



PACIFIC RESEARCH &
ENGINEERING



DMX
Networked Digital Console

DMX Surface

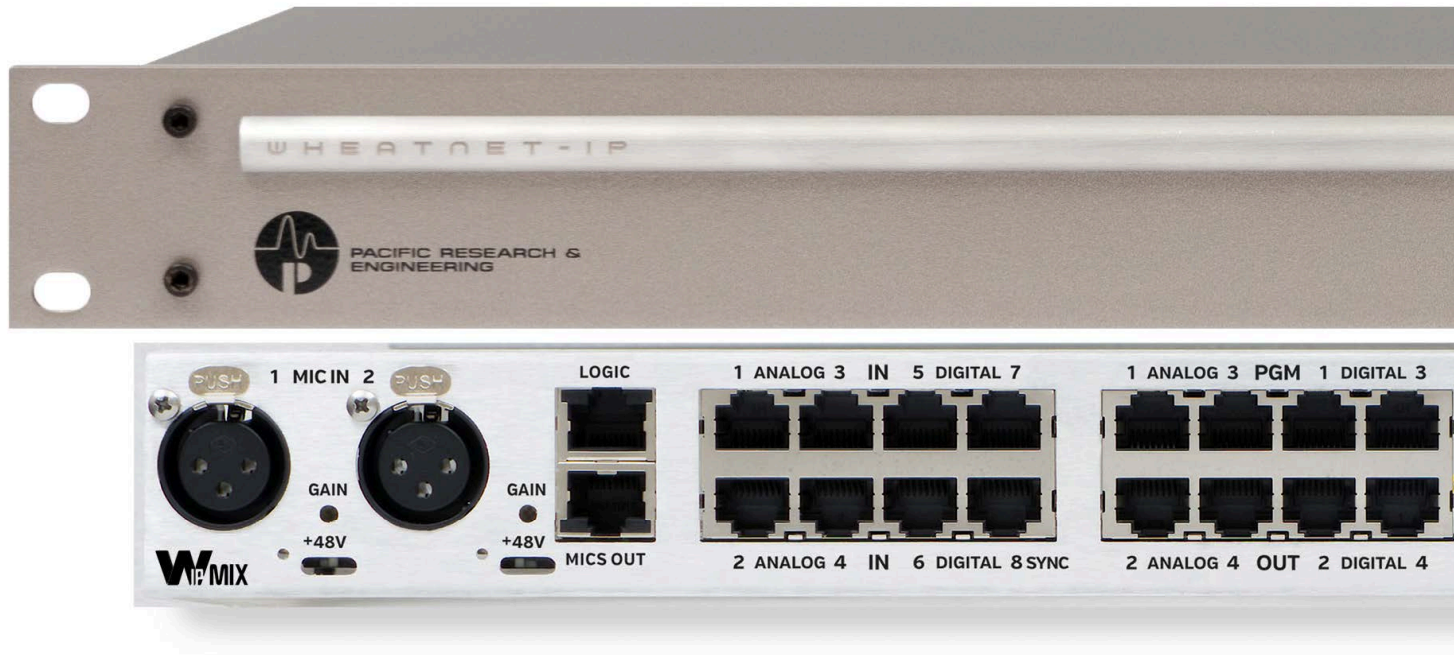




With DMX, PR&E ventures into modern territory - AoIP networking.

