



35 Watt Power Amplifier



ULTRA HIGH EFFICIENCY

MADE IN U.S.A.

- One input with front-panel volume control
- Bass and Treble tone controls
- Designed as a single zone amplifier
- Master volume VCA controlled with remote adjustment capability
- Amplifier output on detachable terminal block
- Unbalanced summing inputs on RCA jacks
- Includes power supply
- Automatic sleep mode meets strictest energy saving standards



HD-PA35U
4 Ω / 8 Ω



HD-PA35UA
25 V, 70 V, 100 V



The HD-PA35U is a single input audio amplifier for systems demanding the highest energy efficiency. It may be used as a single zone amplifier fed from a variety of RDL or OEM mixers. It is ideal for providing one or more additional zones to a mix originating from another RDL HD series mixer amplifier. The 35 W power amplifier output is driven from a high-efficiency Class D amplifier stage. The amplifier normally shuts down (standby "sleep" mode) when audio is absent and automatically turns on when needed. The amplifier output level may be VCA controlled using various optional RDL remote controls, or by industry standard 0 to 10 Vdc or 0 to 10 k Ω controls. The output drives 4 Ω or 8 Ω speakers. The output impedance is switch-selectable on the rear panel. The HD-PA35UA has all the features of the HD-PA35U except its 35 W amplifier provides a constant voltage output (25 V, 70 V or 100 V) instead of a low impedance speaker output.

The HD-PA35U is engineered, tested and manufactured in the U.S.A. to strict energy conservation standards. The unit consumes less than 1W of mains power in standby mode, and meets power amplifier efficiency specifications with an analog-filtered Class-D digital output stage.

The HD-PA35U provides a front-panel control to set the input gain. An optional remote control connected to the rear-panel RJ45 jack provides for remote adjustment of the output level. The tone controls adjust the equalization at the amplifier output.

The presence of a signal at the input causes the HD-PA35U to fully turn on, activating the power amplifier and all associated equalization and compressor circuitry. When an input signal is absent, a delay timer is initiated. Rear-panel DIP switches are provided to set the power-down delay timer to a value between 10 minutes and 2 hours in 10 minute increments. After the time-out period, the HD-PA35U enters the sleep mode until an input signal is received. The switches may be set to disable the sleep mode for systems specifying continuous amplifier operation.

The amplifier includes an analog compressor/limiter for audio fidelity noticeably superior to conventional class D amplifiers with digital limiting. Increasing the input gain can substantially increase the average output power beyond that of a standard 35 W amplifier. A red front-panel LED flashes when the compressor is preventing output clipping. Normal audio level signals remain unaffected by the compressor thereby preserving audio dynamics. The audio is compressed according to three dynamic time constants providing aural transparency while maintaining clean, unclipped amplified audio for input overloads of up to 20 dB. The HD-PA35U, with compression, is capable of producing average audio output levels and clarity normally expected from amplifiers with a much higher output power rating.

During power-up and power-down, the amplifier output is protected against clicks, pops and thumping by internal soft-start solid-state switches.

A blue POWER LED illuminates when the HD-PA35U is powered from its external 24 Vdc power supply (included). The power LED is dim when the amplifier is in the standby mode, and is bright when the amplifier is fully active. A front-panel pushbutton is provided to manually cycle between standby and active modes. The power amplifier is equipped with both thermal and output short-circuit protection. The high-efficiency Class D output stage produces minimal heat for all levels of expected voice or music modulation.

HD-PA35U & HD-PA35UA

Audio Power Amplifiers

HD-PA35U: Low Impedance Output 4 or 8 Ω HD-PA35UA: Constant Voltage Output 25 V, 70 V or 100 V



LEVEL CONTROL
Adjusts the level for the 35 W amplifier output.

TONE CONTROLS
User controls adjust bass and/or treble boost or cut.



RDL REMOTE CONTROLS
Multiple RDL remote controls are available to allow user adjustment of master output level. Remote controls sold separately.

SIGNAL PRESENT INDICATOR
The LED glows if an audio signal is present at the input. The LED is not affected by the level control.

COMPRESSION LED
LED flashes when audio compressor is acting on the amplified audio.

POWER BUTTON
Momentary pushbutton toggles the amplifier between ON and STANDBY.

POWER INDICATOR
Glow dimly when the amplifier is powered and is in standby (sleep) mode; glows bright when amplifier is on; flashes during power-up.

- Audio Amplifier with ECO Standby/Sleep Mode
- Automatic Power-Up and Standby "Sleep Mode" Power-Down
- Programmable Sleep Mode Delay with Selectable Bypass
- Amplifier Output: 35 W RMS
- Output Impedance Switch-Selectable 4 Ω or 8 Ω (HD-PA35U)
- Constant Voltage Outputs 25 V, 70 V, 100 V (HD-PA35UA)
- Unbalanced Stereo-Summing Line Inputs
- Front-Panel Tone Controls

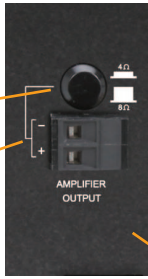
- Amplifier Output on Detachable Terminal Block
- Master VCA Control on RJ45 Jack
- Compatible with RDL Remote Level Controls
- Aurally Transparent Compressor Controls Clipping
- Compressor Maximizes Average Output Power and Level
- Audio Compression Threshold LED
- High-Efficiency Class D Operation
- Thermal and Short-Circuit Protection

OUTPUT IMPEDANCE

Set output impedance to match a 4 Ω or 8 Ω load.

