

At the end of this review is the block diagram, and technical specifications of this receiver. List price is \$460.00 from Panasonic dealers. This is high, as it is available elsewhere for less. This set has electronic digital tuning readout on all but the FM band, MW, and a low shortwave band, (1.6-3MHz).

After playing with the receiver quite a bit for a month now, I've sort of reached some opinions on it's performance across the bands.

The FM is quite poor. Poor sensitivity, poor image rejection, and cross-mod immunity. No digital tuning.

The AM is also a loss, with tons of spurioses, and no digital on a 4" (lengthwise) dial. Loopstick antenna, and no provisions for a loop or shielded antenna input. Relatively insensitive, and broad as a barn door. While on the subject of selectivity, um, the specs say plus or minus, the best you get is 3KHz±6db and 12 KHz± 60 db. It's worse than this, I'm quite sure. The AM, and all SW functions of IF amplification and frequency conversion are handled by one IC. There is, (unfortunately) so much leakage thru the chip, you can break the signal path and still have audio! Ditto on the 1.6-3MHz segment of SW. Insensitive, no digital, easy to overload, broad, poor frequency calibration, etc.

On shortwave, it is sensitive as heck. Probably the most sensitive in the house. However, it overloads the easiest too, and will go into a cross-mod condition on R. Maldives. If the receiver is run with the RF gain cranked down to where the S meter sits around S9, the front end more or less operates in a sane manner, and it's ok.

The dial and tuning system, (it has a fast-slow tuning knob), is great except that it has about 0-1 KHz backlash. They provide a VFO offset to zero the receiver to the display on the front panel. I've found that once set, it need not be changed. The receivers' oscillators drift however, and my receiver exceeds their specifications of less than 500Hz per 1/2 hour. It's around 5KHz per hour. So after you turn it on, you have to retune every so often to stay on frequency especially on marginal stations, where passband placement becomes important. The set is nice to operate, but the volume control is in the wrong spot, and it's the wrong size.

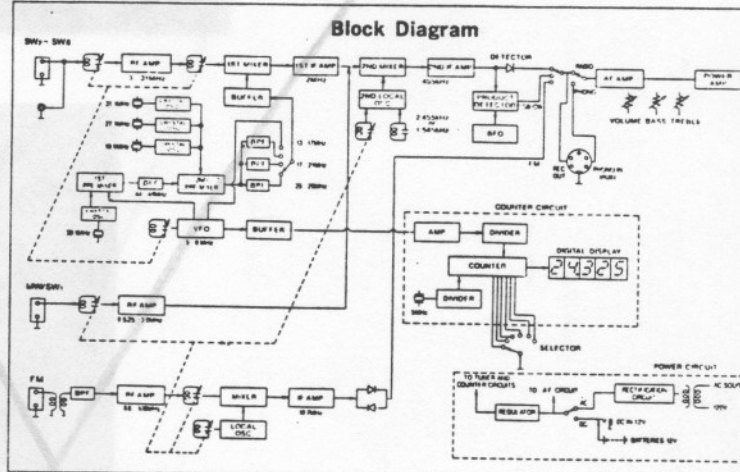
The beast is big! 18" x 11 1/2" x 7". Weighs nothing, (12 lbs.), is black, has R-390 (chrome no less) handles, and NC-98 dials, with a digital display at the center top.

I tried to modify the biggest problem the beast has, namely, the lack of selectivity on SW. I can live with the cross-mod; (S meter freaks will have to learn that "lots" isn't necessarily "best" or be plagued with overload/resultant cross-mod.) The IC that is the IF, (plus two ceramic filters and a couple of interesting transformers), has so much leakage that I was unable to fit a mechanical filter to it, or so far anyway. A 3.8 filter would be just fine with this set.

Basically I like it. I wouldn't buy it for a main receiver, but as something nice looking for stand-by work and maybe some "easy" SWing. On the 19, 31, and 49 meter bands, the wide filters, and quality speaker plus tone controls are great! Hi fi DX! However if you "turn it up", the audio distorts, and pilot lamps flicker from poor power supply regulation.

So, if you are in the market for a fancy entertainment portable, with direct readout on SW, go for it. If you want a communications type receiver, keep looking.

The RF 2800 was also tested at this time - initial results were better, considering the price, and this will be covered in a later article.



