



Technics SU-8600

Stereo Integrated Amplifier

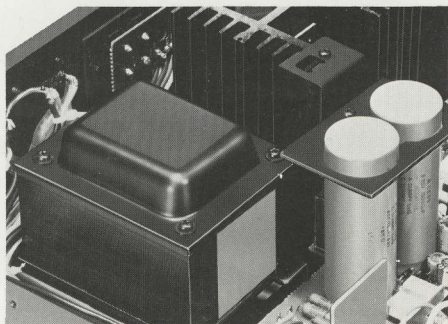


SU-8600 Stereo Integrated Amplifier



73 watts per channel, minimum RMS, both channels driven, at 8 ohms from 20 Hz to 20 kHz, with no more than 0.08% total harmonic distortion.

Total Harmonic Distortion Doesn't Tell the Whole Story about an Amplifier's Cleanness.



If ever an amplifier has been so thoroughly worked over in an effort to produce really clean sound, it's the SU-8600 stereo integrated amplifier from Technics. Every possible source of distortion has been approached with the attitude that the SU-8600 would be the CLEAN amplifier, true-to-the-original in every sense of the word. Transient cross-talk and self-transient distortions have been all but eliminated, while the total harmonic distortion value of 0.08% right up to the full 73 W per channel output speaks for itself. That means an abundance of real clean power which hardly an amplifier in any price range can match.

In addition, the very elaborate circuit construction, incorporating some very original and clever design concepts, offers a high degree of control and function flexibility.

So in whatever component arrangement you use the SU-8600, you can

rest assured that any stray noise or distortion appearing in the system will certainly not be due to the amplifier.

Sixfold Independent Power Supplies for Practically Non-Existent Transient Crossmodulation

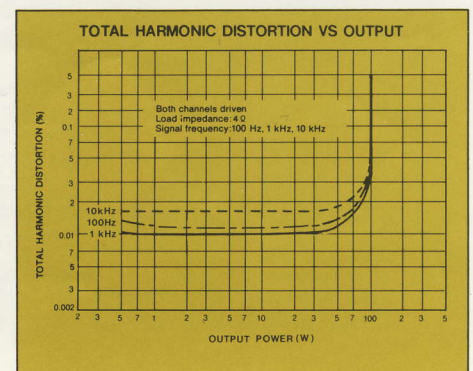
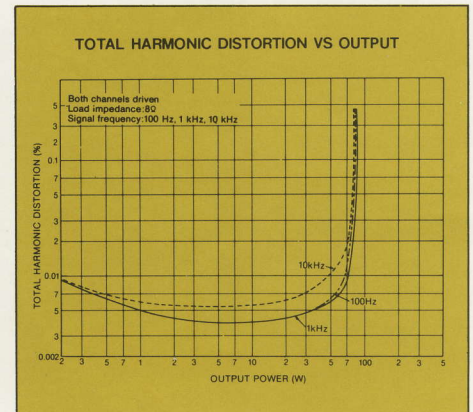
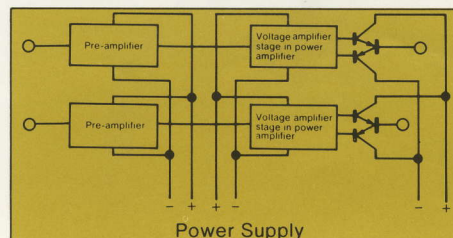
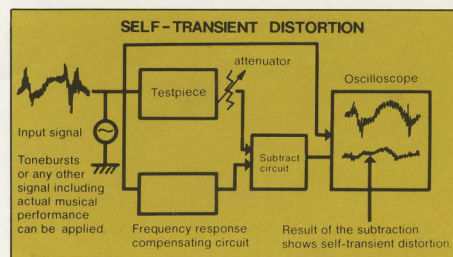
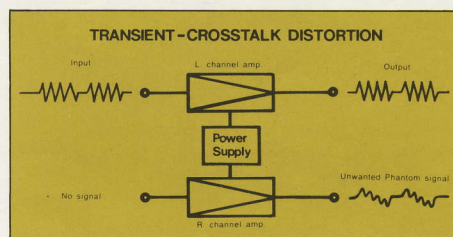
One of the major areas of high grade amplifier performance where the Technics SU-8600 differs from more conventional amplifiers is power supply stability. Normally, transient bursts of music power are capable of causing inter-channel crosstalk distortion through the power supply if the supply is not sufficiently stable. But with each channel of the control amplifier, the voltage amplifier, and the power amplifier stages being supplied with independent positive/negative balanced power, and the first two stages also provided with regulated

voltage supplies, this common source of "signal garbage" has been eliminated.

