



City Council Staff Report

Date:

September 18, 2024

Applicant:

Mapleton City

Prepared By:

Cory Branch

Public Hearing:

No

Attachment:

Equipment Overview

REQUEST

Consideration of a discussion to replace the existing siren controller with a new siren controller.

BACKGROUND

The Mapleton Fire Department was organized during the late 1950's. With donated labor and materials, a fire station was built on city property at 35 East Maple Street. In the late 1970's a Federal Signal 3T22 siren was equipped to the building alerting the volunteer force and citizens of an emergency. A daily siren test at noon took place to ensure the siren functioned properly.

As technology evolved, firefighter communication moved to radio and, eventually, digital communication, thus the siren was not part of the city emergency communication plan. With supporting efforts from city administration and the community it was concluded that the siren would continue to go off daily at noon but was not recognized for emergency communication.

After over 50 years of use, Mapleton's 3T22 siren is in rough shape. The pole it sits on needs to be replaced, its electrical wiring is out of date, and various mechanics need repair. Recently, the siren started going off at unscheduled times, so City leadership put it on pause.

The challenge with repairing the existing siren is finding the proper replacement parts. On the other hand, replacing the existing siren would cost in the range of approximately \$9K (see Attached equipment overview).

TALKING POINTS

1. Does the city council want to budget \$9K for a new siren?
2. Should the siren continue to go off daily at noon or only on special events?

► Model FC

Siren Controller



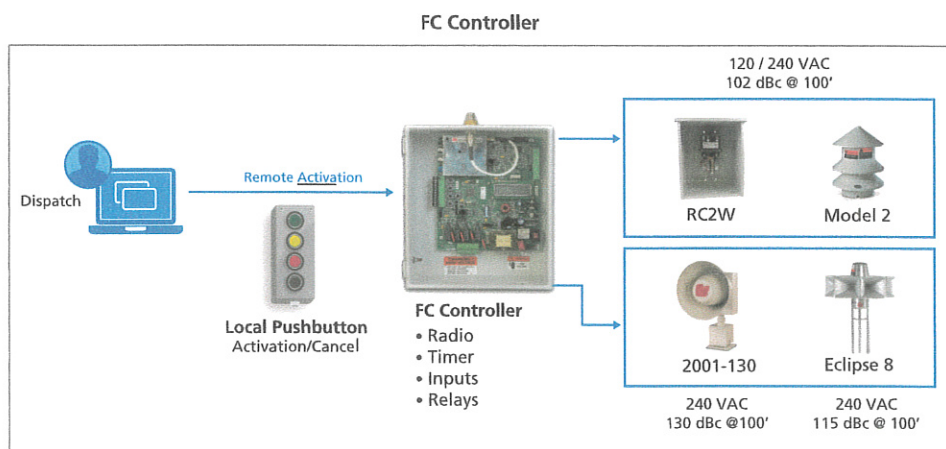
The FC Controller is a remote-control activation point for equipment control (such as electro-mechanical sirens) with relay outputs. Ideal for siren control applications and process' controlled via relay contacts. The FC Controller is equipped with a FCX Controller board which can be powered from 12VDC, 48VDC, 120VAC or 220VAC. The FCX Controller board is equipped with 4 relays to control devices such as siren contractors, overhead door controls, lights, beacons, sounders or railway equipment. The FCX Controller board has 4 inputs for use with external switches or contact closures, and can be programmed to activate the onboard relays and/or the audio from the FCM Plus Control board. The FCX Controller board has built-in siren tones that interface to PA or intercom systems. The audio can be activated through physical inputs or the built-in push buttons on the FCX Controller board. The FC is a compact NEMA 4 metal enclosure equipped with a latching and locking mechanism, removable lock not included. The enclosure has a ground stud and three pre-drilled holes for ease of use, and is equipped with a plug for the top RF hole and an AC lightning surge arrester.

Radios models available are FCH (high-band) and FCU (UHF) which include a synthesized radio receiver. Also available is FSPWARE, a software package that enables computer connection to modify supplied timing or to create unique on/off patterns for control of external equipment. Programming options via FSPWARE include radio receiver frequency, two-tone sequential tones/DTMF decoding digits for security, custom audible signal tones and independent control of output relays and timing patterns for electro-mechanical sirens. Up to six control codes may be programmed and activated through any combination of two-tone sequential, DTMF, EAS, POCSAG, or digital AFSK. Four of the timing sequences can be initiated using local push buttons or remotely through dry contact closures. The use of SFCD Software and SS2000+ allows remote control activation of multiple FC Controllers.

