SILENT KNIGHT®
by Honeywell

Model SK-FFT

Fire Fighters Telephone

Installation and Operations Manual

Document 54711
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Installation Procedure

Installation Precautions - Adherence to the following will aid in problem-free installation with long-term reliability: **WARNING** - Several different sources of power can be connected to the fire alarm control panel. Disconnect all sources of power before servicing. Control unit and associated equipment may be damaged by removing and/or inserting cards, modules, or interconnecting cables while the unit is energized. Do not attempt to install, service, or operate this unit until manuals are read and understood. **CAUTION** - System Re-acceptance Test after Software Changes: To ensure proper system operation, this product must be tested in accordance with NFPA 72 after any programming operation or change in site-specific software. Re-acceptance testing is required after any change, addition or deletion of system components, or after any modification, repair or adjustment to system hardware or wiring. All components, circuits, system operations, or software functions known to be affected by a change must be 100% tested. In addition, to ensure that other operations are not inadvertently affected, at least 10% of initiating devices that are not directly affected by the change, up to a maximum of 50 devices, must also be tested and proper system operation verified. This system meets NFPA requirements for operation within the range of 0°C-49°C (32°F-120°F) or humidity within the range of 10%-93% at 30°C (86°F) noncondensing. However, the useful life of the system's standby batteries and the electronic components may be adversely affected by extreme temperature ranges and humidity. Therefore, it is recommended that this system and its peripherals be installed in an environment with a normal room temperature of 15-27º C/60-80º F. **Verify that wire sizes are adequate** for all initiating and indicating device loops. Most devices cannot tolerate more than a 10% I.R. drop from the specified device voltage. **Like all solid state electronic devices**, this system may operate erratically or can be damaged when subjected to lightning induced transients. Although no system is completely immune from lightning transients and interference, proper grounding will reduce susceptibility. Overhead or outside aerial wiring is not recommended, due to an increased susceptibility to nearby lightning strikes. Consult with the Technical Services Department if any problems are anticipated or encountered. **Remove DC power** prior to removing or inserting circuit boards. Failure to do so can damage circuits. Remove all electronic assemblies prior to any drilling, filing, reaming, or punching of the enclosure. When possible, make all cable entries from the sides or rear. Before making modifications, verify that they will not interfere with battery, transformer, or printed circuit board location. **Do not tighten screw terminals** more than 9 in-lbs. Over-tightening may damage threads, resulting in reduced terminal contact pressure and difficulty with screw terminal removal. Fire alarm control panels contain static-sensitive components. Always ground yourself with a proper wrist strap before handling any circuits so that static charges are removed from the body. Use static suppressive packaging to protect electronic assemblies removed from the unit.

Follow the instructions in the installation, operating, and programming manuals.

These instructions must be followed to avoid damage to the control panel and associated equipment. FACP (Fire Alarm Control Panel) operation and reliability depend upon proper installation.

Equipment used in the system may not be technically compatible with the control. It is essential to use only equipment listed for service with your control panel. **Telephone lines** needed to transmit alarm signals from a premise to a central monitoring station may be out of service or temporarily disabled. **The most common cause** of fire alarm malfunctions, however, is inadequate maintenance. All devices and system wiring should be tested and maintained by professional fire alarm installers following written procedures supplied with each device. System inspection and testing should be scheduled monthly or as required by national and/or local fire codes. Adequate written records of all inspections should be kept.

Contents

Section 1
Overview

An SK-FFT Fire Fighter Telephone System provides supervision, annunciation, and control for local and remote telephone handsets. The SK-FFT with keypad, provides indications of phone activation, and corresponding trouble conditions. Additionally, up to 48 telephone circuits can be annunciated at the SK-FFT by connecting the FFT-24 zone expander.

1.1 Features

- One Form-C trouble relay:
  - System Trouble Relay - TB6
- SK-FFT Fire Fighter Telephone module for control and annunciation of up to 48 remote telephone jacks
- A maximum of 10 Fire Fighter Remote Handsets (FFT-RHS) can be used at one time to communicate over the telephone circuit connected to the SK-FFT
- Fire Fighter Phone Jack (FFT-FPJ) provides a plug-in location for the FFT-RHS
- Single Telephone Station (FFT-STS)
- Fire Fighter Handset Cabinet (FFT-HSC) is used to store ten Fire Fighter Handsets (FFT-RHS)
- System Status LEDs
- Supports a single FFT-24 zone expander

1.2 Optional Accessories

This manual also contains information on how to install the following compatible accessories with the FFT series equipment:

Model Number	Description
FFT-24	24 Zone Expander
FFT-FPJ	Remote Phone Jack
FFT-RHS	Fire Fighters Remote Hand Set
FFT-HSC	Fire Fighters Handset Cabinet
FFT-STSR	Single Telephone Station Recessed
FFT-STSS	Single Telephone Station Surface Mount
FFT-BGK	Break Glass Kit for FFT-STS
SK-Minimon	Addressable Mini-Monitor Module
SK-ISO	SLC Line Isolation Module

1.3 Agency Requirements

The SK-FFT has the same requirements as the main control panel. These requirements are listed in Silent Knight addressable FACP Installation Manuals. Silent Knight Addressable FACP Installation Manuals can be found on Silent Knight's web site at www.silentknight.com.

1.4 About This Manual

This manual is intended to be a complete reference for all installation and operations tasks for the SK-FFT. Silent Knight Installation Manuals can be found on Silent Knight's web site at www.silentknight.com.

Please let us know if the manual does not meet your needs in any way. We value your feedback!

1.5 How to Contact Silent Knight

If you have a question or encounter a problem not covered in this manual, contact Silent Knight Technical Support at 800-446-6444.

To order parts, contact Silent Knight Sales at 800-328-0103.

Limitations of Fire Alarm Systems

Requirements and recommendations for proper use of fire alarm systems including smoke detectors and other fire alarm devices:

- To keep your fire alarm system in excellent working order, ongoing maintenance is required per the manufacturer's recommendations and UL and NFPA standards. At a minimum the requirements of Chapter 14 of NFPA 72, 2010 Edition shall be followed. A maintenance agreement should be arranged through the local manufacturer's representative. Maintenance should be performed annually by authorized personnel only.

The most common cause of an alarm system not functioning when a fire occurs is inadequate maintenance. As such, the alarm system should be tested weekly to make sure all sensors and transmitters are working properly.

Section 2
Before you Begin Installing

This section of the manual is intended to help you plan your tasks to complete the installation. Please read this section thoroughly, especially if you are installing a SK-FFT for the first time.

2.1 Environmental Specifications

It is important to protect the SK-FFT control panel from water. To prevent water damage, the following conditions should be AVOIDED when installing the units:

- Do not mount directly on exterior walls, especially masonry walls (condensation)
- Do not mount directly on exterior walls below grade (condensation)
- Protect from plumbing leaks
- Protect from splash caused by sprinkler system inspection ports
- Do not mount in areas with humidity-generating equipment (such as dryers, production machinery)

When selecting a location to mount the SK-FFT, the unit should be mounted where it will NOT be exposed to temperatures outside the range of 0°C- 49°C (32°F-120°F) or humidity outside the range of 10% - 93% at 30°C (86°F) noncondensing.

2.2 Preventing Water Damage

Water damage to the fire fighters phone system can be caused by moisture entering the cabinet through the conduits. Conduits that are installed to enter the top of the cabinet are most likely to cause water problems. Installers should take reasonable precautions to prevent water from entering the cabinet. Water damage is not covered under warranty.

2.2.1 Removing the SK-FFT Assembly from the Housing

If it should ever be necessary to remove the control panel assembly from the cabinet for repair, do so by removing the screws that hold the control panel in to the cabinet. Do not attempt to disassemble the circuit boards.

2.3 SK-FFT Board Layout

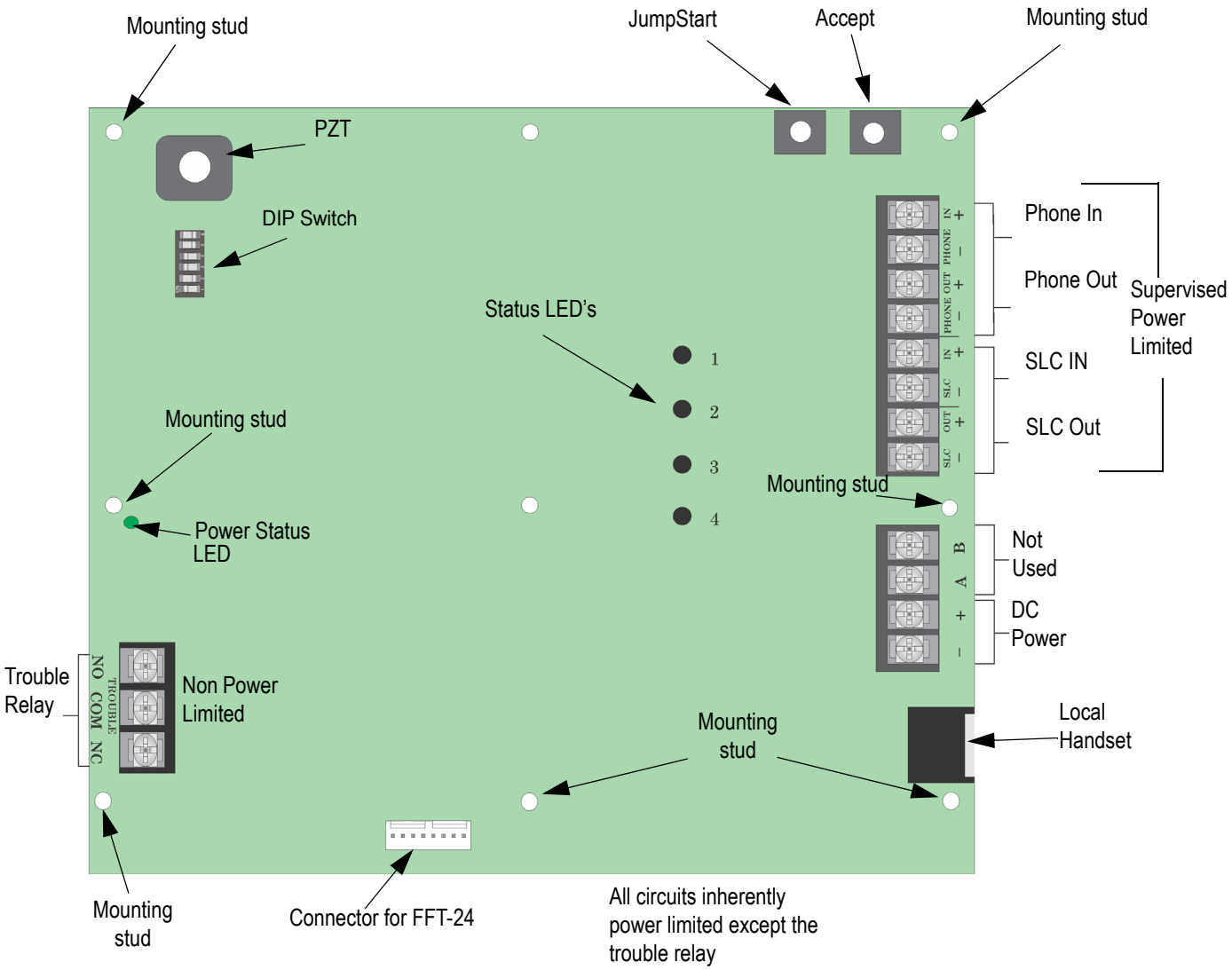


Figure 2-1 Back view of SK-FFT

Figure 2-1 shows the circuit board that attaches to the cabinet. If you should need to remove the board assembly for repair, remove the seven mounting nuts which hold the assembly in the cabinet. Then lift the control board out of the cabinet.