A second type of distortion, self-induced distortion, where transient bursts of power actually cause a kind of self-induced form of distortion, has also been successfully diagnosed and consequently removed.

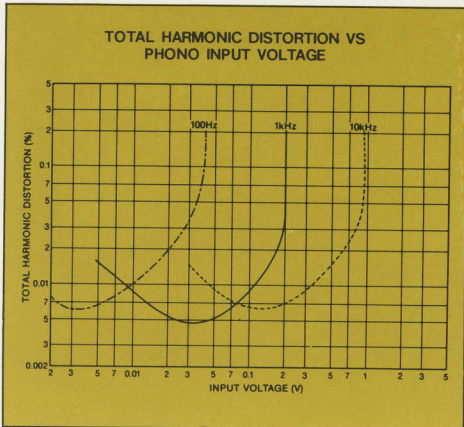
Total Harmonic Distortion of 0.08% and 5Hz-70 kHz Power Bandwidth (-3 dB)

Constant current construction of the last tone control stage and pre-driver stage means that current remains unaffected by voltage fluctuations, which in turn assures stable gain and no source of non-linearities. Even at 73 W per channel output, total harmonic distortion remains 0.08%. And the (-3 dB) power bandwidth covers 5 Hz to 70 kHz.



Super-Quiet Phono Equalizer Gives 73 dB S/N Ratio at Input Sensitivity of 2.0 mV

With differential amplification in the first stage, a modified SRPP in the second stage and specially selected low-noise transistors throughout, the phono equalizer circuit combines superb quietness (S/N ratio 73 dB IHF) with a high sensitivity of 2 mV. In non-technical terms, this means that the sound from your records is given a greater sense of clarity, and that even high intensity peaks in the music are brought to life without an audible trace of distortion. (Maximum input voltage is 200 mV at 1 kHz).

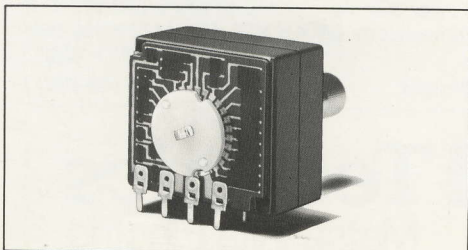


Power Amplifier Stage Engineered for Clean Power

Differential amplifier, emitter follower, voltage amplification and finally output power stage: this description sounds like a regular power amplification stage. And it is, but combined with independent stabilized power supplies and a transformer of high permeability, heavy gauge windings and good regulation, greatly enhance its performance. Two 15,000 μ F electrolytic capacitors in the power supply provide an abundant reserve of stability to handle even violent peaks. At -3 dB below full output, distortion drops to a negligible 0.005% at 1 kHz, another value further substantiating the claim that the SU-8600 stereo integrated amplifier from Technics undeniably combines high output power with superb "cleanliness" and signal quality.

