be placed separately (e.g. inside the house).

Specification

IR barrier specification

Working range:	*0.5m to 5 m*
Number of the beams:	*4 (3 + 1 Sync)*
Detection time:	*1 / 0.5 / 0.35 or 0.2 s (according to the number of interrupted beams)*
Optical ray	*±10°at λ = 900 nm*
Solar immunity	*≥ 30 000 Lux at ± 5°*
Power supply:	*2 x lithium battery 3.6 V / 19 Ah type ER 34615H*
Battery lifetime:	*typically 3 year (activation 2 times a day)*
Security grade	*2 low to medium risk (EN 50131-1)*
Environment class:	*IV. Outdoor general –25 to +60°C (EN 50131-1)*

Dimensions

Electronic box:	*40 x 40 x 240 mm*
IR bar:	*25 x 25 x 1000 mm*

JA-60N specification

Frequency:	*433.92 MHz*

Can be operated according to CEPT/ERC REC 70-03

Working range:	*up to 100 m open area*

Package contents: 2 x IR bars (RX and TX), 2 x electronic units, 2 x connecting cables, a built-in and connected JA-60N transmitter

CE Jablotron s.r.o. hereby declares that the JA-60IR is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EEC (EMC).
The original of the conformity assessment can be found on website www.jablotron.com,Technical Support section.

Installation

Open the electronic units (the TX unit is identified by a red mark and the RX unit by a white mark). Be careful not to damage the JA-60N transmitter which is in the cover of the RX unit.
The same identification is also used in the IR bars. To open the bars simply slide down the top cover. When putting it back be careful not to damage the tamper inside the bar.
The upper seals at the end of the bars are made from rubber and are only used if the electronic units are not placed directly on the bars. The lower seals are made from plastic with holes.

1. Choose the appropriate position to place both bars just opposite each other and within a distance of 5 meters. Drill the holes on the bottom parts of each bar and fix them using screws (the connector inside the bars must point up). If necessary, it is possible to make the bars shorter (being careful not to damage beams or cabling) and adjust the beams according to the specific needs of the application (by loosening the fixing screws).
2. Fix the electronic units onto the desired place. They can be placed directly on the top part of the bars or they can be placed separately inside the secured premises (then seal the top part of the bar by provided rubber padding). In the case of the RX unit (white mark) it is also necessary to take into consideration that the radio signal from the built-in transmitter should not be shielded (by metal objects etc.).
3. Connect the bars to the correct electronic units (according to the red and white marks) using the provided cable.
4. Based on the distance between the bars, set the RANGE jumpers (see Figure 3) according to the following table:

Range	RX (white mark)	TX (red mark)
0.5 to 1.5 m	LOW	LOW
1.5 to 3 m	**HIGH**	LOW
More than 3 m	**HIGH**	**HIGH**

This setting also influences the battery lifetime. If the HIGH option is set, then the consumption of the detector will be slightly higher. But on the other hand it will increase immunity to false alarms, especially during intense daylight.

