D-76

DIGITAL AUDIO CONSOLE

PRELIMINARY LITERATURE

AUDIOARTS ENGINEERING

D-76 Digital Radio Console

AUDIOARTS

Flexible. Affordable. Built To Last.

Audioarts consoles and control surfaces

It's a good bet there's not a single person in America, who's listened to the radio in the last 10 years, who hasn't heard an Audioarts radio console in action. That's how pervasive and powerful this product line is.

Between 2000 and 2013 Audioarts has sold over 10,000 consoles. Virtually every one of them is still in service. As are the many thousands sold before 2000. Audioarts carved a niche for itself, pushing the radio console into the modern age. Today, we're considered the standard in analog and digital audio consoles for radio.

Our D-76 builds on our stalwart D-75 - the most popular console in radio history – to update it to our latest technological advances. With its modular design, it is quickly adaptable to be an on-air or production board, customized to any configuration you need. Optional WheatNet-IP compatibility extends its reach outside the studio and opens it to unlimited sources from virtually anywhere.

WheatNet-IP: The Intelligent Network

We looked at the world of AoIP Networking and thought long and hard before jumping in. The stuff that was out there was OK, but left a LOT of room for improvement. For starters, the way the workload was distributed had to change. Rather than having a single point call the shots, we thought it important to have distributed intelligence built into WheatNet-IP. What this means is that every BLADE (or node) has the DNA of the entire network and can operate in any position on the network. It means that the network can configure itself, as every BLADE is self-aware. It means the network can heal itself - if a BLADE fails (fat chance) just put a new one in its place and watch it set itself up. We also incorporated gigabit Ethernet speed throughout the entire network, giving you 10 times the bandwidth of the common stock. WheatNet-IP's Intelligent Network is what the industry has been waiting for – WheatNet-IP is what YOU'VE been waiting for!

the console

exactly the way a radio console is supposed to be

The new Audioarts D-76 network console has all the practical style and rugged functionality of the beloved D-75 standalone console, a staple in radio studios for the past 15 years, but with modern necessities such as an RJ connector system for all your I/O.

The new D-76 is a tabletop, modular console available in a 12-channel or 18-channel frame like its predecessor, the popular D-75, but includes StudioHub+ RJ45 connectivity.

Sporting a sleek new profile, the new D-76 comes standard with sample rate conversion, ample mic preamps, plenty of stereo busses, and a comprehensive monitor section that provides separate feeds to control room/headphone and studio monitor outputs — plus headphone jack and built-in cue speaker.

It has four stereo busses, dual-domain outputs, sample rate conversion on all digital inputs, and interchangeable input module daughter cards for easy analog-to-digital conversion in the field. Its modern design features backlit controls and meter bridge with full-scale, bargraph digital peak plus VU metering and automatic timer and clock.

Individual plug-in modules make D-76 installation and service a breeze. The D-76 can be ordered with an optional SUPERPHONE module, which supports two callers. It can also be ordered with optional IP-76 plug-in module for interfacing to the WheatNet-IP Intelligent Network.

This new console has everything that the industry has come to expect of an Audioarts console — like rock solid reliability and ease of use —but is laid out in a sleek new design that is both affordable and practical for the modern radio station.

- Modular hot-swap plug-in design
- Optional IP-76 module provides connectivity and additional I/O through WheatNet-IP network
- StudioHub+ RJ45 connectivity
- Inputs can be analog or digital, depending on daughter card installed
- Any combination of analog and digital line inputs
- Input channel A/B source select
- External rackmount power supply
- Universal opto-isolated mic and line control ports on all input modules
- Sample rate conversion on all digital inputs

- Optional dual failsafe power supply
- Digital clock (can be slaved to ESE time code)
- Cue function and auto-dropout
- Connectorized faders and monitor pots
- Connectorized channel ON/OFF switches
- CR and Studio Monitor outputs with separate four-buss source selection plus independent external 1 & 2
- Both Program and Switched VU meter pairs
- Four microphone preamps standard, with option for four additional
- Digital timer with autostart and manual control
- Two on-air tally relays
- Built-in headphone amp with concealed output jack
- Built-in cue speaker with amplifier and external cue output
- Direct digital VU-plus-peak LED metering displays
- Optional phone module with dual caller support

modules

the features and functions you need frequently are on the control panel within easy reach

The D-76's modular construction means you can easily customize it to be the exact console you need.