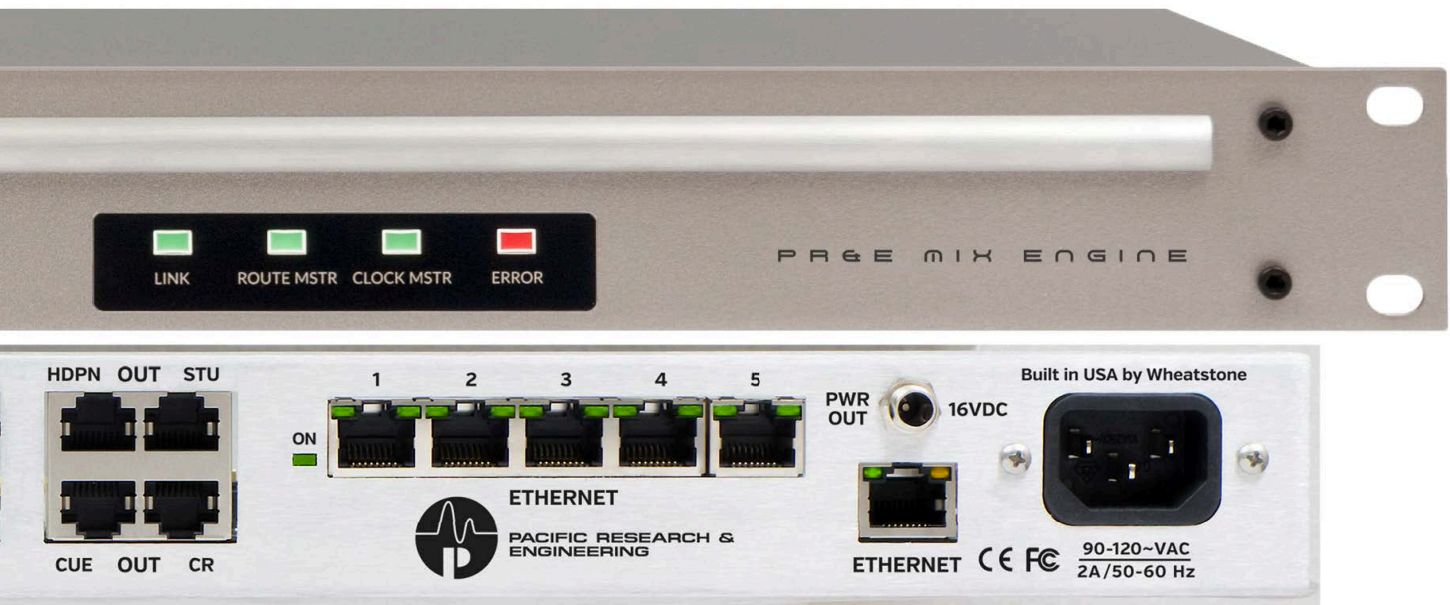
The DMX surface is available in 8- or 16-input versions. Both are low-profile, compact table-top consoles that fit into just about any broadcast environment.

PR&E Mix Engine



Utilizing a WheatNet-IP protocol-based network and engine, the DMX is the first PR&E console to offer AoIP networking and expansion. This means that you get the speed and flexibility to have a complete, self-contained setup, and the ability to add-on, without the need for an external switch.

PR&E Mix Engine uses RJ45 connectors for all audio (StudioHub+ format), logic (WheatNet-IP-format), and network connections, except for the 2 mic preamp inputs (XLR).



Connections include Mic Preamps Out; 4 stereo/dual mono analog inputs; 4 stereo/dual mono digital inputs; four stereo Program outputs (both analog and digital); 4 stereo analog Monitor outputs (Control Room, Studio, Cue, and operator headphones); 6-port logic GPIO; Engine Ethernet port; 5-Port Ethernet switch to network the Surface, Engine, and three additional devices.

With two sizes of control surface (8- or 16-channel) available, DMX puts a lot of radio control into a very small footprint – everything you need to take it to the air.

Overview



The DMX AoIP console line carries forward the rugged quality and practical functionality of the PR&E brand, but includes IP audio routing as an easy studio add-on. It's an ideal setup for the two- or three-studio facility where each studio can act independently as a separate standalone entity, but the studios are linked together through an IP network.

The DMX AoIP is all-inclusive without the need for an external Ethernet switch. It provides 1Gb connectivity for robust routing of sources and destinations between studios and integrates easily into most existing radio automaton systems.

