

MHD-202

REF. 3855

**Dual HDMI input modulator
DVB-T and IP output**



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Introduction

About this Manual

This manual describes the configuration environment of the MHD-202 modulator based on web interface via Ethernet connection.

The Manual covers all configuration options: from start-up and operation, to adjusting the settings and troubleshooting for the MHD-202.

The description consist of the connection procedure and access to the configuration settings, description of the environment and its contents, configuration options and interpretation of the information on the screen.



NOTE

This configuration manual is a practical reference guide. For the correct use and installation of the MHD-202, it is essential to read the corresponding user manual (please see www.customerarea.ikusi.tv for the manual).

Product Description

The MHD-202 is a standalone modulator that can process different Video and Audio formats, to create a high-definition COFDM or in IP channel.

This product offers a solution to video signal distribution requirements in residential installations, hotels, special buildings or security video monitoring installations with COFDM digital TV modulation.

Features

- Two inputs digital audio and video channels in HDMI.
- The firmware update is done through the web interface or USB connector.
- The MHD-202 comes with a USB interface that can incorporate new functions thanks to the unit's upgradable and evolving software, such as: video playback from a USB stick for digital signage and other possible future developments.
- The final user can programme the modulator through the web interface.

DVB-T output services

- Modulator 1 : HDMI 1 or HDMI 1 + USB
- Modulator 2 : HDMI 2

Web Interface Connection

Ethernet Connection

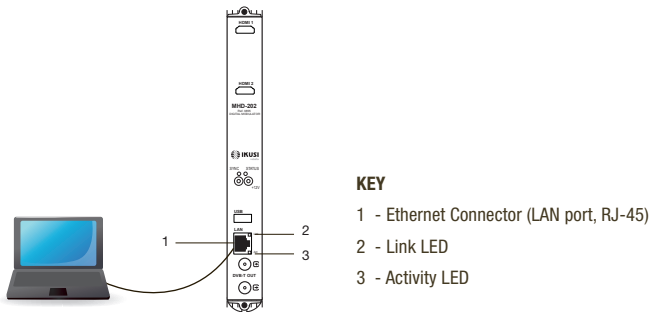
The web user interface can be used to configure all the MHD-202 unit's settings, using an Ethernet connection and a web browser.



NOTE

To view the graphics provided in the unit's configuration programme correctly, we recommend installing Mozilla Firefox 1.5 or later (www.mozilla.com) on the controlling PC.

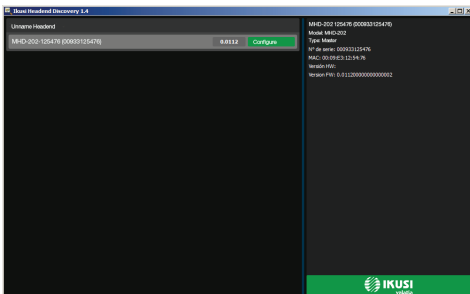
Use a PC with an Ethernet network card and a CAT-5E Ethernet cable.



Ethernet configuration by application:



Download the IKUSI HEADEND DISCOVERY application available on the website (<http://customerarea.ikusi.tv>). In the window we will find the model, the MAC number, serial number and manufacturing firmware version to access the interface of this module simply click on the SET button. In the home page the USERNAME AND PASSWORD fields appear, enter "admin" in both, click on the ENTER button.



MHD-202

User

Password

Ethernet manually configuration:

- 1) Access the PC'S TCP/IP Settings and configure the following parameters:
 - * PC'S /IP Address: 192.168.1.1
 - * Subnet Mask: 255.255.255.0
- 2) Connect the PC to the LAN port (RJ-45) of the MHD-202 unit (position 1 in the diagram below).



NOTE

The MHD-202 Ethernet Connector (position 1 in the diagram above), has two light indicators:

- The link LED (position 2 in the diagram above), remains continuously lit without blinking to indicate that the link is working correctly.
- The activity LED (position 3 in the diagram above), blinks to indicate that the link is active.



NOTE

The configuration process must be carried out in local mode, even though the unit can be accessed from any PC on the LAN.

- 3) Start the web browser and enter the MHD-202 unit's IP address:
 - INITIAL IP ADDRESS: 192.168.1.6



NOTE

You may change this initial IP address later if you wish to.



NOTE

The unit is also assigned the default IP address 10.254.254.254
This IP address cannot be modified.

- 4) Click on ENTER to access the home page.
- 5) Enter the user name "admin" and the password "admin".



NOTE

The unit connected to the PC will automatically disconnect if 15 minutes pass without any interaction.

