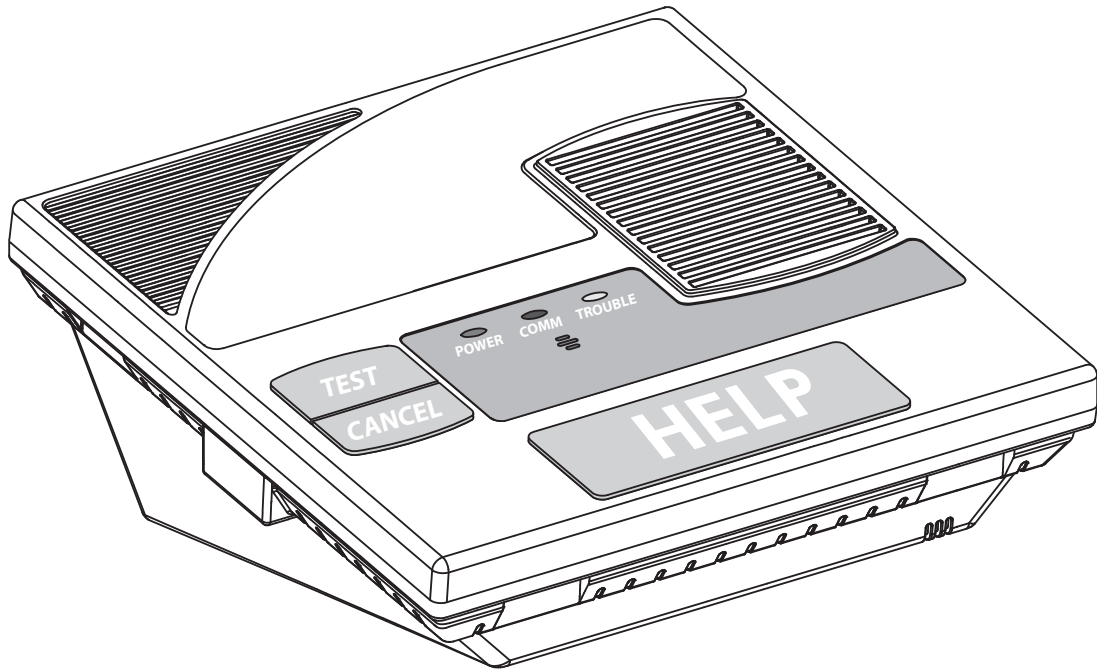


INSTALLATION GUIDE



EM20 PERSONAL EMERGENCY RESPONSE SYSTEM CONSOLE

MODEL EM20 INSTALLATION GUIDE

FCC NOTICE

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.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device has been designed to operate with the integrated 1100 Series PCB antenna having a maximum gain of 1.8 dB. Antennas having a gain greater than 1.8 dB are strictly prohibited for use with this device. The required antenna impedance is 50 ohms.

If necessary, the installer should consult the dealer or an experienced radio/television technician for additional suggestions. The installer may find the following booklet, prepared by the Federal Communications Commission, helpful:

"How to identify and Resolve Radio-TV Interference Problems."

This booklet is available from the U.S. Government Printing Office, Washington D.C. 20402
Stock No. 004-000-00345-4

Industry Canada Information

This device complies with Industry Canada Licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

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Information furnished by DMP is believed to be accurate and reliable.

This information is subject to change without notice.

Caution Notes



Throughout this guide you will see caution notes containing information you need to know when installing the EM20. These cautions are indicated with a yield sign. Whenever you see a caution note, make sure you completely read and understand its information. Failing to follow the caution note can cause damage to the equipment or improper operation of one or more components in the system.

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Specifications

1.1 Power Supply

Input: 16.5VAC
Standby Battery: 12V Sealed Lead Acid

1.2 Communication

EM20C Cellular Communicator

The Cellular communicator uses DMP Model 264C CDMA to communicate with the Central Station receiver.

EM20D Dialer Communicator

The Dialer communicator uses digital dialer line to communicate with the Central Station receiver.

1.3 Enclosure Specifications

The EM20 ships in a plastic enclosure with a Quick Start Guide (LT-1329) and User Guide (LT-1347).

Size	Color
6.5" W x 6.5" H x 2.95" D	White

Introduction

2.1 System Configurations

The EM20 can be programmed with 16 wireless zones.

System Components

3.1 Wiring Diagram

The system wiring diagram in Figure 1 shows some of the accessory devices for use in various applications. A description of each module follows.

