



This lightweight, modified class H amplifier has been designed to the same high standards of reliability and sound quality that our customers have come to expect of all MC² audio products.

As with all E Series amplifiers, the E45 will deliver its rated power over the entire audio bandwidth, and a resonant switchmode power supply with a large reservoir gives extremely high peak power without any "bass sag".

Optical limiters keep mains input and output currents within a safe operating area at all times, whilst maintaining transparent sonic performance.

Power Reduction Circuitry (PRC) controls on the rear panel, linked to the limiter thresholds, allow each channel to be independently set so that different speakers can be safely connected to each channel.

Main Specifications

Output Power (per channel): 8 ohms: 1250W, 4 ohms: 2500W, 2 ohms: 4200W

Measured using continuous music with Crest Factor of 4.8 (14dB)

Output Power (bridged): 8 ohms: 5000W, 4 ohms: 8400W

Measured using continuous music with Crest Factor of 4.8 (14dB)

THD: (@1dB below maximum output power) @ 1kHz < 0.015%, 20Hz to 20kHz < 0.05%

Gain / Sensitivity: Gain 26/32/36dB Sensitivity (for maximum power) +15.7/9.7/5.7dBu (4.7/2.4/1.5V)

Frequency Response: 20Hz to 20kHz (±0.3dB)

Power Consumption: Nominal @ 240V into 4 ohms 4.5A, Nominal @ 120V into 4 ohms 9.0A

Dimensions: Amplifier (2U) (mm/in) 88/3.5(h) x 482/18.9(w) x 428/16.8(d)

Boxed (shipping size - UK) 230/9.0 x 580/22.8 x 560/22.0 (Single boxed)

Boxed (shipping size - all except UK) 250/2.8 x 610/24.0 x 600/23.6 (Double boxed)

Weight: Amplifier 11.4kg(25.1lbs), Boxed (shipping weight) 13.4kg(29.5lbs)

E45

Additional Specifications

Input Impedance: 20k ohms (Active balanced)

Input CMRR: > 60dB **Damping Factor:** > 400 (8 ohms / 1kHz)

SNR: Better than 106dB (unwtd, 22Hz-22kHz)

Signal Limiters: Operate at maximum power to prevent excessive clipping.

Protection: Output short circuit, DC output, over-temperature, mains in-rush control.

Output Power:

Continuous sine wave @ 1kHz (per channel): 1100W (8R), 2050W (4R), 3300W (2R)

Continuous music (with Crest Factor of 2.8 (9dB)): 1200W (8R), 2400W (4R), 4100W (2R)

Continuous music (with Crest Factor of 4.8 (14dB)): 1250W(8R), 2500W(4R), 4200W (2R)

Continuous music (with Crest Factor of 7.8 (18dB)): 1350W(8R), 2700W (4R), 4300W (2R)

For details of Power measurement methods please refer to the Technical Support area of our website.