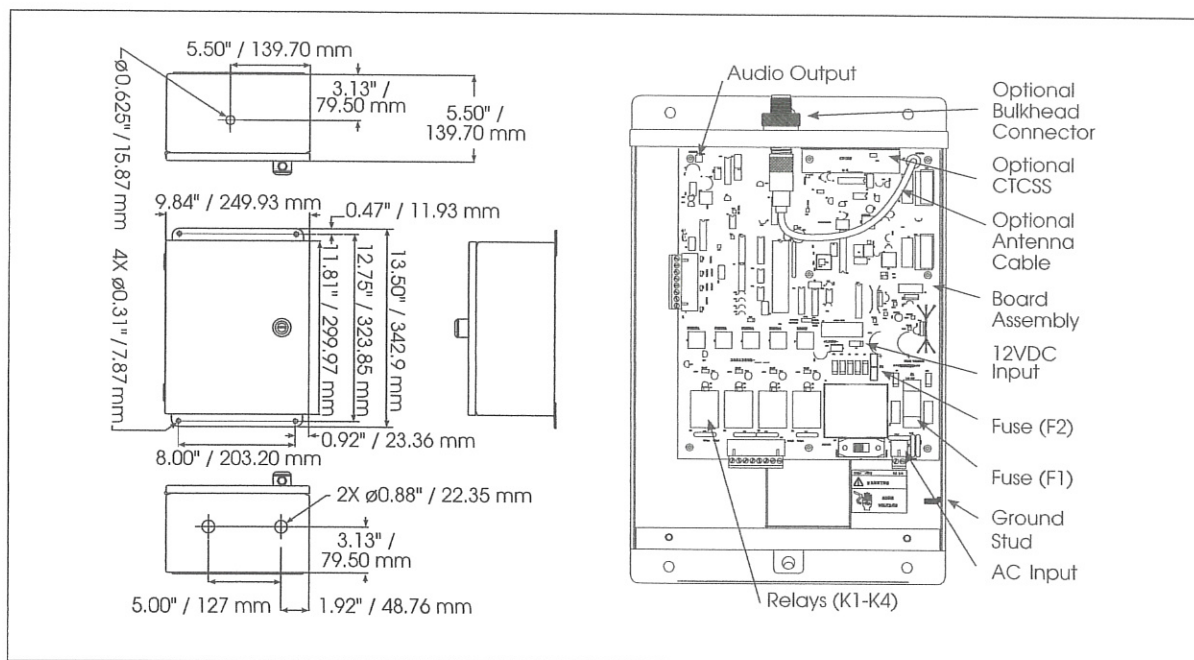
The Federal Controller is an ideal choice to control Eclipse8 and Model 2 siren series, radio activation of indoor PA systems, warning lights or various warning equipment, and fire house alerting applications.

FEATURES

- One-way radio control available
- Simultaneous two-tone sequential, DTMF, EAS, POCSAG, and digital AFSK decoding for security
- Four individually programmable output relays
- Six built in siren tone signals for PA / Intercom
- External inputs / push buttons for local activation



Siren Controller (FC)



SPECIFICATIONS

AC Input Voltage:	120 or 240VAC $\pm 10\%$, 60Hz
DC Input Voltage:	15-75VDC, 400mA max @ 48VDC or 11-15VDC, 400mA max @ 12VDC
4 Relays, contact rating:	8A @ 120/240VAC 5A @ 24VDC
Number of remote activation inputs:	4
Audio Output:	0-2V peak to peak, maximum load 8 ohms
Environmental:	
Temperature	-22°F to 149°F / -30°C to 65°C
Humidity	0-98% non-condensing
Dimensions H x W x D:	13.5" x 10" x 6" (34.3 cm x 25.4 cm x 15.3 cm)
Net Weight:	12 lbs 5.4 kg
Shipping Weight:	13 lbs 5.9 kg

HOW TO ORDER

Contact our Federal Signal Sales Engineers to design a system that meets your specific requirements.

