





# Your PDF Guides

You can read the recommendations in the user guide, the technical guide or the installation guide for RANE RPM 26V. You'll find the answers to all your questions on the RANE RPM 26V in the user manual (information, specifications, safety advice, size, accessories, etc.). Detailed instructions for use are in the User's Guide.

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**RANE DIGITAL** DATA SHEET **RPM 26v**  
DSP MULTIPROCESSOR



**Intuitive Predefined Configurations**

- Dual 2-way or 3-way crossover or up to a mono 6-way crossover with program compression, delay, parametric EQ and limiting
- 1 Input split to two 2-way or 3-way crossovers
- Up to a 1 x 6 digital delay with parametric EQ
- Up to a 2 x 6 matrix signal router with parametric EQ
- 1 x 6 splitter or dual 1 x 3 splitter

**Applications**

- Progressively delayed reinforcement or ceiling speakers
- Room combining and distribution
- Critical cluster alignment
- Churches, auditoriums, restaurants, lounges, gymnasiums
- Board rooms, race tracks, court rooms, convention centers

**Features**

- New 24-bit data converters @ 50 kHz sample rate
- 24-bit and higher precision processing
- 102 dB dynamic range
- Easy-to-use setup & control software for Windows 95/98®
- Signal flow and critical settings in plain view on one screen
- Detailed device report printouts
- Up to 16 memory contact closure configuration recall
- Setup at the office, optimize at the site
- Optional input isolation transformers (Rane part # 00961)
- UL/CSA CE remote power supply (85-265 VAC)

**General Description**

The RPM 26v provides all required signal processing between the mixer and amplifiers. With its insightful, preprogrammed configurations and user-friendly RaneWare® software, the RPM 26v includes a wide variety of intuitive signal processing functions: high & low cut filters, compression, delay, crossover, parametric EQ, splitting, input summing, limiting, trim controls and sine wave or pink noise test tones.

The RPM 26v contains 2 analog inputs, 6 analog outputs and saves several rack spaces with its tamperproof, dead-front, 1U chassis. Configurations and settings are stored in 16 internal, non-volatile memories—which are contact closure accessible from the rear panel Memory Recall Port. This Port can be paralleled with the Ports of other RW 232 products—allowing one hardware switch to select entire system configurations. This makes the RPM 26v ideal for installations requiring preset configurations through simple contact closures. All 16 memories are accessible from RaneWare's Site Control Panel.

The RPM 26v is programmable via its rear panel RW 232 port that interfaces directly to the RS-232 ports found on PC compatible computers. This eliminates the need for a special cable, box or interface card. Up to sixteen RW 232 units at a time can be serially linked to a single computer. Thus a sound system installer can access and program each device on line without having to unplug from the first device and plug into the next. The RW 232 port is also compatible with AMX and Crestion controllers. Once the RPM 26v is programmed, the computer is strictly optional.

The RPM 26v employs 24-bit A/D & D/A converters with 24-bit double-precision internal DSP processing. Euroblock connectors are provided for audio and the Memory Recall Port. The recessed Default button on the rear panel recalls Memory 1 in case of computer failure. The Device Address switch assigns one of 250 possible RW 232 addresses that uniquely identifies each device on the RW 232 bus. The front panel has two-color, signal present and overload indicators for both the Inputs and the Outputs—allowing for fast and intuitive signal flow verification without the need of a computer. Power and CDM (communications) indicators are also on the front panel to verify proper AC supply and communication with the computer.

Powered from a UL listed, CSA and CE certified remote power supply, the RPM 26v may be used in any installation mandating agency compliance.

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Data Sheet-1



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**Manual abstract:**

With its insightful, preprogrammed configurations and user-friendly RaneWare® software, the RPM 26v includes a wide variety of intuitive signal processing functions: high & low cut filters, compression, delay, crossover, parametric EQ, splitting, input summing, limiting, trim controls and sine wave or pink noise test tones. The RPM 26v contains 2 analog inputs, 6 analog outputs and saves several rack spaces with its tamperproof, deadfront, 1U chassis. Configurations and settings are stored in 16 internal, non-volatile memories--which are contact closure accessible from the rear panel Memory Recall Port. This Port can be paralleled with the Ports of other RW 232 products-- allowing one hardware switch to select entire system configurations. This makes the RPM 26v ideal for installations requiring preset configurations through simple contact closures. All 16 memories are accessible from RaneWare's Site Control Panel. The RPM 26v is programmable via its rear panel RW 232 port that interfaces directly to the RS-232 ports found on PC compatible computers. This eliminates the need for a special cable, box or interface card. Up to sixteen RW 232 units at a time can be serially linked to a single computer. Thus a sound system installer can access and program each device on line without having to unplug from the first device and plug into the next.

The RW 232 port is also compatible with AMX and Crestron controllers. Once the RPM 26v is programmed, the computer is strictly optional.

