

# Developer Breadboard Kit multicom<sup>PRO</sup>

RoHS  
Compliant



## Soldering Fume Extractor, Esd, 110V, 22W

### Description

This product is a Desktop-type Solder Smoke Absorber can be operated vertically or horizontally, can remove soldering smoke and fumes quickly, safely and quickly. Activated carbon filter is made of highly activated carbon, strong absorb, and has LED lighting function.

### Features

- Desktop-type with vertical and horizontal dual-use.
- Remove soldering smoke and fumes quickly and safely.
- Highly activated carbon material with strong absorb function.
- LED lighting function.

### Specifications

Power Consumption : 220V AC/50Hz/16W  
110V AC/60Hz/22W  
Max. Suction Capacity : 1.03m<sup>3</sup>/min / 3ft<sup>2</sup>/min  
Dimensions : 103.3mm × 161.8mm × 217.2mm  
Filter size : 142mm × 142mm × 10mm

### Test Data

Test Item	Test Data
Air volume (vertical) m <sup>3</sup> /min	1.03
Air Volume (horizontal) m <sup>3</sup> /min	0.4
Air flow (vertical) m <sup>3</sup> /min	1
Air flow (horizontal) m <sup>3</sup> /min	2.6
Maximum suction capacity m <sup>3</sup> /min	1.03
Maximum suction capacity ft <sup>2</sup> /min	3

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## Handheld With Bluetooth

### Features

- 3-5/6 bit resolution
- Data Logger, Multimeter and Thermometer function
- True RMS test supported
- BLE 4.0 wireless transmission, more stable, less power consumption
- Build-in offline record function
- Chart and Diagram mode helps to analyse the data tendency
- Support NCV non-contact voltage sense
- Widely supported on Android, iOS and Windows

### Performance Specifications

Parameters	Measurement Range	Resolution	Accuracy
DC Voltage	60.00mV / 600.0mV (EU)	0.01mV	±(0.5%+2 dig)
	600.0mV / 6.000V / 60.00V / 600.0V	0.1mV	
	1000V	1V	±(0.8%+2 dig)
AC Voltage	6.000V / 60.00V / 600.0V	1mV	±(0.8%+3 dig)
	750V	1V	±(1%+3 dig)
DC Current	μA	60.00μA / 600.0μA	±(0.8%+2 dig)
	mA	60.00mA / 600.0mA	
	A	20.00A	±(1.2%+3 dig)
AC Current	μA	60.00μA / 600.0μA	±(1%+3 dig)
	mA	60.00mA / 600.0mA	
	A	20.00A	±(1.5%+3 dig)
Resistance	600.0Ω / 6.000kΩ / 60.00kΩ / 600.0kΩ / 6.000MΩ	0.1Ω	±(0.8%+2 dig)
	60.00MΩ	0.01MΩ	±(2%+3 dig)
Capacitance	60.00nF / 600.0nF / 6.000μF / 60.00μF	0.01nF	±(2.5%+3 dig)
	600.0μF / 6.000mF / 60.00mF	0.1μF	±(3%+5 dig)
Frequency	9.999Hz / 99.99Hz/999.9Hz / 9.999kHz / 99.99kHz / 99.9kHz / 9.999MHz	0.001Hz	±(0.8%+2 dig)
Duty Ratio	0.1% to 99.9% ( typical value: Vrms=1V, f=1kHz)	0.1%	±(1.2%+3 dig)
	0.1% to 99.9% (≥1kHz )		±(2.5%+3 dig)
Temperature (°C/°F)	- 50°C to +400°C	1°C	±(2.5%+3 dig)
	-58°F to +752°F	1°F	±(4.5%+5 dig)
Display	5999		
Frequency Response	40Hz to 1000Hz		
Shift Rate	3 times/s		

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## Characteristics

Bluetooth Module	√
True RMS	√
Diode Test	√
Auto Power-off	√
On-off Warning	√
Low-battery Indicator	√
Data Hold	√
Relative Measurement	√
Flashlight	√
Auto Ranging	√
LCD Backlight	√
Automatic-manual Range Selection	√
Input Protection	√
Input Impedance	≥10MΩ
Safety Compliance	600V CATIV, 1000V CATIII
NCV	√
Dimension (W×H×D)	196mm × 88.5mm × 56mm
Weight (without package)	0.3kg
Standard Accessories Included	Multimeter Lead, K-type Thermocouple, Manual, Bolt Driver, Alligator Clip
Optional Accessories	9V Battery
Warranty	12 months

