Package Contents

1. Communication Termination Module (CTM), main board ("E2R")
1.1. Main board mounting screws (qty. 4)
2. Radio Data Cable
3. Radio Antenna Coaxial Cable
4. 24VAC Transformer
4.1. Transformer Retainer Bracket
4.2. Retainer Bracket Nuts (qty. 2)
5. Stainless Steel Wall-mounting Cabinet
5.1. Cabinet mounting screws (qty. 4)
5.2. Cabinet keys (qty. 2)
6. CTM Faceplate
6.1. Faceplate screws (qty. 2)

Installation

1. Secure cabinet to wall using included mounting hardware.

2. Attach antenna cable to coaxial jack protruding from bottom of cabinet (**Figure 1, D**).

3. After removing Faceplate, feed Ethernet cable into cabinet from bottom of cabinet. Plug Ethernet cable into port J1, labeled "ETHERNET" (**Figure 1, A**).

   ⚠ Step 4 should be completed by a qualified professional familiar with the dangers involved.

4. Install power cables to the unit. The connections from the main line power to the transformer's leads should be done in a junction box affixed to the bottom of the cabinet. This reduces the risk of electrical shock and injury. The circuit powering the unit should have power removed during the installation to reduce risk of electrical shock.
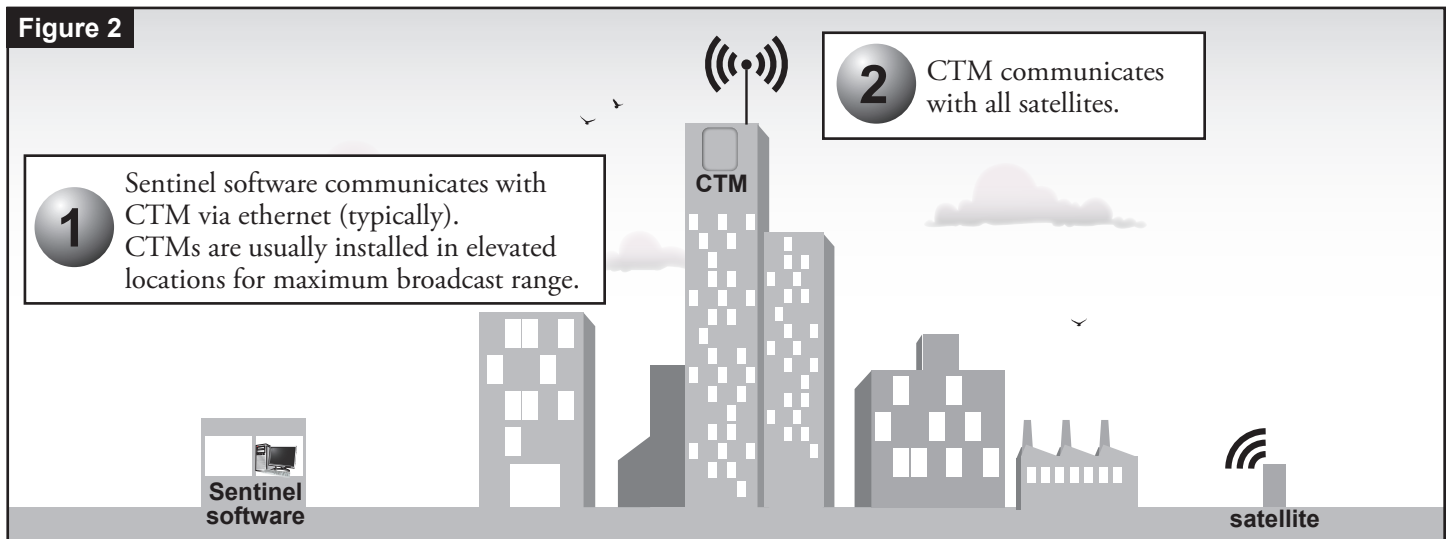
Figure 1
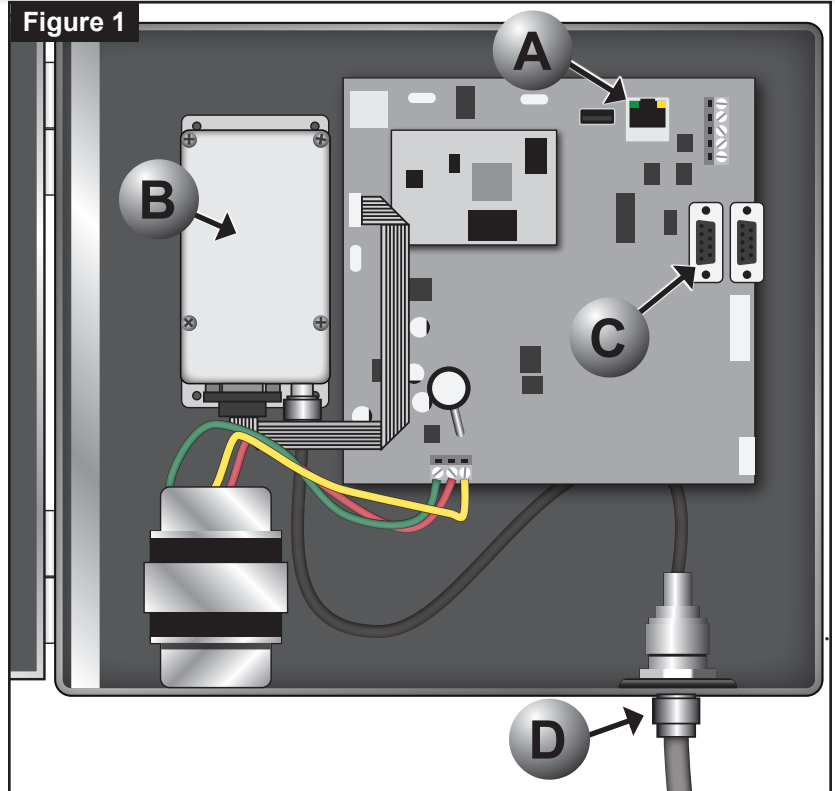
Use a circuit tester to ensure that the power is OFF to these lines before installing the main line power to the transformer.

