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XPi 10 Exporter

Upgrading to v4.3.2

Application Guide

597-0542-005 Revision J
8/11/11

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Upgrading to v4.3.2

Application Guide

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1. XPi 10 Software Upgrade 4.3.2 Overview

Included with this is a CD containing XPi 10 Software Upgrade v4.3.2. Please note that the I.P. Address, Exciter Link Configuration, Call letters, Sync to GPS, and Watchdog **MUST** all be re-entered in the XPi 10 after loading v4.3.2. The following steps **MUST** be followed closely to ensure a successful install.

NOTE: Upgrading to v4.3.2 on the XPi 10 requires that the Exgine firmware be upgraded to v4.0 or newer! The Exgine firmware (v4.0) should be upgraded immediately after completing the XPi 10 software upgrade. The IDi importer is the last component in the chain that should be upgraded.

It is very important that the: 1) Exporter, 2) Exgine and 3) Importer all be updated at the same time and in that order. Failure to update all elements will result in communication faults between components.

1.1. Features

The following are the key features/bug fixes implemented in this version of software.

- Additional HD channel

1.2. Tools / Items Needed

- External Mouse
- External Keyboard

1.3. Estimated Time for Software Upgrade

It will take approximately 30 minutes to upgrade the software in the XPi 10. Please note that the XPi 10 will be off of the air during this process. If the transmitter is in Hybrid Mode, it will remain on the air in FM ONLY operation.

2. Connect an External Mouse and Keyboard

NOTE: On XPi 10 units that have an ITOX Brand Motherboard, a keyboard and mouse **MUST both be connected to the appropriate "labeled" jacks (NOT USB ports) on the rear of the XPi 10 before the software upgrade process is started!**

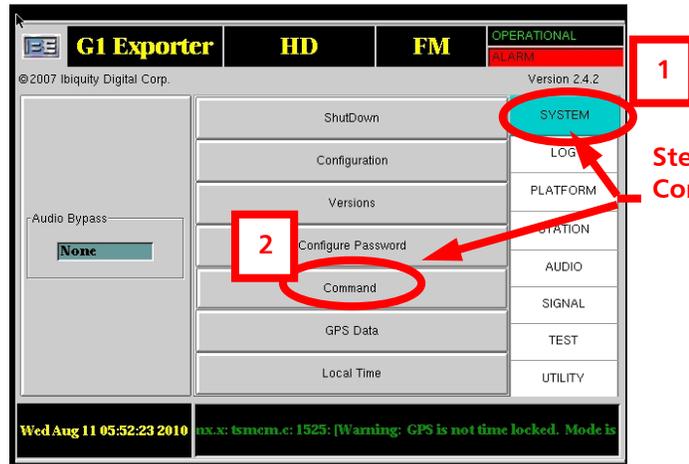
To determine what type of Motherboard is installed in the XPi 10, go to the Main GUI and select **System**, then **Versions** and note the Motherboard type.

Please note that the ITOX **ONLY** recognizes the Mouse and Keyboard when the Operating System Boots up.



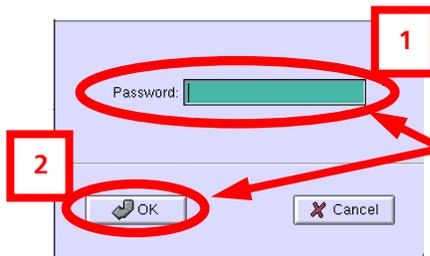
3. Record System Settings

3.1. Record the I.P. Address and Subnet Mask



Step 1 – Select SYSTEM then Command

Figure 1 – Command Menu



Step 2 – Enter your password and select OK .

The factory default password is "password" (all lowercase).

Figure 2 – Password Menu

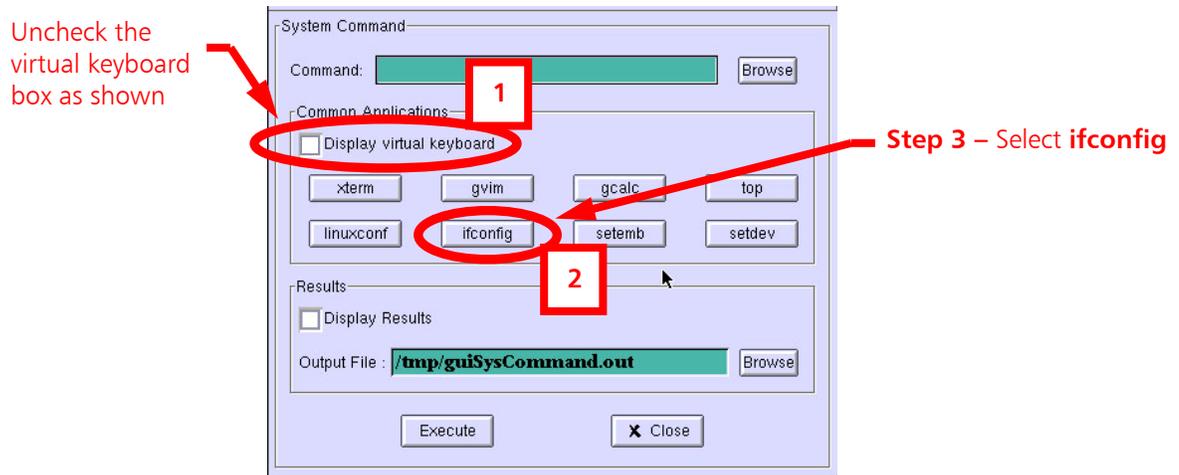
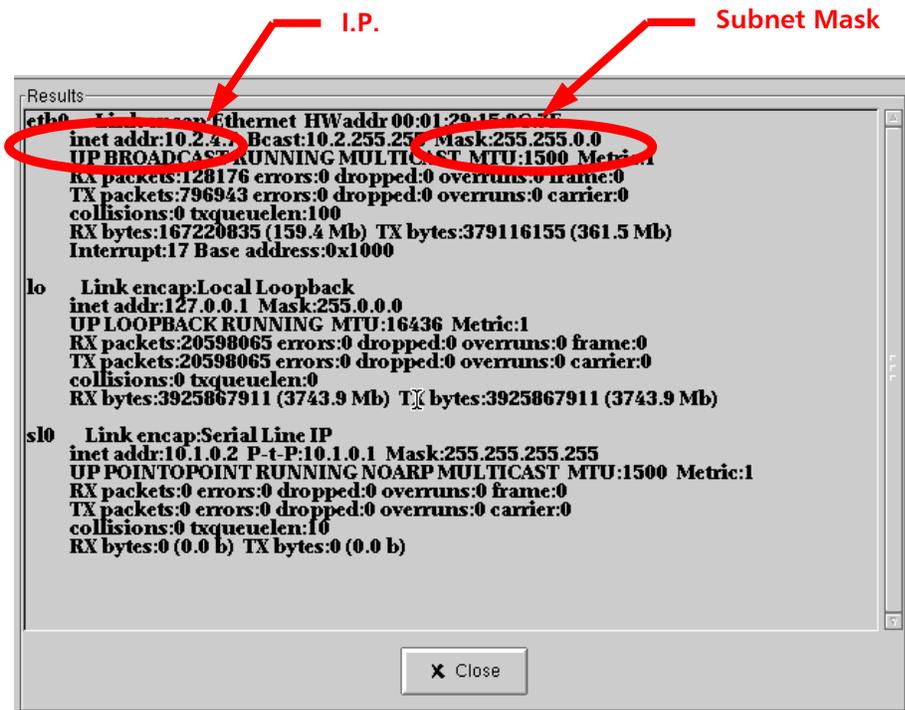


