

Tenor Software – Upgrading and Archiving

Related Products: Quintum Analog Tenor – Models A200, A400 and A800.
 Quintum Digital Tenor - Models D800, D1600, D2400 and D3000.
 Quintum Call Relay.
 Quintum Gatekeeper

I. Introduction.

Over the course of a products life cycle, it may become necessary for Quintum to issue new software. This software may provide bug fixes to previous software versions, maintenance releases and feature/functionality upgrades. Also, it may be desirable for a customer to “back-up” their configuration file and store this later use. This document will discuss the procedures necessary to perform this function.

If you have any questions or comments, please contact the Quintum Technical Assistance Center (QTAC) either via email at service@quintum.com or phone at 1-877-435-7553 toll free in US or 1-732-460-9399 Internationally.

Types of Software:

Within the Quintum Tenor units mentioned above, there are 3 files. They are;

boot.bin

The boot.bin file is the Tenor’s base operating system. The Tenor requires this software just to be able to power up normally. This software is not updated often from Quintum.

sys.bin

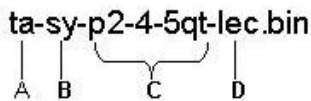
The sys.bin file is the Tenor’s system software. This software gives the Tenor all of its features and functionality. It provides all of the routing algorithms, etc. This software is updated as needed to provide bug fixes and feature enhancements.

db.bin

The db.bin is where your configuration for the Tenor is stored. This software is not upgraded directly, but will be upgraded, if needed, by the sys.bin file automatically. You may archive this file for a backup and later restore it back to the unit if necessary. You may also take this file from one Tenor and load it in to other Tenors of the same model type when you are creating a network of Tenors where the configuration is mostly the same except for some minor details.

Software Naming Convention:

When Quintum sends a customer new software, the file name will reflect the type of software it is. The convention that Quintum currently uses is;



Parameter	Name	Possible Values	Description
A	Model Type	ta – Tenor Analog version td – Tenor Digital version	Each software is provided for either the Analog or Digital Tenor. When you want to load a system, you must make sure that the software is for that product type (analog or digital).
B	Software Type	sy – sys.bin software bt – boot.bin software	As mentioned above, the 2 files that quintum can provide for upgrades are the boot.bin and the sys.bin. When the software is sent, you can identify which software it is by this parameter. Also, when you load the Tenor, the Tenor will only accept a file name of boot.bin, sys.bin or db.bin, so you



			must rename the file to the correct type when you load the software. See the procedures for more information.
C	Software Version	Variable, based on software version	This will reflect the software version.
D	Echo Cancellation Type	lec - Long Echo Cancellation. null - Short Echo Cancellation.	The long echo cancellation or lec software is used to provide up to 128ms of echo cancellation. Quintum recommends that all Tenors except the D3000 be loaded with the lec version software. If the file does not have lec in this position, then it is has shorter echo cancellation and should only be loaded on the D3000.

Software Release Notes.

When a new version of software is released, software release notes will be generated to indicate the new features and/or bug fixes. Additionally, the release notes will tell you which files are to be upgraded (sys.bin, boot.bin or both).

Other Software:

In addition to the above software, there is also a feat.bin file. The feat.bin file is the file that provides different features to the Tenor. If you upgrade from one model type to another, Quintum may send you this file for the system. The feat.bin file is coded to a specific Tenor serial number based on the serial number you provide us. If the feat.bin file is loaded in to a system that does not have the serial number coded in this file, the Tenor will lose all of its features and stop processing calls. The correct feat.bin will need to be reloaded to this system.

II. Upgrading the Tenor.

Before you begin:

Before you upgrade the Tenor with new software you should check the following;

1. Make sure that you have received the correct software for your system from Quintum. Use the above information from Section I to identify the software.
2. Make sure you have saved the software file to a directory on your PC. For example purposes, we will use c:\Quintum as the directory.
3. Check the file size from a DOS window of the file you received. When Quintum emails the software to you, we should provide the file size as shown from DOS. To check this, open a DOS window on your PC where the file is stored and go to the directory where that file is. At the DOS prompt type **dir <enter>**. You will now see a list of all files in that directory and what their file size is. If the file size does not match what Quintum said it should be, then the file may be corrupted. Contact the Quintum Technical Assistance Center (QTAC) to have them resend the file.
4. Make sure that there are no calls active on the Tenor. If possible, place the Tenor in bypass mode.
5. Make sure that you can communicate with the Tenor from your PC over IP. You can only upgrade the Tenor over IP and not from the serial interface.

Software Loading Procedure for A400, A800, D800, D1600, D2400, D3000, Call Relay, Gatekeeper:

Please follow the steps below to load the new software to your Tenor. You may choose to load both the boot.bin and the sys.bin files before the final step. This procedure is also used to restore a db.bin file that you previously archived.

1. From your PC, open a DOS window and at the DOS prompt change the directory to where the software is located (ex. cd c:\quintum).
2. At the prompt type **dir <enter>** to verify that the correct software is there.

