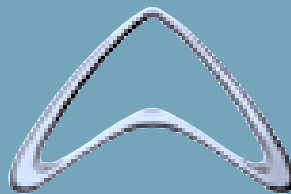


# R SERIES MIXERS



R - 200  
R - 1604  
R - 2004



Wharfedale  
Pro

# THE R SERIES MIXERS

The R Series of mixers from Wharfedale Professional are designed to offer a superior quality audio performance in an easy to use, great value package. The quality of the R Series is such it can be used in a variety of professional applications such as studio, sound reinforcement, field recording and film/video production. Mic and line inputs are provided on balanced XLR and jack connectors for optimum performance with the main stereo outputs on balanced XLRs for better integration with other professional equipment.

## R1604 / R2004 Features:

- 4 balanced/unbalanced mono line input (R1604)
- 8 balanced/unbalanced mono line input (R2004)
- 4 low noise, high headroom XLR mic inputs
- 4 pairs of balanced/unbalanced mono line inputs
- 48V global phantom power
- 3 band EQ in each input channel (12KHz, 2.5KHz, 80Hz)
- 75Hz, 18dB/octave low cut filter on channels 1-4
- PFL/SOLO and Mute/ALT 3-4 on all channels
- ALT 3-4 extra stereo bus
- 2 stereo EFX return
- EFX to Main, ALT 3-4 and AUX 1 switch
- Balanced inputs and outputs
- Peak and signal LED's on mono channel
- Two AUX send, Pre and Post fader switch on AUX 1
- Separate main mix, control room and headphone outputs
- 2 track inputs assignable to main mix, control room/headphone outputs
- Highly accurate 10 segment Bargraph meters
- High quality 60mm faders
- 19" Rack Mounting kit included.

## R200 Features:

- 4 balanced/unbalanced mono line inputs
- 4 low noise, high headroom XLR mic inputs
- 2 pairs of balanced/unbalanced mono line input
- 48V phantom power
- 3 band EQ in each input channel (12KHz, 2.5KHz, 80Hz)
- 75Hz, 18dB/octave low cut filter on channels 1-4
- EFX to Main and Control room switch
- Peak LED's on mono channel
- One aux send and one effect send
- Separate main mix, control room and headphone outputs
- 2 track inputs assignable to main mix, control room/headphone outputs
- Highly accurate 10 segment bargraph meters
- High quality 60mm fader on master output
- 19" Rack Mounting kit included

R-2004



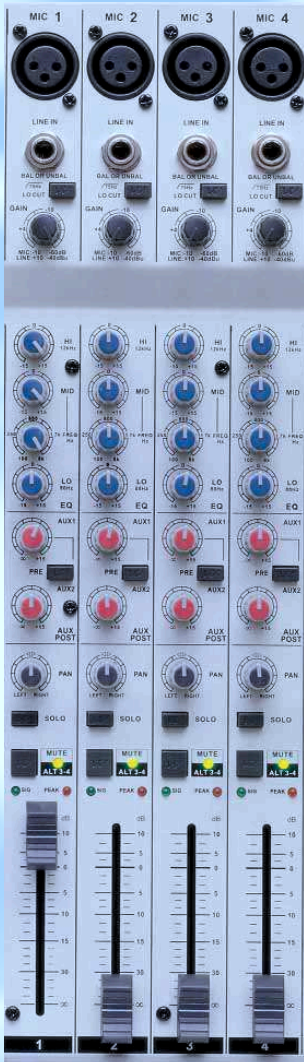
R-1604



R-200



# Mono & Stereo Input Channels R1604/R2004



## Mono Input Channel R2004

The R1604 features 4 and the R2004 features 8 low noise, high headroom low impedance mic inputs for use with balanced or low impedance microphones or external equipment with XLR connectors. The R1604 has four balanced/unbalanced high impedance mono line inputs for use with high level signals with phoe plug connectors. The R2004 has eight line inputs. By pressing the Low Cut Filter button it is possible to reduce background rumble, for example on a vocal track. The input level on the mic channels is controlled by the Gain Control, maximising the signal to noise ratio. The Peak LED will illuminate if the input gain is too high. When the SOLO button is pressed, the channel input is shown on the bargraph meters. Each input channel features HI, MID and LOW EQ. The EQ section should be used with the Low Cut Filter to add extra warmth or punch to the mix. The two AUX sends are mono and Post EQ. Pressing the Pre button will dictate whether AUX1 is sent Pre or Post Fader. AUX1 is set to Pre Fader for cueing purposes. AUX2 is set to Post Fader allowing elimination of any audible reverb when the fader is pulled down. The Pan control adjusts the amount of signal sent to the left versus the right inputs. On the mono channels the controls act as true pots; Channel 1&3 pan left, Channel 2&4 pan right. The level to the main mix is controlled by the channel level faders with a range to +30dB.



## Stereo Input Channel R2004

The Stereo Input channels on the R1604 and R2004 feature two balanced line level inputs with 1/4" jack sockets for left and right signals. When the left input is connected only, then the channel operates in mono. The four stereo input channels are designed for use with any line level sources such as CD players and EFX units. The equalisation on the stereo input channels have the same parameters as the three band EQ on the mono channels but in stereo. The AUX sends are the same as for the mono channels.