Figure 3 – ifconfig Menu





I.P. Address _____
Subnet Mask _____

Figure 4 – Record the XPi's I.P. Address and Subnet Mask

3.2. Record the Exciter Link Config Address Information

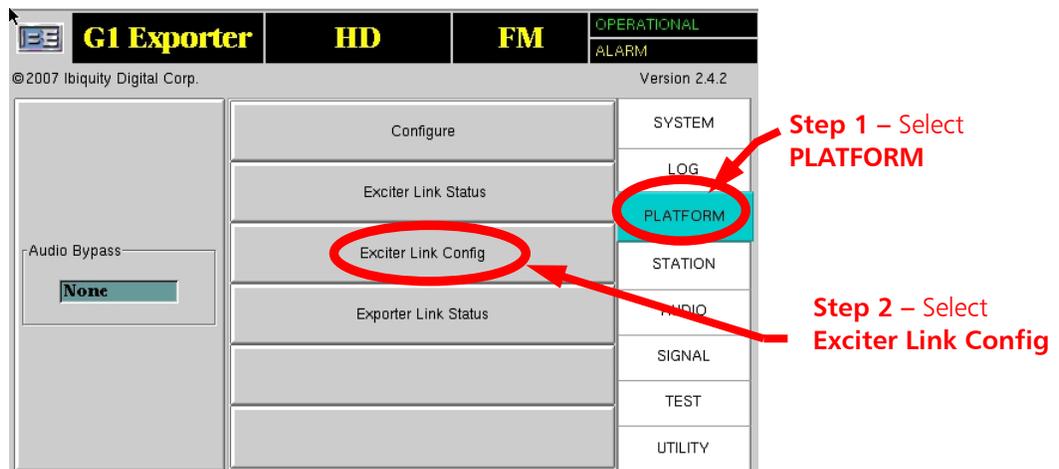
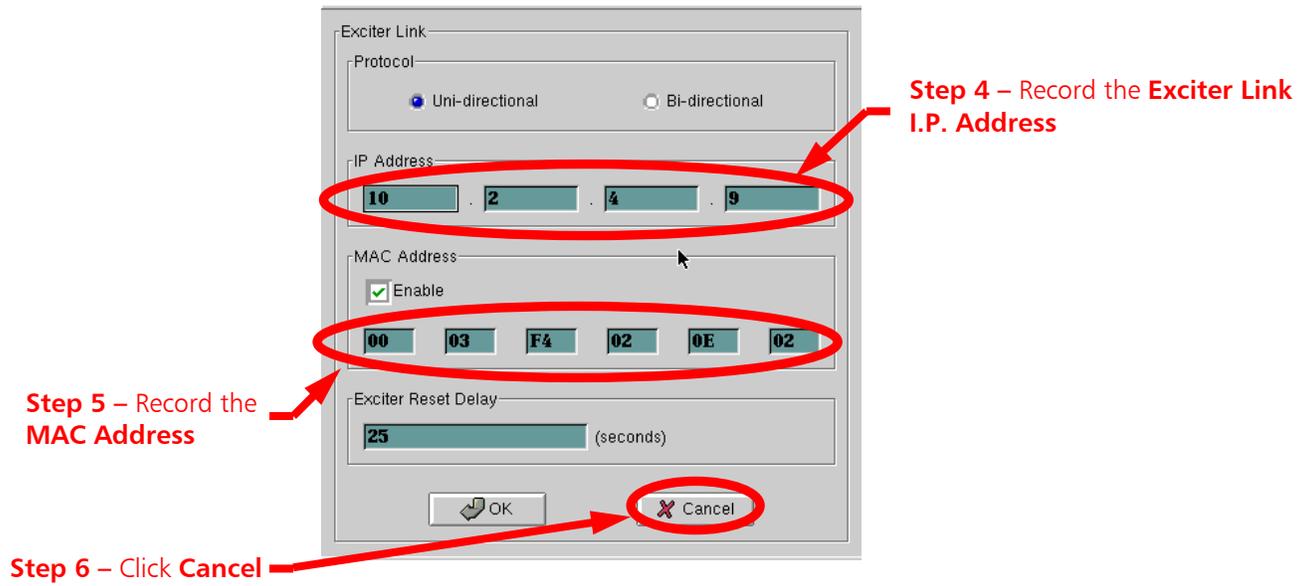


