ROKONET

NOVA II

Programmable, Wireless, Security System Receiver

Installation & Operation Manual

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INTRODUCTION TO NOVA II

- The NOVA II has been designed for quick, easy installation in either of two levels. The Normal level is adopted by most users. The Advanced level of installation gives additional facilities for locating the source of an alarm.
- For more information, contact the ROKONET branch office nearest to you. See the back cover of this manual.

NOVA II Features

- It processes radio signals from up to 16 remote transmitters, including PIR and smoke detectors, universal transmitters, wireless panic buttons and remote control devices..
- It memorizes the pre-programmed identifying address of each transmitter during installation.
- It has four ZONE alarm outputs and a TROUBLE output that indicates a low battery, a tamper, a dead transmitter or jamming.
- Its display is used as part of its installation set-up or when testing of installation.
- Its outputs are connected to any control panel.

Installation Hints for Wireless Systems

- Mount the Receiver high – at least 1.5 m (5 ft) above the floor, near the control panel.
- Locate the Receiver relatively close and central to the transmitter locations.
- Mount the Receiver away from metal objects and RF generating devices such as TV sets and computers.

LEVELS OF NOVA II INSTALLATION & OPERATION

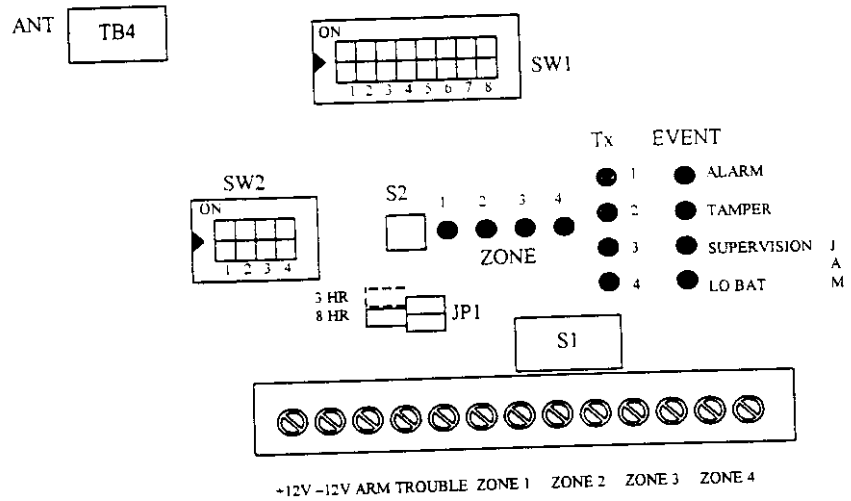
The NOVA II receiver provides two levels of security system installation and operation:

- In the Normal Installation Setup, the NOVA II display gives a momentary indication of the reporting transmitter and the event (alarm, low battery, or tamper). Input conditioning is completely handled by the control panel.
- In the Advanced Installation Setup, the NOVA II receiver assumes some of the functions of a control panel, including inhibiting alarms when the panel is disarmed, and input and exit delay on chosen transmitters. The display is latched when an alarm occurs, so that any of the up to 16 transmitters which can be installed may be identified as causing the alarm.
  THE ADVANCED SETUP MAY BE USED ONLY IF AN ARM FOLLOWER OUTPUT IS AVAILABLE FROM THE PANEL AND IS CONNECTED TO THE ARM INPUT OF THE NOVA IV RECEIVER.

NORMAL LEVEL INSTALLATION & OPERATION

The following instructions describe a simple way to set up and operate a NOVA II wireless system. They assume you need Normally Closed inputs to your control panel, and that you do not require connecting the TROUBLE output. For the additional features available on the NOVA II, see the ADVANCED INSTALLATION AND OPERATION section of this manual. Circuit board features, which are referred to in the instructions, are shown in Figure 1.

Figure 1: Circuit Board Schematic



NORMAL LEVEL INSTALLATION & OPERATION (Continued)

- Remove the cover by twisting a screwdriver in the slots along the upper or lower edge of the receiver.
- Mount the NOVA IT receiver near the control panel.
- Connect the antenna to the left terminal of TB4.
- Set all positions on dipswitches SW1 and SW2 to OFF (levers are pushed DOWN).
- Wire the NOVA IT to the control panel as shown in Figure 2.

