

Function Generators

DT Workshop Equipment Reference — D&T / STEM resource for school workshops | Electronics & Prototyping



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A function generator produces reproducible waveforms - sine, square, triangle and pulse - at set frequencies and amplitudes, used to drive circuits, test amplifiers and demonstrate signal behaviour. Together with an oscilloscope it forms the basic signal lab bench.

Key Features

- Frequency ranges from 0.1 Hz to 10-25 MHz
- Sine, square, triangle and pulse outputs
- Amplitude and DC offset controls
- Frequency counter input on many models
- Sweep and modulation modes

Typical Uses in the Workshop

- Drive audio circuits with known signals
- Test filters and amplifier frequency response
- Provide clock and pulse signals for logic
- Demonstrate waveform shapes and frequency

Safe Operation

1. Set the waveform, frequency and amplitude
2. Connect the output to the circuit under test
3. Confirm the signal on an oscilloscope
4. Keep the output scaled within circuit limits
5. Turn the output off before changing loads

SAFETY NOTES

- Never connect a generator to mains or high voltage
- Keep output levels below circuit ratings
- Check leads and BNC connections for damage
- Do not short high outputs for long
- Switch off before repatching

Maintenance & Consumables

- Keep the output connectors clean
- Check leads for breaks at the connectors
- Calibrate frequency and amplitude yearly
- Store in its case or cover
- Update firmware only if the maker supports it

Specification & Buying Notes

A 5-10 MHz DDS function generator with sweep covers school electronics. USB models double as arbitrary waveform sources. Buy with quality BNC leads and a copy of the manual.