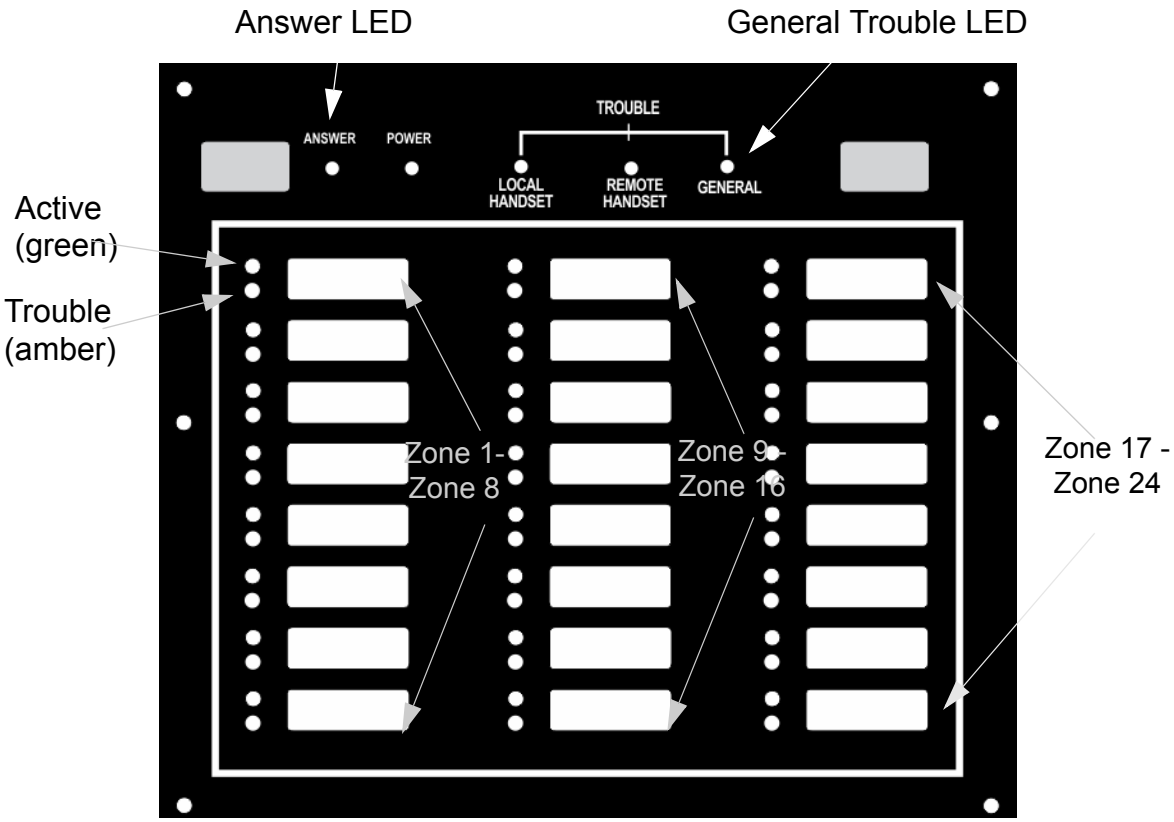


Figure 2-2 SK-FFT Front View

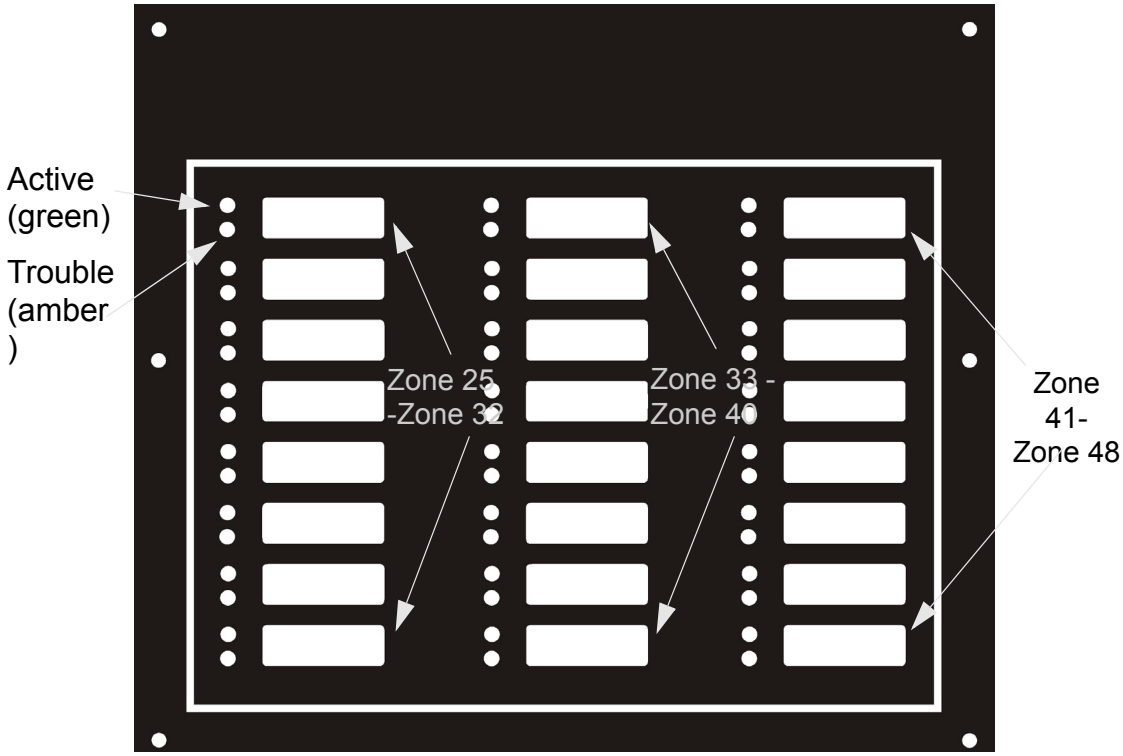


Figure 2-3 FFT-24 Expander Front View for Zone 25 - 48

2.4 Electrical Specifications

2.4.1 Power Requirements

Voltage for the SK-FFT must be a power-limited, filtered, non resettable nominal 24 VDC source. The voltage source must be within the range of 17-29 VDC.

Table 2-1: Electrical Ratings

Circuits	Voltage	Current
SLC Circuits	32 V	150 mA
Audio Circuits	17 V	53 mA

2.4.2 Current Ratings

Maximum current ratings for determining backup battery requirements for alarm (active) and standby conditions over the input voltage range of 17-29 VDC are shown in Table 2-2.

Table 2-2: SK-FFT Current Draw

	Active	Standby
SK-FFT	230 mA	120 mA
FFT-24	25 mA	10 mA

2.5 Wiring Specifications

Induced noise (transfer of electrical energy from one wire to another) can interfere with telephone communication or cause false alarms. To avoid induced noise, follow these guidelines:

- Isolate input wiring from high current output and power wiring. Do not pull one multi-conductor cable for the entire panel. Instead, separate the wiring as follows:

SLC loops	Audio circuits
Relay circuit	

- Do not pull wires from different groups through the same conduit. If you must run them together, do so for as short a distance as possible or use shielded cable. Twisted, shielded wire on the Audio Circuits is recommended for maximum protection against EMI and AFI emissions and susceptibility. Connect the shield to earth ground at the panel. You must route high and low voltages separately.
- Route the wiring around the inside perimeter of the cabinet. It should not cross the circuit board where it could induce noise into the sensitive microelectronics or pick up unwanted RF noise from the high speed circuits. See Figure 2-4 for an example.
- High frequency noise, such as that produced by the inductive reactance of a speaker or bell, can also be reduced by running the wire through ferrite shield beads or by wrapping it around a ferrite toroid.

2.6 Wire Routing

You must follow power-limited wiring techniques, which include maintaining one-quarter inch spacing between power-limited and non-power limited circuits and separating high and low voltage circuits.

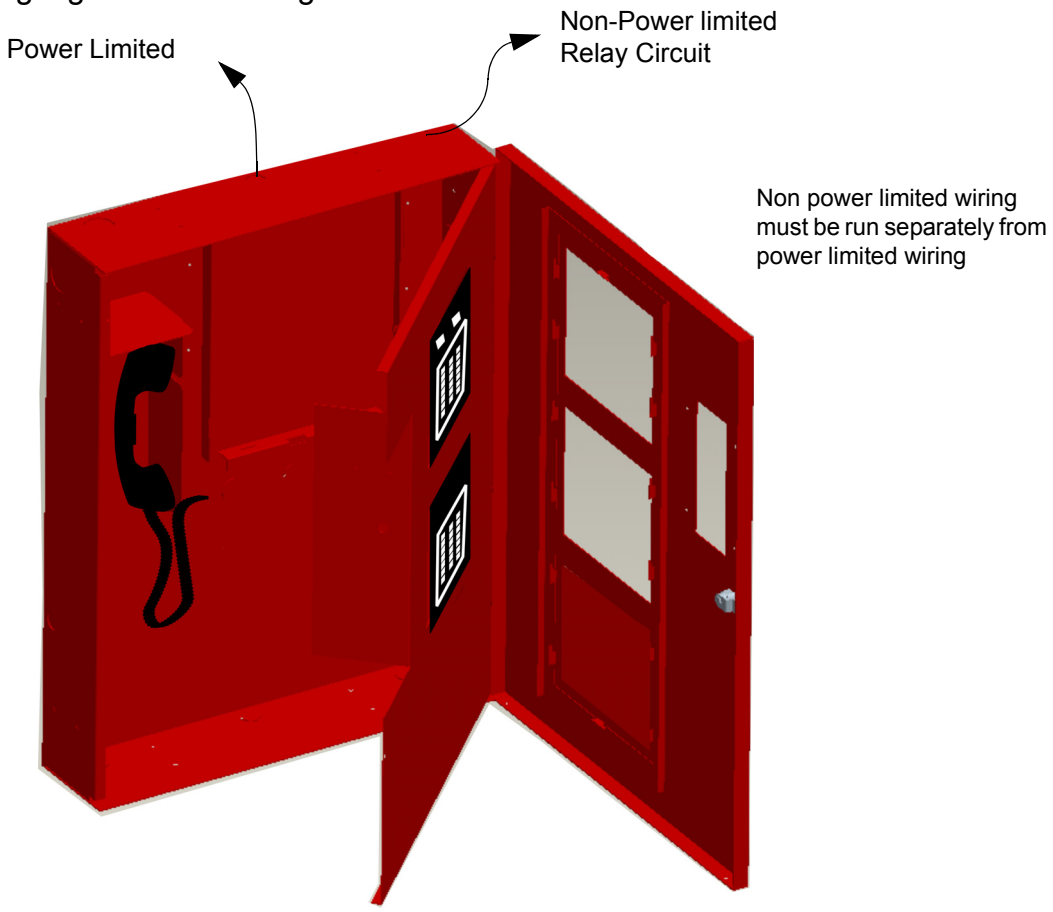


Figure 2-4 Wire Routing Example

Section 3
Installation

3.1 Mounting the Cabinet

Read the environmental specifications in Section 2.1 before mounting the SK-FFT cabinet. This will ensure that you select a suitable location.

The cabinet can be surface or flush mounted. Do NOT flush-mount in a wall designed as a fire break.

3.1.1 Surface Mounting

The Cabinet can be mounted on the wall surface by using the mounting holes in the back of the cabinet (see Figure 3-1).

1. Insert two screws level with each other, 14" apart for the top cabinet key shaped holes. See Figure 3-1.
2. Hang the cabinet onto the two screws. Tighten the screws down.
3. Insert two screws into the two bottom mounting holes and tighten them snug to the cabinet.

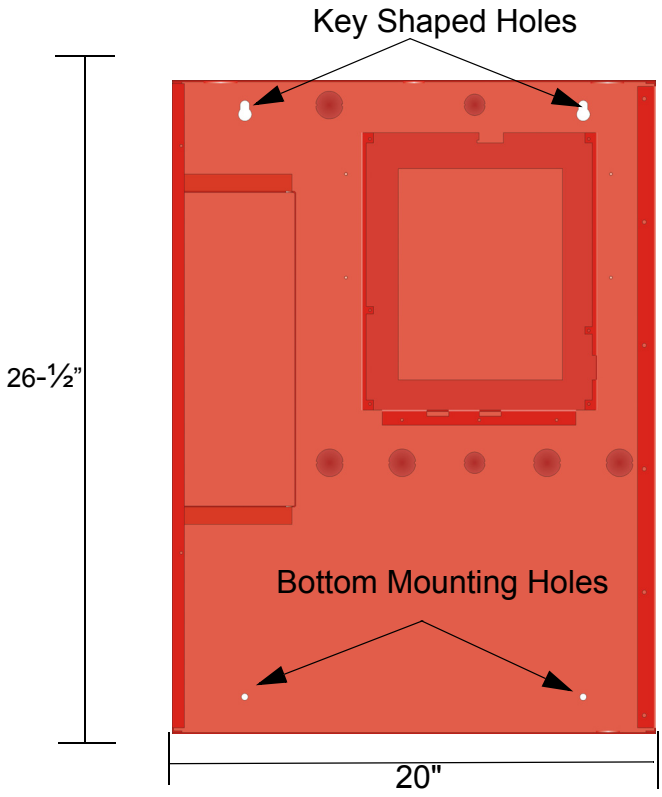


Figure 3-1 Cabinet Mounting Holes

3.1.2 Flush Mounting

This section describes how to flush mount the cabinet into a wall. To recess mount the cabinet you will need to have the optional trim ring P/N VIP-TR (ordered separately).