3.2 Accessory Devices

- 1141 Wall Button
- 1148 Personal Pendant with Lanyard and Wristband

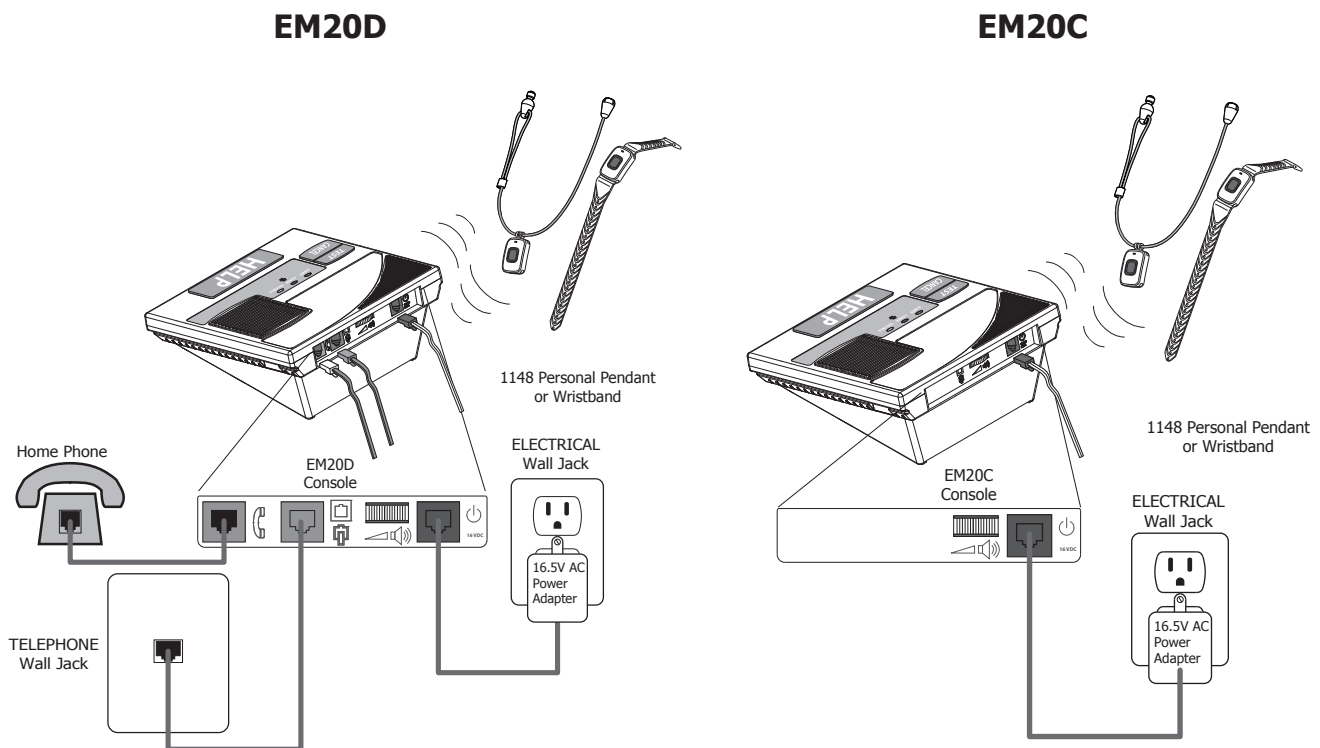


Figure 1: Wiring Diagrams for Cellular and Dialer

Installation

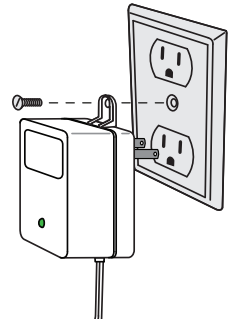
4.1 Location Information

A location should be selected that is centrally located between the 1100 Series transmitters used in the installation. Place the EM20 away from metal objects. Placing the EM20 on or near metal surfaces impairs performance.

Primary Power Supply

5.1 AC Power Supply

1. Unpack the 16.5VAC power supply and fully unroll the cord.
2. Connect the power supply to the Red RJ22 connection on the back of the EM20.
3. Connect the power supply to a 120VAC outlet not controlled by a switch and secure with the screw provided.



Secondary Power Supply

6.1 Standby Battery

Install the Battery

 Observe polarity when connecting battery. Ensure the battery harness connectors are fully inserted to prevent shorting.

