

SPECIFICATIONS

Bands and their Frequency Ranges

Bands	Frequency Range	Bands	Frequency Range	Bands	Frequency Range
VHF 1	30~40 MHz	LW	150~400 kHz (2000~750m)	SW 5	14.0~15.0 MHz (21.4~20m)
VHF 2	40~55 MHz	MW	520~1610 kHz (577~186m)	SW 6	15.0~16.0 MHz (20~18.8m)
VHF 3	55~76 MHz	MB 1	1.5~3.0 MHz (200~100m)	SW 7	17.5~18.5 MHz (17.1~16.2m)
VHF 4	76~90 MHz	MB 2	3.0~5.5 MHz (100~54.6m)	SW 8	21.0~22.0 MHz (14.3~13.6m)
VHF 5	88~108 MHz	SW 1	5.5~6.5 MHz (54.6~46.2m)	SW 9	25.5~26.5 MHz (11.8~11.3m)
VHF 6	108~136 MHz	SW 2	7.0~8.0 MHz (42.9~37.5m)	SW 10	26.5~27.5 MHz (11.3~10.9m)
VHF 7	136~176 MHz	SW 3	9.0~10.0 MHz (33.3~30m)	SW 11	28.0~29.0 MHz (10.7~10.3m)
VHF 8	176~230 MHz	SW 4	11.5~12.5 MHz (26.1~24m)	SW 12	29.0~30.0 MHz (10.3~10m)

Antennas: 2 whip antennas 1,306mm (51 $\frac{7}{8}$ "") for VHF
 3 ferrite core antennas
 12mm ($\frac{1}{2}$ "") ϕ x 200mm (7 $\frac{8}{16}$ "")
 for LW, MW, MB
 Frame antenna
 435mm (17 $\frac{1}{8}$ "") x 300mm (11 $\frac{13}{16}$ "")
 for SW, MW, MB
 External antenna terminals:
 VHF (75 Ω unbalanced)
 SW (75 Ω unbalanced)
 LW, MW, MB, SW (high impedance)

Sensitivity (S + N/N 6dB at flat position of tone control):

VHF VHF 1~VHF 7:
 FM: 0.3~0.7 μ V
 AM: 0.4~1.0 μ V
 VHF 8:
 FM: 2.0 μ V
 AM: 6.0 μ V

LW, MW, MB, SW

LW 70 μ V/m
 MW 15 μ V/m
 MB 1 15 μ V/m
 MB 2 20 μ V/m
 SW 1~SW 12
 0.2~0.4 μ V (SSB)
 0.5~1.0 μ V (AM)

Image rejection:

VHF: 65~35 dB
 LW: 65 dB
 MW: 35 dB
 MB: 30 dB
 SW 1~SW 12: 70~35 dB

Selectivity:

VHF WIDE: 50 kHz
 (-3 dB)
 300 kHz
 (-60 dB)
 NARROW: 10 kHz (-3 dB)
 15 kHz
 (-60 dB)
LW, MW, MB, SW WIDE: 1.7 kHz
 (-3 dB)
 17 kHz
 (-60 dB)
 NARROW: 1.1 kHz
 (-3 dB)
 3 kHz
 (-60 dB)

Intermediate frequency:

VHF WIDE: 10.7 MHz
 NARROW: 455 kHz (U. K. only 470 kHz)
LW, MW, MB 455 kHz (U. K. only 470 kHz)
SW VIF: 1.7~2.7 MHz
 (variable)
 IF: 455 kHz (U. K. only 470 kHz)

S/N ratio (400 Hz 30% modulation, 100 mV input):

VHF FM: 63 dB
 AM: 55 dB
 LW, MW, MB, SW: 55 dB

Squelch control for all FM modes of VHF:

variable
MGC variable range: VHF: 30 dB
 SW: 40 dB

BFO variable range:

± 3.5 kHz

Crystal marker

position for SW: Every 500 kHz

AFC width for VHF:

± 500 kHz

MPX output:

-16 dBm, impedance 5k Ω output

Aux input (AC operation

at 1W output):

