



***Time Electronics***

## **1070 Decade Capacitance Box**

### **Technical Manual**



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*All Time Electronics' instruments are subject to continuous development and improvement and in consequence may incorporate minor detail changes from the information contained herein.*

## 1. Specification

<b>Capacitance Range:</b>	100pF to 10μF in 100pF steps
<b>Accuracy:</b>	± 1%, ±5 pF, measured at 1 kHz
<b>Residual Capacitance:</b>	38pF ±5 pF (2 terminal measurement)
<b>Maximum Operation Voltage:</b>	63V A.C. (50 Hz, RMS). 100V D.C.
<b>Power Factor:</b>	Better than 0.007 (at 1 kHz)
<b>Operating Temperature Range:</b>	-10°C to + 50°C
<b>Stability:</b>	1% per year maximum
<b>Dimensions:</b>	215 x 100 x 120mm (incl. protective boot) 200 x 75 x 110mm (without)
<b>Weight:</b>	1kg (incl. protective boot), 0.64kg (without)
<b>Optional Extras:</b>	A carrying case is available for field and industrial applications. (Code 9026)



If voltages above 70V DC or 30V AC (RMS) are present the optional terminal shroud kit (Part No. 9722) must be fitted.

## 2. Operation

The 1070 (model 9000) is a portable decade capacitance box, housed in a robust metal case and designed for industrial, laboratory and education requirements.

The unit incorporates a colour coding system which divides the setting into three groups:

$\mu\text{F}$  = Red

$\eta\text{F}$  = White

$\rho\text{F}$  = Yellow



The high accuracy obtained in the 1070 is achieved by the use of accurate, stable capacitors. A thumbwheel switch provides precision selection of output capacitance.

A multiple gold contact switch arrangement ensures that should a contact fail, there is always a back-up contact available.

To select a value simply dial up with the digit switches.

For example - to set 2.746 $\mu\text{F}$

- 2 on the 1 $\mu\text{F}$  bank
- 7 on the 100 $\eta\text{F}$  bank
- 4 on the 10 $\eta\text{F}$  bank
- 6 on the 1 $\eta\text{F}$  bank

Connection to the box can be made via 4mm shrouded plugs, as well as standard plugs, bare wires, and spade terminals. Two connections red and black connect to the capacitance and the grey terminal connects to the case for screening purposes. (new model safety terminals shown).



**Note:** Remember that all capacitance boxes have a residual capacitance, i.e. even when the dials are set to zero there is still a capacitance value across the output. If you are making precision measurements or recalibrating the instrument this residual value must be subtracted from all measurements.

### 3. Guarantee & Servicing

#### Guarantee Period

This unit is guaranteed against defects in materials and workmanship for a period of **one year** from its delivery to the customer.

We maintain comprehensive after sales facilities and the unit can, if necessary be returned to us for servicing. During this period, Time Electronics Ltd will, at its discretion, repair or replace the defective items. For servicing under guarantee, the instrument type and serial number must always be quoted, together with details of any fault and the service required. The purchaser of the instrument must prepay all shipping charges. Time Electronics Ltd will pay return shipping charges.

This guarantee is void if servicing has been attempted by an unauthorised person or agent. If, during the guarantee period, failure is due to misuse or abuse of the unit, the repair will be put in hand without delay and charged unless other instructions are received.

Please note that if you require a new UKAS Certificate during the warranty period, this will be charged at the current rate on our price list.

#### Service After Guarantee Period

Even after the guarantee period has expired, Time Electronics Ltd., can still service your instrument. As the manufacturer, we have the specialised knowledge needed to keep your instrument in peak condition and we also maintain a comprehensive spare parts service.

Please enclose details of the service required and your full company details including a contact name when returning for servicing.

#### Returning Instruments

When returning instruments, please ensure that they have been adequately packed, preferably in the original packing supplied. **Time Electronics Ltd will not accept responsibility for units returned damaged.** Please ensure that all units have details of the service required and all relevant paperwork.

Send the instrument, shipping charges paid to:-

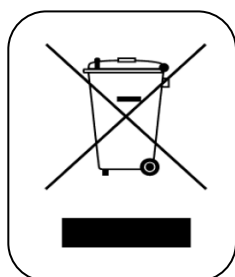
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#### **Disposal of your old equipment**

1. When this crossed-out wheeled bin symbol is attached to a product it means the product is covered by the European Directive 2002/96/EC.
2. All electrical and electronic products should be disposed of separately from the municipal waste stream via designated collection facilities appointed by the government or the local authorities.
3. The correct disposal of your old appliance will help prevent potential negative consequences for the environment and human health.
4. For more detailed information about disposal of your old appliance, please contact your city office, waste disposal service or return to Time Electronics.