Description	Part Number
Controller with FC Controller Board	FC
Controller with one-way high-band (150 - 174 MHz) radio receiver	FCH
Controller with one-way UHF band (450 - 470MHz) radio receiver	FCU

OPTIONAL ACCESSORIES

Description	Part Number
Federal programming software (Non-digital applications)	FSPWARE
Tone Coded and Digital Coded Squelch Decode	FS-PL1
Outdoor NEMA 4 Push-button Panel	PBS-4
208-240VAC Transformer rectifier with 48VDC, 120VAC and contactors with enclosure	2001-AC
Motor starter/cabinet NEMA 3R 120VAC	RC2W-120
Motor starter/cabinet NEMA 3R 240VAC	RC2W-240
Model 2, 120VAC/DC Omni-directional Siren	2-120
Model 2, 240VAC/DC Omni-directional Siren	2-240
Model 2 Pole Mount	PMS

See Project 25 product on page 248 for optional P25 configuration accessories if desired

REPLACEMENT PARTS

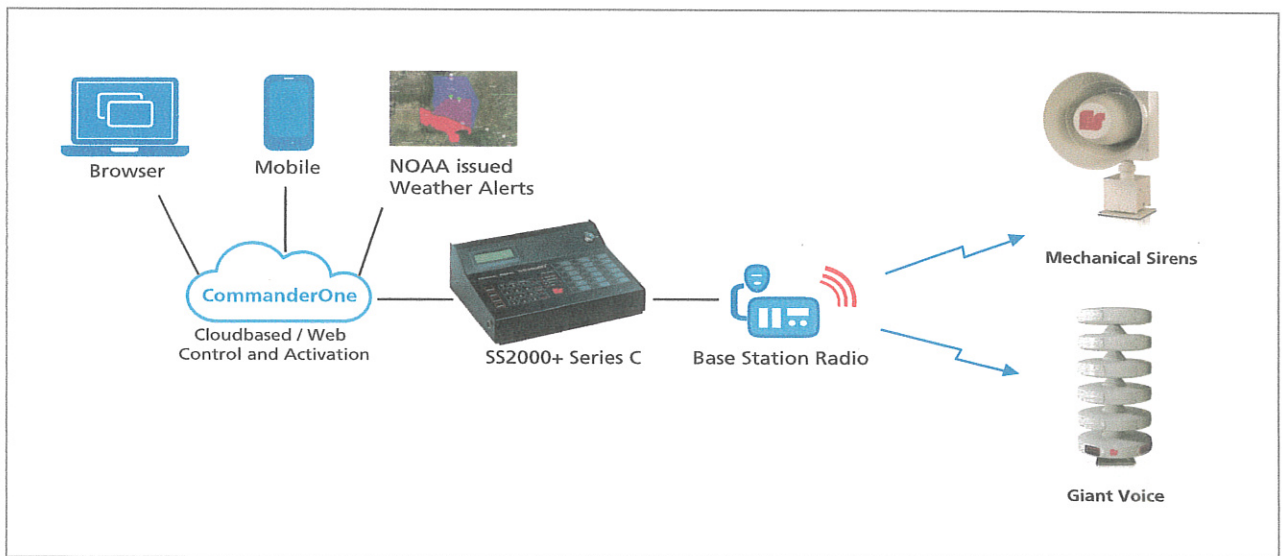
Description	Part Number
FC Control Board	Q20000200D
Radio Receiver High-Band	Q2005240G-02
Radio Receiver UHF Band	Q2005240G-03
Controller board only with one-way high-band (150 - 174 MHz) radio receiver	Q-FCMH
Q-FCMU Controller board only with one-way UHF band (450 - 470MHz) radio receiver	Q-FCMU

► CommanderOne® LE

Cloud-Based Control for Warning Systems

CommanderOne® LE brings the speed, security and convenience of our Two-Way CommanderOne platform to One-Way siren systems. Now, you can upgrade your One-Way systems to web and app-based control in an easy and affordable way. Utilizing our new CommanderOne-enabled SS2000+ Series C Local Hardware Activation Point, our engineers can quickly setup a CommanderOne LE Account and have you activating your One-Way sirens from a web browser or mobile app with no additional servers or software needed. The SS2000+ Series C is a drop-in replacement for existing SS2000D and SS2000+ owners with Radio-based One-Way systems, hotkeys, functions and settings can be brought over during commissioning.

Weather alerting is important to siren system operators and CommanderOne LE brings Automatic Weather Based Activation to your existing One-Way systems. You can create alert areas around your sirens and set CommanderOne to activate your sirens automatically or with user prompted alerts.



User Experience – The Intuitive Interface is simple to set up, always up-to-date, and connects to your on-premise Commander control system.

Desktop Freedom – Access your system from any computer connected to the internet.

Mobile – A user-friendly app for iOS and Android. It has a web-based console with a mobile responsive GUI.

Security – We understand that security is your top priority. CommanderOne utilizes IPSEC over SSL with a multi-layered authentication mechanism.

Weather Activation – All CommanderOne systems will have access to activate sirens based on weather-based polygons.

Auto-Sync Hotkeys – No need to keep multiple locations synchronized, your Hotkey activation settings are automatically created in CommanderOne.