Figure 5 – XPi 10 Main Gui Menu





Exciter Link
I.P. Address _____
MAC Address _____

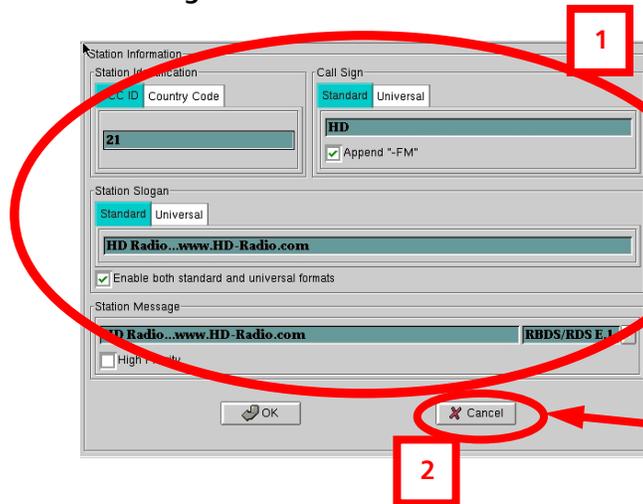
Figure 6 – XPi 10 Exciter Link Menu

3.3. Record the Call Sign and Station Information



Step 1 – Select **STATION** then **Station Information**

Figure 7 – Station Information



Step 2 – Record all **Station Information**

Step 3 – Select **Cancel**

Country Code _____

Network I.D. _____

FCC I.D _____

Short Name _____

Long Name _____

Figure 8 – Station Information Menu

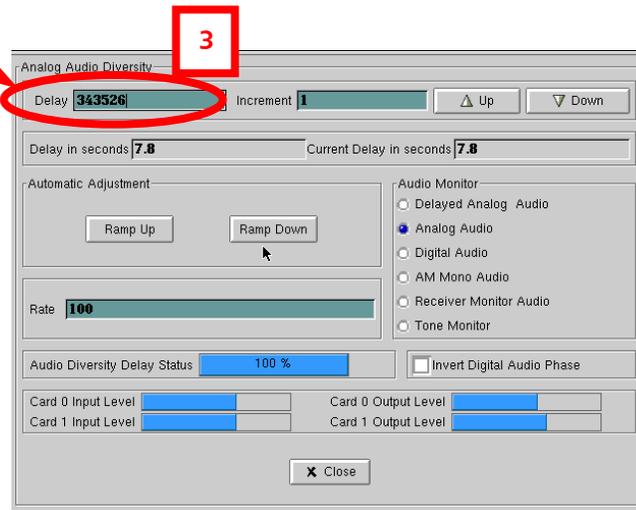


3.4. Record Analog Audio Diversity Delay Value



Figure 9 – Analog Audio Diversity

Record the Analog Audio Delay value



Delay Value _____

Figure 10 – Analog Audio Diversity



4. Disconnect the Audio Bypass Cable from the XPi

Disconnect the **AUDIO BYPASS** cable from the rear of the XPi.



Figure 11 – Disconnect AUDIO BYPASS Cable

5. Upgrading XPi 10 Software

NOTE: On XPi 10 units that have an ITOX Brand Motherboard, a keyboard and mouse **MUST** both be connected to the appropriate “labeled” jacks (NOT USB Ports) on the rear of the XPi 10 before the software upgrade process is started!

To determine what type of Motherboard is installed in the XPi 10, go to the Main GUI and select **System**, then **Versions** and note the Motherboard type.

Step 1 – Ensure that the unit is powered ON



Step 2 – Press the button to open the CD tray



Step 3 – Place the Upgrade CD into the CD Tray and gently push tray to close



Figure 12 – Software Installation

Step 4 – On the XPi Main GUI, go to **SYSTEM** then **Shutdown**. Next, select **OS Restart**, then **OK**. The XPi will now safely power down and boot from the upgrade CD.

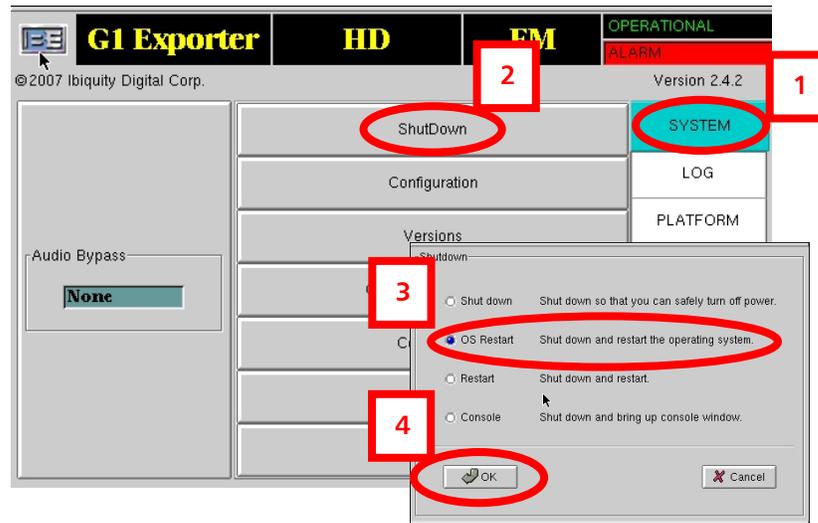


Figure 13 – OS Restart

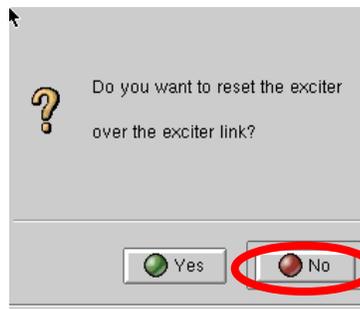


Figure 14 – Reset Exciter

Step 5 – The XPi 10 will boot-up from the CD and the Software Upgrade Installation will begin.

Step 6 – When the Software Upgrade Installation is complete, the CD tray will open.

Step 7 – Remove the upgrade CD and close the tray.

