# JA-100K(R) Security System Control Panel

Warning:

The Jablotron 100 series alarm system is designed exclusively for Jablotron certified installers. It is recommended that only JABLOTRON 100 devices are used with the system. Proper functionality cannot be guaranteed when using third party devices.

The full installation manual for control panel configuration and installation of other devices can be downloaded in the MyCOMPANY application meant for installation partners.

1   Description of JA-100K(R)

1 – USB connector for PC connection
2 – Back-up battery 2.6 Ah;
3 – Control panel;
4 – Position for the GSM antenna;
5 – Transformer;
6 – Mains power terminals with fuse;
7 – Tamper contact of the housing;
8 – Radio module
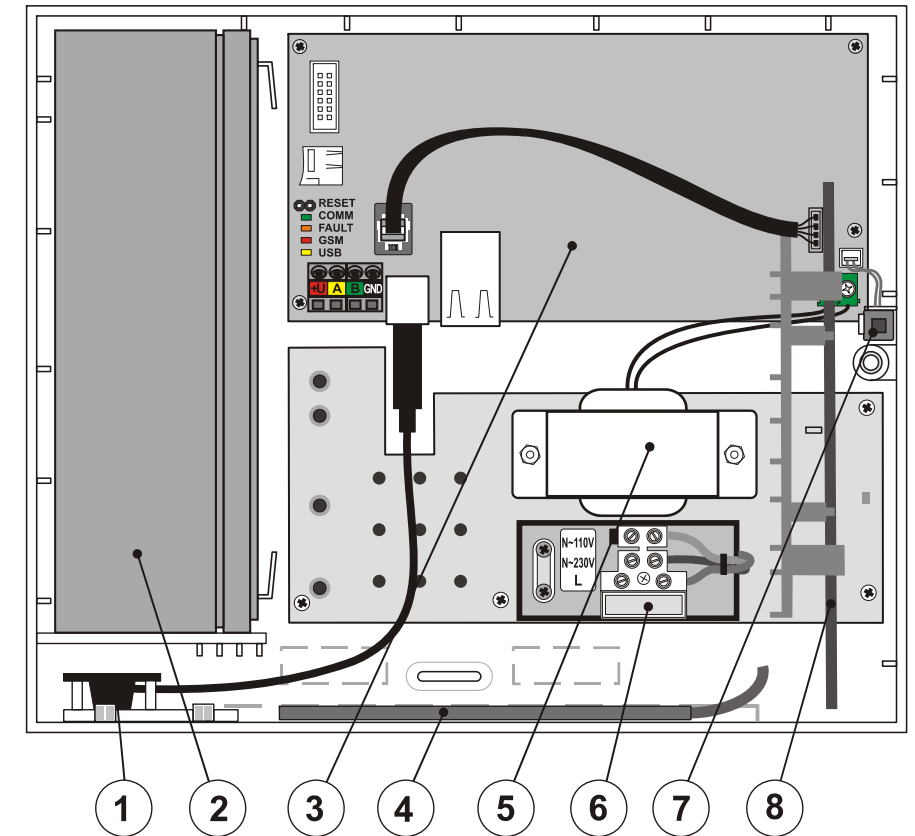
1 – Connector for supplementary modules
(GSM or PSTN communicator);
2 - MicroSD card holder;
3 – LED indicators and RESET jumper;
4 – BUS terminal;
5 – internal BUS connector for the JA-111R module;
6 – USB cable connector;
7 – LAN connector;
8 – Panel lid tamper pins;
9 – Power supply input from the transformer
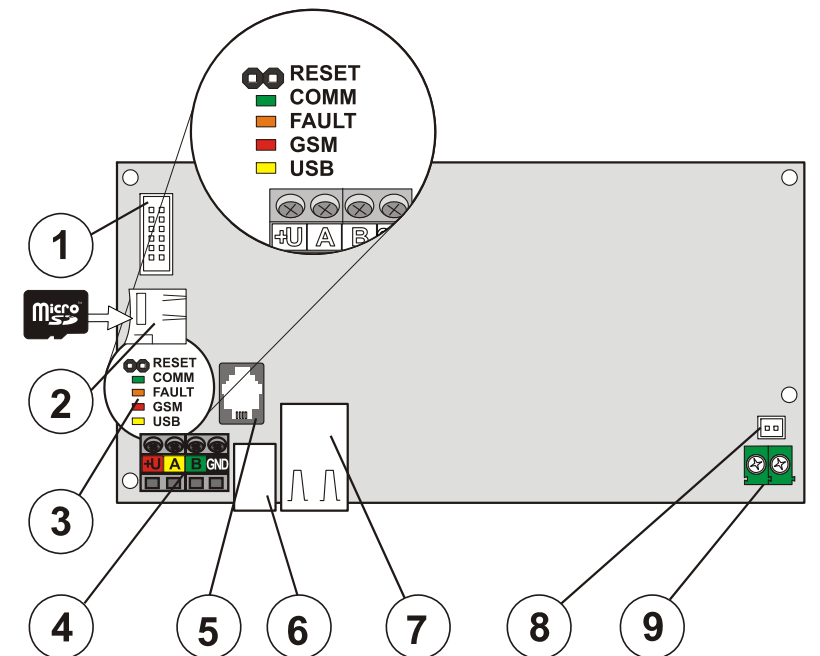
1.1 Indication LEDs on the control panel board

