

Mobile Activation Case

Models MAC-01 and MAC-02



Description, Specifications, and Operations Manual

Limited Warranty

This product is subject to and covered by a limited warranty, a copy of which can be found at www.fedsig.com/SSG-Warranty. A copy of this limited warranty can also be obtained by written request to Federal Signal Corporation, 2645 Federal Signal Drive, University Park, IL 60484, email to info@fedsig.com or call +1 708-534-3400.

This limited warranty is in lieu of all other warranties, express or implied, contractual or statutory, including, but not limited to the warranty of merchantability, warranty of fitness for a particular purpose and any warranty against failure of its essential purpose.



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Safety Messages

⚠ WARNING

It is important to follow all instructions shipped with this product.

Listed below are important safety instructions and precautions you should follow:

Important Notice

Federal Signal reserves the right to make changes to devices and specifications detailed in the manual at any time in order to improve reliability, function or design. The information in this manual has been carefully checked and is believed to be accurate; however, no responsibility is assumed for any inaccuracies.

Publications

Federal Signal recommends the following publications from the Federal Emergency Management Agency for assistance with planning an outdoor warning system:

- The “Outdoor Warning Guide” (CPG 1-17)
- “Civil Preparedness, Principles of Warning” (CPG 1-14)
- FEMA-REP-1, Appendix 3 (Nuclear Plant Guideline)
- FEMA-REP-10 (Nuclear Plant Guideline).

Planning

- If sirens are not activated in a timely manner when an emergency condition exists, they cannot provide the intended audible warning. It is imperative that knowledgeable people, who are provided with the necessary information, are available at all times to authorize the activation of the sirens.
- When sirens are used out of doors, people indoors may not be able to hear the warning signals. Separate warning devices or procedures may be needed to effectively warn people indoors.
- The sound output of sirens is capable of causing permanent hearing damage. To prevent excessive exposure, carefully plan siren placement, post warnings, and restrict access to areas near sirens.
- Activating the sirens may not result in people taking the desired actions if those to be warned are not properly trained about the meaning of siren sounds. Siren users should follow FEMA recommendations and instruct those to be warned of correct actions to be taken.
- After installation, service, or maintenance, test the siren system to confirm that it is operating properly. Test the system regularly to confirm that it will be operational in an emergency.

- If future service and operating personnel do not have these instructions to refer to, the siren system may not provide the intended audible warning and service personnel may be exposed to death, permanent hearing loss, or other bodily injury. File these instructions in a safe place and refer to them periodically. Give a copy of these instructions to new recruits and trainees. Also give a copy to anyone who is going to service or repair the siren.

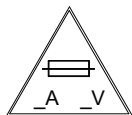
Installation and Service

- Sirens may be operated from remote control points. Whenever possible, disconnect all siren power including batteries before working near the siren.
- After installation or service, test the siren system to confirm that it is operating properly. Test the system regularly to confirm that it will be operational in an emergency.
- If future service personnel do not have these warnings and all other instructions shipped with the equipment to refer to, the siren system may not provide the intended audible warning and service personnel may be exposed to death, permanent hearing loss, or other bodily injury. File these instructions in a safe place and refer to them periodically. Give a copy of these instructions to new recruits and trainees. Also, give a copy to anyone who is going to service or repair the sirens.
- To reduce the risk of electric shock, do not perform any servicing other than what is contained in the operating instructions unless you are qualified to do so. Refer all servicing to qualified service personnel. Always test the MAC before using after repairs have been made.

Operation

Failure to understand the capabilities and limitations of your siren system could result in permanent hearing loss, other serious injuries or death to persons too close to the sirens when you activate them or to those you need to warn. Carefully read and thoroughly understand all safety notices in this manual and all operations-related items in all instruction manuals shipped with equipment. Thoroughly discuss all contingency plans with those responsible for warning people in your community, company, or jurisdiction.

Symbol Definition



Indicates to reduce the risk of fire, replace fuse as marked.

Pay careful attention to the notice located on the equipment.

Read and understand the information contained in this manual before attempting to install or service the Informer.