Step 8 – Once the XPi 10 boots up, verify the following:

- The new version will be displayed on the menu
- Operational block should be GREEN
- The ALARM block will be RED (since GPS is not connected or Locked at this point)
- The Alarm Log at the bottom of the screen should only contain warnings relating to GPS.

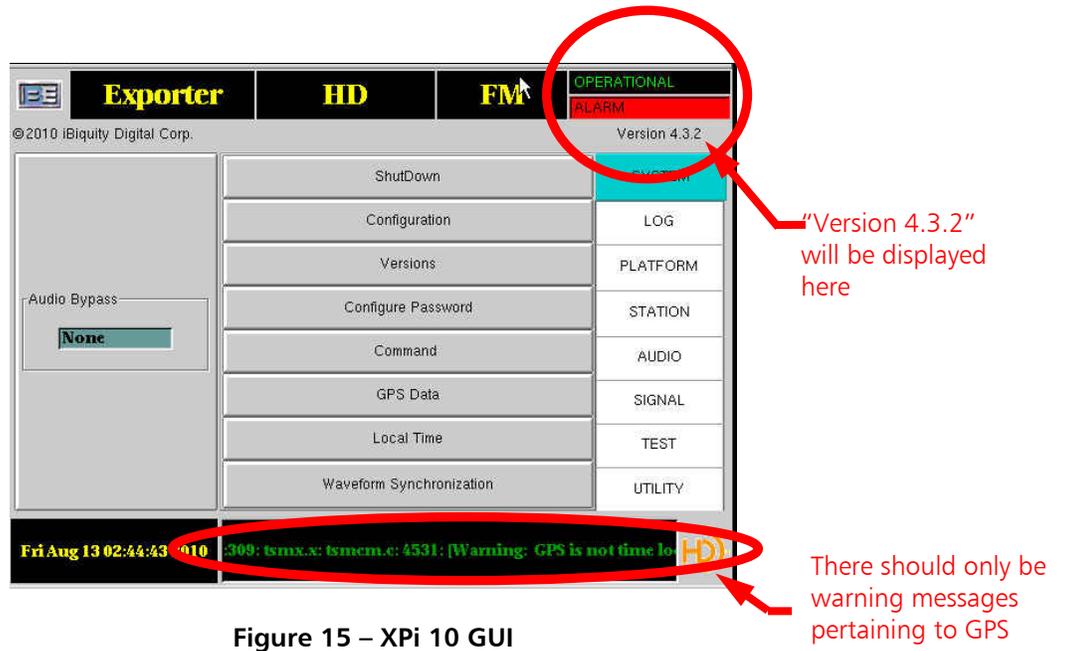


Figure 15 – XPI 10 GUI

Step 9 – With no disk in the drive, perform an **OS RESTART** as directed in step 4 above.

6. Configure the XPI

After the software load has been successfully completed, it is necessary to configure the XPI's I.P. Address, Exciter Link Configuration, Call letters, and Sync to GPS.

6.1. Configure the I.P. Address and Subnet Mask of the XPI 10

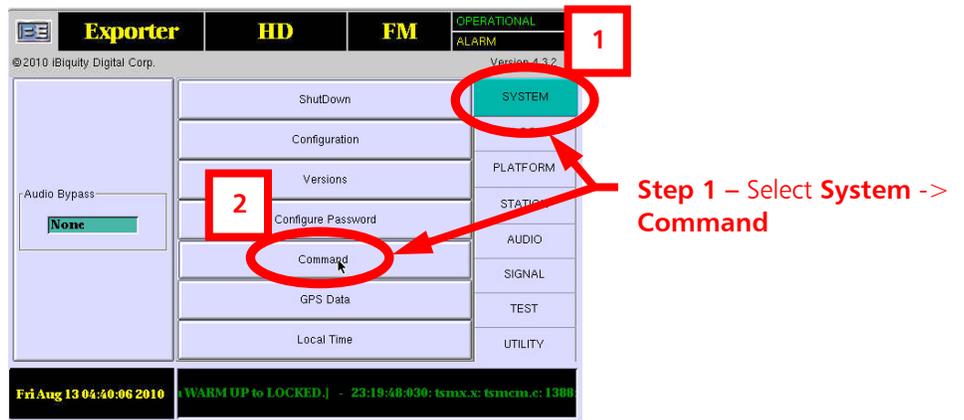
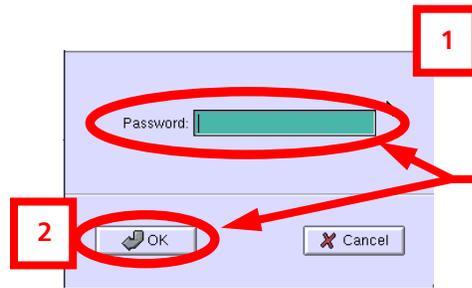


Figure 16 – XPI 10 Config / Control Menu

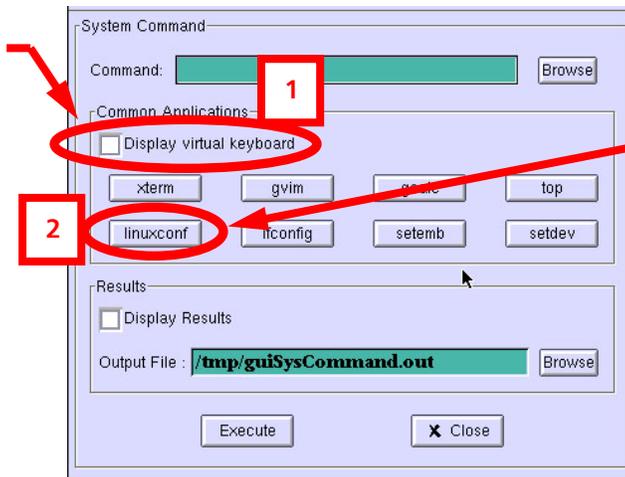


Step 2 – Enter your password and select **OK** .

The factory default password is "password" (all lowercase).

