

AXIS AXRX3 Receiver

Kiss manual

(Keep It Simply Simple)

GETTING STARTED



AXRX3 Out of the shipping box



AXRX3-6 Out of the box, rear panel view

This document will be featuring the AXIS AXRX3-6 6 Way Diversity 5.8GHz Single Decoder (D331 Main board) Receiver.



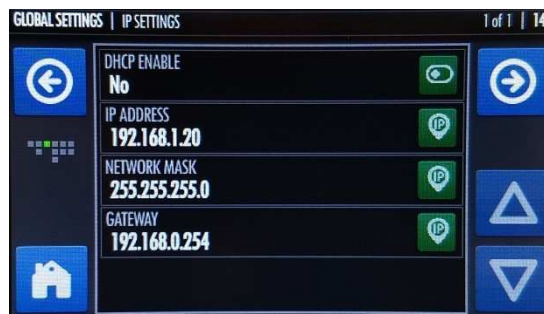
LCD Display protective cover removed



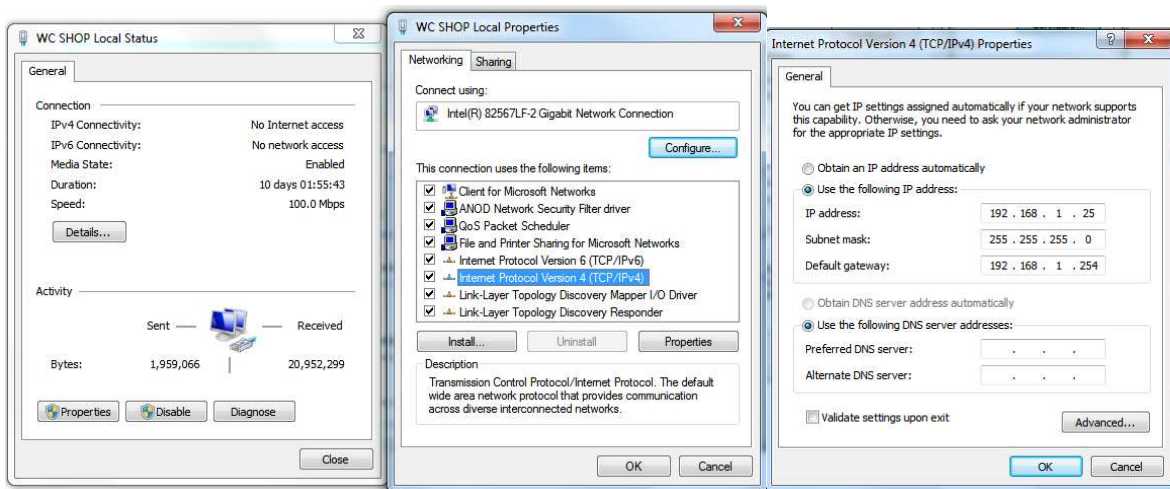
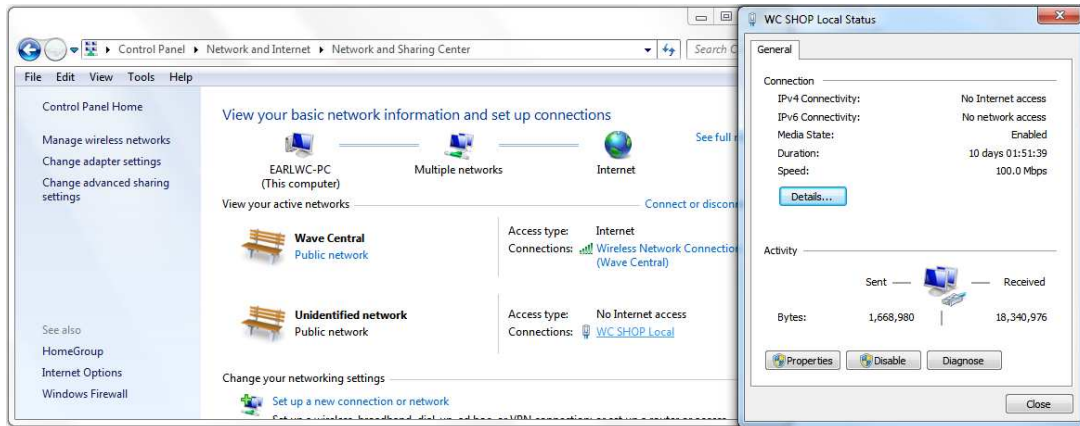
Initial power and Ethernet control connections.

When your receiver ships from Wave Central, it is pre-programmed with your frequency band (16 pre-sets). The receiver's services are tested and verified prior to shipment. The parameters will be explained later in this document. As you are aware the receiver can be programmed via the LCD touch display screen.

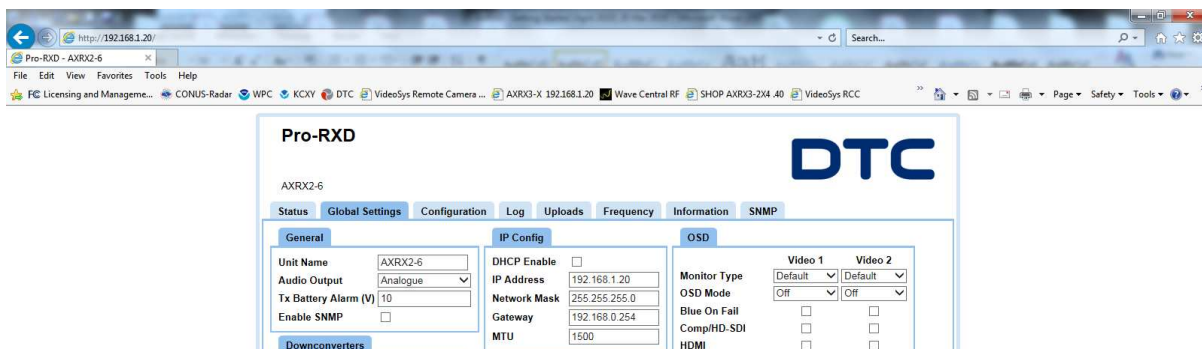
When the receiver is final system tested (FST) all control parameters and operational status is set and verified via the Web browser. This connectivity is via the control RJ-45 top jack on the rear of the back panel. The receiver's IP setting below, as shipped.



