

Checklist for: Flashing OpenTX v2.x the First Time

Part 1: Checking the Bootloader and Installing OpenTX Companion

Note:

Once in a very great while, something goes wrong during the flashing operation. The result is that when you turn on your Taranis, nothing happens. Nyet...nada...nothing. However, don't cue Chopin's *Funeral March* just yet. Normally the situation can be corrected by re-flashing the firmware. This also illustrates the wisdom of backing up your old firmware before you decide to flash the new version. :->)

Introduction

Well, you're ready to flash OpenTX 2.x to your Taranis for the first time. Before we do that, we need to consider a few things.

There is currently a lot of confusion out there about this process. Do I have to use Companion in one form or another? (Yes, but only for the first flash.) Why can't I just copy it to the SD card and flash it through Bootloader mode in the TX? (Because until you flash OpenTX, you don't have a user accessible bootloader.) Where do I get OpenTX 2.x? (You don't...you download OpenTX Companion, install it, and let OpenTX Companion find the new version for you, or you use your existing install of Companion9X.) Etc., etc., etc.,.....

We'll tackle a few of those questions in this lesson, as well as show you how to flash your TX in two or three different ways. Hopefully, we can take some of the mystery out of it for you.

Lesson Goals

There are two goals for this lesson:

1. Goal #1: Download and install OpenTX Companion
2. Goal #2: Use OpenTX Companion to flash OpenTX v2.x to your Taranis transmitter

Prerequisites

Here's what you'll need to know to get started:

1. You'll need to have a working copy of the STM BOOTLOADER installed.
2. You'll need to know how to download and save a program on your computer.
3. You'll need to know where your computer saves your downloaded programs before they're installed.
4. You'll need to know how to install a downloaded program on your computer.

Background

One real problem is that there are OpenTX users at all stages of this process, from raw newcomer to advanced super users. It would be far beyond the scope of this lesson to try and cover each situation individually. Instead, we're going to assume (and, yes, I know what that means) that you are a brand new users, totally unfamiliar with the procedure, and without any software directly related to OpenTX installed on your computer other than the STM BOOTLOADER driver that you installed using *Zadig*. It's vital that you can see that it's installed in the Windows Device Driver when you have your TX **OFF** and plug it into your computer. If you don't have that, you're not going anywhere.

If you're currently using OpenTX (either r2940 or v1.99.x) and have upgraded your firmware before, you can simply tell Companion 9X or OpenTX Companion to get and install the new v2.x firmware. I've been doing that for several months (current date: 06/2014), and it has worked flawlessly. But, then again, if you've done that, you probably wouldn't be here. ☺

NOTE: Because getting your computer to talk to the Taranis and flashing for the first time are such problem areas, there are, literally, hundreds of forum posts on the process. By far one of the best that I've seen is by Cleon on Scott Page's *FrSky Taranis with OpenTX 2.0 and beyond* forum, specifically Post #1452 (<http://www.rcgroups.com/forums/showpost.php?p=28659005&postcount=1452>). If what we do here doesn't float your boat, check out Cleon's post. In fact, you'd probably be smart to bookmark that forum (<http://www.rcgroups.com/forums/showthread.php?t=2178865&pp=50>) as well as Wayne's *FrSky Taranis – 16 Channels, Full Telemetry, RSSI* forum at: (<http://www.rcgroups.com/forums/showthread.php?t=1866206&pp=50&highlight=companion+9x&page=601>). Both are treasure troves of help and should be in every OpenTX and Taranis user's toolbox.

Just to review, here are the givens at the start:

