

TMAP4K

4K UHD encoder with 4K downscalable loop and graphic overlay

DVBT/C modulator and IP streamer (UDP,RTP, RTSP,HLS)

USB record and play



SUMMARY

| Page | Description |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3 | 1 Safety Instructions <ul style="list-style-type: none"> 1.1 MAINS CONNECTION 1.2 OVERVOLTAGE 1.3 LIQUIDS 1.4 CLEANING 1.5 VENTILATION 1.6 ACCESSORIES 1.7 MODULE LOCATION |
| 4 | 2 Description <ul style="list-style-type: none"> 2.1 Introduction 2.2 Main features 2.3 Technical Specifications 2.4 Components description |
| 6 | 3 Configuration |
| 7 | 3.1 Modulation Menu |
| | 3.1.1 Modulation▶Mode |
| | 3.1.2 Modulation▶Attenuation |
| 8 | 3.1.3a Modulation (MODE DVB-T)▶Settings Menu <ul style="list-style-type: none"> 3.1.3a.1 Modulation (MODE DVB-T)▶Settings▶Channel 3.1.3a.2 Modulation (MODE DVB-T)▶Settings▶Frequency 3.1.3a.3 Modulation (MODE DVB-T)▶Settings▶Bandwidth 3.1.3a.4 Modulation (MODE DVB-T)▶Settings▶Constellation 3.1.3a.5 Modulation (MODE DVB-T)▶Settings▶FEC 3.1.3a.6 Modulation (MODE DVB-T)▶Settings▶Guard Interval |
| 10 | 3.1.3b Modulation (MODE DVB-C)▶Settings Menu <ul style="list-style-type: none"> 3.1.3b.1 Modulation (MODE DVB-C)▶Settings▶Channel 3.1.3b.2 Modulation (MODE DVB-C)▶Settings▶Frequency 3.1.3b.3 Modulation (MODE DVB-C)▶Settings▶Bandwidth 3.1.3b.4 Modulation (MODE DVB-C)▶Settings▶Constellation 3.1.3b.5 Modulation (MODE DVB-C)▶Settings▶Symbol Rate |
| 12 | 3.1.4 Modulation▶Network TS Menu <ul style="list-style-type: none"> 3.1.4.1 Modulation▶Network TS▶Country 3.1.4.2 Modulation▶Network TS▶Net ID. 3.1.4.3 Modulation▶Network TS▶ORIG. NET ID. 3.1.4.4 Modulation▶Network TS Menu▶LCN ID. 3.1.4.5 Modulation▶Network TS▶Network Name 3.1.4.6 Modulation▶Network TS▶NIT Release 3.1.4.7 Modulation▶Network TS▶TS ID. |
| 14 | 3.2 TS Settings Menu <ul style="list-style-type: none"> 3.2.1 TS Settings▶Service Name 3.2.2 TS Settings▶Program ID 3.2.2 TS Settings▶LCN 3.2.4 TS Settings▶PMT PID 3.2.5 TS Settings▶VIDEO PID 3.2.6 TS Settings▶AUDIO PID |
| 15 | 3.3 A/V Menu <ul style="list-style-type: none"> 3.3.1 A/V▶Video Compression 3.3.2 A/V▶Video Rate 3.3.3 A/V▶AUDIO RATE 3.3.4 A/V▶AUDIO DELAY 3.3.5 A/V▶MAX HDMI IN 3.3.6 A/V▶MAX HDMI OUT |
| 18 | 3.4 IP Menu <ul style="list-style-type: none"> 3.4.1 IP▶ADDRESS 3.4.2 IP▶MASK 3.4.3 IP▶GATEWAY 3.4.4 IP▶IP MODE 3.4.5 IP▶UDP/RTP SETTINGS Menu <ul style="list-style-type: none"> 3.4.5.1 IP▶UDP/RTP SETTINGS▶ADDRESS 3.4.5.2 IP▶UDP/RTP SETTINGS▶PORT |
| 20 | 3.5 USB Menu <ul style="list-style-type: none"> 3.5.1 USB▶VIDEO Menu <ul style="list-style-type: none"> 3.5.1.1 USB▶VIDEO▶PLAY 3.5.1.2 USB▶VIDEO▶RECORD 3.5.2 USB▶OVERLAY Menu <ul style="list-style-type: none"> 3.5.2.1 USB▶OVERLAY▶FILE 3.5.2.2 USB▶OVERLAY▶POSITION 3.5.2.3 USB▶OVERLAY▶X OFFSET 3.5.2.4 USB▶OVERLAY▶Y OFFSET |
| 24 | 3.6 Advanced settings Menu <ul style="list-style-type: none"> 3.6.1 ADV. SETTINGS▶LANGUAGE 3.6.2 ADV. SETTINGS▶CLOCK Menu <ul style="list-style-type: none"> 3.6.2.1 ADV. SETTINGS▶CLOCK▶YEAR 3.6.2.2 ADV. SETTINGS▶CLOCK▶MONTH 3.6.2.3 ADV. SETTINGS▶CLOCK▶DAY 3.6.2.4 ADV. SETTINGS▶CLOCK▶HOUR 3.6.2.5 ADV. SETTINGS▶CLOCK▶MIN |
| 27 | 4 PC Software |
| 29 | APPENDIX A |

