

Technics SU-8055

Stereo Integrated DC Amplifier



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The main function of an amplifier is to amplify the input signal without adding to or subtracting anything from the waveforms of the original music. In other often-heard words, the ideal amplifier should be a straight piece of wire that provides gain without phase shifts, transient and other types of distortion, over a wide frequency range. Technics sums all this up and calls it "waveform fidelity" and the SU-8055 is a good example of what we have done to make this kind of fidelity a reality. A glance at the specifications will show that what we say is not an idle boast. But we don't want you to just look. Listen to the SU-8055 and we're confident that you'll hear the qualities we're talking about.

DC Power Amplifier Helps Preserve Waveform Fidelity

Waveform fidelity has been greatly enhanced in Technics SU-8055 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 coupling 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.

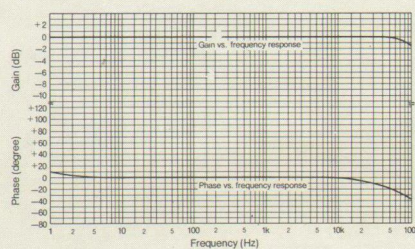
Big Power and Matching High Fidelity

This amp offers plenty of power even if your special interest is thundering popular music with a lot of bass. It delivers 47 W+47 W at 8 ohms from 20 Hz to 20 kHz with no more than 0.02% total harmonic distortion. Reasons for this high fidelity are many. 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

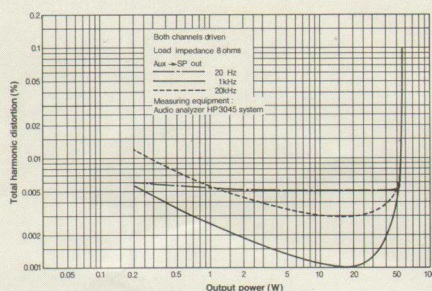
open loop gain without increasing the level of noise. This stage gets help from the emitter-follower, in driving the Class A voltage amplification stage. The end result is minimal distortion in the high frequency range. In addition, a 2-stage Darlington connection is used in the power stage, comprising a pure



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



Output power vs. total harmonic distortion

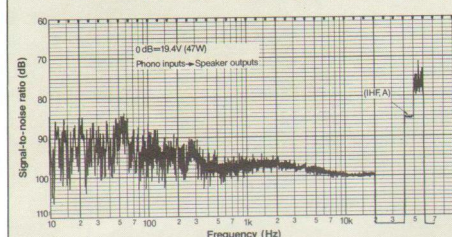


complementary circuit that provides high damping factor and low distortion.

Super Quiet Phono Equalizer

The SU-8055 has an unbelievably high signal-to-noise ratio of 85 dB (at 2.5 mV sens., IHF A) when using an MM type cartridge, something rarely found in this amplifier's price class. 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. Low-output MC cartridges, which are growing in popularity, can also be used without adding an extra pre-preamp (another rarity in a moderate-price amp). For the MC input, S/N ratio is 66 dB (at 170 μ V sens., IHF A). 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)

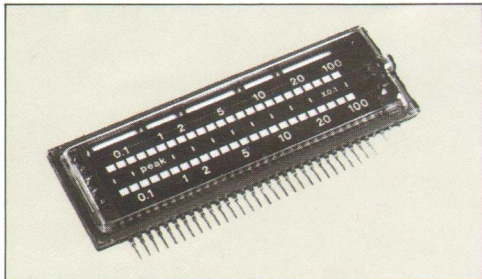


Treble & Bass Controls

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

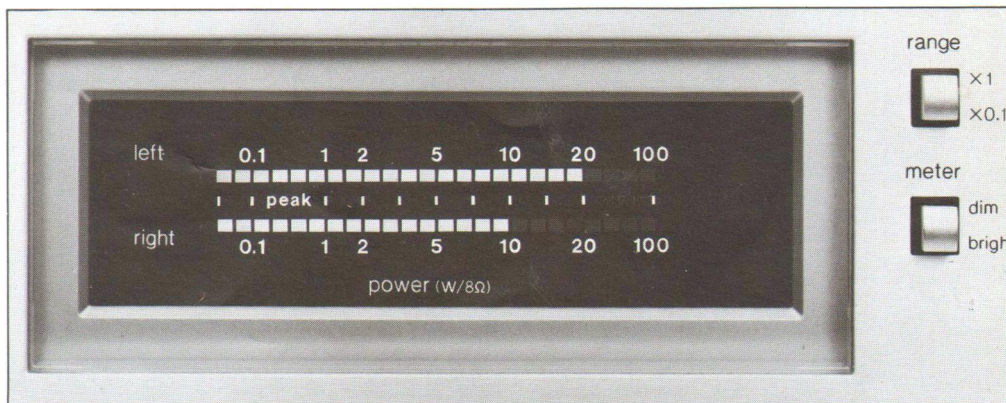
Accurate Peak Power Indicators

These easy-to-read FL (fluorescent) meters are used instead of conventional power output meters. They feature superior accuracy and near-instantaneous response time, and can be switched between two ranges: 0.1 W—100 W when you are metering for full peak power; 0.01 W—10 W when metering in the more usual listening range. Brightness of the meters is switchable between bright and dim.



