

**This is an Az-Box User Guide:
Put together with information by numerous Az-Box users.**

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All the information contained in this user guide for the Azbox has come from many different people who are actually using this receiver, It has been put together in one place by Stargaze with the help of Radar who has given much information about this receiver. This was done since we enjoy this hobby and wanted to share with others & help them as there is no real manual for this receiver.

October: 2010

AZ BOX Quick Start Instructions

Here are the basic steps to Scan in Channels.

Hit the HOME button and go to Settings. Hit OK.

Cursor down to TV Channel and Hit OK. Right Arrow to DVB-S and Hit OK.

Go to Antenna Setup and Hit OK and pick the Satellite Name that you want to use and Hit OK.

Set up your Satellite. LNB Frequency to 5150 for C-Band or to 10750 for Standard Ku-Band and set your DiSEqC Switch to match your setup.

Hit the EXIT Button and cursor down to Sat/TP Edit and hit OK.

Cursor down to the TP Frequency Line and then hit the GREEN Button on the Remote that says: TEXT, just above the up arrow.

This will allow you to add a TP. You then add the Frequency, Symbol Rate, Polarity, Modulation, FEC and Pilot Setting. (Pilot Setting / 0 = Off / 1 = On. Then HIT OK to Save this addition. (Standard DVB-S feeds will not require you to input the FEC or Pilot Options.)

Then Hit EXIT Again and this will take you back to the Setup Menu.

Cursor up 1 line to Advanced TP Scan and HIT OK.

Cursor down to the Frequency line and Hit OK and then go through the Frequencies to find the one that you just added and HIT OK.

Now see if you have Quality. If you don't, then you might need to change your FEC or Pilot setting, until you do have a lock and then go to TP Scan and HIT OK.

The Channel will scan in and then ask you to save it and say YES.

Then exit all of the way out of the menu and when the bottom bar comes up, right arrow to TV and HIT OK. Then you can select the TV Channel and view it.

The following has been tested on the AZ-ULTRA & AZ-PREMIUM PLUS receivers.

Setting up the Azbox as a slaved receiver

Items you should have...

1) 2- high frequency splitters with power out only to one side.

(I use Tru-Spec HFS-2/2150 : 900-2150Mhz splitters)

2) 1- 4x1 switch: (I use a quail-tv NDS-7014)

3) 1-HDMI cable

4) extra cable line for the new connections

5) optional**quick connectors for the end of your cable wiring**

Run the C-Band line from the dish that is already in your home to the input of one of the splitters. The side the line going to the "OUT" on the splitter now connects to your main dish moving receiver as this controls the dish and polarity settings.

The other side of the splitter without the line towards the "OUT" will go to the 4x1 switch Line 1 for C-band.

Now if you have ku on your dish do the same as you did above but now for ku, and run it to the 4x1 switch Line 2.

The line marked "Receiver" on the 4x1 switch goes to the azbox. So you may need some extra cable wiring to do this setup.

Now mark your Tru-Spec HFS's (C-for c-band & KU for ku-band)

With this setup you now have one line going to the azbox for C&ku and are not changing out the lines whenever you want to view something on the different bands.

 Later you will need to make the following changes in the azbox

The receiver will make the changes for you in the Settings menu under TV Channel-Tuner-Antenna setup under the "DiSEqC settings.

LNB 1 for C-Band

LNB 2 for KU

Now that you have the dish connections set up your now ready to turn on the azbox.

 Let's assume you have the latest firmware in your azbox.

This now relieves all the pressure on you for details you may not understand if you are new to the azbox.

Hook up a HDMI cable from the azbox to your monitor/tv set.

Now you can Power on the azbox box.

The Azbox defaults to the PAL format when first booted up unless this setting has already been changed for you so you need the following instructions:

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Here are the directions for bringing the azbox from Pal (default format) to NTSC.

After a reboot the receiver defaults to pal format

To changed the setting in the Menu from PAL, back to NTSC

You need to do the following steps & using the remote keypad.

1) Reboot the receiver by the switch on the back of the unit.

After it powers up and you see the menu rolling, follow these steps:

2) Down Arrow 6 Times

3) Hit the OK button

4) Right Arrow 1 Time

5) Down Arrow 1 Time

6) Right Arrow 1 Time

You will now have changed the setting in the Menu from PAL, back to NTSC.

7) The receiver will ask you if you want to save your change and say YES.

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Now you're in the NTSC mode and you should have a picture on your TV.

You need to be careful while in these menu screens. If you make a change that you are not aware of you can change the settings that will take affect after you power off the receiver and will have to come back in and re-do the settings. **Take your time!**

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Setting up the Network:

The first items we must contend with are our Network Settings - setup parameters and addressing. Go to the HOME button on your remote and select the SETTINGS area - Internet and take a look at what you have set up for IP addressing and all the other items. If your in this area now write down all your settings as they will all be reset or erased during this process:

NETWORK: WiFi (Only on the Premium Azbox)

IP SETTING: STATIC IP (recommended when using FTP)

IP ADDRESS: 192.168.1.102 (assigned to your Azbox by you)

SUBNET: 255.255.255.0

GATEWAY: 192.168.1.1 (this is our router's base address)

DNS1: xxx.xxx.xxx.xxx (fill this in from the information from your provider if you don't know it.

DNS 2: 0.0.0.0 or just leave blank if you don't know it or if it does not apply.

This is all the information that you should have set up previously to get the WiFi or the WIRED NETWORK to connect. If nothing is recorded here (all zeros) then you haven't set up your NETWORK yet and should do so.

After this is set up you need to write down this info in case you need it later on.

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Beginners should skip down now to #20 below *****

Items 1 thru 19 should be for seasoned users only! Do these at your own risk!!!

Seasoned Users XXX

Here, we are simply starting with the basic instructions from loading a new firmware via the USB, but we need to take a detour somewhere in the midst of the process. Let's start with the USB instructions that I mentioned earlier, then I will branch off when necessary.

1] Download the firmware to your PC (all Azboxes use the same firmware). Create a folder for Azbox IMAGE FILES and individual folders within that main folder for each firmware. This is for archiving purposes, but not entirely necessary. You can save all the firmware files simply for your own personal reasons. *Mainly to keep an archive of the backups.*

2] Copy and paste the firmware you wish to update your Azbox with to a USB flash memory stick and rename the file on that device as "patch". NOTE: You may need to rename the file as patch.bin, but do not do so unless the Azbox does not recognize the patch file when named simply "patch". The LINUX operating system is a little picky about the filename format, so be careful here. No harm will become of anything if you rename the firmware file incorrectly, it (the file) will simply not be recognized by the Azbox and nothing will happen - no harm and no foul.

3] Now that the firmware file is copied to the USB drive and renamed "patch", remove the USB drive from the PC and insert it into the USB port of the Azbox.

4] Press and hold the STB POWER button on the remote for the Azbox until it enters the

REBOOT mode (4-5 seconds).

