ClearOne
You're Virtually There™

# Audio Conferencing

## PSR1212 Digital Matrix Mixer

The PSR1212 is a highly-advanced 12x12 digital matrix mixer with audio processing. It uses an internal macro language and 32 user-definable presets to quickly adapt to a variety of sound reinforcement and room-combining applications.

The PSR1212 facilitates local and remote PC setup and diagnostics. Microphone inputs can be individually customized to gate on and off as you wish, while automatic gain control keeps the overall sound level consistent.

All microphone mixing parameters can be customized and any combination of inputs can be routed to any combination of outputs, allowing flexibility in accommodating different applications and customer requirements.

Adjustments in routing, level, and other functions can be made through an RS-232 serial interface or buttons connected to the rear panel.

Basic operational functions can also be controlled remotely with the optional ClearOne Select Control Panel or Volume Control Panel.

The PSR1212 features eight audio processing buses. Each bus has 15 filters which can be configured as parametric, high pass, low pass, CD horn, high shelving, low shelving, all pass, or crossover. Each bus also includes delay and compressor functions. This allows you to tailor the PSR1212's audio response to optimize the audio quality and fidelity characteristics of a wide variety of sound reinforcement systems.

### Applications

- Hotels and Convention Centers
- Auditoriums
- Stadiums
- Conference Rooms
- Houses of Worship
- Theaters

**The PSR1212 is manufactured and marketed by ClearOne, formerly Gentner.**

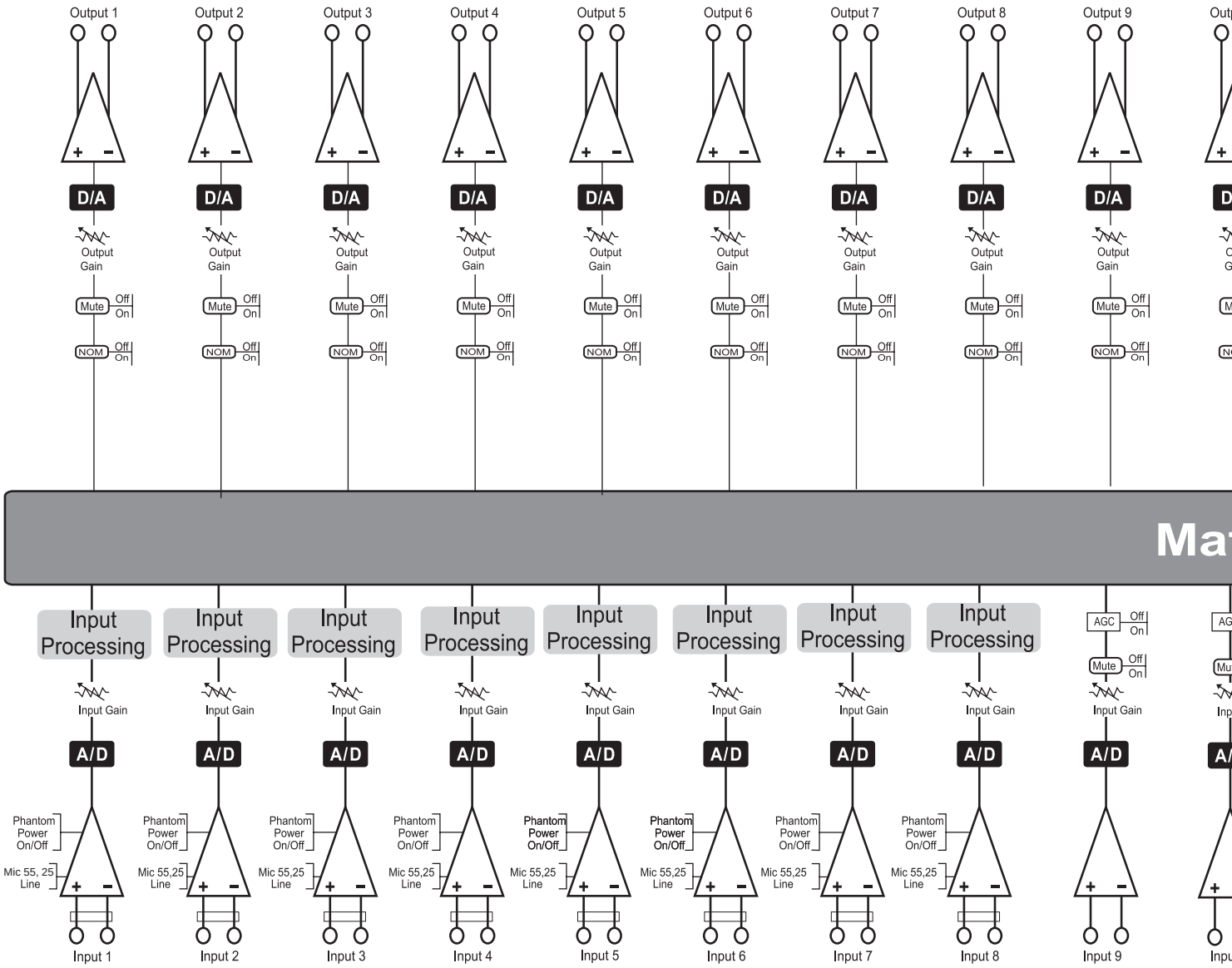
Macro Pro, a scripting language, enables sophisticated control without the need for an expensive external control system. This gives you real-time flexibility to meet a variety of audio reinforcement and room-combining requirements.

