

DGy™ DIGITAL GRAPHICS RECORDER UPGRADING FIRMWARE



RGB Spectrum periodically provides upgrades to the *DGy* to add new features, change functionality or resolve technical problems. Check the *Support* section of the RGB Spectrum Web site for information about firmware upgrades.

This document provides detailed information about the upgrade process required to download and install new versions of the *DGy* firmware. The manual, command line, method is described as is the use of the FTP Client for to upgrade firmware.

[Manual Upgrade Procedure](#)

[Upgrade Firmware Using the FTP Client](#)

Important

The manual procedure must be used to upgrade to version 2.0.6. After 2.0.6 is installed, subsequent upgrades can be done manually or with the FTP Client.

OBTAINING THE FIRMWARE

Each revision of firmware is provided with a copy of the firmware release notes which identifies changes and improvements associated with the new version. Reading the release notes before upgrading the firmware is recommended. Please contact RGB Spectrum Customer Service for questions and assistance.

Download the latest revision of the firmware from the RGB Spectrum web site Support section: <http://www.rgb.com/en/Support/DGy.asp>. The upgrade consists of two files: FWDGY_x.y.z.tgz and FPGADGY_x.y.z.tgz, where x.y.z represents the version number. The file name is case sensitive. Copy these files onto a local drive on the PC. **Do not** rename the files.

The use of a broadband connection is highly recommended as the upgrade files are approximately 8MB.

MANUAL UPGRADE PROCEDURE

There are two files, **FWDGY.x.y.z.tgz** and **FPGADGY_x.y.z.tgz**, which must be sequentially uploaded and installed using an upgrade command. Carefully follow the steps below.

USING A BROWSER TO FTP THE FIRMWARE FILE

1. Open a web browser and type `ftp://<ipaddress>` where `<ipaddress>` is the IP address of the *DGy*.

▲ **Example:** Assuming that the *DGy* IP address is currently set to 192.168.1.150

Type: **ftp://192.168.1.150**

This will launch the *DGy* FTP server login screen.

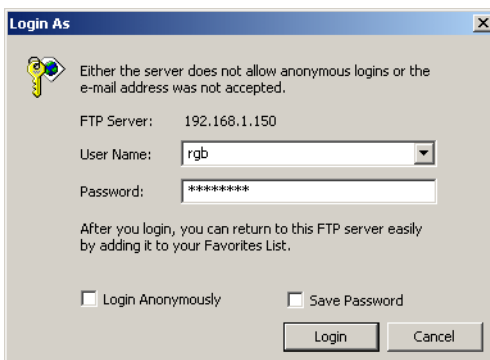


Figure 1 FTP Login Screen

2. If the user name **rgb** is not already entered in the User Name entry box then type **rgb** (lower case only).
3. Type **spectrum** in the password dialog box (lower case only).
4. Click the **Login** button.
5. Cut and paste the upgrade file **FWDGY.x.y.z.tgz** from the PC folder into the browser window; download will automatically begin. A window showing the file transfer progress is displayed.

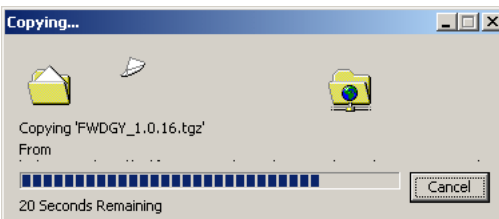


Figure 2 Typical FTP Copy Progress Screen

When the copy process is complete the browser FTP window should look similar to the window shown in [Figure 3](#).

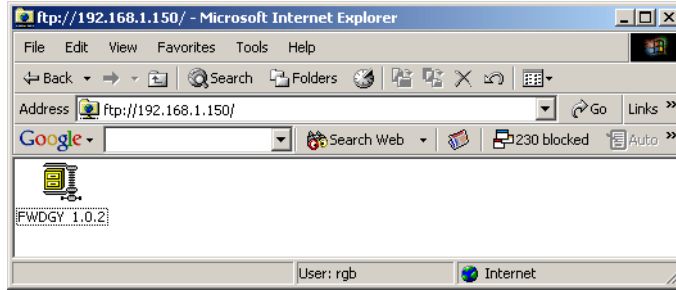


Figure 3 FTP Browser Window with File Transfer Complete

INSTALLING THE DGy FIRMWARE

After the file **FWDGY_x.y.z.tgz** has been transferred to the *DGy*, the next step is to install it into *DGy* non-volatile memory. Installation of the *DGy* firmware requires the **ufw** command to be issued from a command line interface. Use either the serial (RS-232) port or open a Telnet session on the Ethernet port to complete this step.