5] When the Azbox reboots, somewhere during the process, it will read the USB drive and should identify the new patch file automatically. If and when it does, the Azbox will present you with an option menu of what to do next. This menu will contain the following five options:

- 1) USB
- 2) NETWORK
- 3) OTA
- 4) Format Application Area
- 5) Boot without updating

6] This time around, you will select option #4, Format Application Area. Select that option and press OK.

7] Position the cursor or arrow at option #4 (format the application area) and press OK. You will be prompted to press OK to confirm this selection, so press OK and the application area will be formatted.

8] Formatting the application area is fast and it is now complete, next you're prompted to press the EXIT button to return to the previous menu. So press EXIT.

9] Now that you are back to the UPGRADE menu, you will see the same five options to select from, now select option #1, upgrade via USB and continue from step #6.

10] You DO want to upgrade to the "patch" file found on the USB device, so press OK.

11] Your Azbox is now extracting all the features to install.

**NOTE: DO NOT turn the power OFF during this process!
If you do, you are on your own!**

12] When the process is finished, you will be returned to the option menu. Now select option #5 (Boot without update).

13] This process (because of the formatting of the application area) will erase all your user settings, so now you are starting entirely from scratch.

14] The first item you need to contend with is not having any display on the TV. This is because the system has reverted to factory defaults and unless your TV and entertainment center matches these defaults, you will have no picture/video to view.

15] First step to recover from this is to reset our resolution settings. Observe the front panel display of the Azbox Premium Plus. It should say "SETTINGS".

Now for the Non-Seasoned user (beginners)

Pressing "home" on the remote then left arrow 1 time (<) to settings then hit "OK" arrow down to "display" and then hit "ok" to get to this screen.

20] 480p, 720p, 1080i and 1080p. Stop on 1080i if that fits your TV format and press OK. Now the "settings" menu appears on your TV screen. Select what resolution is appropriate for your own equipment.

21] Now, you have a bunch of items to reset as all have been reset to factory default selections. Simply go down the list as it is presented.

22] Language/Time: The language for all parameters default to ENGLISH, so you don't need to adjust them if you want English, but the time is incorrect.

23] TIME: use the > button to navigate over to the selection area and the up/down arrow buttons to navigate to the selection you wish to adjust.

24] Highlight the DATE STYLE and change this to "AMERICAN".

25] Highlight the TIME STYLE and change it to "24 hour format". You select which you like to use best.

26] Scroll down to TIME OFFSET and set it to GMT -6.00 hours (which will be correct for central time zone). Set this to correctly reflect your time.

27] Scroll down to Daylight Saving Time" and select NO as this is now standard time here and not DST. Again set this to reflect what is now current for you.

28] Now, you want to synchronize the time clock with the rest of the world, so scroll UP to AUTO SYNCHRONIZE option and select INTERNET. When you select OK, the Azbox will go to a specific URL and update the box's internal clock with the internet clock from a specific URL. Press the GREEN button on the remote to select or update/edit that URL if needed.

(If you are a beginner and set the internet up earlier you should be alright so continue on at #30 below, the following is for other users)

29] Oh! Guess what! This feature failed! Why? You failed to set up your internet connection after formatting the application area. The connection was reset and you have to go back and restore it all.

Let's try to restore the connection.

1] First you need to go to **SETTINGS > INTERNET**.

You will see that the system (Azbox) has defaulted to a **WIRED NETWORK** and **DYNAMIC (DHCP)** protocol. You want to use **STATIC** and **WiFi**.

2] It is best if you start with a "WIRED" network connection first. Therefore, you are going to reconnect an Ethernet cable between the router and the Azbox.

3] It is recommended to utilize a **STATIC IP ADDRESS** if you intend to use **FTP** and **TELNET**

4] Now you are back at the **INTERNET SETUP** menu within your **AZBOX**. You are going to select **WIRED NETWORK** and **STATIC IP**. Next, you need to fill in the blanks once again as they have all defaulted to **0.0.0.0**

5] Earlier you were asked to record these addresses and now is when we need them. Enter the information as necessary for **IP address**, **SUBNET MASK**, **GATEWAY** and **DNS1**. You may not require **DNS2**.

6] Once you have set all these addresses up, highlight **SETUP** and press **OK**.

7] It should connect just fine. If not, you will have to take a further discussion about **NETWORKING** on later.

8] Let us say that all went without a hitch in step #7 and continue.

9] Now, if you wish to use the **WIFI** connection for the **Azbox Premium**, you need to alter one setup parameter.

10] Simply remove the hard-wired Ethernet cable from the Azbox and in the **INTERNET MENU**, change the selection from **WIRED** to **WIFI**.

11] The moment you do this, my Azbox begins searching for "wireless connections" that are available and in range.

12] It finds the wireless router and the Azbox knows that it is an encrypted connection and displays, "This **WIFI** requires **Security Encryption Key**".

13] If you press the **>** button, it takes you to the identified encryption option.

14] If you press **>** once again, you will enter the field to type in the required encryption key.

15] Type in your encryption **KEY** and press **OK**. Now the button on the menu display

FTP'ing to the Azbox

#1) Set up the azbox first:

Using your remote hit "HOME" (<) left arrow to "SETTINGS" Down arrow to "NETWORK SERVICE":

SSHD: SEE NOTE 1 below

FTP SERVER: ENABLED

FILE SERVER: ENABLED

DYNAMIC DNS: SEE NOTE 2

TELNET SERVER: ENABLED

NOTE 1: This item may be set to either enabled or disabled, you would need to be more familiar with LINUX systems than I am to be able to utilize it fully and properly.

Excerpt from wikipedia... Secure Shell or SSH is a network protocol that allows data to be exchanged using a secure channel between two networked devices.[1] The two major versions of the protocol are referred to as SSH1 or SSH-1 and SSH2 or SSH-2. Used primarily on Linux and Unix based systems to access shell accounts, SSH was designed as a replacement for Telnet and other insecure remote shells, which send information, notably passwords, in plaintext, rendering them susceptible to packet analysis.[2] The encryption used by SSH is intended to provide confidentiality and integrity of data over an unsecured network, such as the Internet.

NOTE 2: This item in the menu is not necessary for general use. If you select it to be ENABLED, that is fine, but you don't need to set up the settings unless you are really savvy with networking devices and servers. This item is not required for the applications that most of us would normally utilize.

Excerpt from Wikipedia: Dynamic DNS is a method / protocol / network service that provides the capability for a networked device, such as a router or computer system using the Internet Protocol Suite, to notify a Domain Name System (DNS) name server to change, in real time, the active DNS configuration of its configured hostnames, addresses or other information. A popular application of dynamic DNS is to provide a residential user's Internet gateway that has a variable, often changing, IP address with a well known hostname resolvable through standard DNS queries.

Personally, I'd set all the options in NETWORK SERVICE menu to ENABLED, whether you use them or not. You do not have to apply the setup for FILE SERVER and DYNAMIC DNS to be able to use the FTP or Telnet servers.

