

7 CORRECTIVE MAINTENANCE

7.1 DIAGNOSTIC TESTING AND TROUBLESHOOTING

7.1.1 Introduction

The ScopeMeter provides semimodular design to aid in troubleshooting. This section describes procedures needed to isolate a problem in a specific functional area. Finally, troubleshooting hints for each functional area are presented.

If the ScopeMeter fails, first verify that you are operating the ScopeMeter correctly by reviewing the Operation Verification Procedure found in the Users Manual.

WARNING: Opening the case may expose hazardous voltages. Always disconnect the instrument from all voltage sources and remove the batteries before opening the case. Remember that repairs or servicing should be performed by qualified personnel only.

Corrective maintenance instructions with page header "CORRECTIVE MAINTENANCE NEW A1 PCB" refer to the revised version of the Digital Board A1. Refer to figures 10.8 and 10.9 for the circuit diagram and component lay-out drawing of the new A1 PCB.

Corrective maintenance instructions of the old Digital PCB A1 start at page 7.1. Corrective maintenance instructions of the Analog Board A2 start at page 7-28.

7.1.2 Troubleshooting techniques

If a fault appears, the following test sequence can be used to help you to locate the defective component:

- Check to verify that the control settings of the instrument are correct. Consult the operating instructions in the Users Manual.
- Check the equipment to which the instrument is connected and check the interconnection cables.
- Verify that the instrument is properly calibrated. If it is not, refer to Chapter 5: "Calibration Adjustment Procedure".
- Locate the circuit(s) in which you suspect the fault: the symptom often suggests the faulty circuit. If the power supply is defective, the symptom may appear to be caused by several circuits.
- Check the circuit(s) in which you suspect the fault. Often it is possible to find faults such as cold or defective solder joints, intermittent or open interconnection plugs and wires or damaged components.