The new DMX control surface is a fully integrated standalone console for on-air and production applications. It is available in an 8-fader (DMX-8) or 16-fader (DMX-16) frame with four program busses and bus-minus on every fader as well as convenient multifunction knob on each channel for adjusting pan, mode, dynamics, and input sources. The console has talkback and cue functions, EQ/dynamics, and control room, studio and headphone monitors, plus LED metering, built-in timer, and four-event recall.

Features



- Standalone production or on-air console with local inputs and outputs
- 5-port Ethernet switch built into PR&E Mix Engine - no need for an external switch
- Control surface sizes for 8-, 16-fader channels
- WheatNet-IP protocol with 1Gb connectivity - any source to any fader
- Bus Minus (N-1) on each input channel
- Four program output busses
- Four event buttons for recalling entire console setups at the touch of a button
- Control room, studio, and headphone jack (with built-in amplifier w/level control)
- Full EQ functions (4-band parametric with high/low pass and high/low shelving) and full dynamics (compression, limiting, and expansion) on every channel
- Multi-function channel-encoder knob with OLED display on each channel for control of EQ, dynamics, sources, pan, mode, and more
- Talkback and cue functions
- Built-in timer
- Six logic GP I/O ports for network control
- PR&E Mix Engine is configured: 2 mic inputs on XLRs, with all additional I/O on RJ-45 connectors: 4 analog inputs, 4 digital inputs, 4 analog outputs, 4 digital outputs, 2 analog mic outputs, Headphone output, Cue output, Studio output, and Control Room output. There are also 5 ethernet ports that will interface directly with optional I/O Razor Interfaces, and a 1 Gb ethernet port for networking.
- Optional Razor I/O Interfaces can expand the system I/O with 8 stereo or 16 mono in and/or out; available in analog, digital or analog/digital version

Extending DMX



DMX utilizes WheatNet-IP protocol to access, control, and process any and all audio sources on the network. Each of the Razor I/O Interfaces pictured above provides you with 8 analog, digital, or analog/digital inputs and outputs, as well as logic and Ethernet connections on RJ45 connectors.

Literally Plug & Play...



1. Using standard CAT-6 cables, plug the DMX control surface and engine into the the built-in switch on the PR&E Mix Engine
2. Plug in your computer running PR&E Navigator software to configure your network
3. If you like, add PR&E Razor I/O modules to add more sources
4. Plug your own audio sources into the PR&E Mix Engine and Razor(s)
5. Turn it all on and hit the airwaves

Cool Stuff about DMX

No External Switch Needed

With the PR&E Mix Engine, we've provided five Ethernet ports for interfacing the Surface, the Engine, your PC for use with PR&E Navigator or PR&E Surface Setup, as well as optional devices such as VoxPro PC, a media server, or a couple of Razor I/O units for expansion. Essentially acting as a built-in switch, this keeps IT management and procurement costs down while making it dead simple to expand your AoIP network.



Of course, if you DO want to expand even further and add more DMX consoles, you can add a managed gigabit switch and be off and running to a larger network

Robust Metal Construction, Made in USA

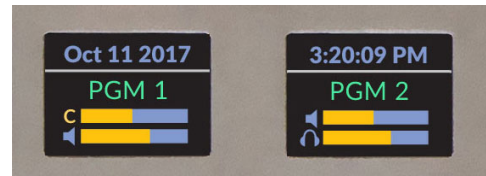
We've built the DMX to withstand years of use and abuse.



The finest components and the most reliable construction come together to create a surface that any station would love to have in their production suite, control room, or on-air.

Source and Program Select

Any channel can be assigned to one or more



program output busses, making your material available to an on-air feed as well as an internet stream, for instance.

SourcePgmSelectAny input can be called up on any channel on the DMX. This means, for instance, the feed you've got plugged into input 7 on the back of the Engine (or ANY Razor I/O Interface) can show up on channel 2...or any other channel. Same with any input.