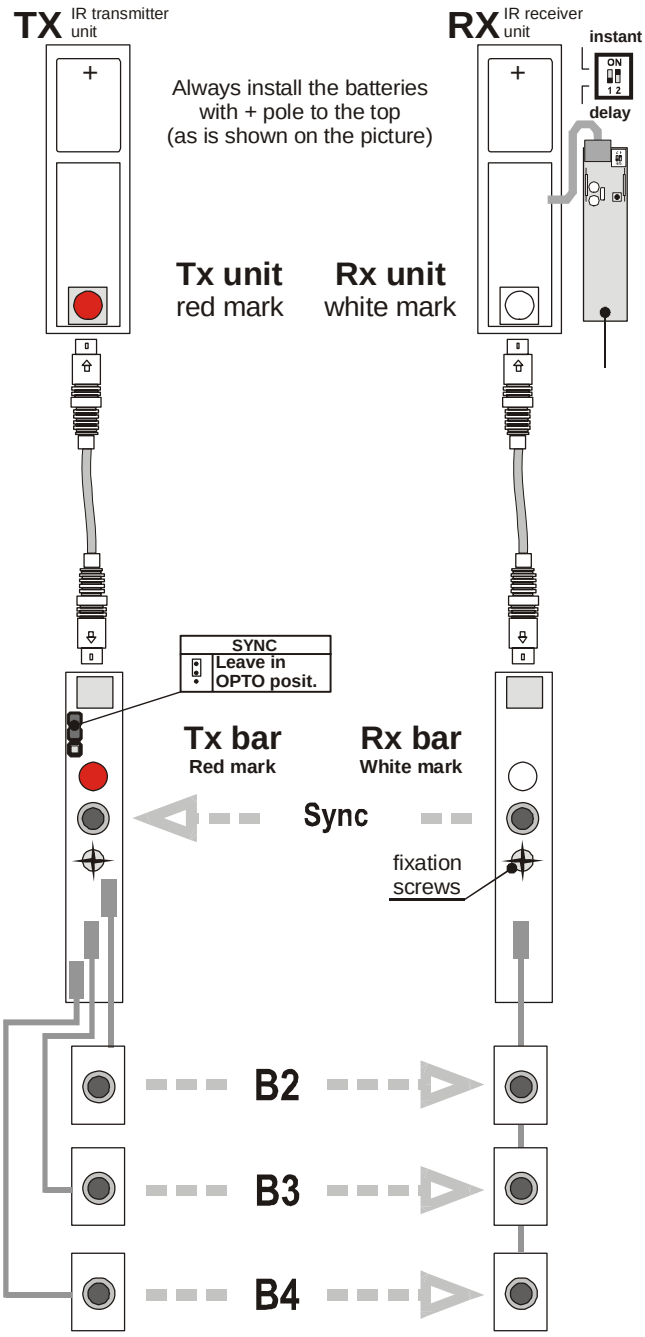

Figure 1

5. To enroll the barrier to a Jablotron alarm system insert its battery into the RX unit (white mark) while the receiver (JA-63KR, UC-260 etc) is in enrollment mode (see also the installation manual of the receiving unit). Set the reaction of the barrier by DIP switch number 1 on the JA-60N transmitter (see Figure 2):
Position ON = Instant reaction
Position 1 = delay reaction
Note: DIP switch number 2 has no influence on the function.

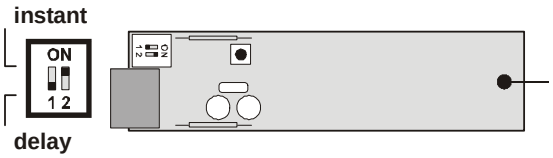

Figure: 2 The JA-60N transmitter

6. Then power up the TX unit (red mark) by connecting its battery.

7. Press the SYNC TEST button in the TX unit (red mark). The LED indicator will start flashing to confirm correct positioning of the sync beam, if not it is necessary to adjust the relative position of the bars.

8. To test the 3 remaining beams set the DIP switch in the RX unit to B2 and press the BEAM TEST button. The LED indicator must be flashing while the button is being pressed, otherwise adjust the position of the beam B2. Repeat the procedure for beams B3 and B4.

9. Using the AL DIP switch, set whether the alarm will be triggered by the interruption of one beam (position 1 – standard false alarm immunity) or two beams (position 2 – higher false alarm immunity).

10. Test radio communication between the detector and the receiving unit by briefly pressing (0.1 sec) the TEST-AL button which will trigger the detector. To deactivate the detector press the TEST-AL button again for about 1 second.

11. For correct functioning of the tamper positioned in the bars, check that the ANTI-STRAPO jumper (see Figure 3) is in the OFF position. A tamper of the RX unit is reported to the system as a tamper alarm and a tamper of the TX unit is reported as activation of the detector (instant or delay zone).

Note: A tamper alarm is activated 1 second after triggering the tamper switch and it is terminated 10 seconds after its deactivation (during these 10 seconds any other possible activation of the tamper is ignored).

12. Test the function of the detector by interrupting the beams (for example by stepping between the bars). The speed of the reaction depends on the number of interrupted beams. After activation of the detector, the JA-60N transmitter will add an approximately 1 second delay before the signal is sent to the receiving unit.

Battery testing and replacement

The detector automatically checks the condition of its batteries. If it is necessary to replace the batteries, the detector will inform the control panel about it. If a low battery is indicated the detector works as normal but, batteries should be replaced as soon as possible (within a week).
Before replacing the batteries, the control panel must be switched into mode, which allows detectors opening (User mode or Programming mode).