Follow these steps to recess mount the cabinet:

1. Remove the cabinet door and the dead front panel.
2. Cut a recess hole 20-1/4” W x 26-3/4” H (51.44 cm W x 67.95 cm H). There should be 1.5" to 1.75" of cabinet extruding from the wall, this should be measured from either the top edge or bottom edge to the exterior side of the sheet rock. (See Figure 3-2.)

Important!
Do not insert the cabinet deeper than recommend above. If the cabinet is mounted to deep you will not be able to re-attach the door assembly.

3. Mount the cabinet to wall studs by inserting a screw through the cabinets side mounting holes into the wall stud.

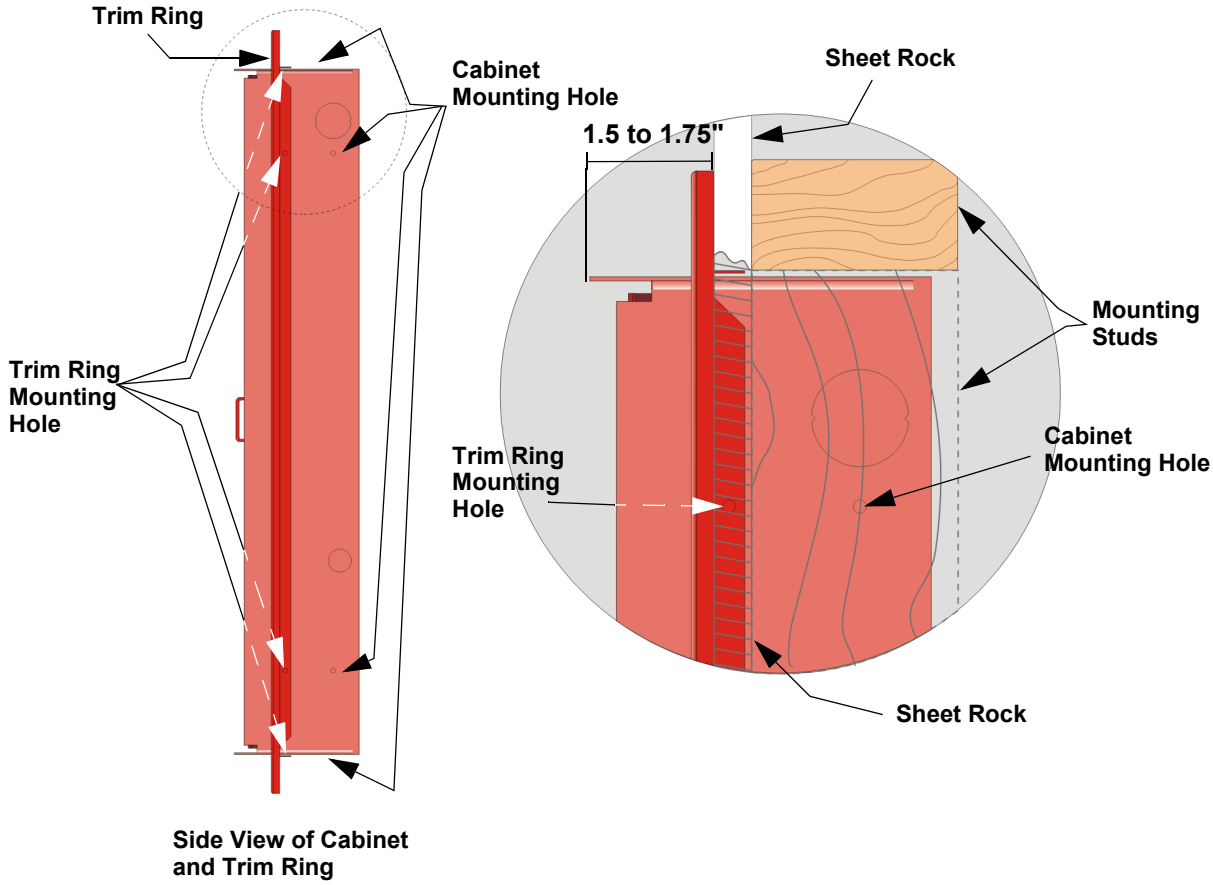


Figure 3-2 Detail of Flush Mounting with Trim Ring

4. Place the trim ring around the cabinet. See Figure 3-3.

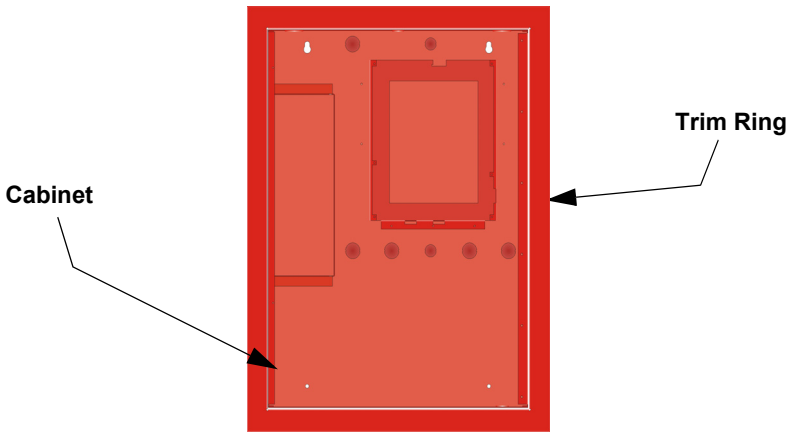


Figure 3-3 Trim Ring Around cabinet

5. Secure the trim ring to the cabinet using the self-tapping sheet metal screws from the inside of the cabinet into the trim ring.
6. Re-attach the cabinet door assembly.

3.1.2.1 Cabinet Door and Dead Front Removal

While installing the cabinet it may be necessary to remove the cabinet door and the dead front panel. This section provides instructions on how to remove the door and dead front panel.

1. Using a Phillips head screw driver, remove the six screws that hold the dead front panel in place. See Figure 3-4.

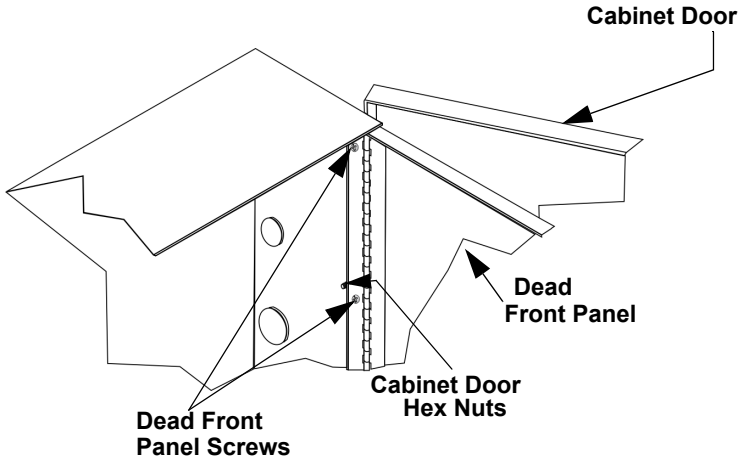


Figure 3-4 Cabinet Door and Dead Front Panel Removal

2. Using a 1/4” Hex drive, remove the six Hex nuts that hold the cabinet door in place. See Figure 3-4.

Re-Attaching the Cabinet Door

To re-attach the cabinet door reverse the procedure in section 3.1.2.1.

3.2 Installing the Fire Fighter's Hand Set

FFT Local Handset installation involves the following steps:

1. Insert phone cord through hole of dead front panel. See Figure 3-5.

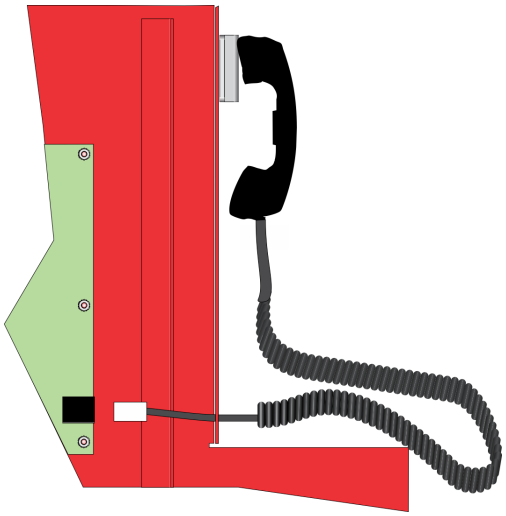


Figure 3-5 Handset Cord Inserted Through Dead Front Panel Hole

2. Attach strain relief clip to the phone cord. The strain relief clip should have about 2 ¾" of phone cord though it. See Figure 3-6.

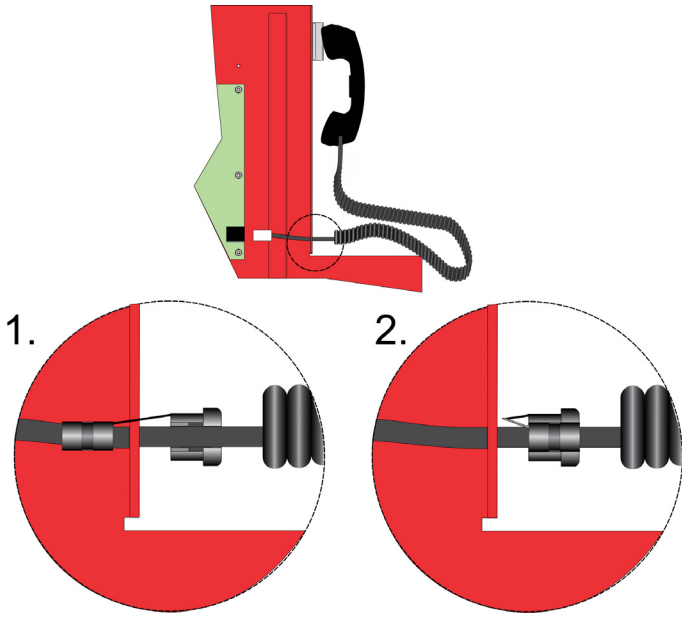


Figure 3-6 Installing Strain Relief Clip

3. Push the strain into the hole in the dead front panel.

3.3 FFT-24 Installation

The FFT-24 expander board lets you add additional zones to the SK-FFT. To add Zone 25 - Zone 48 to the SK-FFT, you must use FFT-24 expander board.

To install the FFT-24:

1. Open Cabinet door and dead front panel.
2. Remove power. See Appendix A for compatible powering devices.
3. Remove blank plate and discard.
4. Mount the FFT-24 on the six mounting studs located on the inside of the dead front panel and secure using the nuts removed from the blank plate. See Figure 3-7.

