

JA-163A RB Wireless outdoor battery-powered siren

The JA-163A RB is a component of the **JABLOTRON 100+** system. It is used for system alarm indication outside a building. It can also be used for supplementary acoustic signalling (PG activation, arming, chirps). The siren is powered by just one lithium battery with no other external power. The JA-163A RB includes only the base with the **JA-163A-BASE-RB** PCB, the **BAT-100A (BAT-100A.01)** lithium battery and always has to be completed with a cover from the **JA-1X1A-C-xx** series (see following table). The siren occupies one position in the system. The product should be installed by a trained technician with a valid certificate issued by an authorized distributor.

For combinations of colour and cover material, see the following table:

Cover type	Colour and cover material	Strobe colour
JA-1X1A-C-GR	Grey plastic	Red
JA-1X1A-C-ST	Stainless steel sheet	
JA-1X1A-C-WH	White plastic	
JA-1X1A-C-GR-B	Grey plastic	Blue
JA-1X1A-C-ST-B	Stainless steel sheet	
JA-1X1A-C-WH-B	White plastic	

Installation

The whole enrolment procedure has to be done in service mode of the control panel. There must be a JA-11xR radio module installed in the control panel.

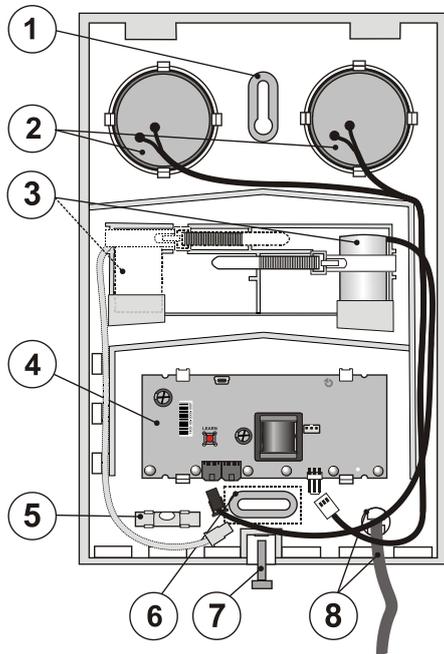


Figure 1: 1 – hole for installing; 2 – piezo sounders; 3 – lithium battery with reusable battery strap (up to 2 batteries can be used); 4 – PCB; 5 – spirit level; 6 – hole for installation with tamper detection; 7 – front cover screw; 8 – string with clip connecting the front cover for easy installation



The siren should be installed on a vertical wall, with the flasher facing downwards. Avoid installing the siren near the gutters and on other places where there is a danger of ice accumulation.

- Attach the siren onto a suitable place using 2 screws through the holes (1) and (6). The spirit level can be used for easy installation (5).
- Connect the lithium battery (3) to the connector (11).
- Proceed according to the control panel installation manual.
Basic procedure:
 - When the battery is connected, the yellow LED (12) indicates by a permanent light that the siren has not been enrolled into the system yet.
 - Go to the **F-Link** software, select the required position in the **Devices** tab and launch the enrolment mode by clicking on the **Enroll** option.
 - Press the button marked **LEARN** (10) – the siren is thus enrolled and the yellow LED indicator goes off.
- Put back the siren cover and attach it using the screw (7).
- Perform siren properties setting, see the following chapter: Internal settings of the siren.

Notes:

- The siren can also be enrolled into the system by entering its production code (9) in the **F-Link** software. You can find the production code on the sticker, glued on the PCB. All numbers under the bar code shall be entered (1400-00-0000-0001).

- After connecting the battery, it is first de-passivated for about 1 minute. During this time the yellow LED indicator is on, but it is not possible to enroll the siren to the control panel.
- The siren can be powered by up to two batteries and we recommend this when longer siren operation time is required. There is a place prepared for second battery use see Figure 1. Connect the battery to the other connector (11). The battery connection order does not matter.

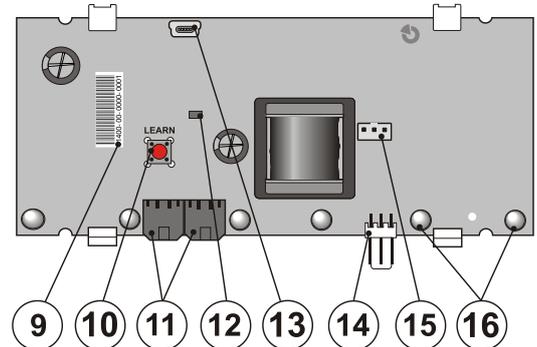


Figure 2: 9 – production code; 10 – LEARN (enrollment) button; 11 – battery connector; 12 – yellow fault indicator; 13 – mini USB connector; 14 – piezo siren connection (attention: high voltage); 15 – external antenna connector; 16 – high intensity red LED flashers

Erasing the siren from system / RESET

Use this procedure when the siren has to be erased from one system and enrolled to another one. Proceed this way:

- The control panel has to be in **Service** mode.
- Open the siren cover and disconnect the battery from its connector.
- Go to the **F-Link** software, **Devices** tab, and erase the siren from the control panel and **leave service mode**.
- Connect the battery. Then press and hold the **LEARN** button (10) for approximately 8 sec until the yellow LED (12) starts flashing. Then release the button.
- When flashing expires (2 x 7 flashes) the yellow LED illuminates. This indicates that the siren is not enrolled.

