DAA2 Series Digital Audio Amplifiers

General

The DAA2 Series amplifiers are multi-featured amplifiers with digital audio functionality. Each DAA2 is capable of accessing and processing one of up to eight audio channels on the DVC audio loop, amplifying the signal, and distributing it via four Class B, two Class A outputs, or four Class A outputs in DAA2 amplifiers with a DCADC Class A expander. A DAA2-50 or DAA2-75 series amplifier is capable of mounting an optional BDA Digital amplifier, which can be used to provide one-to-one amplifier backup, or to support two-channel operation, or increased output wattage to 100W (100W option applies to DAA2-50 series only, other rules apply).

The DAA2 has two wire digital audio ports to connect to wire DAL (digital audio loop) segments. Either or both ports may be converted to fiber using fiber option modules.

Up to 32 devices, such as DAA2 amplifiers, can be connected to the DAL on one DVC Digital Voice Command unit. DAA2 amplifiers may be mixed with DAX and DAA series amplifiers on the same DAL.

An optional Firefighter telephone riser on the DAA2 supports local and network FFT communications. A DAA2 also supports use of an RM-1 remote microphone.

DAA2 amplifiers can store backup alarm and trouble messages, and provide an adjustable background music input.

Features

- Listed to UL Standard 864, 9th edition
- 50 W total output power at 25 VRMS (all DAA2-5025 models) or 70 VRMS (all DAA2-5070 models)
- 75 W total output power at 25 VRMS (all DAA2-7525 models)
- Supports two Class A high-level audio outputs, or four Class A outputs in DAA2 amplifiers with a DCADC Class A expander, or four Class B outputs
- Optional BDA amplifiers support alternative configurations
- Backup amplifier - supports one-to-one backup (all DAA2 models)
- Primary amplifier - supports two-channel operation (all DAA2 models)
- Primary amplifier - increase power up to 100W, one- or two-channel operation. (DAA2-50 series only, configuration rules apply.)
- Supports one-to-many amplifier backup applications using the same model DAA2
- Firefighter telephone riser supports 7 active firefighter telephones. System Release 3.0 and higher supports optional configurations: direct connection for up to 7 firefighter telephones, or connection to multiple FTM-1 modules
- Remote microphone paging option with RM-1
- Audio output activation via network control-by-event equations resident within the DVC
- Two wire digital audio ports that can be converted to fiber using fiber option modules. Support Style 4 or 7 configurations
- Auxiliary input for 1 VRMS, 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. Optional supervision through programming
- Isolated alarm bus input, to be used for backup activation of alarm messages when normal digital communication is lost
- Programmable through VeriFire® Tools

- Up to 106 seconds of backup digital message storage for use in the event of communication loss (from the VeriFire Tools message library, or created by the installer)
- Battery charger disable provides battery sharing option for up to four DAA2s
- Disconnect of deeply-discharged battery (low battery disconnect)

Installation

The DAA2 arrives from the factory already installed on its chassis. The DAA2 mounts in one row of any EQ or CAB-4 Series cabinet: The CAB-4 row can be covered using a DP- 1B dress panel, ordered separately.

One or two fiber option modules will plug directly onto a DAA2 for simple installation. A BDA backup amplifier mounts directly onto a DAA2.

Batteries for the DAA2 may be installed in any of the following configurations:

- In a CHS-BH1 optional battery chassis. The CHS-BH1 battery chassis will hold two 12.0 AH batteries, and mounts on the left side of the DAA2 chassis, so that the DAA2 and batteries are contained in a single cabinet tier. (This option is not available in DAA2 amplifiers with a DCADC Class A expander).
- In the battery row (bottom) of the CAB-4 Series cabinet, or in the bottom row of an EQ Series cabinet.
- In a cabinet adjacent to the cabinet that holds the DAA2, with connections in conduit. External battery charging is supported.