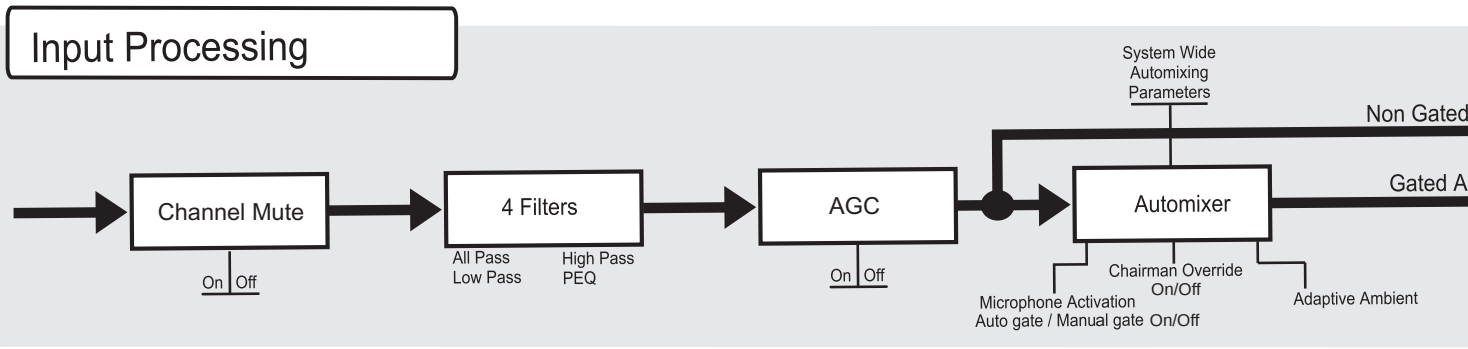
A digital audio and control bus allows up to eight PSR1212s to be connected and controlled as a single unit.

