[an error occurred while processing this directive]

Agilent 8752/53 Firmware History

Firmware Downloads

8753ES Versions:
8753es772.exe
8753es770.exe
8753es768.exe

8753ET Versions:
8753et772.exe
8753et770.exe
8753et768.exe

8753E Versions:
8753ee772.exe
8753ee770.exe
8753ee768.exe
8753e714.exe

8753DU Option 000 Versions:
8753d714.exe

Other Links

875x Product Marketing Site
Network Analyzer Product Marketing Site

Agilent 8752A/B Network Analyzer Firmware History

Revision 1.00

Revision 1.00 was the original release.

Revision 1.01

Firmware Enhancements

- There were no firmware enhancements for this version of firmware.

Firmware Problems Fixed

1. Cal.'s stored to disk could not be recalled.
2. If a parameter changed while measurement was in HOLD, the format could not be changed until MEASURE RESTART is pressed.
3. In list frequency mode, if a single segment list is stored to a register then recalled, the wrong data and stop frequency is returned.

Revision 1.02

Firmware Enhancements

1. Faster HP-IB data array transfer.
2. Auto switches to SYSTEM CONTROLLER mode.
3. Agilent 8752B default Z0 set.
4. Added cal kit for Agilent 8752B.

Firmware Problems Fixed

1. OUTPPLOT doesn't work.
2. Recall of dual channel with interpolated cal. required toggling correction on and off to get correct cal. data.
3. INPUDATA added extra 0.
4. Titles from HP-IB to sequence are sometimes appended, not new.
5. Recalled file with formatted data and user graphics, doesn't update trace.
6. Power trip sets source to -5 instead of -20 dBm.
7. Sweep speed to slow in narrowband sweeps with center frequency of less than 3.3 MHz.
8. Invalid cal. data if the cal. is done in CW with interpolation and then changed to power sweep mode.

Revision 1.03

Firmware Enhancements

- There were no firmware enhancements for this version of firmware.

Firmware Problems Fixed

- Revisions 1.01 and 1.02 disk files are not compatible with each other.

Agilent 8753A Network Analyzer Firmware History

Revision 1.00

Revision 1.00 was the original release.

Revision 1.01

Firmware Enhancements

- There were no firmware enhancements for this version of firmware.

Firmware Problems Fixed

1. Service test 48 failed with certain A3,A9,A11 combinations.
2. Agilent 7090A plotter not compatible.
3. Phase sign in power sweep may be incorrect.
4. Fast sweep times in power sweep mode may hang Agilent 8753.

Agilent 8753B Network Analyzer Firmware History

Revision 2.01

Revision 2.01 was the original release.

Revision 2.02

Revision 2.02 was a **Beta-test only**, and was shipped to a few customers.

Firmware Enhancements

- There were no firmware enhancements for this version of firmware.

Firmware Problems Fixed

- EOI caused system hang up.

Revision 3.00

Revision 3.00 was never shipped in Agilent 8753B's from NMD. It was used in the 11882A (Agilent 8753A to B Upgrade Kit) and the 86387A (mixer measurement kit)

The 08753-60207 phase lock board was introduced to allow RF less than LO mixer measurements. This board must be used with Agilent 8753C firmware rev. 4.02 or higher, or Agilent 8753B rev. 3.00. It is NOT compatible with older firmware revisions (Units will phase lock with A9 CC jumper in ALTER position, but not in NORMAL).

Firmware Enhancements

1. New frequency offset menu
2. Default sweep time is now auto.
3. Chop sweep mode is now default, instead of alternate
4. FORM5 added.
5. Solid-state switch test set compatibility.
6. Faster HP-IB data array transfer.

Firmware Problems Fixed

1. EOI caused hang-up.
2. Slow sweep less than 3.3 MHz.
3. OUTPPLOT didn't work.
4. Destructive DRAM test didn't work.

Agilent 8753B Network Analyzer Firmware History

Revision 4.00

Revision 4.00 was the original release.

Revision 4.01

Firmware Enhancements
There were no enhancements for this version of firmware.

