ers' telephone applications with a CA-1, the CFFT-1 can be mounted in the row below the CA-1.

NOTE: *For NFS2-640/DVC applications using DAL devices, an NCA-2 is required to annunciate DAL device events.*
Refer to the DVC System Audio Product Application Guide (part number M-AG-DVC) for more details on DVC applications).

Specifications

- **24 VDC power (TB1)**: 24 VDC, 1.0 A, non-resettable, power-limited by the source. Recommended wiring: 14 to 18 AWG (2.08 to 0.821 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: maximum 1.0 VRMS, or 1.41 V_{p-p}. Optional supervision is selectable through programming. Recommended wiring: 18 AWG (0.821 mm²) twisted-pair; max. 14 AWG (2.08 mm²). Auxiliary input must be in the same room as the DVC.
- **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 18 AWG (2.08 to 0.821 mm²) twisted-pair.
- **Remote microphone interface (TB9)**: Recommended wiring: 14 to 18 AWG (2.08 to 0.821 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 18 AWG (2.08 to 0.821 mm²) twisted-pair.
- **Alarm bus (TB12)**: Power-limited by source. Recommended wiring: 14 to 18 AWG (2.08 to 0.821 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.
- **Optional DVC-AO analog audio output circuits (TB5, TB6, TB7, and TB8)**: Supervised, power-limited outputs. Signal strength: +12 V_{p-p} nominal, +15 V_{p-p} maximum. Recommended wiring: 18 AWG (0.821 mm²) twisted-pair; max. 14 AWG (2.08 mm²). 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.

Listings and Approvals

The listings and approvals below apply to theDVC, 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.

The DVC is approved by the following agencies except for use with a DAA2 or DAX Series amplifier, or DS-FM Series fiber conversion module:

- **FM Approved.**
- **CSFM** approved: file 7165-0028:224 (NFS2-3030); 7165-0028:243 (NFS2-640).
- **FDNY:** COA#6026 (NFS2-3030): COA#6025 (NFS2-640).
- **City of Chicago** approved: High Rise, Class 1, Class 2 (NFS2-3030, NFS2-640, NCA-2).
- **City of Denver** approved (NFS2-3030).
- **PSB Corporation** approved *(Singapore) (NFS2-3030)*.

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.*

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, or DAA-7525F.*

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, DAA-5070SF, or DAA-7525F.*

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.

CFFT-1: The CFFT-1 Chassis for Firefighters' Telephone mounts in the row directly under a DVC that is mounted in a CA-1 single row chassis. The CFFT-1 includes one FFT handset. The DP-CFFT Dress Plate (separately ordered, required) has one open position for mounting an ACS annunciator or a BMP-1 Blank Module Plate.

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)*; the VP-2B Vent Plate is also required for top row configurations. ADDR Series doors with two-tier visibility are available for use with the CA-2 configuration: ADDR-B4, ADDR-C4, ADDR-D4 *(below)*.

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

VP-2B: Vent plate required for cabinet configurations where the DPA-2B is used for the top two row position.

TELH-1: Firefighters' 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 a CA-2 chassis mounted in the top rows. 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 a CA-2 chassis mounted in the top rows. 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 a CA-2 chassis mounted in the top rows. 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.

ACT-4: Audio-coupling transformer. Used to electronically isolate DVC-AO analog risers.

ACT-25, ACT-70: Audio-coupling transformers for 25V and 70V high-level audio. Used to isolate and convert high-level audio to low-level, supporting applications with large numbers of analog amplifiers.

DAX-3525(E)/DAX-3570(E): 35W, 25 or 70.7VRMS. Digital audio amplifiers with charging power supply and 2 Class B or 1 Class A output, shipped mounted on chassis. Options: BDA-25/70 backup amplifier, DS Fiber modules.

DAX-5025(E)/DAX-5070(E): 50W, 25 or 70.7VRMS. Digital audio amplifiers with power supply and 2 Class B or 1 Class A output, shipped mounted on chassis. Options: BDA-25/70 backup amplifier, DS Fiber modules.

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

DAA2-7525(E): 75W, 25VRMS. Digital audio amplifiers with power supply and 4 Class B or 2 Class A outputs, shipped mounted on chassis. RM-1 port, FFT port, Aux audio port. Supports optional BDA for backup amplifier or 2-channel operation, and DS Fiber modules.

BDA-25, BDA-70: Backup Digital Amplifier, 25 or 70.7VRMS, can be configured to act as a one-to-one backup for DAX and DAA2 series amplifiers. For DAA2 Series only, supports alternative second channel operation.

DS-RFM, DS-FM, DS-SFM: Fiber conversion modules for DAX and DAA2 Series amplifiers.

DAA Series Digital Audio Amplifiers: Legacy DAA Series amplifiers are compatible with DVC systems running SR4.0. For specific information on DAA-50 series amplifiers, refer to DN-7046. For information on DAA-7525 Series, refer to DN-60257.

- **DAA-5025**: 50W, 25Vrms Digital Audio Amplifier assembly with DAA-PS power supply board, shipped mounted to its chassis. Supports twisted-pair wire media. See DN-7046. *(For multi-mode fiber-optic media order DAA-5025F. For single-mode fiber-optic media order DAA-5025SF.)*

- **DAA-5070:** 50W, 70.7Vrms Digital Audio Amplifier assembly with DAA-PS power supply board, shipped mounted to its chassis. Supports twisted-pair wire media. See DN-7046. *(For multi-mode fiber-optic media order DAA-5070F. For single-mode fiber-optic media order DAA-5070SF.)*

- **DAA-7525:** 75W, 25Vrms Digital Audio Amplifier assembly with DAA-PS power supply board. Shipped mounted to its chassis (no battery charger on DAA-7525 power supply board). Supports twisted-pair wire media. *See DN-60257. (For multi-mode fiber-optic media order DAA-7525F. For single-mode fiber-optic media order DAA-7525SF.)*