

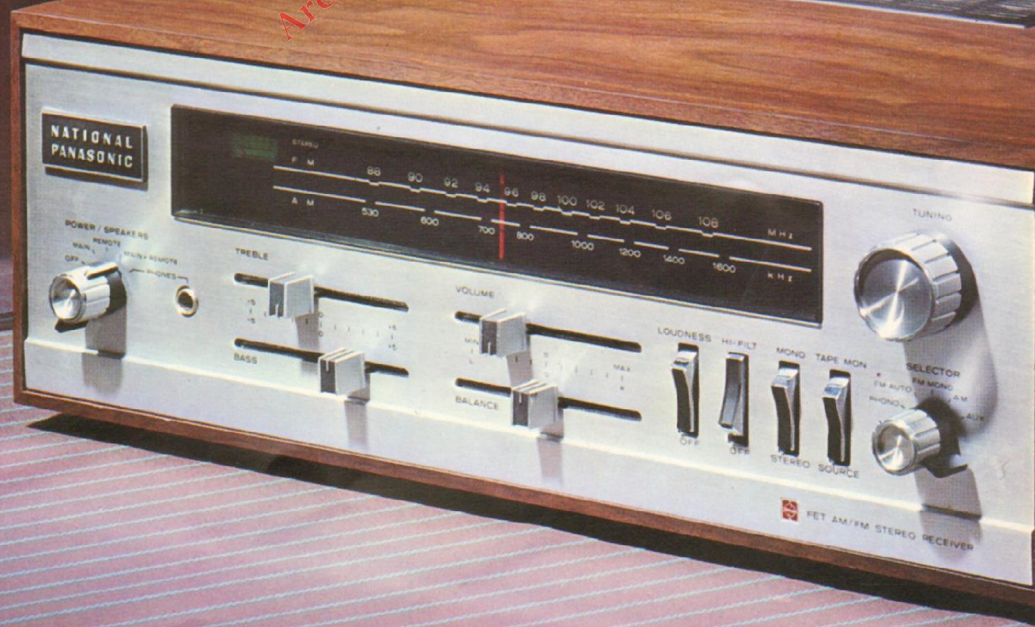


NATIONAL PANASONIC

MODEL SA-40

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Archiv Michael Otto



Japan's Largest Producer of Electronic and Electrical Home Appliances
MATSUSHITA ELECTRIC



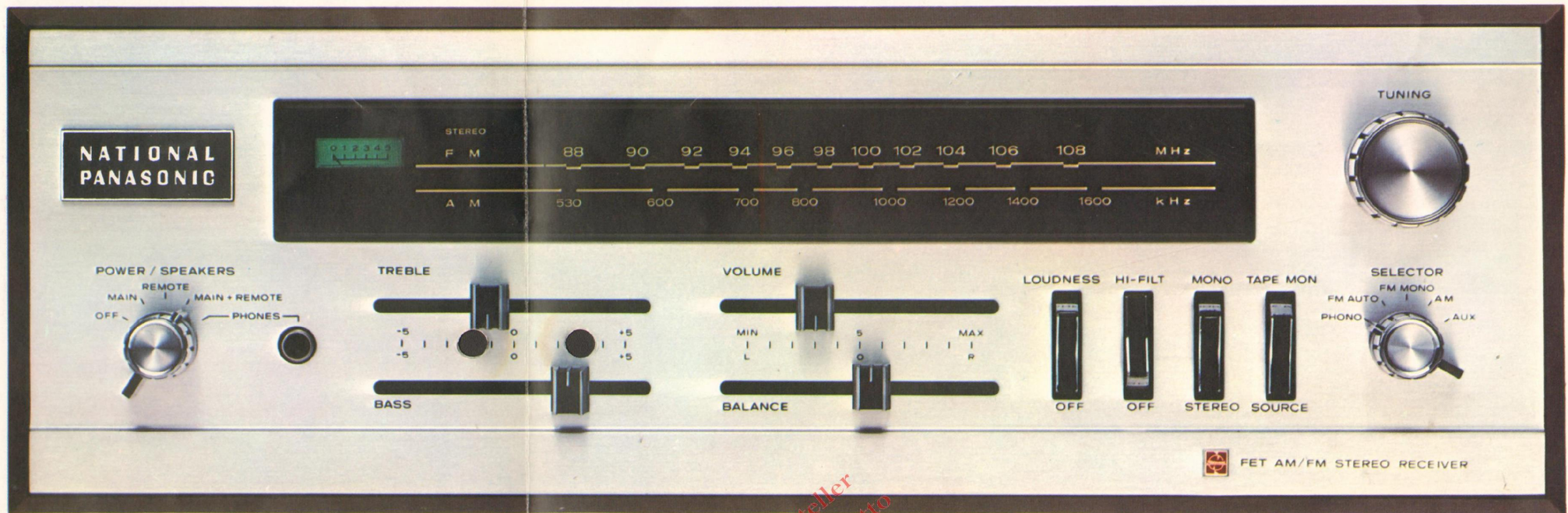
Here is the Solid State receiver to include every known engineering development in transistor design. In addition, this new National Panasonic receiver uses several exclusive circuits that were developed especially for this component by the engineering laboratories of National Panasonic.