Firmware Problems Fixed

1. In the CITI file (ASCII data file storage) application:
    - data is incorrect when more than 401 points are used
    - response and isolation calibration arrays are reversed
    - one-path two-port calibrations could not be saved
    - choice of binary or ASCII file storage is uncoupled between channels
    - only one formatted array is saved if a full two-port calibration is on
    - in log mag, the formatted data says it is linear even though it's log mag
2. When using the maximum number of list mode points:
    - full two-port calibration cannot be performed

    - data into memory does not work correctly
3. Reading an Agilent 8753B instrument state from disk leaves the default printer type as COLOR, which will print incorrectly to a standard monochrome printer. One place where this causes a problem is in SYSTEM VERIFICATION.
4. If frequencies are changed with limit lines on, the limit lines do not move to their new places on the display, although the limit test still works correctly.
5. Occasionally, display characters are blanked at preset.
6. If a full two-port calibration is performed and then CW time mode is selected, bad data results.
7. Waveguide calibration kits do not work correctly.
8. In a one-path two-port calibration, the instrument prompts the user continuously to turn the device around.
9. No installed options appear in the firmware revision information when an instrument has option 002 but not option 006 or 010.

Revision 4.02

The 08753-60207 phase lock board was introduced to allow RF less than LO mixer measurements. This board must be used with Agilent 8753C firmware rev. 4.02 or higher, or Agilent 8753B rev. 3.00. It is NOT compatible with older firmware revisions (Units will phase lock with A9 CC jumper in ALTER position, but not in NORMAL).

Firmware Enhancements

1. A new softkey menu has been added for frequency offset mode. The improved user interface includes a diagram which makes it easier to set up the network analyzer for mixer measurements. A new capability for making measurements where the RF<LO frequency is automatically enabled if the appropriate A11 phase lock assembly (HP part number 08753-60207) is installed in the Agilent 8753C.
2. Faster data array transfer to an external controller is now possible when using FORM1, FORM2, FORM3, or FORM5 (not FORM4). The new HP-IB mnemonics and their normal-speed equivalents are shown below.

```
OUTPRAF(1-4)   OUTPRAW(1-4)    Output current raw data
OUTPDATF       OUTPDATA        Output active channel corrected data
OUTPMEMF       OUTPMEMO        Output current memory data
OUTPFORF       OUTPFORM        Output active channel formatted data
```

3. The Agilent 8753C automatically switches to system controller mode when necessary if no other controller is on the bus.

Firmware Problems Fixed

1. Controller-based plotting using the OUTPPLOT command did not work properly.
2. Interpolation was done on 2-port calibrations whenever the user switched from measuring one s-parameter to another.
3. When "INPUDATA" was used to input FORM4 data arrays to the instrument, an extra 0 was added at the first point. This offset all the following values, causing real data to appear as imaginary values and vice versa.
4. Sending titles over HP-IB into a sequence occasionally appended the title instead of replacing the current title.
5. Recalling an instrument state from disk which had formatted data and user graphics did not update the trace.
6. Data and instrument disk files which are created by an Agilent 8753C with revision 4.02 firmware are compatible with other Agilent 8753B or Agilent 8753C network analyzers.

Revision 4.11

Note: See the 08753-60207 phase lock board warning in version 4.02 above.

Firmware Enhancements

1. New softkey menus have been added for fixed and swept IF frequency converter measurement configurations. The menus also allow control of the Agilent 8625A external LO over the new LO control interface (contained on the A16 rear panel assembly HP part number 08752-60013).
2. New HP-IB mnemonics have been added for programming fixed and swept IF frequency converter measurements from an external controller. The new HP-IB mnemonics are listed below.

```
ADDRLSRC          external source address
DCONV             selects downconverter
```

```
EXTTHIGH          low to high external trigger ON
EXTTLOW           high to low external trigger ON
LOCONT            external LO control
LOFREQ            frequency offset CW (was VOFF)
LOFSTAR           frequency offset start frequency
LOFSTOP           frequency offset stop frequency
LOFSWE            frequency offset sweep frequency mode
LOPOWER           frequency offset power level
LOPSTAR           frequency offset start power level
LOPSTOP           frequency offset stop power level
LOPSWE            frequency offset sweep power mode
OUTPICAL(01-12)   output interpolated cal array
OUTPIPMCL(1,2)    output interpolated power meter cal array
UPCONV            select upconverter
VIEM              view measurement
FREQCONV          frequency conversion measurement parameter
LOIFISOL          LO to IF isolation measurement parameter
LORFISOL          LO to RF isolation measurement parameter
RFIFISOL          RF to IF isolation measurement parameter
RFPRTSWR          RF port match measurement parameter
IFPRTSWR          IF port match measurement parameter
```

