CLEAR VIEW

# HD168Bi Quad CVBS/HDMI
# HD DVBT
# Encoder Modulator
# *U S E R  M A N U A L*

# Contents

# DIGITAL MODULATOR

## 1. GENERAL

### 1.1 Description

The HD168Bi modulator is able to generate a signal in DVB-T format (Digital Terrestrial Television) from 4 x CVBS or HDMI inputs.

HD168Bi is MPEG-4 encoding, DVB-T modulation integrated into one device to convert 4 x CVBS or HDMI signals to one DVB-T RF out.

The HD168Bi is HDCP Compliant and can be set to 720p or 1080p resolution

## 1.2 Specifications

| | |
|---|---|
| **INPUT** | |
| Video Input | HDMI:1080P 25/30, 1080i 50/60 Max, |
| Video Input Level | 1.0 V p-p (CVBS) |
| Input Connectors | 4 x HDMI, 4 x CVBS, 1 RCA Video, 2 RCA Audio. |
| **OUT PUT** | |
| Frequency Range | 177 -858 MHz |
| Output Level | 105 dBuV |
| Channel Bandwidth | 7-8 MHz |
| RF Level Adjustment | 90 to 106dBuV |
| Attenuation step | 1dB per step |
| MER | 35 dB typically |
| **MODULATION** | |
| Video Resolution | 1080P25, 1080P30,1080i,576i,480i, 720p |
| Video Compression | HD: H.264 AVC / HP@L4.0 |
| Audio Compression | MPEG2, AAC |
| Video Bit Rate | Adjustable 2 to 7 Mbit/S Max |
| Audio Bit Rate | 384Kbits |
| Editable Field | Service Name, Network ID, Original NET ID, LCN, Network Name |
| Carrier (OFDM Mode) | 2K/8K |
| Guard Intervals | ½, ¼, 1/8, 1/16, 1/32 |
| Code Rate (FEC) | ½, ¾, 5/6, 7/8 |
| Constellation | QPSK/16 QAM/64 QAM |
| **MANAGEMENT / CONTROL** | |
| **Front panel LCD control** | 6 Local keys on front panel |
| **Web Management** | RJ-45 Ethernet port |
| **GENERAL** | |
| Power Supply | AC 100~240V 50/60Hz |
| Consumption | 20 W |
| Languages | English |
| Dimensions | 19” x 12.5” x 1.75” |
| Weight | 1.8Kg |

*Specifications subject to change without prior notice.

# 2. INSTALLATION

## 2.1 What's in the Box

One HD168Bi Encoder / Modulator
One power cable

## 2.2 Connection

The HD168Bi unit comes standard with 4 x CVBS and HDMI inputs.

Use a quality 75Ω coaxial cable with "F" connectors from the unit's RF OUT jack to the distribution system or directly to a television.

Connect the power cord to an appropriately rated AC power outlet.