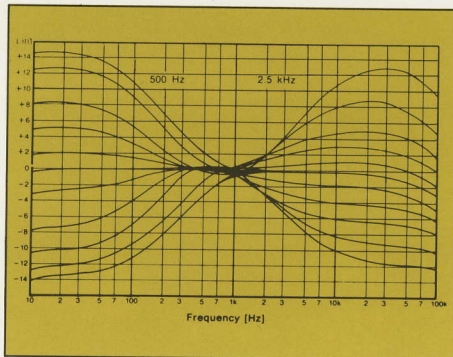
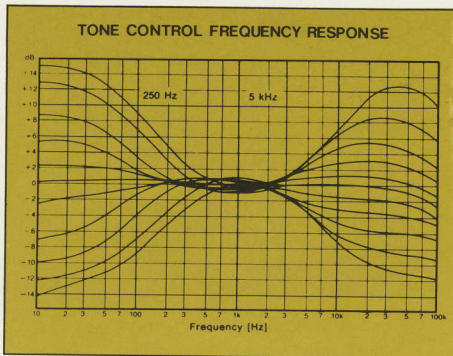
26-Position Precision Detented Attenuator for Volume Control

As in costly measuring instruments, the volume control is a 26-position true attenuator calibrated in 2 dB steps from -40 dB to 0 dB. And this control is linked with the loudness feature, which, when switched on, automatically compensates for apparent bass deficiencies at low listening volumes. Moreover, an audio muting switch instantly reduces output by 20 dB, allowing sudden volume reductions and more precise fine adjustments at low listening levels.



"Current Mirror" Load in Tone Control Circuits

"Current mirror loading" is a relatively new technique in amplifier design. Relatively small currents (an advantage in reducing noise) appear larger in a current mirror load. Hence higher gain becomes possible without the noise problem associated with larger drive currents. In the SU-8600, the current mirror principle is used in the first, differential amplification stage of the 3-stage tone control circuit, permitting optimum distribution of gain among the stages with minimized noise and distortion.



Two Turnover Frequencies for Bass and Treble Controls

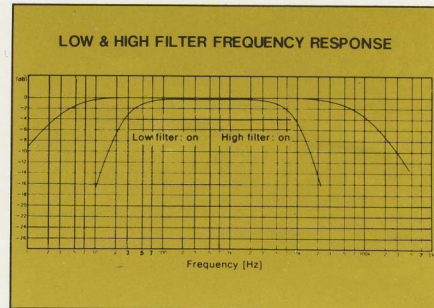
Greater versatility is attained by two turnover frequencies in both bass and treble: 250 or 500 Hz for bass, and 2.5 or 5 kHz for treble. Any deficiencies in room acoustics or program material can be more readily compensated for. And direct comparison with the flat response is possible by simply switching "tone" to "defeat."

Stepped, Click-Stop Tone and Balance Controls

The bass and treble controls operate in clearly marked, precisely repeatable steps. The balance control knob click-stops in center position.

Extremely Steep (-12 dB/oct.) Cut-off Low and High Filters

Adding precision in signal clean-up upon flexibility, these particularly sharp cut-off filters are just another instance of Technics determination to produce an amplifier that will guarantee complete freedom from noise.

