

QST, August 1997  
Measured in ARRL Lab

Grundig  
Yacht Boy 400

Sangean ATS-909 /  
Radioshack DX-398

Sony  
ICF-2010

Minimum discernible signal (Noise floor)	Frequency			
	180 kHz	7.24 $\mu$ V	0.14 $\mu$ V	1.64 $\mu$ V
	1.0 MHz	0.8 $\mu$ V	0.06 $\mu$ V	0.58 $\mu$ V
	14 MHz	0.08 $\mu$ V	0.06 $\mu$ V	0.04 $\mu$ V
<b>AM sensitivity, 10 dB (S+N)/N, 1-kHz tone, 30% modulation</b>				
	1.0 MHz	6.02 $\mu$ V	0.67 $\mu$ V	9.99 $\mu$ V
	14 MHz	1.44 $\mu$ V	0.71 $\mu$ V	0.78 $\mu$ V
	120 MHz	--	--	1.55 $\mu$ V
<b>Blocking dynamic range, SSB mode</b>				
	14 MHz	78 dB	85 dB	112 dB
<b>Two-tone, third order IMD dynamic range, SSB mode</b>				
	14 MHz	76 dB	80 dB*	82 dB
<b>FM Sensitivity, 12 dB SINAD</b>				
	100 MHz	1.64 $\mu$ V	1.8 $\mu$ V	1.15 $\mu$ V

Except as noted, all dynamic range measurements were taken using the ARRL lab standard spacing of 20 kHz.

\* noise limited.

#### Grundig Yacht Boy 400

**Frequency coverage:** AM, SSB, 144-353 kHz; 0.52-30 MHz. FM, 87.5-108 MHz. **Modes of operation:** AM, FM, SSB (CW).

**Power requirements:** 9 V at 110 mA. **Size** (hwd): 4.75x7.75x1.375 inches. **Weight:** 1 pound, 12 oz (with carrying case and batteries).

All measurements were made with the **DX/LOCAL** switch set to **DX**, the **NARR/WIDE** switch set to **NARR**, and the **TONE** switch set to "high".

#### Sangean ATS-909 / Radioshack DX-398

**Frequency coverage:** AM, SSB, 153-1710 kHz; 1.7-30 MHz. FM, 87.5-108 MHz. **Modes of operation:** AM, FM, SSB (CW).

**Power requirements:** 6 V at 78 mA. **Size** (hwd): 5.5x8.5x1.5 inches. **Weight:** 2 pounds, 2 oz (with carrying case and batteries).

All measurements were made with the **AM RF GAIN** control set to maximum, the **NARR/WIDE** switch set to **NARR**, and the **TONE** switch set to "music".

#### Sony ICF-2010

**Frequency coverage:** AM, SSB, 0.15-30 MHz. FM, 76-108 MHz. Aircraft AM, 116-136 MHz. **Modes of operation:** AM, FM, SSB (CW).

**Power requirements:** 4.50 V at 150 mA. **Size** (hwd): 6.5x11.25x1.75 inches. **Weight:** 3 pounds, 8 oz (with batteries).

All measurements were made with the **DX/LOCAL** switch set to **DX**, the **AM RF GAIN** control set to maximum, the **NARROW** switch enabled, and the **TONE** switch set to "high".

# Grundig Satellit 800 Millennium

QST, October 2000  
Measured in the ARRL Lab

## Receiver Dynamic Testing

<b>Minimum discernible signal (Noise floor), 2.3 kHz filter</b>	<b>Frequency</b>	
	1.0 MHz	-126 dBm
	3.5 MHz	-124 dBm
	14 MHz	-125 dBm
<b>AM sensitivity, 10 dB (S+N)/N, 1-kHz tone, 30% modulation</b>	<b>Frequency</b>	
	1.0 MHz	1.3 $\mu$ V
	3.8 MHz	3.2 $\mu$ V
	120 MHz	3.4 $\mu$ V
<b>FM sensitivity, for 12 dB SINAD, 15 kHz bandwidth</b>	<b>Frequency</b>	
	100 MHz	1.2 $\mu$ V
<b>Blocking dynamic range, 2.3 kHz filter</b>	<b>Frequency</b>	
	3.5 MHz	103 dB*
	14 MHz	110 dB*
<b>Two-tone, third order IMD dynamic range, 2.3 kHz filter</b>	<b>Frequency</b>	
	3.5 MHz	84 dB*
	14 MHz	89 dB*
<b>Third-order intercept</b>	<b>Frequency</b>	
	3.5 MHz	+2.0 dBm
	14 MHz	+8.4 dBm
<b>Second-order intercept</b>		+90.7 dBm
<b>S-meter sensitivity, S9 signal at</b>	<b>Frequency</b>	
	1.0 MHz	81.2 $\mu$ V
	14.2 MHz	108 $\mu$ V
<b>Squelch sensitivity, at threshold</b>		AM, 120 MHz, 0.84 $\mu$ V
<b>Receiver audio output</b>		1.4 W at 10% THD into 8 $\Omega$
<b>IF/audio response: Range at -6 dB points, (bandwidth)</b>	<b>USB-W:</b> 442-2307 Hz (1865 Hz)	
	<b>LSB-W:</b> 436-2235 Hz (1799 Hz)	
	<b>AM:</b> 360-2442 Hz (2082 Hz)	
<b>Spurious and image rejection</b>	<b>First IF rejection:</b> HF, 67 dB; AM aircraft, 69 dB; FM broadcast, 89 dB.	
	<b>Image rejection:</b> HF, 48 dB; AM aircraft, 97 dB; FM broadcast, 62 dB.	

**Frequency coverage:** 0.1 – 30 MHz (SSB/AM), 87-108 MHz (FM), 118-137 MHz (AM). **Modes of operation:** AM, SSB, WFM.

**DC current drain:** 0.53 A. tested at 9.0 V. dc\*\*. **Size** (hwd): 9.3x20.9x8.5 inches. **Weight:** 14.6 pounds.

Unless otherwise noted, all dynamic range measurements are taken at the ARRL lab standard spacing of 20 kHz.

\* Measurement was noise-limited at the value indicated.

\*\*A 120/230 V. ac 60/50 Hz power supply is included.

Third-order intercept points were determined using noise floor reference.