6. Power on the unit. The unit indicates that it has completed the boot process once the red "CPU" LED is flashing. This LED is located in the lower left corner of the board.

7. Replace Faceplate if IP settings have already been completed. See Setup procedures below.

Figure 2

① Sentinel software communicates with CTM via ethernet (typically). CTMs are usually installed in elevated locations for maximum broadcast range.

② CTM communicates with all satellites.

CTM

Sentinel software

satellite

Setup

The Sentinel CTM functions as an Ethernet-based extender to the radio features implemented in the Sentinel central control software. The Sentinel software will send a command via Ethernet to the specific IP address of the CTM. The CTM will then transmit this command through the UHF radio (**Figure 1, B**) to one or more Sentinel satellites in the field (**Figure 2**). The responses from the satellites in the field will be received by the CTM and sent along to central control via Ethernet.

The CTM has a few settings that must be configured in order for proper operation. These settings can be configured through the Serial port (labeled "Port 0") on the main board (**Figure 1, C**). Once a computer is physically connected to this Serial port and the unit is powered on, use a terminal application with the following settings to establish a connection:

> Baud rate = 19200 baud
> Data bits = 8 bits
> Stop bits = 1 bit
> Hardware Flow Control = None

Once a Serial connection is established, the unit will respond to commands sent through the terminal application. Most of the commands will require a Unit Code prefix that is unique to each unit. Commands of this type are considered "secure". This means that if the Unit Code of a unit is 1234, all of the commands sent to it must be prefixed with the four-digit Unit Code.

✎ Use leading zeroes to make sure the prefixed Unit Code is four digits long; i.e., "0004" for a Unit Code of 4.

There are two "non-secure" commands that do not require a unit code.

All commands are processed by the unit when <Enter> is pressed. Commands are *not* case sensitive.

FCC Notice

This equipment generates and uses radio frequency energy and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception. It has been type tested and found to comply with the limits for a FCC Class B computing device in accordance with the specifications in Subpart J of Part 15 of the FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause 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 the receiving antenna.
- Relocate the CTM away from the receiver.
- Plug the CTM into a different outlet so the Repeater and receiver are on different branch circuits.

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. The user 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, DC 20402. Stock No. 004-000-00345-4.

Non-secure commands:	
AT	Ping the unit. The command returns the current firmware version.
UC	Unit code. This command returns the Unit Code of the unit. Use the code before the secure commands.

Secure commands (Prefixed by the unit code. See note left.)	
SUC <new unit code>	Change the Unit Code. Range: 0000 to 9999
IP?	Return the current IP settings for the unit.
SETIP A.B.C.D.	Set the IP address to "A.B.C.D". Use "0.0.0.0" for DHCP.
SETNM A.B.C.D.	Set the Netmask to "A.B.C.D".*
SETGW A.B.C.D.	Set the Gateway address to "A.B.C.D".*
SETPDNS A.B.C.D.	Set the Primary DNS address to "A.B.C.D".*
SETSDNS A.B.C.D.	Set the Secondary DNS address to "A.B.C.D".*

* ✎ These commands only apply when a static (non-0.0.0.0.) IP address is used.

After the IP configurations have been completed, the Serial port may be disconnected from the unit and the Faceplate replaced onto the cabinet. Further configurations may be required in Sentinel central software to send communications out via Ethernet connection. Please refer to Sentinel central software documentation for this configuration.

Specifications

Wall Mount Cabinet Dimensions:
- 10.75"W x 9.75"H x 3.25"D

Temperature Range:
- Operating: +14°F to +140°F (-10°C to +60°C)
- Storage: -22°F to +149°F (-30°C to +65°C)

Power Specifications:
- Internal Transformer, Class 2, UL Listed, CSA Certified
  - Input: 120 VAC ± 10%, 50/60 Hz
  - Output: 24 VAC ± 10%, 50/60 Hz
- Total Maximum Load: 1.5 A @ 24 VAC

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