Versatile Recording Selector

The SU-8055 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.

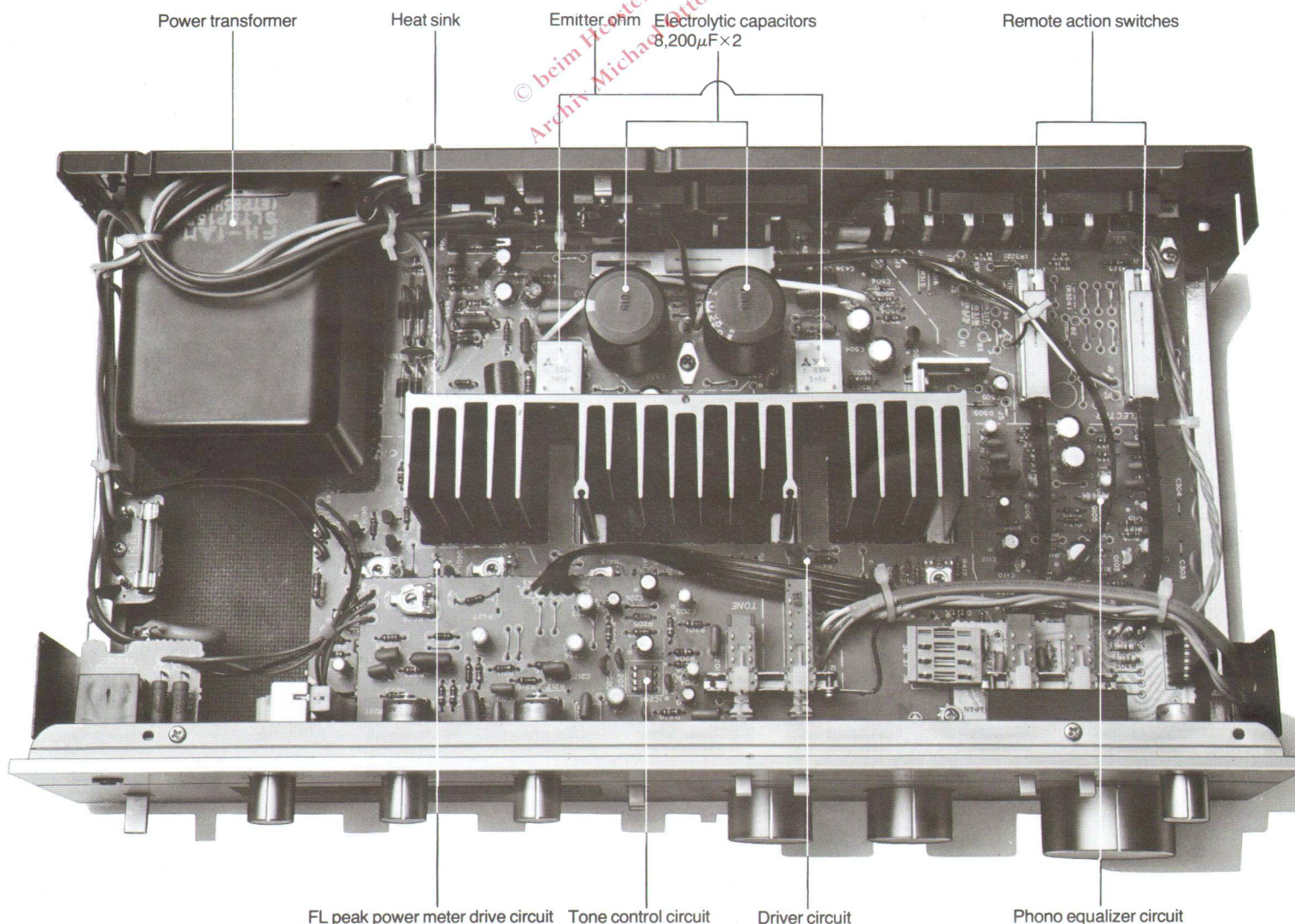


Rugged Stable Power Supply

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 soft volume levels you can enjoy your favorite music without being bothered by a noisy transformer.

