The C2N-VEQ4 provides a very simple solution for adding professional quality volume control, equalization, and signal routing to any Crestron control system. In a compact half-space rack-mountable chassis, the C2N-VEQ4 delivers four channels of digital volume and tone control, four 12-band graphic/parametric equalizers, and a fully-adjustable 4x4 matrix mixer. Dual DSPs and 24-bit 96 kHz A/D and D/A converters attain high-end audio performance perfectly suited for a multitude of applications in boardrooms, auditoriums, night clubs, and homes.

The C2N-VEQ4 is controllable through any Crestron touchpanel, keypad, handheld remote, or e-Control®2 user interface, with true feedback provided for every parameter. Mixer and EQ settings are easily configured and adjusted through Crestron’s DMT Digital Media Tools software and saved in presets stored onboard the C2N-VEQ4 module.

**Volume/Tone Control**—In its most basic configuration, the C2N-VEQ4 provides four individual audio channels which may be operated independently or linked for stereo operation. Each channel includes adjustments for volume, bass, treble, and mute, with definable ramp times and scaling for fully customized operation. Protective relays on each output are included to prevent “thumps” during power-up and provide 100dB attenuation for dead-silent muting.

**Matrix Mixer**—The 4x4 matrix mixer allows any input to be routed to any or all output channels with full control over each individual level. Using the C2N-VEQ4, four up to four line-level sources may be mixed and distributed to up to four destinations, with each destination receiving a different mix as needed. A master volume adjustment is also included to make overall level adjustment a snap.

Five mixer presets may be stored onboard the C2N-VEQ4, with additional presets possible within the control system if needed. Such power and flexibility makes the C2N-VEQ4 ideal for a host of mixing and multi-zone applications.

**Graphic/Parametric EQ**—Each of the four output channels includes a full 12-band equalizer eliminating the need for additional outboard processors. Five selectable modes of audio equalization are available per output channel, providing up to 12 bands of fully parametric EQ or varying combinations of parametric and graphic EQ including a filter set optimized for speech applications. Five parametric EQ presets and ten graphic EQ “trim presets” may be stored onboard the C2N-VEQ4, allowing for save and recall of different EQ curves to account for changing room acoustics, audio material, or listener preference.

The C2N-VEQ4 is a Cresnet slave device designed to communicate with any 2-Series control system via the Cresnet bus. Also available, the C2VEQ-4 provides all of the capabilities of the C2N-VEQ4 in a control card form factor for installation in any 2-Series Y-Bus card slot.

- 24-bit 96KHz A/D and D/A Converters / Dual DSPs
- 4 Balanced/Unbalanced Line-Level I/O Channels
- Fully Adjustable 4 x 4 Audio Matrix Mixer
- Independent Volume, Bass, Treble, and Mute per Channel
- Relays for -100 dB Muting and “Thump” Prevention
- 12-Band Parametric or Graphic Equalization per Output Channel
- Preset and Real-Time Control with True Feedback via Cresnet
- Cresnet Expansion Module and Control Card Versions Available

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### SPECIFICATIONS

#### Connectors

<table>
<thead>
<tr>
<th>IN 1 – 4</th>
<th>(2) 5-pin 3.5mm detachable terminal blocks</th>
</tr>
</thead>
<tbody>
<tr>
<td>OUT 1 – 4</td>
<td>(2) 5-pin 3.5mm detachable terminal blocks</td>
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</table>

#### Performance

- **Master Volume**: -80dB to +20dB, 0.1dB steps (balanced I/O)
- **Channel Volume**: +5dB to +25dB, 0.1dB steps from DMT; +5dB to +20dB, 0.1dB steps from SIMPL
- **Mute**: > -100dB
- **Bass/Treble Gain Range**: ±15dB, 0.5dB steps
- **Equalization Modes**: 10-band graphic plus 2-band parametric; 5-band graphic plus 7-band parametric; speech-optimized 5-band graphic plus 7-band parametric; 3-band graphic plus 9-band parametric; or 12-band parametric
- **PEQ Filter Gain**: ±12dB, 0.1dB steps from DMT; ±12dB, 0.1dB steps from SIMPL
- **PEQ Filter Bandwidth**: ±15dB, 0.5dB steps
- **PEQ Filter Center Frequency**: ±0.1dB 20Hz to 22kHz, ±0.5dB 10Hz to 30kHz
- **Total Harmonic Distortion (THD) + Noise**: <0.008% @1kHz
- **S/N Ratio**: >87dB balanced, >95dB unbalanced, 20Hz to 22kHz A-weighted
- **Crosstalk**: >-90dB 20Hz to 22kHz
- **Common Mode Rejection**: >80dB 20Hz to 22kHz

#### LED Indicators

- **PWR** (green) Indicates 24 Volts DC power supplied from Cresnet control network
- **NET** (yellow) Indicates communication with Cresnet system

#### ACTIVITY 1 – 4

- (red) Illuminates when a parameter is being changed on a given channel

#### SETUP (rear)

- (red) Used for Touch-Settable ID (TSID)

#### Buttons

- (red) Used for Touch-Settable ID (TSID)

#### Power Requirements

- **Cresnet Power Usage**: 8 Watts (0.34 Amps @ 24 Volts DC)
Crestron C2N-VEQ4 4-Channel Volume/Equalizer Control

Environmental

Temperature: 32° to 122°F (0° to 50°C)
Humidity: 10% to 90% RH (non-condensing)

Enclosure

Black metal, .5U 19" rack mountable using optional ST-RMK (sold separately)

Dimensions

Height: 1.8 in (4.57 cm)
Width: 7.07 in (17.96 cm)
Depth: 6.32 in (16.05 cm)

Weight

1.86 lbs (0.837 kg)

CONTROL CARD VERSION

C2VEQ-4

All the features and specifications of the C2N-VEQ4 except:

Enclosure

Y-Bus control card, installs in any Y-Bus expansion slot of a 2-Series control system

AVAILABLE ACCESSORIES

ST-RMK

Rack Mount Kit