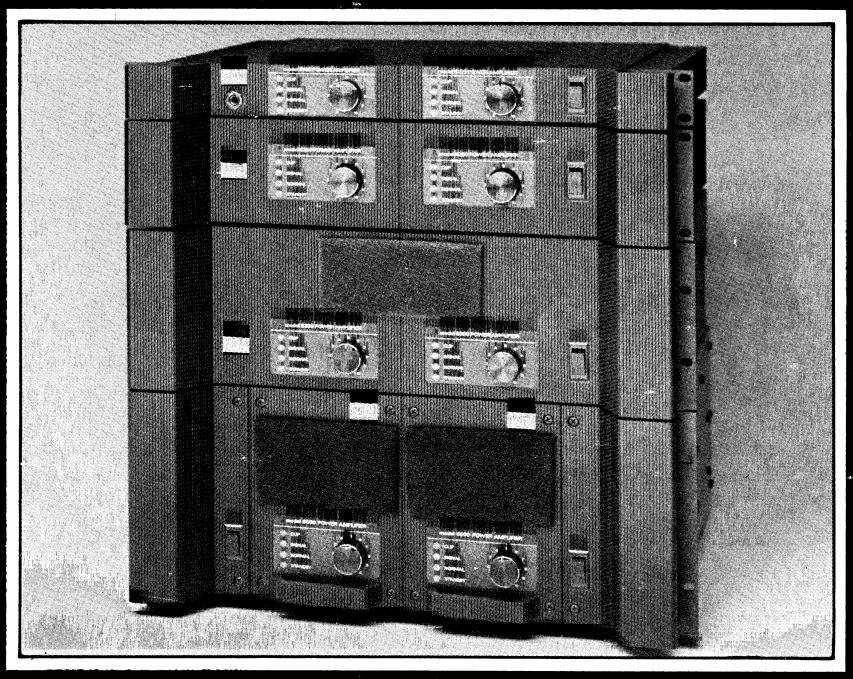
6150, 6250, 6300, 6500 POWER AMPLIFIERS



FEATURES:

Active, balanced input circuitry.

Fully complementary output sections.

Standby mode/speaker disconnect protection.

Inputs are balanced bridging XL-type and 6.3 mm (¼ in) phone jacks (may be operated balanced and unbalanced).

Outputs are heavy duty five-way binding posts. A separate back panel bridge switch is provided for convenient high power mono operation.

Designed for the needs of today's demanding world of professional sound, the UREI power amplifiers are rugged, reliable and conservatively rated. From 80 watts/channel to 275 watts/channel (into 8 ohms), the UREI amplifiers will deliver superb sound in the auditorium, arena and control room.

Each of the UREI amplifiers is designed with the same philosophy. Instead of the common "fix it with feedback" amplifier design approach, UREI engineers have developed an amplifier topology with relatively low loop gain which is highly linear without feedback. Only a small amount of overall negative feedback is used to set the gain and establish the operating point. Frequency compensation in the feedback path and input filtering are calculated to provide an open-loop bandwidth only five

times the closed-loop bandwidth. Intra-loop signal overshoots are suppressed, so that problems of transient intermodulation and slew-rate distortion are eliminated.

Most two-channel amplifiers use a common power supply for both channels. The UREI 6250 and 6300 power amplifiers have split power supplies with separate energy storage capacitors to provide better low frequency transient handling and less crosstalk than conventional single-supply designs.

The UREI 6500 has two totally independent power supplies, each with its own massive transformer and energy storage.

Each UREI power amplifier uses multiple 200 watt output transistors in a full complementary configuration for low distortion and high reliability. The rated power of each amplifier at 8 ohms is typically less than 25% of the output devices' dissipation capacity, thus insuring consistently reliable performance under extreme conditions.

All UREI amplifiers are fully protected against short circuits and open circuits, and can handle highly reactive loads with no difficulty. Relay protection guards the loudspeakers from abnormal low frequency transients, power surges or DC offset. A *Standby* indicator LED on the front panel lights when this protection is activated as well as during power-up and power-down muting. Additional front panel LED indicators denote *Normal* operating conditions, *Signal* presence, and *Clip* levels.

Each UREI power amplifier may be easily operated in bridged monaural mode for even higher power in a small space. Bridging is activated by a switch on the rear panel to avoid accidental operation and no internal modifications are required.

All UREI amplifiers have active differential input circuits which offer the noise rejection of input transformers without attendant transformer problems. Each input has two separate connectors: a three conductor 6.3 mm (¼ in) jack which automatically grounds one side of the differential input if a two conductor plug is used, and a three pin XL-type jack.

Speaker outputs are heavy-duty five-way binding posts, spaced 19 mm (¾ in) apart, so that bridged as well as standard connections may be made with standard twin banana plugs, bare wire or terminal lugs.

