

FT400A-A

Zone 1 Analog Wall/Desk Telephone

25500870A Rev A1 0224

Limited Warranty: This product's limited warranty can be found at www.fedsig.com/SSG-Warranty.

SAFETY MESSAGES TO INSTALLERS AND USERS

Installation shall be carried out in accordance with the relevant, local code of practice for Ex equipment, e.g. EN 60079-14.

The equipment is not intended for repair by the user. Repair of this equipment shall be carried out by the manufacturer or manufacturer's authorised agent.

It is the responsibility of the end user to take suitable precautions to prevent exposure to aggressive chemicals that may attack metals or the polymeric materials used in the construction of this equipment. Specific details of vulnerable materials shall be provided in the instructions.

- **WARNING: ELECTRICAL HAZARD** – This product should be installed by a licensed electrician according to all electrical and building codes.
- **WARNING: HAZARDOUS AREA** – Before opening the enclosure, ensure that the area is safe and that the power conductors are not live. When replacing the faceplate, ensure that the wires or other foreign objects are not trapped between the edges. Anything that prevents the base and the faceplate from being in direct contact nullifies the hazardous area rating of the telephone.
- **WARNING: DISLOCATION HAZARD** – To prevent injury, this apparatus must be securely attached to the floor or wall in accordance with the installation instructions.

Failure to follow all safety precautions and instructions may result in property damage, serious injury, or death to you or others.

NOTES:

- FT400A-A telephones are approved for use in limited hazardous areas. Ensure that this telephone is approved for the area in which it is to be installed.
- FT400A-A telephones are shipped from the factory set for DTMF (tone) dialing mode. If loop disconnect (pulse) dialing is required, program Register Number 52 appropriately.
- Follow all appropriate electrical codes and use only approved electrical fittings for the installation.
- If required, install primary surge protection outside of the classified area.
- Disconnect the tip and ring conductors at the demarcation block to ensure that none of the electrical connection circuits are live.
- If the built-in Ring Detect Relay is to be utilized to activate an external alarm, ensure that the power conductors are not live.
- Using the provided 3 mm Allen® key, remove the four faceplate screws to detach the faceplate from the base.
- The telephone may be wall mounted or installed on a flat surface.
- If the telephone is to be desktop mounted, set the base in the desired location.



Table 1 Package Contents

Qty	Description
1	FT400A-A Hazardous Area Desktop Telephone
1	Parts bag containing two handset clips and screws, one 3 mm Allen® key for faceplate screws, and one Ring Detect Relay Enable jumper wire.

Table 2 Accessories and Options

Qty	Description	Part Number
1	Ferrite core kit for IEC60945 Maritime Compliance	P007919

Table 3 Specifications

Performance	
Audible Range Frequency Response	300-3400 Hz
Hands-Free Speaker Output (Max. 1 kHz)	~85dB at 1 Meter
Receiver Volume Adjustment	Eight steps, 2 dB/step
Speed Dial	Ten registers of 20 digits each
Phone Book Dial	20 registers of 20 digits each (includes Speed Dial numbers)
Flash	280/600 mSec timed disconnect
Redial	32 digits maximum
North American Configuration	
Dialing Method	DTMF or 40:60 pulse at 10 PPS
European Configuration	
Dialing Method	DTMF or 33:66 pulse at 10 PPS
Conforms to	Residential and industrial areas ETSI TBR 38: May 1998 (Acoustics) ETSI TBR 21: January 1998 (Telephone network)
Electrical	
Ingress Protection Rating	IP66
Operating Temperature	-300° to +600°C (-220° to +1400°F)
Storage Temperature	-50° to +80°C (-58° to +176°F)
Humidity	0 to 95% RH
Dustproof	Fully gasketed enclosure
Mechanical	
Hook Switch (Cradle Switch) Life	> 1,000,000 operations
Housing Material	Glass-filled polyester (carbon Loaded)
Handset Material	Glass-filled polyester (carbon Loaded)
Dimensions (H x W x D) - Wall Mounted	291 x 241 x 139 mm (11.5 x 9.5 x 5.5 inches)
Net Weight	3.95 kg (8.68 lbs)
Shipping Dimensions	407 x 267 x 242 mm (16 x 10.5 x 9.5 inches)
Shipping Weight	4.8 kg (10.5 lbs)
Mounting Wall Strength Requirement	15.8 kg (34.8 lbs)
Microphone	Noise canceling
Receiver	Hearing aid compatible (HAC)
Mounting	Desk or wall
Wiring Accessories	2 x M20 and 1 x M12 cable gland entry points

