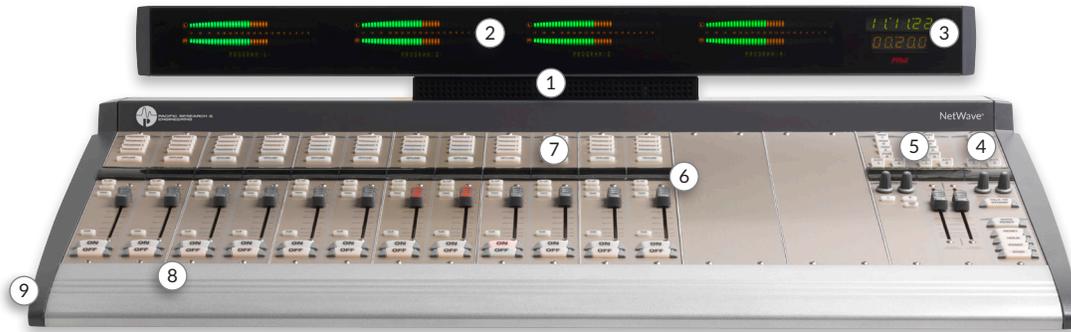


# PR&E NetWave® Networked Digital Console



The NetWave® networkable audio console has been a highly popular member of the VMConnected Network™ console family and features our signature “look and feel.”

Extensive features, operational flexibility and robust construction make the NetWave console appropriate for standalone operation in both on-air and production studios, while the slim, desktop styling makes it perfect for news booths, voice tracking and portable applications.

While the NetWave console is equally suited for on-air, voice tracking and production capabilities in any facility, the full potential of NetWave is met when it is used as part of a VMConnected audio network — as demonstrated by its popularity in countless multi-station facilities worldwide. Not only is it a control surface, but it’s also a fully functional console in which both the four program buses and single offline bus have true digital and analog outputs.

If desired, the NetWave system’s analog inputs can be increased with a 4X-A2D A to D converter. It can also be networked using any VMConnected Network Core frame to other audio consoles and I/O Edge devices (VMXpress and VMQuadra), scaling up or down according to facility needs.

Comprehensive logic facilities, dual or quad metering, and full compatibility with VMConnected Network Core devices audio management devices and software are among the many reasons why the NetWave console continues to be a popular choice among engineers, programmers, and on-air talent.

- ① **Cue system**  
Provides monitoring via an integrated amplifier and speaker located inside the top cover; also features switched metering
- ② **Metering**  
Dedicated program meters with switching to view additional outputs via an integrated meter selector
- ③ **Clock and timer**  
Clock operates as either an accurate standalone clock or syncs to house master clock; integrated timer with comprehensive controls allows event tracking
- ④ **Studio monitor**  
Ample studio monitoring built in; provides support for host, guest and monitor feed, including talkback, dimming and muting; monitor selection can be from any console bus or from two external inputs
- ⑤ **Control room monitor**  
Full control room monitoring selection; supports host, guest and monitor feed and auto-cue for the operator’s headphones; mode function switches provide simple phase monitoring
- ⑥ **Network control**  
Networking option allows upgraded channels to display current/pending input selections; integrated selector provides access to any remote VMConnected Network-based source for simple dial-and-take actions
- ⑦ **Phone and codec system**  
Up to six simultaneous mix-minus feeds (two standard) support most typical formats; automatic selection of mix-minus feeds for live on-air talk segments or “offline” contests
- ⑧ **Channel on/off**  
Features optically isolated remote machine control for interface to equipment and microphone panels; with optional VMConnected Network system, on/off control can be connected to remote sources via the network
- ⑨ **Headphone jack**  
With integrated amplifier; designed to power even low-impedance headphones

## Features

- All-digital design to enable everything from program mixes to talkback channels
- Four program buses and one offline bus, each with digital and analog outputs
- Up to six (two standard) simultaneous telco/codec inputs, each supported by a mix-minus output with automatic online/offline switching
- Two local external monitor inputs
- Three frame sizes for 8-, 16- or 24-input channels
- Compact desktop design (NetWave-8 footprint is just 20 in. x 21 in.)
- One analog, digital and logic I/O connector on each channel
- Ability to distribute local sources and mixed outputs to the VMConnected Network and attach network sources to any fader in the console (with optional network activation)
- Dual meter assembly has two stereo bar graph meters: one dedicated to Program 1 and a second that is switchable to monitor other busses and network sources, digital clock and timer; meters can be set to display average with peak or average only; Quad meter frame includes dedicated program 2 and 3 meters with a selectable fourth meter; Ability to add dual fader panels to the NetWave-16/12 and NetWave-24/18
- Instant visual verification of bus levels with dual meter displays. (Quad meter console frames also available for NetWave 16/12 and NetWave 24/18)
- In-line supply (NetWave-8 and -16); rackmount supply (NetWave-8, -16, and -24)
- Optional redundant power supply available



## Specifications

(Specifications and designs are subject to change without notice)