3. A new softkey menu now appears under the MEAS key if one of the frequency converter tests sets is being used. These test sets are the Agilent 85046A options H20, H21, H40, and H41.
4. In frequency offset mode, power meter calibrations are performed at the source frequency. In earlier firmware revisions, they were done at the receiver frequency.
5. Bit 7 of the status byte is now defined as the PRESET bit. This allows an external controller to detect when the preset key has been pressed.
6. The maximum number of calibration data sets which can be stored in memory has been increased from 12 to 24. This limited by the amount of memory space available.

Firmware Problems Fixed

1. The power loss table used some of the same memory space as internal register 5. Both the power loss table and the cal factor sensor B data have been moved from CMOS to RAM. Therefore, this data is now erased if the power is turned off.
2. In test sequencing, if a user changed the number of points and then immediately performed a calibration, the previous number of points was used for the cal array memory allocation.

Revision 4.12

Note: See the 08753-60207 phase lock board warning in version 4.02 above.

Firmware Enhancements
There were no enhancements for this version of firmware.

Firmware Problems Fixed

- The HP-IB command "INPULEAS" for inputting a learnstring into the Agilent 8753C does not work in revision 4.11. Using this command causes incorrect data and annotations to be displayed, and may lock up the system.

Revision 4.13

Note: See the 08753-60207 phase lock board warning in version 4.02 above.

Firmware Enhancements
There were no enhancements for this version of firmware.

Firmware Problems Fixed

- All previous firmware revisions had a bug that would freeze the display when the analyzer was in dual channel mode where one of the channel formats was a Smith chart with at least one active marker. This problem usually occurred when changing s-parameters of formats and could be remedied by pressing the **PRESET** key.

Agilent 8752C, 8753D Network Analyzer Firmware History

Revision 5.00

Revision 5.00 was the original release.

Revision 5.06

Firmware Enhancements

1. New HPIB commands:

```
PORTR - equivalent to PORT1
PORTT - equivalent to PORT2
INID  - aliased to INIE for the 8752 only
TITP  - title plot file
TITF0 - titles SAVE STATE filename for use from sequencing only
```

2. SOURCE: Power sweep default:start/stop power for 8752C is now set to -20/+5.
3. PLOT TO DISK feature modifications:
   - PLOTTER TYPE setting always behaves like PLOTTER when plotter port is disk, hence no hpgl printer init strings are output.
   - Autofeed ON/OFF is ignored also. (No formfeeds are output to the disk file).
4. Default names generated for plot files have the following form:

```
PLOTnn.pp - Where nn is two digits 00 thru 31.
            Where pp is the page position as shown below.

            FP = full page
            LL = leftlower
            LU = leftupper
            RL = right lower
            RU = right upper
```

5. SAVE/RECALL:
   - Number of save registsers (internal mem) reduced to 31.
   - Increased the number of default files names used for SAVE STATE. FILE00-FILE31 and DATA00D1-DATA31D1 (data only).
6. SOFTKEYS: Port extensions ([**CAL**], [**MORE**], [**PORT EXTENSIONS**]) 2nd line key labels changed to "REFL PORT" and "TRAN PORT" for the 8752.
7. SERVICE: Changed the tracking spec. for 8752C system verification to:

```
50 ohm
      300 kHz - 1.3 GHz       0.2 dB
      1.3 GHz - 3.0 GHz       0.3 dB
      3.0 GHz - 6.0 GHz       0.4 dB
75 ohm
      300 kHz - 1.3 GHz       0.2 dB
      1.3 GHz - 2.0 GHz       0.3 dB
      2.0 GHz - 3.0 GHz       0.3 dB
```