MHD-202

User

Password

General Settings

Main menu

en | es | fr | it 4
logout

1 0 General Settings Status Reports

2 0 Settings Change password Save-restore Upgrade Reboot

3 0 Identification

Model MHD-202

Serial number 001122334455

MAC 00-09-E3-11-22-33

SW Version 3.00.0

HW Version 1.00

Loader version 1.00

Identifier

Location

Installer

Contact

Local settings

Country Spain

Timezone Europe/Madrid

Date 2015-04-05

Hour (hh:mm) 21:54

Network settings

IP 192.168.1.6

Netmask 255.255.255.0

Gateway 192.168.1.1

Save 5

1-Main menu

2-Submenus

3-Work area

4-Language selection

5-Save configuration

To explore the different menus, select each option in the menu area (position 1 in the diagram above). Depending on the options available in each menu, there will be one or various submenus (position 2 in the diagram above). In turn, each submenu may have one or more configuration tabs.

- To change the interface's language settings, click on the option corresponding to your preferred language (position 4 in the diagram above): ES= Spanish; EN= English; FR= French.
- To save the settings you have changed, click on the **SAVE CONFIGURATION** option, (position 5 in the diagram above).

Identification

- 1) Select the GENERAL menu and then the CONFIGURATION submenu.
- 2) Access the IDENTIFICATION menu.

The IDENTIFICATION tab provides configuration data identifying the MHD-202 unit.

General	Settings	Status	Reports	
Settings	Change password	Save-restore	Upgrade	Reboot

Identification

Model	MHD-202	Identifier	
Serial number	001122334455	Location	
MAC	00:09:E3:11:22:33	Installer	
SW Version	3.00.0	Contact	
HW Version	1.00		
Loader version	1.00		

- **MODEL:** The name of the unit. This information cannot be modified.
 - **SERIAL NUMBER:** Displays the manufacturers' serial number identifying the unit. This information cannot be modified.
 - **MAC ADDRESS:** Automatically displays the MAC address of the unit for connection to the network. This information cannot be modified.
 - **SW, HW AND LOADER:** Software and Hardware versions.
 - **IDENTIFIER:** Identifying name assigned to the unit by the installer or operator.
 - **LOCATION:** Name of the location where the unit is installed (for example: a post code).
 - **INSTALLER:** Name of the installer or operator.
 - **CONTACT:** Contact details of the installer or operator (for example: a telephone number).
- 3) Once you have finished configuring the data, you can save the changes by clicking on the SAVE button on the lower part of the tab.

Local settings

- 1) Select the GENERAL menu and then the CONFIGURATION submenu.
- 2) Access the LOCAL CONFIGURATION tab.

This section is used to set the date, time and standard time zone of the MHD-202 modulator.

Local settings

Country	Spain	Date	2015-04-05
Timezone	Europe/Madrid	Hour (hh:mm)	21:54

- **COUNTRY:** Select the country in which the unit is operating.

- **TIME ZONE:** Set the time zone of the country in which the unit is operating.
 - **CURRENT DATE AND TIME:** Shows the hour, date and format (Date: YYYY-MM-DD; Time: HH:MM).
- 3) Once you have configured the data, you can save the changes by clicking on **SAVE** on the bottom part of the tab.

Network settings

- 1) Select the **GENERAL** menu and then the **CONFIGURATION** submenu.
- 2) Access the **NETWORK CONFIGURATION** tab.

Network settings

IP	<input type="text" value="192.168.1.6"/>
Netmask	<input type="text" value="255.255.255.0"/>
Gateway	<input type="text" value="192.168.1.1"/>

Save

- **IP ADDRESS:** Enter a static IP address within the range valid for the local network to which the unit is connected.
- **NETWORK MASK:** Enter the local network mask.
- **DEFAULT GATEWAY:** Enter the default gateway IP address in the local network to which the unit is connected.

Web access password

- 1) Select the **GENERAL** menu and then the **CONFIGURATION** submenu.
- 2) Access the **PASSWORD** tab.

The **PASSWORD** configuration tab allows you to change the current password for accessing the web interface of the MHD-202 unit (see web interface connection section, page 5).

General Settings Status Reports

Settings Change password Save-restore Upgrade Reboot

Web access password

Old password	<input type="password"/>
New password	<input type="password"/>
Confirm new password	<input type="password"/>

Save

- **OLD PASSWORD:** Enter the current password.
- **NEW PASSWORD:** Enter the new password.
- **CONFIRM NEW PASSWORD:** Re-enter the new password.

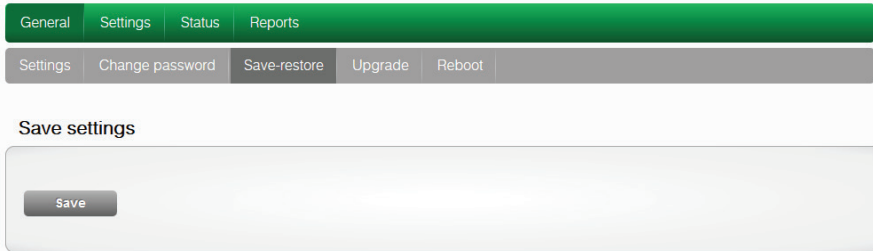
- 3) Once you have configured the data, you can save your changes by clicking on **SAVE** in the lower part of the tab.

