

DVC Series

Digital Voice Command - DVC-EM



Evacuation Systems

GENERAL

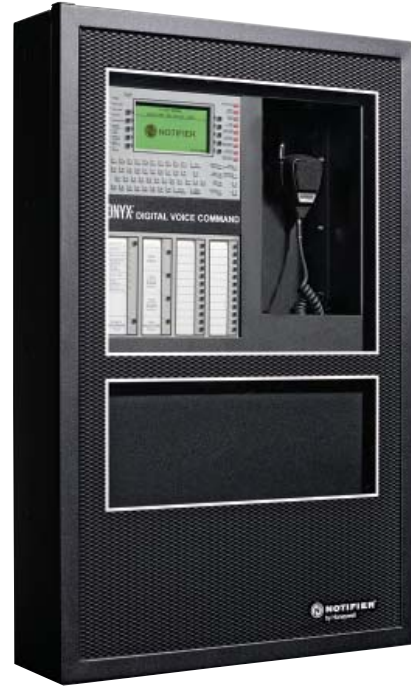
The DVC is the heart of an integrated, full-featured Audio Command Center. The DVC Digital Voice Command combines the capabilities of a powerful digital audio processor, an event driven audio message generator, and a router. Designed for use with Digital Audio Loop (DAL) devices such as DAA2 and DAX series digital amplifiers, each DVC supports a dedicated audio network with up to eight channels of audio and control and supervision for up to 32 DAL devices. DVCs are available in versions supporting wire, multi-mode fibre, or single-mode fibre media. Larger audio systems incorporating hundreds of amplifiers can be created by networking additional DVC units via NOTI•FIRE•NET™.

The DVC may be networked with an AFP-2800 or AFP-3030 Fire Alarm Control Panels (FACP) via NOTI•FIRE•NET or integrated as part of an overall mass notification system via an ONYXWorks workstation. Refer to the DVC manual for details. When used as an Audio Command Center with Emergency Paging capability, the optional DVC-KD Keypad Display is required.

NOTE: Unless otherwise noted, the term "DVC" refers to the DVC-EM.

FEATURES

- Compliant with BCA to form part of an occupant warning system
- Up to 1000 audio sequences
- Message prioritization
- Equations support flexible programming for distribution of messages
- Electrically isolated digital audio ports for direct connection with up to 32 Digital Audio Loop (DAL) devices.
- Local paging microphone option
- Remote paging microphone option
- Broad All-Call functionality when used with DVC-KD (DVC Keyboard Display): All Call, Page Active Evacuation Areas, Page Active Alert Areas, Page Inactive Areas
- Auxiliary input for 12 Vp-p analogue low-level audio sources. Includes user audio level adjustment feature
- Programmable using VeriFire® Tools with up to 32 minutes of standard quality or 4 minutes of high quality digital audio storage of user-selected/ created messages and tones
- Supports twisted-pair wire, single mode fibre and multi-mode fibre media
- Auxiliary input accepts external audio sources such as background music. High impedance input accepts 600 ohm, line level, 1.0 VRMS, or 1.41 Vp-p low level audio
- Selectable AGC, user control of audio level, and audio supervision are supported
- Multiple audio command centers supported via NOTI•FIRE•NET.
- Support for ONYXWorks as audio command centre
- Push-to-talk relay or logic argument.
- Isolated alarm bus input, to be used for backup activation of alarm messages when network communication is lost



Digital Voice Command

PRODUCT LINE INFORMATION

DVC-EM: Digital Voice Command, digital audio processor with message storage for up to 32 minutes of standard quality (4 minutes at high quality) digital audio. Supports twisted-pair wire media. Options: DS Fibre modules, DVC-RPU.

DVC-RPU: Digital Voice Command Remote Paging Unit. Includes the keypad/display. Supports twisted-pair wire media; use DS fibre modules for fibre media.

DVC-KD: Keypad for local annunciation and controls; status LEDs and 24 user-programmable buttons.

