ML1643 FUNCTION GENERATOR

INSTRUCTION MANUAL

Contents

1. Introduction

ML1643 function generator can outputs sine、square、triangle、pulse、ramp、TTL、single pulse etc. Its signal frequency range is from 0.2Hz-2MHz. It can adjusts DC level、duty cycle, and displays the frequency with a 4-digit-LED meter. It can output a large power signal from the POWER terminal. It also can be used as a frequency counter.

2. Specifications

Waveform: Sine, Square, Triangle, Pulse, Ramp, Pulse, TTL

Frequency： 　 0.2Hz－2MHz 　(6 ranges)

　　　　　　　Display with 4-digits-LED

Freq. Error： 　±1%

Output Impedance: 　50Ω, ±10%

Output： 　　5mVp-p to 25Vp-p (open circuit)

Power Output: 　5W max.

Attenuator： 　　-20dB, -40dB, -60dB

DC Level： 　+10V～-10V, continuously variable, with Zero Offset SW

Duty Cycle： 　10%－90% Continuously Variable, with 50-50 Calibrated SW

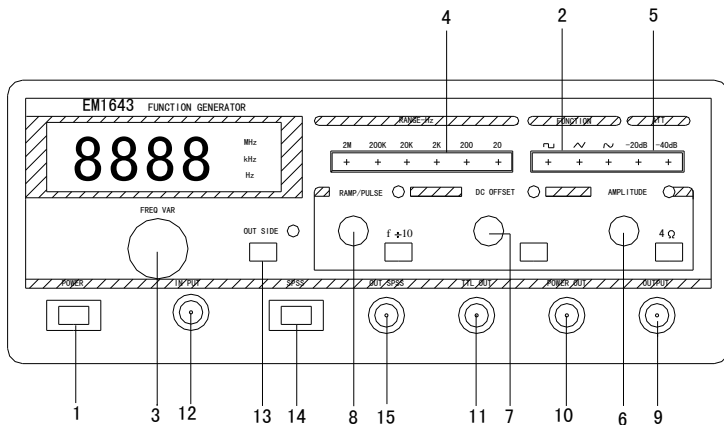Distortion： 　≤1%, THD from 20Hz to 20kHz (sine wave)

Rise Time： 　≤50ns

Pulse：　　　　　$\geqslant$3Vp-p (open circuit), Tr$\leqslant$25ns，For 20 TTL Load

Power：　　　　220V 　$\pm$10%, 50Hz$-$60Hz

Dimension：　240(W)$\times$90(H)$\times$280(D)

Weight：　　　　2.5kg

3. Function of panel controls

1. POWER：When this button is pushed in, the power is turned on and the power lamp lights.

2. FUNCTION：Selects the waveform to output

∿ ： Sine wave

⊓⊔ ： Rectangular wave

∧∨ ： Triangle wave

3. FREQ. VAR：Adjusts the frequency continuous in the range selected.

4. RANGE-Hz：Selects the frequency ranges of the signal

5. ATT：Attenuates the output signal for 20dB, 40dB or 60dB.

6. AMPLITUDE：Adjusts the amplitude.

7. DC OF SET：When the button is pushed in, the lamp lights, the DC component of signal is

adjustable; when the button is pushed out, the DC component is zero offset.

8. RAMP/PULSE：When the button is pushed in, the lamp lights, the ramp or the pulse time ratio can be adjusted from 10% to 90%; when the button is pushed out, the ramp or the pulse duty cycle is 50%.

9. OUTPUT: Outputs signals.

10. TTL OUT: Outputs rectangular waveform for TTL circuits.

11. POWER OUTPUT: Outputs a power signal when the POWER switch is turn on.

12. SPSS: push the button, a single pulse will be output from the OUT SPSS terminal.

13. OUTSIDE: when the button is pushed in, the indicator lights the 4-digit-LED meter can be used

as a frequency counter. The measured signal should be input from the INPUT terminal and the amplitude of measured signal should be from 0.5V to 5V.

4. Operation

1. Connect power cable to the AC input, turn on the power switch.
2. Select a function switch and push in it.
3. If you want to output a pulse or ramp wave, push in the PULSE/RAMP button and adjust the pulse time or ramp ratio, or push it out.
4. If you want to output a little signal, push in the ATT buttons.
5. Adjust the Amplitude until adaptable.
6. If you want to set the DC offset push in the DC

offset button and adjust the DC offset to a convenient level or push it out.

7. TTL level signal is output from the "TTL" terminal.

8. If you want to get a power signal, please turn on the POWER switch. Then the POWER OUTPUT terminal will output a power signal.

5. Caution

1. Check line voltage prior to connect the instrument to the power source.

2. Don't connect a voltage higher than 10V(DC+AC) to the output terminal、 TTL output terminal or VCF input terminal.

6. Accessories

The standard accessories supplied are as follows:

- Instrument   1
- Cable with BNC/Insulated Clips Terminations   1
- Power cord   1
- Instruction manual   1