

TS-590S HOWTO: Firmware Q & A

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Introduction

This HOWTO answers many of the questions that people ask about updating the firmware on the Kenwood TS-590S.

Q: What do I do first when updating the firmware?

A: First? You do nothing!

As with any other piece of advanced electronic equipment, it makes sense to wait a decent interval (say a couple of weeks) after the announcement of the latest update, to see if there are any hidden gremlins lurking. You wouldn't update your smartphone or operating system immediately, would you?

Wait for other people to find the bugs – there's no hurry. Watch the reflectors, and when you see a stream of favorable reports you know the time has come.

[*That said, I have never heard of any problems with TS-590S firmware updates, but there's always a first time.*]

Q: How do I prepare for firmware updating?

A: Before going ahead with updating the firmware, it's a good idea to save the current TS-590S configuration. To do this, download the ARCP-590 program from here:

http://www.kenwood.com/i/products/info/amateur/ts_590/arc590_e.html

After starting the program, click on "File > Save Settings from Radio to Data File..." See Figure 1.

When the "Select Data to be Saved" window pops up, select all three options and click "OK". See Figure 2.

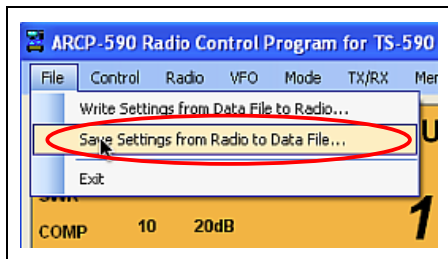


Figure 1: Saving the current TS-590S settings

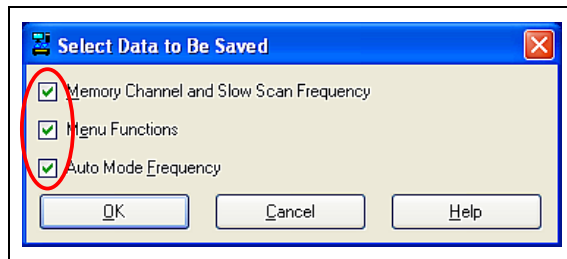


Figure 2: Selecting the data to be saved

Then in the “Save As” window click on “Save”. The settings are saved in plain text format in a file called “ARCP-590.abk” by default. See Figure 3.