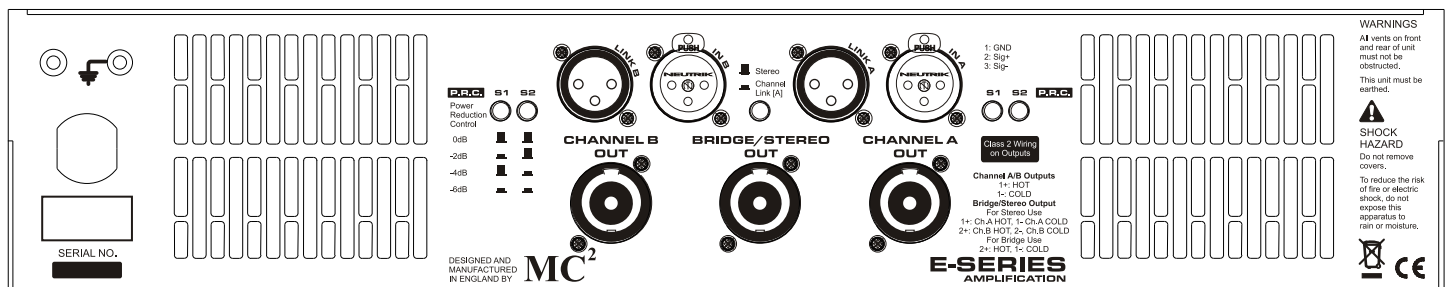
E45

Power Consumption & Thermal Emissions

Mains (V)	Load (R)	Current Draw (A)				Thermal Emissions (W)			
		No Sig'l	Light	Average	Heavy	No Sig'l	Light	Average	Heavy
240	8	1.0	1.7	2.7	5.5	240	281	344	510
240	4	1.0	2.4	4.5	10.1	240	322	447	780
240	2	1.0	3.2	6.9	16.5	240	370	589	1163
120	8	2.0	3.4	5.5	11.1	240	281	344	510
120	4	2.0	4.8	9.0	20.2	240	322	447	780
120	2	2.0	6.4	13.7	33.1	240	370	589	1163

No Sig'l = Quiescent, Light = Crest Factor of 7.8(18dB), Average = Crest Factor of 4.8(14dB), Heavy = Crest Factor of 2.8(9dB)
For details of measurement methods please refer to the Technical Support area of our website.

E45



Controls, Indicators & Connectors

Front Panel: 2 x Level Controls, 1 x Power Switch, 1 x Power LED (green),
2 x 5 point LED level indicators, 2 x PRC Active LEDs (green)
1 x Protection Active (red)
1 x Channel Link LED (green)

Rear Panel: 1 x Channel Link switch
2 x 2 PRC level selector switches
3 x Neutrik Speakon output connectors (4 pole)
2 x Neutrik XLR female connectors (audio input)
2 x Neutrik XLR male connectors (audio link output)
Captive mains cable

E45

Architect's and Engineer's Specification

The power amplifier shall be a 2 channel modified Class H design with a minimum guaranteed power of 1250W into 8R [20Hz to 20kHz]. THD shall be better than 0.05% (20Hz to 20kHz) and the signal to noise ratio shall exceed 106dB (wtd). Minimum load shall be 2R, and 4R in bridge mode. Input sensitivity shall be +5.7dBu for full power output. Frequency response shall be 20Hz to 20kHz (± 0.3 dB). The front panel shall have individual input level controls with a 5 point LED meter showing output level and onset of limiting and power reduction. A front panel non-isolating main power switch shall be fitted. The rear panel shall have outputs on Neutrik Speakon connectors, with a third connector wired to carry both channels and for bridged mode (4 pole). The audio inputs shall be on Neutrik 3 pole female XLR connectors, with Neutrik 3 pole male XLR connectors for link outputs. Individual switching of each channel's PRC (Power Reduction Circuit) will be available on a pair of switches giving 2/4/6dB of power reduction. Input channels shall be linkable using the rear panel link switch.
The amplifier shall be 2U, 19" rackmount in format with dimensions of 8.8cm X 48cm X 43cm and a weight of 11.4kg. AC mains supply shall be nominal 240V/120V, 50/60Hz.
The amplifier shall be designated the MC² E45.



This lightweight, class AB amplifier has been designed to the same high standards of reliability and sound quality that our customers have come to expect of all MC² audio products.

Proprietary current driven output stages give exceptional transient response and a resonant switchmode power supply with a large reservoir gives extremely high peak power without any "bass sag".

Optical limiters keep mains input and output currents within a safe operating area at all times, whilst maintaining transparent sonic performance.

The amplifier features automatic impedance sensing and changes the power accordingly and coupled with user switchable Power Reduction Control, allows different speaker loads to be more safely connected to each channel.

Main Specifications

Output Power (per channel): 8 ohms: 775W, 4 ohms: 900W

Measured using continuous music with Crest Factor of 4.8 (14dB)

Output Power (bridged): 8 ohms: 1800W

Measured using continuous music with Crest Factor of 4.8 (14dB)

THD: (@1dB below maximum output power) @ 1kHz < 0.008%, 20Hz to 20kHz < 0.03%

Gain / Sensitivity: Gain 26/31/32dB Sensitivity (for maximum power) +11.0/6.0/5.0dBu (2.7/1.5/1.4V)

Frequency Response: 20Hz to 20kHz (±0.3dB)

Power Consumption: Nominal @ 240V into 4 ohms 2.7A, Nominal @ 120V into 4 ohms 5.4A

Dimensions: Amplifier (2U) (mm/in) 88/3.5(h) x 482/18.9(w) x 428/16.8(d)