Save/Restore configuration

- 1) Select the **GENERAL** menu and then the **SAVE/RESTORE** menu.

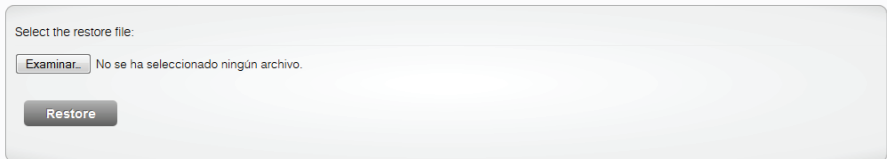
All the configuration data established in the unit and accessible through the menus, sub-menus and web interface tabs can be stored in a backup file.

Likewise, all the unit's settings can be restored using a previously existing backup image.

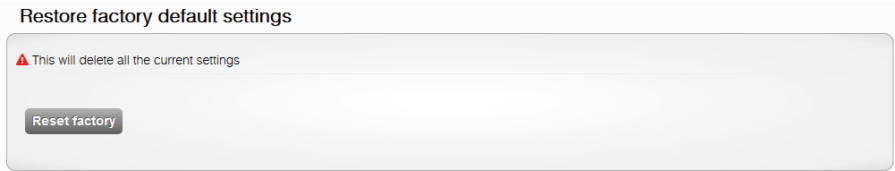


- 2) Access the **SAVE CONFIGURATION** section and click on the **SAVE** button to save a backup copy file. A window will open allowing you to select the location and filename of the security copy.
- 3) Access the **RESTORE CONFIGURATION FROM BACKUP** section and click on the **SELECT BACKUP COPY** button to load a backup copy. A window will open allowing you to select the location and backup file name. Click on the **RESTORE** button.

Restore settings from file

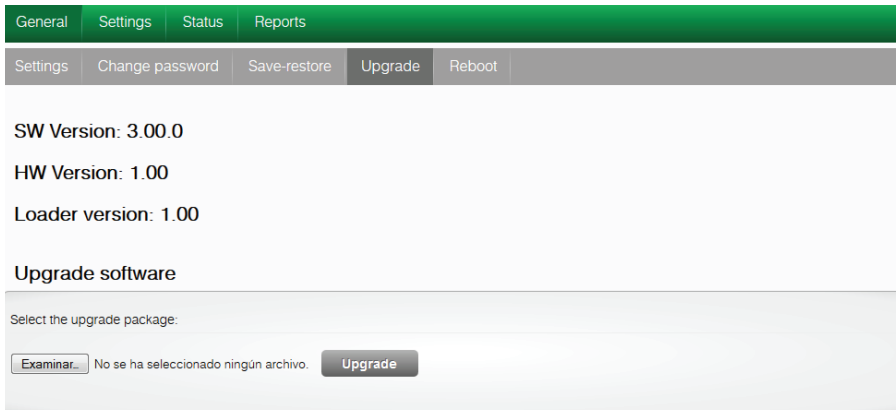


- 4) Access the RESTORE FACTORY SETTINGS tab and click on the FACTORY RESET button to reset the unit's factory settings.



Upgrade

Select the GENERAL menu and then the UPDATE submenu. The unit will automatically display the currently installed firmware version.



- SELECT THE UPDATE PACKAGE by clicking on the FILE SELECT button, to select the firmware update file used by the unit.
- To execute and load the new firmware click on the UPDATE button.



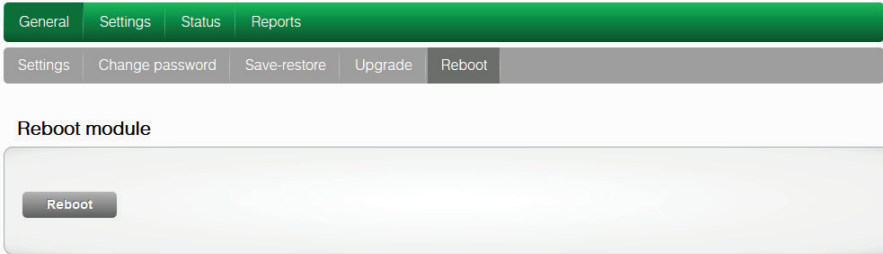
NOTE

The firmware update file has to be stored on the PC's hard drive (it can be downloaded from <http://customerarea.ikusi.tv>).

Reboot

- 1) Select the GENERAL menu and then the REBOOT submenu.
- 2) Click on the REBOOT button.

The REBOOT configuration file can now be used to restart the MHD-202 unit.



