FW NEO 9F

WIRELESS PIR WITH PET IMMUNITY UP TO 20 Kg

PRODUCT FEATURES

The FW NEO 9F is an advanced, fully supervised low-current wireless PIR that includes a FreeWave transmitter. Both transmitter and detector circuits are powered by long life Lithium battery.
Each FW NEO 9F has a unique ID code (This code is impossible to reproduce). Compatible FreeWave receivers are designed to "learn" specific IDs and respond only to them.
Following detection, FW NEO 9F triggers the on-board transmitter that transmits its specific FreeWave ID followed by an alarm signal and status designators for battery condition. If detector cover is removed Tamper Event triggers the on-board transmitter.
Alarm and other data are forwarded to the alarm control panel. A periodic test transmission for supervision purpose takes place automatically once in 7 min. The receiver is informed that the particular detector is taking an active part in the wireless security system.
The FW NEO 9F has unique Alarm Power Saver (APS) mechanism that enables transmitter activation only 2 min after the last movement has been detected.

- State-of-the-art wireless security system
- Low current ASIC PIR Technology
- Powered by a 3Volt Lithium battery
- Battery life : up to 4 years
- Built in Automatic Power Saver (APS)
- Frequency Band: 916.5MHz
- Low Battery condition signal transmission
- Test mode for PIR coverage and RF signal.
- Range up to 300 m at free space.
- Height installation calibration free (1.5m - 3.6m).
- Unique ID number

The FW NEO 9F provides *pet immunity* up to 20Kg. Pet active bellow 1m.

The Wireless PIR transmits the following events data:
SUPERVISION - a periodical transmission.
Every 7 min indicates detector's presence.
ALARM – alarm transmission triggered by PIR intrusion detection.
LOW BAT – Whenever the battery reaches a pre-set low level (2.4V) Battery Low signal will be sent with the next message (Supervision, Alarm, etc.)
TAMPER – Whenever the FW NEO 9F cover is removed or the unit teals from the wall, a message "Tamper" will be transmitted.
APS
The unique APS (Automatic Power Saver) function built in the detector enables a battery life span up to four years. The detector will transmit only when the last event has occurred more than 2 minutes prior to the current one.

SELECT MOUNTING LOCATION

Choose a location most likely to intercept an intruder. (Our recommendation is a corner installation). See detection pattern – fig.2. The quad-element high quality sensor detects motion crossing the beam; it is slightly less sensitive detecting motion toward the detector.
Recommended mounting height – 1.8m-2.4m.
AVOID THE FOLLOWING LOCATIONS

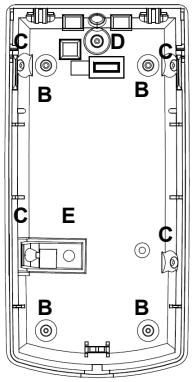
- Facing direct sunlight.
- Facing areas that may change temperature rapidly.
- Areas where there are air ducts or substantial airflows.

The FW NEO 9F performs better when provided with a constant and stable environment.

DETECTOR INSTALLATION

The detector can either be wall or corner mounted.
If ceiling or special wall mounting is required, use the optional bracket base. Refer to bracket description. (See fig. 4).

1. To remove the front cover, unscrew the holding screw and gently raise the front cover.
2. To remove the PC board, carefully unscrew the holding screw located on the PC board.
3. Break out the desired holes for proper installation.



B. Use for flat wall mounting
C. Corner mounting - use all 4 holes. Sharp left or right angle mounting - use 2 holes (top and bottom)
D. For bracket mounting
E. For back tamper

Fig. 1

4. Mount the detector base to the wall, corner or ceiling. (For option with bracket see fig.4).
5. Reinstall the PC board by fully tightening the holding screw.
6. Install battery in the battery holder according polarity.
7. Replace the cover by inserting it back in the appropriate closing pins and screw in the holding screw.

RSSI-RF SIGNAL INDICATION

The control panel has "RF Signal quality Indication" for each transmitter in order to help the installer to define best location for the detector from RF point of view.
The indication value is between 1 and 100, where 100 is the best RF received signal. If the RSSI indication is less then 30, it is a sign for weak RF link, try to find a better installation for the PIR.
NOTE: See control panel installation instruction.