The result is a truly unique instrument without an equal in performance or reliability. In appearance this fine instrument is unmatched. The elegant sculptured control panel features a handsome satin silver finish with contrasting midnight black trim. Behind the recessed window our distinctive slide rule tuning lets you "precision select" the stations of your choice with pin-point accuracy.

Outstanding among the many tuning conveniences of this fine instrument is the Automatic Stereo lamp. This lamp lights to indicate the reception of a stereo station and automatically switches to stereo sound. The calibrated* field strength tuning meter provides the most reliable means of obtaining perfect center-of-station tuning for matchless stereo listening pleasure. The full complement of tone controls and switches provide for complete ease of operation. advanced rocker switches to insure absolutely reliable electrical performance. The ultra-linear sliding controls allow complete freedom to independently adjust the Bass and Treble qualities of each channel to satisfy your own listening requirements. The multiple-position program Selector switch and Speakers switch permit the widest choice of program sources and speakers. Special Pre-amp Output and Main Amplifier input jacks allow you to add an accessory echo reverberation or tremolo sound effect amplifier to enhance the stereo effect. In appearance, performance and reliability, the National Panasonic SA-40 is destined to become one of the most popular receivers available today and will set the standard for years to come.

NATIONAL PANASONIC SA-40

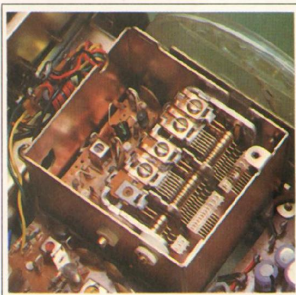
55-Watt FM/AM Tuner Amplifier with Field Effect Transistor (FET) and Four Sensitive FM IF Stages



FIELD EFFECT TRANSISTOR

Highest Sensitivity with Highest Selectivity

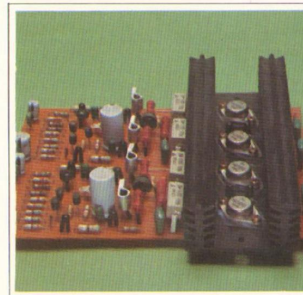
This unique FET tuner utilizes FET for unrivaled sensitivity. One RF stage, a three-section tuning capacitor, and three tuned circuits provide exceptional selectivity making possible the reception of weak or distant stations. This FM tuner is the result of over two years effort by National Panasonic engineers and technicians to develop a tuner unsurpassed in performance.



MASSIVE POWER AMPLIFIER

Distortion Free Power

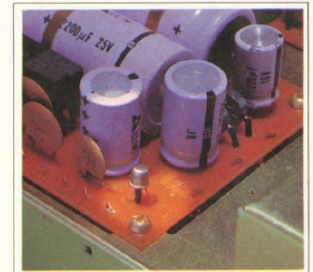
This exclusive National Panasonic power amplifier circuit uses no output transformers (OTL) and no coupling capacitors (OCL) to prevent any additional distortion to the signal. Unwanted phase reactions, which can cause unoscillations are completely eliminated by this directcoupled exclusive circuit. Full power is insured at all times since there are no power-robbing transformers or capacitors.



REGULATED POWER SUPPLY

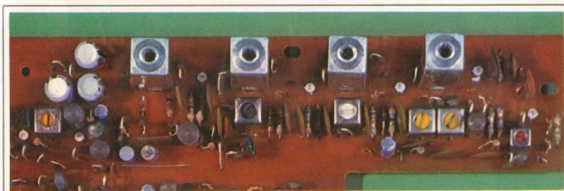
Constant Output Power at All Times

To achieve the ultimate in stereo sound even during the peak periods of music, National Panasonic engineers have incorporated a regulated power supply for FM and AM tuner similar to that used in the most expensive laboratory instruments. This insures that the power to all circuits of the receiver is maintained at the same level, regardless of the changes in the musical content. Together with our newly designed "low-hum" power transformer, lowest noise is insured. The result is a flawless sound....unmatched in power and clarity.