- 3) Once you have restarted the unit, the home page will appear again.



Settings

Services

Select the **SETTINGS** menu and then the **SERVICES** submenu. Specify the parameters inside the **SELECTION** submenu:

The screenshot shows a settings interface with a green header bar containing 'General', 'Settings', 'Status', and 'Reports'. Below this is a grey bar with 'Services', 'DVB-T output', 'IP output', and 'USB player'. The 'Services' section is expanded to show 'Selection' and 'Input settings'. Under 'Selection', there is a dropdown menu for 'Input type' set to '2 HD (2 HD/SD HDMI)'. Under 'Input settings', there are two dropdown menus for 'Input ratio' for 'Input HDMI-1' and 'Input HDMI-2', both set to '16/9'.

- **INPUT TYPE:** Specify input type.
- **INPUT ASPECT RATIO:** 16/9 or 4/3

Within the OUTPUT SETTINGS submenu, specify the following parameters:

Output settings

Service 1

Intensity		Strong ▾
Codification		MPEG 2 ▾
Video bitrate	(4000-15000)	8000 <input type="text"/> Kbps
Audio bitrate		384 Kbps ▾
Audio format		MPEG2 L1/L2 ▾
Low latency		<input type="checkbox"/>
PID blockage		Audio <input type="checkbox"/> Video <input type="checkbox"/>
Name		MOD HD SERV1 <input type="text"/>

DVB-T Settings

SID		42 <input type="text"/>
LCN		1 <input type="text"/>
EIT name		MOD HD SERV1 <input type="text"/>
EIT description		<input type="text"/>

IP Settings

Target IP		225.0.0.1 <input type="text"/>
Target port		1234 <input type="text"/>
SAP group		<input type="text"/>

Service 2 (USB)

Service 3

- **INTENSITY:** Allows you to set the video image's sharpness, by selecting one of various preset values.
- **CODIFICATION:** Allows you to select the encoding standard for the digital audio and video signal, from among the following options: MPEG2, MPEG4 and DEFAULT (if the input signal is SD, the default encoding standard will be MPEG2; if the input signal is HD, the encoding standard will be H.264 (1080p resolution only permits MPEG4).
- **VIDEO BITRATE (4-15 Mbits/s):** The unit can be configured for an input data encoding rate of between 4 and 10 Mbits/s SD quality and 4 and 19 Mbits/s HD quality. When selecting the encoding bitrate, the COFDM output bitrate must be taken into account, as it must be sufficient to support the encoding bitrate. Otherwise, an overflow error warning will appear.
- **AUDIO BITRATE:** The unit can be configured for an input data encoding rate of 96; 128; 160; 192; 224; 256; 320 or 384 Kbits/s.
- **AUDIO FORMAT:** Allows you to select the three types of audio coding: MPEG2 L1/L2, LC-AAC ó HE-AAC
- **LOW LATENCY:** It reduces the codification time for those applications where the reaction time is important (i.e. cameras). The selection of the mode low latency, has a

significant decrease in terms of codification efficiency and images (with much movement) quality.

- **PIDs BLOCKING:** To block any of the PIDs of each service, click to tick the corresponding selection box.
- **NAME:** Tells you the name of each service
- **SID:** Allows you to modify the SID value (can be modified).



NOTE

The SID value is important for detecting the channels in some receivers.

All SID values should be different for the set of services processed by one or more units that contribute to a shared RF output.

- **LCN:** Tells you the logical channel number.
- **NAME CHANNEL (EIT):** Allows you to name an event (ex. “pool camera”)
- **EVENT DESCRIPTION (EIT):** Allows you to add an explanation of an event
- **TARGET IP:** IP multicast in which content flow originates.
- **TARGET PORT:** Port on which the flow of content originates.
- **SAP GROUP:** Group sessions where advertisements are broadcast.

To save the selected configuration, click on the **SAVE SETTINGS** button in the lower part of the tab.

Input

	Input HDMI-1	USB Status	Input HDMI-2
Audio	✘	USB inserted ✔	✘
Video	✔	File available ✔	✘
TV system	1080i 60	Player status ▶	TV system

Input signal status information:

- **VIDEO:** Tells you whether or not a valid video signal is being received at the AV1 input.
- **AUDIO:** Tells you whether or not a valid audio signal is being received at the AV1 input.
- **TV SYSTEM:** States the colour system of the signal received at the AV1 input, which may be: 480i ; 576i ; 480p ; 576p ; 720p 50Hz ; 720p 60Hz ; 1080i 50Hz ; 1080i 60Hz ; 1080p 25Hz ; 1080p 50Hz ; 1080p 60Hz ; 1080p 25Hz.