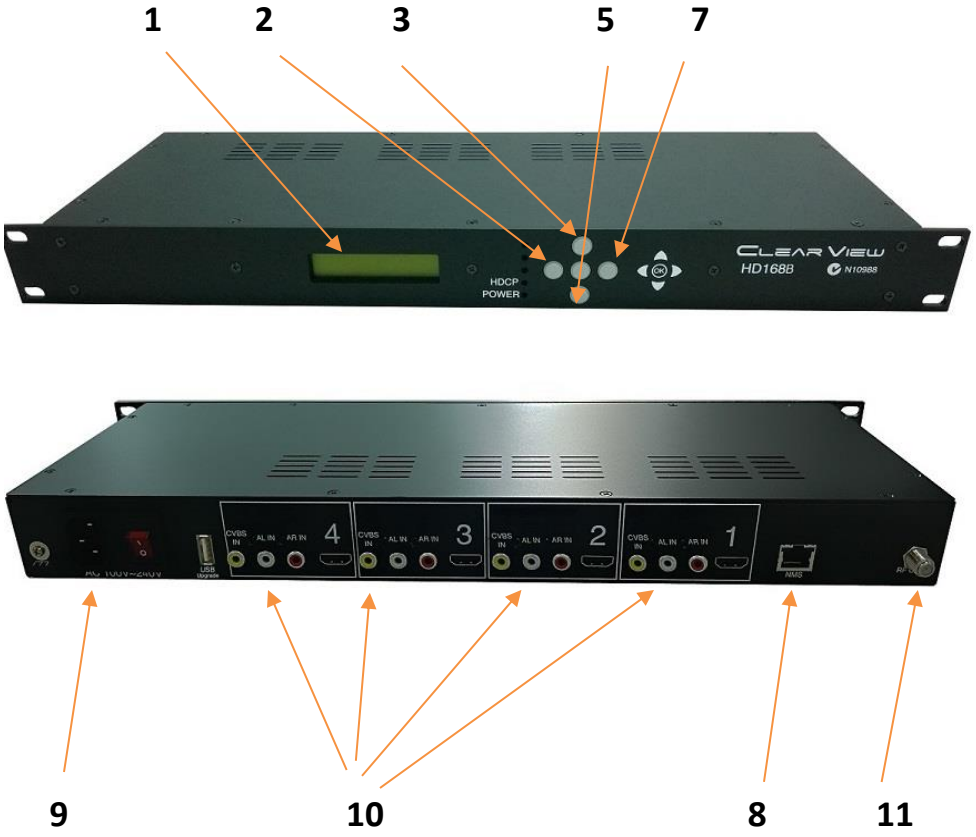
Once connected to power, the device turns on and it takes about 80 seconds to be operational. Then the message "Initial Please wait" appears on the display. After 80 seconds the message "CLEARVIEW and the Frequency Out" will be displayed.


### 2.2.1 DEVICE Programming and Setup

Connect an Ethernet cable directly (no Cross Over cable required) to the Ethernet Port on the rear panel of the encoder and then connect the Ethernet cable to an Ethernet switch or connect an Ethernet Cable to your PC. The default IP address is **192.168.1.138**
Make sure your PC has the same first 3 IP sections, eg. 192.168.1.xx and the 4$^{th}$ is different from 138.

# 3. OPERATING INSTRUCTIONS

## 3.1 Description of controls and components




| | HD168A | Description |
|---|---|---|
| 1 | LCD Display | Configuration and system status |
| 2 | Key PAD / Left | Exit from previous menu. |
| 3 | Key PAD / Up | Move between menu selections. |
| 4 | Key Centre | OK Button to select item |
| 5 | Key PAD / Down | Move between menu selections. |
| 7 | Key PAD / Right | Move between menu selections. |
| 8 | Ethernet Port | RJ-45 Chrome |
| 9 | AC input | AC 100 to 240V / 50~60Hz |
| 10 | HDMI Inputs | Up to 1080p resolution |
| 11 | RF output | “F”-Female 75Ω |

**ATTENTION!**
**FOR THIS CONFIGURATION YOU SHOULD USE OUTPUT FREQUENCIES DIFFERENT FROM THE ONES THAT YOUR TV IS CURRENTLY USING**

## 3.2 Starting

### 3.2.1 Beginning Setup

DEVICE Programming and Setup

1. Apply power.
2. Connect Audio / Video source

Connecting to the GUI Interface:

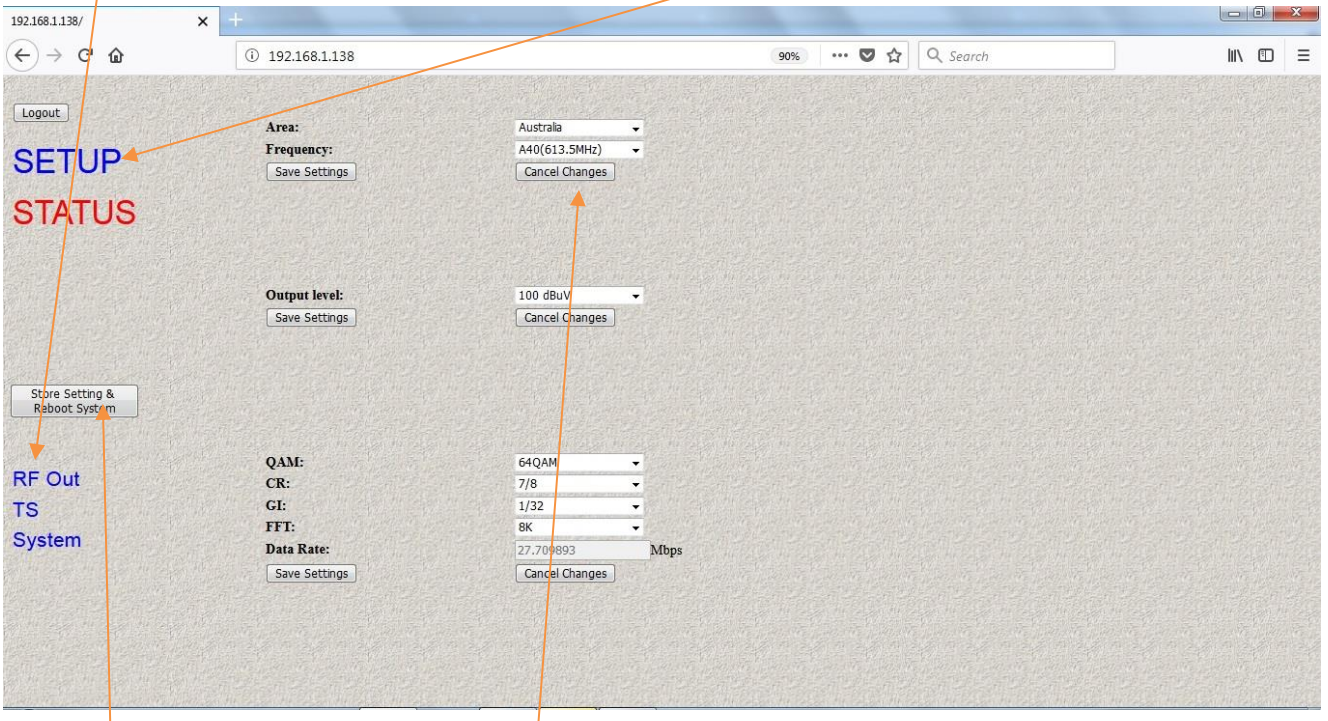
1. Connect an Ethernet cable directly to the Ethernet port on the rear panel of the encoder and then connect the Ethernet cable to an Ethernet switch /router or connect an Ethernet Cable to your PC.
2. Using a Windows-based PC Select Windows Icon
3. The default IP address is **192.168.1.138** Make sure your PC has the same 3 first section IP range.