FOUR IF STAGES

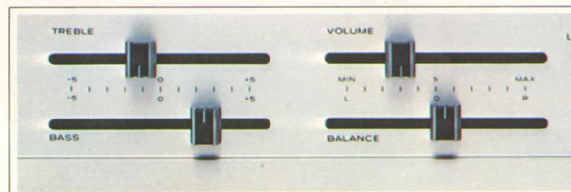
Multiple IF's for Improved Response



Four IF stages, each one separately tuned, provide excellent performance and exceptional selectivity. These four IF stages, each consisting of a double tuned circuit, provide greatly improved IF response. Each stage acts as a limiter for reduced noise interference. An ultra-wide band ratio detector provides full audio frequency response.

FULL RANGE SLIDING TONE CONTROLS

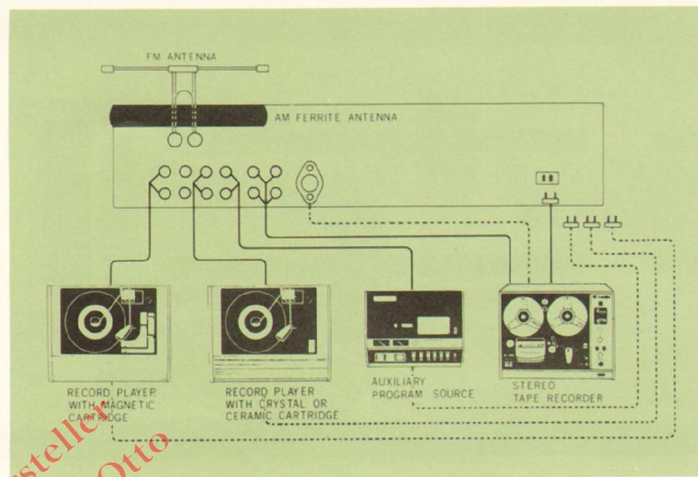
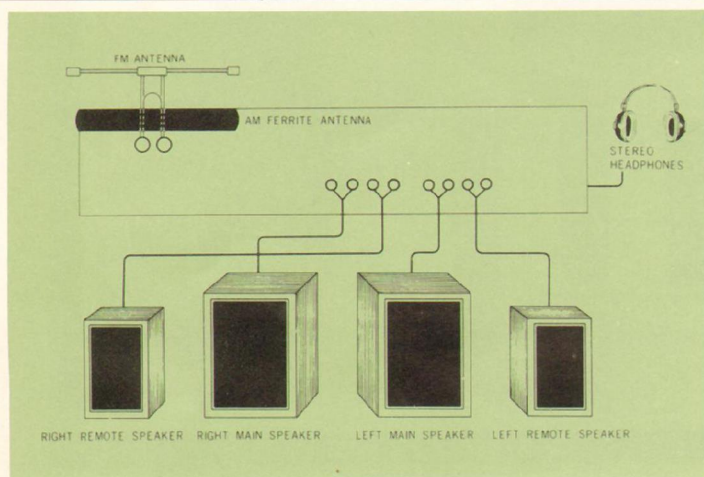
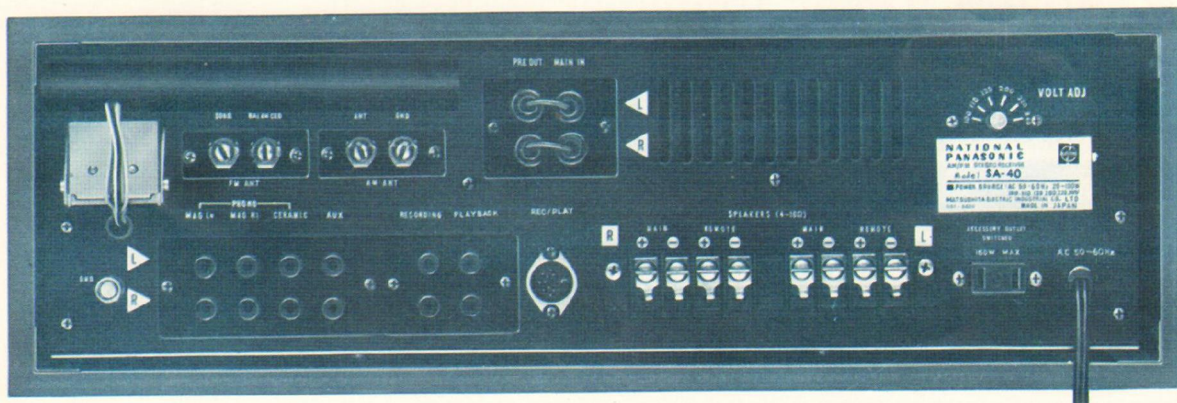
Shape the Sound To Suit Your Taste



With the linear sliding controls you can precisely adjust the bass and treble tonal qualities to suit your own particular musical tastes. The High Filter Switch allows you to shape the tonal qualities of the music to eliminate shrillness of treble tones found in some classical recordings and symphonic renditions. The Loudness Switch insures natural sounding highs and lows at all volume levels.



