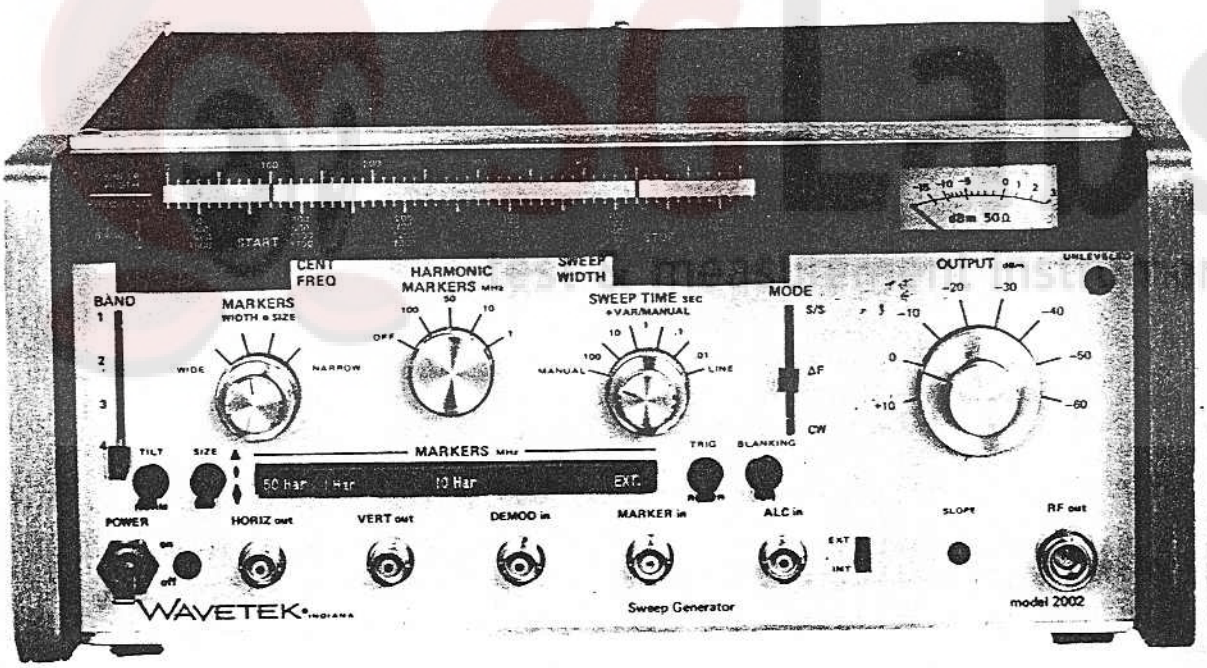
INSTRUCTION MANUAL

MODEL 2002

SWEEP/SIGNAL GENERATOR



WAVETEK INDIANA INC.

66 N. FIRST AVENUE, P.O. BOX 190

BEECH GROVE, INDIANA 46107

317-783-3221

GENERAL INFORMATION

1.2 SPECIFICATIONS

1.2.1 FREQUENCY

OPERATING MODES

Start/Stop - Δf - CW

RANGE

1 to 2500 MHz in four bands
1-500/500-1000/1000-1500/1500-2500

SWEEP WIDTH

Continuously adjustable from 200 kHz to 500 MHz in the Δf mode or 200 kHz to full band in the Start/Stop mode.

MODE			
CW	Δf		S/S
	CENT	SWP WIDTH	
10	10	15	15 MHz
20	20	30	30 MHz

ACCURACY AT 25° C

Bands 1, 2, 3
Band 4

ACCURACY VS TEMP

Bands 1, 2, 3
Band 4

500 kHz/°C
1 MHz/°C

DISPLAY LINEARITY

FREQUENCY SCALE calibrated in 10 MHz increments for bands 1, 2, and 3, and 20 MHz increments for band 4. Δf sweep width is calibrated in 10 MHz intervals.

1%

SPURIOUS SIGNALS

SIGNAL FREQUENCY	SPURIOUS SIGNAL LEVEL
HARMONICS	
1 to 10 MHz	-20 dBc
10 to 1000 MHz	-30 dBc
1000 to 2500 MHz	-28 dBc
NON HARMONICS	
1 to 500 MHz	-35 dBc (1 to 500 MHz)
1 to 500 MHz	-30 dBc (full range)
500 to 2500 MHz	none detectable

RESIDUAL FM (CW MODE)

Bands 1, 2, 3	<10 kHz peak to peak
Band 4	<20 kHz peak to peak

DRIFT

Bands 1, 2, 3	<100 kHz/5 min.
	<2 MHz/8 hr.
Band 4	<200 kHz/5 min.
	<4 MHz/8 hr.

(At constant temperature after 1 hr. warm-up, and allowing a 5 minute stabilizing period after a frequency change.)

BLANKING

A front-panel switch enables the RF output to be removed during the sweep retrace time to provide a zero volt base line.

1.2.2 RF OUTPUT

IMPEDANCE	50 ohms
SWR	Less than 1.5:1 with insertion loss of 10 dB from STEP ATTENUATOR Less than 1.3:1 with insertion of 20 dB or more from STEP ATTENUATOR.
MAXIMUM LEVEL	+13 dBm
ATTENUATION	Output continuously adjustable from +13 to -77 dBm. 70 dB in 10 dB steps plus a 20 dB VERNIER.
ACCURACY	STEP ATTENUATOR: 3% of attenuation (maximum error at 70 dB = ±2.1 dB). VERNIER ATTENUATOR: ±.5 dB over top 13 dB of range, lower 7 dB is unspecified.
FLATNESS AT +13 dBm OUTPUT	±0.5 dB
OUTPUT CONNECTOR	Type N
EXTERNAL LEVELING	An external negative monitor signal, between .2 and 2 volts may be used to level the RF output.

1.2.3 SWEEP

SWEEP MODES	Repetitive sweep Single sweep Externally triggered sweep Manual sweep Line locked sweep
SWEEP TIME	Continuously variable from less than 10 ms to over 100 seconds, in four decade steps plus vernier.
HORIZONTAL OUTPUT	Zero to +10 volts. Impedance 10 kΩ.

1.2.4 MODULATION

See Section 1.2.6, Remote Programming.

1.2.5 MARKER SPECIFICATIONS

TYPE	Birdy by-pass.
EXTERNAL	Front-panel BNC connector accepts external CW signal for conversion to a birdy marker. Input level: 100 mV into 50 ohms. Front-panel on/off control is provided.