Description	Colour	Meaning
COMM	green	Flashing during operation of the communication BUS indicates correct functioning
FAULT	yellow	Permanent lit indicates a general error in the system (more information provided by F-Link or a keypad with a display)
GSM	red	Status indication of a supplementary communicator (GSM or PSTN)
USB	yellow	Indicating a USB connection to a PC

2 Switching the system ON

1. The JA-100K(R) control unit provides power supply terminals to select from 2 types of mains supplies: ~230 V / 50 Hz and ~110 V / 60 Hz. According to the type of mains system, the correct connection terminal and the corresponding fuse must be used to comply with the Technical specifications chapter. Check if the cables are screwed properly into the terminals and fix them by the tab. Verify whether a microSD card has been properly inserted into its holder on the control panel board and if a supplementary GSM module is used then check a SIM card as well.
2. Insert the battery into the control panel and fix it in the housing (using the self-sticking blocks or a strap).
   Caution – the backup battery is delivered in a charged condition, it must not be short-circuited!
3. Connect the supply leads of the battery. **Caution – mind the correct polarity.**
4. Switch on the power from the mains and check the LED indicators on the control panel:
   a. The green LED (COMM) starts flashing (correct BUS function).
   b. The red LED flashes – log in to the GSM network by the supplementary GSM communicator.
   c. The red LED goes out – the control panel has established a connection to the GSM network or is not used at all.
   d. The red LED is permanently lit – the supplementary GSM communicator has not logged in to the GSM network.

Caution

– *The manufacturer declines any liability for damage if the system is installed or set improperly.*

– *Select an appropriate place for the control panel box to be installed. There should be a LAN connection and when a GSM communicator is going to be used also a sufficient GSM signal strength (check with your cell phone).*

– *The mains power supply of the control panel may only be installed by a person with the required electrical qualifications. The power supply of the control panel has double safety isolation of the circuits. No protective earth conductor is connected.*

– *During the installation and connection of the BUS devices of the control panel all the power supplies of the control panel must be completely off.*

– *Never connect the mains power and the backup battery with no inserted SD card or when the supplementary GSM communicator is installed with no GSM antenna connected.*

– *The fuse holder with a glass fuse isn't meant for safety disconnection.*

– *You are recommended to fit the mains supply with voltage surge protection.*

– *Use a suitable cable with double insulation and a cross-section of 0.75 to 1.5 mm^2.*

If a shielded cable is used, do not connect the shield to the BUS terminals! We recommend you to bond all the shields (braiding) in the control panel to an auxiliary terminal and not to connect this bonding anywhere else. Also leave the other end of the shielding at the device end disconnected.