DVB-T Output

Select the **SETTINGS** menu and then the **DVB-T OUTPUT** submenu.
Specify the following parameters in the DVB-T submenu:

The screenshot shows the DVB-T Configuration interface. At the top, there are tabs for General, Settings, Status, and Reports. Below that, there are sub-tabs for Services, DVB-T output, IP output, and USB player. The main content area is titled 'DVB-T Configuration' and is divided into two columns for Encoder 1 and Encoder 2. Each encoder has a checkbox for 'Enable DVB-T output' which is checked. Below this, there are several parameters: Channel, Frequency, OFDM mode, Bandwidth, Guard interval, Constellation, Code rate, TSID, and ONID. Encoder 1 has Channel 21 - +74000Hz, Frequency 474000, OFDM mode 8K, Bandwidth 8 MHz, Guard interval 1/32, Constellation 64 QAM, Code rate 7/8, TSID 21, and ONID 100. Encoder 2 has Channel 24 - +98000Hz, Frequency 498000, OFDM mode 8K, Bandwidth 8 MHz, Guard interval 1/32, Constellation 64 QAM, Code rate 7/8, TSID 22, and ONID 100. Below the encoder settings, there is a section for 'Other DVB-T settings' with an 'Attenuation' parameter set to 0.

Encoder 1		Encoder 2	
Enable DVB-T output	<input checked="" type="checkbox"/>	Enable DVB-T output	<input checked="" type="checkbox"/>
Channel	21 - +74000Hz	Channel	24 - +98000Hz
Frequency	474000	Frequency	498000
OFDM mode	8K	OFDM mode	8K
Bandwidth	8 MHz	Bandwidth	8 MHz
Guard interval	1/32	Guard interval	1/32
Constellation	64 QAM	Constellation	64 QAM
Code rate	7/8	Code rate	7/8
TSID	21	TSID	22
ONID	100	ONID	100

Other DVB-T settings

Attenuation: 0

- **CHANNEL:** Allows you to select and modify the output channel.
- **FREQUENCY:** States the output frequency of the current radiofrequency carrier and allows you to modify its value.
- **COFDM MODE:** Allows you to set the OFDM mode selecting between the values of 2K and 8K.
- **BANDWIDTH:** Allows you to set the bandwidth, selecting between the values of 6, 7 or 8 MHz.
- **GUARD INTERVAL:** Allows you to set the guard interval, by selecting between the values 1/4, 1/8, 1/16 or 1/32, as fractions of a symbol period.
- **CONSTELLATION:** Allows you to set the output modulation constellation, by selecting the 16QAM or 64QAM options.
- **CODE RATE:** Allows you to set the redundant encoding rate, by selecting from the values 1/2, 2/3, 3/4, 5/6 or 7/8.

Select the ADJUSTMENTS menu and then the DVB-T submenu. Specify the following parameters within the NETWORK SETTINGS submenu:

Network settings

Name	Standard	NIT LCN mode	OFF
Provider	IKUSI	Insert TDT-TOT	<input checked="" type="checkbox"/>
NID	1		

- **NETWORK NAME:** Allows you to assign a name to the network.
- **PROVIDER:** Allows you to specify the name of the service provider.
- **NID:** Allows you to assign a value to the network identifier.
- **TSID:** Allows you to assign a value to the transport stream (or TS) identifier.



NOTE

When configuring a headend with 2 or more units, the TSID value must be different in each unit.

- **ONID:** Allows you to assign a value to the original network identifier.
- **ATTENUATION:** Allows you to set the attenuation for the radiofrequency carrier signal at the output, within a range of 0 dB to 25 dB.
- **NIT LCN MODE:** Allows you to select the NIT LCN mode.
 - OFF:** No LCN descriptor will be entered in the NIT.
 - EUROPE MODE:** Enters the descriptor for Europe.
 - INDEPENDENT TELEVISION COMMISSION:** Enters the descriptor for the UK.
 - NORDIG MODE V1:** Enters the descriptor as per the Nordig V1 specification.
 - NORDIG MODE V2:** Enters the descriptor as per the Nordig V2 specification.
 - GENERIC MODE:** Generic LCN Descriptor.
- **INSERT TDT-TOT:** Allows you to choose whether or not to insert the date and time information.

To save the selected configuration, click on the SAVE button on the lower part of the tab.