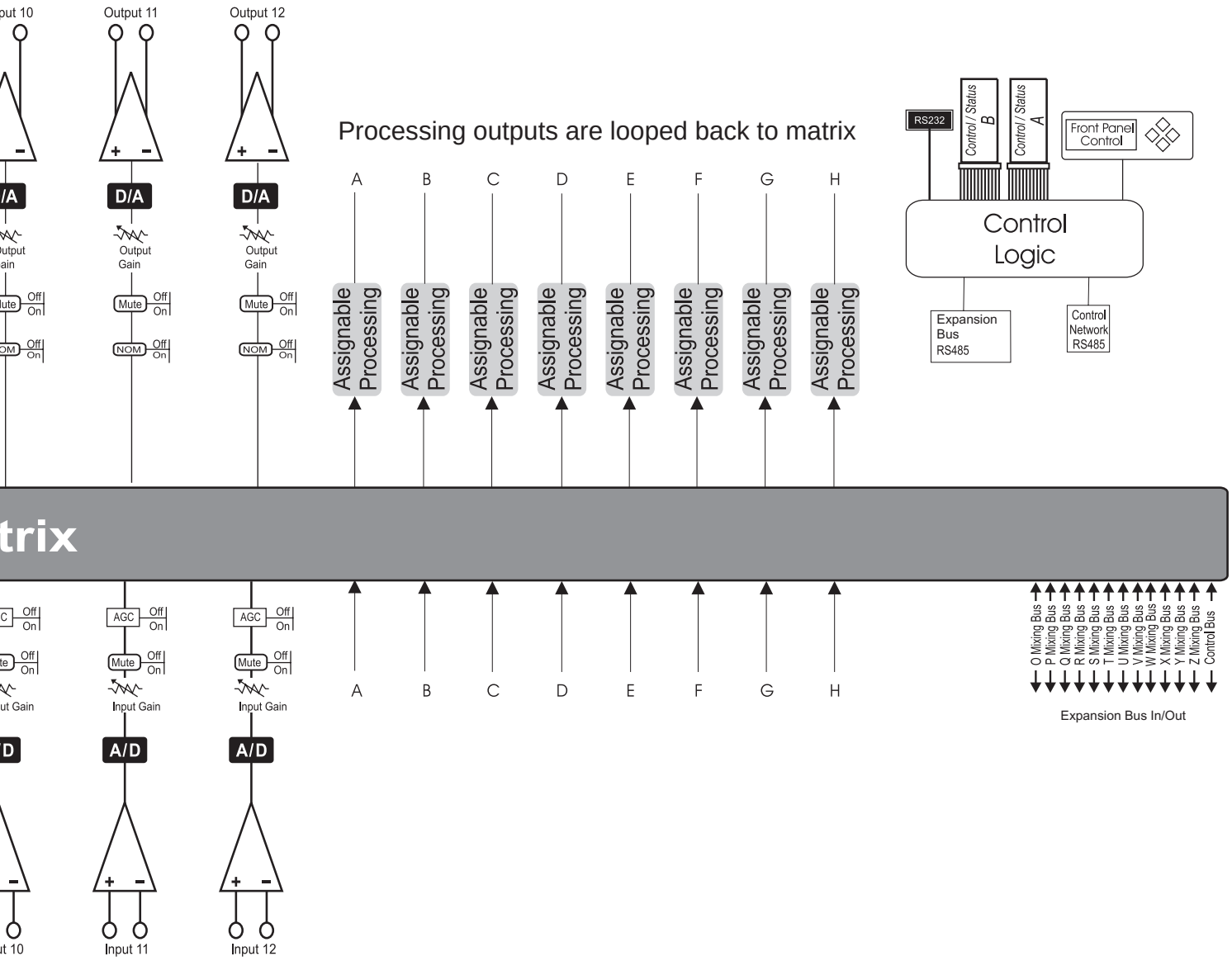

**The PSR1212 quickly adapts to a variety of sound reinforcement and room-combining applications.**

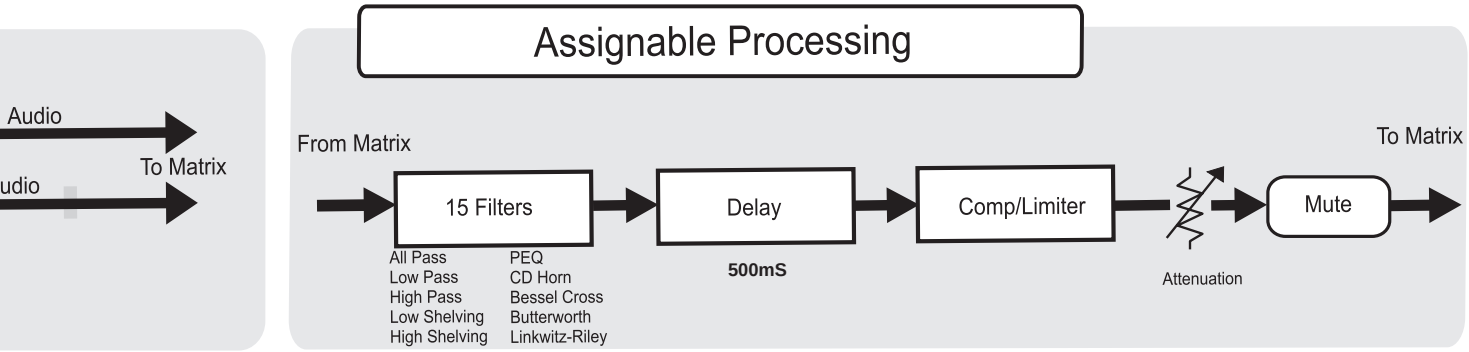
### Features and Benefits

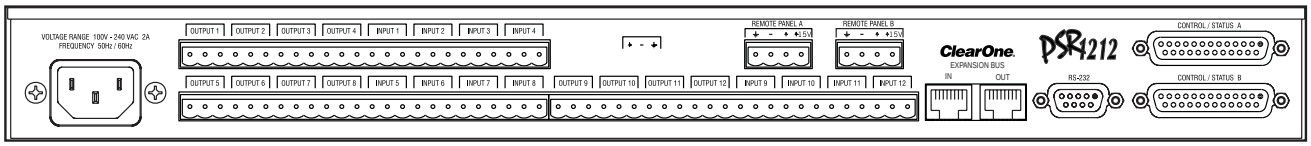
- 12x12 matrix with level control at the cross points
- Eight audio processing buses that can be placed anywhere within the matrix mixer audio path
- Eight-channel automatic microphone mixer with four line inputs. The mixer operates across linked units
- Input gain, configurable audio processing, muting, and automatic mixer are programmable per input channel (inputs 1–8 only)
- All interconnected devices can be accessed, controlled, and programmed via a single RS-232 connection
- Program, operate, and diagnose with a connected PC (direct or via modem) or other serial remote-control device
- Front panel control of gain and mute
- RAMP serial command for greater control over gain adjustments
- Clear Matrix button makes it easy to clear cross points
- 32 programmable presets for instant configuration changes