It's standard and optional modules facilitate a wide range of functions that can be built right in.

All hook up to the board with RJ45 connectors and CAT-6 cables.

For the input modules, you have your choice of analog or digital operation. There's also an Output Module, a Control Room Module, a Studio Module, and optional SuperPhone and WheatNet-IP Modules.

specifications
how the D-76 measures up

FREQUENCY RESPONSE
Mic or Line Input to Program Output: ±-0.1 dB, 20 Hz to 20 KHz
Telco Input to Program Output: +0 dB/-0.2 dB, 20 Hz to 20 KHz

DYNAMIC RANGE
Analog Input to Analog Output: 101 dB, ref. to FSD
Digital Input to Analog Output: 101 dB, ref. to FSD

TOTAL HARMONIC DISTORTION + NOISE
Mic Pre Input to Analog Output: <0.006%, -32 dBu analog input, +24 dBu analog output, 22 KHz filter BW.
Analog Input to Analog Output: <0.006%, +24 dBu input, +24 dBu output, 22 KHz filter BW.
Digital Input to Digital Output: <0.001%, 20 Hz to 20 KHz, -1 dBfs input, -1 dBfs output, 20 KHz filter BW.
Digital Input to Analog Output: <0.003%, 20 Hz to 20 KHz, -1 dBfs input, +23 dBu output, 22 KHz filter BW.

ISOLATION
Crosstalk, Program-to-Aud: >100 dB, 20 Hz - 20 KHz
Off: 120 dB, 20 Hz - 20 KHz
A/B: 95 dB, 20 Hz - 20 KHz

STEREO SEPARATION
Analog Program Outputs: >95 dB, 20 Hz to 20 KHz

MICROPHONE INPUTS
Input Level Range: Adjustable -70 to -31 dBu
Input Headroom: 20 dB above nom.

ANALOG MODULES
Input Impedance: 10 K Ω, balanced
Input Level Range: Adjustable -19 to +14 dBu
Input Headroom: 20 dB above nom.
Maximum Input: +24 dBu

ANALOG OUTPUTS (All)
Output Source Impedance: 50 Ω balanced
Output Load Impedance: 600 Ω min.
Output Level: +4 dBu nom. (adjustable), +24 dBu max.

DIGITAL INPUTS & OUTPUTS
Reference: +4 dBu = -20 dB FSD
Signal Format: AES-3 or S/PDIF (on input only)
Digital Reference Freq.: Internal crystal or opt. external input
Input Attenuation: 0 dB, -12 dB
Internal Sample Rate: 48 KHz, 44.1 KHz or 32 KHz fixed,
Processing Resolution: 32-bit fixed with 80-bit extended precision accumulators
Conversions: A/D 24-bit Delta-Sigma, sample rate conversion on all digital inputs; D/A 24-bit, using 1-bit conversion.
Latency: <1.5 ms, analog in to analog out
Data Path: 24-bit

EQUIVALENT INPUT NOISE
Microphone Preamp: -128 dBu, 150 Ω source

CONSOLE HEADPHONE JACK OUTPUT
Output Impedance: 10 Ω
Output Load: > 8 Ω
Output Level: +8 dBu nom., +20 dBu max. into 600 Ω load

DIMENSIONS (Tabletop mount)
12 input frame: 28 7/8"W x 7 1/8"H x 23 5/8"D
18 input frame: 37 7/8"W x 7 1/8"H x 23 5/8"D

POWER CONSUMPTION (max)
18 input frame (fully loaded): 125 watts

NOTE: FSD = Full Scale Digital = +24 dBu analog

SPS-100: A REAL POWER SUPPLY
Created specifically for use with the D-76, the external rackmount power supply isn't just someone's off-the-shelf modular supply in a box marked 'Audioarts'. The SPS-100 Power Supply is from our own in-house design team and is over-engineered and manufactured (right here in New Bern, NC) for absolute reliability. Besides giving you obvious service benefits, this fan-free external power supply keeps heat where it belongs — in the equipment rack.