DVB-T output data

Status		Number of services	3
	Encoder 1	Encoder 2	
Min free	95%	Min free	100%
Output bitrate	1.313 Mbps	Output bitrate	0 Mbps
Current free	95%	Current free	100%
	Available output bitrate on encoder 1	Available output bitrate on encoder 2	

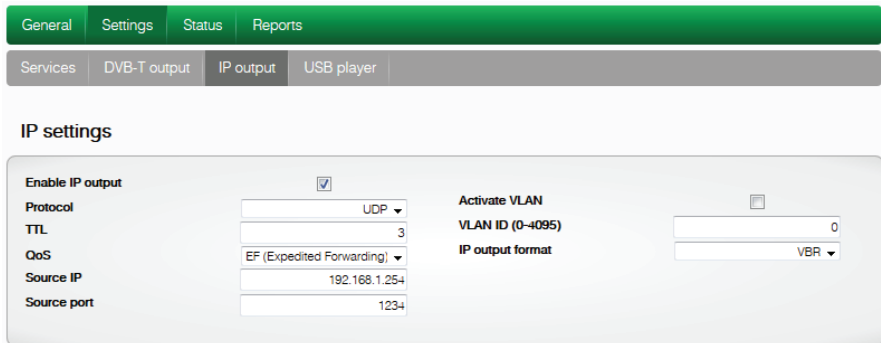
- **OUTPUT STATUS:** Tells you the status of the output services.

- SERVICES NUMBER: Tells you the services number.
- MIN FREE: Tells you the minimum percentage of binary data at output.
- CURRENT FREE: Tells you the current percentage of binary data at output.
- OUTPUT BITRATE: Tells you the speed of the binary data at the unit's output.

IP Output

1) Select the SETTINGS menu and then the IP OUTPUT submenu.

Specify the following parameters in the IP submenu:



The screenshot shows the 'IP settings' configuration page. At the top, there is a green navigation bar with tabs for 'General', 'Settings', 'Status', and 'Reports'. Below this is a grey bar with sub-tabs for 'Services', 'DVB-T output', 'IP output', and 'USB player'. The main content area is titled 'IP settings' and contains the following fields:

- Enable IP output:** A checkbox that is checked.
- Protocol:** A dropdown menu set to 'UDP'.
- TTL:** A text input field containing the value '3'.
- QoS:** A dropdown menu set to 'EF (Expedited Forwarding)'.
- Source IP:** A text input field containing the value '192.168.1.254'.
- Source port:** A text input field containing the value '1234'.
- Activate VLAN:** A checkbox that is unchecked.
- VLAN ID (0-4095):** A text input field containing the value '0'.
- IP output format:** A dropdown menu set to 'VBR'.

- PROTOCOL: The drop down menu offers two options : UDP and UDP/RTP. UDP is a transport protocol.
- Time To Live: Is a parameter used to restrict the multicasting range.
- QoS: Quality of Service.
- SOURCE IP: It shows the IP that is marked as issuer.
- SOURCE PORT: Identifying number of the port that is marked as issuer.
- ACTIVATE VLAN: Allows you to Enable/Disable virtual LAN
- VLAN ID (0-4095): Identifying number of the virtual network.
- IP OUTPUT FORMAT: Selects between formats bit rate variable VBR or CBR constant.

SAP settings




The screenshot shows the 'SAP settings' configuration page. It contains the following fields:

- Enable SAP:** A checkbox that is checked.
- IP:** A text input field containing the value '192.168.1.201'.
- User:** A text input field containing the value 'IKUSI'.
- Seconds:** A text input field containing the value '5'.

- ENABLE SAP: Check the box if you wish to transmit the program guide.
- IP: This data cannot be changed. It is the IP address assigned to the streamer module on the Network tab in the Configuration window.
- USER: The name entered will be transmitted on the SAP/SDP channel.

- **SECONDS:** Introduce the time interval, in seconds, at which the transmitted programmes guide will refresh.

IP output data

Status	
Number of services	3
Output bitrate	26.6 Mbps

- **STATUS:** Tells you the status of the output services
- **NUMBER OF SERVICES:** Reports the number of services.
- **OUTPUT BITRATE:** Tells you the speed of the binary data at the unit's output.






USB Player

Select the **SETTINGS** menu and then the **USB PLAYER** submenu. Within the **FILE PLAYING** submenu, the **Status** section provides the following information:

General
Settings
Status
Reports

Services
DVB-T output
IP output
USB player

File playing

	Status	Actions
USB inserted		 
File available		
Player status		

- **USB INSERTED:** Tells you whether or not there is a pen drive connected to the unit.
- **FILE AVAILABLE:** Tells you the whether a file is available and can be played back
- **PLAYER STATUS:** Tells you whether the file is being played back or not.

Within the **FILE PLAYBACK** submenus, the **Actions** section allows you to choose whether to play or stop playing the file, using two available buttons.



NOTE

The modulator generates signaling for the corresponding service to USB even when not connected. This allows the TV to memorize the service which is destined to a future employment of the USB flash drive.

With this we would avoid TV rescanning if the first installation was made without using the USB flash drive.

When the USB is connected, the 1st output channel must reboot in order to reconfigure itself, this means that the TV won't show anything for a few seconds.

Status

- 1) Select the STATUS menu.

The STATUS tabs provide all the information on the statuses of the inputs and outputs, and the other general parameters of the unit (alarms, temperature, services, etc).

- 2) Access the INPUT tab.