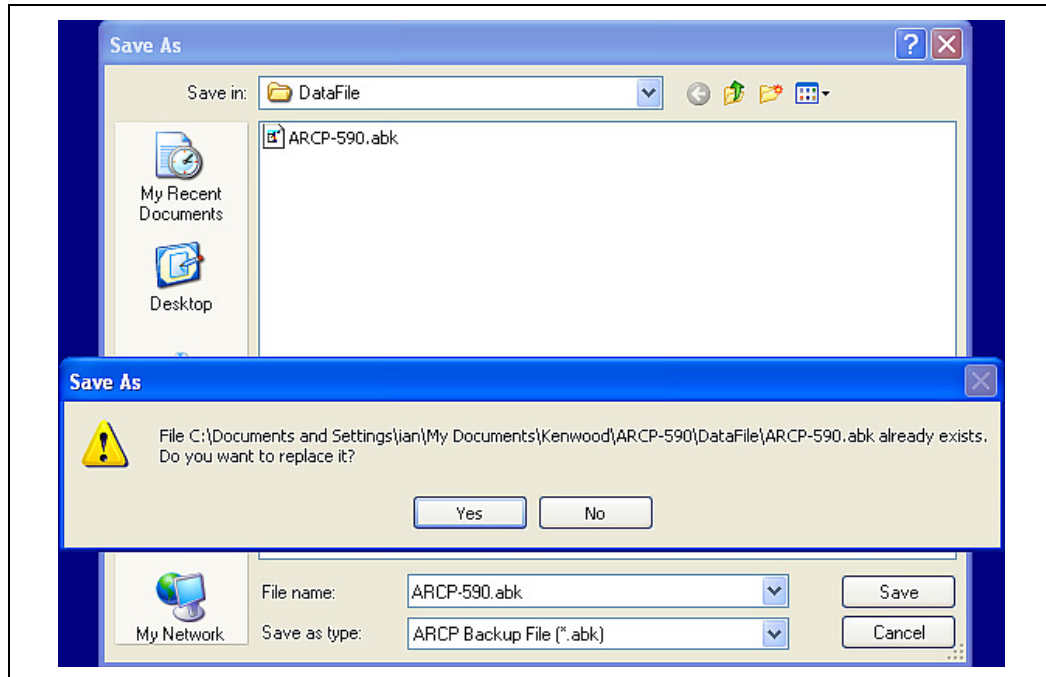


Figure 3: Saving the backup file

The backup file does not contain any form of timestamp, so if it is important to distinguish between settings saved at different times or on different dates, it makes sense to change the filename to something meaningful, like “Sep 16 2012 0830pm ARCP-590.abk”.

The backup file contains the following information:

- all 109 memory settings
- all slow scan frequencies
- all 88 menu settings for Menu A
- all 88 menu settings for Menu B
- auto mode frequencies for all 32 channels

ARCP-590 also internally saves the User Defined TX and RX equalizer profiles, but these are not saved in the backup file.

Note: The ARCP-590 program does ***not*** save any of the following settings (mostly the front panel control settings):

AF Gain, AGC Setting ,AGC Time Constant, Auto Information, BC, Carrier Level, CW Break-In Time Delay, DATA, Fine Tune, Firmware Version, IF Filter, Keying Speed, M/V, Microphone Gain, Mode, NB, Notch, NR, PROC, RF Gain, Speech Processor Function, Speech Processor Level, Split, Squelch Level, TF-Set Status, Transceiver ID, Transverter Offset, Tuner, TX Monitor Output Level.

Make a note of any of these settings that are important to you (for example, the speech processor settings) before updating the firmware. You will need to restore these settings manually after completing the firmware update.

Q: How do I download the firmware?

A: Full instructions for downloading the latest TS-590S firmware are at:

http://www.kenwood.com/i/products/info/amateur/ts_590/ts590_update_e.html

Before you do anything, you must read and understand the whole of this page! The instructions are straightforward, but you must follow them *exactly* to perform the update successfully. If you do things in the wrong order, or miss something out, you risk locking yourself out of the radio.

Q: The update instructions say that a virtual COM port driver needs to be installed onto the PC to use the firmware updating program with a USB cable. I normally use the serial COM port, so do I have to do this?

A: No, you can use the serial COM port instead, and do not need to install any other software. However, if you do decide to use the virtual COM port with a USB cable, be sure to follow Kenwood's advice on the update page:

"If the transceiver is connected to a PC using a USB cable, ensure that the connection is directly in place. The firmware updating program may not behave properly if a connection is in place through a USB hub."

Q: Where do I find the latest firmware?

A: The link to the latest firmware for the TS-590S is at the bottom of this page:

http://www.kenwood.com/i/products/info/amateur/ts_590/ts590_update_e.html

The update is in a zip file named something like "TS-590_V107E.zip".

Q: My firmware is several versions out of date. Do I need to load all the versions I have missed, or can I just update with the latest version?

A: You only need to update with the latest version of the firmware. The latest version contains all the previous updates as well.

Q: Having downloaded the firmware update, how do I now perform the update?

A: First, close ARCP-590. You can not install the firmware when ARCP-590 is running.

Then follow the instructions at:

http://www.kenwood.com/i/products/info/amateur/ts_590/ts590_procedure_e.html

Before you do anything, you must read and understand the whole of this page! The instructions are straightforward, but you must follow them *exactly* to perform the update successfully. If you do things in the wrong order, or miss something out, you risk locking yourself out of the radio.

Q: Does the update baud rate matter?

A: No, you can select any available speed with either the virtual COM port or the serial COM port. However, the update takes several minutes at the highest speed (115200 baud), and progressively longer at lower speeds, so choose 115200 if your PC supports that speed.

Be aware that if you change the baud rate in the TS-590S (using Menu 61 for the COM port or Menu 62 for the USB port), you need to power cycle the radio for the change to take effect.