THE REAR PANEL OF THE SA-40 PROVIDES FACILITIES FOR CONNECTION OF A HOST OF SPEAKERS AND ACCESSORIES.



Up to four speakers can be connected to the SA-40. A pair of main speakers in the living room and a pair of remote speakers in the family room provide magnificent stereo sound throughout the home.

A multitude of accessories can be interconnected with this

superb instrument to form a complete home music center. Facilities are provided for a record player, a tape recorder, an auxiliary program source, such as a shortwave tuner, and a set of stereo headphones. An AC outlet provides the ultimate in ease of wiring.

SA-40 TECHNICAL SPECIFICATIONS

AMPLIFIER SECTION

IHF Dynamic Power:	55 watts at 4 ohms 40 watts at 8 ohms
RMS Power (at 1 kHz and rated distortion):	12/12 watts at 8 ohms
Harmonic Distortion (at 1 kHz and rated output):	0.8%
Intermodulation Distortion (60 Hz + 7 kHz, 4:1, SMPTE):	1.2%
Power Bandwidth:	20 Hz to 50,000 Hz -3 dB
Frequency Response:	
Phono Low	30 Hz to 20,000 Hz ± 3 dB
Auxiliary	30 Hz to 50,000 Hz ± 3 dB
Power Amplifier	20 Hz to 60,000 Hz ± 3 dB
Input Sensitivity (for rated output):	
Phono Low	3.5 mV
Phono High	10 mV
Auxiliary	170 mV
Tape Monitor	170 mV
Input Impedance:	
Phono Low	50 Kohms
Phono High	100 Kohms
Ceramic	33 Kohms
Auxiliary	35 Kohms
Tape Monitor	35 Kohms
Hum and Noise:	
Volume at minimum	70 dB
Phono Low (4 mV reference)	60 dB
Auxiliary (170 mV reference)	70 dB
Bass Range:	± 10 dB at 50 Hz

Treble Range:	± 9 dB at 10 kHz
High Filter:	-6 kHz -6 dB/oct
Damping Factor:	20 at 4 ohms 40 at 8 ohms

Recorder Output Level: 170 mV

FM TUNER SECTION

FM Usable Sensitivity (IHF):	2.8 μ V
FM Harmonic Distortion:	
(at 400 Hz, 100% modulation)	0.7%
Signal to Noise Ratio:	60 dB
Selectivity, Alternate Channel:	40 dB
Spurious Response Rejection (at 100 MHz):	70 dB
IF Rejection (at 100 MHz):	90 dB
Image Rejection (at 100 MHz):	55 dB
FM Stereo Separation (at 1 kHz):	35 dB
Capture Ratio (IHF):	3 dB

AM TUNER SECTION

AM Sensitivity (IHF):	20 μ V
Selectivity (at 1 MHz and 10 kHz):	25 dB
Image Rejection (at 1 MHz):	40 dB
IF Frequency Rejection (at 1 MHz):	45 dB
Dimension (including control knobs and AM Ferrite antenna):	16" Wide 5" High 14" Deep

Weight (unpacked)	20 lb
Power Consumption:	Min 20W—Max 100W
Power Supply:	AC 100—110—120— 200—220—240V

Specifications are subject to change without notice.

Distributed by :



PANASONIC

SA40 55 WATT AM-FM MULTIPLEX STEREO RECEIVER

- Sliding audio controls.
- FET front end.
- Walnut wood cabinet.

\$199⁹⁵

The Panasonic SA-40 offers the features and FM/AM performance previously available only in units costing considerably more. The FM tuner features Field Effect Transistors for sensitive, drift-free reception of FM and FM stereo programs. Four sensitive FM IF stages allow you to seek out the weakest of FM stations. The AM tuner circuit provides broad band response for highest sensitivity and stability. The built-in ferrite antenna employs a revolutionary coil design to assure freedom from static—under all conditions. Exclusive Panasonic wide range Linear Sliding Controls provide for precise adjustment of the music to suit the listening environment. Positive action Loudness, High Filter Mono/Stereo and Tape Monitor rocker switches provide complete control of the musical output. The multiple-position Selector switch and Speaker switch permit a wide choice of program sources and speaker outputs. Facilities are provided on the rear panel of the SA-40 for connection of two pairs of speakers, a record player, two tape recorders, and an auxiliary program source, such as a shortwave tuner. Special Pre-amp Output and Main Amplifier input jacks allow you to add an accessory echo