## Oscilloscope, 25Mhz, 2Ch

### Features

- Up to 100MHz bandwidth, and max. 1GS/s real-time sample rate
- 2 Channels
- Max 10M record length
- Friendly UI : FFT, or X-Y, and waveform 2 views displayed on the same screen
- Multi-trigger option: edge, video, slope, pulse, and alternate
- USB isolation - less signal interference, more PC protection
- USB bus powering, and LAN remote control (optional)
- Ultra-thin body design, easy portability
- SCPI supported
- LabVIEW supported (only in MP720019 US)

### Oscilloscope Specifications

Parameters	MP720016 US
Bandwidth	25MHz
Channel	2 Analogue, 1 Ext Trigger

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Parameters	MP720016 US	
Sample Rate	100MSa/s	
Horizontal Scale (s/div)	5ns/div ~ 100s/div, step by 1~2~5	
Rise Time	≤14 ns	
Record Length	5K	
Input Coupling	DC, AC, GND	
Input Impedance	1MΩ±2%, in parallel with 10pF ±5pF	
Channels Isolation	50Hz : 100 : 1, 10MHz : 40 : 1	
Max Input Voltage	40V (PK - PK) (DC+AC, PK - PK)	
DC Gain Accuracy	±3%	
DC Accuracy	Average≥16: ±(3% reading + 0.05div) for ΔT	
Probe Attenuation Factor	1X, 10X, 100X, 1000X	
LF Respond (AC, -3dB)	≥5Hz (at input, AC coupling, -3dB)	
Sampling Rate / Relay Time Accuracy	150ps	
Interpolation	sin(x) / x	
Interval (ΔT) Accuracy (full bandwidth)	Single: ± (1 interval time + 100ppm × reading + 0.6ns), Average >16: ±(1 interval time + 100ppm × reading + 0.4ns)	
Vertical Resolution (A/D)	8 bits (2 channels simultaneously)	
Vertical Sensitivity	5mV/div ~ 5V/div	
Trigger Type	Edge, Pulse, Video, Slope, and Alternate	
Trigger Mode	Auto, Normal, and Single	
Trigger Level	±5 divisions from screen center	
Acquisition Mode	Sample, Peak Detect, and Average	
Line / Field Frequency (video)	NTSC, PAL, and SECAM standard	
Cursor Measurement	ΔV, and ΔT between cursors	
Automatic Measurement	Vpp, Vmax, Vmin, Vtop, Vbase, Vamp, Vavg, Vrms, Overshoot, Preshoot, Freq, Period, Rise Time, Fall Time, Delay A→B ↗, Delay A→B ↘, +Width, -Width, +Duty, -Duty	
Waveform Math	+, -, ×, ÷, invert, FFT	
Lissajous Figure	Bandwidth	Full bandwidth
	Phase Difference	±3 degrees
Communication Interface	USB 2.0	
Multi-function Interface	Signal Type	Synchronized input / output, Pass / Fail, external trigger input
	Level Standard	TTL
Power Supply	5.0V/1A	
Power Consumption	≤1.5W	
Dimensions (W × H × D)	170mm × 120mm × 18mm	
Device Weight	0.26 kg	
Standard Accessories Included	USB Cable, CD-Rom, Manual, Probes, Probe Adjust Tool	
Optional Accessories	Soft bag	
Warranty	12 months	

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## Power Supply, Bench, Prog, 1Ch, 5A, 30V; Power

### Application

Military R&D, Quality Inspection, Circuit Functional Testing, Automotive Circuit Testing, Education and Technical Training  
Electronic component testing and aging analysis, Monitoring battery charging curve.

### Specifications

Characteristic	MP710086 US
Channel	Single Channel Output
Total Output Power	150W
Channel Output	0V to 30V / 0A to 5A × 1-CH
Display	3.7 inch colour LCD Display
Dimension	117mm(L) × 194mm(H) × 295mm(D)
Weight	Approx. 5.6 kg
Interface	RS232 and USB

Note: The instrument must be operated continuously for more than 30 minutes at the specified temperature to ensure the following parameters.