1. Connect to the *DGy* by either the serial port using a serial emulator or the Ethernet port in a Telnet session.

Important

The Telnet command must specify the *DGy* port. Use the command: `telnet <IPaddress> 8000`.

2. Verify that communication to the command line interface has been established by typing **ver** at the command line prompt. If the connection is set up correctly the *DGy* will respond with the current firmware version.
3. Type the command **ufw** and press **ENTER**.
4. The *DGy* will display a warning message:

“This command will replace the current firmware with the firmware you just downloaded and restart the system. Do you want to proceed (y/n)?”

Type **y** to proceed or **n** to terminate the process.

If the serial port is used to perform the upgrade, a complete log of commands executed by the *DGy* will be displayed. For either serial port or Ethernet use, a message similar to that shown in [Figure 8](#) will be displayed after **FWDGY.x.y.z.tgz** has been installed.

```
Telnet 192.168.35.204
DGy
Copyright (c) 2005 RGB Spectrum

>>>>>>> WARNING <<<<<<<<<
Problem loading firmware files:
  FPGA backup file loaded
  Kernel backup file loaded

The file(s) listed above may be corrupted and may need to be reloaded
with the UFW command. If the problem persists, contact tech support.

>
```

Figure 4 Installation of FWDGY.x.y.z.tgz Complete

DO NOT BE ALARMED

The warning in [Figure 4](#) will only appear when upgrading to firmware version 2.0.6. During future upgrades, an instructional message for the next step will be displayed.

Important

Communications with the *DGy* will be lost during the installation process. This is normal and does not indicate that there is a problem with the installation process. This process may take several minutes.
DO NOT turn the power off during this time.

5. When the installation is complete the *DGy* will automatically reboot; the front panel LED indicators will be turned on simultaneously. Wait fifteen seconds for the boot process to complete before moving on to the next step.

USING A BROWSER TO FTP THE FPGADGY FILE

1. Open a web browser and type ftp://<ipaddress> where <ipaddress> is the IP address of the *DGy*.
2. Enter the user name **rgb** and password **spectrum**.
3. Click the **Login** button.
4. Cut and paste the upgrade file **FPGADGY.x.y.z.tgz** from the PC folder into the browser window.

INSTALLING THE DGy FIRMWARE

1. Reconnect the serial emulator or start a new Telnet session with the *DGy*.
2. Type the command **ufpga** and press **ENTER**.
3. Enter **y** when asked to proceed.

Important

Communications with the *DGy* will again be lost during the installation process. This is normal and does not indicate that there is a problem with the installation process. This process may take several minutes.

Do NOT turn the power off during this time.

When the installation is complete, the > prompt is displayed for serial connection; the Telnet window will display the default prompt.

The firmware upgrade is now complete.

UPGRADE FIRMWARE USING THE FTP CLIENT

The FTP Client may be used to upgrade firmware only after version 2.0.6 or higher is installed. The current firmware version is indicated in the WCP configuration window.

The firmware upgrade includes the following steps:

- Download new firmware from the RGB Spectrum web site.
- Install the **FWDGY_x.y.z.tgz** upgrade.
- Install the **FPGADGY_x.y.z.tgz** upgrade.

STARTING THE FTP CLIENT

1. Connect to the *DGy* by typing the IP address of the *DGy* in the address line of a browser. The first page that the browser displays is the *DGy* Applications Suite page as shown in [Figure 5](#). If the *DGy* WCP is open, close it before proceeding.