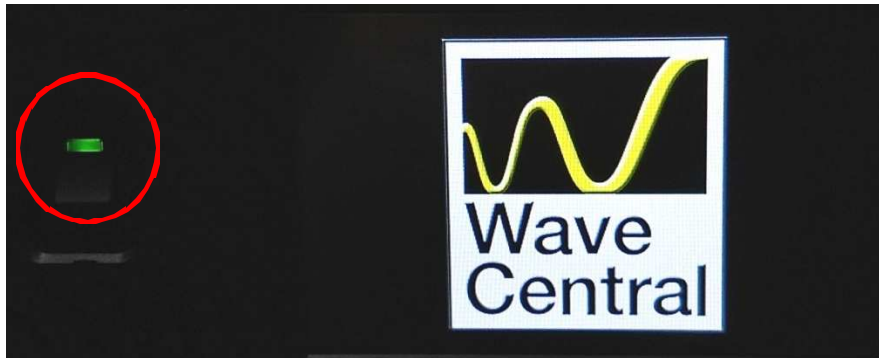
Set up of computer Ethernet adapter to communicate with the AXRX3 receiver. Wave Central engineering's test computer uses Windows 7. Other Microsoft OS' should set up similarly.



The above menu screen shots take you to the location to enter the IP address for your computer, subnet mask and default gateway. When set, press OK. Enter the IP address into your web browser and you should be communication with the receiver.



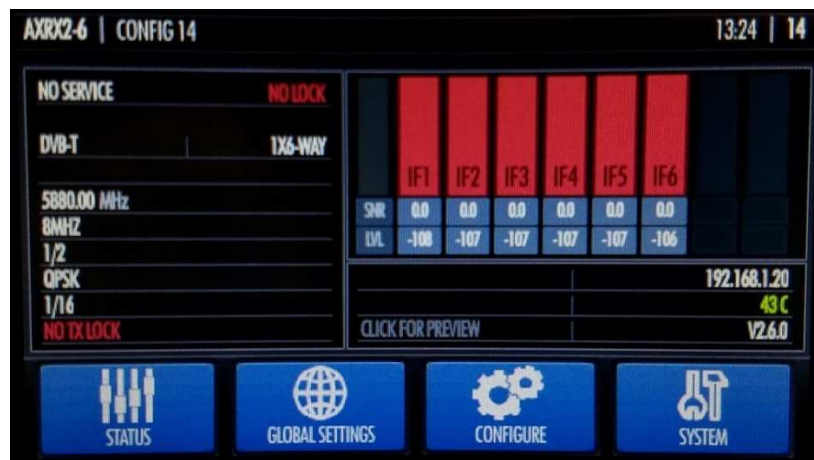
AT YOUR FACILITY



At initial power up after the power switch on the front panel is turned on the green LED will illuminate. Also the internal cooling fans will spool up and with be audible.



Boot Wheel is displayed after several seconds and turning clockwise during the booth up cycle.





Menu displayed after boot sequence has completed.

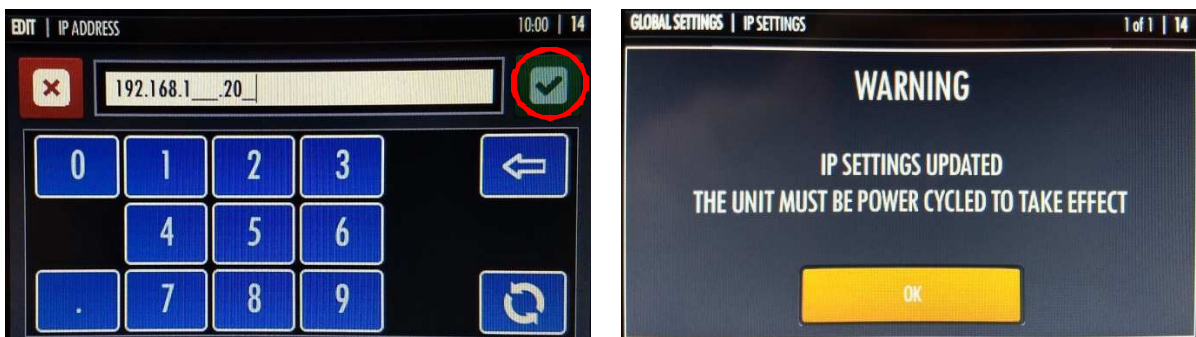
Changing the IP address to interface within your facility to another computer


If you plan to integrate the receiver into the engineering Ethernet for set-up and control, the IP parameters must be entered via the LDC touch screen display. Should you not want to change the network adapter parameters on a computer that is already set up on engineering or specific network execute the following. Unit MUST be power cycled to take effect.

From the main menu on the previous page select GLOBAL SETTINGS. The GENERAL SETTINGS Setting menu is displayed.

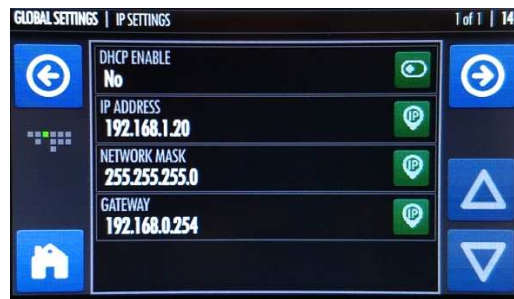


From the GENERAL SETTINGS menu push the  button and press over to the IP SETTINGS menu. From this menu select the  which will bring up the menu below.



Enter the desired IP address. Then press  button. The WARNING message appears. If additional IP parameter need to be changed wait until the WARNING message disappears. The new IP address will then be displayed.

The next entry is for the NETWORK MASK and GATEWAY address. These addresses will be entered in the same sequence. Pressing the  button will delete the entry and return to the main IP SETTING menu.



This is what IP settings will be displayed on the LCD touch screen on the receiver as shipped from Wave Central.

The next steps:

Prior to the sales process and subsequent purchase(s) all aspects of your expectation of this receiver and any other Wave Central products in your operational environment will have been fully explored. Most of the AXIS receivers are part of a system consisting of a camera transmitter(s), camera paint and antennas. The antenna system requires the use of Block Down Converters (BDC). Intermediate Frequencies (70-850MHz) are specific for the operating band (5.8GHz) in this receiver as described in this document.