Boxed (shipping size - UK) 230/9.0 x 580/22.8 x 560/22.0 (Single boxed)

Boxed (shipping size - all except UK) 250/2.8 x 610/24.0 x 600/23.6 (Double boxed)

Weight: Amplifier 10.6kg(23.3lbs), Boxed (shipping weight) 12.6kg(27.7lbs)

E4-75

Additional Specifications

Input Impedance: 20k ohms (Active balanced)

Input CMRR: > 60dB **Damping Factor:** > 400 (8 ohms / 1kHz)

SNR: Better than 105dB (unwtd, 22Hz-22kHz)

Signal Limiters: Operate at maximum power to prevent excessive clipping.

Protection: Output short circuit, DC output, over-temperature, mains in-rush control.

Output Power:

Continuous sine wave @ 1kHz (per channel): 725W (8R), 750W (4R), ---- (2R)

Continuous music (with Crest Factor of 2.8 (9dB)): 750W (8R), 825W (4R), ---- (2R)

Continuous music (with Crest Factor of 4.8 (14dB)): 775W (8R), 900W (4R), ---- (2R)

Continuous music (with Crest Factor of 7.8 (18dB)): 825W (8R), 900W (4R), ---- (2R)

For details of Power measurement methods please refer to the Technical Support area of our website.

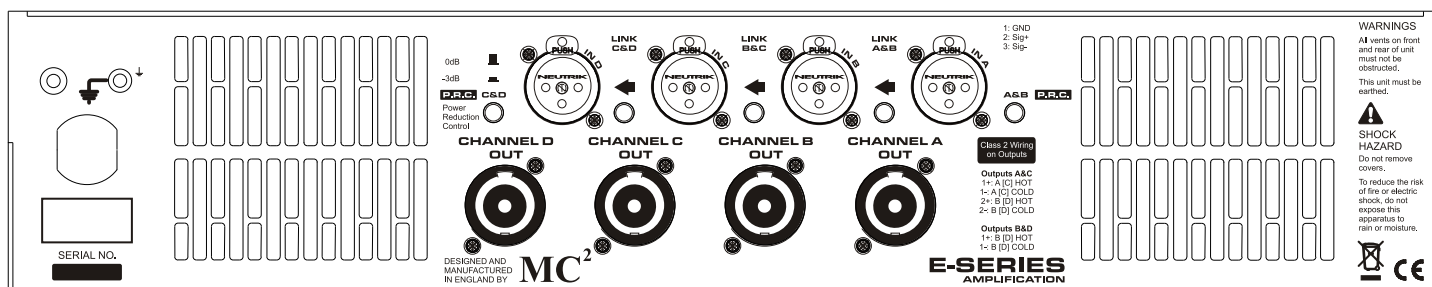
E4-75

Power Consumption & Thermal Emissions

Mains (V)	Load (R)	Current Draw (A)				Thermal Emissions (W)			
		No Sig'l	Light	Average	Heavy	No Sig'l	Light	Average	Heavy
240	8	1.2	1.7	2.5	4.7	288	319	367	494
240	4	1.2	1.8	2.7	5.0	288	321	379	515
240	2	.	.	.	.	.	.	.	.
120	8	2.4	3.4	5.0	9.4	288	319	367	494
120	4	2.4	3.6	5.4	10.0	288	321	379	515
120	2	.	.	.	.	.	.	.	.

No Sig'l = Quiescent, Light = Crest Factor of 7.8(18dB), Average = Crest Factor of 4.8(14dB), Heavy = Crest Factor of 2.8(9dB)
For details of measurement methods please refer to the Technical Support area of our website.

E4-75



Controls, Indicators & Connectors

Front Panel: 4 x Level Controls, 1 x Power Switch, 1 x Power LED (green),
4 x 5 point LED level indicators, 2 x PRC Active LEDs (green)
1 x Protection Active (red),

Rear Panel: 3 x Channel Link switches
2 x PRC level selector switches
4 x Neutrik Speakon output connectors (4 pole)
4 x Neutrik XLR female connectors (audio input)
Captive mains cable

E4-75

Architect's and Engineer's Specification

The power amplifier shall be a 4 channel class AB* design with a minimum guaranteed power of 450W into 8R (20Hz to 20kHz). THD shall be better than 0.03% (20Hz to 20kHz) and the signal to noise ratio shall exceed 105dB (wtd). Minimum load shall be 2R, and 4R in bridge mode. Input sensitivity shall be +5.0dBu for full power output. Frequency response shall be 20Hz to 20kHz (±0.25dB). The front panel shall have individual input level controls with a 5 point LED meter showing output level and onset of limiting and power reduction. A front panel non-isolating main power switch shall be fitted.