Remember the following for your FTP/Telnet Client server:

HOST = "IP address" of the Azbox

USER = root

Password = azbox

FTP port = 21
TelNet port = 23

Remember these rules for your Azbox SETTINGS > "INTERNET":

NETWORK: WiFi or WIRED

IP SETTING: DYNAMIC (DHCP) or STATIC

IP ADDRESS: Azbox IP address selected and assigned by you (192.168.XXX.XXX)

SUBNET: 255.255.255.0

GATEWAY: ROUTER IP address

DNS1: Your internet providers gateway or "Dynamic Name Server" address

DNS2: Ignore this in most cases, just leave at default. It is used when you have multiple internet service providers or accounts.

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 Set up the system to use STATIC IP addressing.

***Use FileZilla Client...** not Filezilla server....

Because of the way Filezilla client and MazEdit and other FTP clients operate, you want to maintain the IP address of your Azbox as the same address and never changing it or letting it being reassigned. It just makes life a little easier. Otherwise, you have to keep checking the IP address of your box to enter that into the FTP client setup or force your router to go around that DHCP stuff somehow.

When doing so, you may want to set your router and your PC up to disable the DHCP feature for both.

On the system with DHCP enabled, you may find that the FTP Client server (Filezilla Client or MaZEdit) frequently stop communicating with the Azbox when they are idle, without notice. When you want to resume the communication path, you have to tell the FTP Client to disconnect and then reconnect to re-establish the connection. It is not a huge concern, but it can be annoying at times. The other system, with DHCP disabled, remains fully connected at all times, unless otherwise interrupted by you or by another program.

If you are well versed in networking systems, it is recommended that you set everything up to use static IP addressing only (DHCP disabled). If you are just a common PC owner and user, don't bother with doing this unless you wish to learn more about networking and routers and how everything works. It is a good experience for you, but not exactly necessary.

Just a note, the system never disconnects the communication link while it is actively being used. That only occurs when the communication link has been idle for some time. Therefore, you do not need to fear that your work in progress will suddenly be cut short. It only disconnects the communication link during idle times.

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The channel list backup feature that they offer in the System Information Menu does not include the entire antenna setting details.

Only the channels themselves and the structure of the "favorite" groups are backed up and saved.

Using FileZilla Client and FTP to backup the following three files from the original receiver:

all_channels.dat,
DVBS.dat and
antenna_list.dat

and then selecting these three files to FTP them over to the new Azbox receiver was the only way to restore the full channel list and the operation of the LNBF, switch settings and motor settings as well.

It will be important to remember this, as merely backing up the channel list via the Azbox menu and a USB memory device is NOT entirely complete. It only saves the channels.

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If you can get MaZEdit 3.0 to quit crashing on your system you will find that it has a lot of really excellent perks that you can use.

It does not work well as a channel or satellite editor:

However, it works really slick to accomplish a few other things that you cannot do with other FTP or Telnet clients.

Setting up recording events / timers, capturing screen shots, downloading your channel lists to view, transferring video, audio and photo files and things of this nature are really great! Also, you can create and alter/edit file folders with it quite easily. It works superb for this.

One word of caution, if you install MaZEdit, **do not** create a short cut to the file on your desktop if you have windows vista. It won't always find the language library and comes up in Spanish only and cannot be altered. Install the exe file in your PROGRAM FILES directory with all the supporting library files and when you open the application, go to the PROGRAM FILES area to access it.

For transferring files, like video/audio/photo files, either one of these applications work just fine.

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You may use any FTP client server application to do this, FileZilla client or MaZEdit or other, if you understand where the files are going to and what format you put the files in.

You need three files:

all_channel.dat
antenna_list.dat
DVBS.dat

First, your files must be converted to *.dat format before being downloaded to the Azbox and they must have the proper nomenclature. The LINUX system is highly critical of the characters **and it is CASE sensitive as well**, so every aspect of the filename has to be exact. Then, you have to know what directory to install them in; they reside in the file folder /DISK2. **There is a backup on file at /DISK1 for one or more of these files.**

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Next page is for those wanting to delete unwanted satellites.

The most important thing I've learned after months of frustration with channel lists is to never EVER add a satellite without also adding one transponder on it. The Azbox firmware sees a satellite with no transponders as corruption, and "helpfully" overwrites some or all of your satellites.

This is what you need to do to the channel list to save it to your computer where you know it is. There will be 3 files saved.

all_channel.dat

antenna_list.dat

DVBS.dat

Once this is saved to your pc, move on to the next step.

Now, make a copy of the folder you downloaded the files to, and save it elsewhere on your computer. This is your backup copy.

Now open AZ Edit (your going to edit the sat list and the unwanted tp's)

Once Azedit is open go to the "File" button and click on "OPEN"

Now find the **all_channel.dat file** where you just saved it on your hard drive

Highlight it so it appears on the lower part of the box and then hit "open".

Then click on "**Organize Sat & TP**"

Do not worry if you get a box popping up saying "subscript out of range"

If you have to click on ok to make it go away then do so.

The satellite list is now on the screen in the middle box.

Go all the way to the top using the side bar in the program and highlight the very top one which should be an Eastern Sat. You can tell by looking to the left side of the screen next to the satellite name is the Degree. You do not want any that say "E".

Now move your mouse over to the delete button under the satellite list and keep deleting. When you get to 169°E, **STOP: Now save the file under the "File" menu.**

Sometimes this program is very tricky and temperamental and crashes every time you reached this point.

To get around it: Follow exactly what is written here, then re-open the file and now instead of deleting the very top satellite go to the 2nd on the list and delete it first, then delete the top satellite name.

Delete every satellite but the very last one.

Once you have only 1 satellite left then add your first one. There is a satellite chart at the end of this guide for a handy reference tool. Now after you have added one satellite: remember to put in 1 tp for each satellite added using AzEdit., then delete the old satellite from the original list. You have now cleaned out all the satellite info from the factory.

If you want to separate your C & KU satellites it is recommended to start at 139°W and work your way to 5°W. Have a printed list handy of each satellite and its location: The ku satellites on the list below are off from their c-band counterpart by (.01°). This is to keep the Azbox happy since the computer may not like 2 satellites at the exact same location.

So now you've reached the point where you have only the western sats on your list. Saved it to your pc **but** just for caution **make sure there is 1 TP on each satellite** you have in your list. Why? Well we have found that deleting every TP causes the receiver to go crazy and revert to the old files. Leaving one TP under each satellite satisfied the receiver and it has always remained stable doing it this way

Using Azbox Edit worked fine for this. Pay attention to satellite settings here when adding satellites or you have to do it on your remote for each satellite after you upload it to your Azbox. **Remember to add 1 transponder to each satellite. You must do this!** Do NOT add any TP's from the website in the program or you will corrupt your new satellite list.