3 Technical specifications

Parameter	JA-100K
Type of installation	Fixed installation
Nominal control panel voltage / frequency / fuse	~ 230 V / 50 Hz, T200 mA fuse 250 V 5 x 20 mm ~ 115 V / 60 Hz, T400 mA fuse 250 V 5 x 20 mm
Operation voltage range	~ 195 V ÷ 250 V ~ 110 V ÷ 120 V
Electric power / current	Max 23 VA / 0.1 A
Protection class	II.
Back-up battery	12 V; 2.6 Ah max. (lead-acid), Please note: Battery is not included
Low battery voltage (fault indication)	≤11 V
Maximum battery charging time	48 ÷ 72 hrs

BUS voltage / max. voltage ripple (red-black)	12.0 ÷ 13.8 VDC / ± 100 mV
Max. continuous consumption from the control panel BUS +RJ	400 mA permanently (1000 mA for 5 minutes)
@ 12 hours backup (2.6 Ah)	LAN OFF: 125 mA – consumption of modules JA-190X (Y) LAN ON: 85 mA – consumption of modules JA-190X (Y)
Max. number of devices	32
Alarm connection	Jablotron BUS – dedicated wiring Wireless connection (with JA-111R) – unspecified wireless connection, Jablotron wireless protocol
Alarm system classification	Security grade 2 / environmental class II
@ according to standards	EN 50131-1, EN 50131-3, EN 50131-6, EN 50131-5-3, EN50131-10, EN 50136-1, EN 50136-2
@ environment	indoor general
@ operational temperature / humidity	-10°C to +40°C, relative humidity 75% no condensation
@ power	Type A – primary supply with a charged backup battery
@ event history	approx. 7 million latest events, incl. date and time
@ system reaction to communication loss	Fault or tamper – according to the pre-set profile @ BUS until 10 sec @ wireless communication in 2 hrs (report) @ wireless communication in 20 min blocks system to be set
@ reaction to invalid code entry	After 10 wrong code entries a tamper alarm is triggered and according to the selected profile it blocks all control devices for 10 min
@ ATS classification	Supported ATS classes : SP2 – SP 5, DP2 – DP3 SPT: type Z Operation type: Pass-Through Built-in LAN: SP2 – SP5 (with IP protocol) JA-190Y SP2 – SP5 (with IP protocol) JA-190X SP2 (with Contact ID protocol) LAN + JA-190Y DP2 – DP3 (with IP protocol) LAN + JA-190X DP2 (with IP / CID protocol)
@ ATS transmission protocols	JABLO IP, SIA IP, Contact ID, JABLO SMS
@ ATC protection against substitution and data protection	Jablotron protocol: Proprietary AES encryption with minimum 128 bit key ANSI SIA DC-09.2012 protocol with 128 bit AES encryption
LAN communicator	Ethernet interface CAT 5 (RJ-45)
Dimensions (mm)	268 x 225 x 83
Weight	1450 g
Basic parameters of the JA-111R module	868.1 MHz, < 25 mW, GFSK < 80 kHz
Radio emissions	ETSI EN 300 220-2 (R module)
EMC	EN 50130-4, EN 55022, ETSI EN 301 489-7, ETSI EN 301 489-3
Electric safety	EN 60950-1
Operational conditions	ERC REC 70-03, ERC DEC (98) 20
Certification body	TREZOR TEST

CE JABLOTRON ALARMS a.s. hereby declares that these JA-100K control panels meet the basic requirements and other relevant provisions of the Directives no. 2014/53/EU, 2014/35/EU, 2014/30/EU and 2011/65/EU. You will find the original Declaration of Conformity at www.jablotron.com.

Note: Although the product does not contain any harmful materials, do not dispose of it as municipal waste, but bring it to a collection facility of electronic waste. More detailed information at www.jablotron.com Technical Support section.

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CREATING ALARMS

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