



## REVISIONS

DOC. NO. SPC-F004 \* Effective: 7/8/02 \* DCP No: 1398

DCP #	REV	DESCRIPTION	DRAWN	DATE	CHECKD	DATE	APPRVD	DATE
1453	A	RELEASED	JWM	2/26/03	HO	2/28/03	JC	2/28/03
1741	B	220V Removed	JWM	6/22/04	JC	6/22/04	JC	6/22/04

**Frequency Counter:**

- Measuring Range:
  - Channel A: 1Hz to 20MHz  
LED display depending on gate time and input signal.  
At least 7 digits are displayed per each second of gate time
  - Channel B: 20MHz to 2.7GHz
- Input Sensitivity
  - Channel A: 20mV RMS Signwave for 100mVp
  - Channel B: 40mV RMS Signwave for 20MHz to 1.3GHz or 70mV RMS Signwave for 1.3MHz to 2.7GHz
- Maximum Input Voltage: 3V
  - Channel A: 35mVp-p
  - Channel B: 3mVp-p
- Input Impedance:
  - Channel A: 1 Megohm
  - Channel B: 50 Ohms
- Selectable Time Base: Channel A, B  
Switch Selectable

**Function Generator**

- Wave Forms: Sign, Square, Triangle, Skewed Sine, Ramp, Pulse, TTL Level
- Frequency: 1Hz to 10MHz
- VCF Voltage Level: 0 to 10VDC
- Output Impedance: Selectable 50 Ohms  $\pm 10\%$   
600 Ohms  $\pm 10\%$
- Output Amplitude: 2vpp to 20vpp open load  
1vpp to 10vpp (50 ohm load)
- Sign Wave: Distortion less than 1% (at 1KHz),  
Flatness + 0.3dB
- Square Wave: Symmetry less than +3% (at 1KHz)  
Rise & Fall time less than 150ns (at 1KHz)
- Triangle Wave: Linerity less than 1% (up to 100KHz),  
5% (100KHz to 20MHz)

**Digital Multimeter (True RMS)**

- Range of Measurement
  - DC Voltage: 4 (400mV to 400V)  $\pm 0.06\%$  + 3dgt  
1 (1000V)  $\pm 0.2\%$  + 3dgt
  - AC Voltage: 4 (400mV to 400V)  $\pm 0.8\%$  + 10dgt  
(40Hz ~ 10 KHz)  $\pm 2.5\%$  + 10dgt  
1 (750V)  $\pm 1.0\%$  + 10dgt  
(40Hz ~ 1KHz)
  - DC Current: 3 (40mA to 400mA)  $\pm 0.3\%$  + 3dgt  
1 (20A)  $\pm 0.8\%$  + 5dgt
  - AC Current: 3 (4mA to 400mA)  
(40Hz ~ 1KHz)  $\pm 1.5\%$  + 10dgt  
(1KHz ~ 10KHz)  $\pm 2.5\%$  + 10dgt  
1 (20A)  $\pm 1.5\%$  + 10dgt  
(40Hz ~ 1KHz)
  - Resistance: 3 (400 Ohms ~ 4 Megohms)  $\pm 0.2\%$  + 10dgt
  - Capacitance: 2 (40nF ~ 400nF)  $\pm 2.0\%$  + 3dgt  
2 (4 $\mu$ F ~ 200 $\mu$ F)  $\pm 3.0\%$  + 5dgt
  - Continuity:  $\leq 40$  Ohms
  - Diode: Test Current max. 1mA at 1K Ohms  
(forward DC voltage max. 3V)
  - Logic: Test current max. 100 $\mu$ A
  - hFE: Yes
  - Signal Output: 10Hz ~ 10.24KHz, C-Mos level between 2.7V & 3.3V

**Power Supply** (3½ digit LCD with Back-Light)

	Terminal 1	Terminal 2	Terminal 3
Output Voltage	0 ~ 30V	5V Fixed	15V Fixed
Output Amps	0 ~ 3A	2A	1A
Ripple	1mV max.	2mV max.	2mV max.
Output Current	2A/3A	2.2A	1.2A

**General Features**

Line Voltage: 110V/120VAC AT 50/60Hz  
Dimension: 14½"(W) x 6½"(H) x 12½"(D)  
Includes: AC Power Cord, Test Leads for DMM,  
& Owner's Manual

SPC-F004.DWG

TOLERANCES:  UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE FOR REFERENCE PURPOSES ONLY.	DRAWN BY:	DATE:	DRAWING TITLE:			
	Jeff McVicker	2/26/03	Multi-Function Universal System			
	CHECKED BY:	DATE:	SIZE	DWG. NO.	ELECTRONIC FILE	REV
	Hisham Odish	2/28/03	A	72-7290	22H6405.dwg	B
	APPROVED BY:	DATE:	SCALE: NTS		U.O.M.: INCHES [mm]	SHEET: 1 OF 1
	John Cole	2/28/03				

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