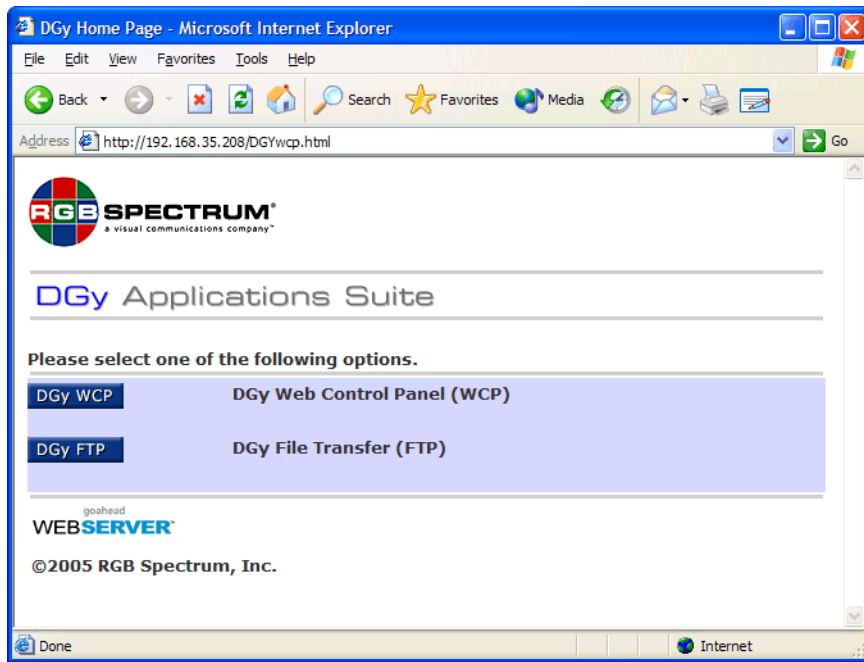


Figure 5 *DGy* Application Suite Page

2. Click on *DGy* FTP to open the client. A file download dialog similar to the one shown in [Figure 6](#) will open.

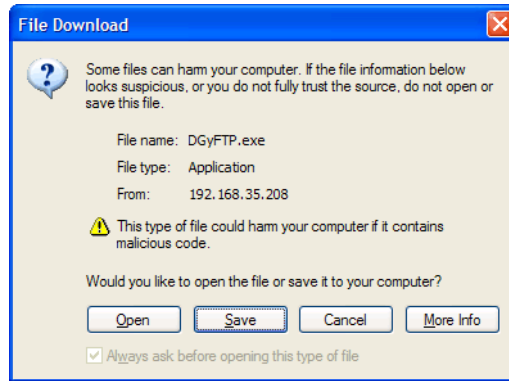


Figure 6 File Download Warning

3. Click **Run** or **Open**, depending on software, to continue. If additional dialog boxes appear due to security applications, click the appropriate button to continue.

After a pause of about 15 - 20 seconds, as the FTP Client application loads and the *DGy* FTP Client window, shown in [Figure 7](#), is displayed.

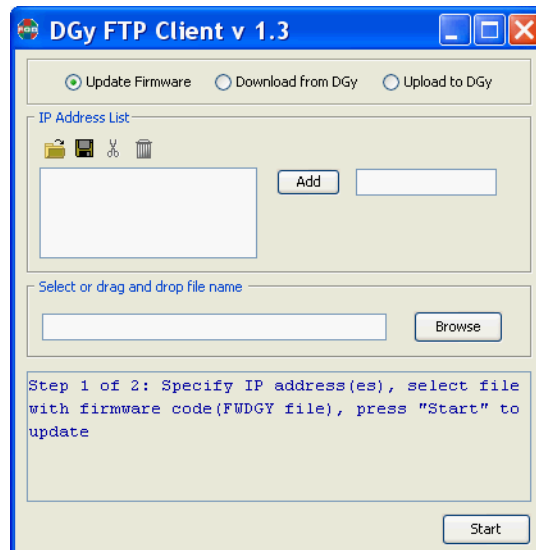


Figure 7 DGy FTP Client Window

FIRMWARE UPGRADE

1. Enter the IP address of the *DGy* in the IP address entry box to the right of the **Add** button.
2. Click **Add** to add the IP address of the *DGy* to the **IP Address List** on the left side of the window.

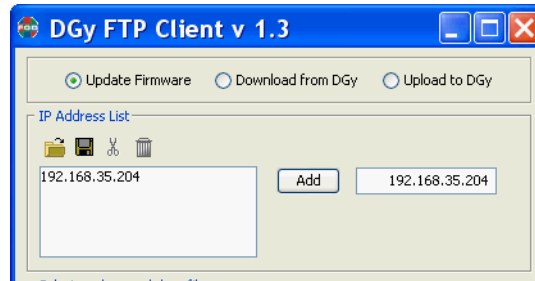


Figure 8 DGy FTP Upgrade Firmware IP Address List

3. Click on the **Browse** button to navigate to the folder containing the firmware upgrade files copied to the PC. Select the file **FWDGY_x.y.z.tgz**. Alternatively, if the path is known, it may be typed directly into the entry box. A third method is to drag the file onto this area.