-32 dBm, impedance 470k Ω

Rec output:

-24 dBm, impedance 350 Ω

DIN jack:

PLAY -38 dBm (AC operation at 1W output)
 impedance 470k Ω
 REC -23 dBm, impedance 80k Ω

Speakers:

Two, 180mm (7") x 100mm (4")

External speaker jack:

8 Ω (switchable to built-in speakers)

Headphones jack:

8 Ω (standard), connectable with any headphones

Earphone jack:

8 Ω (standard), connectable with any earphone

Frequency response:

50 Hz~20 kHz, ± 3 dB (aux in)

Power source:

AC 100/120/220/240V 50/60 Hz
 DC: 8 "D" size batteries for radio (12V)
 DC external power input (12V)
 1 "D" size battery clock (1.5V)

Clock:

Tuning fork, battery powered

Jacks & terminals:

External antenna for VHF (75 Ω)
 External antenna for SW (75 Ω)
 Frame antenna
 External antenna for LW, MW, MB, SW (high impedance)
 MPX out, AUX in, REC out, DIN (REC/PLAY)
 External speaker (8 Ω)
 Headphones (8 Ω)
 Earphone (8 Ω)
 AC power in, DC power in (12V)

Dimensions (W x H x D):

512 x 361 x 213mm
 (20 $\frac{3}{8}$ " x 14 $\frac{1}{4}$ " x 8 $\frac{3}{8}$ "")

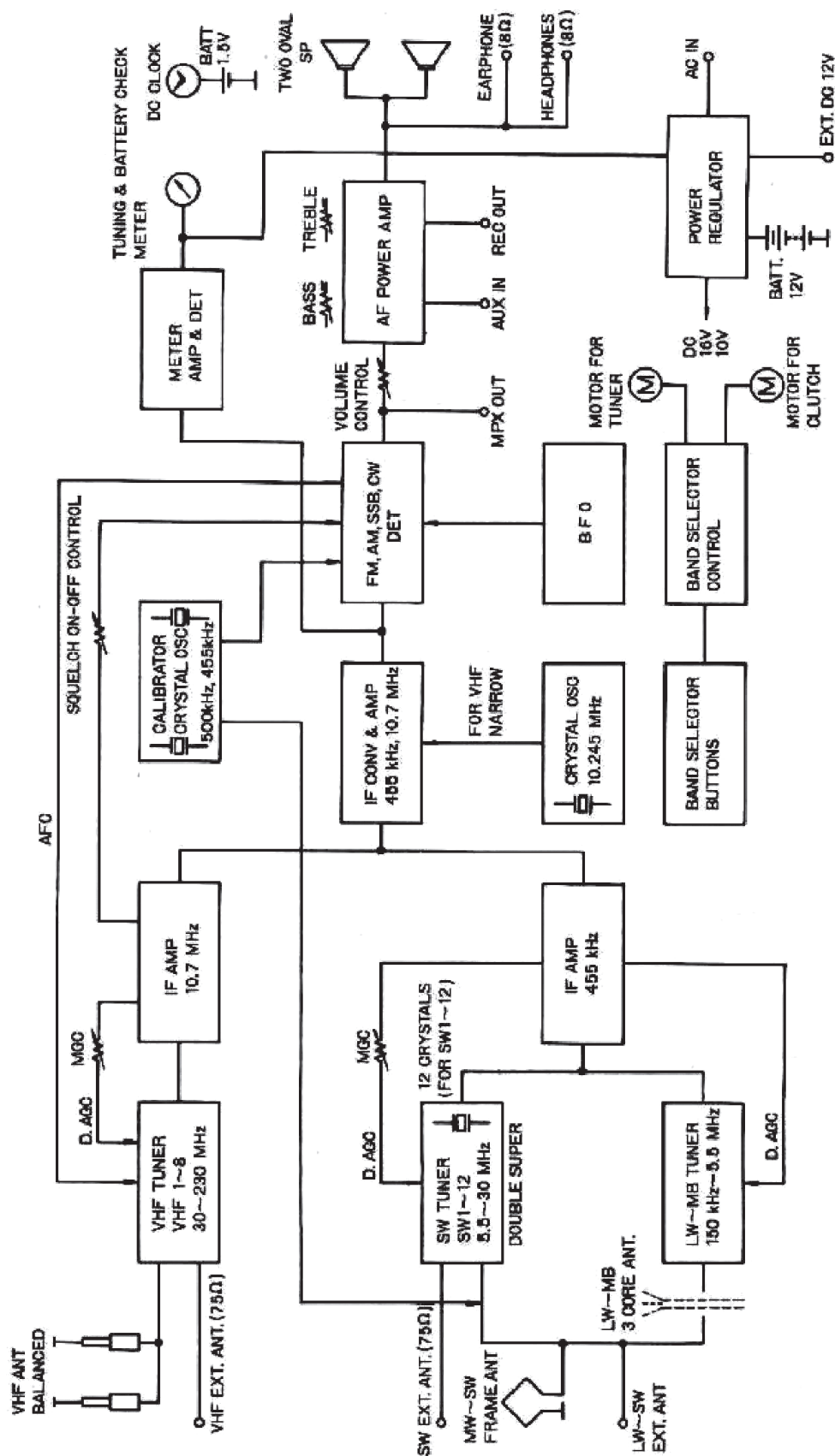
Weight:

21 kg (46 lb. 5 oz.)
 without batteries

Specifications are subject to change without notice.

RF-8000

CIRCUIT BLOCK DIAGRAM



Schema "a blocchi" del Panasonic RF-8000.

FEATURES

[Radio Section]

- PLL (Phase-Locked-Loop) synthesizer FM/LW/MW/SW world-wide receiver.
- Direct-access tuning
- This function allows a broadcast to be received immediately simply by depressing the key.
- 15-station preset tuning
- Direct touch tuning by 22 touch keys
- 3-step AM bandwidth selector
- USB, USB and CW operator
- AM frequency step selector
- Meter for FM center tuning, signal strength and battery check
- Separate bass and treble controls
- RF gain control
- Automatic noise limiter (ANL)
- Loudness switch
- Tweeter on/off switch
- Tuning speed selector (FAST/SLOW)
- 30-LED frequency indication

[Clock section]

- 7-day programmable timer
- The programming function makes it possible to set any desired frequency (FM, LW, MW or SW) to be received at any desired time.
- LCD quartz clock for month, date, day of the week indication
- Battery back-up for clock and memory
- Dual Time Display
- 12/24 HR. Display
- Time Signal

Tuning

Frequency Step:	Fast	Slow
SSB/CW	500 Hz	100 Hz
AM 100/500 Hz	500 Hz	100 Hz
FM	5 kHz	1 kHz
FM	1/5 kHz	50 kHz
Tuning Speed Ratio:	Fast:Slow=5:1	

Preset Memory

Number of Preset:	15-Station Preset
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Clock/Timer/Calendar

Type:	LCD Quartz Clock/7-day Programmable Timer
Function:	Real Time (Hour, Minute, Second) Calendar (Month, Date, Day) Dual Time Time Signal Sleep 12/24 Hour Setting DC Timer out Control 8 Automatic Reception Mode

Selectivity:	WIDE	MED.	NARROW
Image Interference Ratio:	±2.4 kHz (-6 dB) ±5 kHz (-60 dB) ±1.6 kHz (-60 dB) ±3.2 kHz (-60 dB) ±1.2 kHz (-60 dB) ±2.3 kHz (-60 dB)	1st 100 dB	2nd 70 dB

FM

Frequency Range:	87.5~108 MHz
Type:	Single Superhetrodyne with Phase-Locked-Loop Synthesizer
IF:	10.7 MHz
Sensitivity:	1.5 μ V/75 Ω (-3 dB, Limit. Sens.) 2 μ V/75 Ω (S/N 26 dB)
Two-Signal Selectivity:	70 dB ($\pm$ 400 kHz)
Image Interference Ratio:	60 dB (at 68 MHz)