Register Transmitter Addresses in Receiver

ACTION	RESPONSE
Set SW1 position 7 to ON.	All LED's blink. Then Zone 1 LED blinks and Tx1 LED blinks or lights steadily.
Send WRITE transmission from a transmitter. (See Table 1)	All LED's blink and buzzer sounds.
Press push-button S2	Zone 1 LED blinks and Tx2 LED blinks or lights steadily.
Send WRITE transmission from another transmitter.	All LED's blink and buzzer sounds.
Continue to advance the LED's by pressing the button and sending WRITE transmissions until all transmitters have been written in the receiver (up to 16 transmitters).	Blinking LED's point to present transmitter location, and WRITE action is confirmed by all LED's blinking and buzzer sounding.
Set SW1 position 7 to OFF.	LED's extinguish.

Table 1: Summary Instructions for Making Transmitters Send a WRITE Transmission:

NOVA-20 & NOVA-90	Set jumpers to WRITE Mode, then press Tamper Switch for over 3 seconds.
NOVA-30	Press push button on internal transmitter board for over 3 seconds.
NOVA-50, 51, 52, 53 & 61	Press push button for over 3 seconds.
NOVA-70	Disconnect and reconnect battery.

Communication Test

Mount transmitters in their intended locations, then test communications as shown below. Output relays do not operate in this mode.

ACTION	RESPONSE
Set SW1 position 7 to OFF and position 8 to ON.	The LED's blink, indicating COMMUNICATION MODE.
Operate each transmitter.	The green receiver zone and transmitter LED's corresponding to each transmitter will blink and the buzzer will sound to confirm communication.

If there is no response when a transmitter sends a signal, move the transmitter to another location and try again.

Normal Operation

- Set SW1 positions 7 and 8 to OFF. Replace the cover.
- Reception of a signal from a transmitter will cause the corresponding green zone and transmitter LED's to blink, together with a red event LED which indicates the type of transmission: Alarm, Tamper, or Low Battery.
- Interference or jamming on the radio frequency channel will be indicated by blinking the two bottom red LED's.
- Alarm signals will cause a zone output contact to actuate for 2 seconds. If the alarm comes from a NOVA 70 Universal Transmitter or a NOVA 30 Smoke Detector, the contact will remain actuated until a restore signal is received, indicating that the alarm situation is no longer present.
- Perform a functional test of the system by causing each transmitter to alarm, and noting proper response from the receiver and control panel.

ADVANCED LEVEL INSTALLATION & OPERATION

The dipswitch positions and supervision jumper are described in Table 2 and Table 3 below.

Table 2: Configuration Dipswitch SW1 (8 Positions)

Position	Description	Comments
1	Momentary Display.	OFF: All signals are momentarily displayed by zone, transmitter, and event.
	Latched Display.	ON: Signals that cause an output are latched and displayed.
2	Zone output polarity.	OFF: Zone outputs are Normally Closed.
		ON: Zone outputs are Normally Open.
3	ARM input polarity.	OFF: Used if ARM FOLLOW output from panel is low (ground) when panel is armed.
		ON: Used if ARM FOLLOW output from panel is low (ground) when panel is disarmed.

(Continued on next page)

Position	Description	Comments
4,5,6	Transmitter Configuration Setup – Used in WRITE MODE.	Position 4: SUPERVISION. Set ON for supervised transmitters (NOVA 20, 30, 70, 90). Set OFF for unsupervised transmitters (NOVA 50, 51, 52, 61). Position 5: DELAY. When ON, an alarm signal within 30 seconds of arming will be ignored; output due to an alarm signal received more than 30 seconds after arming will be delayed by 30 seconds and cancelled if panel disarmed during this period. Position 6: NOT 24 HOURS. When ON, alarm signals received when panel is disarmed will be ignored.
7,8	OPERATIONAL MODE: 7 OFF, 8 OFF 7 ON, 8 OFF 7 OFF, 8 ON 7 ON, 8 ON	 NORMAL MODE – Normal Operation. WRITE MODE – Used to register transmitter addresses in receiver. COMMUNICATIONS MODE – Used to test communication with transmitters – receiver sensitivity is reduced to increase reliability of test. APPLICATION MODE. Used to verify configuration of each transmitter.

Table 3: Output Dipswitch SW2 (4 Positions) and Jumper JP1

Determines which TROUBLE signals produce an output at the TROUBLE terminals. The TROUBLE output contacts are Normally Closed.

SW2 Position	TROUBLE Output when set ON
1	Low Battery.
2	Tamper – from transmitter (NOVA 20 or NOVA 90), or from NOVA IV receiver.
3	Supervision -- Gives output if no signal received from supervised transmitter (only if SW1 position 4 set ON in WRITE MODE) for 3 or 8 hours (time depends on setting of jumper JP1 – see below).
4	Jamming – Gives output if interference or jamming on channel for 30 seconds or more.