Table 4 A-Compliance

	CE 0539
Quality Assurance Notified Body	UL International Demko A/S
ATEX Equipment Certificate Number	ERO24ATEX0001X
Declaration of Compliance by Federal Signal Available. The year of manufacture is indicated in the marking of the product.	
ICEx Equipment Certificate Number	IECEx EMT 24.0001X
ATEX / ICEx Coding	II 2G Ex eb ib mb IIC T5 Gb II 2D Ex ib mb IIIC T100°C Db -30°C ≤ Ta ≤ +60°C II 2G Ex eb ib mb IIC T6 Gb II 2D Ex ib mb IIIC T85°C Db -30°C ≤ Ta ≤ +45°C
Standards Used	IEC 60079-0:2017, EN IEC 60079-0:2018 IEC 60079-7:2015+A1:2017, EN IEC 60079-7:2015+A1:2018 IEC 60079-11:2011, EN 60079-11:2012 IEC 60079-18:2014+A1:2017, EN 60079-18:2015+A1:2017

GENERAL: The FT400A-A—referred to as a “ZONE 1”—desktop telephone provides safe, reliable communications in hazardous areas that are prone to high humidity, chemical vapors, dust, and physical abuse. Hands Free operation is standard on all models, and the telephones can be programmed for speed dialing. All models have the option to install a third-party headset. Any third-party headset approval ratings are the responsibility of the customer. A Push-to-Talk handset is available as an option.

Features

Housing and Handset

- High impact thermoset – static dissipative

Mounting

- Desktop or wall-mounted

Audio Modes

- Handset and hands-free or optional headset

Resettable Fuse

- Prevents damage to the electronic circuits in the event of a high voltage spike on the telephone line

Magnetic Reed Hook Switch

- No moving parts

LCD Display

- Multi-language capable for ease of user interface

Built In Ring Detect Relay

- 250 Vac 5 A Ring Detect Relay, no need for external RDR

Tone (DTMF)/Pulse Operation

- Factory set to tone (DTMF) dialing
- 60:40 or 66:33 pulse dialing can be ordered or configured in the field

Handset Cord

- Armored cord

Hearing-Aid Compatible (HAC) Receiver

- Compatible with inductively coupled hearing aid devices

Receiver Volume Control

- Switch on keypad provides 15 dB of audio range

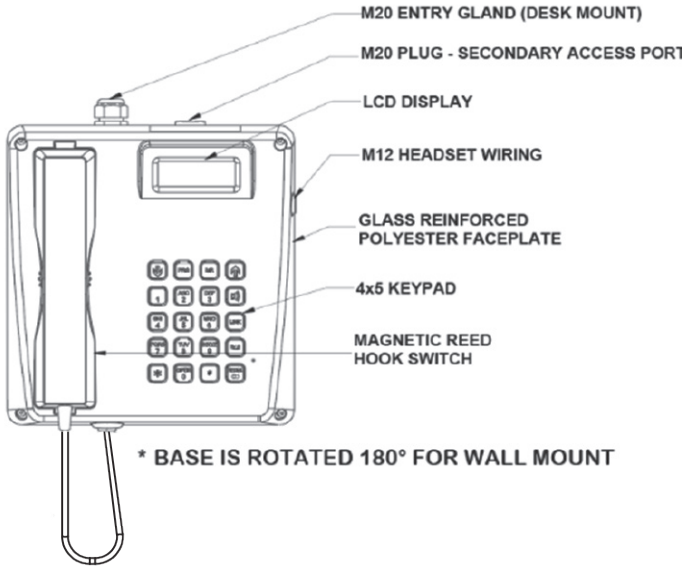
Wide Temperature Range

- -30°C to +60°C (-22°F to +140°F) Refer to Specifications.

Figure 1 Product Standard Compliance Label

 Federal Signal Corporation 2645 Federal Signal Drive University Park, IL 60484 USA	FT400A-A Desk/Wall Mount Telephone		 Pb-free
	II 2G Ex eb ib mb IIC T5 Gb II 2D Ex ib mb IIIC T100°C Db -30° ≤ Ta ≤ +60°C 0539	II 2G Ex eb ib mb IIC T6 Gb II 2D Ex ib mb IIIC T85°C Db -30°C ≤ Ta ≤ +45°C	Part No: FT400A-A Model No: FT400A-A
IECEX EMT 24.0001X ERO24ATEX0001X		Line Voltage: 24-56V, 20 - 120mA Peak Ringer Sens.=128V Ume=184V	SN: 
FT400A-A-YYMXXX			
WARNING: EXPLOSION HAZARD, DO NOT DISCONNECT WHILE CIRCUIT IS LIVE, UNLESS AREA IS KNOWN TO BE NON-HAZARDOUS. REFER TO USER GUIDE FOR INSTALLATION.			
MADE IN CANADA		P006858	REV: A/4