Note: *Dispose of batteries safely depending on the type of the batteries and local regulation. Although this product does not contain any harmful materials we suggest you to return the product to the dealer or directly to the producer after usage*

Maintenance

No special maintenance is needed. The plastic cover can be cleaned carefully to avoid any mechanical damage by non-abrasive materials. We recommend regular testing of the JA-60IR along with other components of the system.

Note: Although this product does not contain any harmful material we suggest you to return the product to the dealer or directly to the producer after usage.

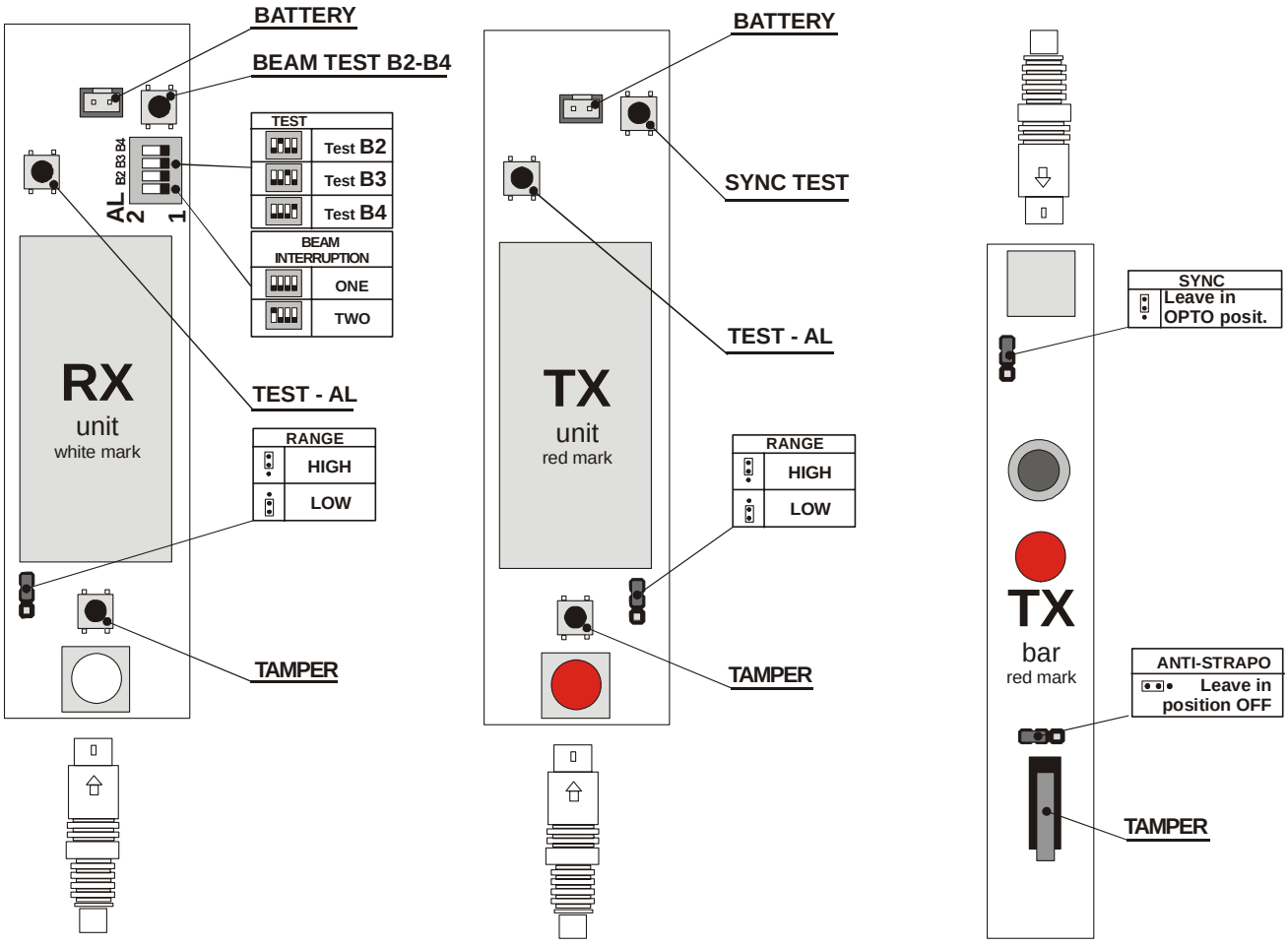

Figure 3

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