Jumper JP1 determines supervision period. Supervised transmitters (NOVA 20, 30, 70, 90) send hourly signals automatically. Lack of signal for a period determined by the jumper setting will cause a STATUS alarm if SW2 position 3 is ON and SW1 position 4 was ON when the transmitter was registered during WRITE mode.

Jumper Placement	Supervision Time
On both JP1 pins	8 hours
On one JP1 pin or removed	3 hours

SPECIFICATIONS

Operating Voltage and Current	10 to 15 Vdc. 50 mA.
Receiver Type	SAW Stabilized Superheterodyne
Outputs	2 Alarm relay outputs plus 1 trouble relay output
Maximum number of transmitters	16 -- maximum 4 per zone
Transmitter Addresses	Over 16 million
Frequency Options	318 MHz FCC and IC Approved 418 MHz DTI Approved 433.92 MHz per European Standard
Output Contacts	0.5 A at 24 Vdc maximum
Dimensions	Width: 145 mm (5.7 in.) Height: 90 mm (3.54 in.) Depth: 42 mm (1.65 in.)
Weight	200 gr. (7 oz.)
Temperature Range	0 to 50°C. (32 to 122°F)

CAUTION NOTICE

This device complies with U.S. FCC PART 15 and with RSS-210 of Industry Canada.

Operation is subject to the following two conditions:

- This device may cause Interference, and
- This device must accept any Interference, including Interference that may cause undesired operations of the device.

Changes or modifications not expressly approved by ROKONET may void the user's authority to operate this equipment.

The communication quality of this unit may be affected by its surrounding environment. Nearby electrical equipment may interfere with its normal operation. The operation of this unit must, therefore, be tested at each installation since its transmission quality may vary as a result of operational conditions.

Simultaneous transmissions from two different units may cause message interference resulting in loss of information.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

-Reorient or relocate the receiving antenna.

-Increase the separation between the equipment and receiver.

-Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

-Consult the dealer or an experienced radio/TV technician for help.

ROKONET LIMITED WARRANTY

Rokonet Electronics, Ltd. and its subsidiaries and affiliates ("Seller") warrants its products to be free from defects in materials and workmanship under normal use for 18 months from the date of production. Because Seller does not install or connect the product and because the product may be used in conjunction with products not manufactured by the Seller, Seller can not guarantee the performance of the security system which uses this product. Seller's obligation and liability under this warranty is expressly limited to repairing and replacing, at Seller's option, within a reasonable time after the date of delivery, any product not meeting the specifications. SELLER MAKES NO OTHER WARRANTY, EXPRESSED OR IMPLIED, AND MAKES NO WARRANTY OF MERCHANTABILITY OR OF FITNESS FOR ANY PARTICULAR PURPOSE. IN NO CASE SHALL SELLER BE LIABLE FOR ANY CONSEQUENTIAL OR INCIDENTAL DAMAGES FOR BREACH OF THIS OR ANY OTHER WARRANTY, EXPRESSED OR IMPLIED, OR UPON ANY OTHER BASIS OF LIABILITY WHATSOEVER.

Seller's obligation under this warranty shall not include any transportation charges or costs of installation or any liability for direct, indirect, or consequential damages or delay.

Seller does not represent that its product may not be compromised or circumvented; that the product will prevent any personal injury or property loss by burglary, robbery, fire or otherwise; or that the product will in all cases provide adequate warning or protection. Buyer understands that a properly installed and maintained alarm may only reduce the risk of burglary, robbery or fire without warning, but is not insurance or a guaranty that such will not occur or that there will be no personal injury or property loss as a result.

CONSEQUENTLY SELLER SHALL HAVE NO LIABILITY FOR ANY PERSONAL INJURY, PROPERTY DAMAGE OR OTHER LOSS BASED ON A CLAIM THAT THE PRODUCT FAILS TO GIVE WARNING. HOWEVER, IF SELLER IS HELD LIABLE, WHETHER DIRECTLY OR INDIRECTLY, FOR ANY LOSS OR DAMAGE ARISING FROM UNDER THIS LIMITED WARRANTY OR OTHERWISE, REGARDLESS OF CAUSE OR ORIGIN, SELLER'S MAXIMUM LIABILITY SHALL NOT EXCEED THE PURCHASE PRICE OF THE PRODUCT, WHICH SHALL BE COMPLETE AND EXCLUSIVE REMEDY AGAINST SELLER.

No employee or representative of Seller is authorized to change this warranty in any way or grant any other warranty.

WARNING: This product should be tested at least once a week.