Figure 2 Features



Mounting the Phone

Figure 3 Dimensions

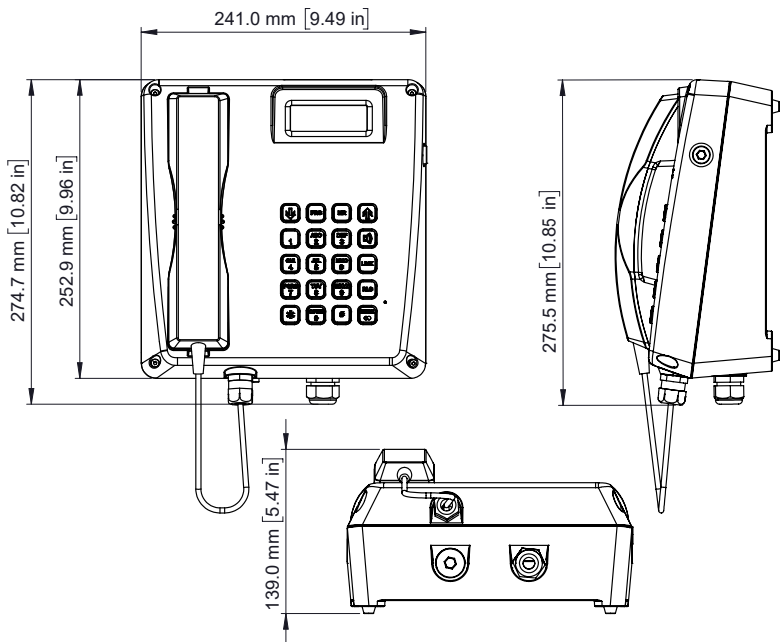
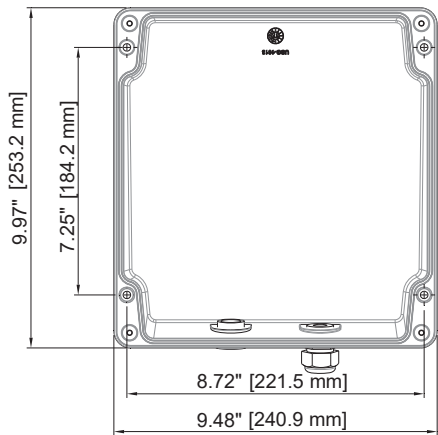


Figure 4 Wall installation of base



Desk Top Configuration

If the telephone is to be desktop mounted, set the base in the desired location.

Install the handset retainer clips on the faceplate using the supplied hardware.

Wall Mount Configuration

If the telephone is to be wall mounted, choose a location that is free of obstructions and permits space for wiring. Mount the base with the deepest dimension on the bottom.

- The telephone weighs 3.95 kilograms (8.68 pounds). Ensure that the mounting can support four times the weight of the unit (15.8 kilograms [34.8 pounds]). Wall anchors are not included; follow the manufacturer's instructions when installing anchors.
- For mounting the unit to concrete or cinder block, lead expansion anchors with M4 (#8) screws are recommended.
- To mount the unit to drywall, hollow wall anchors (Molly Bolts) with M4 (#8) screws are recommended.
- When mounting to other surfaces, ensure that the base is attached in such a way as to support the weight specified above.

Install the handset retainer clips on the faceplate using the supplied hardware.

Hands-free Speaker Phone Voice Switching Adjustment

1. Locate the Voice Path Switching potentiometer.
2. Adjust the potentiometer clockwise to increase the receive sensitivity.
3. Adjust the potentiometer counterclockwise to increase the transmit sensitivity.
4. Install the handset retainer clips on the faceplate using the hardware supplied.

Special Conditions for Safe Use (Gas & Dust)

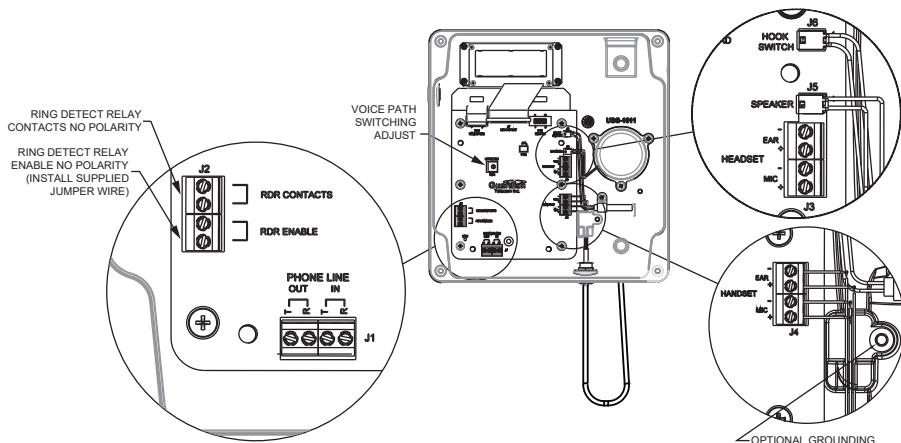
- The enclosure must be in a non-hazardous location in order to open to make the necessary connections. The connecting cable must be suitable for use in the EX environment (see IEC60079-14 & IEC61241-14) and be secured using the cable gland provided.
- The volt-free contacts for the ring detect circuit must be connected only to external equipment suitably rated for its end-use EX environment (see IEC60079-14 & IEC61241-14) and be secured using an approved cable gland.
- During installation, ensure that external wiring to connectors J1 and J2 are sheathed to within 10 mm of the terminals. External wiring shall be rated for a minimum of 250 V and run so that 50 mm separation is maintained between wiring and terminals/connectors other than J1 and J2.

