DVC Series

Digital Voice Command

DVC, DVC-EM, DVC-EMF, DVC-EMSF

NOTIF by Honey

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Reviewed for Code Compliance
Inspections Division
Approved with Conditions

Date: 07/29/13

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 **DAA** series Digital Audio Amplifiers, each DVC supports a dedicated audio network with up to eight channels of audio, five channels of firefighters' telephone, and control and supervision for up to 32 DAA series amplifiers. Twisted-pair wire, multi-mode fiber, or single-mode fiber media options are supported. 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 ONYX® Series panels via NOTI·FIRE·NET with an **NCA-2**, or used in a stand-alone panel configuration with an **NFS2-3030** Fire Alarm Control Panel (FACP). 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, DVC-EM, DVC-EMF, and DVC-EMSF models.*

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DVC shown using CA-2 mounting option, CAB-C4, and ADDR-C4 door

Features

- **Listed to UL Standard 864, 9th edition.**
- Programmable from NUP port using ***VeriFire® Tools*** with:
  - **DVC**: up to 16 minutes of standard quality or 2 minutes of high quality digital audio storage of user-selected/created messages and tones.
  - **DVC-EM**: up to 32 minutes of standard quality or 4 minutes of high quality digital audio storage of user-selected/created messages and tones.
  - **DVC-EMF**: EM features; supports multi-mode fiber-optic media.
  - **DVC-EMSF**: EM features; supports single-mode fiber-optic media.
- 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 DAA amplifiers. Style 4 or 7 configurations supported.
- DCC (Display and Control Center) capabilities when used with optional DVC-KD.
- FireFighters Telephone Riser.
- Local paging microphone option.
- Remote microphone option.
- Broad All-Call functionality when used with DVC-KD (DVC-Keyboard Display): All Call, Page Active Evac Areas, Page Active Alert Areas, Page Inactive Areas.
- Auxiliary input for 12 V_{p-p} analog low-level audio sources. Includes user audio level adjustment feature.
- Auxiliary input for 1 V_{RMS}, to be used for background music input, an interface with a telephone paging source, or other compatible audio sources. Audio levels can be adjusted by end user.
- Associated NCA-2 supports NOTI·FIRE·NET applications.
- Multiple audio command centers supported via NOTI·FIRE·NET.
- Distribution of one channel of standard-level paging audio on NOTI·FIRE·NET.
- NFS2-3030 connects directly (NUP to NUP) for stand-alone, non-networked mode.
- Push-to-talk relay.
- Isolated alarm bus input, to be used for backup activation of alarm messages when normal digital communication is lost.

Installation Options

The DVC provides flexible installation options based on two chassis options: the **CA-1** or the **CA-2** (one-row or two-row audio chassis). Both these chassis mount into size "B", "C", or "D" CAB-4 Series cabinets. The CA-2 must be installed in the top two rows of the cabinet. The **DPA-1** dress panel is used with chassis CA-1. The **DPA-2B** dress panel is required for the CA-2 chassis.

Specifications

- **24 VDC power (TB1)**: 24 VDC, 1.0 A, non-resettable, power-limited by the source. Recommended wiring: 14 to 22 AWG (2.08 to 0.326 mm²) twisted-pair.
- **Digital audio ports, wire media, A and B (TB2, TB3)**: Maximum distance per segment is 1900 feet (579.12 m) on Belden 5320UJ (18 AWG, TP) FPL cable: 18 AWG (0.821 mm²) 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 fiber-optic RXA, TXA, RXB, and TXB (J100, J101, J102, and J103)**: ST® style, supervised. Multi-mode fiber-optic cable: 50/125 or 62.5125 micrometers. Single-mode fiber-optic cable: 9/

125 micrometers. Attenuation of cabling between two nodes (fiber-optic circuits are point-to-point) must not exceed the following maximum attenuations: 4.2 dB for multi-mode with 50/125 micrometer cable @ 850 nm. 8.0 dB for multi-mode with 62.5/125 micrometer cable @ 850 nm. 5.0 dB for single-mode with 9/125 micrometer cable @ 1300 nm.

