



# 2.7 GHz FREQUENCY COUNTER

Model : FC-2700

## 1. FEATURES

- \* TCXO (temperature compensated crystal oscillator) time base, high stability & accuracy.
- \* High sensitivity for the VHF & UHF frequency measurement, useful for the CB amateur.
- \* Wide measuring range up to 2.7 GHz.
- \* Used the exclusive Microprocessor IC offered the intelligent function: Frequency, Period, Multi resolution, Data hold, Relative measurement, Data record ( Max. , Min. , Average reading ).
- \* 8 digits, 18.3 mm large LCD .
- \* 0.1 Hz resolution for 10 MHz.
- \* LCD display for low power consumption & clear read-out even in bright ambient light condition.
- \* Power supply from battery or AC to DC 9V adapter.
- \* RS 232 PC serial interface.

## 2. SPECIFICATIONS

### 2-1 General Specifications

Display	18.5 mm ( 0.72 ) LCD (Liquid Crystal Display), 8 digits.	
Measurement	Frequency, Data hold, Relative, Memory ( max., min., average ), Period.	
Range	2.7 GHz	100 MHz to 2700 MHz
	500 MHz	10 MHz to 500 MHz.
	10 MHz	10 Hz to 10 MHz
	Period	10 Hz to 10 MHz
Resolution, Sample Time	Ref. the following "Table for Resolution & Sample Time".	
Sensitivity (Sensitivity set to high position)	10 MHz	30 mV rms. <i>Typical : 15 mV rms. ( 10 Hz to 9 MHz )</i>
	500 MHz	50 mV rms. <i>Typical : 25 mV rms. ( 30 MHz to 400 MHz )</i>
	2.7 GHz	50 mV rms. <i>( 100 MHz to 2.5 GHz )</i>
		<i>Typical : 35 mV rms. ( 300 MHz to 2.4 GHz )</i>
Max. function signal input & Period (Sensitivity set to normal position)	10 MHz	15 V rms.
	500 MHz	4 V rms.
	2.7 GHz	4 V rms. <i>( 400 MHz to 2.7 GHz )</i>
Over-input (Max. signal will not hurt the circuit)	<i>10 MHz &amp; Period range :</i> Max. 15 V rms.	
	<i>2.7 GHz &amp; 500 MHz range :</i> Max. 4 V rms.	
Time Base Stability vs. Temp.	1.5 PPM ( 10 °C to 30 °C ).	
Frequency Accuracy	± ( 2 PPM + 1 d ) <i>23 ± 5 °C, after calibration.</i>	
Time Base circuit	16.777216 MHz, TCXO (temperature compensated crystal oscillator).	
Input Connector	<i>10 MHz &amp; Period range</i> BNC connector.	
	<i>500 MHz range :</i> N coaxial connector.	
	<i>2700 MHz :</i> N coaxial connector.	
Case	Durable & strong ABS-plastic housing with handle.	
Operating Temperature	0 °C to 50 °C ( 32 °F to 122 °F).	
Operating Humidity	Less than 80%.	
Power Supply	6 x 1.5 V AA ( UM-3 ) battery or AC to DC 9V adapter.	
Power Consumption	<i>2700 MHz &amp; 500 MHz range :</i> Approx. DC 105 mA.	
	<i>10 MHz &amp; Period range</i> Approx. DC 45 mA.	
AC Adapter Power Input	Optional, 9V DC , 300 to 500 mA rating, central positive for socket.	
Dimension	280 x 210 x 90 mm ( 11.0 x 8.3 x 3.5 inch ).	
Weight	1200 g/0.27 LB (including battery).	
Standard Accessories	Instruction Manual ..... 1 PC.	
Optional Accessories	PB-21	Direct probe with BNC connector & alligator clip pairs, available for 10 MHz range
	BB-22	Direct probe with double BNC connector, available for 500 MHz & 10 MHz range.
	NN-23	Direct probe with double N coaxial connector, available for 500, 2700 MHz range.
	NB-24	N coaxial connector to BNC connector adapter.
Remark	Spec. tested under the environment RF Field Strength less than 3 V/M & frequency less than the 30 MHz only.	

**2-2 Table for Resolution & Sample Time**

Range	Gate Time Select	Resolution	Sampling Time
10 MHz	FAST	10 Hz	0.5 SEC
	SLOW	1 Hz	1.25 SEC
	SLOW (select 1)	0.2 Hz	6 SEC
	SLOW (select 2)	0.1 Hz	11 SEC
500 MHz	FAST	100 Hz	0.75 SEC
	SLOW	10 Hz	6 SEC
	SLOW (select 1)	20 Hz	5 SEC
	SLOW (select 2)	50 Hz	1.5 SEC
2700 MHz ( 2.7 GHz)	FAST	1000 Hz	0.5 SEC
	SLOW	100 Hz	2.75 SEC
	SLOW (select 1)	200 Hz	1.5 SEC
	SLOW (select 2)	500 Hz	0.75 SEC