FUNCTION GENERATOR
INSTRUCTION MANUAL

The instrument is an accurate testing instrument. It can output the function wave-form such as sine wave, square wave, rectangle wave, sawtooth wave and triangle wave. And the frequency and amplitude can be adjusted continuously. It is ideal equipment for engineer, electric lab, product line and teaching.

1、MAIN FEATURE:

1)、It's convenient to operate and use with high intelligence for using the single microprocessor to control running and displaying.

2)、Large scale single integrated accuracy function generator leads to super performance.

3)、Designed by large scale integrated circuit to insure the high reliability and high stability.

2、TECHNICAL PARAMETER

1)、Output frequency

Frequency range: 0.2Hz~2MHz ; seven ranges

①0.2Hz-2Hz

②2Hz-20Hz

③20Hz-200Hz

④200Hz-2kHz

⑤2kHz-20kHz

⑥20kHz-200kHz

⑦200kHz-2MHz

2)、Output signal impedance: 50Ω

3)、Output signal wave-form:

sine wave, square wave, rectangle wave, sawtooth wave and triangle wave

4)、Output signal amplitude (peak-peak value):

non-attenuate (2Vp-p~20Vp-p)±20% continuously adjustable

attenuate 20dB (0.2Vp-p~2.0Vp-p)±20% continuously adjustable

attenuate 40dB (20mVp-p~200mVp-p)±20% continuously adjustable

The above are measured with load 1MΩ, the output signal amplitude will be half of standard at 50Ω load.

5)、Function output symmetry adjust scope: 20%~80% (±10%)

6)、Output signal features:

①sine wave distortion:＜2%

②triangle wave linear:＞99% (10%-90% of output amplitude)

③square wave rise edge times: less than 100nS (10%-90% of output amplitude)

④square wave fall edge times: less than 100nS (10%-90% of output amplitude)

⑤square wave rise and fall pulse less than or equal to 5%Vo (50Ω load).

⑥Test condition: frequency output: 10kHz, amplitude: 5Vp-p,warm-up for 20minutes.

7)、Output signal frequency stability: less than ±0.1%/min (test condition is the same as the above)

8)、Amplitude display (only for 50Ω load, at 1MΩ load, the real output amplitude is double of the displaying value):

①Display digits:2/3 digits (decimal point automatic select place).

②Display units: Vp-p or mVp-p.

③Display errors: Vo±10%±1d (Vo refers to the true value of output signal)

④Resolution: non-attenuate 0.2Vp-p

20dB attenuate:20mVp-p

40dB attenuate:2mVp-p

9)、Frequency display:

①display range: 0.2Hz-2MHz

②display effective digit: four or five digits.

10)、Measurement errors: ≤0.5%

11)、Time base: frequency: 12MHz

frequency stability:$\pm 5\times 10^{-5}$

12)、Working temperature: 0℃~40℃

13)、Size: 270mm x 215mm x 100mm

14)、weight: approx.1.6kg.

15)、Power applicability and consume: 110V/220V±10% 50Hz/60Hz±5%,
power consume ≤15W

3、OPERATION SPECIFICATION:

a、front panel description (see fig.1)

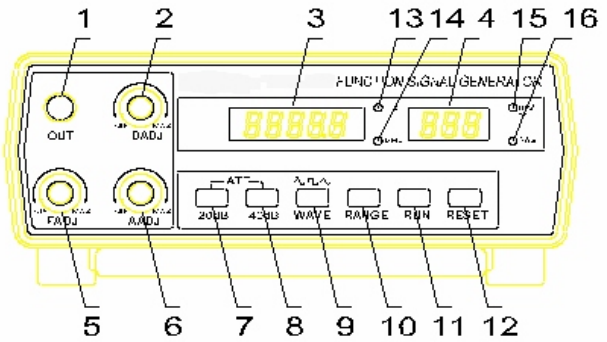

Fig.1

(1)Frequency output terminal: the max. output amplitude for function signal is 20Vp-p (1MΩload)

(2)Duty-cycle adjust: adjust range is 20%~80%

(3)Frequency display window: 5-digit LED numerals, the unit is Hz or kHz, displays separately by two lightening diodes.

(4)Amplitude display window: 3-digit LED numerals, the unit is Vp-p or mVp-p, displays separately by two lightening diodes.

(5)“FADJ”knob: It is frequency adjust knob, and micro-adjust the frequency in every frequency range.

(6)“AADJ”knob: it is amplitude adjust knob and adjust range is 20dB.

(7)20dB attenuate key: press it, the signal will be attenuated 20dB and output

(8)40dB attenuate key: press it, the signal will be attenuated 40dB and output

(9)Wave-form selector: press it down, the display could be 1~3 recycling display by the front 5-digit LED.“1”means sine wave;“2”means square wave and“3”means triangle wave. In fig. 3, it means sine wave.

(fig. 3) | 1 | | |

(10)“RANGE”: it is frequency range selector. The last digit of 5-digit LED displays 1~7 ranges. In fig.4 it means NO.6

(fig. 4)

| | | 6 | | |

(11)“RUN”: press this button down when the others keys are set, the equipment begins to work and displays the frequency and amplitude

(12)“RESET”button: press this button down when something wrong can return to beginning.

(13)“Hz”indicator.

(14)“kHz”indicator.

(15)“mVp-p”indicator.

(16)“Vp-p”indicator.

b. back panel description: (see fig. 2)

(17)Ship-shape power switch

(18)220V/110V transform switch

(19)220V/110V power plug and fuse box
(build-in fuse: 500mA/ 250V)

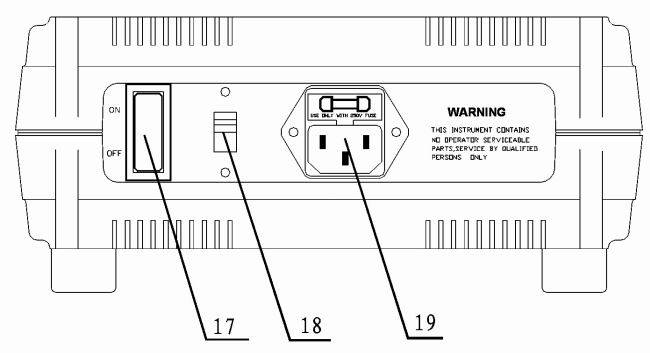

Fig.2

4. OPERATION

1)Switch on: Connect power cable to AC110V/220V power socket. Press the ship-shape switch.

2)Select proper frequency range. When pressing the button, the later of 5-digit LED recycling display in frequency display window displays the range 1~7.

3)Press wave-shape select button, the 5-digit LED window displays cycle: 1~3 (1 means sine wave, 2 means square wave, 3 means triangle wave).

4) Press RUN, the instrument works according to setting mode and displays frequency and amplitude of the output signal.

5) Adjust "FADJ", "AADJ" and DUTY-CYCLE knob according to requirement, connect your instrument and output terminal of the instrument by testing cable.

6) "OUT" terminal outputs the needed wave-form.

5. PRECAUTION

1) Do not operate the instrument in an explosive and humidity condition.

2) Do not operate and store the instrument in violent shock, dusty and strong magnetic place.

3) Switch the power switch to a proper position before turn the power on.

4) Preheat for at least 10 minutes before operation.

5) Do not open the case randomly.

CONTENTS