This receiver is recommended to be operated in a cool dry controlled environment where partible. It is not water proof.

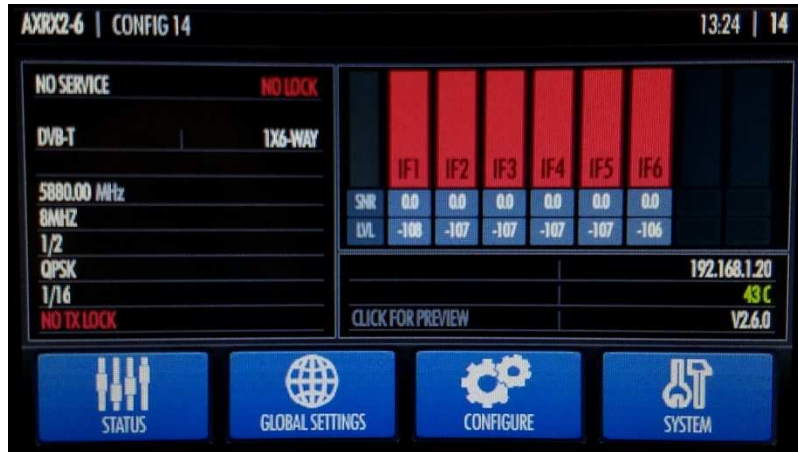
Connections to and from the receiver are via supplied external 12 VDC power supply, Ethernet, XLR analog audio and BNC 50 Ohm female IF Input (1-8) BDC bulk head connectors. Coax cable from the BDC is cable with 50 Ohm BNC connectors. Wave Central recommends Belden 1694A. Pre-made and tested IF cables are available from Wave Central for an additional charge.

All video in and out coax cable connectors are 75 Ohm. Particular attention MUST be adhered to when using coax connectors. The 50 & 75 Ohm connectors are different. Pairing a connector with the incorrect mate can cause damage to the connector and reduce efficiency of the circuitry involved.

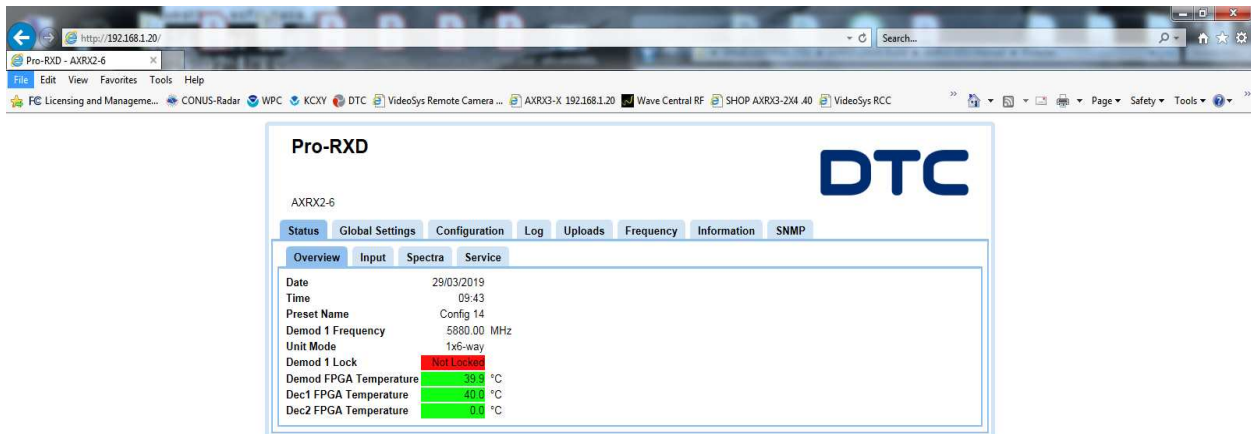


The Web Browser

Connection to the AXRX3-6 receiver is via Ethernet, describe earlier in this document. Once the receiver has completed its boot sequence, this screen will be displayed.

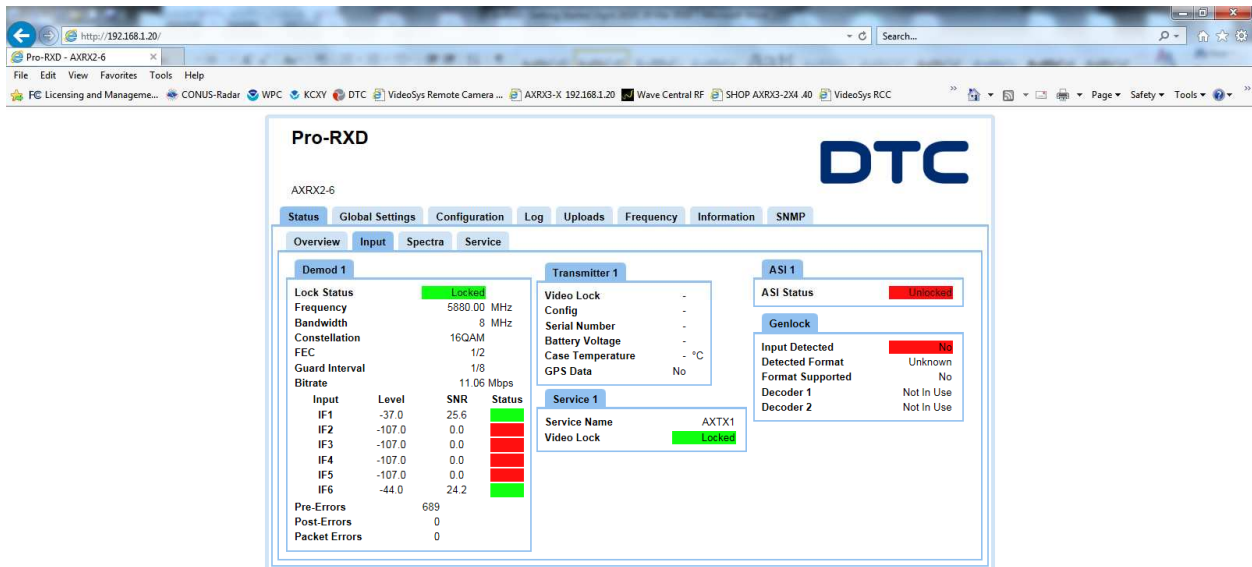


Open the internet explorer on the attached computer and type 192.168.1.20 into the browser address line and hit enter. The following screen will appear.



