

780D Video Generator/Analyzer Software Release Notes

SW Version

17083013

FPGA Version

Rx – 16110103

Tx - 17061601

Change Log:

1. Enhancements Added

The following is a list of enhancements that have been added with this firmware release:

- Trac 773 - Added Audio Clock Regeneration N/CTS measurement to 780D/E RX.
- Trac 777 - Added command line support for invoking ColorBox pattern.
- Trac 782 - Added the XAVI:LEN command/query to support AVI InfoFrame version 4.
- Trac 1880 – Added more details in the Frame Capture/Compare test to show +5V voltage levels, rather than simply indicating PASS/FAIL.
- Trac 1990 - Added the Master pattern to the GUI list of basic patterns on all 780 units.
- Added more video timings such as 48Hz video timings from CTA-861-G and a number of newer DMT formats on the PC side.
- Added HDR10 support to default EDIDs.
- Added HDCP 2.2 stream type selection to 780AH/BH/D and 804B.
- Changed behavior of Format Analyzer and Audio Analyzer to automatically refresh.
- Some formats with low Hblank (CVT-RB v2) can now be sent.
- Removed support for scrambling below 340Mcsc from default EDIDs.
- Windows 10 should no longer need a driver for the USB COM port. Changed USB Vendor ID to Teledyne LeCroy PSG.
- Commands ‘IMGL/IMGU’ now use the last typed name if entered by command, or the generated value if image is selected by GUI.
- Added frame count selection for Golden Frame and Remote Cable Test (780D/E only).
- Added ‘FMTL VICxxx’ command (where xxx = 001 through 116) to set format by VIC code -- not all VICs are supported by 780/804.
- Added MoireX and MoireY patterns to the device.
- Added raw EDID print out on the display (up to the first 2 blocks).
- Added Remote HDBaseT support for 780C/D/E.
- Added ‘TMAX:NBPC?’ command to read incoming bits per component.

2. Anomalies Corrected

The following is a list of anomalies that have been corrected with this firmware release:

- Trac 1924 - Corrected improper response with TMAX command when querying results.
- Corrected issues related to reading the AVI InfoFrame from 780D/E RX which will enable an invalid AVI infoframe Version 4 to be analyzed.
- Corrected incoming color anomalies on 780D/E when video timing is changed in Real Time mode.
- Removed error message which occasionally occurred when VIC is incorrect on incoming video.
- Trac 2017 - Corrected issue where HDBaseT cable test would sometimes leave HPD pin low.
- Trac 2034 – Corrects EMI H pattern in 4:2:0 subsampling mode. Removes extraneous lines on pattern.
- Fixed issue with command names being accepted, and format names being rejected erroneously.
- Fixed an issue where video transmission would be muted upon format change.
- Fixed an issue with Test Link and Test Source installer tests when showing incoming video on 780D.
- Fixed HDCP menu text issue when downstream Sink device NACKs HDCP accesses.
- Timing measurements on 780D/E RX made much tighter (less jitter).
- Commands 'BOXP' and 'BOXES' were fixed on 780D/E.
- Fixed an issue where loading VICs 86-92 via command line selected the incorrect format in GUI.
- Cable test freeze and logical issues were resolved.
- Fixed Zone Plate issue when the image size exceeded the format's size.

Upgrade Procedure

SD Card Upgrade Procedure (Recommended)

1. Download the file from downloads page and unzip it.
2. Copy all files to a SD card's root directory and insert the card to device.
3. Power on the unit.
4. Go to the Help menu and perform Application Flash Update. When complete, reboot the device.
5. Go to the Help menu and perform FPGA Flash Update. When complete, reboot the device.
6. Power on the device and under preferences, select 'COM' as USB mode
7. Connect device to PC using USB connection
8. Using command terminal such as putty, connect to device using serial com communication.
9. Once in command terminal, press enter to bring up command prompt.

10. In commands, type '6gup' and press enter. This may take few minutes so wait until command prompt shows again.
11. Reboot the device
12. Go to the Help menu and perform HDBaseT Tx Flash Update. When it tells you to reboot, go ahead and perform HDBaseT Rx Flash Update. When it tells you to reboot, power cycle.
13. Go to the Help menu and verify the version numbers match below.

SW 17083013, Tx FPGA 17061601, Rx FPGA 16110103, HDMI2Rx 1.99.17_D0, HDMI2Tx 1.00.09_D0, HDBT Tx 13131510, HDBT Rx 13131500

Supplemental Files (70 megabytes)

This archive contains all Compressed Audio Samples, Sine Wave Clips, and Sample BMP Files.

1. [Download Supplemental Files archive from here](#) (updated on August 23, 2013).
2. Unzip the files into a new folder in your PC.
3. Turn on 780D and press Preferences.
4. If COM is selected next to USB Mode, select Disk and power cycle 780D.
5. Connect 780D's USB port to your PC.
6. 780D should appear as a removable disk.
7. Copy unzipped supplemental files to 780D.