Frequency Display

Display Type:	LCD (Liquid Crystal Display)
Precision:	Direct Readout to 100 Hz for SSB/CW/AM
Number of Figures:	0 digits
Frequency Stability:	Within 100 Hz during any 60 minutes after warm-up time

2. SPECIFICATIONS

LW/MW/SW (1.6110~2.9009 MHz)

Frequency Range:	LW 150.0~420.0 kHz (2000~714.3 m) MW 520.0~1610.9 kHz (576.9~186.2 m) SW 1.6110~2.9009 MHz (186.2~103.4 m)
Type:	Single Superhetrodyne with Phase-Locked-Loop Synthesizer
IF:	455 kHz
Sensitivity:	S/N 6 dB LW 1 μ V MW 1 μ V SW 1 μ V
Selectivity:	WIDE $\pm$ 2.4 kHz (-6 dB) MED. $\pm$ 5 kHz (-60 dB) NARROW $\pm$ 1.6 kHz (-60 dB) $\pm$ 3.2 kHz (-60 dB) $\pm$ 1.2 kHz (-60 dB) $\pm$ 2.3 kHz (-60 dB)
Image Interference Ratio:	LW 120 dB (at 200 kHz) MW 80 dB (at 1000 kHz) SW 60 dB (at 2.3 MHz)

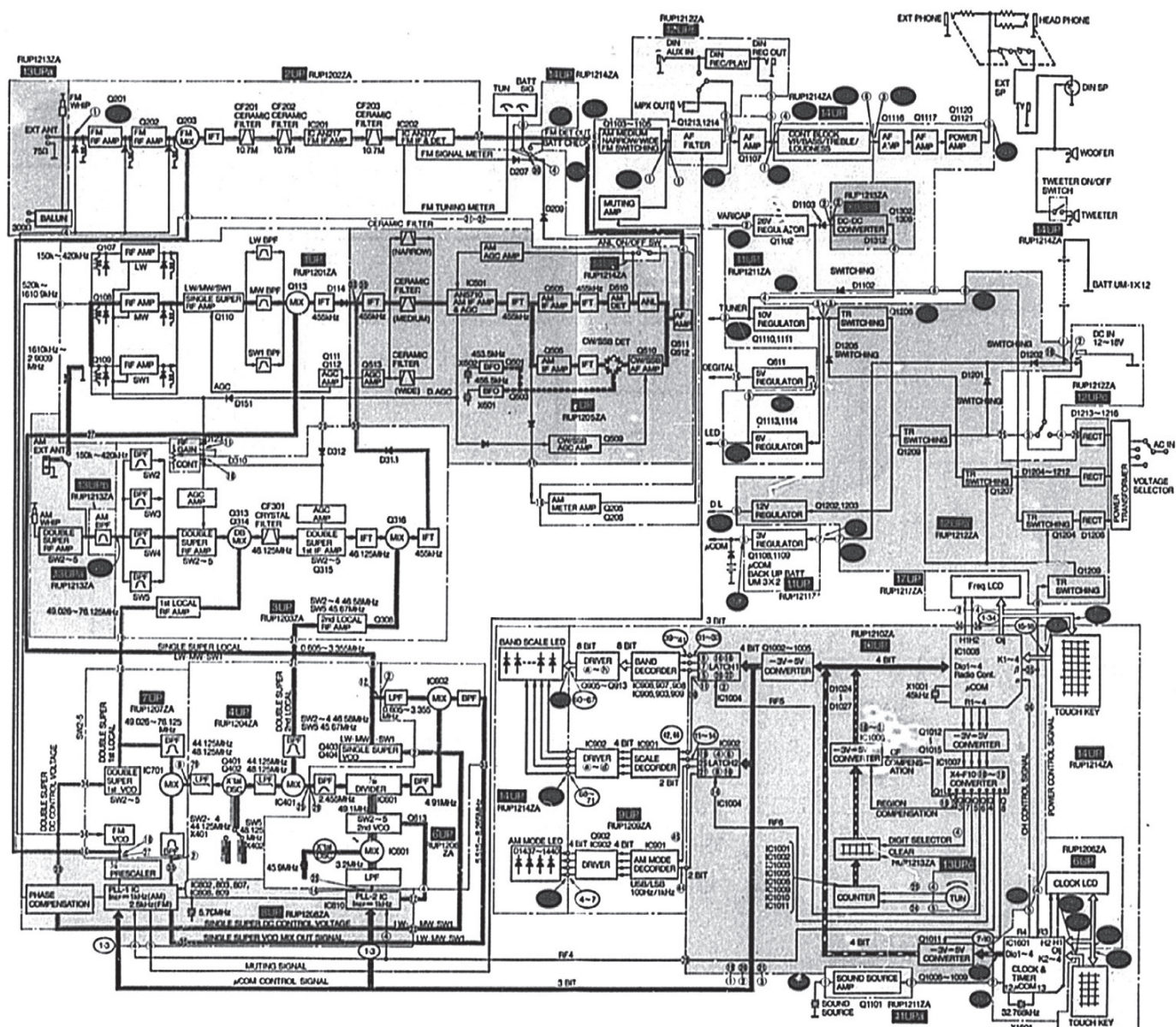
SW (2.9010~30.0000 MHz)