AMPLIFIER OUTPUT

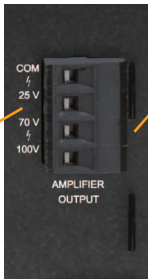
35 Watt 4 Ω or 8 Ω amplified output.



OUTPUT DETAIL HD-PA35U

AMPLIFIER OUTPUT

35 Watt 25 V, 70 V or 100 V amplified output.



OUTPUT DETAIL HD-PA35UA

SECURITY COVER

Slides over the wired constant voltage terminal block to prevent accidental contact. Secured by tightening a single screw.

WIRE ACCESS

Wires enter through the bottom of the cover.



24 VDC POWER INPUT

Insert plug from the included power supply. Rotate 1/4 turn clockwise to lock.

MASTER VCA REMOTE CONTROL

Connect an RDL wall-mounted remote control to adjust the 35 W output master level.



LINE INPUT

Connect any unbalanced audio source. Connect this input from the LINE OUT of an RDL HD-MA35 or HD-RA35 type mixer-amplifier to use this amplifier as an additional zone. Actively sums stereo sources.

NOTE

Connect the input from the PREAMP OUT of an RDL HD-MA** or HD-RA** type mixer-amplifier to use this amplifier to drive additional speakers while using the master VCA control connected to the HD-MA** or HD-RA** type mixer-amplifier to also control the level of this amplifier. In this case, do not connect a remote master VCA control to this amplifier. **denotes multiple models

SLEEP DELAY TIMER

Switch positions set the time duration the product remains fully active after audio is absent at all inputs. Adjustment is in 10 minute intervals from 10 minutes to 2 hours. Disable sleep mode by setting all four switches ON.



HD-RA2 Rack Adapter

Mounts 2 HD series products. Mixer amplifiers may be mounted forward for user control, or may be recessed securely behind a filler panel.



Amplifier mounted in HD-RA2



HD-BP1 BACK-PACK Rear Cover

Mounts to an HD series mixer / amplifier to prevent user access to the rear panel. The back-pack holds the power supply and provides a completely closed back for the installed amplifier.

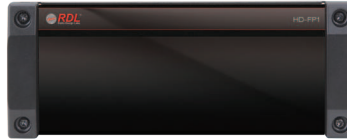


Inside View with Power Supply



BACK-PACK Installed on Mixer Amplifier

Rear View



HD-FP1 Filler Panel

Fills an unused half of rack adapter or mounts in front of an HD series product to prevent user adjustment or tampering.



Amplifier mounted behind HD-FP1



HD-FP2L Filler Panel with Lens

Mounts in front of an HD series product to allow viewing while preventing user adjustment or tampering. Lens is removable during setup.



Amplifier mounted behind HD-FP2L



HD-ASC1 Amplifier Security Cover

Mounts to an HD series mixer / amplifier to prevent user adjustment or tampering. The power button and associated indicators remain accessible with the HD-ASC1 installed.



HD-ASC1 mounted to an amplifier

TYPICAL PERFORMANCE

Rated Power:	35 W RMS
Audio Input:	Unbalanced stereo summing input on RCA jacks
Maximum Input Level:	+ 5 dBV (+11 dBV, one input); (for 1% THD+N at output)
Input level:	-15 dBV (180 mV, to cross compressor threshold equaling 23 W amplified output, both input jacks driven)
Noise:	< -75 dB (max gain)
THD+N:	< 0.5% (1 kHz at compressor threshold)
Compressor:	Threshold 2 dB below rated output, automatically adjusting attack and release times
Frequency Response:	Constant voltage: +/- 3 dB (50 Hz to 18 kHz); 4/8 Ohm: +/- 1 dB (50 Hz to 20 kHz)
Tone Controls:	±10 dB @ 10 kHz, ±9 dB @ 100 Hz (front-panel) with center detent
Power Amplifier Output:	HD-PA35U: 35 W RMS (4 Ohms), 32 W (8 Ohms) on detachable terminal block (switch-selectable 4 or 8 Ohm impedance); HD-PA35UA: 35 W RMS (25, 70 or 100 V); <1% THD+N
Indicators (3):	Front-panel: Signal present (green), Compressor activity (red), Power (bright=on, dim=standby, blue)
VCA:	Output level, 0 to 10 Vdc control, RJ45 (compatible with RDL VCA wall controls)
Front-panel controls (4):	Input, EQ (2, bass and treble), Power (momentary pushbutton, toggle on/standby)
Rear-panel controls (4):	Sleep (standby) mode delay (4 binary switches)
Efficiency Standard Used:	"Energy Star® Program Requirements for Audio/Video" Version 2.0
Sleep Mode Power Consumption:	< 1 W (amplifier and included power supply)
Sleep Mode Delay:	10 minutes to 2 hours (switch-selectable in 10 minute increments)
Sleep Mode Disable:	Selectable
Active Mode Delay:	2 seconds (nominal) after input audio detected
Audio Detector Threshold:	-42 dBV
Ambient Operating Environment:	0° C to 50° C Maximum; 20° C Recommended
Power Supply (included):	100 to 240 Vac, 50-60 Hz, 50 W; 24 Vdc output to amplifier chassis
EMC:	CE
Dimensions and Weight:	Height: 3.5 in.(8.89 cm); Width: 8.5 in.(21.6 cm); Depth: 10 in.(25.4 cm); Weight: 5.6 lb.(2.5 kg) (HD-PA35U), 7.3 lb.(3.3 kg) (HD-PA35UA)