

The detailed steps are fully described at:

http://www.kenwood.com/i/products/info/amateur/ts_480/firmware/ts480_updating_e.htm

Essentially, the process begins by first backing up your radio using **Kenwood's** free ARCP-480 Rig Control software. Then the **Firmware** update software is used to revise the rig.

The steps go as follows:

1. Everything is first disconnected from the RF deck.
2. The top cover of the rig is then opened to gain access to a switch inside the unit which must be gently moved from the "Normal" position to the "Update" position.
3. Power and Serial Cables reconnected.
4. Software self-extracted and **Firmware** updated.
5. Cables removed.
6. Internal Switch Reset to "Normal" Position.
7. Cover Replaced.
8. Cables and Control Panel reconnected.
9. Perform Full Reset to Rig.

The following is from **Kenwood's** website. You will find the direct URL's at the bottom.

From **KENWOOD'S** 2/16/05 NOTE TO CUSTOMERS:

The HF/50MHz All-mode transceiver TS-480 series **firmware** has been updated as follows.

Kenwood is offering the **firmware** updating program to the TS-480 series owners.

Updated items:

1. 7MHz band TX range is expanded to "7000kHz-7200kHz" for the TS-480HX E, TS-480SAT E (European models).
2. Internal automatic antenna tuner performance on 28/50MHz band is revised to higher precision impedance matching for the TS-480SAT K/E.
3. Algorithm of the Speech processor is revised for further compression ratio.

This **firmware** update revises the above items only.

Applicable models/units:

The **firmware** updating program is applicable for following models/units.

Models: TS-480HX K/E, TS-480SAT K/E

Serial numbers: From S/NO.508xxxxx through S/NO.609xxxxx

Notes: You can find the serial number imprinted on the main body bottom cover; it consists of an 8-digit number beginning with "S/NO."

HOW TO CHECK FIRMWARE:

You can check the **firmware** version of your **TS-480HX/SAT** by following procedure.

1. Turn the transceiver ON while pressing the [MIC] key and [NR] key to enter Checksum confirmation mode.
2. The Checksum of the **firmware** appears on the 7 segment display while the [M-CHKSUM] appears on the 13 segment display.
 - Previous **firmware**.(Version 1.00)
[Checksum = 459A]
(**Firmware** update is applicable)
 - New **firmware**.(Version 1.01)
[Checksum = 7CC0]
(**Firmware** update is not necessary)
3. Turn the transceiver OFF to exit Checksum confirmation mode.

Note: The number appears on the 7 segment display while the [P-CHKSUM] appears on the 13 segment display is not the Checksum of the **firmware** in the TX/RX unit (main body) but the Checksum of the CPU in the Control unit (panel).

HOW TO DOWNLOAD:

Firmware updating program download

Notes:

- The downloaded program is available for owners of the TS-480HX/480SAT.
- This program runs on Windows 95/98/ME/NT4.0/2000/XP(*1).
- To update your TS-480HX/480SAT **firmware**, an RS-232C straight cable is required.
- About 1MB of free hard disk space is needed to install this program.
- At least 5MB of memory is required to run this program.
- This **firmware** updating program cannot read and write user data such as menu items, memory channel frequencies.

If you do not want to lose user data, save the data using the Radio Control Program ARCP-480 before updating the **firmware** and write the data back after updating the **firmware**. ARCP-480 is freely available from **Kenwood.net** in the TS-480 area.

Installation:

1. Execute the downloaded self-extracting file "TS480_101.exe" and extract the installation program into a designated folder.
2. In the folder labeled "TS480", the **firmware** updating program "TS-480UPDATE_E.exe" and some other files are automatically created.

Uninstalling:

Delete the folder labeled "TS480" manually using the Explorer or an alternative method.

The **firmware** updating program can be downloaded from:

http://www.kenwood.com/i/products/info/amateur/ts_480/firmware/ts480_download_e.htm

Direct URL's:

Kenwood's "Note to customers using **TS-480HX/SAT** (February 16, 2005)":

http://www.kenwood.com/i/products/info/amateur/ts_480/firmware/pop_ts480_e.htm

How to Check **Firmware**:

http://www.kenwood.com/i/products/info/amateur/ts_480/firmware/ts480_version_e.htm

How to Download **Firmware** Updating Software:

http://www.kenwood.com/i/products/info/amateur/ts_480/firmware/ts480_download_e.htm