Standards and Codes

The DAA2 Series Digital Audio Amplifiers comply with the following standards:

- NFPA 72 2007 National Fire Alarm Code
- Underwriter Laboratories Standard UL 864
- Underwriter Laboratories of Canada (ULC) ULC-S527-11 Standard of Control Units for Fire Alarm Systems
- Part 15 Class A conducted and radiated emissions as required by the FCC
- IBC 2012, IBC 2009, IBC 2006, IBC 2003, IBC 2000 (Seismic).
- CBC 2007 (Seismic)

Listings and Approvals

These listings and approvals apply to the basic DAA2 Series Digital Audio Amplifiers. In some cases, certain modules may not be listed by certain agencies, or listing may be in process. Contact NOTIFIER for latest listing status.

- UL Listed: S635
- ULC Listed: S635
- CSFM: 7165-0028:0243 (NFS2-640/NFS-320), 7165-0028:0224 (NFS2-3030)
- Fire Dept. of New York: COA#6287A (NFS2-640/NFS-320), COA#6306A (NFS2-3030)
- FM approved

Product Line Information

50 WATT DAA2 AMPLIFIERS

Shipped mounted to the chassis.

DAA2-5025: 120 VAC Digital Audio Amplifier (50 W, 25 VRMS)

DAA2-5025-CLA: 120 VAC Digital Audio Amplifier (50 W, 25 VRMS) with DCADC Class A expander

DAA2-5070: 120 VAC Digital Audio Amplifier (50 W, 70 VRMS)

DAA2-5070-CLA: 120 VAC Digital Audio Amplifier (50 W, 70 VRMS) with DCADC Class A expander

DAA2-5025E: 220-240 VAC Digital Audio Amplifier (50 W, 25 VRMS)

DAA2-5025E-CLA: 220-240 VAC Digital Audio Amplifier (50 W, 25 VRMS) with DCADC Class A expander

DAA2-5070E: 220-240 VAC Digital Audio Amplifier (50 W, 70 VRMS)

DAA2-5070E-CLA: 220-240 VAC Digital Audio Amplifier (50 W, 70 VRMS) with DCADC Class A expander

75 WATT DAA2 AMPLIFIERS

Shipped mounted to the chassis.

DAA2-7525: 120 VAC Digital Audio Amplifier (75 W, 25 VRMS)

DAA2-7525-CLA: 120 VAC Digital Audio Amplifier (75 W, 25 VRMS) with DCADC Class A expander

DAA2-7525E: 220-240 VAC Digital Audio Amplifier (75 W, 25 VRMS)

DAA2-7525E-CLA: 220-240 VAC Digital Audio Amplifier (75 W, 25 VRMS) with DCADC Class A expander

BDA BACKUP DIGITAL AMPLIFIERS

BDA-25V: Backup Digital Amplifier (25 VRMS), switch settings for 75, 50, and 35 W operation. Provides a second audio channel when programmed as a primary amplifier.

BDA-70V: Backup Digital Amplifier (70 VRMS), switch settings for 50 and 35 W operation. Provides a second audio channel when programmed as a primary amplifier.

FIBER OPTION MODULES

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.

DS-RFM: Fiber option module for multi-mode fiber. Used exclusively for compatibility with multi-mode fiber DVC or DAA.

ACCESSORIES

CHS-BH1: Battery chassis. Holds two 12.0 AH batteries. Mounts on the left side of the DAA2 chassis.

DP-1B: Dress panel: covers one tier of CAB-4 Series cabinet. ACT-25, ACT-70: Audio-coupling transformers. Used with AA-30 or DAA2-series amplifiers to drive thousands of amplifiers in large system applications.

SEISKIT-DAA: Seismic kit for DAA, DAA2, and DAX series amplifiers. Required when using CHS-BH1 chassis. Includes battery bracket for two 12AH Power Sonic batteries. See document 53851.

Specifications

CPS-24 POWER SUPPLY BOARD

AC Power (TB1):

- Models using 120 VAC, 60 Hz input:
  - DAA2-5025/DAA2-5025-CLA - 4.68A max.
  - DAA2-5070/DAA2-5070-CLA - 4.69A max.
  - DAA2-7525/DAA2-7525-CLA - 4.68A max.
- "E" version models using 220-240 VAC 60 Hz input:
  - DAA2-5025E/DAA2-5025E-CLA - 2.68A max.
  - DAA2-5070E/DAA2-5070E-CLA - 2.68A max.
  - DAA2-7525E/DAA2-7525E-CLA - 2.68A max.