ID REGISTRATION

Refer to the system receiver's installation instructions and follow the procedure given there for "learning" detector IDs.
Perform transmission by pressing and releasing tamper switch for learning it by the control panel receiver.
Make sure that the receiver is at learning mode - according to control panel installation instruction.
NOTE: It is recommended to power up the detector and let the system receiver "learn" the detector's ID before actual installation.

TESTING THE DETECTOR

TEST PUSH BUTTON
Push Button is located at the lower left side of the detector. This button (switch) is used to activate the walk and RF transmission test of the detector.
WALK TEST
Push the Test button for 1 sec and release, the LED will blink 3 times, the LED and a Transmission will activate on the every detection.
The test mode period is 2 min; at the end of the test mode the LED will blink fast 4 times to indicate the end of the Test.
ALARM TRANSMISSION TEST
Pressing Push Button for at least 3.0 sec enables the alarm transmission test feature, which activates 11 transmission signals at 6 sec intervals (total test time about 1 min).
Please check, that the receiver unit indicates 11 events.
This test enables to activate the alarm transmission immediately, and bypass the APS 2 minutes limitation.
To check this function it is necessary to verify that the control panel display shows

Zone # X Open

X- zone number from which the massage received.
Tamper transmission test.
Change of the tamper switch state will cause tamper transmissions. Verify on the control panel that display shows

Trouble Zone # X

Transmission range test.
By Alarm transmission test (Pressing Push Button for more then 3.0 sec) it's enable to check the RF transmission quality (RSSI). Special indication at the control panel displays continuously the received RF signal quality.

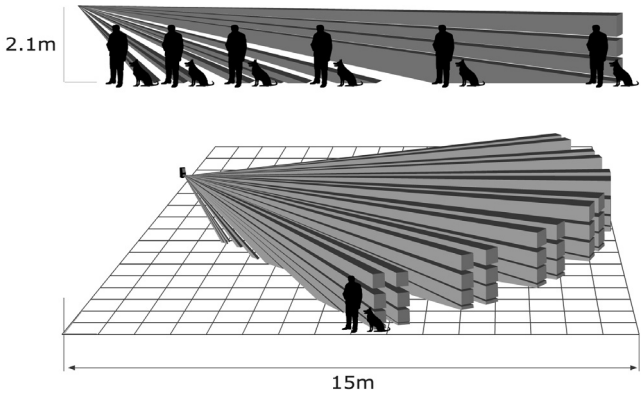


Fig.2

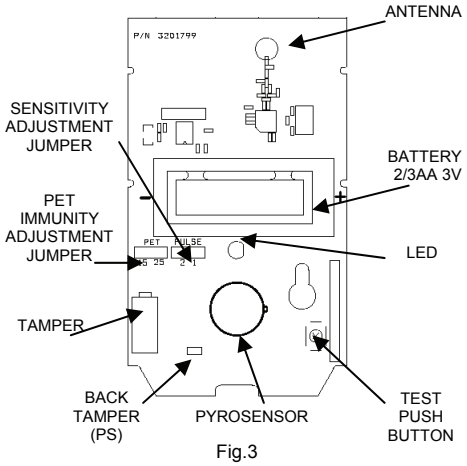


Fig.3

FW NEO 9F

FREEWAVE™ WIRELESS PIR WITH PET IMMUNITY UP TO 20 Kg

OPERATION

The Wireless PIR transmits the following events data:

SUPERVISION - a periodical transmission.
Every 7 min indicates detector's presence.

ALARM – alarm transmission triggered by PIR intrusion detection.

LOW BAT – Whenever the battery reaches a pre-set low level (2.4V) Battery Low signal will be sent with the next message (Supervision, Alarm, etc.

TAMPER – Whenever the unit cover is removed or the unit's cover is put back, a message will be transmitted with "Tamper" signal.

APS
The unique APS (Automatic Power Saver) function built in the detector enables a battery life span up to four years. The detector will transmit only when the last event has occurred more than 2 minutes prior to the current one.

PIR SENSITIVITY ADJUSTMENT

Jumper "Sensitivity Adjustment" use for setting the PULSE count function in order to provide PIR sensitivity control according to the environment.
Position Right– "1"-High sensitivity
For stable environments.
Position Left – "2" – Low sensitivity
For harsh environments.