Analog Line Inputs	
Input Impedance	>60 k ohms, balanced
Nominal Input Level	+4 dBu (each input can be independently trimmed by +/-15dB)
Input Headroom	20 dB above nominal Input
Analog Outputs	
Output Source Impedance	<3 ohms, active balanced
Output Load Impedance	1 k ohms, minimum
Nominal Output Level	+4 dBu
Maximum Output Level	+24 dBu
Digital Inputs and Outputs	
Reference Level	20 dB below FSD
Input Level	Each input can be independently trimmed by +/-15 dB
Signal Format	AES-3, S/PDIF (input only)
AES-3 Input & Output Compliance	24-bit sample rate conversion
Digital Reference	Crystal (internal) or VistaMax™ slave (external) at 48 kHz ±100 ppm
Internal Sample Rate	48 kHz
Output Sample Rate	48 kHz nominal (each can be set for 44.1 kHz)
Processing Resolution	24-bit fixed with extended precision accumulators
Conversions	A/D: 24-bit, Delta-Sigma, 128x oversampling on all digital inputs; D/A: 24-bit; Delta-Sigma, 128x oversampling
Latency	<600µs, any input or monitor output
Monitor Outputs	
Output Source Impedance	<3 ohms, active balanced
Output Load Impedance	1 k ohms min
Output Level	+4 dBu nominal, +24 dBu max
Frequency Response	
Input to Program Output	+0.3 dB/-0.1 dB, from 20 Hz to 20 kHz
Dynamic Range	
Analog Input to Analog Output	106 dB referenced to FSD, 108 dB "A" weighted to FSD
Analog Input to Digital Output	108 dB referenced to FSD, 110 dB "A" weighted to FSD
Digital Input to Analog Output	108 dB referenced to FSD, 111 dB "A" weighted to FSD
Digital Input to Digital Output	115 dB
Total Harmonic Distortion + Noise	
Analog Input to Analog Output	<0.003%, 20 Hz to 20 kHz (<0.002% typical at 1k), +18 dBu input, +18 dBu output
Analog Input to Digital Output	<0.0009%, 20 Hz to 20 kHz, +18 dBu input, -6 dB FSD output
Digital Input to Analog Output	<0.003%, 20 Hz to 20 kHz (<0.002%, typical at 1 kHz), -6 dB FSD input, +18 dBu output
Digital Input to Digital Output	<0.0005%, 20 Hz to 20 kHz, -6 dB FSD input, -6 dB FSD output
Crosstalk Isolation	
Program-to-Program	-85 dB, 20 Hz to 20 kHz
Stereo Separation	
Analog Program Outputs	>90 dB, 20 Hz to 20 kHz

Listed for the basic signal paths, per channel, with 100k ohms load connected to the analog program outputs in a full NetWave24 frame 0 dBu = 0.775 volts RMS, regardless of circuit impedance (equal to 0 dBm into 600 ohms). Noise measurements done using a 20 kHz bandwidth (add 1.7 dB for a 30 kHz bandwidth). Total harmonic distortion (THD+N) is measured using a +18 dBu output with a swept signal and a 20 kHz low pass filter. FSD (full scale digital) = +24 dBu.

## Flexible, Reliable and Affordable

As a valuable member of the VMConnected Network console family, NetWave is specifically designed for smaller-market radio stations. This versatile digital audio console delivers the power and connectivity of on-air consoles at an attractive price point. The NetWave console is also right at home in large multi-station facilities because its look and feel emulates the legendary BMX and RMXdigital® console systems. Each NetWave system features high reliability, excellent performance, operational flexibility, ease of use and robust construction. NetWave is designed from the ground up as a networked console; however, it is also an excellent choice for standalone console applications. The system's expandable architecture allows users to take advantage of networked power, and expand as requirements grow. NetWave reaps the benefits of VMConnected Network audio networking capability, which enables the sharing of audio resources across an entire facility, without the need for time-consuming and costly wiring.

## Accessories

Expand capabilities and fine-tune the NetWave console system with any of the following available external accessories:

- Microphone control (on/off/cough/talkback)
- Automation control panels
- Pushbutton profanity delay/dump
- Studio clock and event timer with console reset control input
- Intercom (with VMConnected Network)
- Headphone amplification/distribution system
- Easy-to-use installation toolkit (MOD IV crimp tool, pin removal tool, hex driver)

Console Power Requirements	
Measured at 120 VAC/60 Hz.	
NetWave-8	54 watts
NetWave-16	99 watts
NetWave-24	141 watts
Required Supply Voltage	
NetWave-8	+48 VDC @ 1.2 amps
NetWave-16	+48 VDC @ 2 amps
NetWave-24	+48 VDC @ 3 amps
One power supply included. The NetWave-8 and NetWave-16 use a 50-27 supply. The NetWave-24 uses a 99-1205 supply. An optional Power Coupler (90-1995) is available for adding a matching redundant supply for on-air consoles.	
Power Supply Ground	
Rack mount or in-line power supply	grounded through the AC input cord ground pin supply
Power Supplies	
AC input voltage & frequency	90-240 VAC, 50/60 Hz
AC input	detachable IEC power cord
DC output	Uses a keyed, latching connector on a captive cable on the 50-27 supply or a detachable cable (90-1858-1) on the 99-1205 supply
Dimensions	
All NetWave™ consoles	3" [76] max height above countertop, except for console reflector, 6" [152]. Front-to-back depth: 21" [533].
NetWave-8	20" [508] wide
NetWave-16	32.4" [823] wide
NetWave-24	45.2" [1148] wide
50-27 (in-line supply for NetWave-8 and NetWave-16)	2" [51] x 3.8" [97] x 9.5" [241] 99-1205 (rack mount supply for NetWave-24): 2 RU: 3.5" [89] x 19" [483] x 10" [254]