8. Frequency offset graphic modified for option 11 instruments.

Firmware Problems Fixed

1. External disk drive is identified as **internal** on display.
2. Color pro plotter (8 pen plotter) is confused if you ask for pen 10.
3. Time domain, 2 chan, same stimulus, one low pass one band pass gives bad bandpass data.
4. Frequency Offset does not work if IF is less than 3 GHz and RF is greater than 3 GHZ
5. When disc is changed from unit-0 to unit-1, still shows as unit-0 on the list. (8752)
6. Does not handle HFS initialized hard disks correctly.
7. Power sweep default; start/stop power for 8752C is incorrect.
8. Nominal power for 8752C option 4 is now -10 dBm in range 1.
9. Modified sampler cal freqs for third harmonic.
10. Power trip in cavity osc test (54). Changed prompt to user to use the low pass filter rather than a cable. Set the high power AFTER the freq is set to the filter stop band.

Revision 5.08

Firmware Enhancements

1. Mods to internal memory directory text to differentiate user preset and preset states.
2. The REF VALUE key is now aliased to SCALE/DIV when in polar and smith chart formats.

Firmware Problems Fixed

1. LIST VALUES then RENAME shows list characters in the title.
2. TTL input isn't working.
3. Fixes interpretation/encoding of null timestamp (DOS only).
4. Free number of Bytes in directory is not updating.
5. DOS label deleted with DELETE ALL files command.

6. DOS label does not show when created on a PC.
7. When the down step key is used in polar format, the reference value goes to 0.
8. While in user-preset mode, user can't recall factory preset from the list.
9. Re-naming the PRESET register messes up save/recall display.

Revision 5.10

Firmware Enhancements
There were no enhancements for this version of firmware.

Firmware Problems Fixed

1. SAVE STATE to disk while creating sequence uses wrong file name.

Revision 5.12

Firmware Enhancements
There were no enhancements for this version of firmware.

Firmware Problems Fixed

1. Would like another error besides "Meter Not Responding".
2. Need test set connector to toggle lines with 8753C attenuator setting.
3. Incorrect return from LOSS/SENSR LISTS in power meter cal menu.
4. Dual Smith loses ch2 memory trace upon autoscale of ch1.
5. Changing IF BW in CW TIME, TRANSFORM ON causes bad data.
6. Response cal. on single parameter (A,B,R) is incorrect when sampler cal. is on.
7. No testset hold with different Port 1&2 attenuation values. This results in continuous transfer switch switching.
8. Shortened error message being truncated by CAUTION prefix.
9. No power at RF port of H20 test set when RF is less than LO and the LO is swept, mixer test.
10. With power meter cal. and full two-port cal, the power trips.
11. Dual channel measurement with redefined drive port has bad data.
12. Continuous switching occurs with different port attenuators.
13. Bad data with dual channel, B input, ch1=port1, ch2=port2.
14. Number keys don't work while plotting over HPIB in pass contineous mode.
15. When deleting option 3 from a standard instrument, frequency response cal. is corrupt.

Revision 5.14

Firmware Enhancements
There were no enhancements for this version of firmware.

Firmware Problems Fixed

- Corrected option 11 problem with power meter cal not working for testset port 2.

Revision 5.20

Firmware Enhancements
There were no enhancements for this version of firmware.

Firmware Problems Fixed

- Modified power level for cavity oscillator test for 8752C to +5.0 dBm.

Revision 5.24

Firmware Enhancements
There were no enhancements for this version of firmware.

Firmware Problems Fixed

1. Loses phaselock in log sweep, harmonic mode.
2. Sampler Cal does not work for Option 002/011.
3. Intermittent power spike in option 11 and standard instruments.
4. External source cannot phaselock at precisely 3 GHz in option 11 and standard instruments.

Revision 5.26

Firmware Enhancements
There were no enhancements for this version of firmware.

Firmware Problems Fixed

- Fix for the lost phaselock problem seen when start freq = 300 kHz and stop freq = 1 GHz. These frequencies had to be set exactly to these values to see the problem.