1. Safety Instructions

1.1 MAINS CONNECTION

This product must be connected to the mains power supply. If there is any doubt concerning the type of power supply available at the installation site, contact your electricity provider. Before carrying out any maintenance or modification on the installation, the product must be unplugged. Warning: use only the power adapter supplied.

1.2 OVERVOLTAGE

An overvoltage on the mains, or from any extension to which it may be connected, can cause short circuits or fires. Never subject the mains cables to overvoltage.

1.3 LIQUIDS

This module must be protected from splashes. Ensure that no container filled with liquid is placed on or above it and that no one spills or splashes liquid onto the module.

1.4 CLEANING

Unplug the module before cleaning it. Use only a damp cloth without solvent.

1.5 VENTILATION

To ensure adequate air circulation and prevent overheating, the product must be installed vertically and the ventilation openings must not be blocked. The product must not be installed in an enclosed space. Do not place other electronic devices or heat-generating equipment on the module.

1.6 ACCESSORIES

The use of accessories not manufactured by the manufacturer may damage the module.

1.7 MODULE LOCATION

The module must be installed in a well-protected location, away from direct sunlight. Every precaution must be taken to avoid sunny and humid areas. Do not install the module near radiators or other heat-producing equipment. Ensure that it is placed at least 10 cm away from any other equipment that may cause electromagnetic interference. Do not install the module on unstable shelves, tripods, or tables from which it could fall. A fall may cause personal injury and material damage.

2. Description

2.1 Introduction

The TMAP4K is a 4K H.264/HEVC encoder, modulator, and streamer capable of modulating an HDMI input with a resolution of up to 2160p to a DVB-T/C output, while simultaneously streaming the video and audio over IP using various protocols, enabling numerous applications in home entertainment, digital signage hotels, shops, restaurants...

2.2 Main features

- HDMI input encoding in H264-AVC/ H265-HEVC
- DVB-T / DVB-C output
- IP output over UDP, RTP/RTSP and HLS
- OSD : logo, text, and QR code overlay insertion using any picture file
- Ajustable audio delay
- Time scheduled record and play of TS Files via USB memory stick
- LCD+joystick and/or Windows PC software for easy local or remote configuration