@@@The front panel has two-color, signal present and overload indicators for both the Inputs and the Outputs--allowing for fast and intuitive signal flow verification without the need of a computer. Power and COM (communications) indicators are also on the front panel to verify proper AC supply and communication with the computer. Powered from a UL listed, CSA and CE certified remote power supply, the RPM 26v may be used in any installation mandating agency compliance.

Intuitive Predefined Configurations · Dual 2-way or 3-way crossover or up to a mono 6-way crossover with program compression, delay, parametric EQ and limiting · 1 Input split to two 2-way or 3-way crossovers · Up to a 1 x 6 digital delay with parametric EQ · Up to a 2 x 6 matrix signal router with parametric EQ · 1 x 6 splitter or dual 1 x 3 splitter Applications · · · · · Progressively delayed reinforcement or ceiling speakers Room combining and distribution Critical cluster alignment Churches, auditoriums, restaurants, lounges, gymnasiums Board rooms, race tracks, court rooms, convention centers Features · · · · ·

New 24-bit data converters @ 50 kHz sample rate 24-bit and higher precision processing 102 dB dynamic range Easy-to-use setup & control software for Windows 95/98® Signal flow and critical settings in plain view on one screen Detailed device report printouts Up to 16 memory contact closure configuration recall Setup at the office, optimize at the site Optional input isolation transformers (Rane part #00961) UL/CSA/CE remote power supply (85-265 VAC)

Windows is a registered trademark of Microsoft Corporation; RaneWare is a registered trademark of Rane Corporation. Data Sheet-1 Rane's easy-to-use, Windows-compatible software-- called RaneWare (included with the unit and available on our website at <http://www.rane.com>)--allows the RPM 26v (and other RW 232 units) to be controlled in real time. RaneWare also supports saving memories--which include configuration changes--to a file.

This allows programming units without being physically connected to them, and allows different configurations to be stored in each Memory. Thus units may be initially programmed at the office, then "r tweaked" on site. The software provides password security, allowing only memory changes, thus disallowing further access. The software also provides metering for Input trims, A/D "number of bits toggling," and Compressor Gain Reduction meters. "Stereo" Linking of Input Trims, Delays and Output Trims as well as Combining of Compressors and Limiters are also supported. Frequency steps for High and Low Cut filters, Crossover and Parametric EQ are adjustable in 1 Hertz steps. The Crossovers and Extended Parametric EQ (included in some of the preprogrammed configurations) support Linkwitz-Riley, Bessel or Butterworth filters (12, 18 or 24 dB/ Octave, where applicable). All Parametric EQs contain ¼ dB boost/cut steps with a +12/-15 dB range and 80 Q steps between 40 and 0.5 (bandwidths between 0.036 and 2.

54 octaves, respectively). @@@@30 bands of PEQ; Most PEQ bands on outputs (see Program 9). @@Extended PEQ+ allows 8th order, 48 dB/oct Linkwitz-Riley Crossover. @@@@Each output may select A, B, or A+B source input. @@Most PEQ bands on inputs (see DSP Program 3). @@@@Most PEQ bands on inputs (see DSP Program 11). @@All PEQ bands on outputs (see DSP Program 10). @@@@Right-clicking allows Flatten, Bypass, or Copy/Paste functions. DSP Program 13 - 2 x 6 Matrix Router System with Extended PEQ+ 2 inputs, 6 outputs; 24 bands of PEQ; includes PEQ+ on outputs. Includes PEQ+ for 6way crossover, or 4-way with stereo subwoofers, or 4-way with two full range Outputs.

Double-clicking on an Output terminal block opens the Detailed Response window. Input and Output EQ, Crossovers, and individual Output responses may be viewed and printed. Data Sheet-4 RPM 26v DSP MULTIPROCESSOR Features and Specifications Parameter Gain Frequency Response THD + Noise Dynamic Range IM Distortion (SMPTE) Propagation Delay Crosstalk Inputs: Type ...

..Connectors ...

..Impedance .....Maximum Level ...

..Common Mode Rejection .....Signal Present ...

..Overload Outputs: Type ...

..Connectors ...

..Impedance .....Maximum Level ...

..Signal Present .....Overload Input Trim Range Output Trim Range Master Output Range Input & Output RFI Filters A/D Converters Processing Communications Interface ...

..Cable Length Memory ...

..Change Update Time High & Low Cut Filters ...

..Low Cut Filter Freq. Range .....High Cut Filter Freq. Range Pink Noise Type .

....Pink Noise Period .....Crest Factor Sine Wave Generator Specification 0.

0 20 Hz to 20 kHz <0.01 102 <0.01 1.5 -100 Active Balanced Euroblock 10k each leg 20 >46 -20 17 Active Balanced Euroblock 100 each leg 20 -20 17 +31.5 to -12 0 to -30 0 to -64 Yes 24 bit 24 bit and higher RW 232 (RS-232) 50 feet maximum NOVRAM 65 Fixed 4th Order 20 to 12,800 31 to 20,000 Pseudo Random (average) 167 4.

9 20 to 20,000 Limit ±0.5 +0/-1 .005 min. .01 1% typ.