Wiring the Phone

WARNING: MAINTAIN TIGHT SEAL — Use properly sized cable to ensure a gas/dust tight seal at the cable gland (M12 – 2 to 5 mm, M20 – 8 to 13 mm). Take care not to lose parts of the gland if the cap is removed.

NOTE: If the cable diameter is not in the range of the M12 or M20 glands provided, an approved reducer and smaller gland can be fitted.

Figure 5 Wiring



1. Insert the Tip and Ring cable through the M20 gland and connect the conductors to the Phone-Line-In terminal block.
2. If an extension telephone is installed, the phone line out terminals may be utilized. A four-conductor cable can be used, or an additional cable can be run through the spare 20 mm opening if it is not occupied for other purposes.
3. Install the headset if provided.
4. If an external sounder is utilized, remove the M20 plug, install an appropriate cable gland, and connect the wiring to the Ring Detect Relay terminal block. Insert the jumper wire provided across the Ring Detect Relay Enable terminals to enable the Ring Detect Relay
5. Tighten the cable glands securely.
6. Mount the faceplate and secure the captive screws to the base.

WARNING: — Ensure that wiring or any other obstruction is not trapped between the faceplate and the enclosure. Anything that prevents the flanges from being in direct contact will negate the hazardous area protection afforded by the design of the telephone.

7. Connect the Tip and Ring conductors at the demarcation block.
8. If the built-in Ring Detect Relay is utilized, apply power to the conductors.
9. If necessary, program the features.
10. Calling to and from another unit on the exchange to test the unit. See "Operating the Phone" on page 16.

Alternate Installation Instructions for IEC60945 Maritime Compliance

Figure 6 Maritime compliance

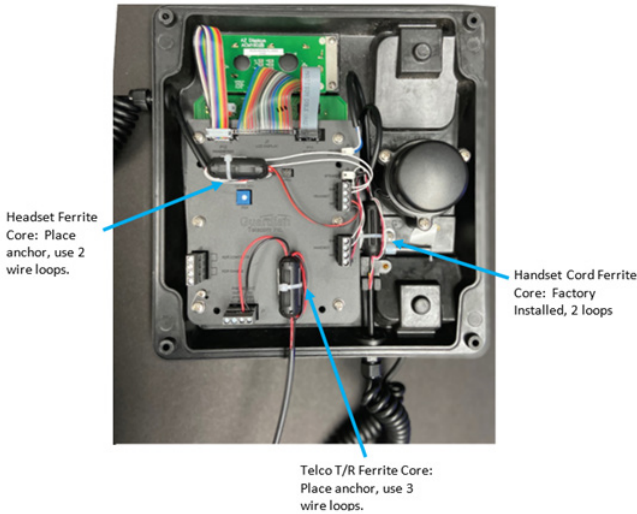
IEC60945 Maritime Compliance Statement

This product complies with the IEC 60945 requirements for Maritime provided it has been installed correctly to follow the 60945 specific installation requirements as outlined within the product manual.

IMPORTANT: Due to increased EMC/EMI and surge protection, if the phone must meet the IEC60945 Maritime Standard as well as the Zone 1 Hazardous Area requirements, it is important to follow the following instructions to ensure compliance.

IEC60945 Alternate Installation

Figure 7 Ferrite cores installation



CAUTION: Place tie-wrap under wires so as not to clamp against the wire and damage insulation. ¶

Telephone Line Connection

The telephone line will require the addition of a ferrite Core (optionally supplied).

1. Feed the cable into the phone gland.
2. Wrap the telephone Tip/Ring wires around the core three times as shown in Figure 7.
3. Clamp the core together and attach it to the circuit pack using the supplied bonding tape and zip tie.
4. Complete the connections to the phone as per the standard wiring method shown.

Headset Option

If a third-party headset is to be installed, then the headset cable must have a ferrite core attached (optionally supplied).

1. Feed the cable into the phone gland.
2. Wrap the headset wires two times around the core as shown in Figure 7.
3. Clamp the core together and attach it to the circuit pack using the supplied bonding tape and zip tie.
4. Complete the connections to the phone as per the standard wiring method shown.

Any third-party headset approval ratings are the responsibility of the customer.

Retrofit the Headset/Strobe Light/Ringer

1. Disconnect the telephone wiring at the demarcation block and ring detect relay power at the breaker to avoid shock hazard.
2. Loosen the four captive screws in the faceplate and detach the faceplate from the base.
3. Install the options following the directions in this manual.
4. Tighten the cable glands securely.
5. Carefully replace the faceplate and install all four screws.
6. Reconnect the telephone and ring detect relay wiring.
7. Call to and from another unit on the exchange to test the unit.