Revision 5.30

Firmware Enhancements

1. Added the capability to print to a DeskJet 540 printer. This added a new softkey under **[PRNTR TYPE], [PRNTYP540]**.
2. Recall speed improvement
3. The INITIALIZING DISK message chagned, it now reads "INITIALIZING DOS DISK" (or LIF), depending on the format selected.
4. Updated the 8753 and 8752 **SELL** command to work with post 5.00 revisions. The current 875x can now generate and receive instrument learn strings from 5.00, 5.20 and 5.24 (for the 8753)and from 5.10, 5.20, and 5.26 (for the 8752).

Firmware Problems Fixed

1. Removed number of points restriction that previously occurred in TIME DOMAIN when retrieving formatted data over the bus.
2. The trace data transfer requires a WAIT statement.
3. Limit test sometimes give false fail in background channel.
4. DEADLOCK when changing number of points in dual ch, uncoupled, time domain.
5. Instrument hangs if fact_cal_option_type is not set correctly."
6. HP8752C recomputes factory cal. when changing channels from channel 2 to 1.
7. Admittance Smith chart, fixed marker value incorrect after recall.
8. Added save/recall support of TEST SET I/O values. Saving instrument state to DISK use to destroy these values.
9. Fixed a number of problems related to remote/local transitions of the HP-IB bus.
10. LOCAL 7 releases REN and the last command is not executed.
11. DONM hpib code lost if bus set to local too soon afterwards.
12. Using numeric keypad afterarray dump in instr (over hpib)hangs instr.
13. Clearing the error queue does not remove error message in the display.
14. Fixed the setting of the FIXED MARKER STIMULUS "x-axis" value (previously it incorrectly limited values in TIME DOMAIN and other domain modes).
15. Fixed the following source correction defects:
    - Sign error in Sq Law/Lin DAC routine in Service Test 47.
    - Square Law/Lin window set to tight in Source Correction.
    - Source Defaults are not optimized for Opt 011/075.
16. Keys still active after a REMOTE.
17. Loading formatted array from citifile save corrupts subsequent recall of binary save.
18. Hard disk formatted by 8711 (DOS); cannot cat disk on 8753D.

Revision 5.34

Firmware Enhancements

- Added serial number query capability. The HP-IB mnemonic is OUTPSERN.

Firmware Problems Fixed

1. Fixed defect so that port extensions now work correctly with two port error correction under specific "corner cases." For example, HOLD while in LIST mode, the data was not updated correctly when the parameter was changed from a forward to reverse sweep.
2. Fixed defect described as "CS followed by RS HPGL commands prevent analyzer from sweeping."

Revision 5.38

Firmware Enhancements
There were no enhancements for this version of firmware.

Firmware Problems Fixed

1. Single segment frequency list state does not sweep on recall.
2. Update arrow works incorrectly for fast sweeps in list mode.

3. Added fixes to eliminate power spikes due to attempting to reset power during RF blanking and when restoring RF. Not blanking the RF when setting power if in the same power range.
4. Start freq for all confidence tests now 300 kHz.

Revision 5.40

Firmware Enhancements
There were no enhancements for this version of firmware.

Firmware Problems Fixed

1. Saving instrument state with interpolated cal causes corrupt state.
2. Full two port cal corrupted by save and recall from DOS disk.

Revision 5.42

For Special Handling ONLY.
There is NO PCO or LCN associated with this release.
(The tape archive will be retained by the R&D FW team for the time being until other logistical details can be thought/worked out. JULY 1996)

Firmware Enhancements

1. Added MuRata code (conditional) for the 8752 to use the TTL bits 0-2 to note limit test output status. Murata Code is enabled ONLY through cpp flag MURATA.
2. Added a new limit test routine to speed up limit testing.

Firmware Problems Fixed
There were no problems fixed for this version of firmware.

Revision 5.46

Firmware Enhancements
There were no enhancements for this version of firmware.

Firmware Problems Fixed

- This was noted by an HPED customer using the 8753D with the IC-CAP program.
  When in CW, different power levels on foward and reverse, and two port error correction on, the measurement was incorrect for the forward parameters by the power difference between forward and reverse.

Revision 5.48

Firmware Enhancements
There were no enhancements for this version of firmware.