Q: How do I find out what has changed in the latest firmware update?

A: Full details of the changes in each update are listed here:

http://www.kenwood.com/i/products/info/amateur/ts_590/ts590_update_e.html

[Some of the sections include the strange statement “Revises the following symptoms”. It is assumed that this means “Fixes the following issues”.]

Q: What do I do if the firmware update doesn't install properly?

It is very unlikely that the update will not install properly – about the only thing that can go wrong is that the PC's baud rate and the radio's baud rate are not the same. Take a deep breath, re-read the instructions and start over.

Q: Can I revert to an earlier version of the firmware?

A: Yes, you can, but there is probably no point. If you really must, these are the versions of the firmware that are currently available:

Version 1.01: http://www.kenwood.com/i/products/info/amateur/ts_590/pdf/TS-590_V101E.zip

Version 1.02: http://www.kenwood.com/i/products/info/amateur/ts_590/pdf/TS-590_V102E.zip

Version 1.03: http://www.kenwood.com/i/products/info/amateur/ts_590/pdf/TS-590_V103E.zip

Version 1.04: http://www.kenwood.com/i/products/info/amateur/ts_590/pdf/TS-590_V104E.zip

Version 1.05: http://www.kenwood.com/i/products/info/amateur/ts_590/pdf/TS-590_V105E.zip

Version 1.06: http://www.kenwood.com/i/products/info/amateur/ts_590/pdf/TS-590_V106E.zip

Version 1.07: http://www.kenwood.com/i/products/info/amateur/ts_590/pdf/TS-590_V107E.zip

Q: Once I have completed the firmware update, how do I restore the radio settings I saved earlier with ARCP-590?

A: After starting the program, click on “File > Write Settings from Data File to Radio...” See Figure 4.

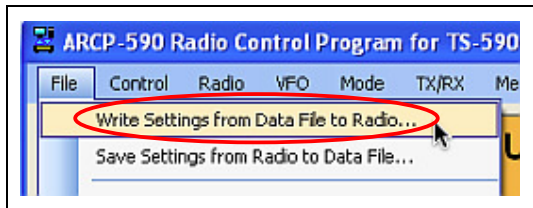


Figure 4: Restoring the saved radio settings from the .abk data file

When the “Open” window appears, select the backup file you want to restore from, then click on “Open”.

A new window “Select Data to be written” appears. Select the required options, then click on “OK”.

Q: The ARCP-590 program and the update firmware are Windows programs, but I am running a Mac. How do I do the update?

A: On the Mac you can install Windows under the Apple Boot Camp, or will need one of the two popular Windows emulation programs (Parallels or VMware Fusion). VMware lets you run Windows XP Pro at the same time as Apple's OS X.

ARCP-590 and the TS-590S update software communicate with the TS-590S via the virtual COM port. You need to install the virtual COM port driver for OS X – the driver is available for free from the Silicon Labs web page at:

<http://www.silabs.com/products/mcu/pages/usbtouartbridgevcpdrivers.aspx>

Scroll down to the heading “Download for Macintosh OSX (v3.0)” and click on the link “VCP Driver Kit” below it.

Unzip and install the driver, then Windows will be able to use it.

As in the Windows environment, be sure to follow Kenwood's advice on the update page:

“If the transceiver is connected to a PC using a USB cable, ensure that the connection is directly in place. The firmware updating program may not behave properly if a connection is in place through a USB hub.”

Now follow the instructions given earlier for:

- using ARCP-590 to save the radio's settings ¹
- updating the firmware
- using ARCP-590 to restore the saved radio settings

¹ If after installing ARCP-590 you find that it does not control the radio, the problem is usually that Windows cannot find the virtual COM port. Pull the USB cable from the Mac, wait a few seconds, then replace the cable. This will cause Windows to wake up to the fact that a new device has been attached. When VMware nags you, assign the new device to Windows, not the Mac. See Figure 5.



Figure 5: Assigning the VMWare COM device to Windows

Document Version History

Version	Date	History
1.0	20 September 2012	First public release
1.1	2 October 2012	Changed number of menus saved by ARCP-590 from 87 to 88 (numbered 00-87)