Headset

1. Remove the M12 plug on the side of the faceplate and install the accessory cord gland.
2. Slide the accessory cord through the gland into the faceplate and tighten the gland.
3. Connect the headset wiring to the headset earpiece and microphone terminal block. See Figure 5 on page 7.
4. If the headset is utilized, program the phone to recognize the headset (Register Number 54).

Strobe Light /Loud Ringer

1. Remove the alerter device wiring plug from the base and install an approved M20 cable gland.
2. Insert the cable through the gland and connect the Strobe Light or Loud Ringer wiring to the Ring Detect Relay terminal block. See Figure 5 on page 7.
3. Inserting the provided jumper wire across the Ring Detect Relay Enable terminals to enable the Ring Detect Relay.

Fuses

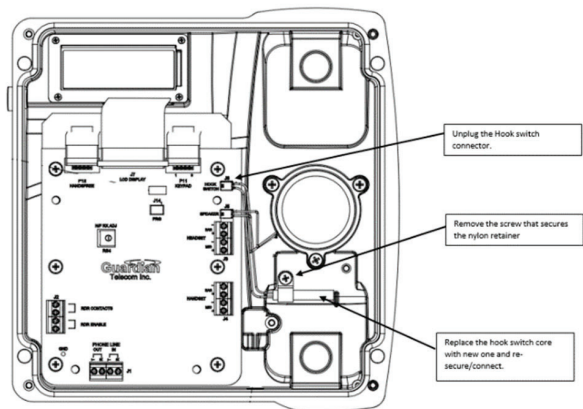
There are no replaceable fuses in the FT400A-A.

The phone line fuse on the circuit board of all models is of the resettable type and is not replaceable. If the fuse trips due to an external event, it resets in a short period of time. The duration depends on ambient temperature and other factors. If the fuse trips repeatedly, check the telephone system wiring. The fuse protects the Tip and Ring line from the telephone system. It is usually powered at 48 volts DC and must not be connected to 120 Vac or 230 Vac.

The Ring Detect Relay fuse is a 5 A at 250 Vac fast blow fuse. It is potted to prevent an exposed spark. If the fuse blows, the circuit board must be replaced.

Magnetic Reed Hook Switch Replacement

Figure 8 Replacing the hook switch



- 1. Unplug the Hook Switch Connector.
- 2. Remove the screw that secures the nylon retainer.
- 3. Replace the hook switch core with new one and re-secure/connect it.

Key Functions

While Programming

	Hands Free mode.
	Puts phone in programming mode.
	Scroll through registers.
	Returns to main register prompt without changing contents of selected register.
	Stores number in selected register.
	Clears selected register and switches back to main register prompt.

While Operating

	Hands Free mode or returns to on-hook.
	Scroll through registers in Phone Book mode. Volume control during conversation.
	Timed disconnect (same as Flash) for some CO or PABX functions.
	Disconnects from phone line.
	Dials number in buffer.
	Displays register 0 to 9 for quick dialing when pressed once. When pressed twice, displays register 00 to 19 for phone book dialing; can scroll with arrow keys.

Programming the Phone

Programming Mode

1. To enter Programming Mode, removing the handset from the cradle or by pressing the SPK key to take the phone off the hook. During the programming process, do not switch Audio modes.
2. Press the PRG key for 1 second until a beep tone sounds and the programming prompt displays. The pass code prompt displays on the second line of the LCD.
3. Enter the pass code. It must be four characters long; the numeric keys, the asterisk (*) and the pound sign (#) are valid keys. The user-entered code does not display on the LCD.

NOTE: The telephone has a provision for two pass codes; either one allows access to Programming Mode. Factory settings are 1234 and 5678.

- If the entered code is incorrect, an invalid message displays on the second line for two seconds and the phone will go back to on hook.
 - If the entered code matches the preset code, the phone enters programming mode and the main register prompt displays:
Enter REG #:
REG 0-19, 50-69
4. Enter a two-digit register number or use the arrow keys to scroll to the desired register. Once the first number is entered, the second key also must be a number. Other keys entered following the first key (except the arrow keys and PRG key) result in an invalid message being displayed on the LCD for 2 seconds and two alert beep tones. The LCD switches back to the main register prompt.

Once the register number is entered, it displays on the first line. The previous setting of the register will also be displayed:

REGxx=xxxx

Scrolling

The first key can be an arrow key (↑, and ↓). If an arrow key is activated, the selected register will be shifted to the adjacent register (the next higher or lower, depending on whether the entered key is the ↑ or down ↓ key). The register number displays on the first line and the contents of the register displays. The phone is then ready to accept the register setting.

Register scrolling can run from registers 00 to 19 (phone number registers), and from 50 to 69 (feature registers). The arrow keys shift the register within the range 00 to register 19 but will not jump to registers 50 to 69. To access registers 50 to 69, press RLS to get back to the main register prompt, and then enter a register within the range of 50 to 69. Use the arrow keys to scroll through registers 50 to 69.