PET IMMUNITY SETTING

Jumper "Pet Immunity Adjustment" use for setting the PET Immune function - to 15Kg or 25Kg. (Depending on the pet weight).
Position Right
Immunity to an animal up to 25 kg
Position Left
Immunity to an animal up to 15 kg

YOU MUST RESET THE DETECTOR BY DISCONNECT POWER SUPPLY AND RECONNECT IT AFTER FEW SECONDS.

BATTERY

A 3 V lithium battery powers the unit. Thanks to the exclusive APS (Automatic Power Saver) characteristics, the battery provides up to 4 years of continuous operation (depending on the amount of alarms).
If the battery reaches a factory preset low level, the LOW BATTERY signal will be sent and from this moment the detector remains operational for another 30 days giving enough time to replace the 3V lithium battery.

The battery must be replaced
by Size 2/3 CR 17345
Lithium battery 3V
Models as: Power One CR123A-6205

The battery model be only to a type considered a "Limited Power Source" (LPS)in accordance with the Standard EN 60950-1 Latest Version

BATTERY REPLACEMENT

This action has to be performed by your Service Personnel.
NOTE: USE ONLY THE REQUIRED BATTERY AS SPECIFIED IN "BATTERY" SECTION
Instructions:

- Remove the front cover.
- Take out the old battery.
- Install a new battery according polarity.
- After assembling the battery the LED will flash twice in sec for a period of 1 min, during this time the PIR isn't functioning, wait until the LED stop flashing.

CAUTION !!!
RISK OF EXPLOSION IF BATTERY
IS REPLACED BY AN INCORRECT TYPE.
DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS.

SUPPLY CONNECTION

The supply connection to the Detectors must only be to a Limited Power Source (LPS) for the input supply in accordance with the Standard EN 60950-1 Latest Version

STANDARDS COMPLIANCE

This device complies with:

European Council Directive EMC 89/336/EEC

EN50130-4+A1+A2	EN301489-3
EN300220-3	EN61000-6-3
EN55022 Kl. B	EN50371
EN50131-1	EN50131-5-3
EN50131-2-2	SAFETY 2006/95/EC
EN60950-1	Certified by: ANPI

Security Grade 2, Environmental Class II
For more detailed instruction please refer the manuals which you could download from the internet at:
www.thecrowgroup.com

The FCC Wants You to Know

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:
a) Reorient or relocate the receiving antenna.
b) Increase the separation between the equipment and receiver.
c) Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
d) Consult the dealer or an experienced radio/TV technician.

FCC Warning

Modifications not expressly approved by the manufacturer could void the user authority to operate the equipment under FCC Rules.

Ceiling bracket base **Wall bracket base**

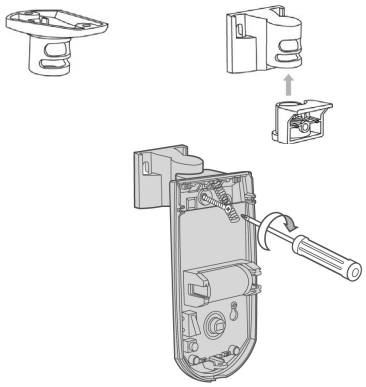


Fig.4

TECHNICAL SPECIFICATION

Modulation Type	*2FSK (1 Frequency)*
Frequency band	*916.5MHz*
Identification	*Unique ID serial number – 24bit*
Event Transmission	*Alarm, Tamper, Test, Supervision, Low Bat*
Supervision Timing	*Every7 minutes (randomly)*
Detection Method	*Dual Element PIR*
Lens Type	*Hard Lens*
Range in open space	*up to 300 m*
Environment Condition	*Jumper for Normal or Harsh selection*
RF Immunity	10 V/m Pulse and 80% AM from 80 MHz to 2GHz
Battery	*Lithium. 3V Type: xx123 Size: 2/3AA*
Current Consumption	
Standby	*~10 μA*
Transmission	*~24 mA*
Power Saving	*APS (Automatic Power Saver)*
Installer Test Modes	*LED Indicator (RF & Optic) Walk test & Alarm transmission test*
Operating temperature Range	*-10°C to +50°C*
Dimensions	*123mm x 62mm x 38mm*
Weight	*120gr*
Standards	*FCC Part 15 and ETS 300-220*