There are two additional Stereo AUX returns on the R1604 and R2004. If you connect a jack only to the Left socket it will operate in mono. EFX return can be switched between the main mix and the cue feed by pressing the EFX to AUX button (see following page Master Section). AUX Send 1 is automatically assigned to the main mix. AUX Send 2 can be switched to ALT 3-4.

## R-2004 Rear panel



AC Input Power Switch Main XLR outputs ALT 3-4 inputs Main outputs

Channel Inserts

# THE MASTER SECTION



## Track In/Out:

The two track input section has phono jack inputs to enable easy connection to DAT tape devices and other audio equipment. This is used primarily for listening to mix playback from a tape for example. The Mix button allows you to audition the signal from the Main Mix. The 2K button routes the signal from 2 track playback. Similarly, the ALT 3-4 button when pressed to MIX will route the signal from the ALT 3-4 bus. The Level is determined by the 2TK level control faders which can be changed to control either ALT 3-4 to MIX or 2TK to MIX, depending on where the signal is routed.

## Monitoring:

There is a single headphones output, the signal from which follows the signal from the control room outputs. There is a single level control for both these outputs.

## ALT 3-4 Outputs:

When the MUTE button is pressed on a channel, the output of that channel will be routed to the ALT 3-4 output instead of the Main Mix.

## Metering:

The level of the Main Mix/Solo is displayed on these 10 segment bar graph meters. The 0 level should be illuminated most of the time, if the 6 or above is illuminated then you should reduce the main mix or the channel volume. The Master Section also features the Power On LED which when illuminated indicates that power is supplied to the unit. The +48 V DC LED illuminates when Phantom Power is present.



AC Input

Power Switch

Main XLR outputs

ALT 3-4 inputs

Main outputs

# R200 Features



## R200 Mono Input Channel:

The R200 features four low noise, high headroom Low Z mic inputs for use with balanced or low impedance microphones or low level external equipment with XLR connectors. The R200 features four balanced/unbalanced high impedance mono line inputs for use with high level signals with 1/4" phone plug connectors. The low cut filter can be activated by pressing this button. The slope of this filter is 18dB/oct -3dB at 75Hz and should be used when it is necessary to eliminate or reduce background rumble for example on a vocal track. The input level on the mic channels is controlled by using the Gain Control maximising the signal to noise ratio. The Gain control should be used in conjunction with the Peak LED which will illuminate if the input gain is too high.

Each mono input channel features a three band EQ section. The Hi EQ control has an upper shelf limit of 12kHz, the Mid EQ 2.5kHz and the Low EQ 80Hz. Each control has a range of -15dB to +15dB cut and boost, with a central point of '0' for OFF. The EQ control section should be used in conjunction with the Low Cut Filter to add extra warmth or extra punch to the mix where necessary. The AUX is set to Pre Fader (independent of the channel fader) on the R200 for cueing purposes. The EFX control is set to Post Fader which allows you eliminate any audible reverb which would appear when the fader is pulled down. The Pan control adjusts the amount of channel signal sent to the left versus the right inputs. On the mono channels the controls act as true Pan pots. Channels 1 and 3 pan left, Channels 2 and 4 pan right. The level to the main mix bus is controlled by the channel volume control with a range to +15dB.



## R200 Stereo Input Channel:

The R200 stereo channel features two balanced line level inputs with 1/4" jacks for left and right signals. When the left input is connected only, then the channel operates in mono.

The AUX Send and EFX Send operate in the same way as for the mono channel. There are two additional stereo line inputs (EFX returns 1 & 2) on the R200. If you connect a jack only to the Left socket it will operate in mono. EFX return can be switched between the main mix and the cue feed by pressing the button 'EFX to AUX'.

## Track In/Out

The two track input section has phono jack inputs to enable easy connection to DAT tape devices and other audio equipment. This is used primarily for listening to mix playback from a tape for example. Pressing the '2TK to MIX' button routes this signal to the main mix. Similarly, pressing the button '2TK to Phones Ctrl Room' will route the signal to the studio monitors. The Level is determined by the 2TK Level control.



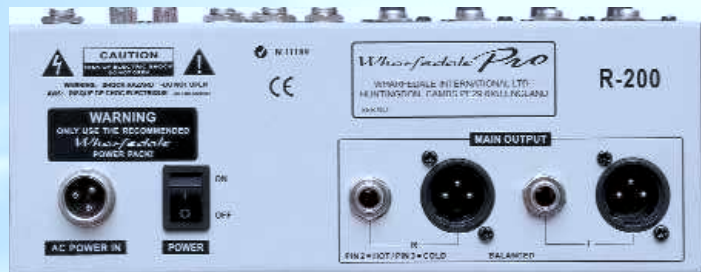
## R200: Master Section Metering

The level of the main mix is displayed on this LED section. The '0' level LED should be illuminated most of the time - if the '6' or 'CLIP' LEDs are illuminated then you should reduce the main mix or channel volume. This Power On LED is illuminated when power is supplied to the unit. The +48V DC LED is illuminated to indicate that phantom power is present. The Phantom Power is switched on and off by a sliding switch.