Programming phone numbers

If the selected register is within the range 00 to 19, it is a phone number register that can contain a maximum of twenty digits. The pound (#) key is counted as one digit and will be treated as a 3-second pause. This may be required if an access number e.g., "9" must be entered to get an outside line.

Enter the new phone number to replace the previous setting.

1. Use the MR key to store the setting to the non-volatile memory. A beep tone sounds, and the store message displays for 1 second. The LCD then switches back to the main register prompt.
2. Use the RLS key to cancel the entry leaving the previous phone number unchanged. The display switches back to the main register prompt.
3. Use the LINK key to clear the contents of the register and switch back to the main register prompt.

Programming Access Codes

If the selected register is 50 or 69, it is a four-digit Programming Access Code register. If desired, enter a new pass code to replace the previous code. The pass code must be four characters long. The numeric keys, asterisk (*), and pound (#) are valid keys for pass code.

1. Use the MR key to accept the new code. A second prompt displays with the newly entered pass code. Check and compare the pass code on the LCD display to the pass code on the programming sheet. Press the MR key again to store the new code to the non-volatile memory. A beep tone sounds, and the store message displays on LCD for one second. The LCD will switch back to the main register prompt.
2. Press the RLS key to cancel the newly entered pass code leaving the existing pass code unchanged. A "Code not saved!" message displays for 1 second and the display switches back to the main register prompt.

For convenience, the FT400A-A telephone has two Access Code registers; either one allows entry to programming mode. If the Access Codes are to be replaced, they should be changed one at a time. Confirm the new code by using it to get into the programming mode. If the new code does not work, use the other Access Code to restore the code that was previously changed.

Always use the Programming Sheet to record the Access Codes. If both Access Codes are forgotten, the phone must be sent back to Federal Signal or an authorized service center for the Access Codes to be restored.

Configuration Codes

If the selected register is within the range of 51 to 68, it is a one-digit Configuration Code register. Use the Programming Sheet as a guide to select the settings. Enter the new code to replace the previous setting.

1. Use the MR key to store the setting to the non-volatile memory. A beep tone sounds, and the store message displays on the display for 1 second. The LCD then switches back to the main register prompt.
2. Use the RLS key to cancel the entry, leaving the previous Configuration Code unchanged. The display switches back to the main register prompt.

Default Settings

When register 51 is set at "2," all the configuration codes and pass codes will remain unchanged while the phone is still in Programming Mode. Once the phone goes from on-hook to off-hook again, all the configuration codes and pass codes will be reset to the default settings and register 51 will be reset to "1." The phone number registers will remain unchanged.

Exiting Programming Mode

Press and hold the PROG key to exit programming mode. The exit-programming message displays, and the phone will go back to on hook.

Programming Sheet

Register number	Function	Descriptions	Entered Codes	Parameters	Remarks
00	Speed dial phone numbers	Phone number at 0		Maximum 20- digit phone number	Registers 00 to 09 can be accessed for dialing by pressing MR once followed by a number 0 to 9. Registers 00 to 19 can be accessed for dialing by pressing MR twice and entering a number 00 to 19. In addition, the up/down arrows can be used to scroll through the registers. When the desired number is located, pressing MR will cause the number to be dialed.
01		Phone number at 1			
02		Phone number at 2			
03		Phone number at 3			
04		Phone number at 4			
05		Phone number at 5			
06		Phone number at 6			
07		Phone number at 7			
08		Phone number at 8			
09		Phone number at 9			
10		Phone number at 10			
11		Phone number at 11			
12		Phone number at 12			
13		Phone number at 13			
14		Phone number at 14			
15		Phone number at 15			
16		Phone number at 16			
17		Phone number at 17			
18		Phone number at 18			
19		Phone number at 19			
20-49		Not Used			
50		First Access Code (numeric keys, *, and #)		Four characters	Default = 1234
51	Default Settings	1 = user, 2 = default Factory defaults: 50 = 1234 (Access code) 51 = default settings 52 = DTMF dialing 53 = English Display 54 = Speaker Mode 55 = Flash 56 = 5, Headset Mic gain 57 = 3, Handset Mic gain 60 = 60 minutes Talk Time 61 = 32 dialing digits 62 = 5 hand/headset volume 63 = 5 speaker volume 64 = 1 65 = 2 66 = 6 67 = 5 TX gain 68 = 6 Rx gain 69 = 5678 (Access code)		One-digit code	When register 51 is set at '2', all the configuration codes and the Pass Codes will remain unchanged while the phone is still in Programming Mode. Once the phone goes from on hook to off hook again, all the configuration codes, and the Pass Codes will be reset to the default settings and register 51 will be reset to '1'. Phone number registers will not be changed. Default = 1