The screen default is the Status and sub menu: Overview.

Prior to going forward, you need to know what the television standard your facility is using. In our test setup Wave Central our test standard is HD/SDI: **1080i 59.94**. The test transmitter source is using this line standard and is operating on pre-set 14 which is 5880 MHz. The transmitter is transmitting at 10 mW on 5880 MHz, 8 MHz bandwidth, 16QAM constellation, 1/8 guard interval, 1/2 FEC (Forward Error Correction) and bit rate of 11.06 Mbps. Block Down Converters are connected to IF inputs 1 and 6.



Select the Input tab on the display shown the status of the Demod 1, Transmitter with services, ASI status and Genlock.

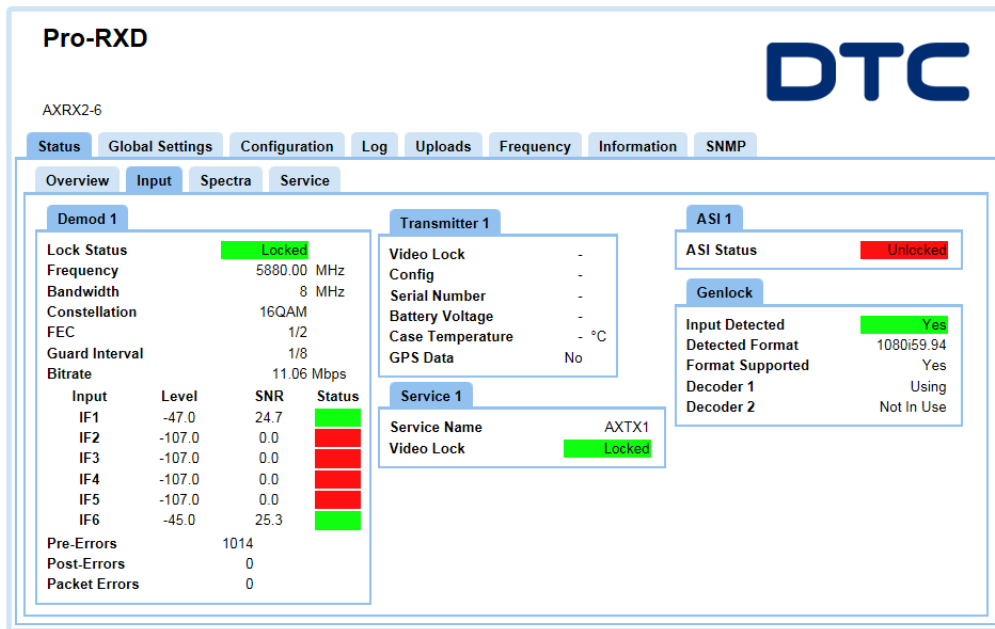
Connecting the Genlock source

The Genlock source MUST be the same standard used within your facility and that of the RF cameras etc. Connect the Genlock source to the standard as used in your facility to the Genlock input (75 Ohm) on the receiver.

HD/SDI 1, HDMI 1, CVBS (NTSC) and the BDC to IF inputs 1 and 6 should be connected at this time. We also check and verify each analog outputs; Audio 1 through 4 are functional. Your system will most likely be using embedded audio.