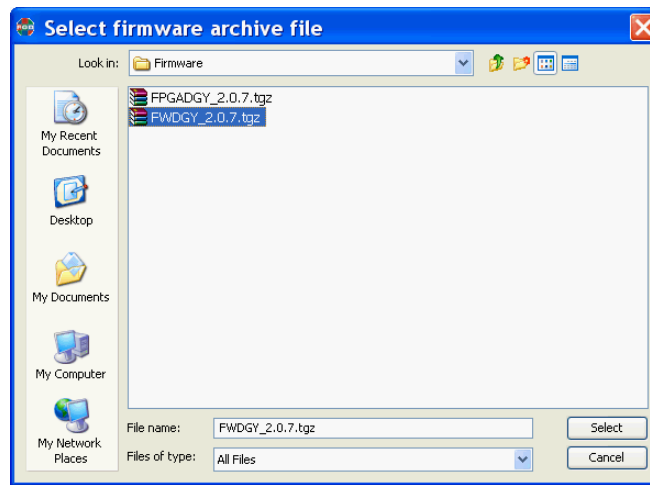


Figure 9 FTP Select Firmware Archive File

The file name now appears in the box to the left of the **Browse** button as shown in [Figure 10](#).

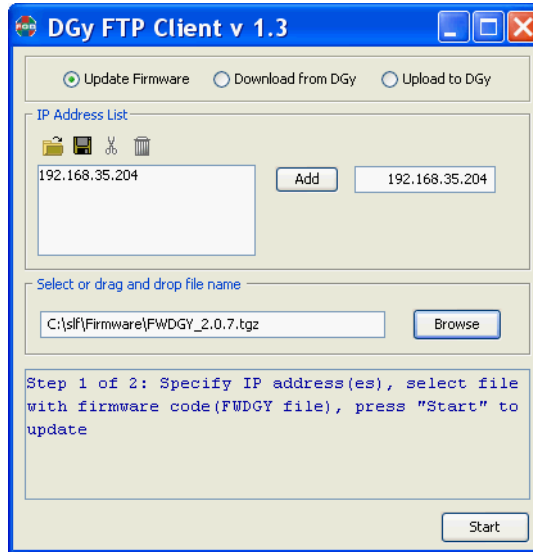


Figure 10 FTP Firmware File Name

4. Click the **Start** button to begin the firmware file transfer process from the PC to the *DGy*. A **File transfer** status window will display the progress.

The *DGy* will automatically upgrade the firmware after it has transferred the file. When the upgrade is complete. The FTP Client window will indicate readiness for the next step as shown in [Figure 11](#).

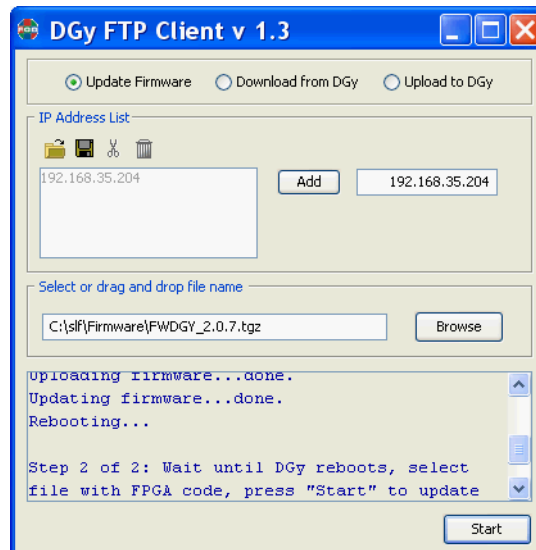


Figure 11 FTP Upgrade Firmware Status

5. Repeat steps 3 and 4 above for the **FPGADGY_x.y.z.tgz** file.

The *DGy* will automatically reboot upon completion of the firmware upgrade. During this time, communication with the *DGy* will be lost.

6. Reconnect to the *DGy* Applications Suite after the system has rebooted and launch the *DGy* WCP.

The WCP Configuration window will indicate the new firmware version. The upgrade is now complete.