1. Turn the EM20 over and remove battery cover.
2. The new battery comes with the harness pre-installed.
3. Connect the new battery harness to the locking 4-pin header battery connector inside the battery compartment. Because the header is keyed, it can only be installed in one direction.
4. Re-install the battery cover and turn the EM20 upright.

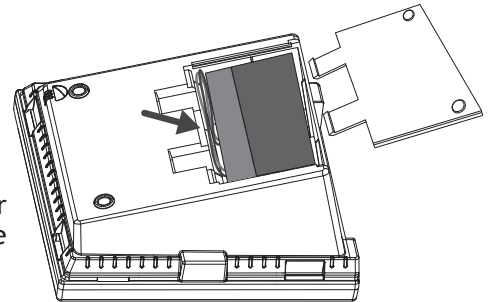


Figure 2: Step 1.

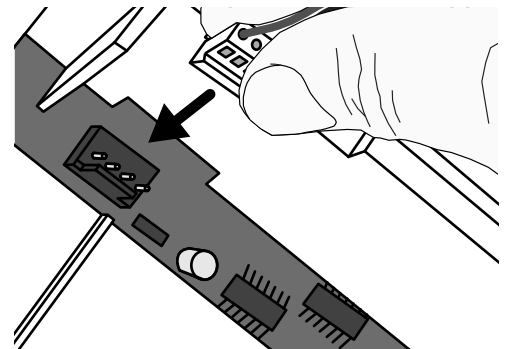
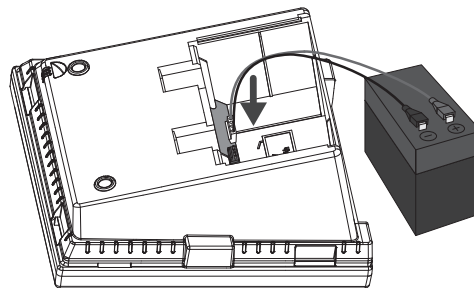


Figure 3: Step 2 & 3.

6.2 Battery Supervision

The EM20 tests the battery once every hour when AC power is present. This test occurs 15 minutes past each hour and lasts for five seconds. A load is placed on the battery and if the battery voltage falls below 11.9V, a low battery is detected. If DC power has failed, a low battery is detected any time the battery voltage falls below 11.9V.

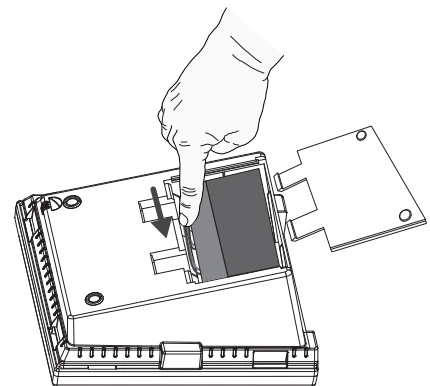


Figure 4: Step 4.

Status Light Operation

7.1 Status Lights

Each Status Light indicates the current status of the EM20 Console.

Green POWER Light

Off..... No AC Power. Check power cord is plugged in.

Blinking..... AC Power Adapter is plugged in but the battery is low.

On Steady .. AC Power and battery good. This is normal.

Red COMM Light

Off..... Normal

Blinking..... No telephone line or cellular connection detected.

On Steady .. Connected to an operator or sending a message.

Yellow TROUBLE Light

Off..... Normal

Blinking..... Press and release the CANCEL Button to reset activity on console.

On Steady .. System troubles such as low battery on pendant or missing pendant.

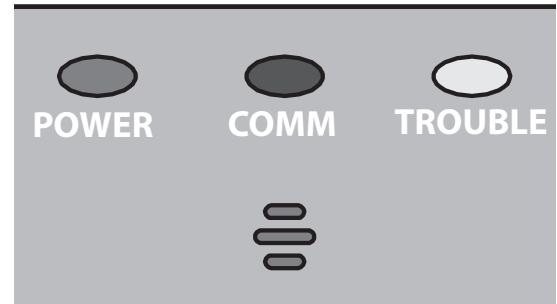


Figure 5: Status Lights

Programming Connection

8.1 Programming Connection

A locking 4-pin header is provided to connect the Remote Link computer when using a DMP Model 399 Programming Cable to program the unit. After programming is complete, remove the Model 399 Programming Cable.