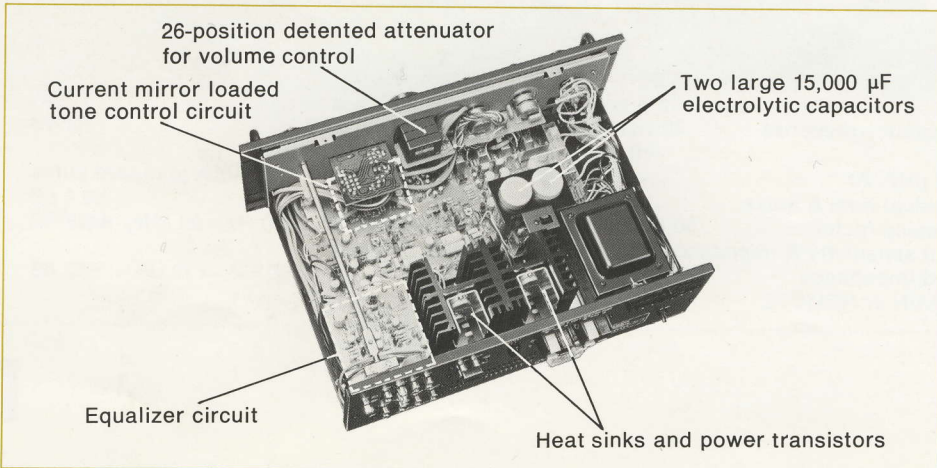


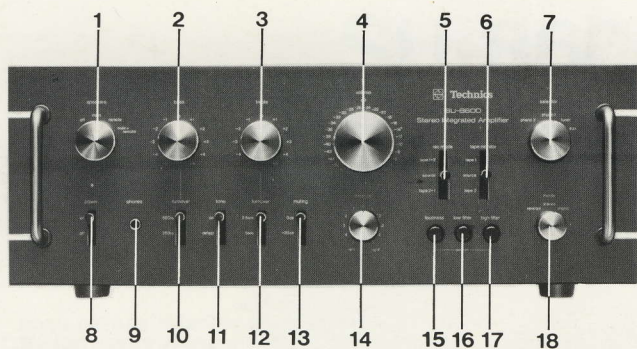
Tape-to-Tape Dubbing While Listening to Another Program

There's no need to tie up the entire system for hours while copying tapes. With the SU-8600, you can copy tapes through its monitor circuits and at the same time listen to an unrelated, third program source such as records or FM.

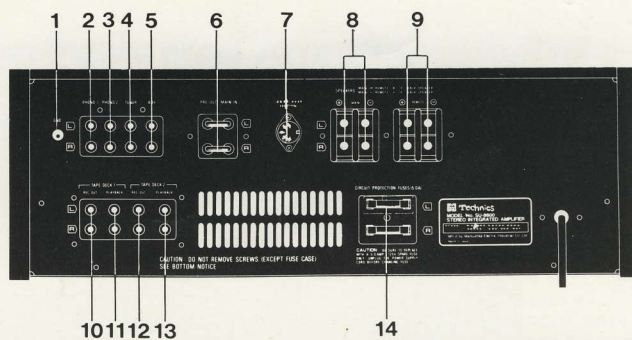
Still Many More Features

- Inputs for two stereo turntables, one tuner, and one auxiliary source.
- Pre-out and power-amp-in terminals for expanded systems such as bi-and tri-amplification, graphic octave equalizers, etc.
- Spring-loaded speaker terminals for easy, safe connections of main and remote speakers.





1. Speaker selector switch
2. Bass control
3. Treble control
4. Calibrated attenuator-type volume control
5. Rec mode switch
6. Tape monitor switch
7. Program selector
8. Power switch
9. Phones jack
10. Turnover switch (Bass)
11. Tone defeat switch
12. Turnover switch (Treble)
13. Muting switch
14. Balance control
15. Loudness switch
16. Low filter switch
17. High filter switch
18. Mode selector



1. Ground terminal
2. Phono 1 inputs
3. Phono 2 inputs
4. Tuner inputs
5. AUX inputs
6. Pre-out/Power-amp-in terminals
7. REC/PLAY terminal (tape deck 1)
8. Speaker terminals (main)
9. Speaker terminals (remote)
10. Tape deck 1 REC outputs
11. Tape deck 1 PLAY inputs
12. Tape deck 2 REC outputs
13. Tape deck 2 PLAY inputs
14. Circuit protection fuses

Technical Specifications

DIN 45 500

AMPLIFIER SECTION

1 kHz continuous power output both channels driven	2 × 85 W (4 Ω) 2 × 76 W (8 Ω)
20 Hz ~ 20 kHz continuous power output both channels driven	2 × 80 W (4 Ω) 2 × 73 W (8 Ω)
Power bandwidth both channels driven at 4 Ω	5 Hz ~ 50 kHz, -3 dB
Total harmonic distortion rated power at 40 Hz ~ 16 kHz, 4 Ω	0.08%
Intermodulation distortion rated power at 250 Hz: 8 kHz = 4:1, 4 Ω	0.08%
Frequency response	20 Hz ~ 20 kHz, ±0.3 dB
Damping factor	50 (8 Ω), 25 (4 Ω)