Accessories Included : (UK / EU) or US Power Cord, Fuse, RS232 Cable, USB Cable and User Manual

Standard Warranty : 12 Months

Characteristic		MP710086 US
Rated Output (0°C to -40°C)	Voltage	0 to 30V
	Current	5A
Load Regulation	Voltage	≤0.01% +3mV
	Current	≤0.01% +3mA
Power Regulation	Voltage	≤0.01% +3mV
	Current	≤0.01% +3mA
Setting Resolution	Voltage	1mV
	Current	1mA
Read Back Resolution	Voltage	1mV
	Current	1mA
Set Point Accuracy (within 12 months) (25°C ±5°C)	Voltage	≤0.03% +10mV
	Current	≤0.1% +5mA
Read Back Resolution (25°C ±5°C)	Voltage	≤0.03% +10mV
	Current	≤0.1% +5mA
Ripple/Noise (20Hz - 20MHz)	Voltage (Vp-p)	≤4mVp-p
	Voltage (rms)	≤1mVrms
	Current (rms)	≤4mArms
Output Temperature Coefficient (0°C to +40°C)	Voltage	≤0.03% +10mV
	Current	≤0.1% +5mA
Read Back Temperature Coefficient	Voltage	≤0.03% +10mV
	Current	≤0.1% +5mA
Response Time		100µs
Storage		5 groups of data
Working Temperature		0 - 40°C

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## Digital Soldering Station, 80W, 120V

### Specifications

Input Voltage	: 100V AC to 120V AC 60Hz
Heater voltage	: 26V AC
Temperature range	: 150°C to 450°C
Temperature offset range	: ±50°C
Temperature stability	: ±2°C (in still air, no load)
Temperature adjustment	: 5 digits (Default)/1 digit (Fine-tuning)
Automatic stand-by time	: 1-120 minutes (Adjustable)
Automatic shutdown time	: 1-120 minutes (Adjustable)
Heater	: 60W High performance dual-core ceramic heater
Tip-to-ground impedance	: < 2Ω
Tip-to-ground voltage	: < 2mV

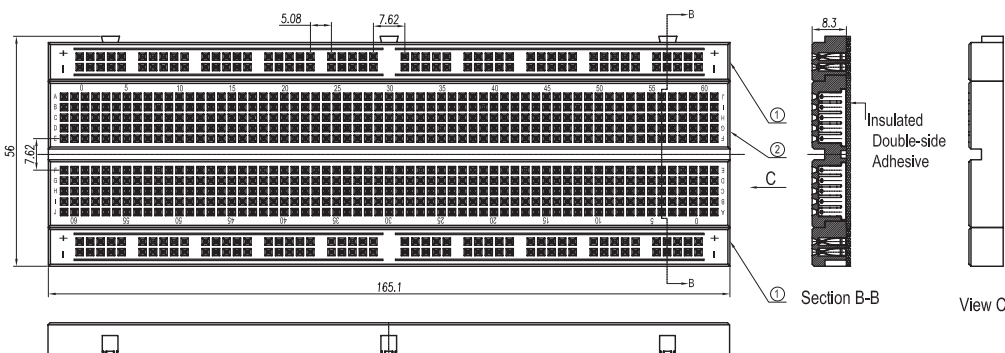
### Includes

Main Unit	1
Iron	
Iron stand	
Cleaning Sponge	

## Solderless Breadboard

### Specifications

Pitch	: 2.54mm
Terminal Strips	: 630 Tie-point
Distribution Strips	: 200 Tie-point
Rated Voltage / Current	: 300V / 3 to 5A
Insulation Resistance	: 500MΩ / DC500V
Withstanding Voltage	: 1,000V AC / 1 minute
Wire Range	: 29AWG to 20AWG
Temperature Range	: -25°C to +80°C
Strip Length	: 7mm to 8mm



1. Terminal Strip
2. Distribution Strips

Dimensions : Millimetres

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## Jumper Wire Assortment With Tips, 65 Pieces

### Specifications

65 pcs of 22 AWG Jumper Wire

Line of different colours can be re-used

Lengths and Quantity : 100mm 45pcs.  
150mm 10pcs.  
200mm 5pcs.  
250mm 5pcs.

## 4 Outlet 270J Surge Protector Strip

### Specifications

No. of Outlets : 4 Outlets  
Outlet Type : NEMA 5R to 15R  
Current Rating : 15A  
Supply Voltage V AC : 125V  
Cable Length : 3ft

## Part Number Table

Description	Part Number
Developer Breadboard Kit : Breadboard + Jumpers + PC Baced Scope + DMM + Bech Top PSU + Soldering Station + Fume Extracter + Outlet Strip	Developer Breadboard Kit.

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