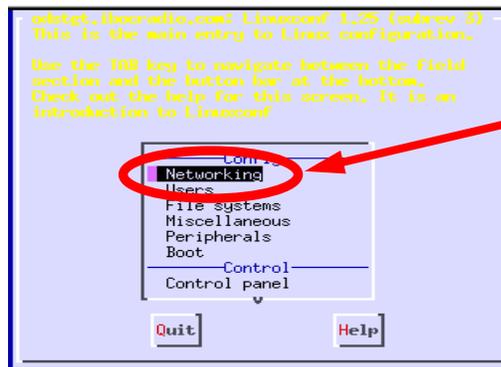
Figure 17 – Password Menu

Uncheck the virtual keyboard box as shown



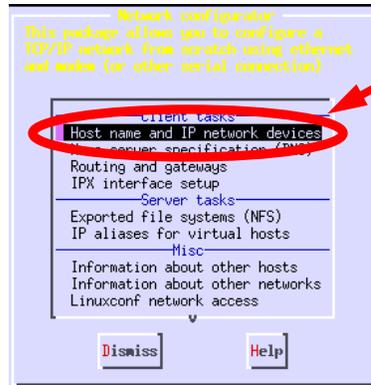
Step 3 – Select **linuxconf**

Figure 18 – XPi 10 Config / Control Menu



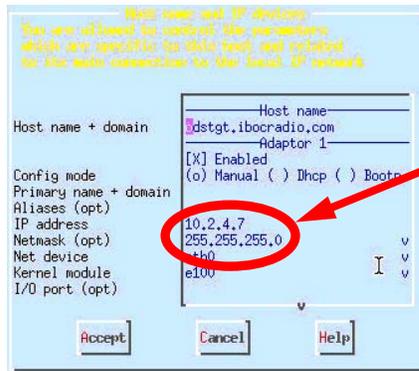
Step 4 – Select **Networking** then **<Enter>** on the keyboard

Figure 19 – XPi 10 Config / Control Menu



Step 5 – Select **Host Name and IP Network Devices** then **<Enter>** on the keyboard

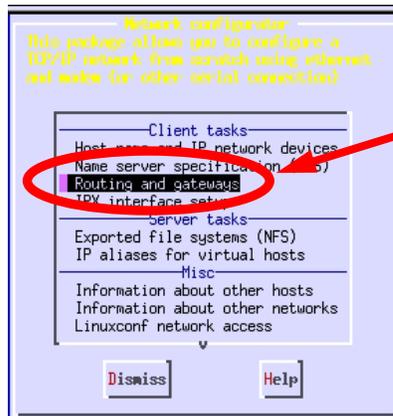
Figure 20 – XPi 10 Networking Menu



Step 6 – Use arrows to go to the XPi 10's I.P. Address and Netmask. Change both to the desired values.

Hit **<TAB>** to accept (Accept will then highlight) then press **<ENTER>** on the keyboard.

Figure 21 – XPi 10 Networking Sub-Menu



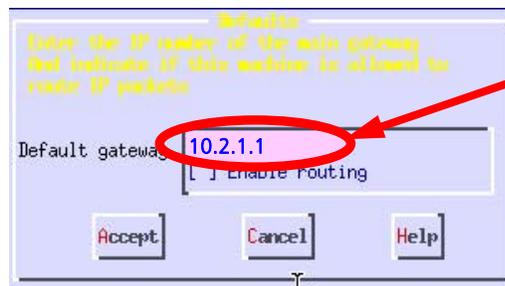
Step 7 – If you are using a Gateway, select **Routing and Gateways** then **<Enter>** on the keyboard

Figure 22 – XPi 10 Client , Server, and Misc Tasks Menu



Step 8 – Select **Defaults** then **<Enter>** on the keyboard

Figure 23 – XPI 10 Client , Server, and Misc Tasks Menu



Step 9 – Enter the Gateway Address for your network

Figure 24 – Gateway Menu

Step 10 - Press **<TAB>**, type **A** (NOTE: capital A) to Accept, then press **<Enter>** on the keyboard.

Step 11 - Press **<TAB>**, type **D** (NOTE: capital D) to Dismiss, then press **<Enter>** on the keyboard.

Step 12 - Press **<TAB>**, type **Q** (NOTE: capital Q) to Quit, then press **<Enter>** on the keyboard.

Step 13 - Press **<TAB>** twice to highlight **Do It**, type **D**, (NOTE: capital D) then press **<Enter>** on the keyboard.

Step 14 - The System Command window should now be displayed, press **<Close>**.