Messaging – Keep in contact with employees and first responders via email, SMS, and voice. Create on the fly messages or templates to streamline your workflow.

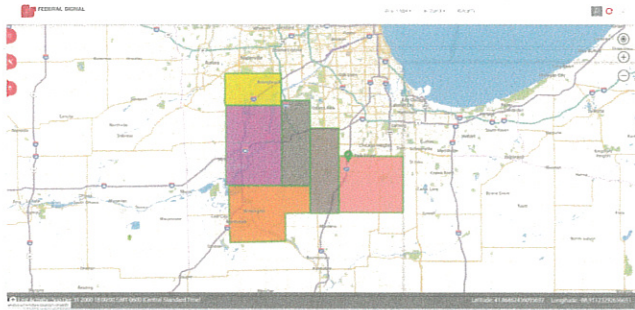
Scalability – CommanderOne platform is scalable from a few devices to hundreds of devices. It leverages a global network of data centers to maintain availability while securing your data.

CommanderOne® LE Cloud-Based Control for Your Warning Systems

Desktop and Mobile

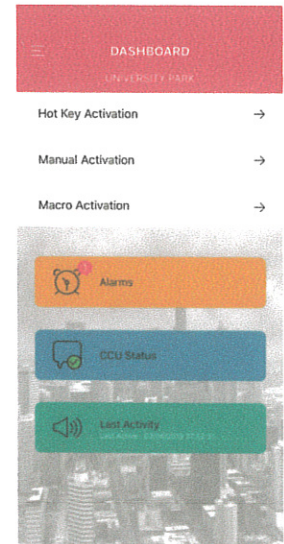
Desktop

HotKeys are automatically pushed to the web by the SS2000+ Series C, so you can easily activate from a web browser interface. The HotKeys can be color coded on the web for ease of use.



Mobile

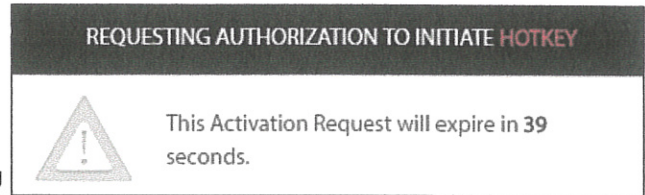
iOS and Android apps let you control and monitor your system from virtually anywhere. It shows all HotKeys by a single click.



Security

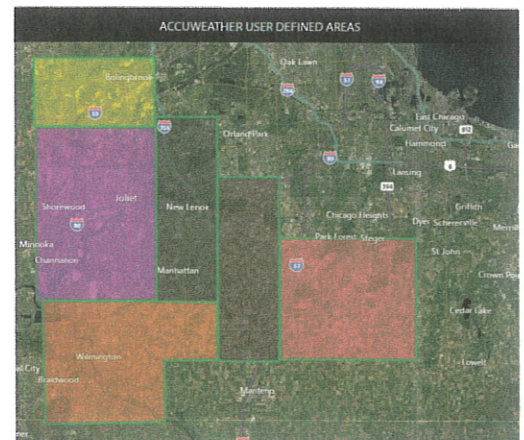
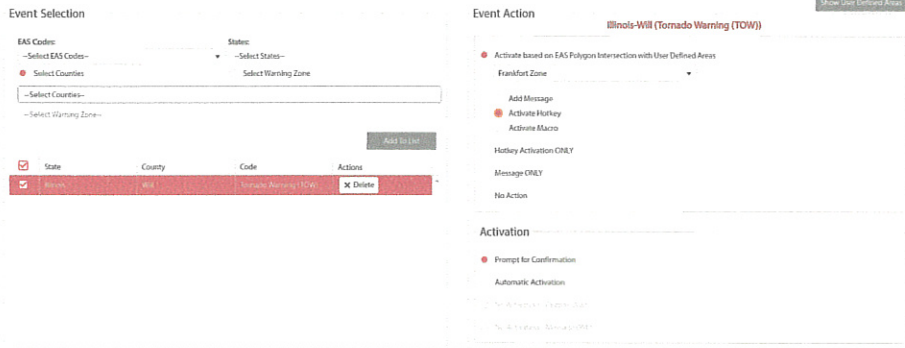
CommanderOne LE is secure by design. We use One Time Passwords, Token-Based Security and industry standard SSL to secure your communications.

Our new Multi-User Authentication takes security to the next level by allowing you to configure Hotkeys, Macros or Functions with an authorization level, which require varying levels of authorization: from simple passwords to app-based authentication. This means that you can set-up CommanderOne so that no one activates a function without another person verifying that activation, like two people needing their keys turned at the same time to open a locked door.