4. Key in the IP address in web browser 1 9 2 . 1 6 8 . 1 . 1 3 8

### 3.2.2 Step 1: Login and Adjust RF Settings

Login Password:
Default Password: 1 2 3 4

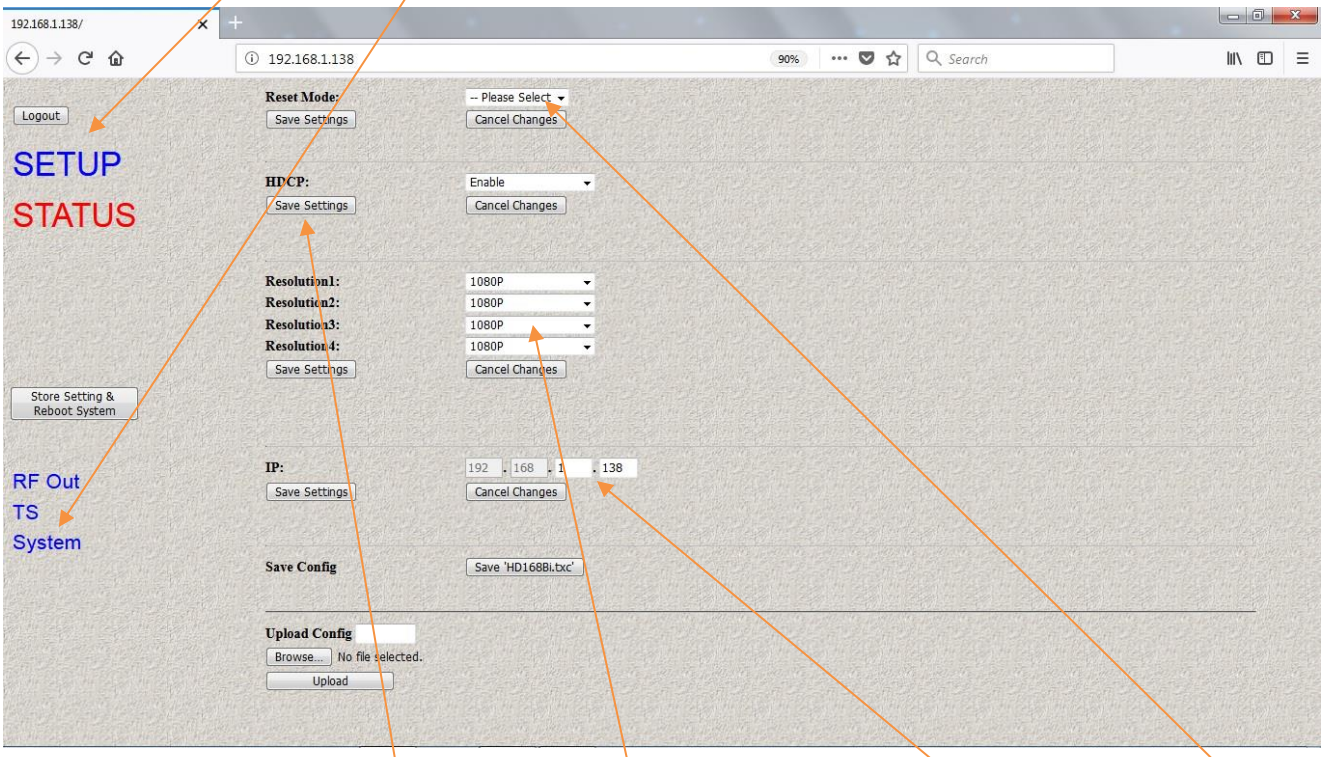
Encoder Programming and Setup via GUI Interface and click on SETUP then on RF Out:




Set your Country and frequency **here**. Once set press the **Save Settings** button to the left. It is the same with Output Level, Service Names, LCNs, Service IDs, Network IDs and Network Names. When setting Service names, lower case letters will be converted to capitals on SAVE If the name contains less than 15 characters. You need to press **Save Settings** to the left of each group. After setting all these parameters, you need to press the-
**Store Settings and Reboot System** for them to be saved completely.

