INSTALLATION INSTRUCTIONS
FOR CRN 6-CHANNEL & 12-CHANNEL ALARM TRANSMITTERS
Models: CRN6EU, CRN6EV, CRN12EU & CRN12EV

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IMPORTANT: READ THESE INSTRUCTIONS & REFER TO DIAGRAM ON REVERSE SIDE

INTRODUCTION

The CRN6EU/V and CRN12EU/V are Very Long Range Alarm Radio Transmitters for use in the NEARNET Alarm Radio Network. Intended as a backup to telephone line based digital communicators, the units employ microprocessor controlled CRN Blink-of-an-Eye data encoders and fully synthesized 2-Watt UHF or VHF RF transmitters to provide highly reliable, supervised communication between the subscribers alarm system and the central station.

It is important that the installation technician recognize that unlike smoke detectors, motion detectors, etc. these transmitters draw a substantial amount of current (nearly 1 Amp during transmit) and require a fair amount of care in mounting so as to achieve an optimal RF path. Therefore, *read the installation notes thoroughly prior to installing the product and consult the wiring diagrams during installation.*

TESTING, INSTALLATION & TROUBLESHOOTING

For best results, this radio device should be installed in a climate controlled area, and as high as possible within the premise. *This device should not be installed at or below grade level (underground), in poorly ventilated attics, or within 36 inches of large metal objects, low or high voltage wiring/devices or florescent light fixtures.*

TESTING (The following should be done at the Subscriber's premise prior to installation.)
1. Install the antenna as shown in the pictorial on reverse side.
2. Temporarily connect power to the transmitter from a fully charged 12V, 6AH (min.) battery. Do not mount the transmitter at this time. *Temporarily* position the unit in the location it is intended to be mounted.
3. Swipe a magnet along the front (decal side) of the transmitter from the letter "C" at the top to bottom of the decal while observing the red LED at the top left hand side of the unit. Each time the magnet is swiped, the red LED will illuminate indicating transmission of the transmitter ID plus code 0. Verify the signal has been received by calling the central station or using the NEARNET Automated Signal Verification System (516-696-7496). Move the unit as required for reliable results. Reduce output power by *temporarily* installing the Half-Power Test Resistor (3 ohm 2 watt) between the +12VDC supply and the transmitter. Verify signals are reliably received. If reliable results cannot be obtained using the Half-Power Test Resistor, an extended range CRN Hi-Gain Antenna should be used (see catalog for extended range antenna options). After testing, be sure to remove the Half-Power Test Resistor from the transmitter and re-connect power.

INSTALLATION
1. Permanently mount the unit and connect to the control panel as shown in the wiring diagram on reverse.
2. Trigger the transmitter by setting off the alarm control and verify signals have been received by calling the central station or using the NEARNET Automated Signal Verification System (516-696-7496).