The Model 6500 features UREI's patented Conductor Compensation, which effectively eliminates the problems originating in loudspeaker wiring by including the speaker leads in the main feedback loop of the amplifier. The result is extremely high damping factor and outstanding transient response at the loudspeaker terminals, not just at the amplifier output.

Conductor Compensation is licensed exclusively to UREI by W. Turner, U.S. Patent #4,236,118.

UREI amplifiers are built for the rigors of touring sound systems. Their solid heat sinks, rigid chassis construction and massive mounting extrusions will keep them operating under the extreme conditions inevitably found in portable reinforcement.

The Model 6500 has two separate amplifier modules, each of which plugs in from the front of the amplifier chassis. In case of field problems, an amplifier module may be exchanged in less than one minute, using only a Phillips-type srewdriver, without removing the amplifier from the rack or even turning off the other channel.

Models 6500 and 6300 are fan cooled, and foam filters are provided on the front panels to keep dust and dirt from interfering with amplifier cooling. Model 6500 has two separate continuously variable speed fans, one for each channel.

SPECIFICATIONS COMMON TO ALL MODELS

Input:	Balanced bridging differential amplifier.
Input Impedance:	40k ohms, used as balanced input. 20k ohms, used as unbalanced (single ended) input.
Input Sensitivity:	1.1 V for maximum output into 8 ohm load.
Maximum Input Level:	+20 dB (7.75 V rms).
Voltage Gain:	Variable: max. 32 dB (40 times).
Hum and Noise Level:	-100 dB below rated output (15.7 kHz noise bandwidth).
Frequency Response:	+0, -1 dB; 20 Hz to 20 kHz, at any power level up to rated output.
Rise Time:	Less than 7 μs.
Slew Rate:	50 V/μs (into 8 ohm load).
Intermodulation Distortion:	Less than 0.05% total, 250 milliwatts + rated output (60 Hz and 7 kHz, 4:1 ratio).
Channel Separation:	>60 dB (input shorted).
Damping Factor:	With 8 ohm load, greater than 200 at any frequency from 20 Hz to 1 kHz, greater than 70 @ 20 kHz.
Power Requirements:	100/120/200/220/240 VAC (strappable), 50/60 Hz.

MODEL	6150	6250	6300	6500	
OUTPUT POWER, 20 Hz-20 kHz, PER CHANNEL*:					
8 ohm stereo	80 W	150 W	225 W	275 W	(<0.1% THD)
4 ohm stereo	80 W	200 W	380 W	450 W	(<0.2% THD)
2 ohm stereo	NA	NA	NA	600 W	(<0.5% THD)
8 ohm bridged	150 W	400 W	750 W	900 W	(<0.2% THD)
4 ohm bridged	NA	NA	NA	1200 W	(<0.5% THD)
OUTPUT POWER AT CLIPPING**					
8 ohm stereo	100 W	175 W	310 W	360 W	
4 ohm stereo	110 W	270 W	500 W	580 W	
2 ohm stereo	NA	NA	NA	800 W	
8 ohm bridged	220 W	540 W	1000 W	1160 W	
4 ohm bridged	NA	NA	NA	1600 W	
DIMENSIONS	44 × 483 mm (1¾ × 19 in)	89 × 483 mm (3½ × 19 in)	133 × 483 mm (5¼ × 19 in)	178 × 483 mm (7 × 19 in)	
DEPTH behind front panel	356 mm (14 in)	356 mm (14 in)	356 mm (14 in)	406 mm (16 in)	
NET WEIGHT	10 kg (22 lb)	16.3 kg (36 lb)	23.6 kg (52 lb)	38.1 kg (84 lb)	
SHIPPING WEIGHT	11.8 kg (26 lb)	17.7 kg (39 lb)	27.2 kg (60 lb)	43.1 kg (95 lb)	

Connections:	Input through XLR/QG and 1/4" phone jack. Output through 5-way binding posts. Conductor Compensation feedback through BNC connector. Power through 3-wire AC power cord.
Controls:	Front panel level controls Front panel mains switches Rear-panel MONO/STEREO switch
Indicators:	"NORMAL" (green LED) = normal, linear operation. "SIGNAL" (green LED) = indicating that signal is present at output terminals. "CLIP" (red LED) = clipping or nonlinear operation. "STANDBY" (red LED) = speakers automatically disconnected or thermal protection activated.
Finish:	Panel is 4.76 mm (3/16 in) black anodized aluminum. Chassis is matte black painted steel.

* Minimum continuous sine wave average power output per channel over a power bandwidth from 20 Hz to 20 kHz. Maximum total harmonic distortion measured at any power level from 250 milliwatts to rated power.

**Output power measured at typical clipping point (1% THD); both channels driven with 1kHz continuous sine wave.