Note: To use the programming header with the DMP Model 399 Programming Cable, you must remove the battery connector. The same 4-pin header is used for programming and for charging the battery.

8.2 Low Power Shutdown

Using Remote Link Programming Software, Low Power Shutdown can be enabled to preserve the battery during shipment to the end user by shutting down the processor until AC Power is restored to the unit and Voice Prompt Setup is completed.

On-Board 1100 Series Wireless

9.1 Wireless Antenna

The EM20 Wireless Antenna is integrated into the circuit board. The built-in wireless receiver operates with the DMP 1141 and 1148 transmitters. See section System Components/Accessory Devices for a list of accessory devices.

Telephone Connections

10.1 Telephone

Connect the House Phone

1. Unpack the color-coded phone wire and fully unroll.
2. Connect the Green wire to the Green RJ11 Connector on the back of EM20.
3. Connect the opposite end of the Green wire to the house phone wall connection.

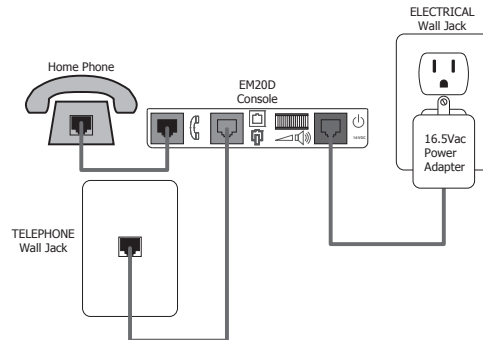


Figure 6: Telephone Connections.

10.2 Cellular

Connect to Cellular Network

1. When AC power is applied, the EM20C will begin searching for cellular signal.

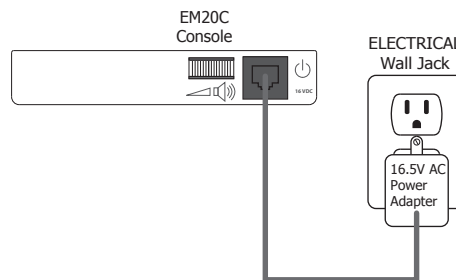


Figure 7: Cellular Connections.

10.3 FCC Registration

The panel complies with FCC part 68 and is registered with the FCC.

Registration number: CCKAL01BXEM20

Ringer Equivalence: 0.1 B

10.4 Notification

Registered terminal equipment must not be repaired by the user. In case of trouble, the device must be immediately unplugged from the telephone jack. The factory warranty provides for repairs. Registered terminal equipment may not be used on party lines or in connection with coin telephones. Notification must be given to the telephone company with the following information:

- a. The particular line(s) the service is connected to
- b. The FCC registration number
- c. The ringer equivalence
- d. The make, model, and serial number of the device

10.5 CS-03 Registration Information

This product meets the applicable Industry Canada technical specifications.

Le présent matériel est conforme aux spécifications techniques applicables d'Industrie Canada.

The Ringer Equivalence Number (REN) is an indication of the maximum number of devices allowed to be connected to a telephone interface. The termination of an interface may consist of any combination of devices subject only to the requirement that the sum of the RENs of all the devices not exceed five.

L'indice d'équivalence de la sonnerie (IES) sert à indiquer le nombre maximal de terminaux qui peuvent être raccordés à une interface téléphonique. La terminaison d'une interface peut consister en une combinaison quelconque de dispositifs, à la seule condition que la somme d'indices d'équivalence de la sonnerie de tous les dispositifs n'excède pas cinq.

EM20 Personal Emergency Response System Console Compliance

Home Health Care Signaling Equipment

ANSI/UL 1637/1635

11.1 Home Health Care Signaling Equipment

1. Power fail hours needs to be set to 8 hours or less in System Options.
2. Add the character "D" to the beginning of a phone number in Communications for the EM20 to wait for a dial tone before dialing.

Specifications Battery Life Expectancy 2 years (normal operation) Type 12V Lead Acid Frequency Range: 905-924 MHz Dimensions Base Unit Case 6.5" L x 6.5" W x 2.95" H Color White Ordering Information EM20D Dialer Communicator EM20C Cellular Communicator Accessories 1141 Wall Button 1148 Personal Pendant with Lanyard and Wristband	Patents U. S. Patent No. 7,239,236 Certifications FCC Part 15 Registration ID CCKPC0156 Pending Industry Canada ID: 5251A-PC0156
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