DVC-AO: Optional DVC Analog Output board provides four analog output circuits for use with AA or XPIQ Series amplifiers. Four-channel operation supported.

DAA2-5070E\DAA2-5025E: 50W, 25 or 70.7VRMS. Digital audio amplifiers with charging power supply and 4 audio outputs, shipped mounted on chassis. RM-1 port, Aux audio port. Supports optional BDA for backup amplifier or 2-channel operation, and DS Fibre modules.

BDA-70: Backup Digital Amplifier, 70.7VRMS, can be configured to act as a one-to-one backup for DAA2 series amplifiers. For DAA2 Series only, supports alternative second channel operation.

DS-FM: Fiber option module for multi-mode fiber. Converts a wire DAP (digital audio port) to a multi-mode fiber port.

DS-SFM: Fiber option module for single-mode fiber. Converts a wire DAP (digital audio port) to a single-mode fiber port.

SPECIFICATIONS

System Capacity

- Distributed Amplifiers. 32
- Analog audio outputs via DVC-AO. 4

Electrical Specifications

DC Power: 24VDC, DVC-EM (300mA), DVC-KD (60mA), DVC-AO (175mA), Fibre Module (60mA)

24 VDC power (TB1): 24 VDC, 1.0 A, non-resettable, power-limited by the source. Recommended wiring: 2.00 to 0.75 mm² twisted-pair.

Digital audio ports, wire media, A and B (TB2, TB3): Maximum distance per segment is 500 m on twisted-pair, foil-shielded, power-limited. Consult wiring documentation provided in document P/N 52916ADD:C Addendum to DVC and DAA Manuals.

Digital audio ports, single- and multi-mode fibre-optic media:

– **DS-FM and DS-SFM fibre option module (no direct DAA connection):**

- 6.5dB maximum attenuation for multi-mode with 50/125 um cable @ 1310 nm.
- 10dB maximum attenuation for multi-mode with 62.5/125 micrometer cable @ 1310 nm.
- 30dB maximum attenuation for single-mode with 9/125 micrometer cable @ 1310 nm.

– **DS-SFM (single-mode fibre DAA connection):**

- 17dB maximum attenuation for single-mode with 9/125 micrometer cable at 1310 nm going from the DS-SFM to the fibre DAA.
- 4dB maximum attenuation for single-mode with 9/125 micrometer cable going from the fibre DAA to the DS-SFM.
- 12dB minimum attenuation going from the DS-SFM to the fibre DAA.

Auxiliary input A (AUX A, TB4): Signal strength from low level analog audio input: maximum 1.0 VRMS, or 1.41 Vp-p. Optional supervision is selectable through programming. Recommended wiring: 0.75 mm² twisted-pair; max. 2.00 mm²). Auxiliary input must be located close to DVC.

Auxiliary input B (AUX B, TB14): Signal strength from low-level analog audio input: 12 Vp-p nominal, 15 Vp-p maximum. Optional supervision is selected through programming. Recommended wiring: (0.75 to 2.0 mm² twisted-pair).

Remote microphone interface (TB9): Recommended wiring: (2.00 to 0.75 mm²) twisted-pair. Power limited. Maximum distance between remote microphone and DVC: (300 m).

Push-to-talk interface (TB10): Dry contact. Recommended wiring: 2.00 to 0.75 mm² twisted pair.

Alarm bus (TB12): Power-limited by source. Recommended wiring: 2.00 to 0.75 mm² twisted pair.

Optional DVC-AO analog audio output circuits (TB5, TB6, TB7, and TB8): Supervised, power-limited outputs. Signal strength: +12 Vp-p nominal, +15 Vp-p maximum. Recommended wiring: (0.75 mm² twisted-pair; max. 2.00 mm²). Maximum impedance: 66 ohms.

Temperature And Humidity

This system has been certified for operation at 0° to 49°C and at a relative humidity 93% +/- 2% at 32°C



This document is not intended for installation purposes. We try to keep our product information up-to-date and accurate. We cannot cover all specific applications or anticipate all requirements. All specifications are subject to change without notice.

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