	Input HDMI-1	USB Status	Input HDMI-2
Audio		USB inserted	Audio
Video		File available	Video
TV system	1080i 60	Player status	TV system

■ INPUT 1 AND INPUT 2:

- VIDEO: shows whether there is a valid video signal at the input.
- AUDIO: shows whether there is a valid audio signal at the input.
- TV SYSTEM: shows the colour system at the input.
- USB INSERTED: It indicates a USB device inserted.
- FILE AVAILABLE: Reports the existence of a file on the device.
- PLAYER STATUS: Reports the operating status of the USB device..

- 3) Access the OUTPUT tab.

	DVB-T		IP	
	Encoder 1	Encoder 2	Bitrate	26.6 Mbps
Bitrate	1.313 Mbps	0 Mbps	Bitrate of service 1	8.3 Mbps
Max bitrate	31.668 Mbps	31.668 Mbps	Bitrate of service 2	10 Mbps
Current nulls	95.5%	100%	Bitrate of service 3	8.3 Mbps
Minimum nulls	95%	100%		

■ OUTPUT BITRATE:

- MAX BITRATE: Displays the maximum binary data rate supported by the unit.
- CURRENT NULL: Displays the current binary data percentage at the output not containing any information.
- MIN NULL: Displays the minimum binary data percentage at the output not containing any information.

4) Access the GENERAL tab.

General	
Uptime	3:37
HW Status	OK
IN Status	OK
COD Status	OK
SI Status	ERROR
DVB-T Status	OK
IP Status	OK
SYNC Status	ERROR
Temperature status	OK

■ GENERAL:

AVAILABLE VALUES: OK/ERROR

- TIME WORKING: Displays an error message if a hardware problem has been detected.
- HW STATUS: Displays an error message if an HD input has been inserted in the SD input.
- IN STATUS: Displays an error message if there is any problem at the DVB-T output, such as an overflow.
- COD STATUS: Displays the status of the MPEG encoder.
- SI STATUS: Displays the status of the DVB signal.
- DVB-T STATUS: Displays an error message if there is any synchronisation problem.
- SYNC STATUS: Muestra error si hay algún problema de sincronización
- TEMPERATURE STATUS: Displays an error message if the unit's temperature goes beyond the established thresholds.

Reports

Settings

- 1) Select the REPORTS menu and then the SETTINGS submenu.

The general report provides information on the general configuration of the unit, as performed in the following submenu tabs:

General	Settings	Status	Reports
---------	----------	--------	---------

Settings	Logs
----------	------

Identification

Model	MHD-202	Identifier	
Serial number	001122334455	Location	
MAC	00:09:E3:11:22:33	Installer	
SW Version	3.00.0	Contact	
HW Version	1.00		
Loader version	1.00		

Local settings

Country	Spain	Date	2015-04-05
Timezone	Europe/Madrid	Hour (hh:mm)	21:29

Network settings

IP	192.168.1.6
Netmask	255.255.255.0
Gateway	192.168.1.1

Selection

Input type	2 HD (2 HD/SD HDMI)
------------	---------------------

Input settings

	Input HDMI-1		Input HDMI-2
Input ratio	16/9	Input ratio	16/9

Output settings

	Service 1		
Intensity			Strong
Codification			MPEG 2
Video bitrate	(4000-15000)	8000	Kbps
Audio bitrate		384 Kbps	

Output settings

Service 1	
Intensity	Strong
Codification	MPEG 2
Video bitrate	8000 Kbps
Audio bitrate	384 Kbps
Audio format	MPEG2 L1/L2
Low latency	<input type="checkbox"/>
PID blockage	Audio <input type="checkbox"/> Video <input type="checkbox"/>
Name	MOD HD SERV1
DVB-T Settings	
SID	42
LCN	1
EIT name	MOD HD SERV1
EIT description	
IP Settings	
Target IP	225.0.0.1
Target port	1234
SAP group	
Service 2 (USB)	
Name	MOD HD SERV2
DVB-T Settings	
SID	43
LCN	2
EIT name	MOD HD SERV2
EIT description	
IP Settings	
Target IP	225.0.0.2
Target port	1234
SAP group	
Service 3	
Intensity	Strong
Codification	MPEG 2
Video bitrate	8000 Kbps
Audio bitrate	384 Kbps
Audio format	MPEG2 L1/L2
Low latency	<input type="checkbox"/>
PID blockage	Audio <input type="checkbox"/> Video <input type="checkbox"/>
Name	MOD HD SERV3

DVB-T Settings	
SID	44
LCN	3
EIT name	MOD HD SERV3
EIT description	
IP Settings	
Target IP	225.0.0.3
Target port	1234
SAP group	