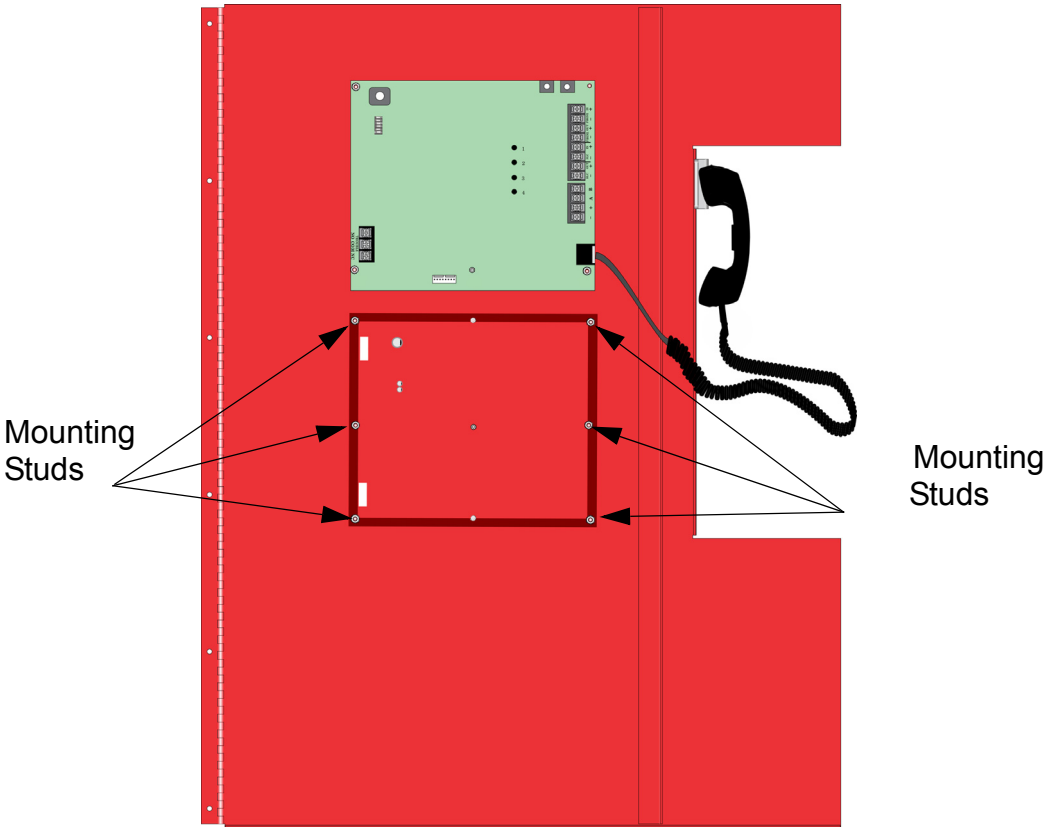


Figure 3-7 Mounting locations for the FFT-24

5. Connect one end of the wiring harness (P/N 130398 supplied) to the SK-FFT and

the other end to the FFT-24 as shown in Figure 3-8.

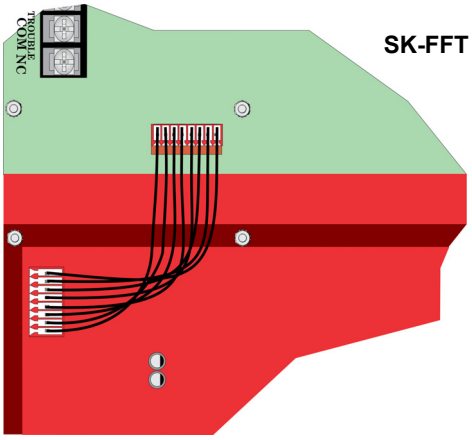


Figure 3-8 Wire Harness Connection from SK-FFT to FFT-24 zones 25- 48

6. Restore power. See Section 3.5.

3.4 Installing the SK-FFT

SK-FFT installation involves the following steps:

- Make physical connection to any outputs that will power* the SK-FFT. (See Section 3.5).
- Set the DIP switch ID for the SK-FFT (See Section 3.6.1).

*See Appendix A for compatible powering devices. Silent Knight Installation Manuals can be found on Silent Knight's web site at www.silentknight.com.

3.5 Operating Power

This section provides instructions to install the appropriate DC power source.

1. Connect the SK-FFT to the appropriate DC power source. See Section 2.4.1 for power requirements. For compatible product see Table A-1.
2. Use the on-board DIP switch to assign the configuration setting to the SK-FFT. (See Section 3.6.1).

3.6 DIP switch settings on SK-FFT

This section describes how to configure the DIP switch setting on the SK-FFT.

1. Refer to Figure 2-1 for location of the DIP switches on the SK-FFT board.
2. Configure the SK-FFT module by adding it to the system through JumpStart feature. See Section 6.3 for JumpStart Operation. Table 3-1 list possible DIP switch configurations.

3.6.1 DIP Switch

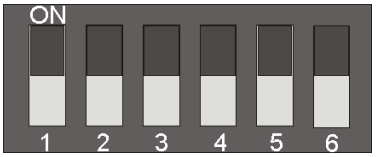


Figure 3-9 DIP Switch

Table 3-1 SK-FFT DIP Switch Configurations

DIP Switch	ON	OFF
1	SLC Devices Installed	SLC Devices not Installed
2	Trouble PZT Enabled	Trouble PZT Disabled
3	SLC Class A Supervision	SLC Class B Supervision
4	Phone Circuit Class A Supervision	Phone Circuit Class B Supervision
5	First FFT-24 Expander Installed	First FFT-24 Expander not Installed

3.7 SK-FFT Fire Fighter Telephone Module Connection

The SK-FFT provides connection for a single Class B or Class A telephone audio circuit. See Section 4 and Section 5 for examples of audio zone configurations. A monitor module can be used to monitor the connection of the Fire Fighter Telephone remote handset (FFT-RHS) into the FFT-FPJ, which is then displayed on the SK-FFT active zone LED during the JumpStart feature.

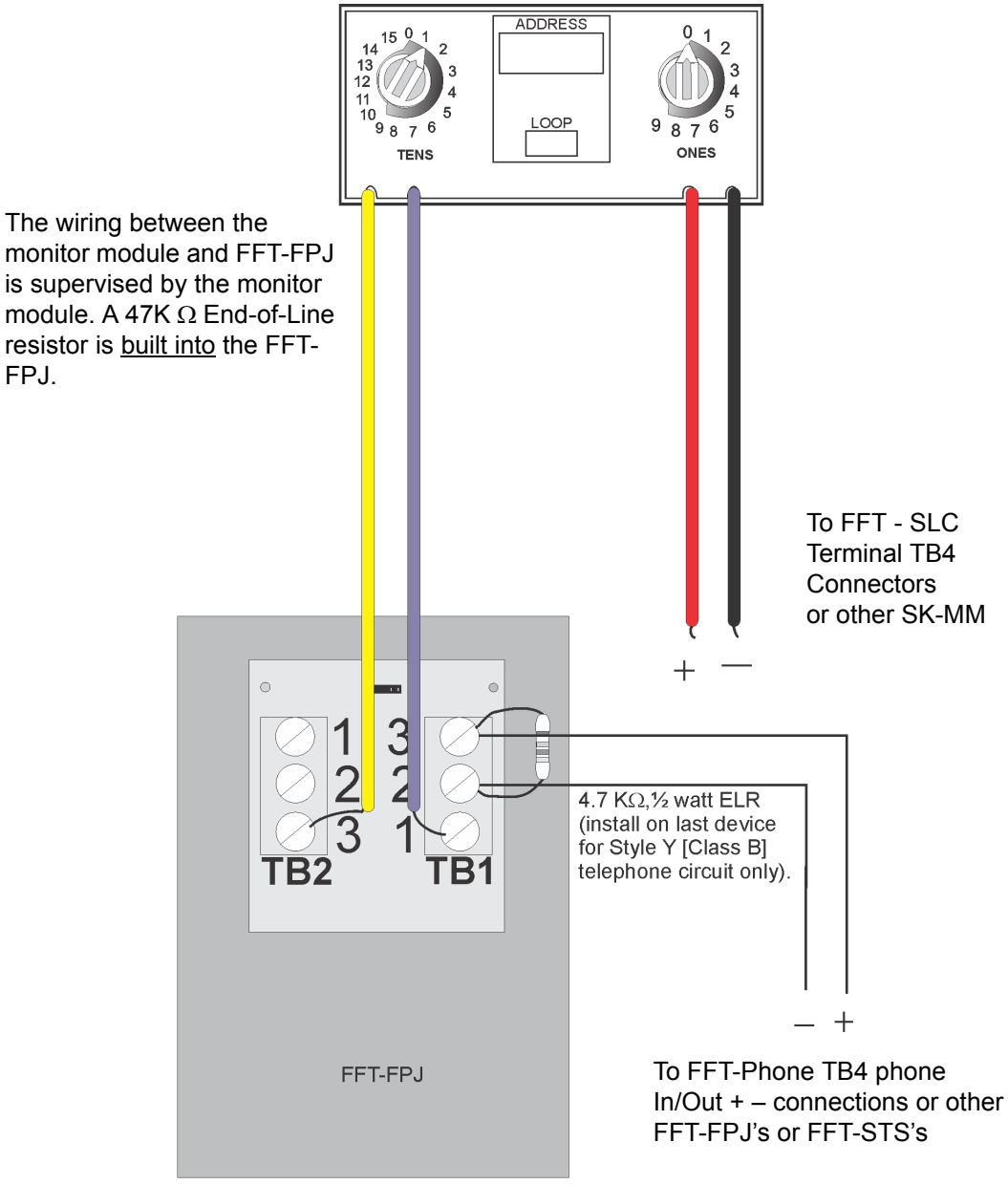


Figure 3-10 SK-FFT Connections

3.8 FFT-FPJ Installation

The FFT-FPJ Firefighter Phone Jack mounts to a single-gang electrical box (4" x 2-1/8" x 2-½") or, when the addressable mini-monitor module is installed with it, a deep single-gang electrical box (4" x 2-1/8" x 3-¾").

Connect the telephone audio loop between the FFT-FPJ and FFT as detailed in Figure 3-12.

All circuits are power-limited and supervised.

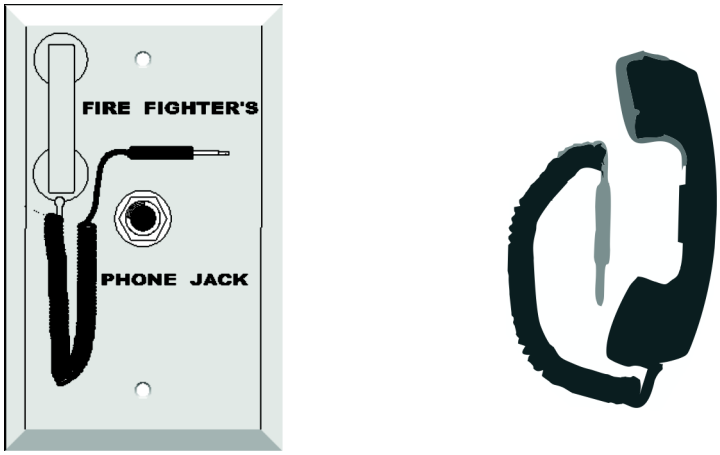


Figure 3-11 FFT-FPJ (phone jack) and FFT-RHS (handset)

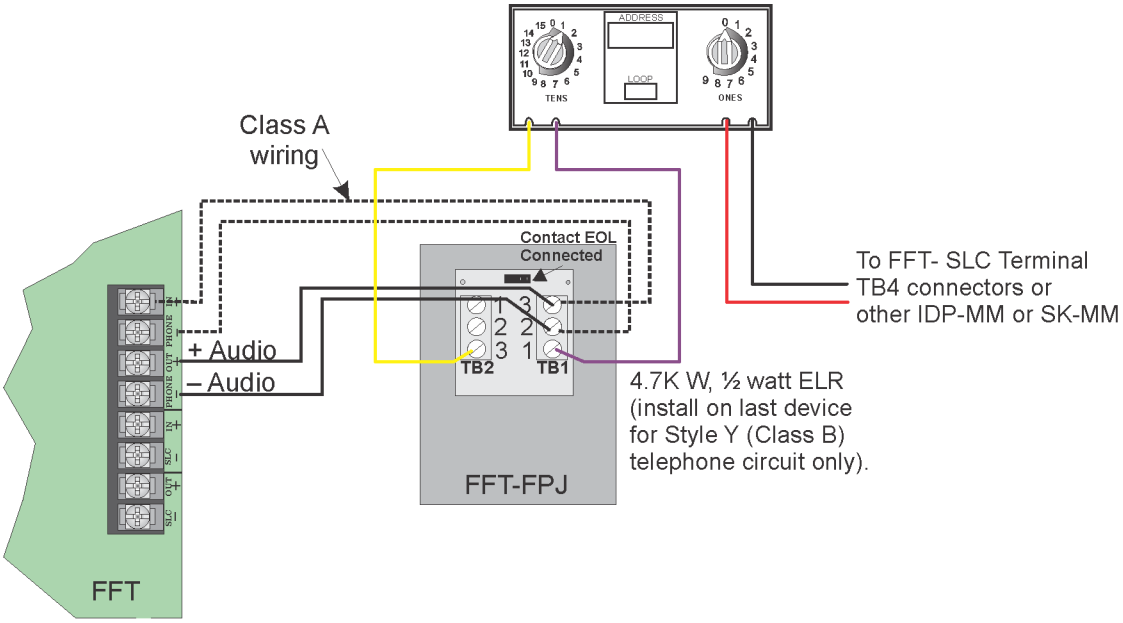


Figure 3-12 FFT to FFT-FPJ Connection

3.9 Installation of FFT-STS

The Single Telephone Station comes in a series of parts. The telephone chassis, backbox, breakglass kit and door with keylock are all ordered separately. Up to ten remote handsets may be operated simultaneously.