Firmware Problems Fixed

1. Corrected phase lock failure errors for specific frequency ranges as noted by production engineering.
2. Save/recall used to go through attenuator 0 value and then set desired attenuation. This is now corrected to set the new attenuation only for the change needed.
3. Fixed ATM 875x.683 (could not display more than 4 options on the power up option string).
4. **Agilent 8753D ONLY (not for Opt 011)**
   Switching from port 1 to port 2 when they have different power levels (PORT POWER UNCOUPLED) causes the higher power to appear on the lower power port momentarily. This is now fixed so that:
   - high -> low : lower power first, then throw transfer switch
   - low -> high: throw transfer switch first, then raise power

---

Notes on Compatibility

- **Learn Strings** are not compatible between different firmware revisions of the Agilent 8753.
- Instrument state disk files created by different versions of the Agilent 8752A/B are compatible *except* for revision 1.02.
- Agilent 8753A instrument state files which are stored to disk **cannot** be read by the Agilent 8753B or Agilent 8753C instruments due to differences in the learn strings.

There is a free disk translation program available, that will allow Agilent 8753A files to be read on a Agilent 8753B/C. The part number for this program is 08753-10018.

- Instrument state disk files created by different versions of the Agilent 8753B's are compatible with each other.
- Instrument state disk files created by the Agilent 8753B firmware rev. 2.01 and 2.02 cannot read files from an Agilent 8753C with firmware rev. 4.01 or lower.
- Instrument state disk files created by different versions of the Agilent 8719A are compatible.
- Instrument state disk files created by different versions of the Agilent 8719C are compatible.
- Instrument state disk files created by different versions of the Agilent 8720C are compatible.
- Instrument state disk files created by different versions of the Agilent 8722A are compatible.
- Instrument state disk files created by the same revision numbers of the Agilent 8719A and 8720B firmware are compatible with each other.
- Instrument state disk files created by the same revision numbers of the Agilent 8719C and 8720C firmware are compatible with each other.
- Instrument state disk files created by an Agilent 8719A rev. 1.00 are not compatible with the Agilent 8719C.
- Instrument state disk files created by an Agilent 8719A with rev. 1.01 or 1.02 can be used by the Agilent 8719C rev. 1.03 or higher.
- The Agilent 8720C can read files from any Agilent 8720A.
- Instrument state disk files created by an Agilent 8720B rev. 1.00 are not compatible with the Agilent 8720C.
- Instrument state disk files created by an Agilent 8720B with rev. 1.01 or 1.02 can be used by the Agilent 8720C rev.1.03 or higher.
- Instrument state disk files created by an Agilent 8720B with rev. 2.00 cannot be used by the Agilent 8720C.
- Disk files created by any Agilent 8719, 8720, or 8722 analyzer can be read by any other Agilent 8719, 8720, or 8722 analyzer if the user chooses to use the generic instrument state when saving the file.
- The generic instrument state is defined as the instrument state from Agilent 8720A rev. 2.01. When files are saved using this, the file can be read by any Agilent 8719, 8720, or 8722 network analyzer. This instrument state will not include any features that weren't in the Agilent 8720A rev. 2.01.

Notes on Test Set Compatibility

Agilent 8753A

- The Agilent 8753A is compatible with the Agilent 85044A/B transmission/reflection test sets and the Agilent 85046A/B s-parameter test sets. It will not work correctly with the Agilent 85047A 6 GHz s-parameter test set. Also, the Agilent 8753A will treat solid-state switch test sets as though they had a mechanical switch (continuous switching will not be allowed).

Agilent 8753B

- Agilent 8753B's can be used with the Agilent 85044A/B, 85046A/B, or 85047A, although option 006 is necessary for 6 GHz operation with the 85047A. Only revision 3.00 will work with the solid-state switch versions of the 85046A/B and 85047A.

Agilent 8753C

- Agilent 8753C's can be used with the Agilent 85044A/B,and both solid-state switch and mechanical switch versions of the 85046A/B or 85047A. Option 006 is necessary for 6 GHz operation with the 85047A.

For additional information, contact the Component Test PGU email node.

Return to the 8753 Family Service Homepage

Last Complete Review: 26 August 2002

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