6.2. Configure the Exciter Link Config

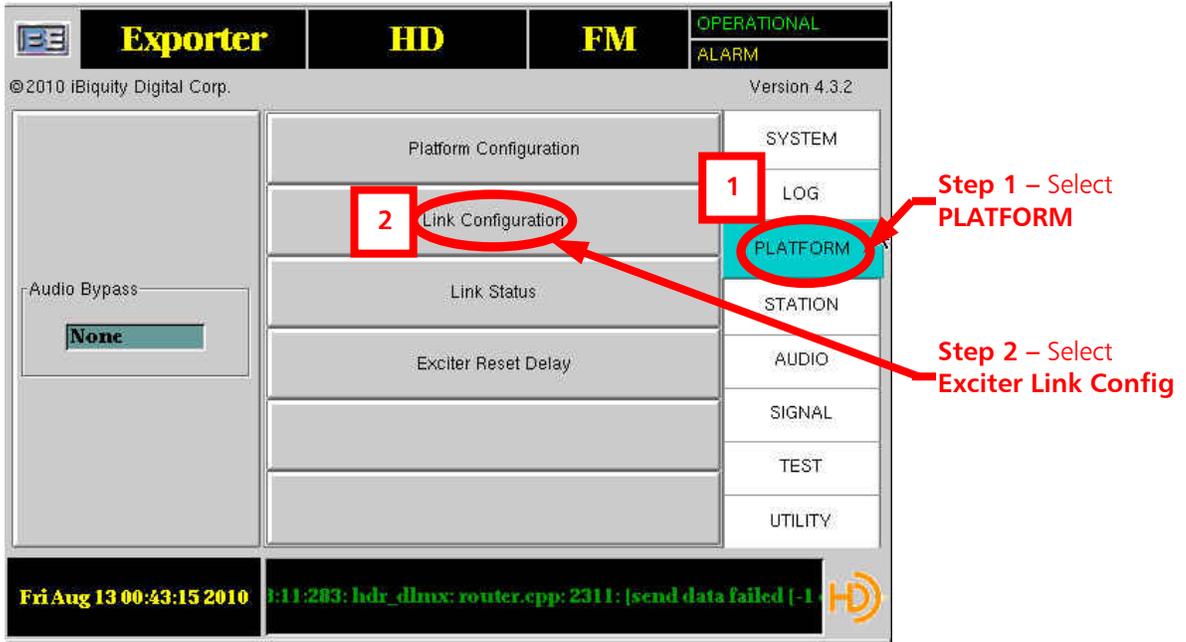


Figure 25 - XPi 10 Main Gui Menu

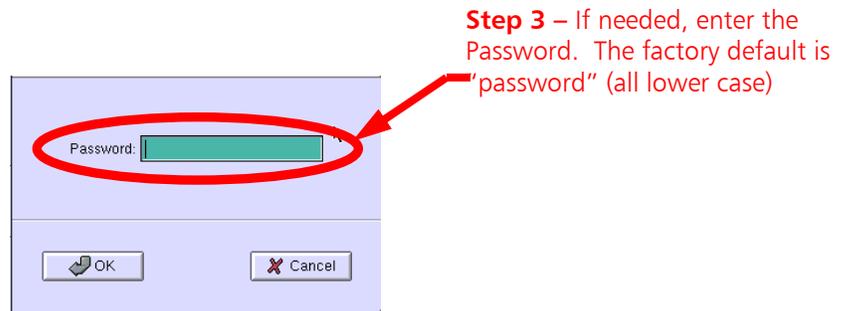


Figure 26 - Password Menu

Step 4 – Set the Exciter Link Protocol to **Uni-directional**

Step 5 – Enter the previously recorded **Exciter Link I.P. Address**

Step 6 – Check the **Enable** Box

Step 7 – Enter the previously recorded **MAC Address**

Step 8 – Click **OK**

Step 9 – Click **Yes**

Step 10 – Click **No**

The figure shows a sequence of GUI interactions. The main window is 'Link Configuration' with fields for Protocol, IP Address, MAC Address, and an Enable checkbox. Below it are two confirmation dialogs. Red arrows and circles highlight the specific elements mentioned in the steps.

Figure 27 – XPi 10 Main Gui Menus

6.3. Configure the Call Sign and Station Information

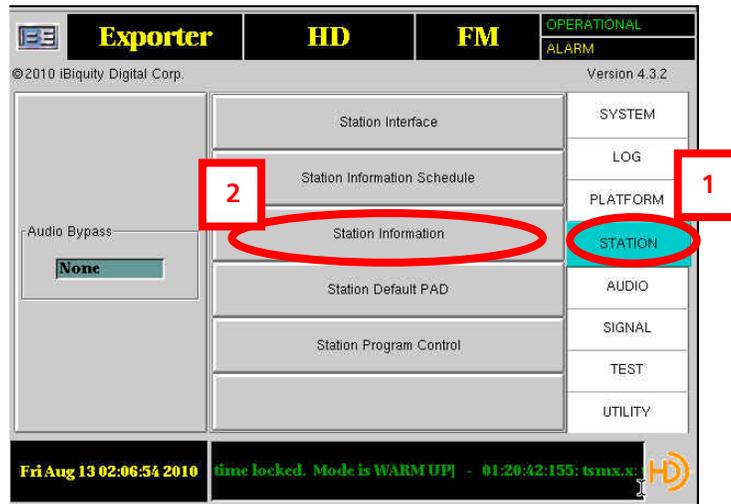


Figure 28 – Station Information

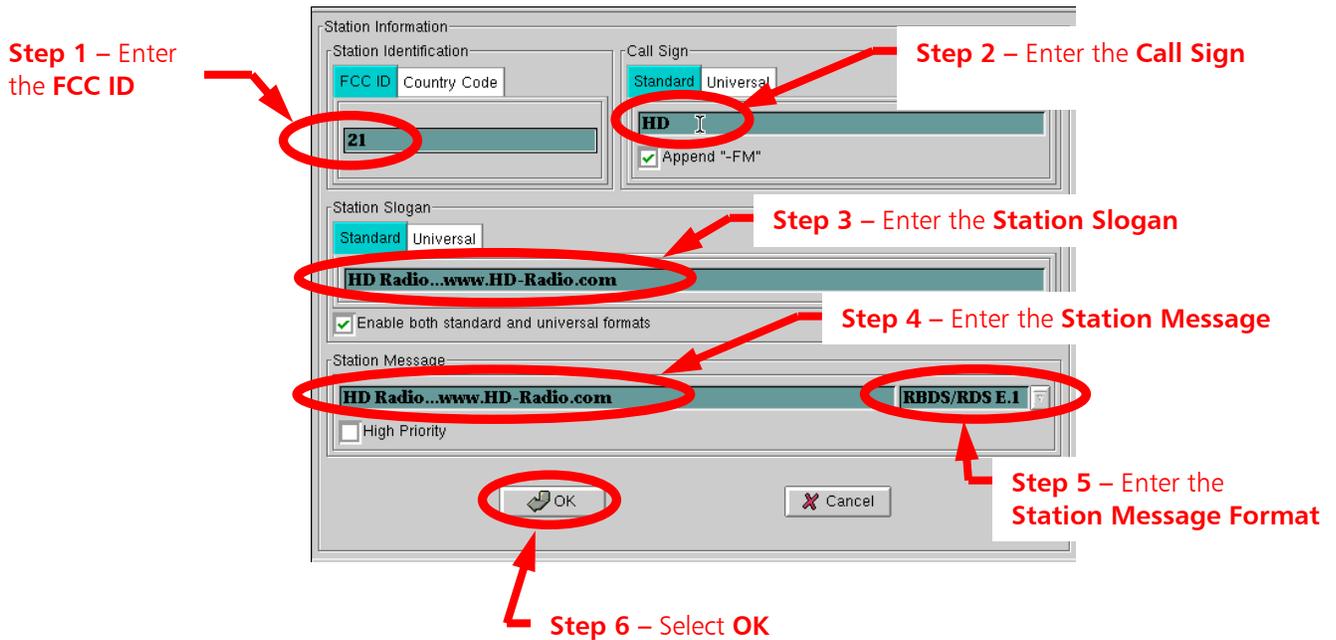


Figure 29 – Station Information Menu

6.4. Set Watchdog to Enabled

Step 1 - Select **STATION**, then **Station Interface**.