General Description

Introduction

The Mobile Activation Case (MAC) is a portable radio activation system. This mobile system allows you to activate your outdoor warning system using radio controls. The MAC comes in two version: the MAC-01 supports VHF radio networks, and the MAC-02 supports UHF radio networks. The MAC is a portable, self-contained radio transceiver and Modem MSK with power and battery backup.

The following main components are required for mobile use:

- MAC includes backpack for storage and cables for connecting to user-supplied laptop.
- Laptop computer equipped with Federal Signal Commander Software.

Set up these components in the field and you are able to activate your warning system through your laptop computer using Commander Software. The MAC comes with a water-resistant backpack that includes everything you need to set up your mobile workstation.

Features

The MAC has the following features.

- 30 Watt radio transceiver installed.
- Federal Signal Modem-MSK universal transceiver.
- USB port and backup RS232 port for connecting to your laptop.
- USB and RS232 serial cables.
- Bulkhead mounted female BNC antenna receptacle.
- Rubber duck antenna.
- Long-lasting rechargeable Li-ion battery with built-in battery charger.
- 8 hour standby operation followed by one hour continuous radio polling operation without AC power, with radio at 10 Watts.
- 10 foot male-male fused automotive accessory power cable to interface 12 Vdc automotive accessory power receptacle.
- AC power receptacle to charge internal battery with removable AC power cable.
- Padded water-resistant backpack to store and carry MAC and laptop computer.

Customer-Supplied Accessory

- Laptop computer (with power cord, if required) equipped with Federal Signal Commander Software.

Input/Output Definitions

Figure 1 Front of MAC Radio Case

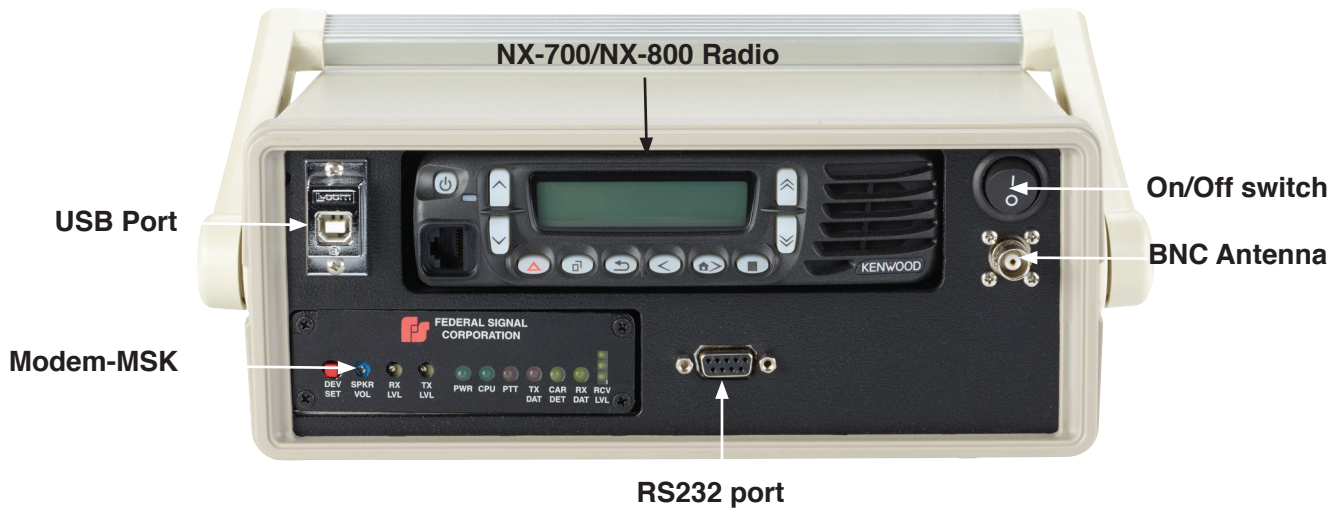


Figure 2 Back of MAC Radio Case



Figure 3 Backpack



Unpacking the Kit

Ensure that the parts listed are included in the package. If you are missing any parts, contact Customer Support. See Getting Service.