- Allows grouping of mics across four automatic mic mixers within a single PSR1212
- Internal room-combining capabilities


Output 1
Output 2
Output 3
Output 4
Output 5
Output 6
Output 7
Output 8
Output 9
D/A
Output Gain
Mute
Off
On
NOM
Input Processing
Input Gain
A/D
Phantom Power On/Off
Mic 55, 25 Line
Mic 55,25 Line
Input 1
Input 2
Input 3
Input 4
Input 5
Input 6
Input 7
Input 8
Input 9
AGC


Input Processing
Channel Mute
On Off
4 Filters
All Pass
Low Pass
High Pass
PEQ
AGC
On Off
System Wide Automixing Parameters
Automixer
Non Gated
Gated A
Microphone Activation
Auto gate / Manual gate
Chairman Override On/Off
Adaptive Ambient


Output 10
Output 11
Output 12
D/A
Output Gain
Mute
Off
On
NOM
Processing outputs are looped back to matrix
A
B
C
D
E
F
G
H
Assignable Processing
RS232
Control / Status B
Control / Status A
Front Panel Control
Control Logic
Expansion Bus RS485
Control Network RS485
trix
AGC
Input Gain
A/D
Input 11
Input 12
O Mixing Bus
P Mixing Bus
Q Mixing Bus
R Mixing Bus
S Mixing Bus
T Mixing Bus
U Mixing Bus
V Mixing Bus
W Mixing Bus
X Mixing Bus
Y Mixing Bus
Z Mixing Bus
Control Bus
Expansion Bus In/Out