Frequency Range:	2.9010~30.0000 MHz (103.4~10 m)
Type:	Double Superhetrodyne with Phase-Locked-Loop Synthesizer
IF:	1st IF 46.125 kHz 2nd IF 455 kHz
Sensitivity:	SW 0.5~1 μ V (S/N 6 dB) SSB/CW 0.2 μ V (S/N 6 dB) (Modulation 400 Hz, 30%, for 50 mW)

for Memory & Clock DC in 12~18 V

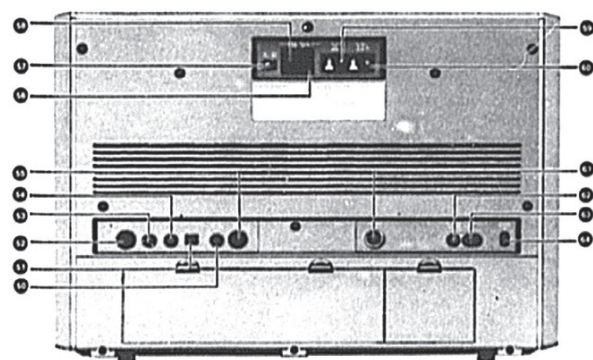
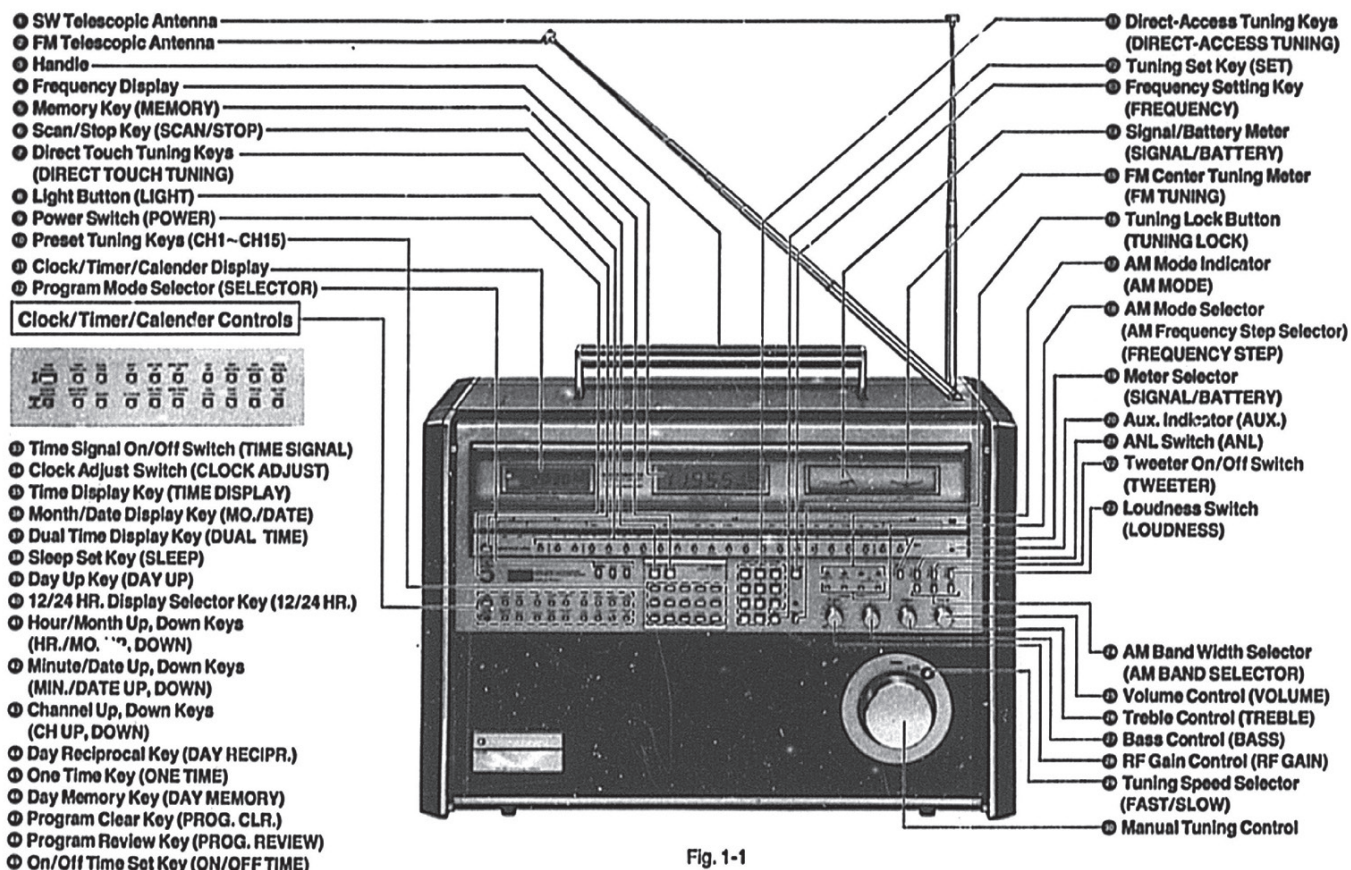
Power consumption:	35 W
Jacks:	Earphone out (3.5 ϕ) Headphone out (6 ϕ) Rec. out (3.5 ϕ , 8 ϕ) Rec. out (DIN, 8 ϕ) AUX in (3.5 ϕ , 570 k Ω) AUX in (DIN, 570 k Ω) MPX out (3.5 ϕ , 5 k Ω) External Speaker out (3.5 ϕ , 4~8 Ω) External Speaker out (DIN, 4~8 Ω)
DC In	AC In
DC Timer out	FM Whip Antenna 100 cm
Ext. Ant. (one-touch, 75 Ω)	Ext. Ant. (DIN, 300 Ω)
LW Ferrite Core Antenna 120 ϕ ×200 mm	MW/SW (1.6110~2.9009 MHz)
Ferrite Core Antenna 120 ϕ ×200 mm	SW (2.9010~30.0000 MHz)
Whip Antenna 150 cm	LW/MW/SW
External Antenna (one-touch, 75 Ω)	External Antenna (DIN, 75 Ω)
Dimensions:	520×382×208 mm (20-1/2"×14-1/4"×8-1/8")
Weight:	20.3 kg (44 lb, 14.1 oz)
	without batteries

Specifications subject to change without notice.