## Monitoring:

There is a single headphones output. The signal from this output follows the signal from the control room outputs. There is a single level control for both these outputs. The master fader controls the level of the master mix.

## R-200 Rear panel



AC Input

Power Switch

Main XLR outputs

&

Main outputs

# SPECIFICATIONS

MODEL	R1604	R200	R2004
<b>MAIN MIX NOISE</b>			
20Hz-20kHz bandwidth, 1/4" Main out, channels 1-4 Trim @ unity gain, channel EQs flat, all channels assigned to Main Mix, channels 1 and 3 pan left, 2 and 4 pan right	Main mix fader down, channel faders down: -100dBu Main mix fader unity, channel faders down: -90dBu Main mix fader @ unity, channel faders @ unity: -90dBu	Main mix fader down, channel faders down: -100dBu Main mix fader unity, channel faders down: -90dBu Main mix fader @ unity, channel faders @ unity: -90dBu	Main mix fader down, channel faders down: -100dBu Main mix fader unity, channel faders down: -90dBu Main mix fader @ unity, channel faders @ unity: -90dBu
<b>TOTAL HARMONIC DISTORTION (THD)</b>			
1KHz @ +14dBu, 20Hz-20kHz	Mic into main out: 0.0025%	Mic in to Main out: 0.0025%	Mic in to Main out: 0.0025%
<b>ATTENUATION (CROSSTALK)</b>			
kHz relative to 0dBu, 20Hz-20kHz bandwidth, line in, 1/4" Main out, Trim @ unity	Main fader down: -85dBu Channel Alt/Mute switch engaged: -80dBu Channel fader down: -70dBu	Main fader down: -85dBu Channel Alt/Mute switch engaged: -80dBu Channel VR minimum: -70dBu	Main fader down: -85dBu Channel VR minimum: -70dBu
<b>FREQUENCY RESPONSE</b>			
Mic input to any output	20Hz-20kHz: +0dB/-1dB 10Hz-60kHz: +3dB/-3dB	20Hz-20kHz: +0dB/-1dB 10Hz-60kHz: +3dB/-3dB	20Hz-20kHz: +0dB/-1dB 10Hz-60kHz: +3dB/-3dB
<b>MAXIMUM LEVELS</b>			
	Mic in: +13dBu Tape in: +13dBu All other inputs: +25dBu Main Mix XLR out: +22dBu All other outputs: +22dBu	Mic in: +13dBu Tape in: +13dBu All other inputs: +25dBu Main Mix XLR out: +22dBu All other outputs: +22dBu	Mic in: +13dBu Tape in: +13dBu All other inputs: +25dBu Main Mix XLR out: +22dBu All other outputs: +22dBu
<b>IMPEDANCES</b>			
	Mic in: 3 kilohms Channel insert return: 20 kilohms All other inputs: 10 kilohms or greater Tape out: 10 kilohms All other outputs: 100 ohms	Mic in: 3 kilohms Channel insert return: 20 kilohms All other inputs: 10 kilohms or greater Tape out: 10 kilohms All other outputs: 100 ohms	Mic in: 3 kilohms Channel insert return: 20 kilohms All other inputs: 10 kilohms or greater Tape out: 10 kilohms All other outputs: 100 ohms
<b>EQ</b>			
	High shelving: +/-15db @ 12kHz Mid peaking: +/-15db @ 2.5kHz Low shelving: +/-15db @ 80Hz	High shelving: +/-15db @ 12kHz Mid peaking: +/-15db @ 2.5kHz Low shelving: +/-15db @ 80Hz	High shelving: +/-15db @ 12kHz Mid peaking: +/-15db @ 2.5kHz Low shelving: +/-15db @ 80Hz
<b>EQUIVALENT INPUT NOISE (EIN)</b> (20Hz-22kHz)	150 ohm: -129dBm unweighted	150 ohm: -129dBm unweighted	150 ohm: -129dBm unweighted
<b>POWER CONSUMPTION</b>			
	18 watts EUROPE: 230VAC-50Hz JAPAN: 100VAC-60Hz UK: 240VAC-50Hz USA: 115VAC-60Hz	15 watts EUROPE: 230VAC-50Hz JAPAN: 100VAC-60Hz UK: 240VAC-50Hz USA: 115VAC-60Hz	25 watts EUROPE: 230VAC-50Hz JAPAN: 100VAC-60Hz UK: 240VAC-50Hz USA: 115VAC-60Hz
<b>FUSE RATING</b>	90V-250V: 300 mA, 5 x 20mm	90V-250V: 300 mA, 5 x 20mm	300 mA, 5 x 20mm
<b>SIZE mm (H x W x L)</b>	80.3 x 416 x 431	80.3 x 30 x 379	80.3 x 225 x 280
<b>WEIGHT</b>	7.3Kg	5.9Kg	4.4Kg

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