3.9.1 Assembly of Units with Coiled Cord Handsets

The following assembly steps are for telephones with coiled cord handsets. These steps must be accomplished once the enclosure has been mounted and the system wiring is in place

1. Attach system wiring to the terminal strip on the telephone chassis assembly
2. Install 6-32 nut in backbox. Do not tighten.
3. Install telephone chassis assembly in backbox.
4. Install trim ring on backbox with 6-32 wing nuts. Do not tighten.
5. Install door assembly. Tighten wing nuts.

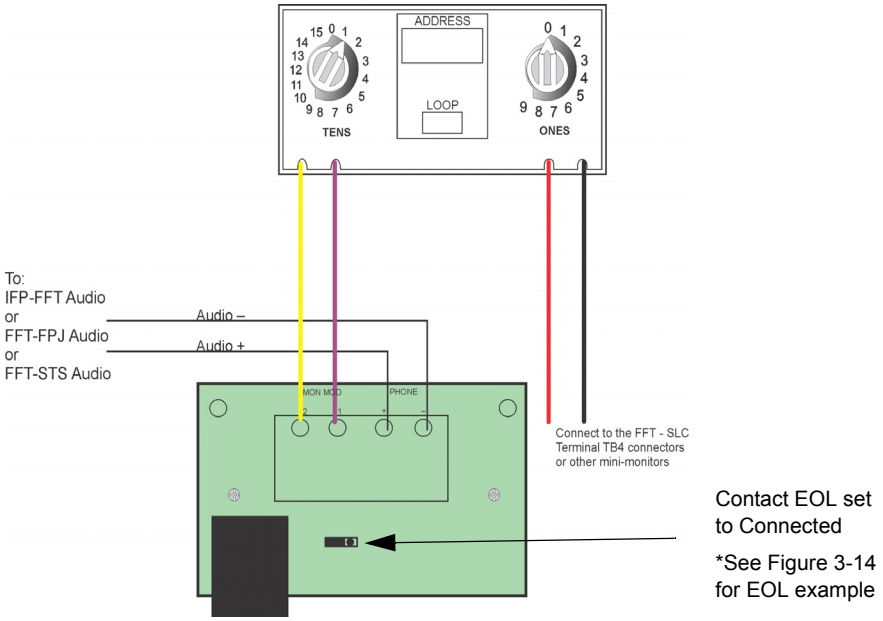


Figure 3-13 FFT-STS Telephone Connection

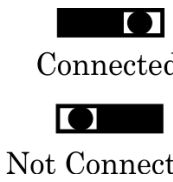


Figure 3-14 EOL Example

Section 4
SLC Device Installation

Caution!
To avoid the risk of electrical shock and damage to the unit, power should be OFF at the control panel while installing or servicing.

4.1 List of SLC Devices

The following SLC device can be used with the Fire Fighters Phone. See the device installation instructions for more information (packaged with the device).

SK Part Number	Model Name/Description	Section/ Install Sheet PN
SK-Minimon	Mini Monitor Module	I56-3444-000
SK-ISO	Fault Isolator Module	I56-3445-000

4.2 Maximum Number of Devices

The SK-FFT supports up to 48 SK-Minimon devices on one FFT system.

4.3 Wiring Requirements for SLC Device

The following information applies to the SK-Minimon - Mini Monitor module.

4.3.1 Wiring SLC in Style 4 (Class B) Configuration

No special wire is required for addressable loops. The wire can be untwisted, unshielded, solid or stranded as long as it meets the National Electric Code 760-51 requirements for power limited fire protective signaling cables. Wire distances are computed using copper wire.

Maximum wiring resistance is 40 ohms to the farthest SLC device.

Maximum loop length depends on the wire gauge.

Wire Gauge	Max. Distance
22 AWG	1200 feet
18 AWG	3100 feet
16 AWG	4900 feet
14 AWG	7900 feet
12 AWG	10,000 feet

Figure 4-1 and Figure 4-2 show how length is determined for out and back tap T-Tap style wiring.

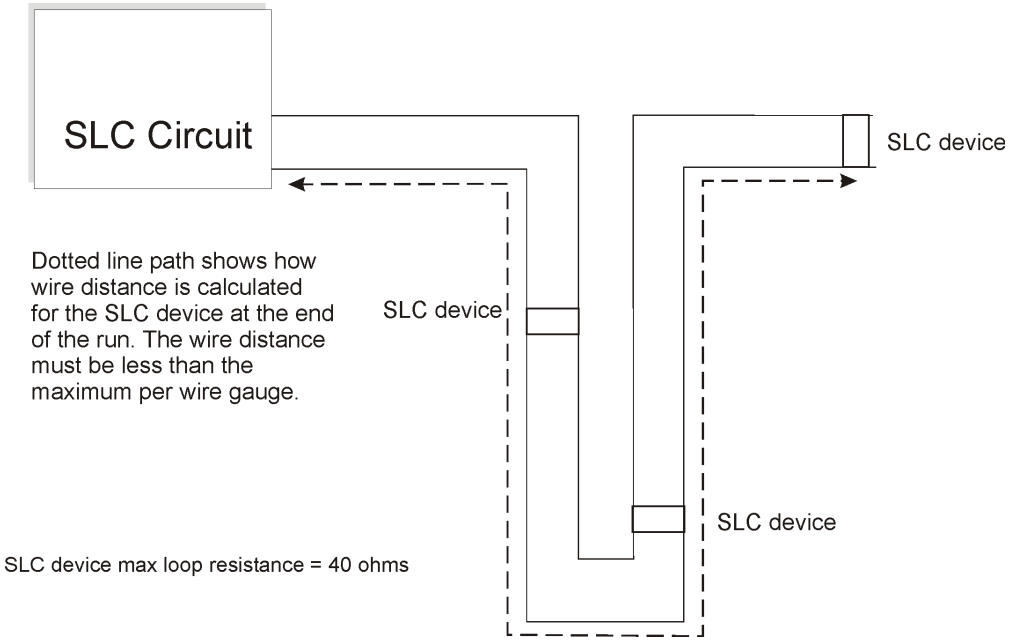


Figure 4-1 Calculating wire run length for a simple out and back

When using T-taps, the total length of all taps and the main bus must not exceed 40,000 feet. This requirement must be met in addition to the maximum distance requirements for the various wire gauges.

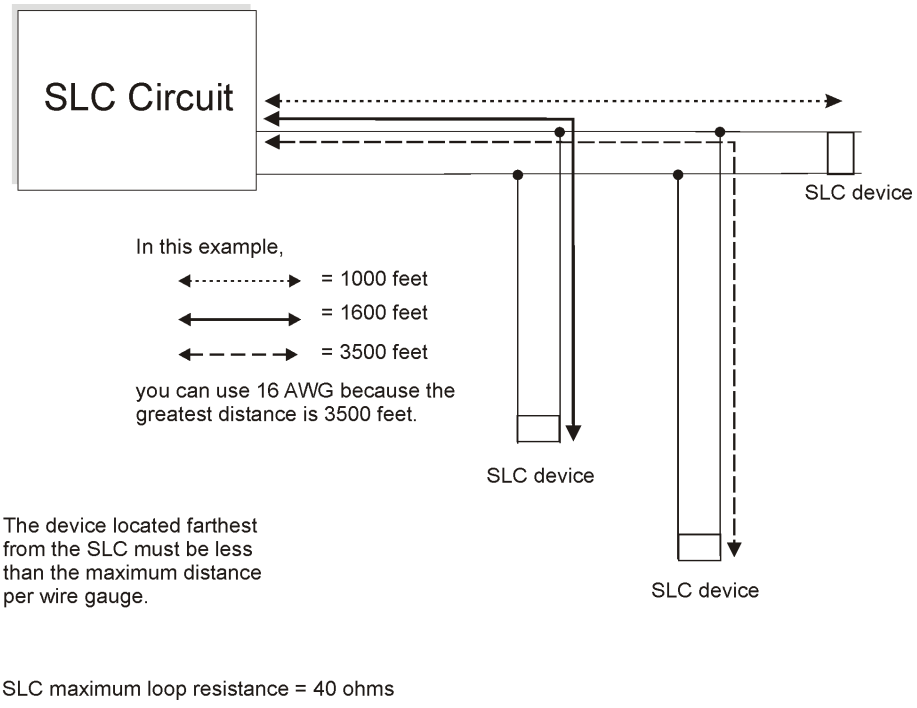


Figure 4-2 Calculating Wire Run Length for a T-tap

4.3.2 Wiring SLC Devices in Style 6 & 7 (Class A) Configuration

Figure 4-3 illustrates how to wire the SLC loop for Style 6 or Style 7 Class A installations.

Note: Style 6 does not require the use of isolator modules.

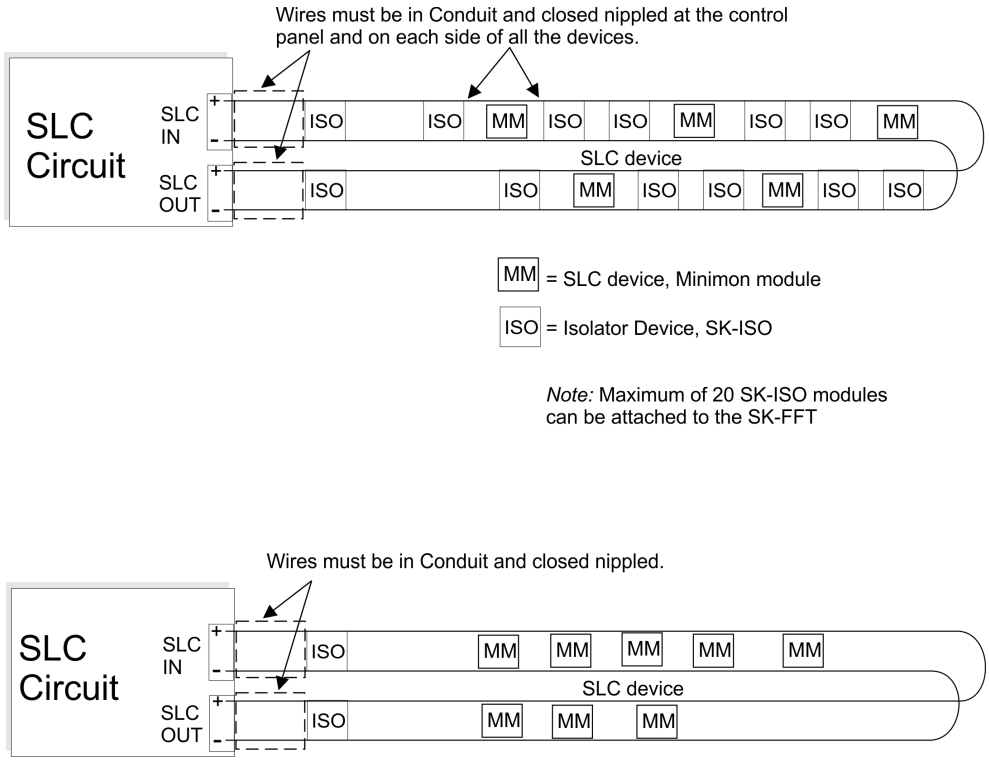


Figure 4-3 Class A SLC Configuration

Note: No t-taps allowed on Class A SLC loops.

Caution
For proper system supervision do not use looped wire under terminals marked SLC + and – of the SLC device connectors. Break wire runs to provide supervision of connections.

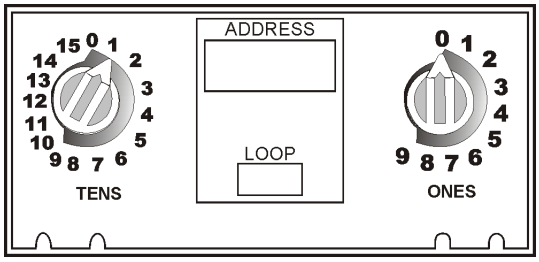
4.4 Addressing SK-Minimon SLC Devices

All SK-Minimon devices are addressed using the two rotary dials that appear on the device board. Use the *ONES* rotary dial to set the ones place in a one or two digit number, and use the *TENS* rotary dial to set the tens place in a two digit number.