For Satellite settings: using az-edit with a system slaved using a 4x1 switch:

LNB: Type = USER DEFINED :: LNB Freq.= 5150 c/band or 10750 ku::

Power = ON :: DiSEqC: >set to your specifics, my case was LNB-1 for C and LNB-2 for ku band satellites.

When you have finished you satellite list.

Then open the program: ACC (**Azbox Control Center**) version 1.1

Go to "Connection" (top right) click on it and set up your connection again using the same info you did for Maz3 near the top of this note.

Add the profile or a new profile here so it will always be there for the future.

There is also a Language setting here under Connections so set it up the first time around here.

Now.... Open the **Tools-2** button

Everything should be setup on this page so DO NOT UNCHECK ANYTHING HERE!

Now Stop for a second and make sure you have the Azbox turned on and connected to your internet. Do not proceed until you have done this!

After you have verified your Azbox is connected now on your pc:

Look on the left side for a button called: **send to Azbox** and click on it.

The new channel maps are now being sent to your Azbox and the Azbox will reboot on its own, **do not turn off your Azbox on your own, (manually).**

After the Azbox has rebooted go into your settings using your remote find...

TV Channel:: Tuner A.DVB-S:: Antenna Setup.

Now setup your LNB Frequency and DiSEqC settings if you have it set up.

When your done you can FTP them back to your pc and your settings will be backed up now just in case.

I found that after I reset the Frequency settings on just a couple of satellites that were not set proper before then after the edit I started over by downloading it to my pc and once I was satisfied all the new changes were there I used the ACC program to re-send it to the Azbox. Now my settings are set in both the backup files along with the ones in use. If the box wants to revert back now it is from this starting point.

Now if you had scanned in some channels before on your Azbox they may no longer work, so you want to go in and Delete all channels. Click on Home>Settings> Data-Re-Set, enter password (0000) then press Delete All Channels.

The trick of all this is the **Azbox control center program.**

Not only will it write the file to the Azbox and reboot, but it also

uploads all 3 files in disk 2 and additionally rewrites in disk1 \ disk2 backup file

dvbs.dat which the other channel editors do not do. The back up file is what causes all the problems with the satellite list changing back to the factory default on Azbox

users. Now your backup file is set for North America and if you done everything you also deleted all those TP's that are no good and now your blind scan should improve time-wise. I am now doing a blind-scan on some satellites I did it on in under 7 minutes.

Once you get re-setup and you have a channel list that is a good starting point for you, it is recommended you ftp it to your pc after all the settings have been made for your set-up. If anything happens in the future you now have a solid starting point and only have to use the **Azbox control center** program to upload your satellite and channel list.

This has been tried on firmware version 4890 & 5020 and on the Az-Ultra & the Az-Premium Plus receivers.

After playing around with the azboxes, using the above directions, I then used the AZEdit program and re-named the channels I had in the Azbox, Now instead of showing a frequency I have the actual name. Once again, I downloaded it to my pc using Maz3 and after editing uploading it using the ACC program.

The only potential pitfall I can foresee is what will happen if you install a new firmware to the Azbox. I don't know yet. Maybe you will have all those Eastern Sats back in if it is installed along with new firmware updates, but if you have a folder on your pc with the last change you made using this procedure all you have to do then is to open ACC and upload the **all_channel.dat** file and your good to go once more.

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The next page is for the hard drive you may want for recording from the satellite using the Azbox.

Hard Drives for the Azbox Recordings

Use SATA drives! The “Green” Drives run cooler and are recommended for the Azbox. It is also recommended that you not use a larger HDD than 1.0 TB as I have read that anything larger was not supposed to be compatible. It might be more akin to "we don't guarantee the results", opposed to "it won't work". But, I have read this on the official Azbox site. A 1 TB HDD will give you plenty of space.

Two types known to work decently are these models...

Samsung HD103SI (p/n 61823-B741-B25GG) 1000GB/R54/32M

Western Digital -1 TB SATA HD WD1000CSRTL

Hook the connector wiring (**already in the azbox under the top panel**) up to the drive and put the cover back on. Then go into the settings menu on the azbox to Storage.

The device should be recognized by the Azbox and then ask to format it. Press yes to format the drive if it gives you this option.

It takes less then 10 minutes to format a 1tb drive.

Follow the directions on the screen. **Do not power off the receiver at anytime and leave the receiver reboot when it wants to do so.**

You Can Not Rush This Process If You Want It Done Properly!

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The az-box will not record a high bit-rate program without artifacts. This has been a known issue for some time. I believe it should record ok up to 29.997, anything more it does stutter and breakup while playing the recording; but viewing the program while recording is fine. There is not a fix for this as of this writing.

Now try to record a program:

Use the menu button and highlight **record** then hit enter.

A Menu will appear on the TV screen with the time for the recording of the program. If you want to record this, press yes. The receiver should now be recording your program. To stop a recording you have the press the red record button again and a menu will appear asking if you want to stop recording. You may have to press this twice.

To delete a recorded program:

Hit the menu button

Arrow down 4 times to “Recorded program” hit “ok”

Your recorded programs should now appear in a box on your screen.

Arrow to the program you want to delete and using the “check” button hit ok and a check mark will now appear next to the ones you want to delete.

Now hit the “Menu” button and a box appears with...

Play Selection

Select All

Cancel all

Delete Selection

Delete all.

Go to “Delete Selection” press ok.

Another box will come up with...

Information

2 recorded file has been selected
 would you like to delete?
 Yes No

The yes was already highlighted so hit ok.

The 2 files are now gone leaving only one program left.

The receiver will display the channel name under the programming and the date recorded so at this point that is all I have to go by.

To change the name you go to settings > file manager > arrow to TV Record
 put a check on the one you want to rename, then hit the 'Menu' button which will now have the Rename option for the file.'

=====

Now if you want to do a timed recording using your remote:

Step 1) set up your time correctly in the azbox.....

After that is done now you want to do the following...

Using the "Menu" button arrow down to" Reserve Record/Play "

The top box will display the channel you are going to record from, make sure it is correct.

The second box is "Part" set this to "Record"

Repeat box is next, if you want to do a 1x recording set it to " Once "

Start Time:

This is where I kept hitting the arrow key and found that is not correct.

To change the am/pm use the "OK" button on your remote and this will toggle between am/pm. now > arrow over to the time.

(be careful as the time always want to change back to AM when you go to the next line so make sure your time is set correctly before moving on)

To get the correct time you want to highlight the time and then enter it using your remote or keyboard numbers. Do the same for the date.

Then set the time duration. Again these are preset so you have several choices to choose from using the > arrow key on the remote.

The target on my receiver is HDD.

The last line is "Program" this is where you can enter the name of what you are recording.

Now after this is set up arrow down to the Reservation button and hit ok

Another box comes up quickly asking if this is ok (Hit the "OK" on the remote quickly, and it is now in your reserved list of recordings.

If you're going to be out and do not want the receiver on all the time put it in the "Sleep" mode and your timed recording will go off properly.

If you turn off the receiver it will not record the program and it may clear it out of the reserved list. At least it did it on mine when I powered off the receiver one time.