Weather

CommanderOne LE Accuweather® brings automatic and prompted activation based on weather events. Using a simple if this then that interface, you choose them from events, such as a 911 telephone outage to a Winter Weather Advisory and the actions associated with them. From the Accuweather interface, you can activate sirens based on National Weather Service events and send messages with optional messaging. *Sold separately*



Messaging

CommanderOne LE Messaging is a new addition to the CommanderOne Cloud-Based Control system. Messaging adds the ability to quickly and easily contact your employees using our CommanderOne activation systems, either via the web or mobile app, on your smartphone.

Messaging allows users to create templates, ad-hoc messages and even dynamically add phone numbers or emails at the time of message creation. Utilizing CommanderOne macros, you can activate a siren Hotkey and at the same time, a messaging template. Templates allow for operators to create scenarios ahead of time, adding all users and information in a ready-to-go, one-button activation.

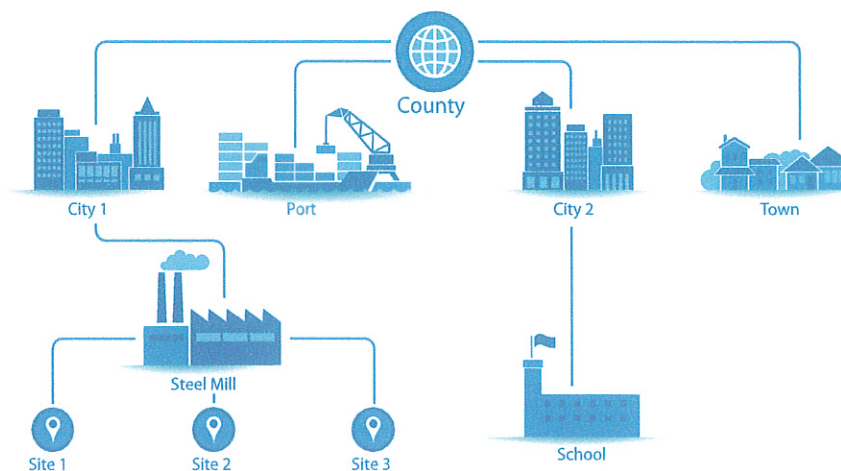
Messaging add-on is designed around you and your first responders, by keeping it simple and easy for you to message your crew while activating the sirens. With simple, easy to understand plans, administrators can add messaging to their existing CommanderOne systems.

Messaging builds upon the strengths of the CommanderOne platform and can allow administrators to send out operational alerts and automated messages the moment NOAA issues alerts.

The screenshot shows a web-based interface for creating a message. At the top, there are tabs for 'Message' and 'Templates'. The 'Message' tab is active, displaying a form with the following fields:

- Select Template:** A dropdown menu with the text '--Select Template--' and a small downward arrow. To its right is the text '(Optional)'.
- To:** A dropdown menu with the text '--Select Groups and Users--'.
- Subject:** A text input field.
- Channel:** A section with three radio buttons: 'Email' (which is checked), 'Voice', and 'SMS'.
- Mail Priority:** A dropdown menu with the text 'High' and a small downward arrow.

Scalable Centralized Command and Control



CommanderOne is designed for a centralized command and control by managing disparate systems. Whether you have one site or multiple sites, you need a single dashboard to monitor and manage your network.

CommanderOne® LE Cloud-Based Control for Your Warning Systems

CommanderOne 1-Way

Model	Description	Sirens	Users ¹	Basic Weather
Commander1-LE 10	CommanderOne LE Annual Sub	Up to 10	5	Yes
Commander1-LE 25	CommanderOne LE Annual Sub	Up to 25	5	Yes
Commander1-LE 255	CommanderOne LE Annual Sub	Up to 255	5	Yes

*Includes Remote Implementation Support. For on-site support and training, contact your Federal Signal representative for a quote.

CommanderOne with Messaging

Model	Description	Users ¹	Recipients ²	Messages Per Month
Commander1-SM	Standard messaging annual	5	200	500

*Includes Remote Implementation Support. For on-site support and training, contact your Federal Signal representative for a quote.

¹ Users: Users defined as full ability to activate and create messages also includes CommanderOne APP. (Admin has ability to control USER rights)

² Recipient: Recipient defined as having the ability to receive messages via text or email.

CommanderOne LE is a registered trademark of Federal Signal Corporation.
Accuweather is a registered trademark of AccuWeather, Inc.