Units Conditions/Comments dB Level controls at unity gain dB % +4 dBu, 1 kHz dB A-weighted, re +20 dBu, 20-20 kHz % 60 Hz / 7 kHz, 4:1, + 4 dBu msec Displayed in software delay times dB 1 kHz bandpass, any Channel Optional line level isolation transformers available Shields are chassis grounded ohms dBu dB 20 Hz to 20 kHz dBu at 1 kHz dBu at 1 kHz; 3 dB before clipping Shields are chassis grounded 1% 1 2 2 0.

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15 0.01 0.01 ohms dBu dBu dBu dB dB dB 2k ohms load at 1 kHz at 1 kHz; 3 dB before clipping Minimum 1/2 dB steps Minimum 1/2 dB steps Minimum 1 dB steps 50 kHz sample rate 1% 1 1 2 2 avg. typ. typ. msec Hz Hz sec. 15 meters maximum Non-volatile, no batteries 90 msec max.

, DSP Program dependent 24 dB / octave, Butterworth Minimum step size 1 Hz Minimum step size 1 Hz 1/2 dB error Hz 1 Hz steps Channel 1 and Channel 2 generators are phase incoherent Note: unless otherwise noted, all settings "flat," Thresholds set at minimum, Ratios set at maximum Continued... Data Sheet-5 RPM 26v Features and Specifications Parameter Specification Parametric EQ (PEQ) & Extended Parametric EQ (PEQ+) .....Center Frequency

Range 20 to 20,000 ..

...Normal Filter Level Range +12 to -15 ..

...Shelving Filter Level Range +12 to -15 ..

...Bandwidth Range [BW (Q)] 0.036 to 2.54 Extended Parametric (PEQ+) & Crossover Filter Types .....

Bessel Corner Frequency 2nd Order -4.5 3rd Order -6.25 4th Order -7.5 .....Bessel Orders 2nd, 3rd & 4th ..

...Butterworth Corner Frequency -3 ..

...Butterworth Orders 2nd, 3rd & 4th ..

...Linkwitz-Riley Corner Freq, -6 .....Linkwitz-Riley Orders 2nd & 4th ..

...Crossover Frequency Step Size Approximately 1 Simple Crossover Mode: Frequency Range .....2-Way 70 to 3,600 ..

...3-Way, Low Output Corner 70 to 1,000 ..

...3-Way, High Output Corner 190 to 7,000 Advanced Crossover Mode: Frequency Range ..

...2-Way 20 to 12,500 .....3-Way, Low Output Corner 20 to 12,500 ..

...3-Way, High Output Corner 20 to 12,500 .....3-Way, Mid Out High Corner 12,500 Maximum ..

...3-Way, Mid Out Low Corner 20 Minimum CD Horn EQ: Frequency Range 2k to 5k Compressor ..

...Threshold Range +20 to -20 ..

...Ratio Range 1:1 to 20:1 & infinity:1 .....Attack Time 0.5 to 100 .

....Release Time 1 msec to 5.0 se .....

Frequency Response .....

Bandwidth .....

THD + Noise Active balanced analog inputs and outputs shall be accessible via rear panel Euroblock connectors. Signal processing configurations and settings shall be accessible via a rear panel RS-232, DB-9 input port. Up to 16 units at a time shall be daisy-chained via a rear panel RS-232 output port. The rear panel device address switch shall uniquely identify each unit on the RW 232 bus. The front panel shall provide independent input and output, dual-color signal present (green) and overload (red) indicators. Level indicators shall provide throughput signal flow verification without need for a computer. There shall be front panel power and communications indicators. The control software shall provide complete display and control, in graphical form, of all signal processing configurations and functions. @@@@The unit shall have certified compliance with FCC Part 15J for a Class B computing device and EMCD 89/336/EEC (CE approved). The unit shall be powered from a UL listed, CSA certified remote power supply meeting LVD 73/23/EEC and EMCD 89/336/EEC standards.

The unit shall be constructed entirely of cold-rolled steel. The unit shall be a Rane Corporation RPM 26v DSP Multiprocessor. Accessory Available: Input Isolation Transformers (Rane part #00961) Conditions/Comments Grade "80" Ni. transformer specs Primary to secondary 1% THD point 1% THD point Primary / secondary +4 dBu Half power frequency +20 dBu; 100 - 20 kHz +20 dBu; 30 - 20 kHz Specification Limit Units Nickel Core Bobbin Wound 20 source, 10k load ohms 1:1 20 0.5 dB dBu 18.5 0.5 dB dBu 0.5 0.1 dB 200 10% ohms 20 Hz to 20 kHz 0.1 dB 60 kHz -3 dB <0.

005 0.001 % <0.15 0.05 % ©Rane Corporation 10802 47th Ave. W.

, Mukilteo WA 98275-5098 TEL (425)355-6000 FAX (425)347-7757 WEB <http://www.rane.com> Data Sheet-8 All DSP Programs, features & specifications subject to change without notice. DOC 103834 PN 11233 2-00 .



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