TROUBLESHOOTING
1. Verify there is between 12 and 14VDC at the transmitter terminal strip. While measuring 12V at the terminal strip, swipe a magnet verifying the red LED illuminates. If the supply voltage falls below 11.5 volts, check the power supply and cable wire size (22 AWG for up to 10 ' / 18 AWG for up to 50 ').
2. With an ohm meter set to the 200 ohm scale, measure between the "-" power supply terminal and the case. The reading should be less than 2 ohms. If it is higher than 2 ohms, damage has been caused by the positive supply voltage being shorted to the transmitter metal case. Return the transmitter to NEARNET for this Non Warranty Repair.
3. Remove all wires connected to the unit and power the unit from a fully charged 12V 6AH (min.) battery. Swipe a magnet along the decal side of the transmitter from the "C" at the top to bottom of the decal while observing the red LED. Verify the signal has been received by calling the central station or using the NEARNET Automated Signal Verification System (516-696-7496). If signals have not been received, remove the unit and try this test outdoors from as high a position as possible. If signals have not been received, verify operation closer to a receiving site or call NEARNET Technical Assistance (516-736-7123).
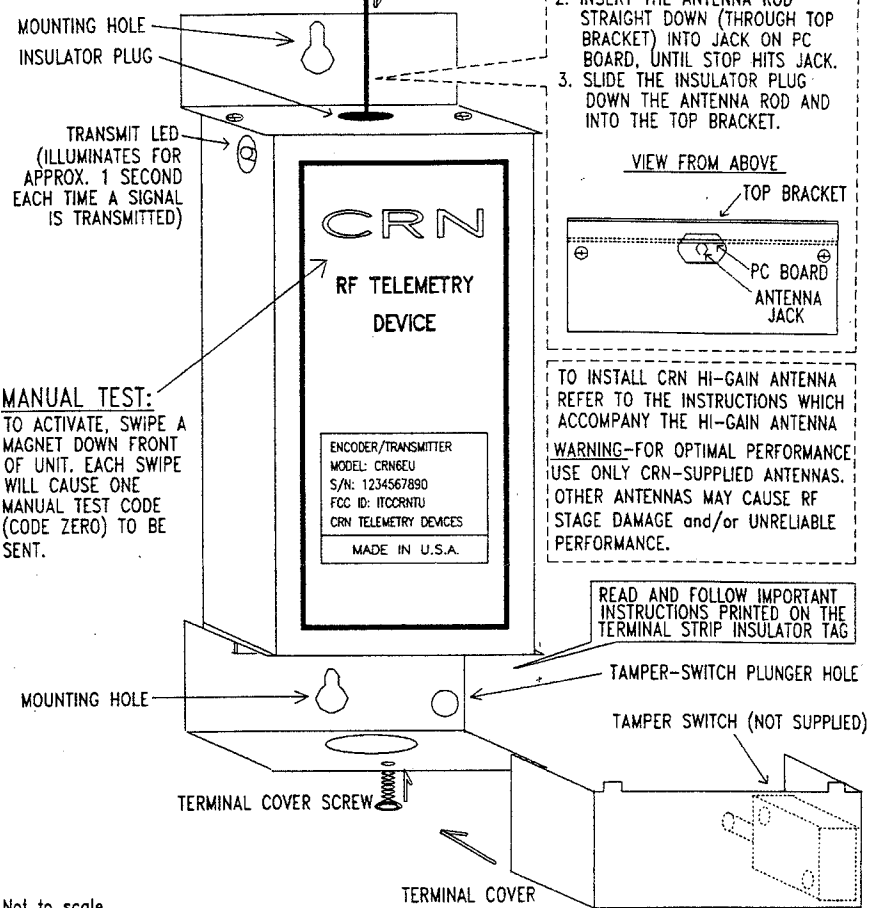
CRN6EU/V & CRN12EU/V INSTALLATION DIAGRAM

INPUT CHANNEL	CODE SENT	CHANNEL PRIORITY	TRIGGER METHOD/INPUT VOLTAGE
1	1	1	4.5 TO 14.5VDC
2	2	2	4.5 TO 14.5VDC
3	3	3	4.5 TO 14.5VDC
4	4	4	6-CHAN MODEL: 4.5 TO 14.5VDC OR GROUND IF R64 IS CUT. 12-CHAN MODEL: 4.5 TO 14.5VDC
5	5	5	6-CHAN MODEL: 4.5 TO 14.5VDC OR GROUND IF R64 IS CUT. 12-CHAN MODEL: 4.5 TO 14.5VDC
6	6	6	6-CHAN MODEL: 4.5 TO 14.5VDC OR GROUND IF R64 IS CUT. 12-CHAN MODEL: 4.5 TO 14.5VDC
7	7	7	4.5 TO 14.5VDC
8	8	8	4.5 TO 14.5VDC
B	B	9	GROUND
C	C	10	GROUND
D	D	11	GROUND
E	E	12	GROUND
SUPV. TEST	Ø	TIMER RESET ON ALARM	INTERNALLY TRIGGERED EVERY 5 HOURS
MANUAL TEST	Ø	DISABLED ON ALARM	MAGNET SWIPE

1. ALARM CHANNELS TRANSMIT 5 TIMES / EVENT, SUPERVISORY & MANUAL TEST TRANSMIT ONCE / EVENT. 2. LOWEST CHANNEL # HAS HIGHEST PRIORITY. 3. ALL CHANNELS HAVE A 750 mSEC INTEGRATION DELAY.

WARNING
A 50 OHM ANTENNA MUST BE INSTALLED ON THE ANTENNA OUTPUT PRIOR TO POWERING THE UNIT OR DAMAGE TO THE RF STAGE WILL RESULT

