

Technics SU-8044

Stereo Integrated DC Amplifier



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Technics presents an amp which, while not the absolute highest in power, has plenty of punch especially for the majority of people who listen to music at less than full power from their amps anyway. And we haven't neglected waveform fidelity, which means that this amp will amplify the input signal while adding or subtracting little or nothing from the waveforms of the original music. So you'll get distortion-free amplification over a wide and flat frequency range. Plus these great operating conveniences: FL meters to replace conventional output meters, a versatile recording selector, a stable, rugged power supply and advanced NF-type tone controls. The list of features and specs will give you the facts and figures. But the real test of this amp is in the listening. And we invite you to make that test yourself.

DC Power Amplifier Helps Preserve Waveform Fidelity

Waveform fidelity has been greatly enhanced in Technics' SU-8044 by the elimination of coupling capacitors not only in the signal path but also in the NFB loop.

The lack of something is often a defect. But here the absence of capacitors means gain all the way down to 0 Hz and phase linearity in the bass frequencies. The result, in this DC power amplifier, is waveform fidelity—the accurate reproduction of musical waveforms.

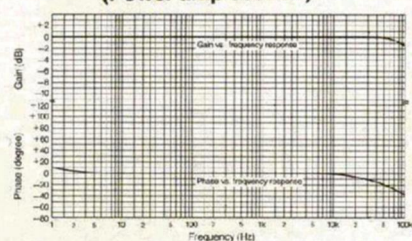
Advanced Circuitry Delivers 38W+38W (both channels driven into 8 ohms, 20 Hz to 20 kHz, 0.02% total harmonic distortion)

The SU-8044 offers plenty of power for dynamic sound, and superior waveform fidelity. Here are some of the circuit features that make it possible:

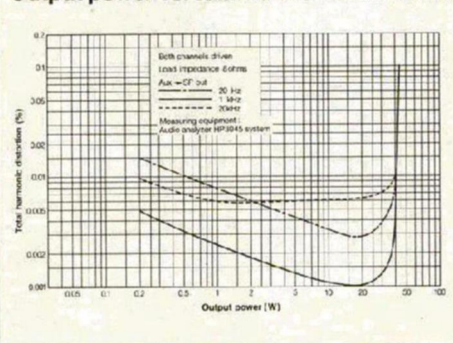
a single-packaged, low-noise dual transistor is used in the differential amplifier first stage for low noise and precise thermal tracking. Current-mirror loading provides high open loop gain, without increasing the level of noise. This output, assisted by the emitter follower, drives the voltage amplification stage (Class A) with



Gain, phase, vs. frequency response (Power amp section)



Output power vs. total harmonic distortion

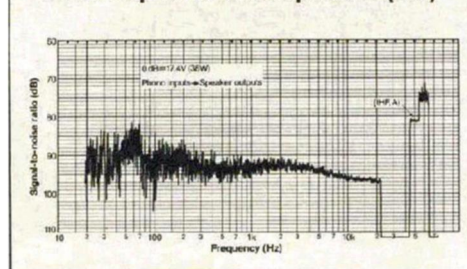


minimal distortion especially in the high frequency range. A 2-stage Darlington connection is used in the power stage, all adding up to plenty of power and insignificant distortion.

Super Quiet Phono Equalizer

The SU-8044 has an unbelievably high signal-to-noise ratio of 80 dB (at 2.5 mV sens., IHF A) when using an MM type cartridge, a spec rarely found in this amp's price class. It means that noise won't interfere with your enjoyment of records, even during very soft passages. There is a 3-stage direct coupling MM phono equalizer section with direct coupling of the PNP-NPN transistors, plus a PNP transistor in the emitter-follower. A few of the reasons for low distortion and high gain are the separation of DC and AC in the negative feedback loop of the equalizer, 100% DC feedback and the use of narrow tolerance components for negative feedback.