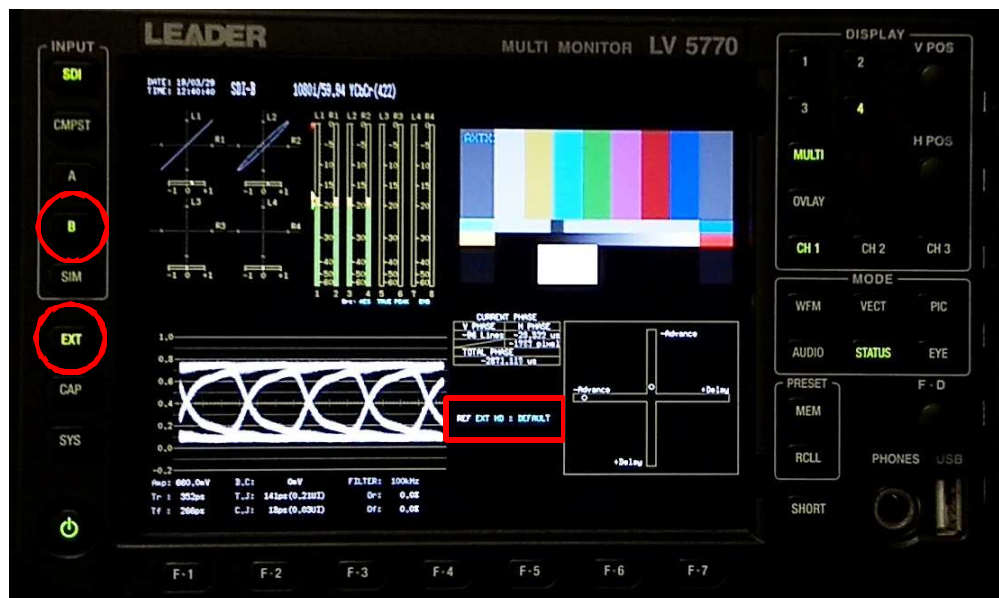
Rear panel as configured for testing



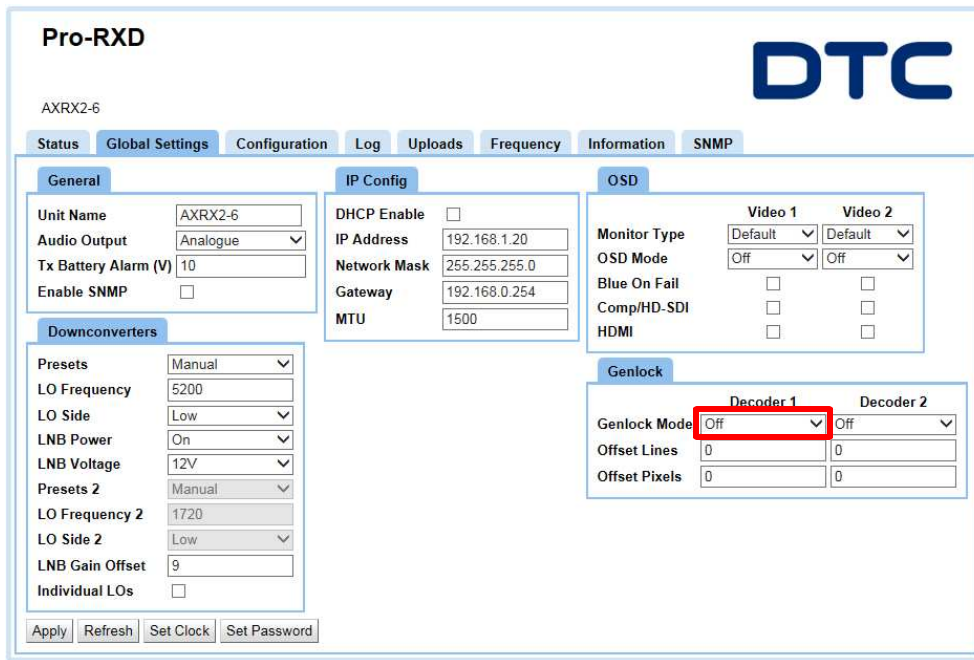
The Genlock menu indicates that the input Genlock signal has been detected (1080i 59.94) and supported. Since the receiver (D331 main board) has one Decoder 1 displays Using.

Adjusting Genlock

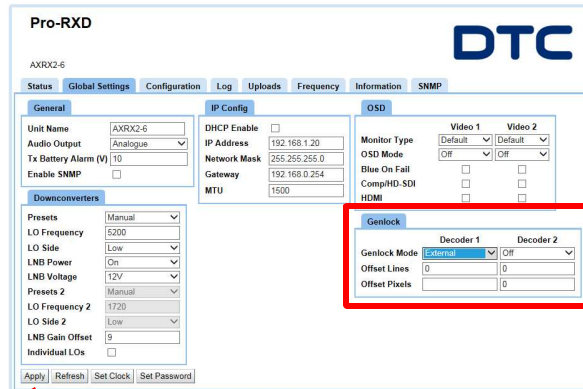
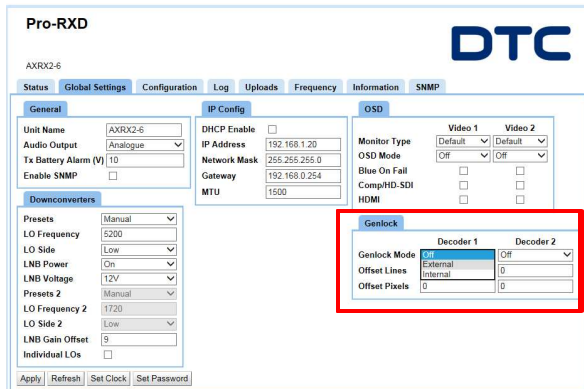
Wave Central uses a Leader Multi Monitor LV5570. The reference (Genlock) is the same signal feeding the Genlock input to the receiver. The HD/SDI 1 output, in our case feeds input B of the LV5570 and the monitor is set to external.



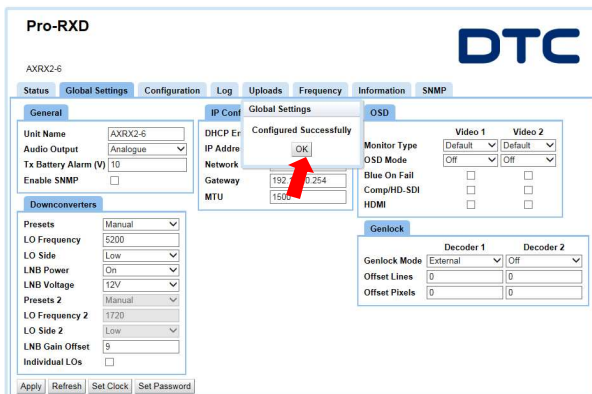
Ref: Ext HD : DEFAULT



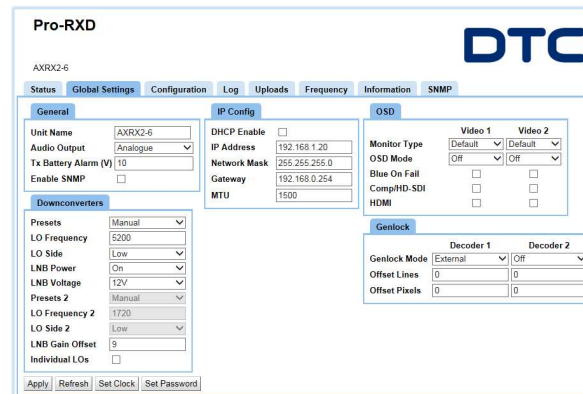
Select the Global Settings tab. From this menu at the Genlock tab, cursor over to the Decoder 1, Genlock Mode (Off) the check and click. A drop down menu will appear high light external and click.