DVB-T Configuration

Encoder 1		Encoder 2	
Enable DVB-T output	<input checked="" type="checkbox"/>	Enable DVB-T output	<input checked="" type="checkbox"/>
Channel	21 - 474000Hz	Channel	24 - 498000Hz
Frequency	474000	Frequency	498000
OFDM mode	8K	OFDM mode	8K
Bandwidth	8 MHz	Bandwidth	8 MHz
Guard interval	1/32	Guard interval	1/32
Constellation	64 QAM	Constellation	64 QAM
Code rate	7/8	Code rate	7/8
TSID	21	TSID	22
ONID	100	ONID	100

Other DVB-T settings

Attenuation	0
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Network settings

Name	Standard	NIT LCN mode	OFF
Provider	IKUSI	Insert TDT-TOT	<input checked="" type="checkbox"/>
NID	1		

IP settings

Enable IP output	<input checked="" type="checkbox"/>	Activate VLAN	<input type="checkbox"/>
Protocol	UDP	VLAN ID (0-4095)	0
TTL	3	IP output format	CBR
QoS	EF (Expedited Forwarding)		
Source IP	192.168.1.254		
Source port	1234		

Network settings

Name	Standard	NIT LCN mode	OFF
Provider	IKUSI	Insert TDT-TOT	<input checked="" type="checkbox"/>
NID	1		

IP settings

Enable IP output	<input checked="" type="checkbox"/>	Activate VLAN	<input type="checkbox"/>
Protocol	UDP	VLAN ID (0-4095)	0
TTL	3	IP output format	CBR
QoS	EF (Expedited Forwarding)		
Source IP	192.168.1.254		
Source port	1234		

SAP settings

Enable SAP	<input checked="" type="checkbox"/>	User	IKUSI
IP	192.168.1.201	Seconds	5

Logs

Select the REPORTS menu and then the SYSTEM LOGS submenu.

General	Settings	Status	Reports
Settings	Logs		

Logs

Process: All | Error level: Debug

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Date	Level	Process	PID	Message
Apr 5 23:33:33	err	kernel	-	FAT: Directory bread(block 24918) failed
Apr 5 23:33:33	err	kernel	-	FAT: Directory bread(block 24919) failed
Apr 5 23:33:33	err	kernel	-	FAT: Directory bread(block 24920) failed
Apr 5 23:33:33	err	kernel	-	FAT: Directory bread(block 24921) failed
Apr 5 23:33:33	err	kernel	-	FAT: Directory bread(block 24922) failed
Apr 5 23:33:33	err	kernel	-	FAT: Directory bread(block 24923) failed
Apr 5 23:33:33	err	kernel	-	FAT: Directory bread(block 24924) failed
Apr 5 23:33:33	err	kernel	-	FAT: Directory bread(block 24925) failed
Apr 5 23:33:33	err	kernel	-	FAT: Directory bread(block 24926) failed
Apr 5 23:33:33	err	kernel	-	FAT: Directory bread(block 24927) failed
Apr 5 23:33:33	err	kernel	-	FAT: Directory bread(block 24928) failed
Apr 5 23:33:33	err	kernel	-	FAT: Directory bread(block 24929) failed
Apr 5 23:33:33	err	kernel	-	FAT: Directory bread(block 24930) failed
Apr 5 23:33:33	err	kernel	-	FAT: Directory bread(block 24931) failed
Apr 5 23:33:33	err	kernel	-	FAT: Directory bread(block 24932) failed
Apr 5 23:33:33	err	kernel	-	FAT: Directory bread(block 24933) failed
Apr 5 23:33:33	err	kernel	-	FAT: Directory bread(block 24934) failed
Apr 5 23:33:33	err	kernel	-	FAT: Directory bread(block 24935) failed
Apr 5 23:33:33	err	kernel	-	FAT: Directory bread(block 24936) failed
Apr 5 23:33:33	err	kernel	-	FAT: Directory bread(block 24937) failed
Apr 5 23:33:33	err	kernel	-	FAT: Directory bread(block 24938) failed
Apr 5 23:33:33	err	kernel	-	FAT: Directory bread(block 24939) failed
Apr 5 23:33:33	err	kernel	-	FAT: Directory bread(block 24940) failed
Apr 5 23:33:33	err	kernel	-	FAT: Directory bread(block 24941) failed
Apr 5 23:33:33	err	kernel	-	FAT: Directory bread(block 24942) failed
Apr 5 23:33:33	err	kernel	-	FAT: Directory bread(block 24943) failed
Apr 5 23:33:33	err	kernel	-	FAT: Directory bread(block 24944) failed
Apr 5 23:33:33	err	kernel	-	FAT: Directory bread(block 24945) failed
Apr 5 23:33:33	err	kernel	-	FAT: Directory bread(block 24946) failed
Apr 5 23:33:33	err	kernel	-	FAT: Directory bread(block 24947) failed
Apr 5 23:33:33	err	kernel	-	FAT: Directory bread(block 24948) failed



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