Phono equalizer noise spectrum (MM)

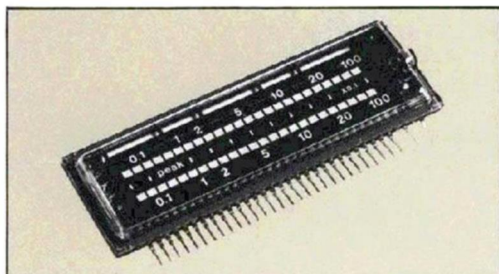


Treble & Bass Controls

An advanced operational IC is used for the negative feedback-type tone controls. Bass and treble can be easily boosted or attenuated to suit individual tastes without introducing distortion.

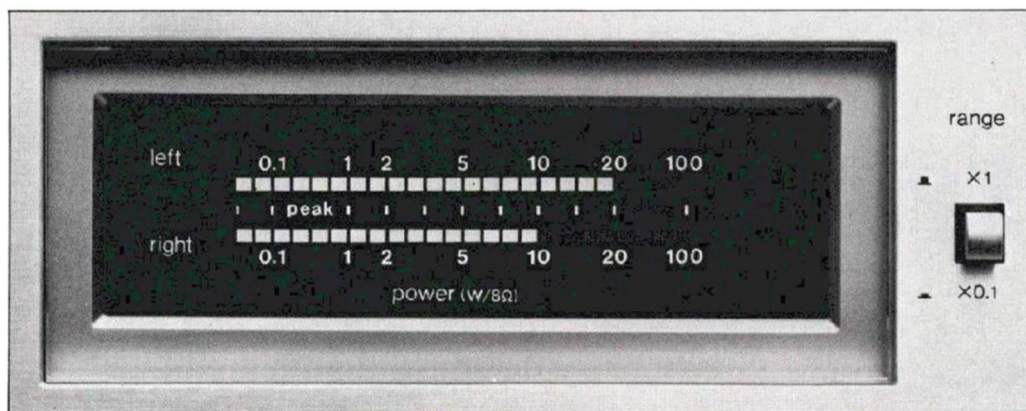
Accurate Peak-Power Indication

The easy-to-read FL (fluorescent) meters are an improvement over conventional peak power indicators because of their near-instantaneous response and superior accuracy. They can be switched between two ranges: 0.1 W—100 W, a range that is useful when metering for full peak power; 0.01 W—10 W, the range at which most listening is usually done.



Versatile Recording Selector

The SU-8044 has two tape positions on the input selector as well as on the recording selector in a logical and practical layout. With this complete separation, you can do such things as dub from tape to tape while listening to your favorite disc. Or tape from your tuner while listening to music on another tape.