While in a timed recording, if you had it in the sleep mode, you will not be able to see the picture you are recording on your tv /monitor, while it is recording.

=====

As for the recording on the azbox I found that it will only do a timed recording in increments of 10 minutes. I have not found a way yet to have a fixed recording for just 45 minutes or a specific start and end time using your remote. To have a fixed timed duration of your choosing you need to use MazEdit, the instructions are below.

Timed Recording with Azbox using MazEdit:

MazEdit 3.0 is the way to go here! *If you can get it to run on your PC.*

Install the MaZEdit 3.0 program on you pc. Go to the Maz configuration menu. Set it up with the appropriate IP address for your Azbox, FTP port (21), TelNet port (23), login (root) and password (Azbox) and background and language that you desire. Get it to connect to the Azbox.

Click on CHANNEL LISTS and then the "DOWNLOAD" arrow to transport your current channel list from your Azbox to your PC.

Find the satellite that the channel is on, find the channel in the list and LEFT click on the channel name. A sub menu will appear. Look for the option "SCHEDULE RECORDING" and right click on it. A new menu box will open.

The CHANNEL box should now be fully filled out for you with the satellite, TP and channel information required.

In the EVENT box, fill in the blanks as you wish to name the recording title, select the destination device (HDD/USB 1 or 2) and the start date. Then, you can select the start time and the length or duration of the program. Then select the repetition of recording (one time, daily, which day, etc). Then click on ACCEPT.

Next, move over to the panel on the right side of the MaZEdit's screen and click on RECORDING (RED SQUARE) and locate your newly created recording (reserved record) and either edit it if you wish or locate the upload arrow near the bottom of that one panel to upload the changes to your Azbox. You will be prompted with a message that states that box will reboot after the upload for the changes to be installed. Click on approve or continue or YES or whatever it says and your box will reboot and the recording session will be installed.

You may edit this recording event down to the minute of the start time, and adjust the end time by fixing the DURATION time.

=====

One thing that I don't like about MaZEdit, is that the program has to go out and seek several websites for extraneous information (like the latest firmware, plug-ins, channel creators i.e. Kingofsat - and news). These are not necessary and they seem to be geared

more to the European markets. These specialty site searches are part of what require MaZEdit to take so long to load up and sometimes crash. If it cannot find the site, it wants to generate an error, or so it seems.

An option to retrieve the latest official or daily firmware would be nice, if it were simply an optional menu that didn't run automatically when the program is opened.

When the satellite and channel list is opened / downloaded / uploaded, it should default to listing the satellites by their orbital position (with an option to sort alphabetically by name if desired). Then, sort by TP frequency and polarity and then sort by channel by SID with the option to sort alphabetically by name.

Download the zip file folder and when you extracted all the files, extracted them to the PROGRAM FILES directory. Then, when you open the MaZEdit application, you should go straight to the PROGRAM FILES directory and open it from there, opposed to trying to put up a shortcut on your desktop.

XX

How to change boot logo in Azbox?

Connect your box via FTP client (WinSCP)
go to directory / **MMP/hd/program/image/startup-simple**
there you will find "**boot_logo.png**"

You can change it with one of your favorite pictures but don't forget to make backup of the original one.

Picture must be in **.png** format, **24bit** and size **960x540**.

Just FYI, to clean the Azbox, first reset all data in the menu. Then using a USB stick with nothing on it but patch dot bin, (or a clean hard drive with only the firmware on it) you will have an option to format the application area. Do that, and then reinstall the firmware. Test it to make sure it works, and then reload your channel files. That way, if you have problems with your box, your channel list is not corrupt.

And don't forget the manual tells you NOT to reboot the box with an external USB drive connected (an internal drive is OK).

Tips:

When in the TV mode press the OK button twice for the channel guide to appear.

While viewing a program press the "Del/Back" button and a pop up box will appear on your screen showing you the last few channels viewed. Use the arrow key to highlight one and hit ok, takes you back to the previously viewed channel. Nice way to go back to a channel you wanted to watch earlier.

 The Elite Azbox remote is identical to the Azbox Ultra.
 The Azbox Elite is no longer available, it was the basic model.

 The Azbox Premium adds wireless networking, and internal Sata drive cable to Elite, but has poor blind scan.

 The Azbox Premium Plus has hardware blind scan, wireless networking, room for an expansion card (but there are none available for North America, unless you get another DVB-S/S2 card). Room for internal Hard drive with SATA drive cable, (HD not included) Front panel display and key functions.

 The Azbox Ultra, which is actually more basic than the Premium Plus, and replaced the Elite. It has true blind scan, external (USB2) hard drive attachment, no front panel display, setup for wired ip.

 The Azbox won't store a new transponder's info if it is close in frequency to an existing one in your list.

 Faster Blind scan.

First delete all the stored transponders on the satellite you're going to scan.

You could keep the active ones but get rid of everything else. Remember.....

The Azbox won't store a new transponder's info if it is close in frequency to an existing one in your list.

If you are using a standard LNB, set the maximum scan frequency to 12200 then set the step rate to 4000 KHz.

Change the minimum SR to 2500 instead of 1000. This will dramatically reduce the time spent doing a blind scan.

You should now be able to blind scan on the Ultra in about 10-12 minutes instead of 20 minutes. You might miss some really low SR feeds, but it is much faster then it was.

Azbox Premium Plus and firmware 0.9.4931.

Record a program from your favorite station. Then, during playback of the recording, press the numbered keys (0-9) on your remote keypad. This allows quick access to certain chapter marks. Instead of using the |<< or the >>| button to fast forward or back up to a certain point in the program, you can use the numeric keys to go to a "set" chapter mark.

Some questions & answers: From other Azbox users:

How are you getting the Azbox to see your pc's hd? or am I misunderstanding your post?

Just go into the File Manager (on the Azbox), and select "Network", and it will pop up your LAN, and list any directories that you have shared on your network (or your computer if you only have the one computer). If you have a video file that the Azbox is capable of playing, just highlight it, and hit the OK button, and it will play. Of course you'll need a network fast enough to play the files, but most people now have a 100Mbps hard wired LAN or a 54 Mbps wireless. I can play up to the ~20 Mbps Azbox recording limit via a wired lan, and can play SD and low to medium bitrate HD over my wireless. To me, it's much easier than transferring the files to the Azbox. Besides lots of programs I've recorded off sat that I have on my computers, I also have a bunch of old TV shows that I bought the DVDs of, and have saved the episodes on my hard drive, and if nothing is on regular TV, I just go into the Azbox file manager, and pull up an old Get Smart, Mork & Mindy, Taxi, Bob Newhart, Gilligan's Island, Batman, etc, etc. In addition to the video programs, you can do the similar things with photos and music files. If the Azbox HTTP channel thing worked better, you could stream live programming from other tuners to the Azbox too, but the Azbox seems to choke if the bitrate is more than something around 10 Mbps. I can stream live programming at the ~20 Mbps limit via UDP channels, but I don't have a very convenient way of doing that, I have to send the stream to VLC, and have it recode it as UDP, which is a pain.