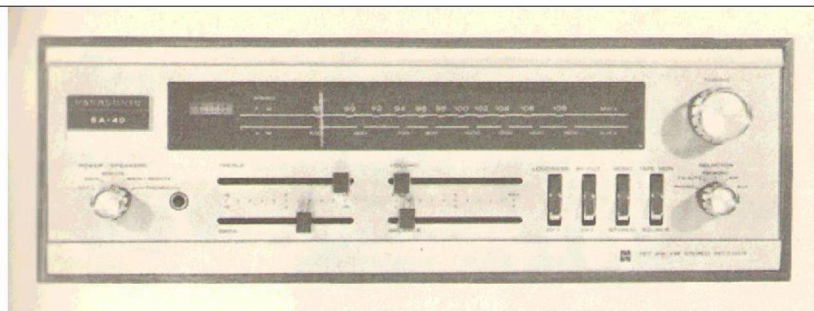


reverberation or tremolo sound effect amplifier to enhance the stereo effect. **Specifications. Amplifier Section:** Music Power 55 watts (IHF) at 8 ohms; HD 0.8%; ID 1.2%; Power Bandwidth 20 Hz to 50,000 Hz -3 db; Freq. Resp.: Phono, 30 to 20,000 Hz ± 3 db; Aux., 30 to 50,000 Hz ± 3 db.

Power Amplifier: 20 Hz to 60,000 Hz -3 db; Input Imp.: Phono 50K ohms, and 100K ohms, 33K ohms (Ceramic); Aux. 35K ohms, Tape Monitor 35K ohms; Hum and Noise, 70 db; Phono; Aux., 70 db; Bass and Treble Control ± 10 db @ 50 Hz; High Filter 6 db per octave above 6K Hz; Recorder output level 170 mV. **Tuner Section: FM:** Usable sensitivity (IHF) 2.8 μ V; HD 0.7%; Signal to Noise Ratio 60 db; Selectivity, alternate channel 40 db; Image rejection (at 100 MHz) 55 db; Stereo separation (at 1K Hz) 35 db; Capture Ratio (IHF) 3 db. **AM:** Sensitivity (IHF) 20 μ V. Dimensions: 16" W. X 5" H. X 14" D. Power 120 V AC, 100 Watts.

No. 33A405. Shpg. wt. 29 lbs.
Net Each

\$199.95

NATIONAL**SA-40****RECEIVER**

TECHNISCHE DATEN

Hersteller: NATIONAL-MATSUSHITA ELECTRIC. JAPAN

Empfänger, Vorverstärker und Kraftverstärker integriert

Verstärker

Bestückung: 40 Siliziumtransistoren, 1 FET und 34 Dioden

Eingänge. Phono mag. I : 3,5 mV/50 kOhm, Reserve (Aux) I : 170 mV/35 kOhm

Monitor: ja

Phonoentzerrung: RIAA

Dauertonleistung: 2 x 12 W an 8 Ohm

Musikleistung: 2 x 20 W an 8 Ohm, 2 x 27,5 W an 4 Ohm

Klgrad bei 1 kHz, Nennleistung und Austeuerung beider Kanäle: 0,8 %

Inlermodulation 250 Hz/8.000 Hz 4/1 bei Nennleistung: 1,7%

Frequenzgang über alles: 30-50.000 Hz $\pm$ 3 dB

Fremdspannungsabstand bei Vollaussteuerung und vollaufgedr. Lautstärkeregler:

niederpegelige Eingänge 60 dB, hochpegelige Eingänge 70 dB

Ausgänge: Lautsprecher: 2 Gruppen wahlweise, Main - Remote, Main + Remote

Kopfhörer: an der Frontplatte

Klangregler: (Regelumfang)

Bässe $\pm$ 10 dB bei 50 Hz

Höhen $\pm$ 9 dB bei 10 kHz

Empfänger

Empfangsbereiche: UKW 88-108 MHz/MW 525-1-605 kHz

Stereoempfangsbereit: ja

Empfindlichkeit für 30 dB Signal-Rauschabstand: UKW 2,8 μ V

Begrenzung, Einsatzpunkt: 20 μ V

Übersprechdämpfung bei 1 kHz und $\pm$ 40 kHz Hub: 35 dB

Abmessungen: 417x147x340 (BxHxT in mm)

Gewicht: 9 kg