



SCHEMATIC OF THE IT-2240 DIGITAL LC BRIDGE

SCHEMATIC NOTES

- REFER TO THE "CIRCUIT BOARD X-RAY VIEWS" FOR THE PHYSICAL LOCATION OF PARTS.
- REFER TO THE COMPONENT IDENTIFICATION SECTION FOR THE TOLERANCE AND RATING OF COMPONENTS SHOWN ON THE SCHEMATIC.
- ALL CAPACITOR VALUES ARE IN μ F UNLESS OTHERWISE INDICATED.
- ALL RESISTORS ARE 1/4-WATT, 5% UNLESS OTHERWISE SPECIFIED. ALL RESISTOR VALUES ARE IN OHMS (k = 1000, M = 1,000,000).
- SW101 TO SW104 ARE SHOWN IN THE "OUT" POSITION.
- SW1 IS SHOWN IN FULL CCW (200 pF) POSITION.
- ∇ INDICATES POWER GROUND.
- ∇ INDICATES LOW-NOISE GROUND.
- |||| INDICATES CHASSIS (EARTH) GROUND.
- \square INDICATES A WIRE CONNECTION TO THE CIRCUIT BOARD.
- --- INDICATES A JUMPER CONNECTION ACROSS A RESISTOR.
- --- INDICATES A TEST POINT OR TEST CONNECTOR.
- --- INDICATES A CIRCUIT BOARD FOIL SOLDER PAD.
- \circ WITH A NUMBER, INDICATES A SWITCH OR COMPONENT LUG CONNECTION.
- \circ INDICATES A WAVEFORM LOCATION. REFER TO THE "WAVEFORMS" SECTION OF THE MANUAL.
- CIRCUIT COMPONENT NUMBERS ARE IN THE FOLLOWING GROUPS:
 - 1-99 PARTS MOUNTED ON THE CHASSIS OR ACCESSED THROUGH THE FRONT PANEL.
 - 100-299 PARTS MOUNTED ON THE MAIN CIRCUIT BOARD.
 - 300-399 PARTS MOUNTED ON THE DISPLAY BOARD.
- \circ INDICATES A VOLTAGE FOR ANY FUNCTION OR RANGE SELECTED.
- \circ INDICATES A VOLTAGE DEPENDENT ON THE VOLTAGE APPLIED AT THE REAR PANEL "BIAS IN" TERMINALS.
- \circ INDICATES A VOLTAGE ON THE "L" OR "C" FUNCTIONS WITH THE "D" SWITCH PUSHED AND DEPENDENT ON THE DISSIPATION FACTOR (LOSS) OF THE MEASURED COMPONENT. "L" OR "C" VALUE DISPLAYED MUST BE BETWEEN 200 AND 2000 COUNTS ON RANGE SELECTED.

- \circ INDICATES A VOLTAGE ON THE "C" FUNCTION ON THE 200 nF RANGE WITH THE "D" SWITCH PUSHED AND MEASURING THE DISSIPATION STANDARD CIRCUIT (150 nF 820 Ohm).
- \circ INDICATES A VOLTAGE ON THE "L" OR "C" FUNCTIONS WITH THE "D" SWITCH OUT AND DEPENDENT ON THE RANGE SELECTED AND THE COMPONENT BEING MEASURED.
- \circ INDICATES A VOLTAGE ON THE "C" FUNCTION ON THE 200 nF RANGE WITH THE "D" SWITCH OUT AND MEASURING THE 150 nF CAPACITOR STANDARD.
- \circ INDICATES A VOLTAGE DEPENDENT ON THE A/D (U301) INPUT (V in, V ref) VOLTAGES.
- \circ INDICATES A VOLTAGE FOR AN "ON" OR "OFF" LOGIC SIGNAL OR DISPLAY SEGMENT.

NOTE: ALL VOLTAGES WERE MEASURED AT NOMINAL (120 VAC) LINE VOLTAGE WITH A 10 MEGOHM (OR HIGHER) INPUT IMPEDANCE DC VOLTMETER. VOLTAGES ARE MEASURED WITH RESPECT TO THE LOW NOISE (TP1) GROUND. VOLTAGES MAY VARY $\pm 10\%$ EXCEPT AS SHOWN.