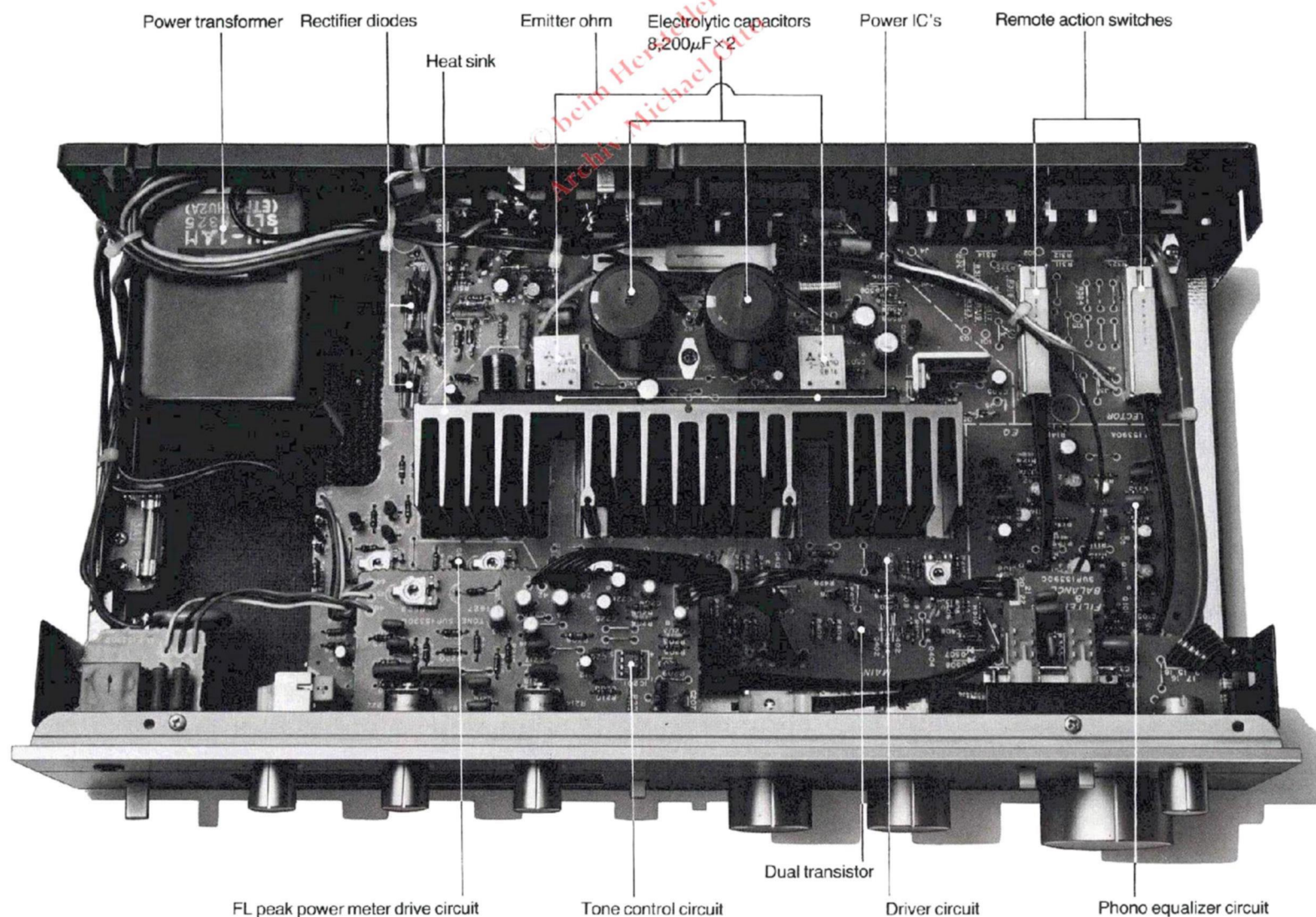


Rugged Stable Power Supply

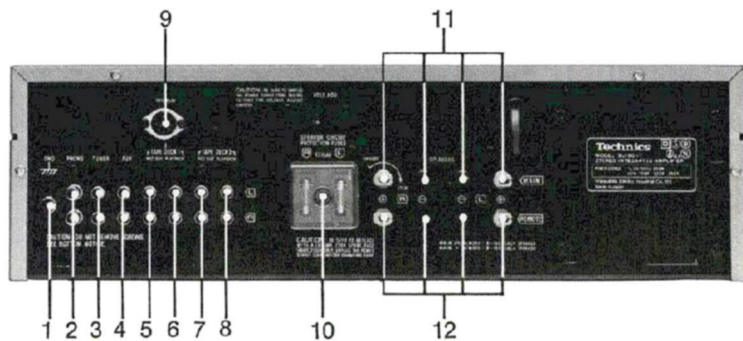
The power supply is designed to handle the sudden current demands of high energy musical transients without losing sound clarity or introducing transient crosstalk. This is done by using two large capacity 8,200 μ F electrolytic capacitors in the bridged, full-wave rectifier circuit and by employing a recently-developed transformer. It also supplies regulated voltage to the phono equalizer circuit. The transformer coils are floated in a special resin to absorb unwanted vibrations. Even at low volume levels you can enjoy your favorite music without being bothered by a noisy transformer.

Other Features

- Muting circuit eliminates shock noise when the power is turned on and off, providing added speaker protection.
- High filter to cut out high frequency noise such as record scratches and tape hiss.
- Loudness switch for use when listening at low volume levels. Lows and highs are boosted to make up for "deficiencies" in the way the human ear responds at low volume levels.
- Front-panel speaker selector lets you select either of two speaker systems (A or B) both or at once (A+B).