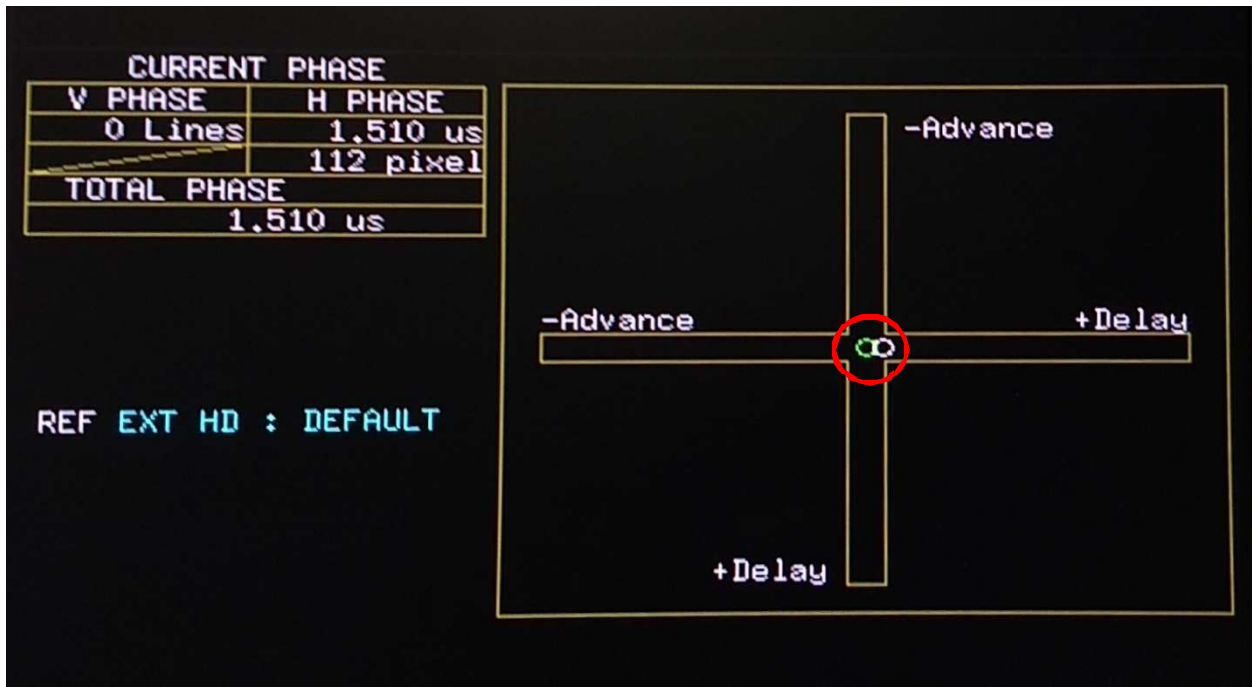
Then click the Apply tab.



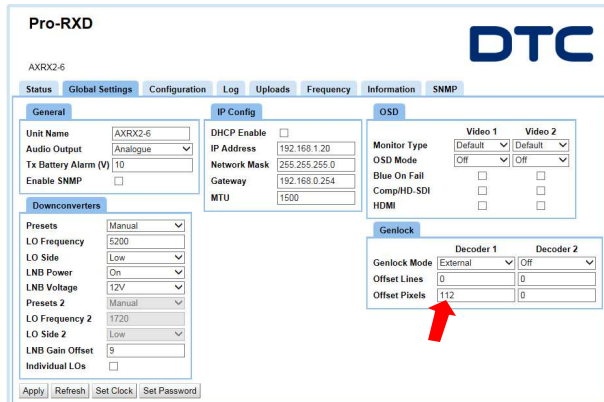
Click OK



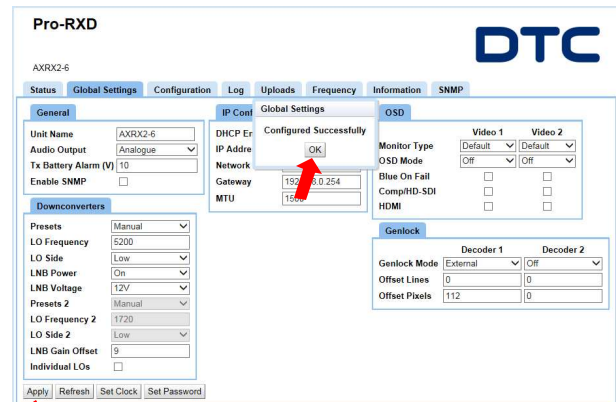
The Receiver Genlocked to the reference



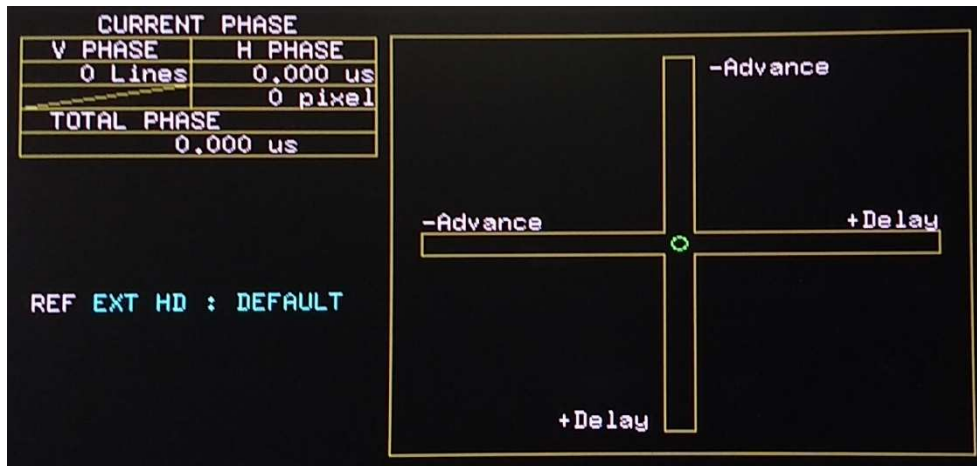
Leader's LV5570 monitor showing the Genlocked relation with the receiver and the reference. The current phase relationship; Vertical Phase: 0 Lines, Horizontal Phase: 1.510 us or 112 Pixels. The procedure below sets the Genlock parameters for the receiver.



Enter the pixel offset of 112 in the box above.



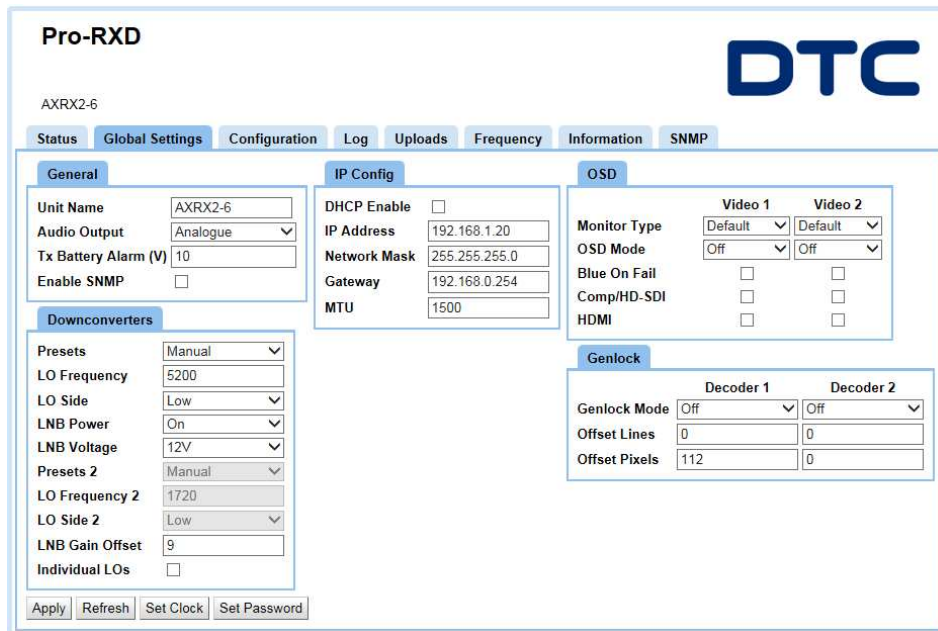
Select Apply to set. Then click OK.