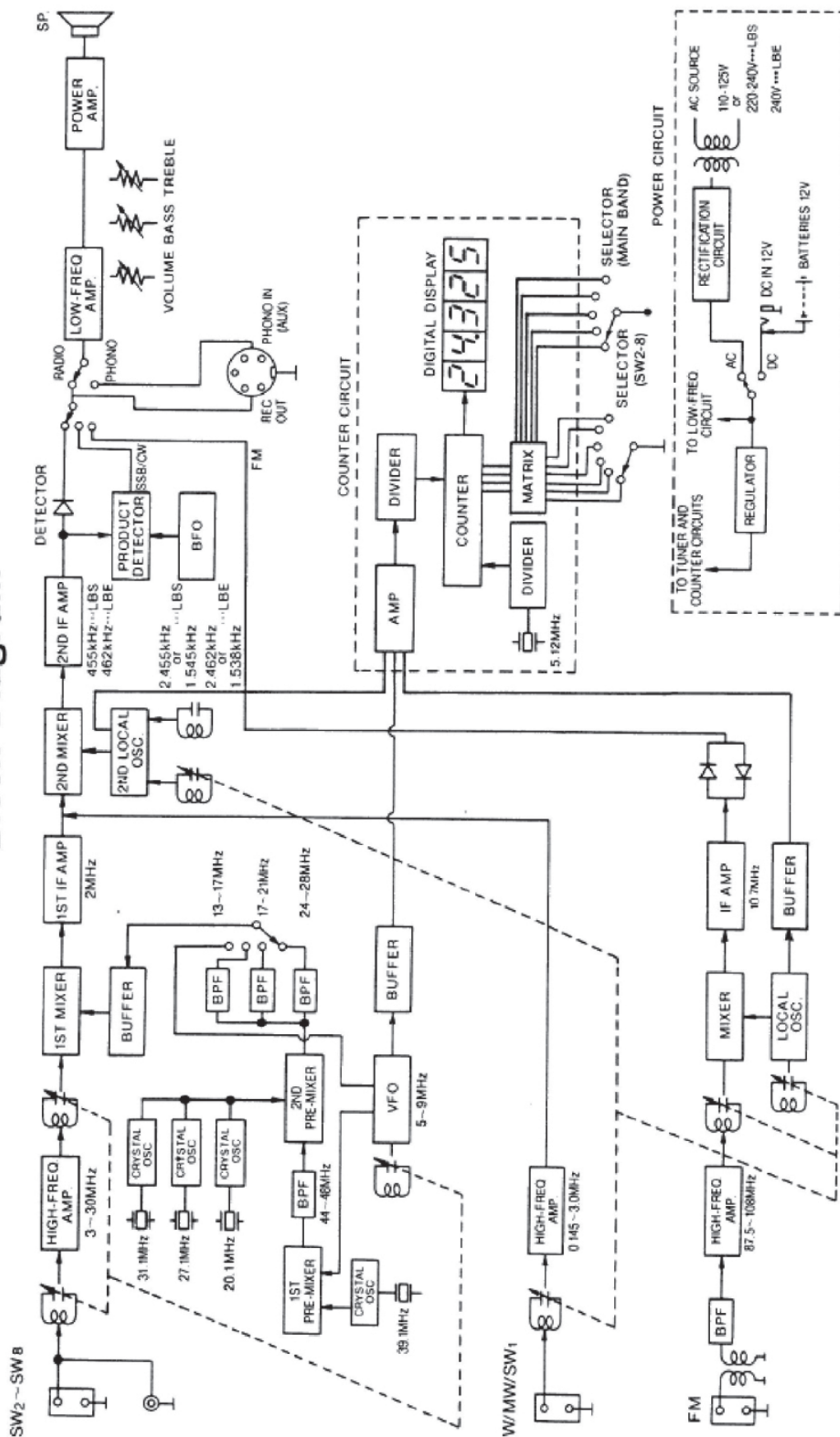
Schema "a blocchi" del Panasonic RF-9000

LOCATION OF CONTROLS



I controlli del Panasonic RF-9000.

Block Diagram



Schema "a blocchi" del Panasonic RF-4900/DR49.

The diagram illustrates a portable FM/AM receiver circuit. It features a telescopic antenna input, followed by a series of amplifiers and mixers. The circuit includes a digital frequency display (FL301) showing MHz and KHz. Other notable components include a DC-DC converter, a speaker output, and various control elements like switches and potentiometers. The schematic is densely packed with component labels and connection lines, indicating a highly integrated design.

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