Mix-Minus/Direct Output/TalkbackCueTB

Each fader has a dedicated Mix-Minus output that includes all active faders on its selected source bus,



except for itself. These auto generated monaural Mix-Minus signals may be routed to feed telephone hybrids or other devices as required. Alternately, these outputs may be set to provide a separate direct output from that channel only, consisting of the source assigned to that channel. Each channel has a talkback that will interrupt the feed to that mix-minus.

Surface Functions

MULTI-FUNCTION CHANNEL-ENCODER KNOB:

When the channel is off, rotating the encoder switches the channel display to show alternate sources, selected by "clicking" the encoder. The encoder can also control channel mode, panning, and EQ & Dynamics.

ASSIGN:

Directs the channel's signal to any of four stereo output busses.

TB:

Routes the selected talkback mic to the channel's individual bus-minus output.

CUE:

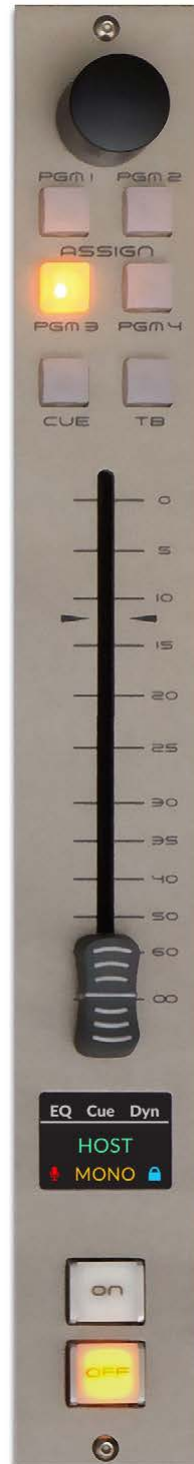
Routes the channel's pre-fader and pre-switch signal to the CUE bus.

FADER:

100mm Long-throw fader for channel level control.

ON/OFF:

Switches the channel's audio on and off.



METER:

Selects the switchable meter source between PGM 3, PGM 4, and EXT (external).

EVENT:

Recalls one of four user-programmable console snapshots.

SOFT:

Programmable button to be used as you wish.

TIMER:

Buttons for auto-start, start/stop, reset, and hold for the built-in timer in the meter bridge.

SOURCE:

Selects one of four busses or two external sources for listening in the control room and studio.

CUE/SOURCE:

Adjusts the cue speaker level. Also used to select and set the source for the EXT, EXT 1, and EXT 2 buttons.

EXT:

Sends an external signal (such as an off-air feed) to the STUDIO monitor.

STUDIO:

Level control for the studio monitor output.

SPLIT CUE:

Sets how cue feeds the headphones (split or stereo).

TB:

Engages talkback to the studio monitors.

CR/CONTROL ROOM:

Level control for the control room output.

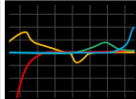
HDPN/HEADPHONE:

Level control for headphone amplifier output.

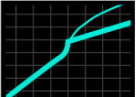


DMX Onboard Processing & Displays

Full Parametric EQ and Dynamics Processing on Every Channel

EQ Lo FREQ 100 Hz	EQ Lo BW .99 OCT	EQ Lo LEVEL 5.9 dB	EQ Lo Mid FREQ 794 Hz	EQ Lo Mid BW .50 OCT	EQ Lo Mid LEVEL -4.0 dB	LPF OUT	EQ Lo Shelf IN	Input 8 IN/OUT EQ LO FILTERS
EQ Mid Hi FREQ 2.4 kHz	EQ Mid Hi BW 1.2 OCT	EQ Mid Hi LEVEL 2.1 dB	EQ Hi FREQ 6.3 kHz	EQ Hi BW 0.1 OCT	EQ Hi LEVEL 1.5 dB	HPF OUT	EQ Hi Shelf IN	

The DMX has 4 fully parametric EQ bands with peak/shelf control for the low and high bands plus high and low pass filters - on every channel. Same with compression, limiting, and expansion dynamics control - a full suite on every channel. When editing, the functions spill out across channels on the DMX letting you see the entire picture at once. When you are done editing, just close out and the board goes back normal display functions.