PRODUCT SERVICE

Should your Panasonic product ever require service, refer to an Authorized Panasonic Servicenter listed in the enclosed Directory, or consult your authorized Panasonic dealer for detailed instructions.

SERIAL NUMBER: Located on the back of the unit.

SPECIFICATIONS

Power Source:	AC 120V, 60 Hz DC 12V; eight 1.5V batteries (Panasonic UM-1 or equivalent), or any external 12V DC source (such as a car or boat battery through a car-battery adaptor)	SW2	S/N 10 dB 1.3-V S/N 26 dB 8.0-V
Power Consumption:	10W	SW3	S/N 10 dB 0.8-V S/N 26 dB 5.0-V
Receivable-Signal Types:	FM, AM, CW, and SSB	SW4	S/N 10 dB 1.2-V S/N 26 dB 7.0-V
Frequency Range:	FM 88-108 MHz MW 525-1605 kHz (571-187m) SW1 1.6-3.0 MHz (187-100m) SW2 3.0-7.0 MHz (100-42.9m) SW3 7.0-11.0 MHz (42.9-27.3m) SW4 11.0-15.0 MHz (27.3-20.0m) SW5 15.0-19.0 MHz (20.0-15.8m) SW6 19.0-23.0 MHz (15.8-14.7m) SW7 23.0-27.0 MHz (14.7-11.1m) SW8 27.0-31.0 MHz (11.1-9.7m)	SW5	S/N 10 dB 1.2-V S/N 26 dB 7.0-V
Reception Method:	FM Superheterodyne MW/SW1 Superheterodyne SW2-8 Double-Superheterodyne (variable oscillated-frequency up-converting, premixing system)	SW6	S/N 10 dB 1.2-V S/N 26 dB 7.0-V
Intermediate Frequency:	FM 10.7 MHz MW/SW1 455 kHz SW2-8 1st IF 2 MHz 2nd IF 455 kHz	SW7	S/N 10 dB 1.3-V S/N 26 dB 8.0-V
Frequency Display:	SW2-8 (3.0-31.0 MHz) 7-segment, red LED 5 digits Easy reading to three decimals in MHz (below 1 kHz to the closest round number)	SW8	S/N 10 dB 1.3-V S/N 26 dB 8.0-V
Antenna:	FM External antenna (75Ω) MW Built-in ferrite-core antenna and external antenna (75Ω) SW1 External antenna (75Ω) SW2-8 External antenna (75Ω), or M-type coaxial-cable antenna (75Ω)	Image Ratio:	FM 30 dB (98 MHz) MW 40 dB (1000 kHz) SW1 30 dB (2.3 MHz) SW2 65 dB (5 MHz) SW3 60 dB (9 MHz) SW4 55 dB (13 MHz) SW5 50 dB (17 MHz) SW6 45 dB (21 MHz) SW7 35 dB (25 MHz) SW8 35 dB (29 MHz) (SW2-8 is 1st IF image ratio.)
Sensitivity:	FM 3 dB down limiter 1.6µV S/N 26 dB 3µV MW S/N 10 dB 60µV/m S/N 26 dB 400µV/m SW1 S/N 10 dB 1.0µV S/N 26 dB 6.0µV	Selectivity:	FM ±200 kHz (35 dB), ±400 kHz (70 dB), AM WIDE ±2.5 kHz (-6 dB), ±15 kHz (-60 dB), NARROW ±1.7 kHz (-6 dB), ±8 kHz (-60 dB)
		Frequency Stability:	Thirty minutes after power-on, fluctuation is less than 500 Hz
		Input Jacks:	AUX mini-type, 20mV, 300Ω
		Output Jacks:	REC OUT mini-type, 400mV, 4kΩ EP/EXT. SP 4-8Ω
		SW2-8 Tuning Control:	Fast/Slow Ratio... 12:1 Retardation Ratio... 1:9.5 (Fast) 1:114 (Slow)
		Semiconductors:	5 IC's, 3 FET's, 34 Transistors
		Power Output:	RMS 2.0W
		Speaker:	10 cm, 4Ω
		Dimensions:	482(W) x 200(H) x 354(D)mm
		Weight:	8 kg (without batteries)

Specifications subject to change without notice.