1. SAFETY RULES

- Before operating this instrument, familiarize yourself with all instructions outlined in this manual.
- Always check to make sure that the function switch is set to the proper position.
- When making measurements, use CAUTION as dangerous voltages may be present in normally safe areas.
- Always disconnect the circuit under test prior to attaching test leads, as voltages may be present in capacitors even when the main power is disconnected.
- To avoid electrical shock, use CAUTION when working above 60V DC or 25V AC rms.
  Such voltages pose a shock hazard.
- Make sure all power (AC or DC) is disconnected (OFF) when making resistance (OHMS) measurements.
- Never make measurements with the battery cover OFF.
- Never fail to keep the maximum tolerable input.

2. FEATURES

- SOAR CORP. 80 pin LSI for low parts count that assures long term stability.
- Full line of optional accessories.
- Dust proof and rugged case.
- Safety test leads and jacks.
- Useful tilt stand.
- 3 terminal input jacks for easy use.
- Transient noise protection: 6000V
- Compact size and light weight.
- Large LCD display.
- Built in Data Hold and Range Hold function. (Model 3510)
- Low power consumption.

3. SPECIFICATIONS

3—1 General Specifications

Measuring Method: Dual integration mode.
Display: 3.5 digit LCD max. reading of 1999.
Range: Auto or manual ranging.
Overload Indication: Blanking of all digits except MSD 1.
Polarity: Automatic "—" sign for negative polarity.
Maximum Indication: 1999.
Low Battery: "⊐" Mark on LCD readout.
Sampling Time: 2 times/sec.
Operating Temperature: 0 °C to 40 °C <80% RH.
Storage Temperature: −20 °C to 60 °C <70% RH.
Fuse: 250V, 0.2A
Battery: Two AA size 1.5V battery.
Power Consumption: 5 mW. Typ.
Battery life: Approx 500 hours.
Size: 70 (W) × 141 (H) × 34 (D) mm.
Weight: 180g (include batteries)
Standard Accessories: Test Lead (red & black)···1pair
Battery (AA size 1.5V) ·····2pc
Spare Fuse (250V/0.2A)···1pc
Instruction Manual ·····1pc

3-2 Electrical Specifications

● Model-3510

DC Voltage

Range	Resolution	Accuracy	Input resistance	Maximum input
200mV	0.1mV	±0.3%rdg ±2dgt	>1000MΩ	1200VDC or 900VAC rms (Sine)
2000mV	1mV		11MΩ	
20V	10mV	±0.5%rdg ±1dgt	10MΩ	
200V	100mV			
1000V	1V			

AC Voltage

Range	Resolution	Accuracy	Input impedance	Maximum input
2000mV	1mV	±1.0%rdg ±5dgt (40Hz~500Hz)	11MΩ <50pF	1200VDC or 900VAC rms (Sine)
20V	10mV		10MΩ <50pF	
200V	100mV			
750V	1V			

DC Current

Range	Resolution	Accuracy	Burden voltage	Maximum input
200μV	0.1μA	±1.0%rdg ±1dgt	<0.25V	0.2A (Protected by 250V/0.2A fuse)
20mA	10μA		<0.7V	
200mA	100μA			
10A	10mA	±1.2%rdg ±1dgt	<0.25V	10A(Unfused)

AC Current

Range	Resolution	Accuracy	Burden voltage	Maximum input
200μA	0.1μA	±1.2%rdg ±5dgt (40Hz~500Hz)	<0.25V	0.2Arms (Protected by 250V/0.2A fuse)
20mA	10μA		<0.7V	
200mA	100μA			
10A	10mA	±1.5%rdg ±5dgt	<0.25V	10Arms(Unfused)

Resistance

Range	Resolution	Accuracy	Test current	Open circuit voltage	Input protectio
200Ω	0.1Ω	±0.7%rdg ±3dgt	<0.7mA	<1.6V	250Vrms
2000Ω	1Ω	±0.7%rdg ±1dgt	<0.1mA	<0.7V	
20kΩ	10Ω		<30μA		
200kΩ	100Ω		<4μA		
2000kΩ	1kΩ	±1.0%rdg ±2dgt	<0.4μA		
20MΩ	10kΩ	±2.0%rdg ±2dgt	<40nA		

Diode Test

Range	Resolution	Accuracy	Test current	Open circuit voltage	Input protectio
1000mV	1mV	±5%rdg ±2dgt	<0.7mA	<1.6V	250Vrms

Continuity Check

Range	Resolution	Continuity beeper	Test current	Open circuit voltage	Input protectio
200Ω	0.1Ω	<20Ω±10Ω	<0.7mA	<1.6V	250Vrms

Adaptor

Full count	Resolution	Accuracy	Input resistance	Input sensitivity
2000(DC)	1	±0.3%rdg ±2dgt	>100kΩ	0.1mV count
2000(AC)	1	±0.8%rdg ±5dgt		

● MODEL--3520

DC Voltage

Range	Resolution	Accuracy	Input resistance	Maximum input
200mV	0.1mV	±0.5%rdg ± 2dgt	>1000MΩ	1200VDC or 900VACrms (Sine)
2000mV	1mV		11MΩ	
20V	10mV	±0.7%rdg ± 1dgt	10MΩ	
200V	100mV			
1000V	1V			

AC Voltage

Range	Resolution	Accuracy	Input impedance	Maximum input
2000mV	1mV	± 1.2%rdg ± 5dgt (40Hz ~ 500Hz)	11MΩ // <50pF	1200VDC or 900VACrms (Sine)
20V	10mV		10MΩ // <50pF	
200V	100mV			
750V	1V			

DC Current

Range	Resolution	Accuracy	Burden voltage	Maximum input
200mA	100μA	±1.2%rdg ± 1dgt	< 0.7V	0.2A(Protected by 250V/0.2A fuse)
10A	10mA		<0.25V	10A(Unfused)

AC Current

Range	Resolution	Accuracy	Burden voltage	Maximum input
200mA	100μA	± 1.5%rdg ± 5dgt (40Hz ~ 500Hz)	< 0.7V	0.2Arms(Protected by 250V 0.2A fuse)
10A	10mA		<0.25V	10Arms(Unfused)

Resistance

Range	Resolution	Accuracy	Test current	Open circuit voltage	Input protection
200Ω	0.1Ω	±0.7%rdg ± 3dgt	<0.7mA	<1.6V	250Vrms
2000Ω	1Ω	±0.7%rdg ± 1dgt	<0.1mA	<0.7V	
20kΩ	10Ω		<30μA		
200kΩ	100Ω		<4μA		
2000kΩ	1kΩ	±1.0%rdg ± 2dgt	<0.4μA		
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Diode Test

Range	Resolution	Accuracy	Test current	Open circuit voltage	Input protection
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Continuity Check

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Adaptor

Full count	Resolution	Accuracy	Input resistance	Input sensitivity
2000(DC)	1	±0.5%rdg ± 2dgt	>100kΩ	0.1mV count
2000(AC)	1	±1.0%rdg ± 5dgt		