ENGINEERING SPECIFICATION
Stand Alone Emergency Voice Evacuation Control Panel

PART 1.0 - GENERAL

1.1. DESCRIPTION:

A. This section of the specification includes the furnishing, installation, connection and testing of the microprocessor controlled voice evacuation control panel.
B. The voice evacuation panel shall comply with NFPA 72 requirements.
C. The installing company shall employ NICET (minimum Level II Fire Alarm Technology) technicians on site to guide the final check-out and to ensure the systems integrity.

1.2 APPROVALS:

A. The system shall have proper listing and/or approval from the following nationally recognized agencies:

UL Underwriters Laboratories Inc

B. The system shall be certified for seismic applications in accordance with the International Building Code (IBC). For OSHPD applications in California the system shall be Pre-Approved for seismic applications. The basis for qualification of seismic approval shall be via shake table testing.

1.2. SCOPE:

A. A microprocessor-controlled voice evacuation control panel shall be installed in accordance with the project specifications and drawings.

1.3 Voice Evacuation Control Panel

A. The FACP shall be a NOTIFIER NFV-25/50 series (FireVoice 25/50 series) and shall contain a microprocessor-based Central Processing Unit (CPU). The CPU shall distribute and control emergency voice messages over the speaker circuits.

B. The system shall provide the capability to interface to distributed voice evacuation control panels from the same manufacturer.
C. Shall have as minimum requirements:

A. Integral 25 Watt, 25 Vrms audio amplifier with optional converter for 70.7-volt systems. The system shall be capable of expansion to 50 watts total via the insertion of an additional 25-watt audio amplifier module into the same cabinet.

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b. Speaker circuit that can be wired both Class A or B.

c. Integral Digital Message Generator with a memory capacity for up to 60 seconds of messaging. The Digital Message Generator shall be capable of producing five distinct messages (12 seconds each). These messages shall field programmable without the use of additional equipment.

d. Built in alert tone generators with steady, slow whoop, high/low and chime tone field programmable.

e. The Voice Control Panel will be capable of detecting and annunciating the following conditions: Loss of Power (AC and DC), System Trouble, Ground Fault, Alarm, Microphone Trouble, Message Generator Trouble, Tone Generator Trouble, and Amplifier Fault.

f. An option shall exist for serial integration between the NFV-25/50 and compatible fire alarm control panels from the same manufacturer.

g. An option shall exist for fire fighters telephone operation.

4. The Voice Control Panel shall be fully supervised including microphone, amplifier output, message generator, speaker wiring, and tone generation.

5. Speaker outputs shall be fully power-limited.

6. Amplifiers will be supplied power independently to eliminate a short on one circuit from affecting other circuits.

7. The Voice Control Panel will provide full supervision on both active (alarm or music) and standby conditions.

8. An optional zone splitter version shall be available that permits splitting speaker circuits into 8 specific zones.

9. An optional distributed amplifier unit shall be available that permits splitting speaker circuits into up to a total of 24 zones when two distributed amplifiers are combined with the master unit.

D. Speakers:

1. All speakers shall operate on 25 or 70 VRMS with field selectable output taps from 0.5 to 2.0 Watts.

2. Speakers in corridors and public spaces shall produce a nominal sound output of 84 dBA at 10 feet (3m).

3. Frequency response shall be a minimum of 400 HZ to 4000 HZ.

4. The back of each speaker shall be sealed to protect the speaker cone from damage and dust.

3.2. TEST:

The service of a competent, factory-trained engineer or technician authorized by the manufacturer of the fire alarm equipment shall be provided to technically supervise and participate during all of the adjustments and tests for the system. All testing shall be in accordance with NFPA 72, Chapter 10.

A. Before energizing the cables and wires, check for correct connections and test for short circuits, ground faults, continuity, and insulation.

B. Open and short notification appliance circuits and verify that trouble signal actuates.

C. Ground all circuits and verify response of trouble signals.

D. Check presence and audibility of tone at all alarm notification devices.

E. When the system is equipped with optional features, the manufacturer's manual shall be consulted to determine the proper testing procedures. This is intended to address such items as verifying voice messages.

3.3. FINAL INSPECTION:

A. At the final inspection a minimum NICET Level II technician shall demonstrate that the system functions properly in every respect.

3.4. INSTRUCTION:

A. Instruction shall be provided as required for operating the system. Hands-on demonstrations of the operation of all system components and the entire system including program changes and functions shall be provided.

B. The contractor or installing dealer shall provide a user manual indicating "Sequence of Operation."