Input sensitivity and impedance	
MAIN IN	1 V/47 kΩ
PHONO 1, 2	2 mV/47 kΩ
TUNER, AUX	150 mV/47 kΩ
PLAYBACK (TAPE DECK 1, 2), REC/PLAY input (TAPE 1)	150 mV/47 kΩ
PHONO maximum input voltage (1 kHz, RMS)	200 mV
S/N	
rated power PHONO 1, 2	60 dB
TUNER, AUX	85 dB
50 mW power output	
PHONO 1, 2	55 dB
TUNER, AUX	55 dB
Tone controls	
BASS	50 Hz, +12 dB ~ -12 dB
TREBLE	20 kHz, +12 dB ~ -12 dB
Turnover frequency	
BASS	250 Hz, 500 Hz

TREBLE	2.5 kHz, 5 kHz
Low filter	30 Hz, -12 dB/oct.
High filter	8 kHz, -12 dB/oct.
Loudness control (volume at -30 dB)	100 Hz, +8 dB
Muting	-20 dB
Output voltage	
PRE OUT rated	1 V
max.	8 V
REC OUT (TAPE DECK 1, 2)	150 mV
REC/PLAY output (TAPE DECK 1)	30 mV
Load impedance	
MAIN or REMOTE	4 ~ 16 Ω
MAIN + REMOTE	8 ~ 16 Ω

GENERAL	
Power consumption	700 W
Power supply	110 V/120 V/220 V/240 V
Dimensions (W × H × D)	450 × 173 × 352 mm (17 ³³ / ₃₂ " × 6 ¹³ / ₁₆ " × 13 ³⁷ / ₃₂ "
Weight	12.7 kg (28.0 lb.)

IHF

POWER AMPLIFIER SECTION

1 kHz continuous power output both channels driven	85 W + 85 W (4 Ω) 76 W + 76 W (8 Ω)
20 Hz ~ 20 kHz continuous power output both channels driven	80 W + 80 W (4 Ω) 73 W + 73 W (8 Ω)
Total harmonic distortion	0.08%
Intermodulation distortion	0.08%
Power bandwidth (both channels driven at 8 Ω)	5 Hz ~ 70 kHz, -3 dB
Frequency response	20 Hz ~ 20 kHz, +0, -0.2 dB
S/N (IHF, A)	115 dB
Residual hum & noise	0.3 mV
Damping factor	50 (8 Ω), 25 (4 Ω)
Input sensitivity & impedance	1 V/47 kΩ
Load impedance MAIN or REMOTE	4 ~ 16 Ω

MAIN + REMOTE	8 ~ 16 Ω
PRE-AMPLIFIER SECTION	
Input sensitivity & impedance	
PHONO 1, 2	2.0 mV/47 kΩ
TUNER, AUX	150 mV/47 kΩ
TAPE DECK 1, 2 PLAYBACK REC/PLAY input (TAPE 1)	150 mV/47 kΩ
PHONO maximum input voltage (1 kHz, RMS)	200 mV
Total harmonic distortion	0.08%
S/N (IHF, A)	
PHONO 1, 2	73 dB
TUNER, AUX	92 dB
Frequency response	
PHONO 1, 2	RIAA standard curve ±0.4 dB
TUNER, AUX	20 Hz ~ 20 kHz, ±0.3 dB
Tone controls	
BASS	50 Hz, +12 dB ~ -12 dB

TREBLE	20 kHz, +12 dB ~ -12 dB
Turnover frequency	
BASS	250 Hz, 500 Hz
TREBLE	2.5 kHz, 5 kHz
High filter	8 kHz, -12 dB/oct.
Low filter	30 Hz, -12 dB/oct.
Loudness control (volume at -30 dB)	100 Hz, +8 dB
Muting	-20 dB
Output voltage	
PRE OUT rated	1 V
max.	8 V
TAPE 1, 2 REC OUT	150 mV
REC/PLAY output (TAPE DECK 1)	30 mV
GENERAL	
Power consumption	700 W
Power supply	110 V/120 V/220 V/240 V
Dimensions (W × H × D)	450 × 173 × 352 mm (17 ³³ / ₃₂ " × 6 ¹³ / ₁₆ " × 13 ³⁷ / ₃₂ "
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Matsushita Electric