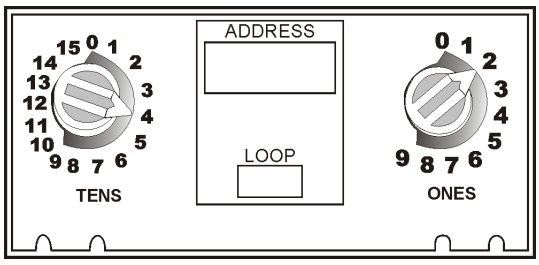
SK-Minimon modules can be assigned any unique address from 1 to 48.

Example 1: To select device address 10, turn the *ONES* rotary dial to **0** and the *TENS* rotary dial to **1** as shown in Figure 4-4.

Example 2: To select device address 42, turn the ONES rotary dial to **2** and the TENS rotary dial to **4** as show in Figure 4-4.



Example 1: Device set to 10



Example 2: Device Set to 42

Figure 4-4 SK-Minimon SLC Device Addressing using Rotary Dials

Section 5
Audio Phone Circuit Installation

5.1 List of Devices

Part Number	Description
FFT-FPJ	Fire Fighters Telephone Jack

5.2 Maximum Number of Devices

The SK-FFT supports up to 48 zones. Each zone consists of one addressable monitor module (SK-Minimon) and a minimum of one Fire Fighter Telephone Jack (FFT-FPJ).

5.3 Wiring Requirements for the Audio Telephone Circuit

The following information applies to the FFT-FPJ Fire Fighter Phone Jack.

5.3.1 Single Phone Jack Audio Circuit in Class B Configuration

No special wire is required for the Audio Telephone Circuit. The wire can be untwisted, unshielded, twisted or shielded as long as it meets the National Electric code 760-51 requirements for power limited fire protective signaling cables.

54 Ohm maximum impedance - 12 to 18 AWG.

Twisted, shielded wire is recommended for maximum protection against EMI and AFI emissions and susceptibility.

If using shielded cable, attach the shield to Grounding Stud below TB6 of the FFT.

Note: Do not ground shield on both ends.

Figure 5-1 illustrates single phone jack configuration wiring the audio circuit and SLC for Class B Configuration. Audio circuits must be connected to FFT phone out terminals for all Class B audio configurations.

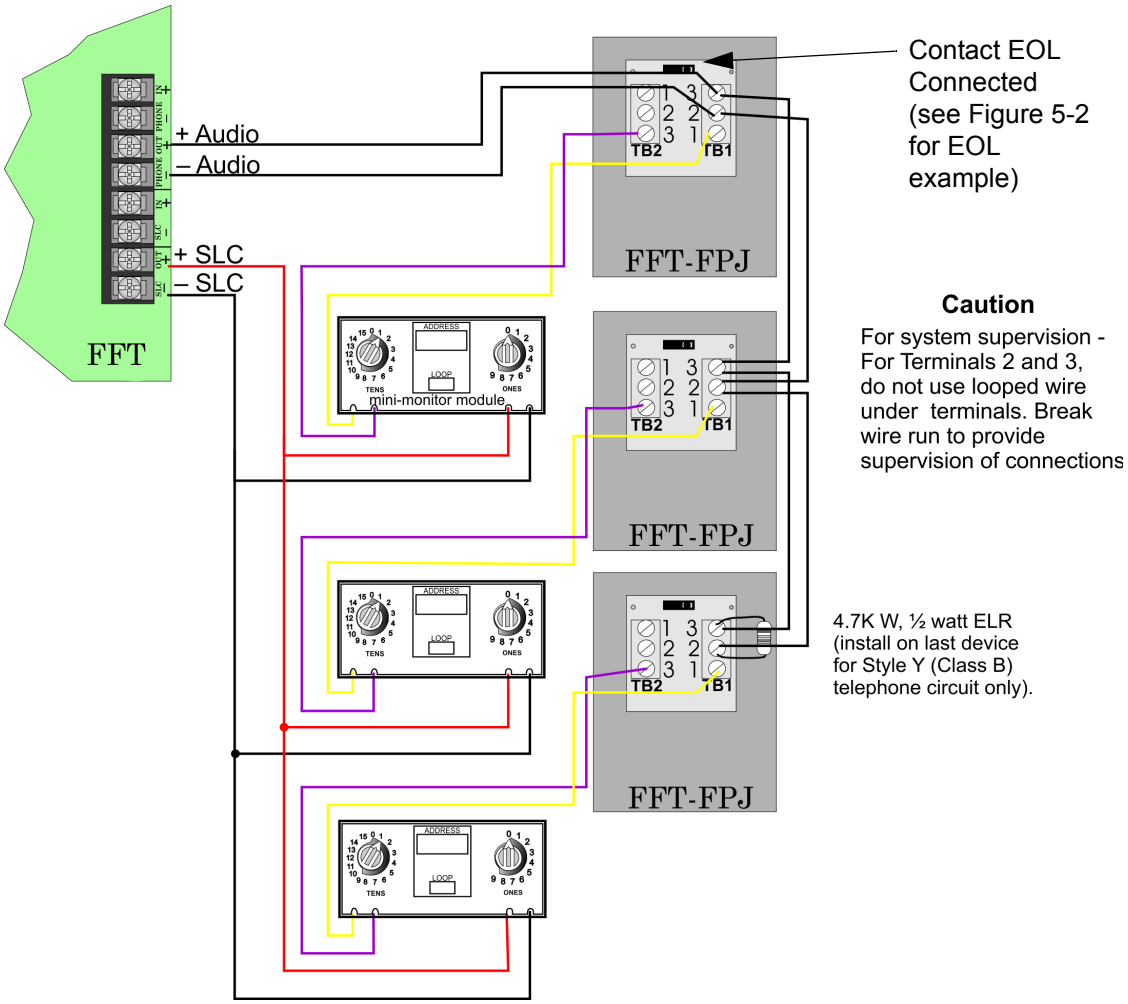


Figure 5-1 Single Phone Jack Audio Circuit in Class B

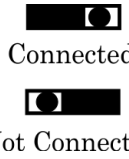


Figure 5-2 EOL Example

5.3.2 Single Phone Jack Audio Circuit in Class A Configuration

For wiring specifications see section 5.3.1.

Figure 5-3 illustrates phone jack audio circuit (Class A) and SLC for Style 6 & 7 (Class A) configuration.

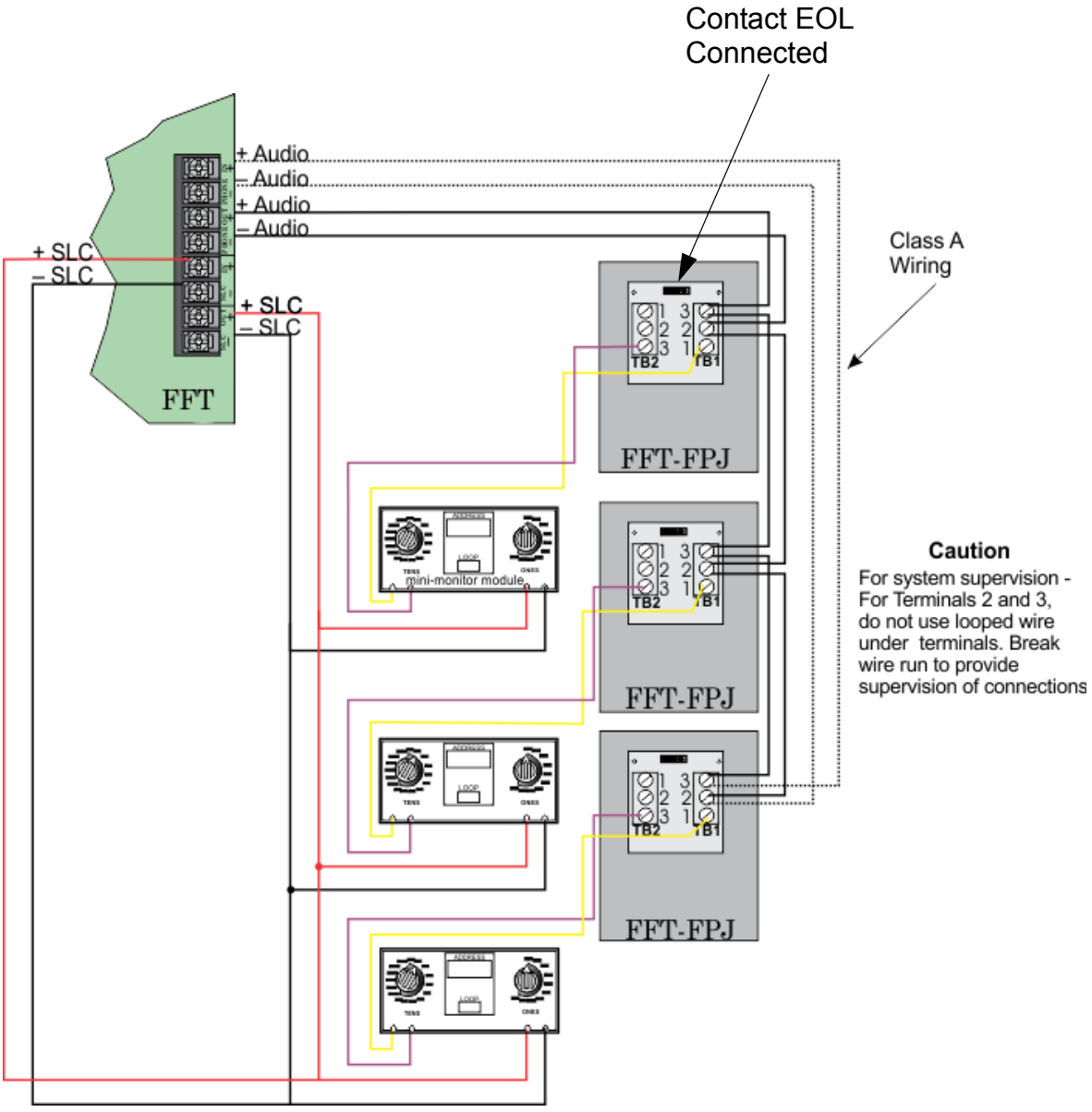


Figure 5-3 Single Phone Jack Audio Circuit in Class A

5.3.3 Multi-Phone Jack Audio Circuit in Class B Configuration

For wiring specifications see section 5.3.1.

Figure 5-4 illustrates how to wire the Multi-Phone Jack audio circuit (Class B) and SLC for for Style 4 (Class B) configuration. In the Multi-Phone Jack configuration, the maximum mini-monitor contact wiring resistance between to first and last FPJ must be less that 100 ohms.

