

# MULTICOM PRO-XL MDX4600



## Technical Specifications

VERSION 1.2 September 2002

ENGLISH



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# MULTICOM PRO-XL

**INTERACTIVE REFERENCE-CLASS 4-CHANNEL EXPANDER/GATE/COMPRESSOR/ PEAK LIMITER WITH DYNAMIC ENHANCER AND LOW CONTOUR FILTER**



- ▲ Switchable IKA (Interactive Knee Adaptation) program-adaptive compression circuitry combines the advantages of hard-knee and soft-knee characteristics
- ▲ IRC (Interactive Ratio Control) expander/gate circuitry for virtually inaudible noise suppression
- ▲ Switchable dynamic Enhancer for brilliant, lively audio even with heavy compression
- ▲ IGC (Interactive Gain Control) peak limiting circuitry combines clipper and program limiter for reliable and inaudible protection against signal peaks
- ▲ Switchable Low contour filter prevents “pumping” due to low-frequency dominated compression
- ▲ Stereo couple function selectable for channels 1/2 and 3/4
- ▲ Ultra low-noise 4580 operational amplifiers and state-of-the-art VCA's
- ▲ Separate 8-segment LED meters for input/output levels and gain reduction
- ▲ Selectable operating level (+4 dBu/-10 dBV)
- ▲ Servo-balanced inputs and outputs with ¼” TRS and gold-plated XLR connectors
- ▲ High-quality components and exceptionally rugged construction ensure long life
- ▲ Conceived and designed by BEHRINGER Germany

**SPECIFICATIONS**

**AUDIO INPUTS**

|                  |  |
|------------------|--|
| Type             | XLR and 1/4" TRS connectors, HF-shielded, servo-balanced |
| Impedance        |  |
| +4 dBu           | 90 kΩ bal., 45 kΩ unbal. @ 1 kHz                         |
| -10 dBV          | 180 kΩ bal., 90 kΩ unbal. @ 1 kHz                        |
| Operating level  | +4 dBu/-10 dBV (switchable)                              |
| Max. input level | +22 dBu balanced and unbalanced                          |
| CMRR             | typ. 40 dB, >60 dB @ 1 kHz                               |

**AUDIO OUTPUTS**

|                   |   |
|-------------------|---|
| Type              | XLR and 1/4" TRS connectors Electronically controlled servo-balanced output stage |
| Impedance         | 95 Ω bal., 50 Ω unbal. @ 1 kHz  |
| Max. output level | +21 dBu, +20 dBm balanced and unbalanced  |

**SIDECCHAIN INPUTS**

|                  |  |
|------------------|--|
| Type             | 1/4" TS connector, unbalanced, HF-shielded, DC-decoupled |
| Impedance        | 45 kΩ  |
| Max. input level | +24 dBu  |

**SIDECCHAIN OUTPUTS**

|                   |  |
|-------------------|--|
| Type              | 1/4" TS connector, unbalanced, HF-shielded, DC-decoupled |
| Impedance         | 50 Ω   |
| Max. output level | +21 dBu  |

**SYSTEM SPECIFICATIONS**

|                 |  |
|-----------------|--|
| Bandwidth       | 20 Hz to 20 kHz, +0/-0.5 dB  |
| Frequency range | 0.35 Hz to 200 kHz, +0/-3 dB   |
| S/N ratio       | 115 dB, unweighted, 22 Hz - 22 kHz   |
| THD             | 0.008 % typ. @ +4 dBu, 1 kHz, gain 1<br>0.07 % typ. @ +20 dBu, 1 kHz, gain 1 |
| IMD             | 0.01 % typ. SMPTE  |
| Crosstalk       | -110 dB @ 1 kHz  |

**EXPANDER/GATE SECTION**

|           |   |
|-----------|---|
| Type      | IRC (Interactive Ratio Control) expander                  |
| Threshold | variable (OFF to +10 dB)                                  |
| Ratio     | variable (1:1 to 1:8)                                     |
| Attack    | <1 msec/50 dB, program-dependent                          |
| Release   | variable<br>SLOW: 100 msec/1 dB,<br>FAST: 100 msec/100 dB |

**COMPRESSOR SECTION**

|                     |  |
|---------------------|--|
| Type                | IKA (Interactive Knee Adaptation) compressor                     |
| Threshold           | variable (-40 to +20 dB)   |
| Ratio               | variable (1:1 to ∞:1)  |
| Attack/release      | variable (manual or automatic)                                   |
| Auto characteristic | wave adaptive compressor   |
| Manual attack time  | variable (0.3 msec/20 dB to 300 msec/20 dB)                      |
| Manual release time | variable (0.05 sec/20 dB to 5 sec/20 dB)                         |
| Auto attack time    | typ. 15 msec for 10 dB,<br>5 msec for 20 dB,<br>3 msec for 30 dB |
| Auto release time   | program-dependent,<br>typ. 125 dB/sec                            |
| Output              | variable (-20 to +20 dB)   |

**PEAK LIMITER SECTION**

|                      |   |
|----------------------|---|
| Type                 | IGC (Interactive Gain Control) peak limiter |
| Level                | variable (0 dB to OFF (+21 dBu))            |
| Ratio                | ∞:1   |
| Level 1 limiter type | clipper                                     |
| Attack               | "zero"                                      |
| Release              | "zero"                                      |
| Level 2 limiter type | program limiter                             |
| Attack               | program-dependent,<br>typ. <5 msec          |
| Release              | program-dependent,<br>typ. 20 dB/sec        |

**DYNAMIC ENHANCER SECTION**

|                  |                                    |
|------------------|------------------------------------|
| Type             | IDE (Interactive Dynamic Enhancer) |
| Filter frequency | 2.5 kHz (lower cut-off frequency)  |
| Characteristic   | high-pass filter (6 dB/oct.)       |
| Boost            | max. 28 dB @ 7.5 kHz               |

**POWER SUPPLY**

|                      |   |
|----------------------|---|
| Mains voltage        | USA/Canada 120 V ~, 60 Hz<br>U.K./Australia 240 V ~, 50 Hz<br>Europe 230 V ~, 50 Hz |
| General export model | 100 -120 V ~, 200 -240 V ~,<br>50 - 60 Hz   |
| Power consumption    | max. 18 W   |
| Fuse                 | 100 -120 V ~: T 630 mA H<br>200 -240 V ~: T 315 mA H                                |
| Mains connection     | standard IEC receptacle   |

**DIMENSIONS/WEIGHT**

|                 |   |
|-----------------|---|
| Dimensions      | approx. 1 3/4" (44.5 mm) x 19" (482.6 mm) x 8 1/2" (217 mm) |
| Weight          | approx. 2.25 kg (4.96 lbs)                                  |
| Shipping weight | approx. 3.45 kg (7.61 lbs)                                  |

BEHRINGER makes every effort to ensure the highest standard of quality. Necessary modifications are carried out without notice. Thus, the specifications and design of the device may differ from the information given in this manual.

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