3. At the DOS prompt type **ftp ipaddress <enter>**. Where *ipaddress* is, enter the IP address for the Tenor.
4. At the *User* prompt hit **<enter>**. The Tenor has no user name.
5. At the *Password* prompt, type in the Tenor's password you assigned. If you have not set a password on the Tenor, then just hit **<enter>**.
6. At the *ftp>* prompt type **bin <enter>**. This will tell FTP that the file to be transferred is a binary file.
7. At the *ftp>* prompt type **hash <enter>**. This will tell FTP to provide a hash (#) mark as a status indicator.
8. At the *ftp>* prompt type **put origfile destfile**. Where *origfile* is enter the name of the file as it is shown in DOS when you saved the file. For example; ta-sy-p2-4-5qt-lec.bin or td-sy-p2-4-5qt-lec.bin. Where *destfile* is enter the file name that the Tenor needs to see. For example; sys.bin. So a full example might be; put ta-sy-p2-4-5qt-lec.bin sys.bin.
9. When you hit **<enter>** the file will first be transferred to the Tenor. This will be evident by the hash (#) marks appearing across the screen.
10. When the hash (#) stop appearing, the file has been transferred and the Tenor is now erasing the old software and loading the new one. This step can take as short as 20 seconds or as long as 1-2 minutes. This is a critical step. If the Tenor loses power or resets during this period, it may not come back up.
11. When the above is completed, you should get a message of "**Transfer Complete**". If you do not get this message, or if the message reads "connection closed by remote host", then the load is not completed yet. Wait about 2 minutes and then try to FTP into the Tenor again. If it allows you in, the load is complete and you can continue to step 12.
12. When you get the message *Transfer Complete*, the load is completed. If you have another file, like the boot.bin file to load, you can repeat step 8 to load this file now. Exit FTP by typing **bye <enter>**.
13. The Tenor must know be reset for the new software to be active.

Software Loading Procedure for A200:

System Software.

You must have a TFTP software program on your PC that is able to communicate to the A200 via IP.

1. Save the software to a directory on your PC called C:\Quintum\A200.
2. Connect to the A200 with a web browser.
3. Click on the *Maintenance* menu tab.
4. Click on the *Upgrade Firmware* tab.
5. Start the TFTP server on your PC (the TFTP server software is on the CD that you received with the A200).
6. Enter the name of the directory (C:\quintum\A200) in the TFTP server's root directory using the *File*→*Change root directory* menu options.
7. On the A200's *Upgrade Firmware* page, type in the IP address of your PC that is running the TFTP server in the field named *TFTP Server IP Address*.

8. In the field *Download File Name*, enter the name of the system code file (xxxxxxx.bin).
9. Click on the **Upgrade** button.
10. The system will load the code (about 2 to 3 minutes). When it is done, the A200 will reset on its own and come back up with the new software.
11. Once the A200 comes back up, re-connect with the web browser.
12. Click on **System Information** tab.
13. Verify that the *Software Version* field is showing the latest version number.

Updating A200 Boot Code

1. Copy the new boot code to a directory on your PC called C:\quintum\A200.
2. Prepare the command file, param.ini, for FirstAid agent. This file should reside in the same directory as the boot code. Make sure that the file has only the following line in it;

```
action=boot-code&bootv101.bin
```
3. Launch the FirstAid Agent on your PC. The FirstAid Agent software is on the CD that you received with the A200.
4. Click on the **Configuration** button of the FirstAid Agent.
5. Enter or select the full path of the command file, param.ini.
6. Connect the A200 to the Ethernet card of your PC and reboot the A200.
7. Watch the status window of the FirstAid Agent. You should see 3line messages like the following;

```
RRQ from 192.168.4.31 file param.ini  
RRQ from 192.168.4.31 file bootv101.bin  
File "bootv101.bin" sent to 192.168.4.31 size 113777 bytes
```
8. Wait for 5 minutes for the file transfer and writing to FLASH in the A200.
9. Close the FirstAid Agent. You must close the FirstAid Agent before you go to the next step.
10. Reboot the A200.

Archiving the db.bin file (A400, A800, D800, D1600, D2400, D3000, Call Relay, Gatekeeper):

Follow the below steps to archive your db.bin file.

1. From your PC, open a DOS window and at the DOS prompt change the directory to where the software you want to store the software at (ex. cd c:\quintum).
2. At the DOS prompt type **ftp ipaddress <enter>**. Where *ipaddress* is, enter the IP address for the Tenor.
3. At the *User* prompt hit **<enter>**. The Tenor has no user name.
4. At the *Password* prompt, type in the Tenor's password you assigned. If you have not set a password on the Tenor, then just hit **<enter>**.
5. At the *ftp>* prompt type **bin <enter>**. This will tell FTP that the file to be transferred is a binary file.



6. At the *ftp*> prompt type **hash <enter>**. This will tell FTP to provide a hash (#) mark as a status indicator.
7. At the *ftp*> prompt type **get db.bin destfile**. Where *destfile* is enter the name you would like to call this file on your PC. For example; NYTEN-DB.bin.
8. When you hit <enter> the file will transferred from the Tenor to your PC. This will be evident by the hash (#) marks appearing across the screen.
9. When the hash (#) stop appearing, the file has been transferred and you should see *Transfer Complete*.
10. When you get the message *Transfer Complete*, the load is completed. Exit FTP by typing **bye <enter>**.