Table 1 MAC Contents

Description	Part Number
Minimum Shift Keying (MSK) Modem*	MODEM-MSK
12.8 Vdc LiFePO4 Battery Charger*	12000529-TERM
12.8 Vdc, 5 Ah, LiFePO4 Battery*	15500483
Kenwood NX-700 Radio*	19900172A
Right Angle, High, Antenna	240190B-02
6 Ft AC Power Cord	1461212A
Male to Male Cig. Lighter Cable	17500537
RS232, DB9(F) to DB9 Cable	1751190A
USB Type A/Type B Cable	1751410A
MAC Instruction Manual	25500128
Pelican Backpack #S115	864200177

*Included in the Mobile Activation Case enclosure.

Figure 4 Picture of MAC Contents



Specifications

Table 2 Electrical

AC Power Input	6 foot 3 conductor wire AC power cable 120 Vac for battery charger
DC Power Input	12 Vdc female automotive accessory receptacle with 10 foot fused male to male automotive DC power cable NOTE: Does not charge battery.
Antenna Jack	Panel mount female BNC
Antenna	Rubber duck*
Battery	12.8 Volt 5 Ah Li-ion rechargeable
Charger	14.6 Volt, 1.5 A CC/CV
Radio	Kenwood NX-700 for MAC-01, supports VHF radio networks Kenwood NX-800 for MAC-02, supports UHF radio networks 30 Watt (Set power per customer specifications and FCC license)
Modem MSK	Modem radio interface

* If you require more radio frequency (RF) coverage, other antenna options are available for purchase.

