

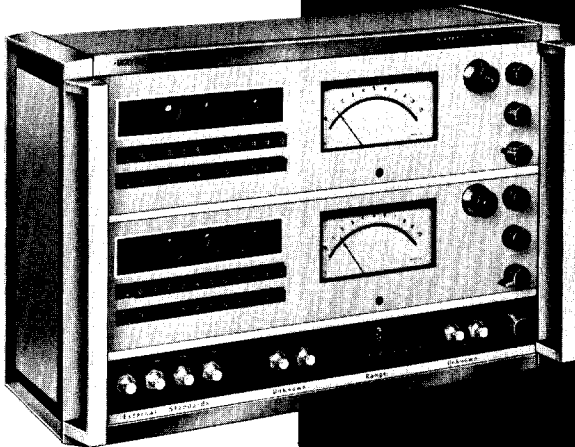


# Wayne Kerr CORPORATION

22 Frink Street, Montclair, New Jersey 07042 • (201) 746-2438

Innovations in Instrumentation ■ Measurement ■ Analysis ■ Synthesis ■ Control

## B641 Push-Button Bridge



- Measures Impedance to 0.1% Accuracy
- No Manual Balancing Required

Now, batch testing of components or the observation of changing values under laboratory conditions are made simpler and faster by the new Wayne Kerr B641 Universal Impedance Bridge.

Designed for the continuous measurement of any type of impedance or admittance, at audio frequencies, as low as 1 picofarad — to an accuracy of 0.1% — the B641 *eliminates manual balancing*, makes readout virtually automatic.

Operation is simple: once the Bridge is trimmed, it is necessary only to depress a series of front-panel range push-buttons in sequence until a reading is obtained on the electronically-balanced meters. Setting up the first one or two digits of this reading on push-button decade controls makes the balancing automatic; the meters can read the first, second, third or fourth digits.

The Bridge produces analog voltage proportional to the meter readings and BCD (in a 1248 code), for the nixie readout is available as an optional extra.

The B641 is based on the transformer-ratio-arm principle, giving stable performance even when components under test form part of a sub-assembly (such as a printed board or an encapsulated unit) or when long measurement leads must be used.

## SPECIFICATIONS

### Overall ranges:

C 0.002pF — 50000 $\mu$ F, G 20p $\bar{U}$  — 500 $\bar{U}$ , L 200nH — 5MH,  
R 2m $\Omega$  — 50000M $\Omega$

### Accuracy:

0.1% from 1 pF to 10 $\mu$ F, 10n $\bar{U}$  to 100m $\bar{U}$ , 1mH to 10kH, 10 $\Omega$  to 100M $\Omega$

### Discrimination:

0.01% of max. on all ranges

### Frequency:

Internal source/detector: 1592c/s ( $\omega = 10^4$ )  $\pm 1\%$ , External  
source/detector 50c/s — 20kc/s

### Comparator:

Bridge gives direct measurement of difference between Unknown  
and External Standard(s) of values 100pF — 100nF and 1 $\mu$  $\bar{U}$  — 1m $\bar{U}$   
(1k $\Omega$  — 1M $\Omega$ ).

### Outputs:

0 — 100mV (O.P. res. approx. 10k $\Omega$ ) from C and G meter circuits  
available at side panel. Pre-set adjustments for setting-up full-scale  
values.

### Ambient:

Operates over temperature range 0 — 40°C.

### Power supply:

115 or 230V, 40 — 60 c/s, or external 9V battery.

### Dimensions:

Width: 19 in. (48 cm.), Height 12 $\frac{1}{4}$  in. (31 cm.), Depth: 6 in. (15 cm.)

### Weight:

28 lb. (12.7 kg.)

**Note:** 1nH (1 nanohenry) = 10<sup>-9</sup>H

Optional (A): BCD (1248) outputs for Printers from each decade on both C and G.  
Outputs also provided from Range Switch.  
Optional (B): Center Zero meter.

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