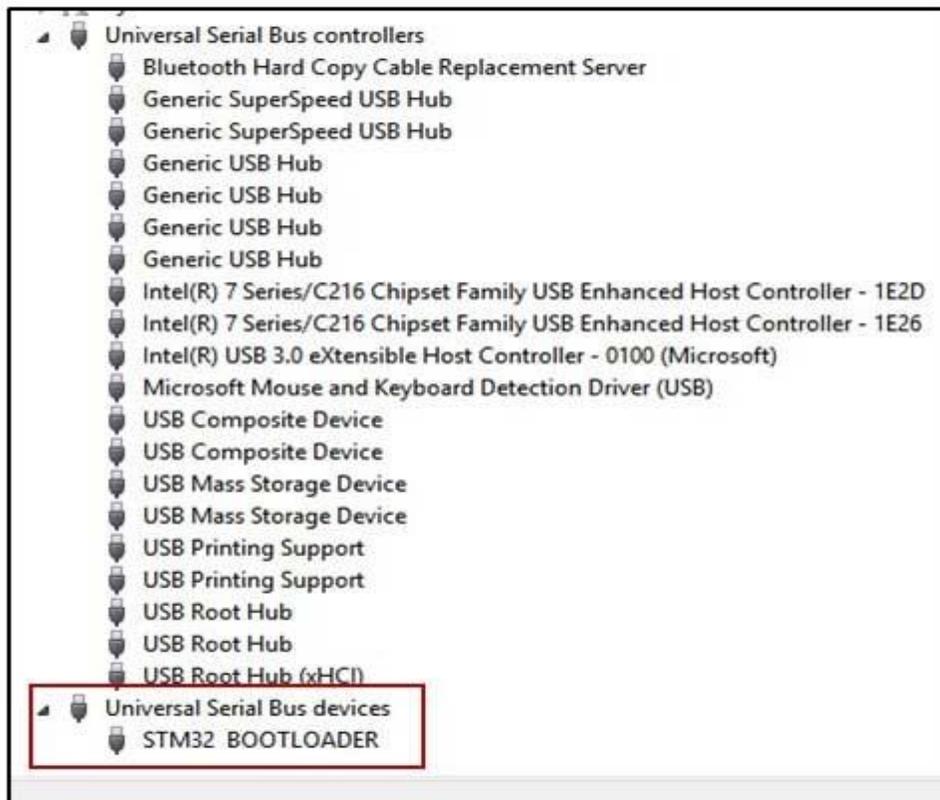
1. You have an installed copy of the STM BOOTLOADER on your system.
2. You are competent in downloading and installing applications from the Web.
3. You do not have Open TX Companion installed on your computer. If you have Companion 9X installed, that's fine. OpenTX installs in its own folder, and the two live happily together without conflict. If you're still using Companion 9X, now is probably the time to upgrade to OpenTX Companion. I still have C9X on my machine and use it to upgrade my older Turnigy 9X equipped with a FrSky module and running OpenTX r2490. It works just fine!

OK, we're off!

Steps/Checklist

Step #1: **Checking the STM BOOTLOADER** *DO THIS!!*

1. Using the steps provided in the previous lesson, *Using Zadig*, plug your Taranis into your computer with it **OFF**.
2. Give Windows a few seconds to recognize the TX, then open the Device Driver and ensure that the STM BOOTLOADER device is loaded. You should see something like this:



3. Leave the Device Manager open, and fire up your browser.

Step #2: Downloading and Installing OpenTX Companion

1. Point your browser to the OpenTX Download Page: [Downloads Improving Your TX](http://www.open-tx.org/downloads.html) (<http://www.open-tx.org/downloads.html>). If you haven't already done so, bookmark or add this page to your bookmarks/favorites half a dozen times or so. It's your official source for all things approved for Taranis. Note that there are resources here for working with Taranis audio, images that you can use on your Taranis and other downloads that may or may not interest you at the moment. The point is, don't forget about this page!

Downloads Improving your Tx

OpenTX Firmware - Current: 2.0.3

You use OpenTX Companion to select exactly which options you want to prepared for you by our build server and downloaded to your PC. OpenTX

You can check the release history of OpenTX firmware [on this page](#)

OpenTX Companion - Current: 2.0.3

- [OpenTX Companion 2.0.3](#) (2014-06-17) 
- [OpenTX Companion 2.0.2](#) (2014-06-12)
- [OpenTX Companion v1.52](#) (2014-01-10)
- [OpenTX Companion v0.97 for OSX](#) (2012-09-02)

2. Choose the latest edition of OpenTX Companion and click it.
3. Select the correct platform for your computer and click it.

OpenTX Companion 2.0.3 Improving your Tx

OpenTX Companion is now available as version 2.0.3 Download Companion and use it to retrieve and transfer the latest OpenTX firmware to your radio.

The OpenTX team always encourages upgrading to the latest versions, but no security problems have been found in the earlier 2.0.0, 2.0.1 or 2.0.2 versions that make it necessary to update.

Download links:

[OpenTX Companion 2.0.3 - Windows Installer](#) 

[OpenTX Companion 2.0.3 - Linux RPM Package](#)