Recommended Wiring: 12 to 14 AWG (1.6 mm O.D.) with 600 VAC insulation.

Shipping Weight: 13 lb (5.9 kg).

Secondary Power 5V and 24V AUX Outputs (TB2):

24 V AUX: Power-limited, 24V @ 0.5A, utilizes wire sizes 12-18 AWG (3.31 mm^2 - 2.08 mm^2.

5 V: Future Use.

Battery Connections: Supplied cable connections to batteries.

Battery Charger: Current-limited sealed lead acid battery charger which charges two 12 volt batteries in series, up to 200 AH:

	Charge 7 AH to 26 AH Batteries	Charge 26 AH to < 50 AH Batteries	Charge 50 AH to 200 AH Batteries
DAA2-5025 DAA2-5025-CLA DAA2-5070 DAA2-5070-CLA	Yes	Yes	Yes
DAA2-7525 DAA2-7525-CLA	Yes	Yes	No
DAA2-5025/ DAA2-5025-CLA or DAA-5070/ DAA-5070-CLA w/ BDA in Group 2 of VeriFire®Tools	No	No	No

DAA2 BOARDS

Digital Audio Ports, wire media, A and B (TB2, TB3): Maximum distance per segment is 1900 feet (579.12 m) on Belden 5320UJ (18AWG, TP) FPL cable: 18 AWG (0.821 mm2) twisted-pair, unshielded, power-limited. For approved cable types, see wiring documentation, P/N 52916ADD: C Approved Wire Cables for Digital Audio Loops.

Digital Audio Ports, fiber media, fiber option modules: Digital audio loop connectors support single- and multi-mode fiber with the use of fiber option modules. Refer to the Fiber Option Module datasheet for fiber specifications.

Alarm Bus: Power-limited, supervised by source. Recommended wiring: 14-18 AWG twisted-pair. Requires 16VDC minimum @ 20mA across the terminals to activate. Nominal 24VDC.

Remote Microphone Interface: RMI power: +24VDC, power-limited @ 100mA. Supervised. Recommended wiring: 14-18 AWG twisted-pair, Max. 14 AWG. Nominal AC signal strength 2.5VRMS, 3VRMS Max. Maximum distance between remote microphone and DAA2: 100 ft (304.8 m).

FFT Riser: Power-limited output, supervised. Class A or Class B operation. Class B 2-wire connections require a 3.9k ohm 1/2 watt resistor (P/N R-3.9K). Max. wiring resistance (including individual telephone zone to last handset) permitted is 50 ohms, 10,000 ft (3048 m) max. wiring distance at 14 AWG to last handset.

Auxiliary Input: Signal strength from low-level analog audio input (such as background music or telephone paging): 1Vp-p max. Optional supervision through programming. Recommended wiring: 14-18 AWG, twisted-pair. Auxiliary input source must be within 25 ft. (7.6 m) of the DAA2, and within the same room.

Speaker circuits: Power-limited outputs (exception: a DAA2-5070 speaker circuit used with any Canadian Room Isolator module is non-power limited. Speaker circuit 1 (TB10) cannot be used.). Supervision determined by programming. DAA2-5025/70, Each circuit rated up to 50 watts*. DAA2-7525, each circuit rated up to 75 watts*. Recommended wiring: 12-18 AWG twisted-pair (shielded recommended). Class B or Class A: Class B requires 20k end-of-line resistors (included, P/N ELR-20K). Class A requires 10k end-of-line resistors (included, P/N R-10K) on the return.

*Total wattage may vary per configuration.

Backup: High-level audio input: 25VRMS (DAA2-5025 and DAA2-7525). 70 VRMS (DAA2-5070). Recommended wiring: 14-18 AWG. Not supervised when inactive. Supervised by backup source when active. Must be in same room or enclosure.

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