Notes:

- When a reset is done the yellow LED goes off and it means that there is some control panel in the siren's radio range with an open service mode and the enrollment procedure has been performed again and the siren is assigned to that control panel.

FW update

- A FW update can be performed by the **F-Link** software in service mode, but only by a user with **Service** authorisation.
- Start the **F-Link** software and enter service mode.
- Open the siren cover.
- Do not disconnect the battery!**
- Connect a PC to the siren using a mini USB cable.
- FW update mode is indicated by the flickering of the yellow LED.
- Continue as with updating the control panel using **F-Link** software; **F-Link: Control panel** → **Update firmware**. In the device options select the USB option (typically at the first position).
- Press the **OK** button to perform an update of the selected device.
- Disconnect the mini USB cable.
- Close the siren cover.
- Check the siren settings via **F-Link SW, Devices / Internal settings**.
- Test the siren functions.

Notes:

- A mini USB cable is not in the supplied accessories of the siren, control panel or any other device. You can use the cable from the **JA-190T** card reader. We strongly recommend connecting the USB cable straight to the PC connection as using a USB HUB can reduce the reliability.
- According to the changes which have been done during the update, previous settings might stay or settings could be erased to default. When a reset has been done you can reload the previous settings by the **Import** button and restore them with no negative influence on the new firmware.

Internal settings of the siren

The siren properties can be set in the **Devices** window of the **F-Link** software. When at the siren position, use the **Internal settings** option to open a dialog window, internal setting is separated into 2 tabs: **Settings** and **PG indication** (default settings are marked *):

Settings tab:

Acoustic indication of an intrusion alarm from sections: to set for which sections the siren should indicate an alarm, as well as setting the chirps. The default setting is indication for all sections disabled.

Reaction: defines whether the siren should indicate **EW*** (external warning) or **IW** (internal warning). Alarm indication can also be disabled completely (other functions remain enabled).

Siren sound: intermittent*, continuous. Option *intermittent* saves energy.

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Maximum siren time: No, 1, 2, 3*, 4, 5 minutes, During an alarm.

Option 'No' – the siren does not indicate alarm acoustically (optical indication remains). Option 'During an alarm' – acoustic indication in duration of 'Alarm length' set in 'Parameters'. *Note: the maximum Alarm length is 20 minutes, which would significantly affect the battery lifetime.*

Different fire alarm indication: YES/NO*: if enabled the siren indicates fire alarm by fast loud beeping, not by a standard beeping when indicates other types of alarm like intrusion, sabotage, panic etc. (fast beeping indicating the fire alarm is synchronized with the acoustic indication of the fire detectors)

Enabling any of these mentioned options can cause a reduced battery life-time depending on the frequency of its use. That is why we recommend fitting the BAT-100A (BAT-100A.01) second battery.



Other acoustic indication from section: selection of the sections for which sounds mentioned below will be produced. Default setting is 'All sections'.

Higher volume: YES / NO* - affects only entrance / exit delay indication and sounds indicating PG output triggering. It does not have any influence on the sound of an alarm.

During section control: YES / NO – if enabled, the siren chirps once after setting, twice after unsetting and three times when unsetting after an alarm.

During warning: YES / NO* - When enabled the siren will beep three times to indicate:

- 1) inability to set (a system status which prevents setting, such as a fault or a triggered detector)
- 2) unsuccessful setting (an event occurs during exit delay, e.g. a triggered detector)
- 3) unsetting with alarm memory (an alarm occurred)

Entry delay: YES / NO* if enabled, it indicates the entrance delay for the whole entrance time – intermittent beeping.

Exit delay when partially set: YES / NO* - if enabled, it indicates the entrance delay for the whole time when the system has been partially set – intermittent beeping. This option is available when *Entry delay* is enabled.

Exit delay: YES / NO* - if enabled, it indicates the exit delay for the whole exit time when the system is fully set – intermittent beeping.

Upon loss communication: YES / NO - When enabled, the siren sounds in case of loss communication with the control panel longer than (110 min). The length of sounding depends on 'Maximum siren time' – where the option 'During an alarm' signifies 20 minutes.

Optical indication:

Flashes every 60 seconds: YES / NO* - It sets to one siren flash per minute. It can be used as a warning that the building is protected by an alarm system.