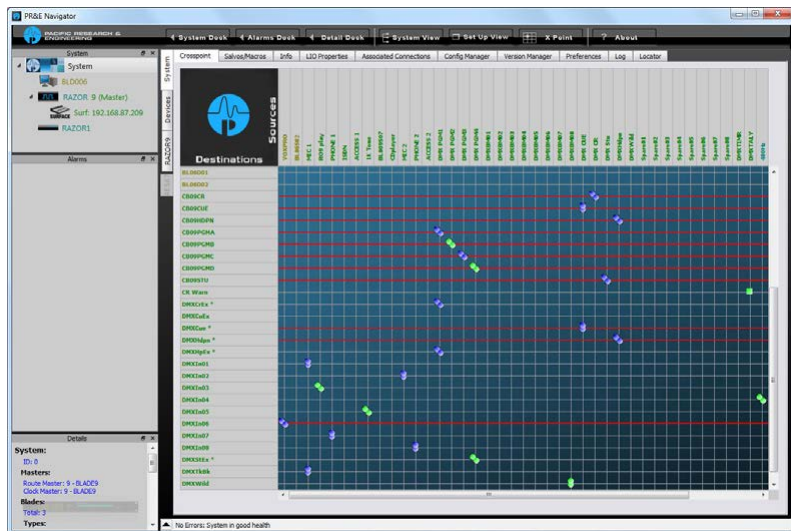
EQ Cue Dyn HOST MONO	EQ Dyn GUEST 1 MONO	EQ Dyn GUEST 2 MONO	Pan Center	VOXPRO MONO	PLAY 1 STEREO	EQ PHONE 1 MONO	EQ Dyn CODEC STEREO	Oct 11 2017 PGM 1
Expander OPEN 5.0 mS	Expander THRES 0.0 dB	Expander HANG 100 mS	Expander RATIO 3:1	Expander DEPTH 3.9 dB	Expander CLOSE 300 mS		Input 8 IN/OUT EXPANDER FILTERS	3:20:09 PM PGM 1

With full color OLED displays and color-coded functions, you can see all your settings at a glance. Shown are just a sampling of the displays available on the DMX.

DMX Software

PR&E Navigator

If you've been around Wheatstone's WheatNet-IP, you'll probably recognize this. It runs on Windows and is the way you get to an overview of your system. From here, you can tweak or reconfigure your entire network. It's intuitive and powerful, making the DMX the command center for your AoIP universe. Or neighborhood (we suffer no delusions of grandeur).



PR&E Surface Setup

Configuring your DMX is as simple as running this program. Think of it as PR&E Navigator for your surface. Get a birds-eye view of your entire setup and tweak or reconfigure it as you wish. It makes quick work of setup and lets you know just about everything you need to know about the way your board is configured. And when you make a change—whether large or small, you click one button: Apply, and the changes are applied instantly. No provisioning, no distributing files, no waiting for devices to restart to use the changes, as in previous PR&E consoles.





PHYSICAL DIMENSIONS DMX 8 CONSOLE:

17.625"/45cm wide

16.875"/43cm deep (tabletop mount)

4.25"/11cm high (rear)

1.625"/4.1cm high (front)

Weight 16 lbs/7.26 kg

Powered by the PR&E Mix Engine



PHYSICAL DIMENSIONS DMX 16 CONSOLE:

29.625"/75.3cm wide

16.5"/42cm deep (tabletop mount)

4.25"/11cm high (rear)

1.625"/4.1cm high (front)

Weight 26 lbs/11.8 kg

Powered by an external power supply



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