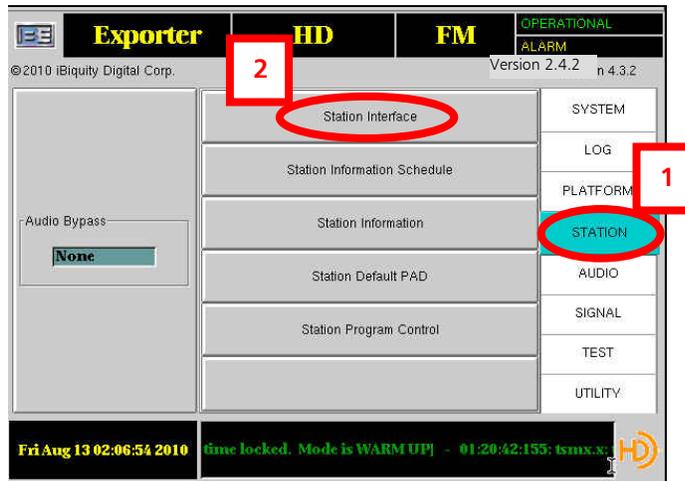


Figure 30 – Station Interface

Step 2 – Ensure that **Watchdog Enable** is selected. When Watchdog is Enabled, the Watchdog timer on the Station Interface Card (SIC) will be enabled. When it is enabled, the SIC will monitor the motherboard. If there is no activity for 1 second the host processor is assumed to be locked up. The Audio Bypass relays will be set to Bypass, the system operational relay will be opened, and the exciter will be re-booted. Enabling the Watchdog circuit may prevent a “DEAD AIR” situation if the motherboard or host processor locks up on the XPi.

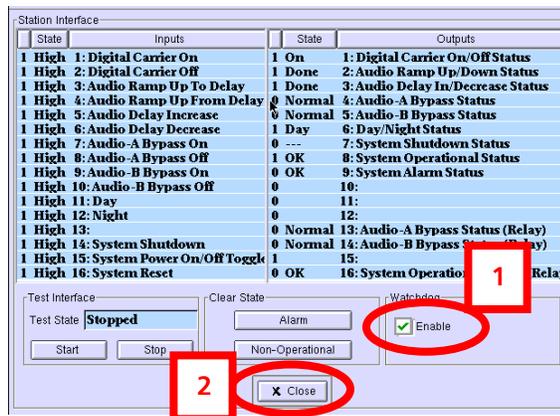


Figure 31 – Station Interface

6.5. Sync Local Time to GPS

Step 1 – On the Main GUI Menu select the **Date / Time** window.



Figure 32 – Date / Time

Step 2 – Select the **Sync Local Time to GPS** check box, then select **OK**.
Next, when the "It is recommended that system be restarted to expedite GPS time synchronization" menu appears, select **OK**.

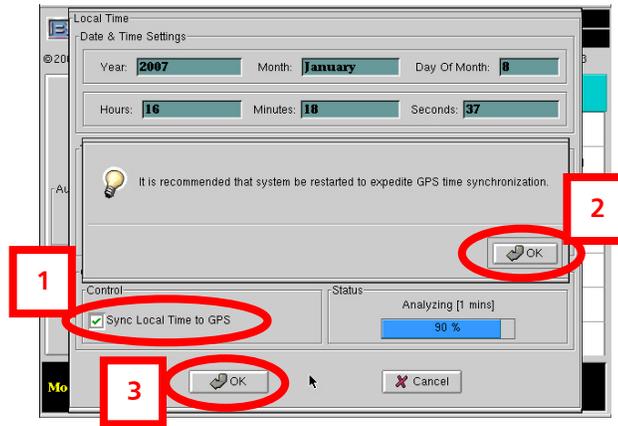


Figure 33 – Sync Local Time to GPS

6.6. Enter the Analog Audio Diversity Delay Value

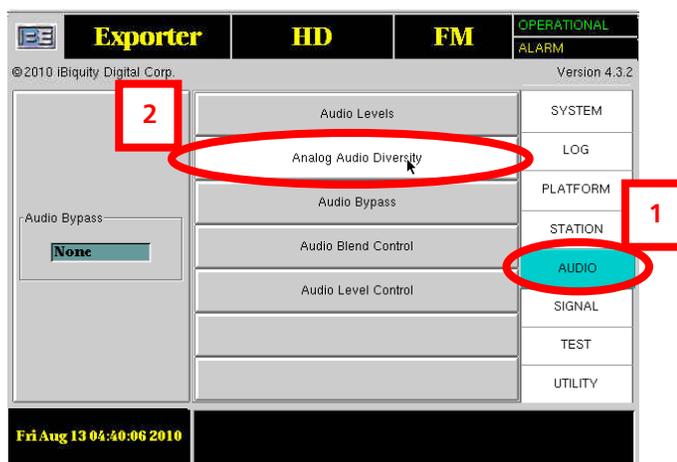


Figure 34 – Analog Audio Diversity

Step 2 - Enter the previously recorded "Delay Value". This value **WILL** change from software revision to software revision and need to be adjusted for optimum blend performance.