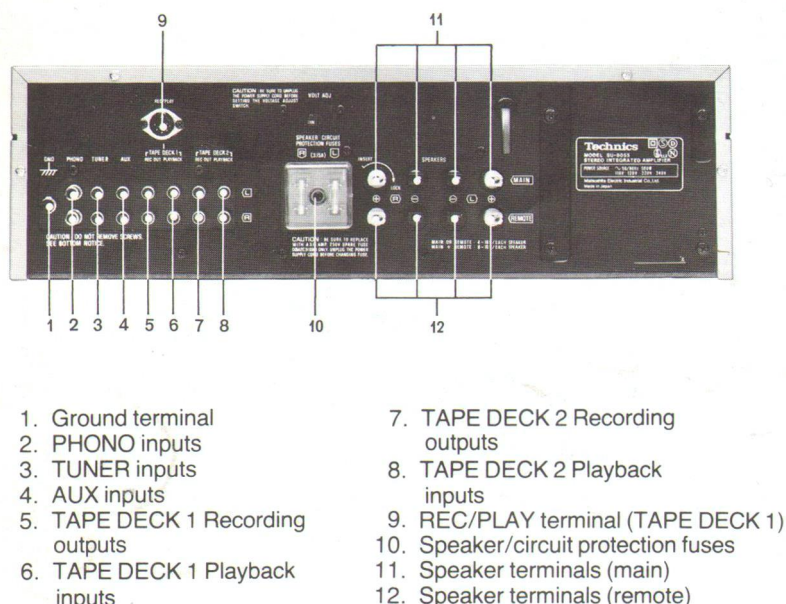
Other Features

- 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. Subsonic filter reduces low-frequency noise.
- 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).



Power transformer Heat sink Emitter ohm Electrolytic capacitors 8,200 μ F $\times$ 2 Remote action switches
FL peak power meter drive circuit Tone control circuit Driver circuit Phono equalizer circuit

Rear Panel Facilities



The ST-8044 FM/AM Stereo Tuner is just the right companion for your SU-8055. With the same clean, attractive styling and outstanding performance standards, it perfectly complements the SU-8055 Integrated DC Amplifier.

Technical Specifications (DIN 45 500)

AMPLIFIER SECTION

20 Hz~20 kHz continuous power output both channels driven	48 W×2 (4 Ω) 47 W×2 (8 Ω)
40 Hz~16 kHz continuous power output both channels driven	48 W×2 (4 Ω) 47 W×2 (8 Ω)
1 kHz continuous power output both channels driven	56 W×2 (4 Ω) 50 W×2 (8 Ω)
Total harmonic distortion rated power at 20 Hz~20 kHz	0.03% (4 Ω) 0.02% (8 Ω)
at 40 Hz~16 kHz	0.03% (4 Ω) 0.02% (8 Ω)
at 1 kHz	0.03% (4 Ω) 0.02% (8 Ω)
half power at 20 Hz~20 kHz	0.01% (8 Ω)
at 1 kHz	0.008% (8 Ω)
-26 dB power at 1 kHz	0.15% (4 Ω)
50 mW power at 1 kHz	0.2% (4 Ω)
Intermodulation distortion rated power at 250 Hz: 8 kHz=4:1, 4 Ω	0.03%
rated power at 60 Hz: 7 kHz=4:1, SMPTE, 8 Ω	0.02%
Power bandwidth both channels driven, -3 dB	5 Hz~30 kHz (4 Ω) 5 Hz~40 kHz (8 Ω)

Residual hum & noise	0.8 mV (0.8 mV, IHF A)
Damping factor	18 (4 Ω), 36 (8 Ω)
Headphones output level & impedance	440 mV/330 Ω
Load impedance	4 Ω~16 Ω
MAIN or REMOTE	8 Ω~16 Ω
Input sensitivity & impedance	
PHONO MM	2.5 mV/47 kΩ
MC	170 μV/100 Ω
TUNER, AUX	150 mV/47 kΩ
TAPE 1, REC/PLAY	180 mV/33 kΩ
TAPE 2	150 mV/33 kΩ
Phono maximum input voltage at 1 kHz, RMS	
MM	150 mV
MC	6.5 mV
S/N	
rated power (4 Ω)	
PHONO MM	73 dB (85 dB, IHF A)
MC	60 dB (66 dB, IHF A)
TUNER, AUX	86 dB (97 dB, IHF A)
-26 dB power (4 Ω)	
PHONO MM	62 dB
MC	58 dB
TUNER, AUX	63 dB
50 mW power (4 Ω)	
PHONO MM	58 dB
MC	56 dB

TUNER, AUX	60 dB
Frequency response	
PHONO RIAA standard curve	±0.5 dB (30 Hz~15 kHz)
TUNER, AUX, TAPE	10 Hz~60 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
Subsonic filter	30 Hz, -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	60 dB

GENERAL

Power consumption	500 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	7.7 kg (17.0 lb)

Technics
Matsushita Electric