

ision Simulators



A-7550 OPERATION MANUAL
SUPPLEMENT 02 VERSION 2.0

OCTOBER 1, 1986

DPN: 1002-5301-002

1.0 OVERVIEW

Firmware Version 2.0 for the A-7550 includes the following operational changes:

1. Bandwidth and Sweep Rate optimization can be disabled for manual entry.
2. Auto Cal mode can be disabled manually.
3. The display REF scale now includes dBuV.
4. The GPIB language was changed to accommodate the above changes.
5. An indicator now shows when the voice filter is active.

The version number was incremented because of the requirement for a second ROM on the Control Processor and a new Trace ROM is required for the Video Processor Board.

1.1 Firmware Changes

Firmware changes were made to add to the Remote Processing capabilities of the A-7550.

1.2 LOGO Changes

The logo was changed to reflect Firmware Version 2.0.

1.3 Index of Changes

Following is an index of changes described in this supplement for the A-7550 Operations Manual.

- 2.1 REF Scale
- 2.2 Autocal
- 2.3 GPIB/Remote Language Differences
- 2.4 Reference Display
- 2.5 Tracking Generator
- 2.6 SETUP Menu
- 2.7 MANUAL Menu
- 2.8 Filter Indication
- 2.9 Top of Trace

2.0 VERSION 2.0 CHANGES

2.1 REF Scale

The REF Scale selection now includes a dB μ V (microvolts) scale. This reference is also reflected in the Tracking Generator.

2.2 Auto Cal

An indicator (Ac) is displayed between the SCAN WIDTH and Center frequency displays across the top of the screen if the Auto Cal option is manually disabled. The dBm reference and 50 Ohm impedance must now be set in the SETUP menu before executing an Auto Cal sequence.

After 100 unsuccessful attempts to calibrate the set, the Auto Cal mode automatically aborts. CAL Fail (F) indicates this condition on the TEST menu.

2.3 GPIO/Remote Language Differences

The GPIO language was upgraded to include the setting for the dB μ V reference. New commands and their definitions are:

REF=DBUV*	Set the Reference Scale to microvolts.
REF?	Returns the reference (DBM, DBMV or DBUV).
TOP?	Returns the TOP OF SCREEN scale value (e.g., 110 or -30). This enhances plotting the spectrum via a host computer.

New commands allow users to specify which delimiter is being used to separate GPIO commands and data. Any decimal number that corresponds with a valid ASCII character can be used to assign a delimiter.

DEL=ddd	"ddd" is a decimal number (from 0 to 127) whose value corresponds with an ASCII character code to be used as the delimiter (e.g., DEL=44 sets the delimiter to ",").
DEL?	Returns the decimal equivalent of the current delimiter.

New commands allow control of bandwidth and sweep rate optimization with the Remote Language.

BWC=M	Disable the bandwidth from system standard.
BWC=A	Return bandwidth control to automatic selection.

*The letter U is used here, as "mu" is not a valid ASCII character.

SWPC=M	Disable Sweep Rate from system standard.
SWPC=A	Return Sweep rate control to automatic selection.
ACAL=0	Disable automatic calibration feature.
ACAL=1	Enable automatic calibration feature and force one Auto Cal cycle.
ACAL	Force one Auto Cal sequence if Auto Cal is enabled (as before).

2.4 REF Display

When in display reference, the scale is changed to display "0" in the middle of the screen and the units displayed at the top left become dB, regardless of the unit selected. The display then becomes a RATIO between the input signal and the stored signal. Returning to line or bar mode (DISP Menu) returns the scale and unit to the selected scale.

The stored REF display now sends the subtracted reference signal, as is, over the remote bus.

2.5 Tracking Generator Option

When changing the Tracking Generator level over the bus, the signed reference level ranges also change as follows:

<u>UNITS</u>	<u>50 OHM RANGE</u>	<u>75 OHM RANGE</u>
dBm	0 thru -75	-6 thru -81
dBmV	47 thru -28	43 thru -32
dBμV	107 thru 32	103 thru 28

The A-7550 saturates to either end for out-of-range values.

NOTE:

The negative sign must be entered for proper operation.

2.6 SETUP MENU

The GPIB and RS-232 selections on the SETUP Menu are now one, REMOTE, menu selection. Depending on the installed option, a GPIB, RS-232 or OPTION NOT INSTALLED Menu appears when this selection is made.

A new menu, MANUAL, appears when "4" is selected.

2.7 MANUAL Menu

The new MANUAL Menu is as follows:

MANUAL

1 Bw	A (or M)
2 Swp	M (or A)
3 Acal	1 (or 0)

0 Ret

Pressing "1" on the keyboard toggles between Automatic (A) and Manual (M) Bandwidth selection. When in manual operation, "M→" appears immediately to the left of the Bandwidth value in the upper right-hand corner of the CRT display. The A-7550 does not optimize the bandwidth when manual mode is activated.

Pressing "2" on the keyboard toggles between Automatic (A) and Manual (M) Sweep Rate selection. When in manual operation, "M→" appears immediately to the left of the lower right-hand corner of the CRT display. The A-7550 does not optimize the Sweep Rate when manual mode is activated.

Pressing "3" on the keyboard toggles between Auto Cal function ON (1) and Auto Cal function OFF (0). Returning to the ON state forces one Auto Cal sequence. Turning the Auto Cal function OFF causes "Ac" to be displayed between the SCAN WIDTH and Center Frequency displays and disables the Auto Cal function.

2.8 Filter Indication

When video filtering is selected in the Filters Menu, the video filter that is selected is displayed in the upper right-hand quadrant of the CRT display graph. "vF 300" indicates the 300 Hz filter is selected and "vF 30k" indicates that the 30 kHz filter is selected.

2.9 Top of Trace

Two additional display dots enhance the top of the trace being displayed, if the trace peaks at the top graticule of the display.