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# Test & Measurement

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## **Complimentary Reference Material**

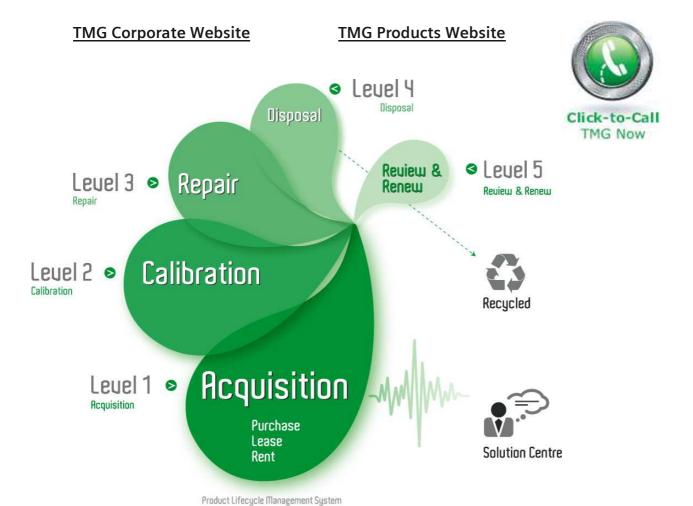
This PDF has been made available as a complimentary service for you to assist in evaluating this model for your testing requirements.

TMG offers a wide range of test equipment solutions, from renting short to long term, buying refurbished and purchasing new. Financing options, such as Financial Rental, and Leasing are also available on application.

TMG will assist if you are unsure whether this model will suit your requirements.

Call TMG if you need to organise repair and/or calibrate your unit.

If you click on the "Click-to-Call" logo below, you can all us for FREE!



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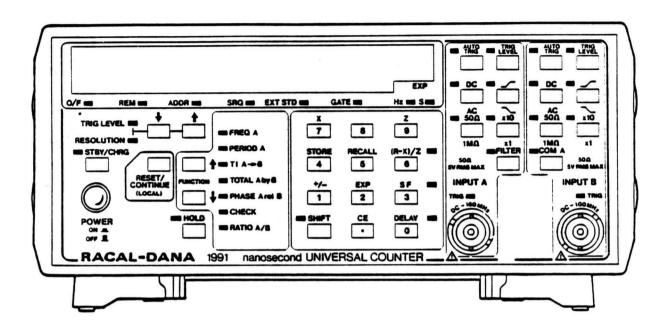


Figure 1.1 - Model 1991 Universal Timer/Counter

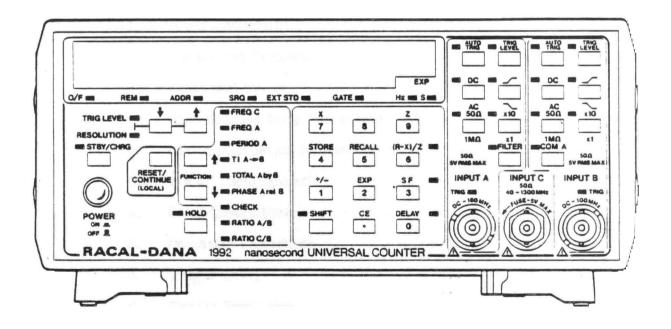


Figure 1.2 - Model 1992 Universal Timer/Counter

### INPUT CHARACTERISTICS (MODEL 1991)

Inputs	A	and	B
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Frequency Range:

Empered A.

DC to 160 MHz DC-coupled 10 Hz to 160 MHz AC-coupled

Input B:

DC to 100 MHz DC-coupled 10 Hz to 100 MHz AC-coupled

Sensitivity:

Sine Wave:

25 mV rms DC to 100 MHz 50 mV rms to 160 MHz

Pulse:

75 mV p-p, 5 ns min. width

Dynamic Range: (x1 attenuation) 75 mV to 5V p-p to 50 MHz 75 mV to 2.5V p-p to 100 MHz 150 mV to 2.5V p-p to 160 MHz

Signal Operating Range: x1 attenuation: x10 attenuation:

± 5.1V ± 51V

Input Impedance (nominal):
(x1 and x10 attenuation)

Separate Mode: Common Mode: 50 ohms or 1 Megohm  $//\leq$  45 pF 50 ohms or 1 Megohm  $//\leq$  55 pF

Maximum Input (without damage):

50 ohms: 1 Megohm: (x1 attenuation) 5V (DC + AC rms) 260V (DC + AC rms), DC to 2 kHz Decreasing to 5V rms, at 100 kHz and above

1 Megohm: (x10 attenuation) 260V (DC + AC rms), DC to 20 kHz Decreasing to 50V rms at 100 kHz and above

Coupling:

AC or DC

Low Pass Filter:

50 kHz nominal (Input A selectable)

Trigger Slope:

+ve or -ve

Attenuator:

x1 or x10. In Auto Trigger mode, attenuator selected automatically if necessary

#### Table 1.1 - 1991/1992 Specifications (Cont'd)

Trigger Level Range:

Manual:

xl attenuation: ± 5.1V in 20 mV steps x10 attenuation: ± 51V in 200 mV steps **Automatic:** 

± 51 V

Trigger Level Accuracy:

Manual and Automatic:

x1 attenuation: ± 30 mV ±1% of trigger level reading x10 attenuation: ± 300 mV ±1% of trigger level reading

Auto Trigger:

Frequency Range: DC and 50 Hz to 100 MHz

(Typically 160 MHz) Typically 150 mV p-p\*

Min. Amplitude (AC):

x10 attenuator Automatically selected if input signal

exceeds  $\pm$  5.1V or 5.1V p-p\*

Trigger Level Outputs:

(Rear Panel)

Range: ± 5.1V

Accuracy (Relative to true

trigger level)

x1 attenuation: ± 1% V output ±10 mV x10 attenuation: ± 1% V output ± 100 mV

Impedance: 10 kohm nominal

MODEL 1992: Specification for input characteristics is identical to that for the 1991 except for the following addition:

Input C

40 MHz to 1.3 GHz Frequency Range:

Sensitivity:

Sine Wave: <15 mV rms, 40 MHz to 1 GHz

<75 mV rms to 1.3 GHz

Dynamic Range: 15 mV rms to 5V rms to 1 GHz

75 mV rms to 5V rms to 1.3 GHz

Input Impedance: 50 ohms nominal AC-coupled

VSWR:  $\leq 2:1$  at 1 GHz

Maximum Input: 7V rms (fuse-protected)

Fuse located in BNC connector

Damage Level: 2.5W

<sup>\*</sup>See Definitions