Does anyone know how to change the blind scan parameters on the Ultra? I can change the first number of the freq. and symbol rate but nothing happens when I try to enter the next numbers?

Use the del/back key on your remote.

Does the Azbox ultra have panel on top that comes off so you can install an internal hard drive in it?

A. Yes the ultra has removable panel on top so you can install an internal hard drive.

What the password is for "Data Reset"?

A... "0000" (four zeros)

I can't get The CW Networks to lock at 91°W on the Azbox. How do you enter more than one line of PIDs? The Azbox only displays one line

A.....you must add the sid info: 1, 2 & 3 .

After entering the first one put sid # as 1, then save it and then press the text button on remote again to add another channel to the mux.

Will the Ultra record and play back from the internal hard drive (if so, make/model of drive you put in) ?

A..... Yes, It has door on top for easy drive access for installation of SATA drive.

Some channels I am watching have some strange line and bars across the top of the screen, what is going on?

A... Under Settings-Display change the “screen Format” and/or the Display format. On my HDTV I have the screen set to 16:9 and the display set to Pan & Scan for this very reason.

How do you add a west satellite to the Azbox Elite? It usually tries to show up as East and not West ?

A... Once you have typed in the orbital position (i.e 125.0) simply press the > button on the remote and it will adjust the E to W. Then press OK to save.

what is the downside to leaving hardware acceleration turned on?

The downside would be if you came across a feed that used some scheme that the developers didn't write a method to pass through the GPU.

Just as an example that's highly unlikely:

Let just say you run across a feed that is transmitted in VC1 (the default codec for Blu-Ray/HD-DVD) instead of MPEG2 or MPEG4.

And (in this example) the Azbox has no software telling how to accelerate this through the GPU.

The system will bog down and stutter as the feed is fed to the GPU only to be rejected and sent back to the CPU for processing. If you were to turn off hardware acceleration you could get a watchable show.

Silly question but how do you know what TP's are not active to be able to delete them?

What you should do is to delete them all, active or not. Then go to blind scan and it will scan them all and put the good ones back in.

How do you add a west satellite to the Azbox Elite? It usually tries to show up as East and not West.

It is fairly easy, although not stated anywhere very explicitly. Once you have typed in the orbital position (i.e 125.0) simply press the > button on the remote and it will adjust the E to W. Then press OK to save.

Can you turn off an Azbox via the remote???

I generally turn off my Azbox by flipping the switch in the back. I was just doing some experiments to see if the Azbox passed RF through the pass thru when switched off, and wanted to compare that to turning off via the remote, which I've never done before. I tried to turn it off, but you apparently can't, at least with the 4585 firmware version I'm using.

What happens, is if I hit the power button on the remote, it takes me to a menu that gives me the options of SLEEP,SHUTDOWN,REBOOT,CANCEL . SLEEP, REBOOT and CANCEL seem to work, however SHUTDOWN takes you into a screen that says it's shutting down, then comes back to a page that says to shutdown now. Ie it seems like if you use that option, you still have to get up and manually turn off the switch in the back. I assume that it is just closing down any open files, and/or un-mounting any directories, etc, but I was under the impression that this isn't necessary with newer versions of firmware anyway, and I've never had any issues with using the switch without doing this first. So I guess the question is, what good is this function if you have to get up and turn the thing off anyway.

BTW, upon trying this SHUTDOWN option, I used the EXIT key, which brought me back to the menu with the 4 options. If I then go into SLEEP, it won't come out of SLEEP. Or actually, it comes out, but the screen has been disabled, and the mouse is non-functional. This is similar to what I've experienced if I try doing a REBOOT from telnet. The Azbox boots back up, no screen, and no remote. Whenever you get in this no screen/no remote situation, doing a power cycle reboot brings you back to life.

Anyway, I'm curious if anyone else has noticed this, and either know of a way to turn it off via the remote or has some insight into why they have this seeming-less unnecessary function whereby you have to use the switch anyway?

.....

I believe that the "SHUTDOWN" via the remote only **prepares** the system to be powered OFF from the rear switch (just like shutting down a PC), but whereas the PC actually does shut itself down, we still have to hit the power switch on the Azbox.

I think the intention is to prevent any corruption that might occur if you simply flipped the switch... Not that I ever witnessed any by doing it that way.

Linux systems `_CAN_` have a tendency to write to volatile memory, that doesn't go to disk or non-volatile memory until the partitions are un mounted. With some other Linux systems, I have tried to do this manually when shutting down, but I don't really know how necessary it is, because like you, I have never seen a situation where not doing this resulted in problems.

With the Azbox, I seem to remember one of the firmware upgrades that said something like "safe shutdown".

.....

it does seem to gain us very little except for the "security blanket" feeling. I have never tried the "SLEEP" function from this menu. I had assumed that it meant "STANDBY MODE" as opposed to a full shutdown. From your experience, it sounds a little quirky. I do use the "REBOOT" quite often (compared to all others listed in that menu). That works really nicely when loading the firmware.

I rarely shut my Azbox down at all. It is still running and it has been ON pretty much 24/7 since 2004/2005. It just keeps going and going and going.

I have been playing with this new 3877 firmware. I do not notice if it has happened with the earlier versions, but this one seems to try to default to PAL every chance it gets, so please be aware of it. It happened once when I tried an AC restart, and just now again when I performed a Data Reset using the "Factory setting".

If you have a PAL capable display, no harm done. But for those of you with no PAL capability, you will not be able to see clearly enough to navigate the menus enough to recover to our NTSC standard. This would result in a rapid vertically rolling picture. To recover, you will be forced to resort to our old "blind man's bluff" method.

- 1.) Press the Home button if you are not already in the Setup menu.
- 2.) Press left arrow once to get to the Setup menu if needed.
- 3.) Press OK to bring up the menu. It takes about 2 or 3 seconds for the menu to change, so be patient.
- 4.) Press down arrow six times to get to the Display choice.
- 5.) Press OK and then right once to get to the Display menu.
- 6.) Press down arrow once to get to the Video Format, and then right arrow once to get back into NTSC. You should now be able to temporarily see the menu, but within maybe

10 seconds it will revert to PAL. Just toggle the change (PAL vs. NTSC), and then left arrow once to save your choice

Now that you are confident that you can recover from PAL mode back into NTSC, time to play on the next message.

 If your Azbox is connected directly to your internet router with a reasonably fast connection, check out the following. There are 4 Russian channels viewable. This works with the new 3877 version, I am not certain of the earlier versions since I have it on those.

Press Home and then choose Setup.

Go down to TV Channel and press OK.

Right arrow to IP Channel.

Press OK, and then set the Protocol line to HTTP using the right arrow key.

Go down one line to the TV Type and then right arrow once from the Normal choice to instead read kartina.tv You do not need to type anything in here, it is appearing directly on the menu by itself.

