

Setup Procedure

- Step 1:** Connect a current probe to the AM 503A input connector.
- Step 2:** Use 50 Ω coaxial cable to connect the AM 503A output to a 50 Ω oscilloscope input.
- Step 3:** Set the oscilloscope coupling to DC, set the vertical sensitivity to 10 mV/division, and turn off any bandwidth filters.
- Step 4:** Adjust the oscilloscope ground reference so that the trace appears at the center graticule line or at another desired zero-current reference.
- Step 5:** Remove the current probe from the test conductor (if attached) and lock the probe.
- Step 6:** Press the AM 503A REF button and then press the **PROBE DEGAUSS AUTOBALANCE** button.
- Step 7:** Set the AM 503A coupling to DC or AC. The AM 503A and current probe are now balanced, degaussed, and ready to measure current.

AM 503S

CURRENT PROBE SYSTEM

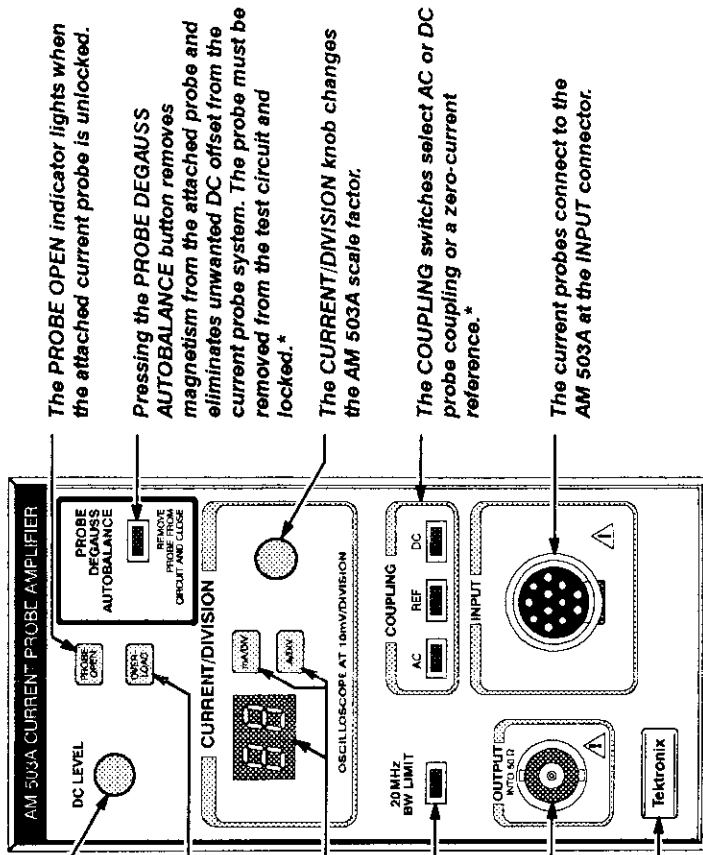
Quick Reference

This reference card lists basic setup instructions and provides operating guidelines to consider when using the AM 503S. Refer to the AM 503S User Manual for more information.

Operating Guidelines

To ensure accurate measurements and increase equipment reliability, observe these operating guidelines:

- Be sure the oscilloscope input impedance is 50 Ω .
- If the oscilloscope has a 1 M Ω input, install a 50 Ω termination at the oscilloscope input, not the AM 503A output.
- Leave the vertical sensitivity of the oscilloscope at 10 mV/division and the input coupling at DC.
- Never insert the AM 503A into, or remove it from, the power module unless the power module is off.
- Never connect the current probe to, or remove it from, the AM 503A while the probe is clamped around a test conductor or while the power module is on.
- Do not exceed the upper frequency limit of the probe.
- Remove power from a bare conductor before touching it with an open current probe.
- Frequently degauss the current probe, especially after a current overload or when measuring high currents.
- Before degaussing the current probe, always remove it from the test conductor and lock the probe.
- If the AM 503A front panel displays error code 54, verify that the AM 503A is properly terminated into 50 Ω and that the oscilloscope coupling is set to DC.



The DC LEVEL knob vertically positions the signal on the oscilloscope screen. Rotate the knob to move the signal up or down the screen.*

The OVERLOAD indicator lights when a measurement exceeds the maximum continuous current ratings of the AM 503S system.

The CURRENT/DIVISION display shows the current AM 503A scale factor in either mA/division or A/division.

The 20 MHz BW LIMIT button alternately selects or deselects a 20 MHz bandwidth limit for noise filtering.

The AM 503A output appears at the OUTPUT connector. Connect this output to a 50 Ω input of your oscilloscope.

Pull the release lever to remove the AM 503A from the Power Module.

The PROBE OPEN indicator lights when the attached current probe is unlocked.

Pressing the PROBE DEGAUSS AUTOBALANCE button removes magnetism from the attached probe and eliminates unwanted DC offset from the current probe system. The probe must be removed from the test circuit and locked.*

The CURRENT/DIVISION knob changes the AM 503A scale factor.

The COUPLING switches select AC or DC probe coupling or a zero-current reference.*

The current probes connect to the AM 503A at the INPUT connector.

*After the degauss/autobalance routine completes, the DC level is reset to a level determined by the COUPLING setting: AC or DC — the DC level is restored to the DC level set prior to the degauss/autobalance routine. REF — the DC level is set to zero, regardless of the DC level set prior to the degauss/autobalance routine.