Alternatively, you can download the file sets separately: Compressed Audio Test Samples (57 megabytes)

1. [Download compressed audio test samples from here](#) (updated on August 23, 2013).
2. Turn on 780D and press Preferences.
3. If COM is selected next to USB Mode, select Disk and power cycle 780D.
4. Connect 780D's USB port to your PC.
5. 780D should appear as a removable disk.
6. Copy downloaded compressed audio test sample files to 780D.

Sine Wave Audio Clips (760 kilobytes)

7. [Download audio clips from here](#) (updated on August 23, 2013).
8. Turn on 780D and press Preferences.
9. If COM is selected next to USB Mode, select Disk and power cycle 780D.
10. Connect 780D's USB port to your PC.

11. 780D should appear as a removable disk.
12. Copy downloaded audio files to 780D. **Sample BMP Files (324 kilobytes)**
13. [Download sample BMP files from here](#) (updated on August 23, 2013).
14. Turn on 780D and press Preferences.
15. If COM is selected next to USB Mode, select Disk and power cycle 780D.
16. Connect 780D's USB port to your PC.
17. 780D should appear as a removable disk.
18. Copy downloaded sample files to 780D.
19. The UserPats.txt file is used to add the bitmaps to 780D Video Pattern menu. You can add your own bitmaps by copying them to 780D and updating this text file.

USB COM Port .inf File

1. Determine whether your Windows is 32-bit or 64-bit.
 - a. For 32-bit Windows: [Download .inf file from here](#).
 - b. For 64-bit Windows: [Download .inf file from here](#).
2. Turn on 780D and press Preferences.
3. If Disk is selected next to USB Mode, select COM and power cycle 780D.
4. Connect 780D's USB port to your PC.
5. Follow the procedure below to install the USB COM Port driver.

Windows 8

1. Go to the Advanced Startup options. You can easily do this by holding down the Shift key and clicking on Restart.
2. Select Troubleshoot.
3. Select Advanced options.
4. Select Startup Settings.
5. Click on Restart.
6. Press F7 for "Disable driver signature enforcement." 7. Turn on the 780D.
8. Go to the Preferences menu and make sure USB Mode is set to COM. If not, select COM and power cycle the 780D.
9. Connect 780D's USB port to your PC.
10. Go to the Device Manager.
11. Under Other devices, right-click on USB COM and select Update Driver Software.
12. Select Browse my computer for driver software.
13. Click on Browse button and browse to the location of the downloaded 780D USB COM driver file and click on OK.
14. Click on Next.

15. When you see the Windows Security dialog box show up, click on "Install this driver software anyway."

Windows 7

16. The first time you connect 780D to your PC in COM mode, the Installing device driver software message will show up. Click on this message to see the status.
17. You will see a message that says "Searching Windows Update" for the USB COM port driver. After a while, you will see "No driver found" message.
18. Click on Close.
19. Open Device Manager by launching Control Panel and selecting System and Security -> System -> Device Manager.
20. Under Other devices, you might see USB COM.
21. Right-click on USB COM and select Update Driver Software.
22. Click on Browse my computer for driver software.
23. Click on Browse, select the folder that contains QD780.inf file, and click on OK.
24. Click on Next.
25. If a dialog box shows up asking whether or not to continue installing the driver, click on "Install this driver software anyway."

Windows Vista

26. The first time you connect 780D to your PC in COM mode, the Found New Hardware Wizard will show up. Select "Locate and install driver software (recommended)."
27. When asked if you want to allow Windows to search online for driver software for your USBCOM Device, click on "Don't search online."
28. When asked to insert the disc that came with your USBCOM Device, click on "I don't have the disc. Show me other options."
29. Click on "Browse my computer for driver software (advanced)."
30. Browse and select the directory where QD780.inf is located.
31. Click on Next.
32. If a dialog box shows up asking whether or not to continue installing the driver, click on "Install this driver software anyway."
33. If you get a dialog box that says the file 'usbser.sys' is needed, then you will need to either insert the Windows Vista installation disc or search your PC for usbser.sys file.

Windows XP

34. The first time you connect 780D to your PC in COM mode, the Found New Hardware Wizard will show up. Select "Install from a list of specific location (Advanced)."
35. Click on Next.
36. Click on Browse and select the directory where QD780.inf is located.
37. Click on Next.
38. If a dialog box shows up asking whether or not to continue installing the driver, click on Continue Anyway.
39. If you get a dialog box that says the file 'usbser.sys' is needed, then you will need to either insert the Windows XP installation disc or search your PC for usbser.sys file.

Windows 2000

40. The first time you connect 780D to your PC in COM mode, the Found New Hardware Wizard will show up. Click on Next.
41. Select "Display a list of known drivers for this device so that I can choose a specific driver."
42. Click on Next.
43. Select Ports (COM & LPT) and click on Next.
44. Click on Have Disk.
45. Browse to the location of QD780.inf file and select it.
46. Click on OK.
47. Click on Next.
48. Click on Next.
49. If a dialog box shows up asking whether or not to continue the installation, click on Yes.