The rear panel shall have outputs on Neutrik Speakon connectors, with two connectors being wired to allow channel pairs to be accessed from a single plug (4 pole). The audio inputs shall be on Neutrik 3 pole XLR connectors. Switching of each pair of channel's PRC (Power Reduction Circuit) shall be on one switch per pair offering a 3dB reduction on available output power. Inputs to channels shall be linkable via 3 channel link switches.

The amplifier shall be 2U, 19" rackmount in format with dimensions of 8.8cm X 43cm X 48cm and a weight of 10.6kg. AC mains supply shall be nominal 240V/120V, 50/60Hz.
The amplifier shall be designated the MC² E4-75. *with "switching" PSU



The most powerful two channel amplifier MC² has ever made, the E90 has been designed to meet demands for higher power and increased efficiency, whilst still maintaining the renowned sonic qualities and unsurpassed reliability associated with all our amplifiers.

Proprietary class-D technology with a dual feedback loop system gives exceptional transient response and a resonant switchmode power supply with a large reservoir gives extremely high peak power without any "bass sag".

Newly designed limiters, linked to the output current monitors and power supply, keep mains input and output currents within a safe operating area at all times, whilst maintaining transparent sonic performance.

Running cool in even the most difficult conditions, the E90 can deliver up to 4800W into 4 ohms with both channels driven, and a massive 16000W bridged (4R), with outstanding distortion and noise figures right up to maximum output.

Main Specifications

Output Power (per channel): 8 ohms: 2500W, 4 ohms: 4800W, 2 ohms: 8200W

Measured using continuous music with Crest Factor of 4.8 (14dB)

Output Power (bridged): 8 ohms: 9600W, 4 ohms: 16400W

Measured using continuous music with Crest Factor of 4.8 (14dB)

THD: (@1dB below maximum output power) @ 1kHz<0.15%, 20Hz to 20kHz<0.5%

Gain / Sensitivity: Gain 32/36/39dB Sensitivity (for maximum power)+13/9/6dBu (3.50/2.20/1.50V)

Frequency Response: 20Hz to 20kHz (±1.0dB)

Power Consumption: Nominal @ 240V into 4 ohms 5.6A, Nominal @ 120V into 4 ohms 11.2A

Dimensions: Amplifier (2U) (mm/in) 88/3.5(h) x 482/18.9(w) x 428/16.8(d)

Boxed (shipping size - UK) 230/9.0 x 580/22.8 x 560/22.0 (Single boxed)

Boxed (shipping size - all except UK) 250/2.8 x 610/24.0 x 600/23.6 (Double boxed)

Weight: Amplifier 11.8kg(26.0lbs), Boxed (shipping weight) 13.8kg(30.4lbs)

E90

Additional Specifications

Input Impedance: 20k ohms (Active balanced)

Input CMRR: > 60dB **Damping Factor:** > 400 (8 ohms / 1kHz)

SNR: Better than 105dB (unwtd, 22Hz-22kHz)

Signal Limiters: Operate at maximum power to prevent excessive clipping.

Protection: Output short circuit, DC output, over-temperature, mains in-rush control.

Output Power:

Continuous sine wave @ 1kHz (per channel): 2400W (8R), 4500W (4R), 7200W (2R)

Continuous music (with Crest Factor of 2.8 (9dB)): 2400W (8R), 4400W (4R), 6800W (2R)

Continuous music (with Crest Factor of 4.8 (14dB)): 2500W(8R), 4800W(4R), 8200W (2R)

Continuous music (with Crest Factor of 7.8 (18dB)): 2600W(8R), 5000W (4R), 8900W (2R)

For details of Power measurement methods please refer to the Technical Support area of our website.