Register number	Function	Descriptions	Entered Codes	Parameters	Remarks
52		Dialing Modes 1 = DTMF (RS 470) 2 = DP 60:40 (10pps) 3 = DP 66:33 (10pps) 4 = DTMF (BTR 21)		One-digit code	Default North America = 1 Europe = 4
53		LCD Display Languages 1 = English 2 = French 3 = Spanish		One-digit code	Default = 1
54		Hands-free Devices 1 = Speaker 2 = Headset		One-digit code	Default = 1
55		Timed Break (Flash) 1 = 280 ms 2 = 600 ms		One-digit code	Default Europe = 1 North America = 2
56		Headset Microphone Gain (1-8)		One-digit code	Default = 3
57		Headset Microphone Gain (1-8)		One-digit code	Default = 3
58-59		Not used		One-digit code	
60		Talk time (minutes) 1 - 9 = 1 to 9 minutes 0 = 60 minutes		One-digit code	Default = 0
61		Max. digits in manual dialing 1-9 = 3+(1 to 9) digits 0 = 32 digits		One-digit code	Default = 0
62		Handset / headset volume after reset (1 - 8) 2 dB / step		One-digit code	Default = 5
63		Speaker volume after reset (1 - 8) 2 dB / step		One-digit code	Default = 5
64		Voice switch speed between transmit & receive (1 - 4) 1= max speed 4= min speed		One-digit code using the factory setting recommended	Default = 1
65		Background noise offset level (1 - 4) 1=120mV, 2=180mV 3=240mV, 4=300mV		One-digit code using the factory setting recommended	Default = 2
66		Background noise & soft clips (1 - 8) 1 = Tx soft clip 2 = Rx soft clip 3 = Tx, Rx s.c. 4 = BGN on 5 = BGN, Tx s.c 6 = BGN, Rx s.c. 7 = BGN, Tx, Rx, s.c. 8 = BGN off,		One-digit code using the factory setting recommended	Default = 6

Register number	Function	Descriptions	Entered Codes	Parameters	Remarks
67		Transmit gain (1- 8)		One-digit code using the factory setting recommended	Default = 5
68		Receive gain (1 - 8)		One-digit code using the factory setting recommended	Default = 6
69		Second Access Code(4 characters) (numeric keys, *, and #)		Four-digit code	Default = 5678

Operating the Phone

When the handset is off the cradle or the SPK key is pressed, the phone goes off hook. The LCD displays the greeting message and the current audio mode. While the phone is off hook and it detects a Call Disconnect pulse from the CO line or PABX, the phone goes on hook, even with the handset off the cradle.

Audio Modes

The "Zone 1" phone has two Audio Modes: Handset and Hands-free. The LCD display shows the current status of the Audio mode. The up ↑ and down ↓ keys are volume control keys. Pressing these two keys adjusts the volume of the current hearing device.

Handset Mode

When the phone is on hook or while it is off hook in Hands-free Mode, removing the handset from the cradle sets the phone to the Handset Mode. In this mode, the speaker and the hands-free microphone are off. The headset receiver and microphone are off if the headset is configured to replace the speaker. The volume control keys adjust the volume on the handset earpiece volume. The phone will go back to on hook if the handset is returned to the cradle.

Hands-free Mode

When the phone is on hook, or while it is off hook in Handset Mode, pressing the SPK key sets the phone to the Hands-free Mode. After the phone has switched from Handset Mode to Hands-free Mode, returning the handset to the cradle does not put the phone on hook. The phone goes back to on hook if the SPK key is pressed. Hands-free Mode can be configured to Speaker Phone or Headset by setting the contents of register #54 to 1 or 2 respectively. Speakerphone capability is standard; however, a headset is optional.

- **Speaker Phone Mode:** When the phone is configured to Speaker Phone, the hands-free MIC and the speaker are on and the handset MIC and headset are off. The volume control keys adjust the speaker volume.
- **Headset Mode:** When the phone is configured to Headset Mode, the hands-free MIC, speaker, and handset are off. The volume control keys adjust the volume on headset earpieces.

NOTE: Ensure that Register #54 is set correctly.

Dialing Modes

There are four signaling modes in the "Zone 1" phone (Register #52)

- **DTMF dialing mode (RS 470 and BTR 21):** In the DTMF mode, using keypad dial, redial, or Phone Book dial results in having the phone dialed in DTMF tones.
- **Pulse dialing (break/make ratio of 60:40) mode:** In the 60:40 Pulse dialing mode, using the keypad to dial, redial, or Phone Book dial results in having the phone number dialed in pulse with the break/make of 60:40 at 10 pulses per second. In this mode, the Link key (timed break key), the asterisk (*) key, and the pound (#) key are not supported.
- **Pulse dialing (break/make ratio of 66:33) mode:** In the 66:33 Pulse dialing mode, using the keypad to dial, redial, or Phone Book dial results in having the phone number dialed in pulse with the break/make of 66:33 at 10 pulses per second. In this mode, the Link key (timed break key), the asterisk (*) key, and the pound (#) key are not supported.