The other fields such as Address, Buffer Size, Username and Password are already set to default for this signal.

Select Save and press OK when you are done. The receiver will connect to the internet and it indicate that 4 channels were found.

Press the exit button twice and then right arrow once and then press OK to get back into the TV section.

This in effect adds you another "satellite". While in your normal viewing position press **OK** to bring up the "Channel Selection" screen. Press **exit** once and then move the heading to the SATELLITE setting. You should see your current programmed satellites as before, but you should now have an additional one named "IP Channel". If you are not able to find this channel, you may need to perform an AC reset (toggle the rear panel power switch off a few seconds and then back on). This is where I first had my first PAL incident, so be aware.

Once you have an "IP Channel" satellite choice, you should see the 4 channels under that satellite. My four viewable channels did not appear until after I had performed a "Factory Reset", which again defaulted into PAL, but after getting back into NTSC mode I was able to view the channels. If using a factory reset, you will loose all of your existing sats and channels. And after the master reset, I still had no IP_CHANNEL satellite, but after an AC reset, it was then usable.

My internet access is not the fastest, so my video goes in and out, and sometimes does not view at all (black screen). But when it does, the video quality is surprisingly good. Patience is a virtue here.

 The IP address on an AZ is displayed in "Settings" "System Information" screen menu and also in the "Internet" menu. It will be a number like this" 192.168.0.xxx with the xs

being assigned by your DHCP server. If you're doing an "adhoc" network deal then those numbers will be 169.254.0.xxx.

If you have a router that you are connecting your AZ to then it will automatically assign an IP address to it that will appear in both those places.

 talking about IPTV, how about IPTV from satellite. I tried playing around with that the other day with a known satellite IPTV business tv service but I didn't have any luck because some places to put some parameters were missing.

I've concluded for the AZBOX, IPTV only works with internet IPTV and lacks enough data inputs to be able to take a satellite IPTV stream and display it.

 As far as I'm concerned, the Azbox is the most capable receiver I've owned. It is not just based on the fact that it does HD 4.2.2, it's also based on it's capability to play media over the network. It has almost replaced my Roku and/or Pop-Corn-Hour. **Almost, because it still has problems with high bitrate video.** But it is much more user friendly than either Roku or PCH for SD and low bitrate HD. And I like the capability to connect via Telnet, FTP, etc. It is simply the most capable receiver I have used or read about.

I understand that some people have specific expectations from any receiver they buy, and won't be happy if a receiver won't do what they want, but other people have different expectations. ALL receivers have their good points and problem areas. Anyone looking for a receiver should consider both good and bad, and evaluate the importance of both based on the way they intend to use the receiver. Basically, I don't think that the Azbox deserves the negative press it has received.

Relative to the changing channel format and problems encountered when changing firmware versions, I think that it is true that there has been ONE relatively recent change in format, however it never affected me. I think the error in the original scenario is going forward and backward in firmware versions. I think it's really asking a LOT of any computerized device to go backwards in firmware, and expect it to understand changes made in future versions. Generally when changes are made in computerized devices, the new versions can be expected to understand old info, but it's not reasonable to expect old versions to understand new info.

So basically, if you revert to an older Azbox firmware, I would recommend re-formatting the application area, and then put back the 3 .dat files you were using with that older version, and you won't have any problems. Going forward in firmware, you generally won't have any problems, as long as you replace all three .dat files.

When problems DO occur, I have generally been able to get things working again by replacing the DVBS.dat file. This is because the Azbox saves a backup copy of the DVBS.dat file, and if whenever it detects a problem, it runs home to it's backup copy, and this backup is often not compatible with changes made to sat/channel/transponder lists. So I recommend making routine copies of the 3 .dat files, and if problems occur, first try replacing the DVBS.dat file. Nine out of ten times that will fix things.

I've upgraded my Azbox up through about 5 different versions of firmware, and am now using the most recent firmware version, and haven't encountered the many problems that people are posting about, and I'm convinced that the problems are often caused by the jumping around from firmware to firmware, and/or having corrupted channel/sat data and moving that corrupted data along with the firmware changes. I had all sorts of problems when I first got my Azbox, because it came with corrupted sat data. Once I was able to purge the corrupted sat data, and start over from scratch, I have had very few problems.

I really recommend manually deleting all but the sats you can see, add any that are missing, then save that version of the DVBS.dat file, then go ahead and manually scan in transponders and channels.

Anyway, keep an eye on the file size of the DVBS.dat file. If you have edited out all the extraneous sats, the size of that file should be down in the 50-100K range. If the Azbox has had a problem, and reverted to the backup file, the file size will be up around 1600-1700 K. If you see the big file in there, I immediately replace it, and reboot.

As a disclaimer, I do pretty much use my Azbox slaved. Some of the problems people have reported involve some of the diseqC-1.2/USALS functions, which I don't use, so it's possible that I wouldn't be quite so happy with my Az if I were controlling a couple dishes with it. However I've tried to reproduce some of the issues people have reported, and so far haven't been able to. So I really think that it is possible that many if not most of the problems people have reported, are due to the way people are using the receiver.

Anyway, I think it's a GREAT receiver. If I had to have only 1 STB, it would definitely be an Azbox.

I'm not saying the Ultra's blind scan is perfect, but it IS better if you delete excess stored transponders and tweak the scan settings.

I have been scanning with the minimum SR set to 2000 now and I'm still getting good (better) scan times of about 12-14mins. It really depends on the satellite. I've been testing 97W and 101W the most tonight. 105W for some reason took longer like 17min. But this has been a big improvement over the 20-23mins I was getting before.

It is probably a combination of changing the minimum SR and deleting all the excess transponders. My 20-23 min scans before already included setting the minimum freq to 12200MHz.

This procedure will allow you to completely clean your Azbox HD. All configuration, plug ins and firmware will be lost.
So use it with caution and follow it carefully.

When do you need to use this procedure?

- If you feel that your Azbox no longer works properly and behaves totally at random.
- Problems with plug ins
- If you have a bug that nobody else experience or can reproduce

Pre-requisite:

DO NOT SKIP THIS PART.

- Download the latest firmware with Firefox from <http://fw.azupd.com>
- Check the MD5 signature
- Rename the file to **patch.bin** and nothing else (so azbox-0.9.5020-patch.bin is not a valid name it should be renamed to patch.bin, so suppress "azbox-0.9.5020-").
- Format an USB key to FAT file system
- Copy the file patch.bin to the newly formatted USB key
- Power off your Azbox
- Connect the USB key
- Restart your Azbox
- In the upgrade screen select 1 - upgrade USB (the firmware you copy on the USB should be detected and installed).
- This process should end normally during the countdown remove the USB key.
- Your Azbox will restart with the firmware you select.

Clean-up

- Please DO NOT SKIP PRE-REQUISITE!!!

- Enable Telnet server on your Azbox (11. Setup - Network Services - Telnet server : Enabled).
- Connect to your Azbox IP address with a telnet client
- Type the following command.