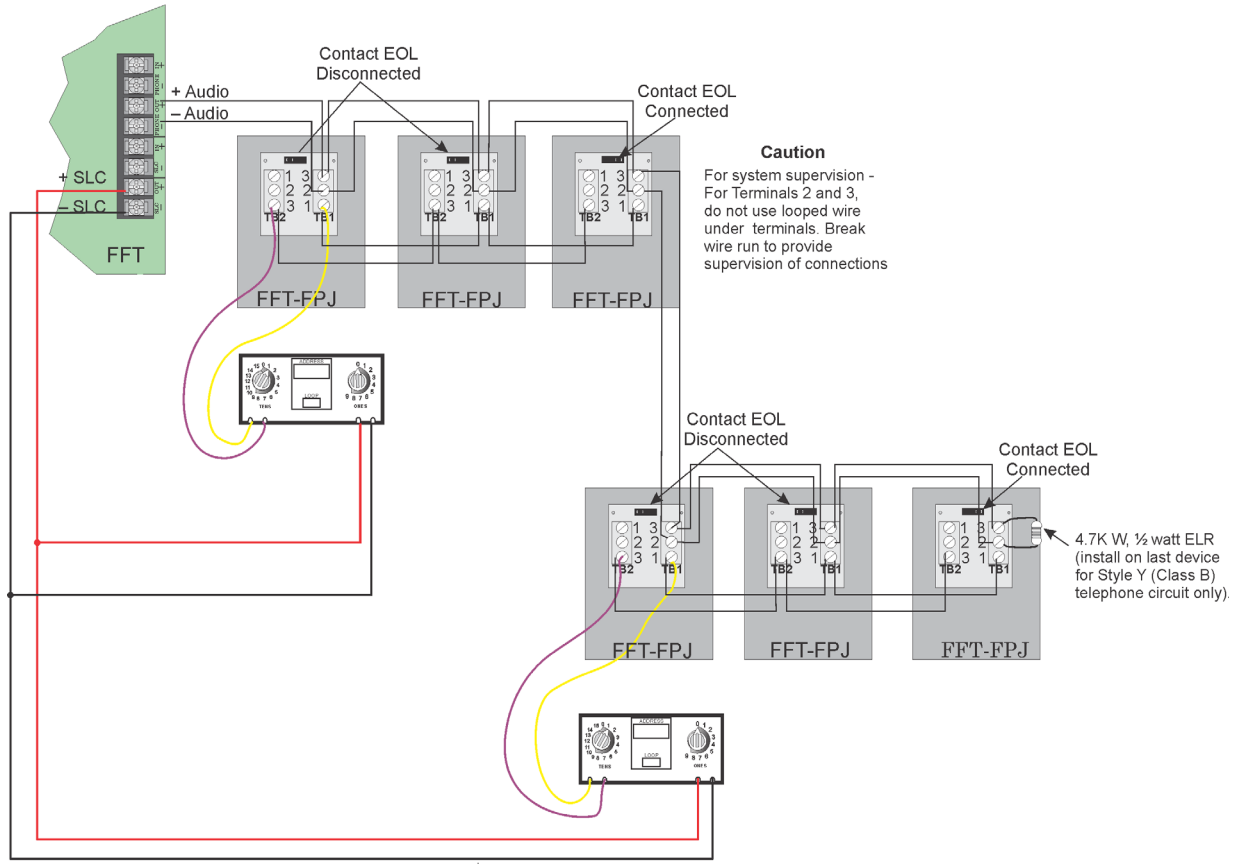


Figure 5-4 Multi-Phone Jack Audio Circuit in Class B

5.3.4 Multi-Phone Jack Audio Circuit in Class A Configuration

For wiring specifications see section 5.3.1.

Figure 5-5 illustrates how to wire the Multi-Phone Jack audio circuit (Class A) and SLC for Style 6 & 7 (Class A) configuration. In the Multi-Phone Jack configuration, the maximum Mini-Monitor Contact wiring resistance between to first and last FPJ must be less that 100 ohms.

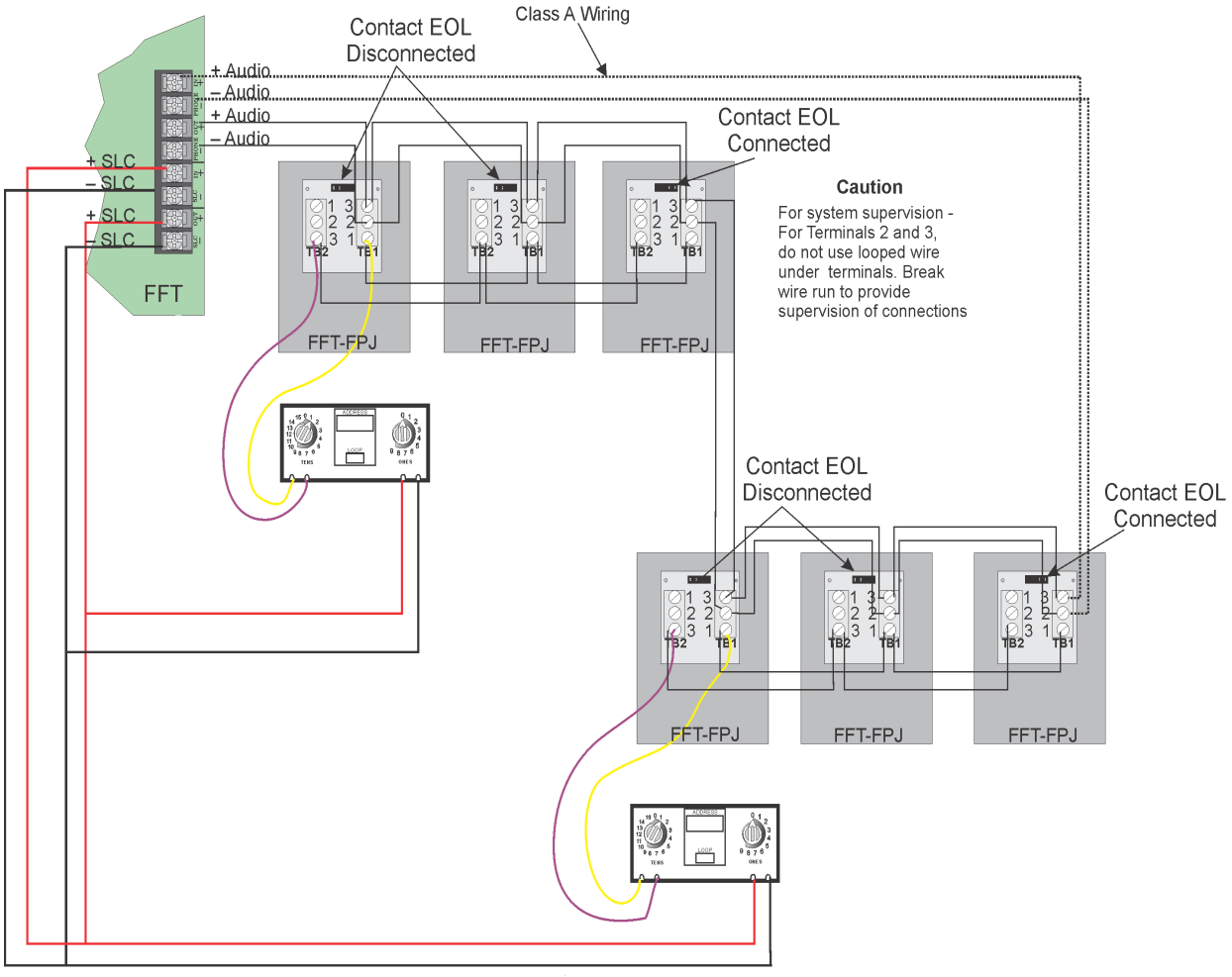


Figure 5-5 Multi-Phone jack Audio Circuit in Class A

5.3.5 Telephone Jack Only Audio Circuit

The FFT can also be configured using only the Fire Fighters Phone Jack (FFT-FPJ). In this configuration, the SK-Minimon module is not required for system operation. To configure the FFT for Telephone Jack only, the DIP Switch position 1 must be off (SLC Devices not Installed). See Table 3-1.

Audio wiring for this configuration is detailed below. See Figure 5-6 and Figure 5-7.

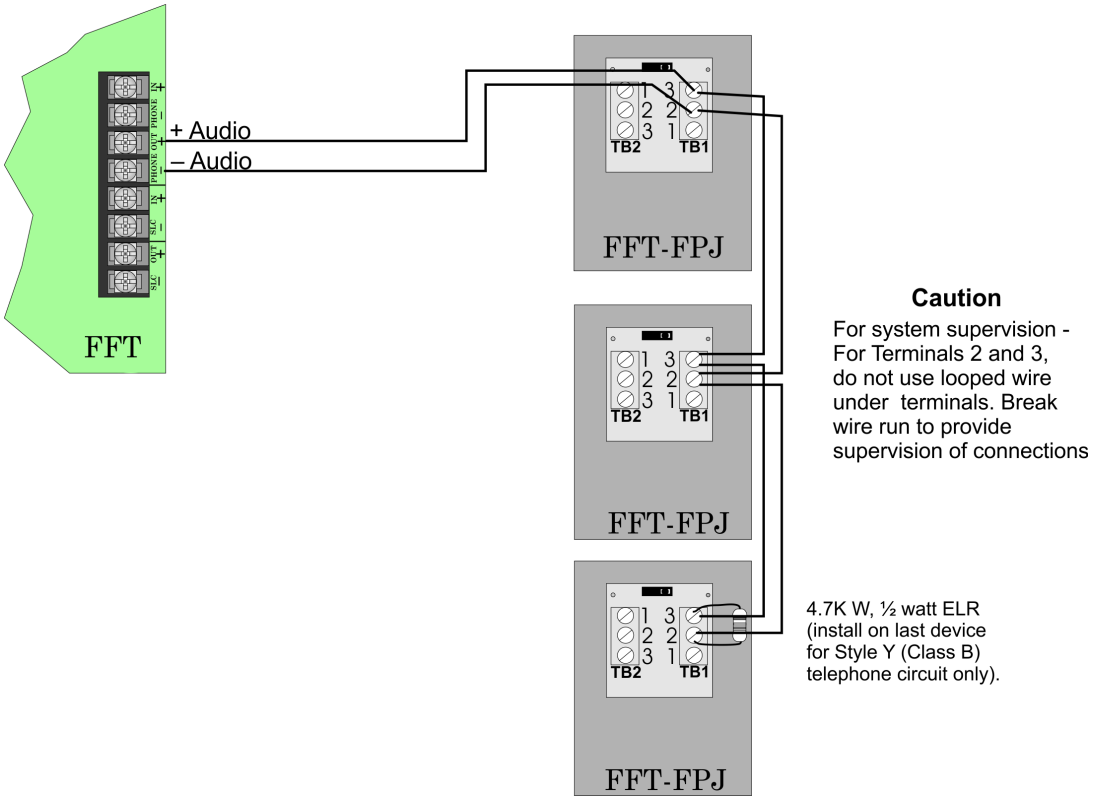


Figure 5-6 Telephone Jack Only Audio Circuit Class B

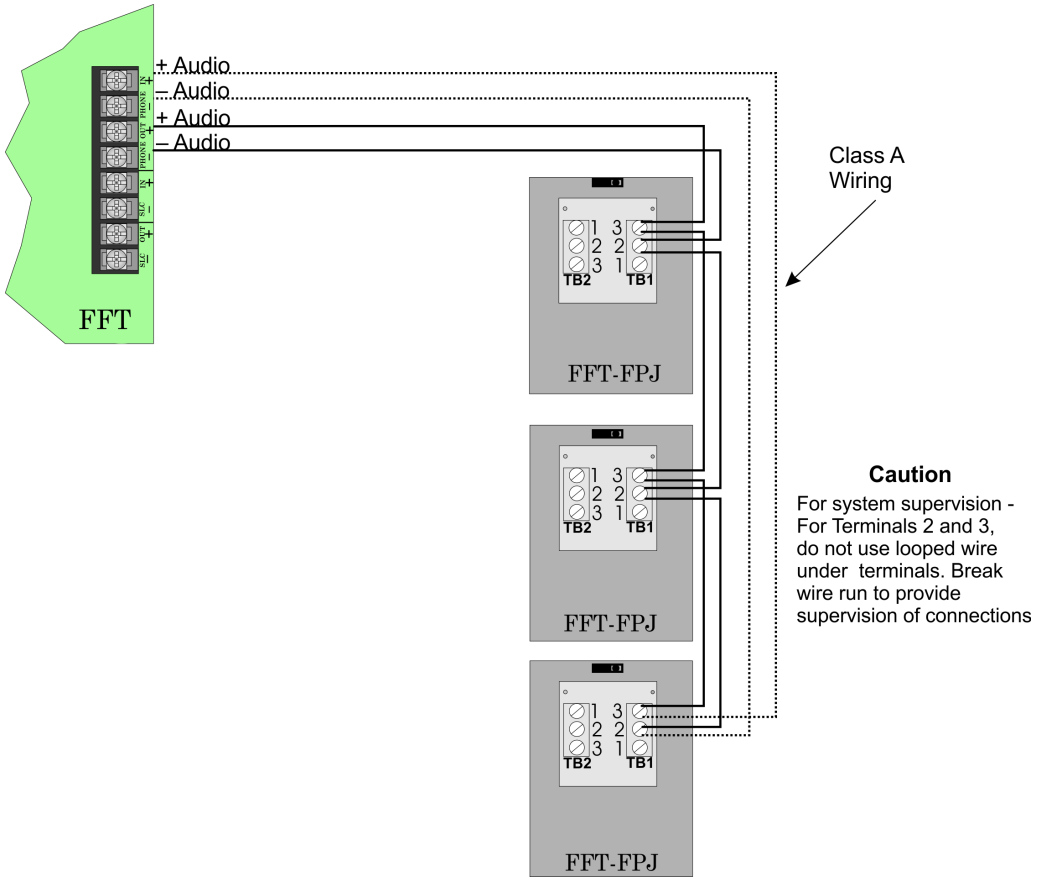


Figure 5-7 Telephone Jack Only Audio Circuit Class A

Section 6
System Operation

The operation of the SK-FFT Fire Fighter Telephone system allows audio communication from 24 remote connections through remote handsets from a single local handset. Up to 10 remote handset can be connected and communicating at one time. Remote audio connections can be expanded to 48 with the optional FFT-24 zone expander.