Numeric keys, * key, and # key on the Keypad

While in Operating Mode, all the numeric keys, the asterisk (*) key, and the pound (#) key when pressed are dialed out. (If the phone is set to pulse, dialing the asterisk (*) key and the pound (#) key are not supported.)

The maximum number of characters that can be dialed out is 32. The dialed-out characters displays on the LCD starting from the first character to the left on the first line and ending at the last character to the right on the second line. The dialed number on the display is maintained for 6 seconds, and then the display switches back to show the Audio Mode status until further numeric keys are pressed.

The Up ↑ and Down ↓ Keys

The up and down arrow keys adjust the volume of the hearing device currently being used. Each press of these keys increases or decreases the volume by 2 dB within a range of 15 dB. The LCD displays the current volume setting for 2 seconds and then switch back to show the Audio Mode status.

Link Key

The Link key that is sometimes referred to as Flash provides a timed disconnect to the current on the phone line. The period can be configured to 280 ms or 600 ms and is required for some Central Office or PABX functions.

RLS key

The RLS key disconnects the phone from the phone line for 1 second to reset the phone line for the next call.

Redial Key

Pressing the Redial key after going off hook dials out the last keys stored in the dial buffer. It may be different from the keys that were pressed in the previous call.

The number dialed out displays on the LCD starting from the first character to the left on the first line and ending at the last character to the right on the second line.

The dialed number displays for 2 seconds and then the LCD switches back to show the Audio Mode status.

The arrow keys resume the volume control function.

Subsequent keypad dialing resumes.

Quick Dialing and Phone Book Call

Quick dialing and Phone Book calling must be used just after going off hook. If manual dialing is used, Quick dialing and Phone Book are disabled.

Quick Dialing

There is provision for ten Quick dialing phone numbers in the phone.

1. To activate Quick dialing, press the MR key.
2. The register number prompt displays:
Enter REG #:
REG 0 to 9
3. Press one numeric key (0 to 9). The phone number in the register is dialed out to the phone line and displays on the LCD. The dialed number displays for 2 seconds and then the LCD switches back to show the Audio Mode status.
4. The arrow keys resume the volume control function. Subsequent keypad dialing resumes.

Phone Book Dialing

There are twenty phone numbers in the Phone Book including the ten Quick Dialing phone numbers.

1. To activate the Phone Book, press MR twice.
2. The register number prompt displays:
Enter REG #:
Phone List
3. Enter a two-digit number or use the arrow keys to scroll through the register. The associated phone number displays.
4. Use the up ↑ and down ↓ keys to scroll through the Phone Book.

5. Press the MR key to dial out the current register phone number.
6. The dialed number displays for 2 seconds, and then the LCD switches back to show the Audio Mode status. The arrow keys resume the volume control function. Subsequent keypad dialing resumes.

NOTE: When a phone number register is clear, calling it through Quick Dial or Phone Book dialing results in no dialing at all. All phone number registers that are not used should be cleared.

Time out

The time out counter enforces a fixed call duration that is programmable from 1 minute to 9 minutes or alternatively 60 minutes, starting from the moment the phone is off hook. It generates three beep tones and displays a time out message on the LCD 10 seconds prior to disconnecting the call. This feature is applicable in both Handset and Hands free modes. This feature is useful when the user forgets to return the handset back to the cradle or does not press the SPK key to hang up the call while the phone is in the Hands-free Mode.

This feature can be set to a maximum of 60 minutes.

After time out, the phone is disconnected from the phone line. The phone rings when there is an incoming call. The handset must be returned to the cradle for the phone to be used in handset or hands-free mode to answer the call.

Push-to-Talk Handset

If the telephone is equipped with a push-to-talk handset, the button must be pressed for voice to be transmitted.

Maintenance and Service

Technical Assistance: Contact our Technical Support Team at +1 708-587-3587 or signalsupport@fedsig.com.

Repair Service: A return authorization is required. Contact your Authorized Distributor or Federal Signal Customer Support. Defective products under warranty will be repaired or replaced at Federal Signal’s discretion.

Product Returns: Returns require authorization from Federal Signal. Contact your Authorized Distributor for more information on our return policy or to request a return.

Table 5 Replacement Parts

Description	Part Number
FT400A-A Zone 1 Telephone Armored Handset/Cord Assembly	P3026
FT400A-A Encapsulated Main PCBA	P007198
FT400A-A Handset Retainer	P006614



FEDERAL SIGNAL
Safety and Security Systems

2645 Federal Signal Drive, University Park, Illinois 60484

Additional translations available at signaling.fedsig.com

Traducciones adicionales disponibles en signaling.fedsig.com

Customer Support 1-800-344-4634+1-708-534-4756, iordersup@fedsig.com

Technical Support 1-800-755-7621+1-708-587-3587, signalsupport@fedsig.com
signaling.fedsig.com