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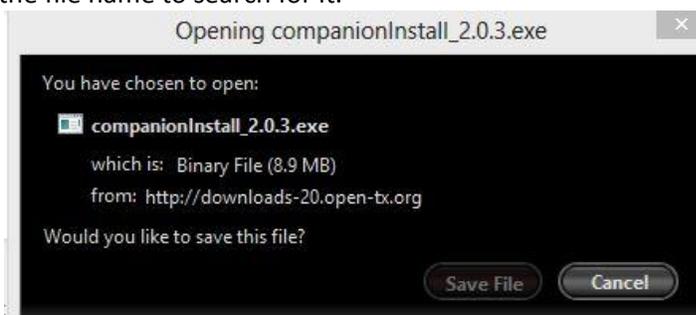
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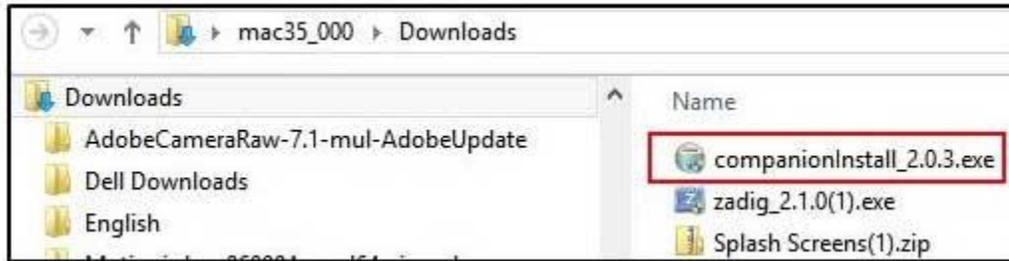
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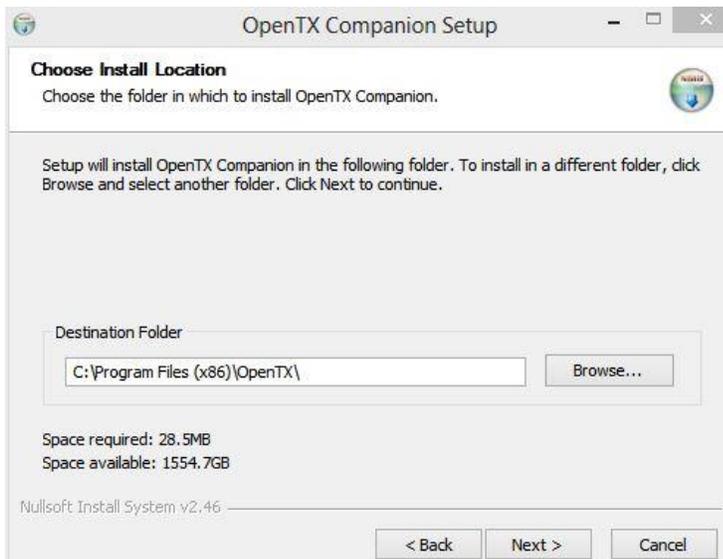
4. Windows will ask you what to do with the file. Click: "Save File" to authorize the download. Note that the file name is something similar to: companionInstall_2.0.3.exe. If you can't find where Windows puts it, you'll need the file name to search for it.



5. Your download time will vary, depending upon the speed of your Internet connection and your computer. On my machine, it takes between 10-15 seconds, and I'm running a Core I-4, 3.3GHz processor with a relatively slow (by some standards) 15MB DSL line.
6. When the download is completed, use Windows Explorer to locate it. I can't answer for everyone, but my download utility through Firefox is configured to save downloads in the "Downloads" folder. Your experience may vary. If you can't find it, type the file name in the search bar. If you get it right, that should do it.



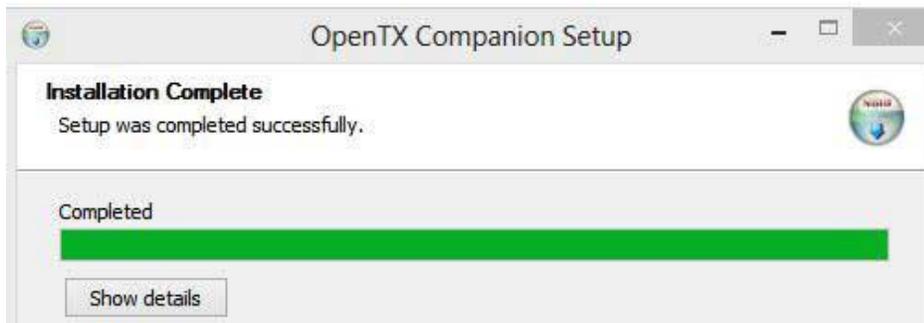
7. Double-click the file to begin the install. You may see a screen asking you if you wish to allow the program to make changes to your computer. Select **"Allow"** to move onward.
8. You'll then see the standard window asking if you accept the Terms and Conditions. Since you can't install the software unless you do, click, **"Yes"**.
9. The next screen is the component selection screen. There's only one option, so click **"Next"**.
10. The next screen asks where you want your computer to put the program. Unless you have an overwhelming reason not to, accept the default by clicking **"Next"**.



11. Finally, Setup asks you where you'd like to create the programs shortcuts. Again, unless you have an overwhelming reason not to, keep things simple by selecting the default (OpenTX Companion). Leave "Do not create shortcuts" at the bottom of the window unchecked to create the shortcuts we all love.



12. Click "Install" to start the installation. It takes less than 5 seconds on my machine, and the standard progress bar keeps me informed as to the progress. When you're finished, you'll see the screen below:



13. Click "Next", and the "Finish" screen displays with the option to launch OpenTX selected. Click "Finish" to accept that option.
14. Take time to look at the next lesson: Part 3: Flashing OpenTX **BEFORE** you proceed any farther. There are still things to do, and having an understanding of what they are and how they fit together helps to ensure success.

CONTRATULATIONS! You've just installed OpenTX Companion on your computer! Don't you feel proud of yourself?