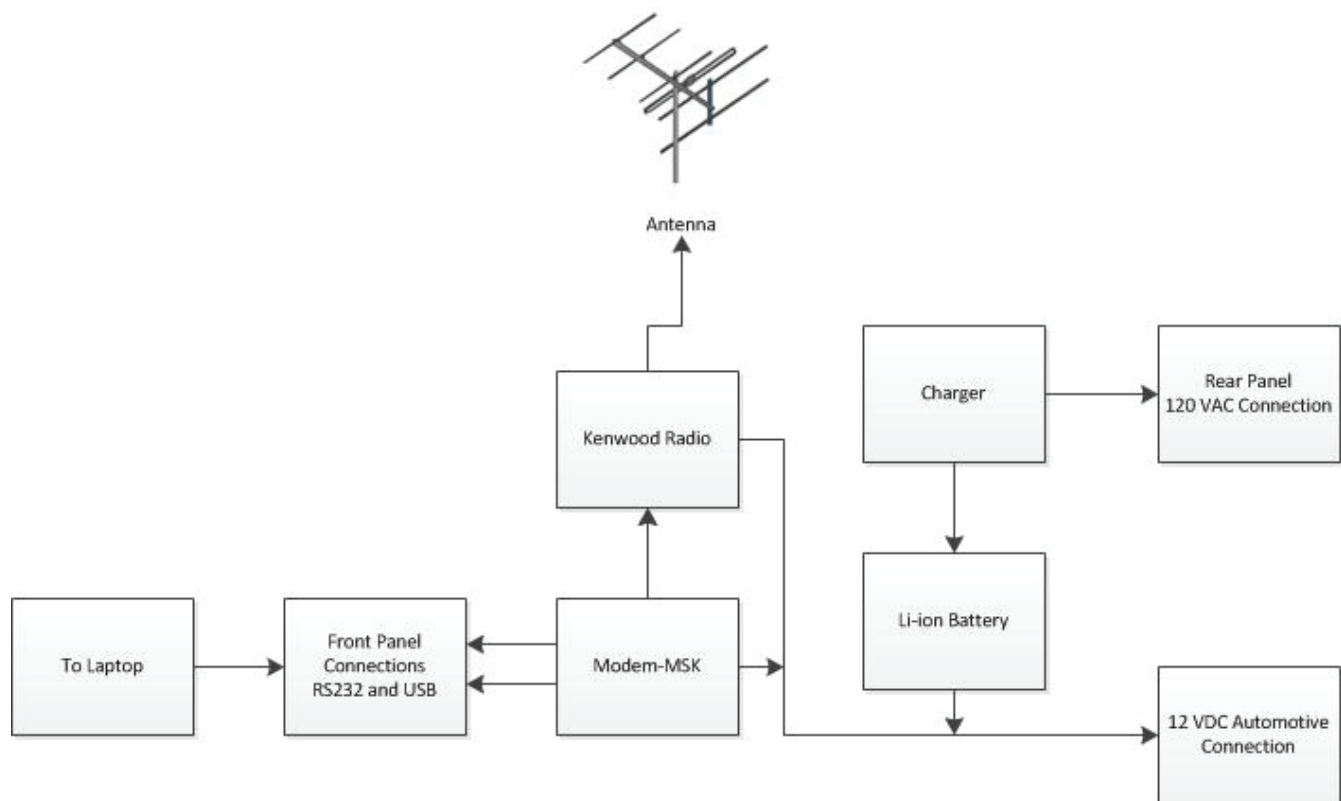
Table 3 Environmental

Operating Temperature	-30°C to +65°C
Humidity	0-95% Non-Condensing

Table 4 Physical

MAC Radio Case Size (H x W x D)	12.50 lb (5.67 kg) 4 in x 10 in x 13 in
Backpack Exterior (H x W x D)	18.50 in x 13 in x 10 in
Backpack Interior (H x W x D) for laptop computer compartment	15.5 in x 10.5 in x 1.1 in

Figure 5 MAC Block Diagram



Operating Instructions

The operating instructions consist of three parts:

- Setting up the MAC for use
- Activating sirens using Commander Software
- Powering the MAC

Setting up the MAC for use

To set up the MAC for use, do the following:

1. Connect antenna to BNC antenna port located on the front of the MAC Radio Case.

NOTE: RF communications are affected by a number of physical factors; such as, antenna placement and RF interference. Therefore, the placement of the radio antenna on high ground typically improves radio communications. Whereas, the placement of the radio antenna inside a vehicle can degrade radio communications.

2. Connect the USB cable between the computer and the USB port located in the front the MAC Radio Case.

NOTE: You can use the RS232 port instead of the USB port.

Figure 6 USB cable between computer and MAC Radio Case



3. Turn on the power switch located on the front of the MAC Radio Case. Ensure that the radio and Modem-MSK power lights are on.
4. Use Commander Software to activate, monitor, and control remote devices (such as, sirens).

Activating Sirens Using Commander Software

Commander Software allows you to activate your sirens. After you activate your siren system, Commander Software performs a Poll and logs the results. A Poll will poll each siren site for status.

NOTE: The operator must always be aware that site conditions shown on any Commander System screen, including the map, are not in real time, but represent conditions at the time of the last polling. Large systems may take several minutes to complete a polling sequence.

Commander Software allows single point and click activation and polling.

See the Commander Software Reference Manual, located within the Commander Software, for further software operation details.

Powering the MAC

If the MAC is not charged, you can power it by using your power receptacle in the vehicle.

To power the MAC from the vehicle, do the following:

1. Connect the Automotive Accessory Power Cable to the plug located on the back of the MAC Radio Case and the other side to an Automotive Accessory Power receptacle in vehicle.

NOTE: This does not charge the MAC internal battery.

Figure 7 Automotive Accessory Power Cable



2. Turn on the Automotive Accessory Power Cable switch to the on position. The LED is lit when plugged into an Automotive Accessory Power receptacle in vehicle.

Figure 8 Automotive Accessory Power Cable switch



Testing the MAC

Refer to the MSK Modem Product Manual for further information. Verify RF settings and test communications with all system components before placing into service.

Getting Service

If you are experiencing any difficulties, contact Federal Signal Customer Care at: 800-548-7229 or 708-534-3400 extension 7511 or Technical Support at: 800-524-3021 or 708-534-3400 extension 7329 or through e-mail at: techsupport@fedsig.com. For instruction manuals and information on related products, visit: <http://www.fedsig.com/>