### 3.2.3 Step 2: Adjust System Settings

Click on SETUP then on System

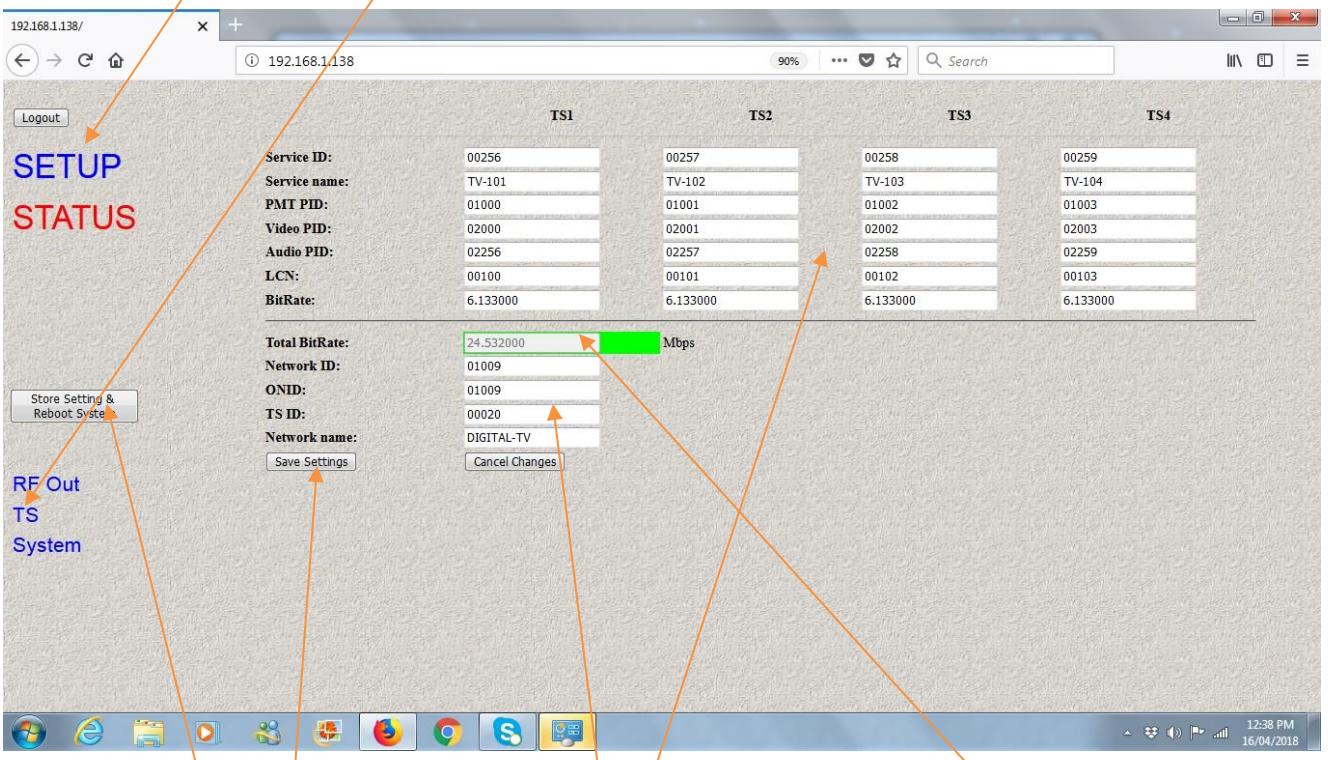



You can reset the unit to Factory Default or just Hardware Reset by clicking on this dropdown **here.**
Be sure to always press the **Save Settings** to the left after selecting your option. The IP Address of the unit can be adjusted in the 192.168 range. The last 2 sections are adjustable **here**. MAC address and Password can be changed and after each change press the **Save Settings** button to the left.
The output resolution of each channel can be set **here**.
After all settings have been adjusted press the-
**Store Settings and Reboot System** for them to be saved completely.

If the buttons turn grey while you are adjusting settings log out then back in again
To activate them.
The STATUS but only shows you status of the device and changes cannot be made in this menu.

### 3.2.4 Step 3: Adjust TS Settings

Click on SETUP then on TS




All System information data can be adjusted **here** for each channel.

The bitrate for each channel is individually adjustable.

Make sure the total bitrate for all 4 channels does not exceed the total bitrate shown **here**.

If it does this Total bitrate field will turn red.

Be sure to press **Save Settings** when you are finished making adjustments and after all adjustments are complete press **Store Settings and Reboot System** so the changes are permanent.

# 4 MENU TREE

## 4.1 Menu Tree of Front

| Button | | | | |
|---|---|---|---|---|
| OK | 1 | System | OK | OK |
| | | | System | <System> |
| | | | Reset Mode | < Reset Mode> |
| | | | Mac Address | < Mac Address> |
| | | | Network IP | < Network IP> |
| | | | Set HDPC | < Set HDPC> |
| | | | Reset Mode | < Reset Mode> |
| OK | | RF Out | Area | < Area> |
| | | | Network Provider | < Network Provider> |
| | | | LCN | <LCN> |
| | | | Service Name | < Service Name> |
| | | | Output Level | < Output Level> |
| | | | Frequency | < Frequency> |
| | | < Area> | | Select your Country |
| | | < Network Provider> | | ONID, NID TSID Adjustment, |
| | | | | Network Name |
| | | <LCN> | | Set LCN1,2,3 & 4 |
| | | < Service Name> | | Set Service Name 1,2,3 &4 |
| | | <Output Level> | | Set 90 to 105dBuV |
| | | < Frequency> | | Set Channel you prefer |
| | | < Reset Mode> | | Hard Reset |
| | | | | Default Reset |
| | | < Mac Address> | | Set your MAC address |
| | | < Network IP> | | Set your IP Last 2 sections |
| | | < Set HDPC> | | HDCP ON or OFF |

Once all settings are made press left arrow 3 times to EXIT to Save screen
When Prompted **Saving Changes & Setting Reset** arrow down until you see **y**
Then press OK