- **Auxiliary input A (AUX A, TB4)**: Signal strength from low-level analog audio input: 1 VRMS maximum. Optional supervision is selectable through programming. Recommended wiring: 18 to 22 AWG (0.821 to 0.326 mm²) twisted-pair. Auxiliary input must be in the same room as the DVC.
- **Remote microphone interface (TB9)**: Recommended wiring: 14 to 22 AWG (2.08 to 0.326 mm²) twisted-pair. Power-limited. Maximum distance between remote microphone and DVC: 1000 feet (300 m).
- **Push-to-talk interface (TB10)**: Dry contact. Recommended wiring: 14 to 22 AWG (2.08 to 0.326 mm²) twisted-pair.
- **Alarm bus (TB12)**: Power-limited by source. Recommended wiring: 14 to 22 AWG (2.08 to 0.326 mm²) twisted-pair.
- **FFT riser (TB13)**: Power-limited output. Class A (Style Z) or Class B (Style Y) operation. Style Y two-wire connections require a 3.9K ohm, 1/2 watt resistor (P/N K-3.9K). Maximum wiring resistance (including individual telephone zone to last handset) permitted is 50 ohms, 10,000 feet (3048 m) maximum wiring distance at 12 AWG (3.31 mm²) to last handset.
- **Auxiliary input B (AUX B, TB14)**: Signal strength from low-level analog audio input: 12 V_{p-p} nominal, 15 V_{p-p} maximum. Optional supervision is selected through programming. Recommended wiring: 14 to 22 AWG (2.08 to 0.326 mm²) twisted-pair.
- **Optional DVC-AO analog audio output circuits (TB5, TB6, TB7, and TB8)**: Supervised, power-limited outputs. Signal strength: +12 V nominal, +15 V maximum. Recommended wiring: 18 AWG (0.821 mm²) maximum, twisted-pair. Maximum impedance: 66 ohms.

Standards and Codes

The Digital Voice Command DVC, DVC-EM, DVC-EMF, and DVC-EMSF comply with the following standards:

- NFPA 72 2002 National Fire Alarm Code.
- Underwriters Laboratories Standard UL 864, 9th edition.
- Underwriters Laboratories of Canada (ULC) ULC-S527-99 Standard of Control Units for Fire Alarm Systems.

UL 864 NINTH EDITION COMPLIANCE

This product has been certified to comply with the requirements in the Standard for Control Units and Accessories for Fire Alarm Systems, UL 864 9th Edition. Operation of this product with products not tested for UL 864 9th Edition has not been evaluated. Such operation requires the approval of the Authority Having Jurisdiction (AHJ).

Listings and Approvals

The listings and approvals below apply to the DVC, DVC-EM, DVC-EMF, and DVC-EMSF Digital Voice Command. In some cases, certain modules may not be listed by certain approval agencies, or listing may be in process. Consult factory for latest listing status.

- **UL** Listed: file S635.
- **ULC** Listed: file S635.
- **CSFM** approved: file 7170-0028:22
- **MEA** approved: file 232-06-E.
- **City of Chicago** approved: High Ri
- **City of Denver** approved.
- **PSB Corporation** approved *(Singa*

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Product Line Informatio

DVC: Digital Voice Command, digita message storage for up to 16 minute minutes at high quality) digital audio.

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.

DVC-EMF: 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 multi-mode fiber-optic ports, requires DAA-5025F or DAA-5070F.*

DVC-EMSF: 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 single-mode fiber-optic ports, requires DAA-5025SF or DAA-5070SF.*

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.

CA-1: Chassis, occupies one tier of a CAB-4 Series enclosure. The left side accommodates one DVC and a DVC-KD *(optional)*; and the right side houses a CMIC-1 microphone and its well *(optional)*.

CMIC-1: Optional microphone and microphone well assembly used with the CA-1 chassis.

CA-2: Chassis assembly, occupies two tiers of a CAB-4 Series enclosure. The left side accommodates one DVC mounted on a half-chassis and one NFS2-3030 or NCA-2 mounted on a half-chassis. The right side houses a microphone/handset well. The CA-2 assembly includes a microphone. **DPA-2B** dress plate is required *(below)*. ADDR Series doors with two-tier visibility are available for use with the CA-2 configuration: ADDR-B4, ADDR-C4, ADDR-D4 *(below)*.

DPA-2: Dress plate required for CA-2 chassis assembly.

TELH-1: Firefighter's Telephone Handset for use with the DVC when mounted in the CA-2 chassis. Order separately.

ADDR-B4: Two-tier-sized door designed for use with the CA-2 chassis configuration. ADDR Series doors are similar to CAB-4 Series "DR" doors, but a clear window space exposes the top two tiers of the CAB-4 enclosure. Use an SBB-B4 backbox with the ADDR-B4 *(see data sheet DN-6857)*.

ADDR-C4: Three-tier-sized door designed for use with the CA-2 chassis configuration. ADDR Series doors are similar to CAB-4 Series "DR" doors, but a clear window space exposes the top two tiers of the CAB-4 enclosure. Use an SBB-C4 backbox with the ADDR-C4 *(see data sheet DN-6857)*.

ADDR-D4: Four-tier-sized door designed for use with the CA-2 chassis configuration. ADDR Series doors are similar to CAB-4 Series "DR" doors, but a clear window space exposes the top two tiers of the CAB-4 enclosure. Use an SBB-D4 backbox with the ADDR-D4 *(see data sheet DN-6857)*.

DPA-1: Dress panel, can be used with the CA-1 chassis when configured with a DVC, DVC-KD, and CMIC-1.

DPA-1A4: Dress panel, used with the CA-1 chassis when the CMIC-1 is not used. Provides mounting options on right two bays for two ACS annunciators, or for blank plates.

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Stand-Alone NFS2-3030 with DVC

DVC with NCA-2

Application with DVC-AO

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