During warning: YES/NO* - if enabled, the siren indicates by triple flashing:

- 1) inability to set (a system status which prevents setting, such as a fault or a triggered detector)
- 2) unsuccessful setting (an event occurs during the exit time, e.g. a triggered detector)
- 3) unsetting with alarm memory (an alarm occurred)

When controlled by a section: YES / NO* – it sets a siren to optically indicate setting and unsetting of (a) section(s). It blinks once when set and it blinks twice when unset and when unset after an alarm then three blinks. **LED indication:** red*/blue, sirens are equipped with dichromatic LED indicators. According to the colour of the bought front cover it is necessary to set the same colour of indication for LEDs.

Siren flashing options: During alarms*/ 1/ 3/ 5/ 30/ 60 min of flashes after an alarm. This option can set the length of siren flashing for only the alarm time or extended for by a pre-set interval. Extended flashing can be terminated by new system setting or cancellation of alarm indication in the system (with a keypad).

Periodical communication: 1 s / 8 s – This parameter can set the maximum postponed reaction of the siren to an alarm, supplementary indication or Signalling PG.

Notes:

- PG output activation sometimes might not be indicated when periodical communication is set to 8 s and a PG output is switched ON for a shorter time than 8 s.
- If the end customer wants any of the supplementary indications mentioned above, we recommend to set the 'Periodical communication' to 1 s in order to have a faster response time when section or PG state changes.
- When periodical communication is set to just 1 s it can reduce the typical battery lifetime by half.

Signalling PG tab:

The siren can indicate the activity of PG outputs 1 – 32 with its beeps.

Slow beeping - 1 per second (for the whole period when the PG is active)

Rapid chirping - 2 per second (for the whole period when the PG is active)

1xOn/2xOff - 1 chirp when the PG is activated, 2 chirps when the PG is deactivated

20 seconds of beeping – a long 20 sec beep when the PG is activated

Settings according to security grade 2

To set the siren to comply with security grade 2 use F-Link SW, the 'Parameters' tab and the option 'System profiles' set to 'EN50131-1, gr.2'. Device will be configured according to required properties.

Sound priorities

The siren sound has the highest priority, the control chirps have a lower priority and the PG output activity indication has the lowest priority (PG1 has a higher priority than PG2 etc). A chirp with a higher priority always terminates chirping with a lower priority.

External antenna use

To improve the communication quality between the control panel and the outdoor siren you can connect an external antenna (AN-868). Plug the antenna into the connector (15) on the PCB. Detection of a connected antenna is performed only when the cover is open (active tamper). If the siren during closing the cover detects the external antenna, it is automatically used for radio communication. If the antenna is shorted out or cut off, it automatically switches to the internal antenna and a tamper alarm is sent. When the siren cover is closed with no external antenna, the internal antenna is used for radio communication.

Battery replacement

The product checks the battery status automatically. When a battery fault is triggered, the system informs its user (or service technician). The siren remains fully functional, but we strongly recommend to replace the battery is replaced within 2 weeks. **Do not charge the battery at all! Use the BAT-100A or BAT-100A.01 type only**, distributed by Jablotron. **When using a battery of a different type, the correct function and safety of the product cannot be guaranteed.** If two batteries are used, always replace both batteries at once. The battery can be changed in control panel service mode by a service technician. When replacing is finished, test the siren's functioning. Take the used battery to an official collection point, don't dispose in the general trash.

Technical specifications

The JA-163A RB parts (lithium battery, front cover and base) are supplied individually. The reason is the free selection of a wide range of front covers and the transportation of lithium batteries.

Power	Lithium battery 3.6 V / 13 Ah type BAT-100A, BAT-100A.01 (up to 2 batteries can be used)
Current consumption (nominal/maximal)	0.3/1000mA
Battery low voltage	≤ 2.8 V
Typical battery lifetime	approx. 5 years (for basic settings)
Communication frequency	868.1 MHz, JABLOTRON protocol
Communication range	approx. 300 m (open area)
Antenna	internal, external can be used, type AN-868
Activation lost integrity	acoustic tamper alarm (110 min)
Piezo electric siren	100 dB/m
Dimensions (cover included)	200 x 300 x 70 mm
Weight	434 g
Classification	security grade 2/environmental class IV
- according to	EN 50131-1, EN 50131-4, EN 50131-5-3
- environment	general outdoor
- operational temperature range	-20 to +60°C
- power supply	type W
- operational humidity	75% (95% 30 days) RH, non-condensing
- certification body	Trezor Test s.r.o. (no. 3025)
Security grade	IP44
Also complies with	ETSI EN 300 220, EN 50130-4, EN 55022, EN 60950-1, ERC REC 70-03

Can be operated to



JABLOTRON ALARMS a.s. hereby declares that the JA-163A RB is in a compliance with the relevant Union harmonisation legislation: Directives No: 2014/53/EU, 2014/35/EU, 2014/30/EU, 2011/65/EU. The original of the conformity assessment can be found at www.jablotron.com - Section Downloads.

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