Code: [Select]

```
mount -o remount,rw -t ext3 /dev/hda1 /MMP
rm -rf /PLUGINS
rm -rf /DISK2
rm -rf /MMP
sync
```

You will probably read some error messages, don't care about this.

- Power off your Azbox (switch off) (if you press the power key on the RCU the end menu will no longer appears since we just delete it).

- Put the USB key that we prepare in pre-requisite in the Azbox USB slot.
- Power on your Azbox

On the upgrade screen select:

4 - Format application Area

Followed by:

1 - upgrade USB

Let the upgrade process run (DO NOT POWER OFF your Azbox during this process) and wait for the final countdown and remove the USB key.

If you miss the final countdown at the Azbox reboot select 5 - Continue without upgrade.

Your Azbox is now brand new with a fresh firmware without any old stuff on it. Then you will need to reconfigure all your Azbox like you first power it up.

Note: The azboxes have their quirks about them; it is not a 100% full-proof receiver.

Keep this in mind when using them and remember it is just a hobby. Enjoy!

In my opinion, I have found the Azbox Premium Plus receiver the way to go for anyone interested in one. The Ultra receiver which is a step down and \$100.00 cheaper, but in the long run the Premium Plus is the way to go for the on screen display and wireless internet connection and you have a much nicer remote to work with than the Azbox Ultra receiver. The Premium Plus is larger and seems more robust then the Ultra. For recording you can tell when it is, where as, the Ultra it is difficult at best to tell if you're still recording on it. (When, you have installed a hard drive in the receivers).

Western Satellites from 5.0 °W to 85.0 °W

Slot ° W	Real Satellite Name	C or ku	Position_#	Slot ° W	Real Satellite Name	C or ku	Position_#
~~~~~	xxxxxxxxxxxxxxxxxxxxx	~~~~~		~~~~~	xxxxxxxxxxxxxxxxxxxxx	~~~~~	
5.0 °W	Atlantic Bird-3	C-Band		43.0 °W	Intelsat-11	C-Band	
7.0 °W	NileSat-101 ku	KU		45.0 °W	Intelsat-14	C-Band	
8.0 °W	Atlantic Bird-2	C-Band		50.0 °W	Intelsat-1R	C-Band	
11.0 °W	Express-AM44	C-Band		53.0 °W	Intelsat-707	C-Band	
11.1 °W	Express-AM44 ku	KU		55.5 °W	Intelsat-805	C-Band	
12.5 °W	Atlantic Bird-1 ku	KU		58.0 °W	Intelsat-9	C-Band	
15.0 °W	TelStar-12 ku	KU		61.0 °W	Amazonas-1	C-Band	
18.0 °W	Intelsat-901	C-Band		61.5 °W	EchoStar-3-6 ku	KU	
18.1 °W	Intelsat-901 ku	KU		63.0 °W	TelStar-14 ku	KU	
20.0 °W	NSS-5	C-Band		65.0 °W	Star One-C1	C-Band	
22.0 °W	NSS-7	C-Band		70.0 °W	Star One-C2	C-Band	
22.1 °W	NSS-7 ku	KU		72.0 °W	AMC-6	C-Band	
24.5 °W	Intelsat-905	C-Band		72.1 °W	AMC-6 ku	KU	
24.6 °W	Intelsat-905 ku	KU		72.5 °W	Nimiq-5 ku	KU	
27.5 °W	Intelsat-907	C-Band		74.0 °W	Horizon-2 ku	KU	
29.5 °W	Intelsat-707	C-Band		77.0 °W	EchoStar-8 ku	KU	
30.0 °W	Hispasat-1C ku	KU		78.0 °W	Simon Bolivar	C-Band	
34.5 °W	Intelsat-903	C-Band		79.0 °W	AMC-5 ku	KU	
34.6 °W	Intelsat-903 ku	KU		82.0 °W	Nimiq-4 ku	KU	
37.5 °W	NSS-10	C-Band		83.0 °W	AMC-9	C-Band	
37.6 °W	TelStar-11N ku	KU		83.1 °W	AMC-9 ku	KU	
40.5 °W	NSS-806	C-Band		85.0 °W	AMC-16 ku	KU	

## Western Satellites from 87.0°W to 139.0°W

Slot ° W	Real Satellite Name	C or ku	Position_#	Slot ° W	Real Satellite Name	C or ku	Position_#
~~~~~	XXXXXXXXXXXXXXXXXXXX	~~~~~		~~~~~	XXXXXXXXXXXXXXXXXXXX	~~~~~	
87.0 °W	AMC-3	C-Band		110.0°W	EchoStar-10-11 ku	KU	
87.1 °W	AMC-3 ku	KU		111.1°W	Anik-F2	C-Band	
89.0 °W	Galaxy-28	C-Band		111.2°W	Anik-F2 ku	KU	
89.1 °W	Galaxy-28 ku	KU		113.0°W	SatMex-6	C-Band	
89.2 °W	Spare-2	C-Band		113.1°W	SatMex-6 ku	KU	
91.0 °W	Galaxy-17	C-Band		116.8°W	SatMex-5	C-Band	
91.1 °W	Galaxy-17 ku	KU		116.9°W	SatMex-5 ku	KU	
91.2 °W	Nimiq-1 ku	KU		118.7°W	Anik-F3	C-Band	
93.1 °W	Galaxy-25	C-Band		118.8°W	Anik-F3 ku	KU	
93.2 °W	Galaxy-25 ku	KU		119.0°W	EchoStar-14 ku	KU	
95.0 °W	Galaxy-3C	C-band		121.0°W	Galaxy-23	C-Band	
95.1 °W	Galaxy-3C ku	KU		121.1°W	EchoStar-9 ku	KU	
97.0 °W	Galaxy-19	C-Band		123.0°W	Galaxy-18	C-Band	
97.1 °W	Galaxy-19 ku	KU		123.1°W	Galaxy-18 ku	KU	
98.0 °W	Spare-1	C-Band		125.0°W	Galaxy-14	C-Band	
99.0 °W	Galaxy-16	C-Band		125.1°W	AMC-21 ku	KU	
99.1 °W	Galaxy-16 ku	KU		127.0°W	Galaxy-13	C-Band	
101.0°W	SES-1	C-Band		127.1°W	Horizon-1 ku	KU	
101.1°W	SES-1 ku	KU		129.0°W	Ciel-2 ku	KU	
103.0°W	AMC-1	C-Band		131.0°W	AMC-11	C-Band	
103.1°W	AMC-1 ku	KU		133.0°W	Galaxy-12	C-Band	
105.0°W	AMC-18	C-Band		135.0°W	AMC-10	C-Band	
105.1°W	AMC-15 ku	KU		137.0°W	AMC-7	C-Band	
107.3°W	Anik F1R	C-Band		139.0°W	AMC-8	C-Band	
107.4°W	Anik F1R ku	KU					