Application Note

VECP Series
Quick Start Installation Guide

1/3/2017

VECP Series control panels are extremely easy to add to an existing fire alarm system, interfacing directly to any addressable or conventional FACP. Both models have two alarm inputs; one triggered by reverse polarity (NAC output) and one by supervised dry contact trigger.

Applications: Upgrade existing Fire Alarm Systems

- Schools • Healthcare Facilities • Factories • Theaters • Military Facilities • Restaurants
- Auditoriums • Places of Worship • Office Buildings • Dormitories

System design - Guide:

Quick specifications

Model	Power Output	Speakers Supported	Speaker Circuits	Battery Size
VECP-25	25Watts	33	4 (4x25W)	2x 12V/7aH
VECP-50	50Watts	67	4 (2x25W, + 2x25W)	2x 12V/7aH

The VECP series can be connected to any Fire Alarm Panel that has a 10 to 32V DC output. This includes most Fire-Burg style panels that use 12 volt outputs, to an Addressable panel using Monitor/Control modules.
In existing systems, match the current power output or number of speakers, and speaker circuits to the specs above.
In new installations, use the Speaker placement Guide below to help determine how many speakers are needed.

Typically the rule-of-thumb for power to speaker assessment is 3/4W per speaker. Using the needed wattage determine which VECP is needed. Both panels have 4 (Class B or Class A) speaker circuits, each individually supervised to connect the speaker wiring to.

The VECP25 has a total of 25 Watts spread out over the 4 circuits. One or all the circuits can be used, up to 25Watts per output not to exceed 25Watts total.

The VECP50 has a total of 50 Watts spread out over the 4 circuits. One or all the circuits can be used, up to 25Watts per output not to exceed 50Watts total.

Speakers are connected using paired wiring. Speaker loops are wired like all Fire Alarms related devices, using in-out supervised connections, with an EOLR in the last device on the loop. Twisted pairs are recommended.
Typically, 16/2, FPL style red-jacketed fire alarm wire can be used.
Speaker wiring that's run in the same conduit with addressable loop wires (SLC), should be shielded twisted pairs.

Speaker placement - Guide:

Locate speakers typically wherever conventional horns would be mounted. They should be near; pull stations, exits, and main corridors. Additional speakers should be placed in any meeting area of 10 or more and isolated areas.
All occupied areas should be within 50ft. of a speaker.
Set speakers output levels from 1/4 to 2 watts depending on area coverage needs.
To improve intelligibility, use more speakers per area, each at a lower wattage.
A typical one-watt speaker can cover about 2,000 square feet, at 75dBA.
Wall mounted speakers provide better intelligibility, and a louder sound level per watt than do ceiling speakers.

10 steps to a complete installation – Check off as you go ✓

Install

☐ 1 **Mount; Cabinet** to wall
Surface: 12-3/4" on center keyed holes
Semi-Flush: 14-1/2"W x 18-3/4"H, opening between studs

☐ 2 **Connect; AC** to 3 position terminal strip on Power Supply

☐ 3 **Connect; NAC** circuit (polarity reversing, supervised, non-coded) to JP8-2+, JP8-2-

☐ 4 **Connect; FACP-EOLR** to JP8-3+, JP8-4-,

☐ 5 **Connect; Speaker Circuits** to OUT connectors, OUTx-1+, OUTx-2-,
with VECP-EOLR (10K) in last speaker device

☐ 6 **Apply;**
AC power, verify Green Power light and Yellow System (FLT) Fault light are on
Connect Batteries (2x 12V, 7aH), verify 'System Normal' by Green Power light,
with no Yellow Faults LED's and Signal Meter(s) in center of display

Test

☐ 7 **Press; PTT** switch on side of Microphone, and verify Paging function

☐ 8 **Move; Test** switch down to test position, and verify Alert Tone, and Evac-Message

☐ 9 **Press; PTT** switch on side of microphone, and verify Local Audio override function, then move Test switch up

☐ 10 **Test**; **Supervision**, by removing Speaker connectors, and verify Troubles reported in VECP and FACP