Receiver locked and phased with House reference source

Navigating more menus

Now that you can communicate with the receiver from the web menu more menus can be explored. It's important to browse the menus to get familiar with the receivers capabilities.



Most of the menus are self-explanatory.

The name of the receiver can be changed as you desire. In this example the name is changed to **End Zone Camera**.

Clicking on the X will delete what is in the box. Type the desired name in the box. Then click **Apply**, and then **OK** in the Configured successfully box.

Downconverters menu: Shows configuration, these parameters are set during systems testing. **Note**: 12 VDC is sent to the Block Down Converters with the IF output BNC connectors located on the rear panel.

Status Menu:

Input
Spectra
Services

Pro-RXD **DTC**

End Zone Camera

Status Global Settings Configuration Log Uploads Frequency Information SNMP

Overview Input Spectra Service

Demod 1

Lock Status Locked

Frequency 5880.00 MHz

Bandwidth 8 MHz

Constellation 16QAM

FEC 1/2

Guard Interval 1/8

Bitrate 11.06 Mbps

Input	Level	SNR	Status
IF1	-33.0	25.8	Locked
IF2	-106.0	0.0	Locked
IF3	-107.0	0.0	Locked
IF4	-107.0	0.0	Locked
IF5	-106.0	0.0	Locked
IF6	-40.0	25.8	Locked