6.1 Key Switch Operations

6.1.1 JumpStart Key Switch (on inside of FFT dead front panel).

JumpStart key will cause the FFT to search the SLC loop for devices. The Active LED (green) will then blink for each zone where a device was found. Press and hold the Jumpstart Key for 2 seconds in order to initiate Jumpstart.

6.1.2 Accept Key Switch (on inside of FFT dead front panel).

The Accept key is used after Jumpstart. It will save the current SLC device configuration and re-initialize the FFT. If the user does not press the Accept key within one minute after the JumpStart is complete, its configuration will be discarded and the FFT will be restarted.

6.1.3 Answer Switch

When a Remote Handset is connected to one of the FFT-FPJ phone jacks, the Answer LED will blink and the FFT's PZT will sound. Pressing the Answer Switch will connect the local handset to the phone circuit, turn the answer LED on solid, and silence the PZT. Communication between the local and remote handset is now possible. Up to six remote handsets can be connected to the phone circuit simultaneously. After the initial remote handset, the connection of additional handsets does not cause the PZT to sound or the Answer LED to blink.

6.1.4 Silence Switch

The Silenced Switch is used to silence a system type trouble that has occurred in the FFT system. Once pressed the PZT will silence.

6.2 LED Operations

6.2.1 Power Status LED

The Power Status LED is located on the left side of the FFT board. On Power-UP the Power Status LED will blink at a 50% on/off rate until FFT initialization is complete (which takes approximately 20 seconds). Once initialization is complete the Power Status LED will blink at a 10% on and 90% off rate.

No key input will be valid until the FFT completes its initialization.

6.2.2 Answer

When a Remote Handset connects to the audio channel the Answer LED will blink and the PZT will sound. The operator at the FFT then picks up the local handset and presses the Answer Switch which causes the Answer LED to remain on solid and the PZT goes silent. Communication between the local and remote handset is now established. Additional remote handsets can be attached to the audio connection without any intervention at the FFT. Once the last remote handset has disconnected from the FFT, the answer LED will go blank and the system will be back to normal.

6.2.3 Power

The Power LED indicates that 24 VDC is connected to the FFT.

6.2.4 Local Handset Trouble

The local handset trouble LED will activate and blink when there is a problem with the local handset.

6.2.5 Remote Handset Trouble

The remote handset trouble LED will activate and blink when there is a problem with the phone circuit.

6.2.6 General Trouble

The General Trouble LED will blink active when system troubles are detected. When the Silence Key is pressed, the General Trouble LED will become constant. Once all system troubles have been restored, the General Trouble LED will deactivate.

6.2.7 Status LEDs (on Inside of FFT dead front panel)

LED 1 - SLC Supervision*

LED 2 - SLC Extra Point Detected

LED 3 - FFT-24 missing

LED 4 - Audio Circuit Supervision

*Note: * Troubles that will turn LED on: SLC shorted, SLC Class A open trouble and wrong device type.*

6.2.8 Zone Active

Each zone has an Active LED (see Figure 6-1). The zone's Active LED will illuminate when a remote handset is plugged into that zone. The LED will turn off when the handset is removed from the zone.

6.2.9 Zone Trouble

Each zone has a Trouble LED (see Figure 6-1). The zone's Trouble LED will blink when specific SLC issues occur such as a missing device or double address. Pressing the Silence Key will cause the zone trouble LED to be on solid. Once the zone trouble is corrected, the LED will turn off.

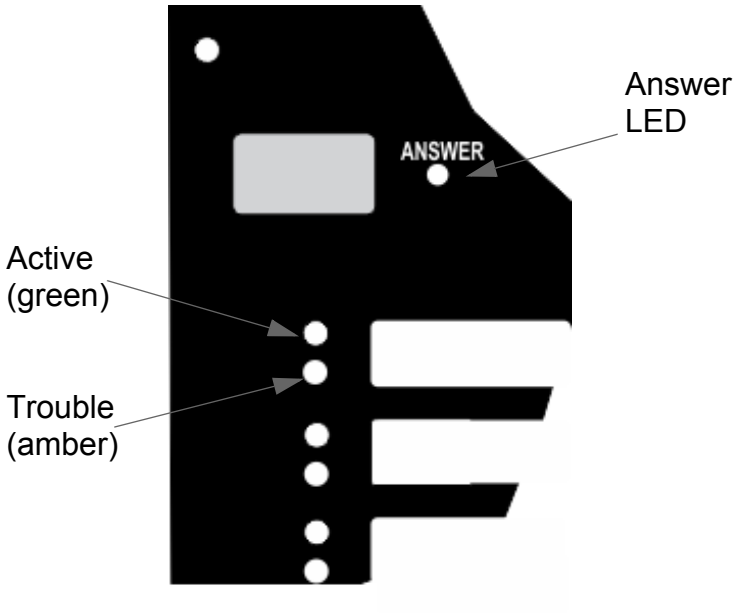


Figure 6-1 LED Operations

6.3 JumpStart Operation

The JumpStart® feature will attempt to locate all SLC Mini-Monitor devices installed in the system, indicate all devices found on the FFT and all FFT-24 Active LED's and allow the user to accept the configuration, repeat the JumpStart or allow the configuration to be discarded.

1. To perform the FFT Jumpstart press and hold the JumpStart button for 2 seconds.
2. The FFT will search for installed SLC devices and activate the Active LED’s of all zone/point addresses found.
3. When the Jumpstart is complete, the first four status LED’s will blink. The user can now press the ACCEPT key causing the FFT to save the configuration and restart.
4. The user presses the JumpStart key again to repeat the SLC search process.
5. If the user does not press the Accept key within one minute after the JumpStart is complete, its configuration will be discarded and the FFT will be restarted.

Appendix A
Compatible Powering Devices

A.1 Compatible Power Device

Table A-1 list the available Silent Knight compatible power devices used with SK-FFT.

Table A-1: Compatible Powering Devices

Model	Manual PN
5820XL / 5820XL-EVS Addressable Fire Control Panel / Emergency Voice System	151209 / LS10061-001SK-E
5808 Addressable Fire Control Panel	151274
5700 Addressable Fire Control Panel	151295
5600 25-Point Addressable Fire Control Panel	151450
5895XL Power Supply	151142

Notes:

Silent Knight Fire Product Warranty and Return Policy

General Terms and Conditions

- All new fire products manufactured by Silent Knight have a limited warranty period of 36 months from the date of manufacture against defects in materials and workmanship. See limited warranty statement for details.
- This limited warranty does not apply to those products that are damaged due to misuse, abuse, negligence, exposure to adverse environmental conditions, or have been modified in any manner whatsoever.

Repair and RMA Procedure

- All products that are returned to Silent Knight for credit or repair require a RMA (Return Authorization) number. Call Silent Knight Customer Service at 800-328-0103 or 203-484-7161 between 8:00 A.M. and 5:00 P.M. EST, Monday through Friday to obtain a return authorization number.
- Silent Knight Technical Support is available at 800-446-6444 between 8:00 A.M. and 5:00 P.M. CST, Monday through Friday.
- All returns for credit are subject to inspection and testing at the factory before actual determination is made to allow credit.
- RMA number must be prominently displayed on the outside of the shipping box. See return address example under Advanced Replacement Policy.
- Included with each return should be: a packing slip that has the RMA number, a content list, and a detailed description of the problem.
- All products returned to Silent Knight must be sent freight pre-paid. After product is processed, Silent Knight will pay for shipping product back to customer via UPS ground.
- Return the Silent Knight product circuit board only. Products that are returned in cabinets will be charged an additional $50 to cover the extra shipping and handling costs over board only returns. **Do not return batteries**. Silent Knight has the authority to determine if a product is repairable. Products that are deemed un-repairable will be returned to the customer.
- Product that is returned that has a board date code more than 36 months from date of manufacture will be repaired and the customer will be assessed the standard Silent Knight repair charge for that model.

Advanced Replacement Policy

- Silent Knight offers an option of advance replacement for fire product printed circuit boards that fail during the first 6 months of the warranty period. These items must be returned with transportation charges prepaid and must be accompanied by a return authorization.
- For advance replacement of a defective board, contact your local Silent Knight distributor or call Silent Knight at 800-328-0103 to obtain a RMA (Return Authorization) number and request advanced replacement.
- A new or refurbished board will be shipped to the customer. The customer will initially be billed for the replacement board but a credit will be issued after the repairable board is received at Silent Knight. All returned products must comply with the guidelines described under “General Terms and Conditions” and “Repair and RMA Procedure”.
- The defective board must be returned within 30 days of shipment of replacement board for customer to receive credit. No credit will be issued if the returned board was damaged due to misuse or abuse.
- Repairs and returns should be sent to:
  Silent Knight / Honeywell
  Attn: Repair Department
  12 Clintonville Road
  Northford, CT 06472
  USA

  RA Number:_____

Manufacturer Warranties and Limitation of Liability

Manufacturer Warranties. Subject to the limitations set forth herein, Manufacturer warrants that the Products manufactured by it in its Northford, Connecticut facility and sold by it to its authorized Distributors shall be free, under normal use and service, from defects in material and workmanship for a period of thirty six months (36) months from the date of manufacture (effective Jan. 1, 2009). The Products manufactured and sold by Manufacturer are date stamped at the time of production. Manufacturer does not warrant Products that are not manufactured by it in its Northford, Connecticut facility but assigns to its Distributor, to extent possible, any warranty offered by the manufacturer of such product. This warranty shall be void if a Product is altered, service repaired by anyone other than Manufacturer or its authorized Distributors. This warranty shall also be void if there is a failure to maintain the Products and the systems in which they operate in proper working conditions.

MANUFACTURER MAKES NO FURTHER WARRANTIES, AND DISCLAIMS ANY AND ALL OTHER WARRANTIES, EITHER EXPRESSED OR IMPLIED, WITH RESPECT TO THE PRODUCTS,TRADEMARKS, PROGRAMS AND SERVICES RENDERED BY MANUFACTURER INCLUDING WITHOUT LIMITATION, INFRINGEMENT, TITLE, MERCHANTABILITY, OR FITNESS FOR ANY PARTICULAR PURPOSE. MANUFACTURER SHALL NOT BE LIABLE FOR ANY PERSONAL INJURY OR DEATH WHICH MAY ARISE IN THE COURSE OF, OR AS A RESULT OF, PERSONAL, COMMERCIAL OR INDUSTRIAL USES OF ITS PRODUCTS.

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Warranty Claims. Manufacturer shall replace or repair, at Manufacturer's discretion, each part returned by its authorized Distributor and acknowledged by Manufacturer to be defective, provided that such part shall have been returned to Manufacturer with all charges prepaid and the authorized Distributor has completed Manufacturer's Return Material Authorization form. The replacement part shall come from Manufacturer's stock and may be new or refurbished. THE FOREGOING IS DISTRIBUTOR'S SOLE AND EXCLUSIVE REMEDY IN THE EVENT OF A WARRANTY CLAIM.

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SILENT KNIGHT
by Honeywell

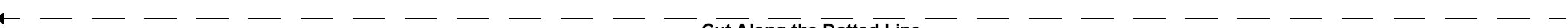
Model SK-FFT Basic Operating Instructions

These Instructions must be framed and displayed next to the SK-FFT panel in accordance with NFPA 72 fire code for Local Protected Fire Alarm Systems. Test the system in accordance to NFPA 72. Refer to Installation Manual P/N 54711 for more information regarding this control panel.

Operation	Task to Perform
Answer Call	When Remote handset is connected to the FFT-FPJ, the Answer LED will blink and PZT will sound. Press ANSWER key and PZT will silence. Answer LED will be on solid and audio connection will be established between local and remote handset.
Silence Trouble	Press SILENCE key and PZT will silence. General Trouble LED will be on solid.
For Service call:	

P/N 54713 Rev. A ECN 11-0003

Cut Along the Dotted Line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