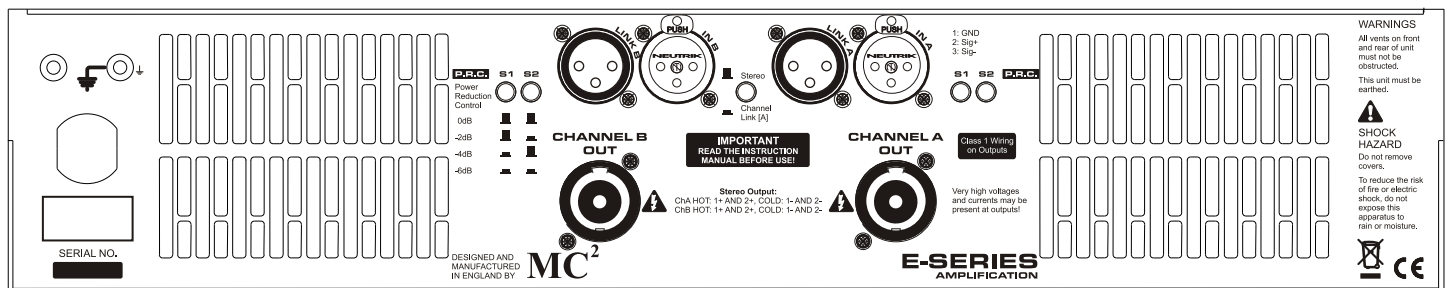
E90

Power Consumption & Thermal Emissions

Mains (V)	Load (R)	Current Draw (A)				Thermal Emissions (W)			
		No Sig'l	Light	Average	Heavy	No Sig'l	Light	Average	Heavy
240	8	1.3	2.2	3.6	7.2	312	338	381	492
240	4	1.3	2.9	5.6	12.1	312	362	445	642
240	2	1.3	4.2	8.7	18.0	312	402	539	822
120	8	2.6	4.3	7.1	14.4	312	338	381	492
120	4	2.6	5.9	11.3	24.2	312	362	445	642
120	2	2.6	8.5	17.4	35.9	312	402	539	822

No Sig'l = Quiescent, Light = Crest Factor of 7.8(18dB), Average = Crest Factor of 4.8(14dB), Heavy = Crest Factor of 2.8(9dB)
For details of measurement methods please refer to the Technical Support area of our website.

E90



Controls, Indicators & Connectors

- Front Panel:** 2 x Level Controls, 1 x Power Switch, 1 x Power LED (green),
2 x 5 point LED level indicators, 2 x PRC Active LEDs (green)
1 x Protection Active (red)
1 x Channel Link LED (green)
- Rear Panel:** 1 x Channel Link switch
2 x 2 PRC level selector switches
2 x Neutrik Speakon output connectors (4 pole)
2 x Neutrik XLR female connectors (audio input)
2 x Neutrik XLR male connectors (audio link output)
Captive mains cable

E90

Architect's and Engineer's Specification

The power amplifier shall be a 2 channel Class D design with a minimum guaranteed power of 2500W into 8R (20Hz to 20kHz). THD shall be better than 0.5% (20Hz to 20kHz) and the signal to noise ratio shall exceed 105dB (wtd). The minimum load shall be 2R, and 4R in bridge mode. Input sensitivity shall be +6.0dBu for full power output. Frequency response shall be 20Hz to 20kHz (± 1.0 dB). The front panel shall have individual input level controls with a 5 point LED meter showing output level and onset of limiting and power reduction. A front panel non-isolating main power switch shall be fitted.

The rear panel shall have outputs on Neutrik Speakon connectors, with both connectors being wired to use pairs of conductors to improve current carrying capability (4 pole). The audio inputs shall be on Neutrik 3 pole female XLR connectors, with Neutrik 3 pole male XLR connectors for link outputs. Individual switching of each channel's PRC (Power Reduction Circuit) will be available on a pair of switches giving 2/4/6dB of power reduction. Input channels shall be linkable using the rear panel link switch, with corresponding indication on the front panel.

The amplifier shall be 2U, 19" rackmount in format with dimensions of 8.8cm X 48cm X 43cm and a weight of 11.8kg. AC mains supply shall be nominal 240V/120V, 50/60Hz. The amplifier shall be designated the MC² E90.