

ICM TOSL-300X CALIBRATION PROCEDURE for HP8753 Series

PREFACE:

This procedure is valid for series TOSL-300x calibration kits.

(This example uses the TOSL-3001 calibration kit)

INSTRUCTION CRITERIA:

- Comments and suggestions are contained in parenthesis
- Screen menu keys are in *ITALICS*
- Data or hard keys are in **BOLDFACE**

EQUIPMENT:

HP 8753ES with disk drive

ICM TF-3001-B P/N A0107124

ICM TOSL-3001 P/N A0104416

5/16" Torque Wrench

ICM Application Note 111 "Mainframe / TRL Calibration Trouble Shooting Guide"

For background information on the HP8753ES Network Analyzer, please refer to the HP operating manual.

LOAD CALIBRATION COEFFICIENTS FROM DISK:

Depress **SAVE/RECALL** (located in INSTRUMENT STATE area of front panel)

- Depress *SELECT DISK*
- Insert the Calibration Disk generated when installing Calibration Coefficients (make certain it is the disk for HP8753ES)

- Depress *INTERNAL DISK*
- Using rotary knob highlight appropriate file (if disk contains multiple files)
- Depress *RETURN*
- Depress *RECALL STATE*

SELECT TOSL-3001 CALIBRATION KIT

- Depress **CAL**, (located in RESPONSE area of front panel)
- Depress *CAL KIT [xxxxxx]*, (does not matter what cal kit is shown)
- Depress *SELECT CAL KIT*
- Depress *USER KIT*
- Depress *RETURN*
- Now the display should have “MODIFY [TOSL3001], DO NOT PRESS
- Depress *RETURN*
- Now the display should show “CAL KIT [TOSL3001]”

CALIBRATION WITH ICM STANDARDS

Setup Frequency Range, Power levels, averaging, etc.

- Depress **CAL**, (located in RESPONSE area of front panel)
- Now the display should show “CAL KIT [TOSL3001], DO NOT PRESS
- Depress *CALIBRATE MENU*
- Depress *FULL 2-PORT*
- Depress *REFLECTION*
- Insert OPEN STANDARD into mainframe test fixture
- Depress *Forward Open* (continue when OPEN is underlined)
- Depress *Reverse Open* (continue when OPEN is underlined)
- Insert SHORT STANDARD into mainframe test fixture
- Depress *Forward Short* (continue when SHORT is underlined)
- Depress *Reverse Short* (continue when SHORT is underlined)

- Insert LOAD STANDARD into mainframe test fixture
- Depress *Forward Load* (continue when LOAD is underlined)
- Depress *Reverse Load* (continue when LOAD is underlined)
- Depress *STANDARDS DONE*
- Depress *TRANSMISSION*
- Insert THRU STANDARD into mainframe test fixture
- Depress *DO BOTH FWD+REV*, (The analyzer underlines the menu-key label after it completes each measurement)
- Depress *ISOLATION*
- Depress *OMIT ISOLATION*
- Depress *DONE 2-PORT CAL*
- *Instrument will compute cal. coefficients, wait until done*
- Depress **SAVE/RECALL** (located in INSTRUMENT STATE area of front panel)
- Insert floppy disk
- Depress *SELECT DISK*
- Depress *INTERNAL DISK*
- Depress *RETURN*
- Depress *SAVE STATE*
- *Instrument will indicate: Saving Cal Arrays, Saving Instrument state, Saving Cal Kit*

CHECK CALIBRATION:

With THRU STANDARD in the mainframe test fixture

S21-CHECK:

- Depress **CHANNEL 1** (located in ACTIVE CHANNEL area of front panel)
- Depress **MEAS.** (located in RESPONSE area of front panel)
- Depress *TRANS. FWD. S21 (B/R)*
- Depress **SCALE REF.** (located in RESPONSE area of front panel)
- Depress *AUTO SCALE* or Depress *SCALE/DIV* and enter 0.1 then x1

S11-CHECK:

- Depress **CHANNEL 2** (located in ACTIVE CHANNEL area of front panel)
- Depress **MEAS.** (located in RESPONSE area of front panel)
- Depress *REFL. FWD. S11 (A/R)*
- Depress **SCALE REF.** (located in RESPONSE area of front panel)
- Depress *AUTO SCALE* or Depress *SCALE/DIV* and enter 10 then x1

END OF PROCEDURE

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