N345

CROW ELECTRONIC ENGINEERING LTD. ("Crow") - WARRANTY POLICY CERTIFICATE

This Warranty Certificate is given in favor of the purchaser (hereunder the "**Purchaser**") purchasing the products directly from Crow or from its authorized distributor.
Crow warrants these products to be free from defects in materials and workmanship under normal use and service for a period of 24 months from the last day of the week and year whose numbers are printed on the printed circuit board inside these products (hereunder the "**Warranty Period**").
Subject to the provisions of this Warranty Certificate, during the Warranty Period, Crow undertakes, at its sole discretion and subject to Crow's procedures, as such procedures are form time to time, to repair or replace, free of charge for materials and/or labor, products proved to be defective in materials or workmanship under normal use and service. Repaired products shall be warranted for the remainder of the original Warranty Period.
All transportation costs and in-transit risk of loss or damage related, directly or indirectly, to products returned to Crow for repair or replacement shall be borne solely by the Purchaser.
Crow's warranty under this Warranty Certificate does not cover products that is defective (or shall become defective) due to: (a) alteration of the products (or any part thereof) by anyone other than Crow; (b) accident, abuse, negligence, or improper maintenance; (c) failure caused by a product which Crow did not provide; (d) failure caused by software or hardware which Crow did not provide; (e) use or storage other than in accordance with Crow's specified operating and storage instructions.
There are no warranties, expressed or implied, of merchantability or fitness of the products for a particular purpose or otherwise, which extend beyond the description on the face hereof.
This limited Warranty Certificate is the Purchaser's sole and exclusive remedy against Crow and Crow's sole and exclusive liability toward the Purchaser in connection with the products, including without limitation - for defects or malfunctions of the products. This Warranty Certificate replaces all other warranties and liabilities, whether oral, written, (non-mandatory) statutory, contractual, in tort or otherwise.
In no case shall Crow be liable to anyone for any consequential or incidental damages (inclusive of loss of profit, and whether occasioned by negligence of the Crow or any third party on its behalf) for breach of this or any other warranty, expressed or implied, or upon any other basis of liability whatsoever. Crow does not represent that these products can not be compromised or circumvented; that these products will prevent any person injury or property loss or damage by burglary, robbery, fire or otherwise; or that these products will in all cases provide adequate warning or protection.
Purchaser understands that a properly installed and maintained product may in some cases reduce the risk of burglary, fire, robbery or other events occurring without providing an alarm, but it is not insurance or a guarantee that such will not occur or that there will be no personal injury or property loss or damage as a result.
Consequently, Crow shall have no liability for any personal injury; property damage or any other loss based on claim that these products failed to give any warning.
If Crow is held liable, whether directly or indirectly, for any loss or damage with regards to these products, regardless of cause or origin, Crow's maximum liability shall not in any case exceed the purchase price of these products, which shall be the complete and exclusive remedy against Crow.

CROW ELECTRONIC ENGINEERING LTD.

ISRAEL: Crow Electronic Engineering Ltd.
12 Kineret St. Airport City
P.O. Box 293 Ben Gurion Airport , 70100
Tel: 972-3-9726000
Fax: 972-3-9726001
E-mail: support@crow.co.il

USA: 2160 North Central Road,
Fort Lee, N.J. 07024
Tel: 1-800-GET CROW
or (201) 944 0005
Fax: (201) 944 1199
E-mail: support@crowelec.com

AUSTRALIA: 429 Nepean HWY Brighton East Vic 3187
Tel: 61-3-9596 7222
Fax: 61-3-9596 0888
E-mail: crow@crowaust.com.au

POLAND: VIDICON SP. ZO. O.
15 Povazkowska St.
01 – 797 Warsaw Poland
Tel: 48 22 562 3000
Fax: 48 22 562 3030
E-mail: vidicon@vidicon.pl

LATIN AMERICA: CROW LATIN AMERICA
5753 NW 151ST.Street
MIAMI LAKES,
FL 33014 – USA
Tel: +1-305-823-8700
Fax: +1-305-823-8711
E-mail: sales@crowlatinamerica.com

ITALY: DEATRONIC
VIA Giulianello 4/14
00178 ROMA, ITALY
Tel: +39-0676-12912
Fax: +39-0676-12601
E-mail: info@deatronic.com

These instructions supersede all previous issues in circulation prior to January 2006.