Audio
To Matrix
udio
Assignable Processing
From Matrix
To Matrix
15 Filters
Delay
Comp/Limiter
Mute
All Pass
Low Pass
High Pass
Low Shelving
High Shelving
PEQ
CD Horn
Bessel Cross
Butterworth
Linkwitz-Riley
500mS
Attenuation




## Specifications

### Dimensions (LxDxH)
17.25" x 10.25" x 1.25"
43.8 x 26 x 4.5 cm

### Weight
7 lb/4.5 kg dry
12 lb/5.9 kg shipping

### Operating Temperature
32–100° F/0–38° C

### Humidity
15% to 80%, non-condensing

### Power Input Range
Auto-adjusting
100–240VAC; 50/60Hz

### Power Consumption
30W typical

### Expansion Bus In/Out
Proprietary Network
RJ-45 (2), 115.2kbps, 110kΩ impedance
Category five twisted-pair cable
80' (24 meters) maximum cable length between any two PSR1212s, XAP 800s or XAP 400s

### RS-232
DB-9 female
9,600 /19,200/38,400 (default)/57,600 baud rate; 8 bits, 1 stop, no parity
Hardware flow control on (default)/off

### Control / Status
DB25 female A/B (2)
Inputs A/B: active low (pull to ground)
Outputs A/B: Open collector, 40VDC max, 40mA each
+5VDC pins (2) (300mA over-current protected)

### Remote Panels A/B
4-pin push-on terminal block
RS-485 proprietary protocol
Cat five twisted-pair cable
1 pair data, 1 pair power and ground
+15VDC (300mA over-current protected)

### Mic/Line inputs 1-8
Push-on terminal block, balanced, bridging
Impedance: 5kΩ
Nominal Level: adjustable -55dBu, -25dBu, 0dBu
Maximum Level: -35dBu, -5dBu, +20dBu
Phantom Power: 24V, selectable

### Line Inputs 9-12
Push-on terminal block, balanced, bridging
Impedance: >10kΩ
Nominal Level: 0dBu
Maximum Level: 20dBu

### Outputs 1-12
Push-on terminal block, balanced
Impedance: 50Ω
Nominal Level: 0dBu
Maximum Level: 20dBu

### Audio Performance
Conditions: Unless otherwise specified all measurements are performed with a 22Hz to 22kHz BW limit (no weighting).
Frequency Response: 20Hz to 20kHz ±1dB
Noise (EIN): -126dBu, 20kHz BW, max gain, Rs=150Ω
THD+N: <0.02%
SNR: 80dB re 0dBu, (A-weighted)
Dynamic Range: 100dB (A-weighted)
Crosstalk <-91dB re 20dBu @ 20kHz channel to channel

### Approvals
FCC, CSA, IC, CE, NOM, ACA, SABS, JATE

### Assignable Processing Blocks
Filters:
- All pass
- Low pass
- High pass
- Low shelving
- High shelving
- Parametric EQ
- Notch
- CD Horn

Crossovers:
- Bessel
- Butterworth
- Linkwitz-Riley

Compressor
Delay adjustable up to 500ms

### Matrix Mixing Parameters
32x32 matrix
12 analog in/out
12 expansion bus in/out
8 assignable processing blocks in/out

### Auto Mixer Parameters
Number of Open microphones (NOM)
PA Adaptive Mode
First Mic Priority Mode
Last Mic Mode
Maximum # of Mics Mode
Ambient Level
Gate Threshold Adjust
Off Attenuation Adjust
Hold Time
Decay Rate

### Microphone Input Configuration
Input Gain Adjust
Mic or Line Level
Phantom Power on/off
Filters
- All Pass
- Low Pass
- High Pass
- Notch
- PEQ

Mute on/off
Chairman Override on/off
AGC on/off
Auto Gate/Manual Gate
Adaptive Ambient on/off

### Set-up Software
G-Ware™

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