Rear Panel Facilities



1. Ground terminal
2. PHONO inputs
3. TUNER inputs
4. AUX inputs
5. TAPE DECK 1 Recording outputs
6. TAPE DECK 1 Playback inputs
7. TAPE DECK 2 Recording outputs
8. TAPE DECK 2 Playback inputs
9. REC/PLAY terminal (TAPE DECK 1)
10. Speaker/circuit protection fuses
11. Speaker terminals (main)
12. Speaker terminals (remote)



The ST-8044 FM/AM Stereo Tuner is just the right companion for your SU-8044. With the same clean, attractive styling and outstanding performance standards, it perfectly complements the SU-8044 Integrated DC Amplifier.

Technical Specifications (DIN 45 500)

AMPLIFIER SECTION

20 Hz~20 kHz continuous power output	
both channels driven	40W×2 (4Ω) 38W×2 (8Ω)
40 Hz~16 kHz continuous power output	
both channels driven	40W×2 (4Ω) 38W×2 (8Ω)
1 kHz continuous power output	
both channels driven	46W×2 (4Ω) 40W×2 (8Ω)
Total harmonic distortion	
rated power at 20 Hz~20 kHz	0.03% (4Ω) 0.02% (8Ω)
at 40 Hz~16 kHz	0.03% (4Ω) 0.02% (8Ω)
at 1 kHz	0.03% (4Ω) 0.02% (8Ω)
half power at 20 Hz~20 kHz	0.015% (8Ω)
at 1 kHz	0.008% (8Ω)
-26 dB power at 1 kHz	0.15% (4Ω)
50 mW power at 1 kHz	0.2% (4Ω)
Intermodulation distortion	
rated power at 250 Hz: 8 kHz=4:1, 4Ω	0.03%
rated power at 60 Hz: 7 kHz=4:1, SMPTE, 8Ω	0.02%

Power bandwidth both channels	
driven, -3 dB	5 Hz~30 kHz (4Ω) 5 Hz~50 kHz (8Ω)
Residual hum & noise	0.8 mV (0.6 mV, IHF A)
Damping factor	16 (4Ω), 32 (8Ω)
Headphones output level & impedance	400 mV/330Ω
Load impedance	
MAIN or REMOTE	4Ω~16Ω
MAIN and REMOTE	8Ω~16Ω
Input sensitivity & impedance	
PHONO	2.5 mV/47kΩ
TUNER, AUX	150 mV/47kΩ
TAPE 1, REC/PLAY	180 mV/33kΩ
TAPE 2	150 mV/33kΩ
Phono maximum input voltage	
at 1 kHz, RMS	150 mV
S/N	
rated power (4Ω)	
PHONO	73 dB (80 dB, IHF A)
TUNER, AUX, TAPE	86 dB (97 dB, IHF A)
-26 dB power (4Ω)	
PHONO	62 dB
TUNER, AUX, TAPE	63 dB
50 mW power (4Ω)	
PHONO	58 dB
TUNER, AUX, TAPE	60 dB

Frequency response	
PHONO	RIAA standard curve ±0.8 dB (30 Hz~15 kHz)
TUNER, AUX, TAPE	10 Hz~50 kHz (-1 dB) ±0.5 dB (20 Hz~20 kHz)
Tone controls	
BASS	50 Hz, +10 dB~-10 dB
TREBLE	20 kHz, +10 dB~-10 dB
High filter	7 kHz, -6 dB/oct
Loudness control (volume at -30 dB)	50 Hz, +9 dB
Output voltage & impedance	
REC OUT	150 mV
REC/PLAY	30 mV/82 kΩ
Channel balance	
AUX, 250 Hz~6300 Hz	±1 dB
Channel separation	
AUX, 1 kHz	58 dB

GENERAL	
Power consumption	400 W
Power supply	AC 110/120/220/240 V 50/60 Hz
Dimensions (W×H×D)	430×142×255 mm (16-15/16"×5-19/32"×10-1/32")
Weight	6.7 kg (14.8 lb)

Technics
Matsushita Electric