Pre-Errors 491

Post-Errors 0

Packet Errors 0

Transmitter 1

Video Lock -

Config -

Serial Number -

Battery Voltage -

Case Temperature - °C

GPS Data No

ASI 1

ASI Status Unlocked

Genlock

Input Detected Yes

Detected Format 1080i59.94

Format Supported Yes

Decoder 1 Not In Use

Decoder 2 Not In Use

Service 1

Service Name AXTX1

Video Lock Locked

Pro-RXD **DTC**

End Zone Camera

Status Global Settings Configuration Log Uploads Frequency Information SNMP

Overview Input Spectra Service

Frequency Ch.1 5880.00 MHz

Bandwidth 8 MHz

Pro-RXD **DTC**

End Zone Camera

Status Global Settings Configuration Log Uploads Frequency Information SNMP

Overview Input Spectra Service

Service 1 Service List 1

Service Name AXTX1

Video Lock Locked

Service Scrambled Unscrambled

Video Resolution 1920x1080

Line Standard 1080i59

Audio1 Type MPEG Layer 2

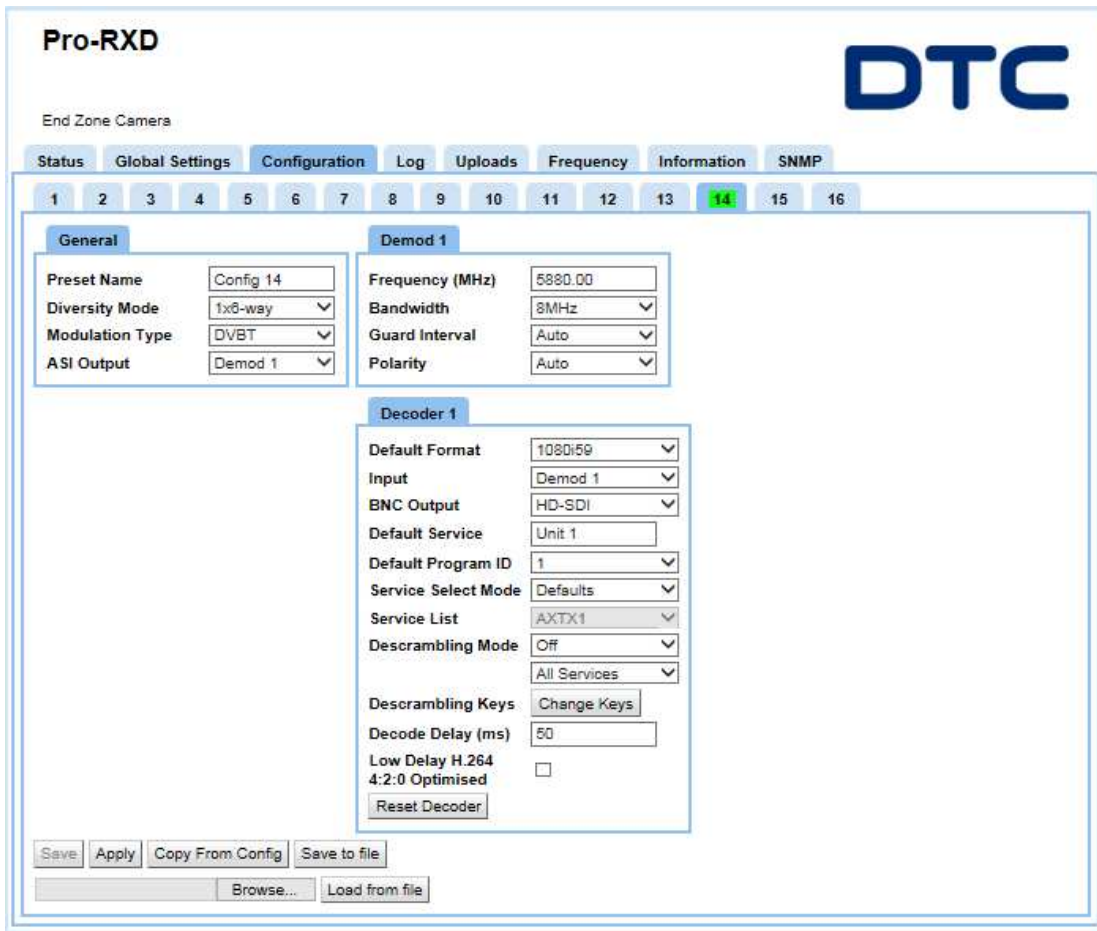
Audio1 Mode Stereo

Audio2 Type MPEG Layer 2

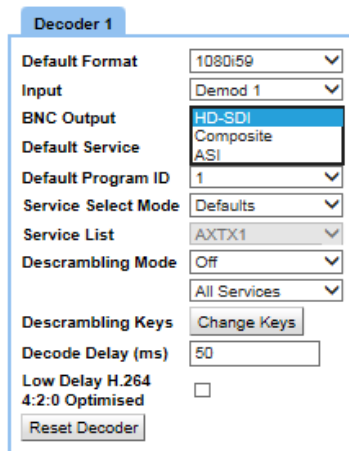
Audio2 Mode Stereo

Data Baud Rate -

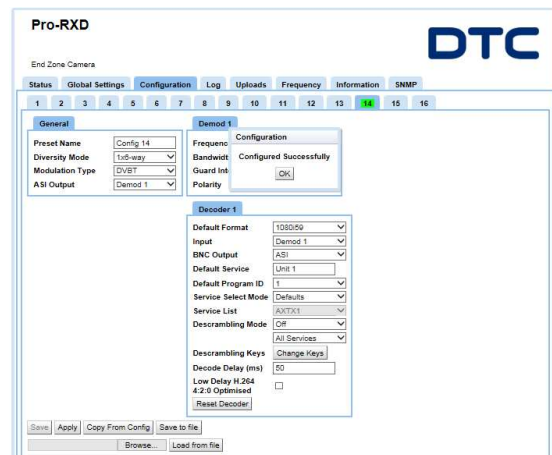
Show Details

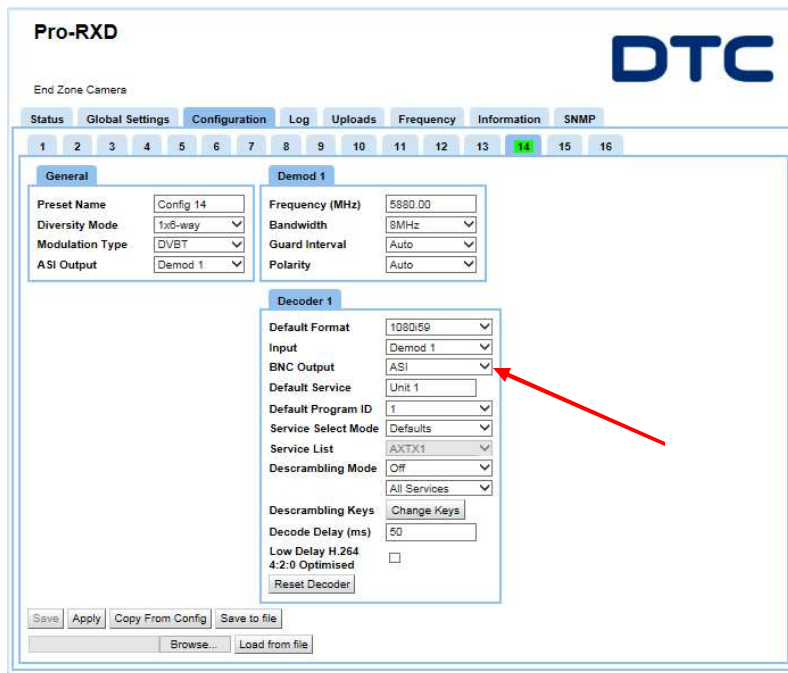


The receivers tested are set to pre-set Channel 14 (5880 MHz). The bandwidth is set to 8MHz. The GI & FEC are set to auto. Decoder 1 menu's BNC Output is labeled HD/SDI 1 on the rear connector panel of the receiver.

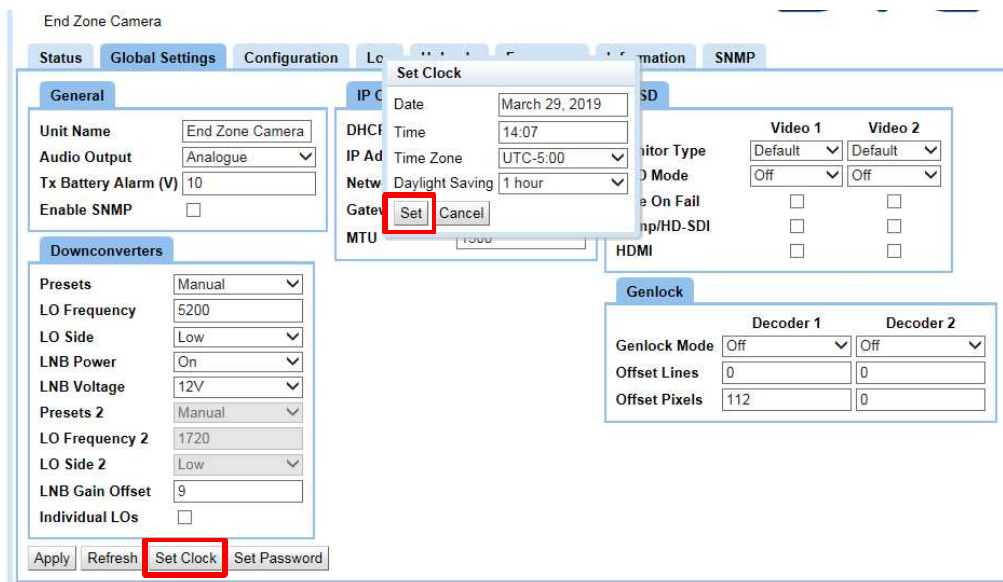


This BNC output can select Composite, ASI and HD-SDI (default). This setting does not change the HDMI 1 output.





The ASI output is now available on the HD/SDI 1 BNC connector on the receiver.



Setting the Clock: Click on **Set Clock**. In the pop menu all the parameters are entered. Time format is 24 hours separated with colon (14:07). Click **Set**, and then click **OK**.