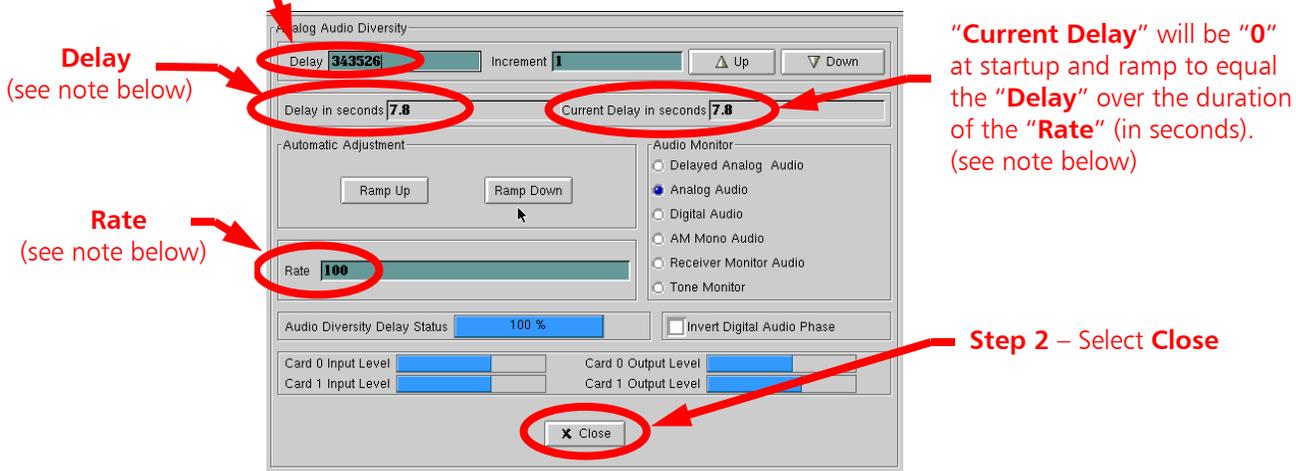


Figure 35 – Analog Audio Diversity

Note: With the "Rate" set to "100", it will take 100 seconds for the "Current Delay" and "Delay" to sync up after restarting the system. If you do not want to wait 100 seconds, change the "Rate" to "0" and then select Close.

Open the **Analog Audio Diversity Menu** again, ensure that the "Current Delay" and "Delay" values are equal. Next, change the "Rate" back to "100", then select Close.

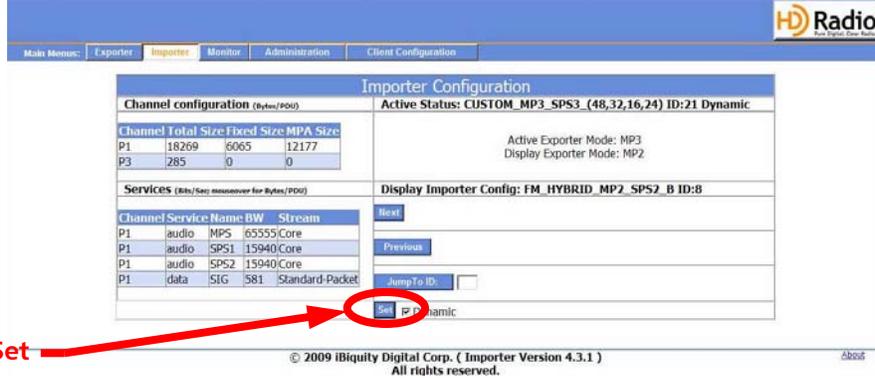
Step 3. Cycle the AC power (operate the power switch OFF, then ON) to restart the operating system on the new settings.



7. Reset Synchronization in the IDi 20 Data Importer

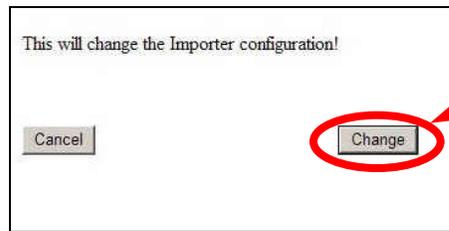
After updating the Software in the XPi 10, it is necessary to **Reset Synchronization** in the **IDi 20 Data Importer**.

To synchronize the Importer, login to the IDi 20 Importer Web Admin page and press SET.



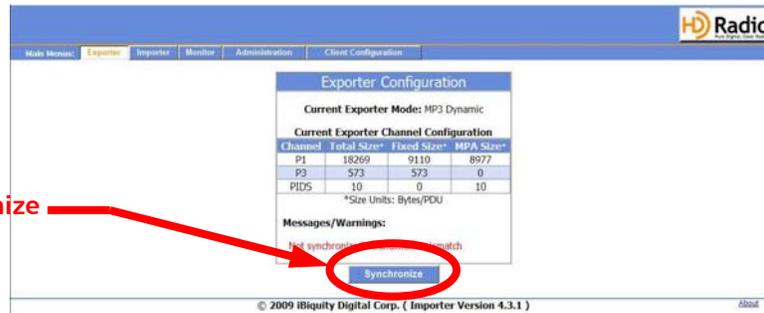
Step 1 – Select Set

Figure 36 – IDi 20 Data Importer Web Admin page



Step 1 – Select Change

Figure 37 – IDi 20 acknowledgment



Step 1 – Select Synchronize

Double-check the correct configuration has been selected and press Synchronize.

NOTE: This procedure will restart the XPi 10 Exporter!

Figure 37 – IDi 20 Synchronize

8. Connect the Audio Bypass Cable to the XPi

Connect the **AUDIO BYPASS** cable to the rear of the XPi.



Figure 38 – Connect the AUDIO BYPASS Cable

9. The System Should Now be Operational

10. Additional Documentation

Reference B.E. document **FXi 60/250 Exciter w/Exgine and XPi 10 Exporter Quick Installation Guide (597-0542-XM3)** for additional information regarding system Setup and Operation. This document was included in the shipment from B.E. and may also be found at www.bdcast.com under the "Support" tab, then "all Product Manuals."

11. RF Technical Services Contact Information

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