CAUTION !
UNIT POSITION IS CRITICAL MOUNT UNIT SO ANTENNA IS VERTICAL AND AT LEAST 36" FROM ALARM CONTROL PANEL, LARGE METAL OBJECTS, HIGH VOLTAGE WIRING/DEVICES, LOW VOLTAGE WIRING/DEVICES & FLOURESCENT LIGHT FIXTURES.
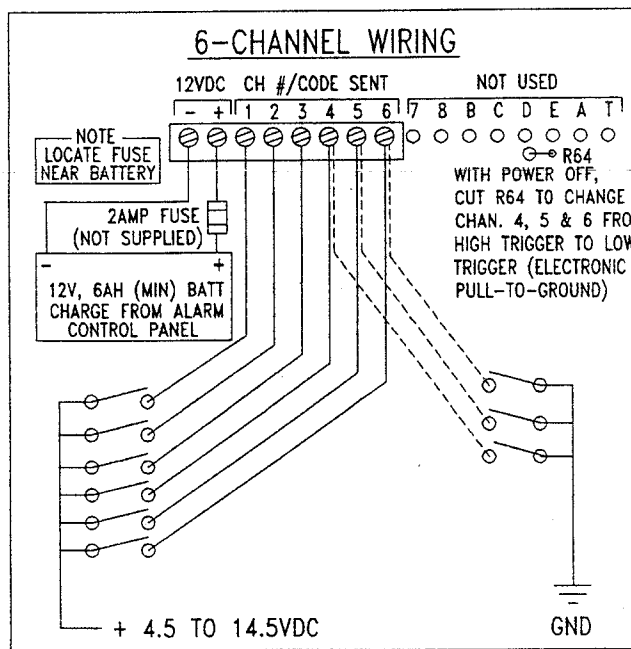
STANDARD 1/4 WAVE UNITY-GAIN ANTENNA

MOUNTING HOLE
INSULATOR PLUG

TRANSMIT LED
(ILLUMINATES FOR APPROX. 1 SECOND EACH TIME A SIGNAL IS TRANSMITTED)

ANTENNA INSTALLATION
1. SLIDE THE INSULATOR PLUG HALFWAY UP THE ANTENNA ROD.
2. INSERT THE ANTENNA ROD STRAIGHT DOWN (THROUGH TOP BRACKET) INTO JACK ON PC BOARD, UNTIL STOP HITS JACK.
3. SLIDE THE INSULATOR PLUG DOWN THE ANTENNA ROD AND INTO THE TOP BRACKET.

VIEW FROM ABOVE

TOP BRACKET
PC BOARD
ANTENNA JACK

CRN
RF TELEMETRY DEVICE

ENCODER/TRANSMITTER
MODEL: CRN6EU
S/N: 1234567890
FCC ID: ITCCRNTU
CRN TELEMETRY DEVICES
MADE IN U.S.A.

TO INSTALL CRN HI-GAIN ANTENNA REFER TO THE INSTRUCTIONS WHICH ACCOMPANY THE HI-GAIN ANTENNA

WARNING-FOR OPTIMAL PERFORMANCE USE ONLY CRN-SUPPLIED ANTENNAS. OTHER ANTENNAS MAY CAUSE RF STAGE DAMAGE and/or UNRELIABLE PERFORMANCE.

READ AND FOLLOW IMPORTANT INSTRUCTIONS PRINTED ON THE TERMINAL STRIP INSULATOR TAG

TAMPER-SWITCH PLUNGER HOLE

TAMPER SWITCH (NOT SUPPLIED)

MANUAL TEST:
TO ACTIVATE, SWIPE A MAGNET DOWN FRONT OF UNIT. EACH SWIPE WILL CAUSE ONE MANUAL TEST CODE (CODE ZERO) TO BE SENT.

MOUNTING HOLE

TERMINAL COVER SCREW

TERMINAL COVER

Not to scale.

6-CHANNEL WIRING

12VDC WIRING	
0-10'	22AWG
10-50'	18AWG

12VDC   CH #/CODE SENT   NOT USED
– + 1 2 3 4 5 6 7 8 B C D E A T

NOTE LOCATE FUSE NEAR BATTERY

R64
WITH POWER OFF, CUT R64 TO CHANGE CHAN. 4, 5 & 6 FROM HIGH TRIGGER TO LOW TRIGGER (ELECTRONIC PULL-TO-GROUND)

2AMP FUSE (NOT SUPPLIED)

12V, 6AH (MIN) BATT CHARGE FROM ALARM CONTROL PANEL

+ 4.5 TO 14.5VDC   GND

12-CHANNEL WIRING

12VDC   CH #/CODE SENT   NOT USED
– + 1 2 3 4 5 6 7 8 B C D E A T

NOTE LOCATE FUSE NEAR BATTERY

2AMP FUSE (NOT SUPPLIED)

12V, 6AH (MIN) BATT CHARGE FROM ALARM CONTROL PANEL

+ 4.5 TO 14.5VDC   GND