2.3 Technical Specifications

| | | | |
|---------------------|---------------------|--------------------|------------------------------------------------|
| HDMI | Video | Resolution | 480p - 576p - 720p - 1080 i - 1080p - 2160p |
| | | Encoding | HEVC/H265 – MPEG4 AVC/H264 |
| | | Bit rate | 1-15 Mbps |
| | Audio | Sample rate | 32, 44.1, 48KHz |
| Encoding | | 128-384Kbps LC-AAC | |
| Modulation | Freq - Level | | 47-862MHz - Level > 82dbuV |
| | DVB-T | Const. - FEC | QPSK, 16 QAM, 64 QAM - 1/2, 2/3, 3/4, 5/6, 7/8 |
| | | Guard Int. | 1/4, 1/8, 1/16, 1/32 |
| | | MER | > 34dB |
| | DVB-C | Const. | 16, 32, 64, 128, 256 QAM |
| | | MER | >39dB |
| IP Streaming | | | 10M/100M auto negotiation |
| | | | UDP, RTP, RTSP, HLS |

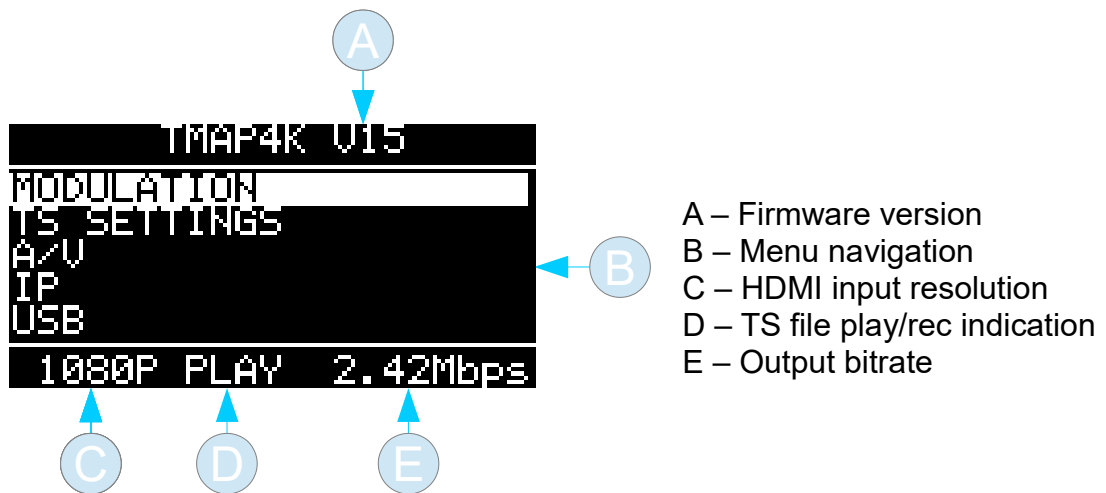
2.4 Components description



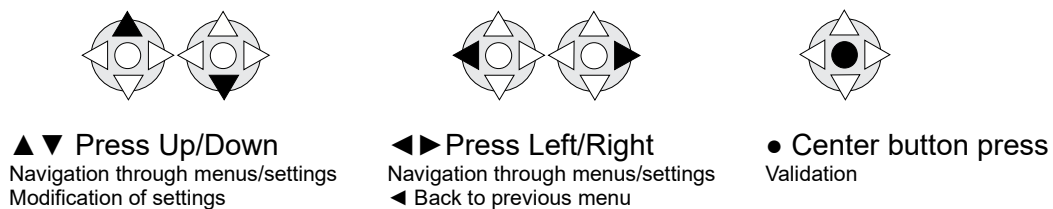
- | | |
|-----------------------------|----------------------------------------------|
| 1 5Vcc Power Supply | 5 Ethernet (streaming and management) |
| 2 HDMI input | 6 RF OUT |
| 3 HDMI output loop | 7 RF IN |
| 4 USB (memory stick) | |



8 OLED 128x64 pixels graphic display



9 Navigation joystick



3. Configuration

Use ▲▼ to move from one menu to another and confirm with ● to enter the highlighted menu.

```

TMAP4K V15
MODULATION
TS SETTINGS
A/V
IP
USB
--- 1.98Mbps
  
```

3.1 Access the RF Output Modulation menu

DVB-T / DVB-C Mode selection
Level attenuation modification
Frequency, constellation... settings
TS Network information settings



```

TMAP4K V15
MODULATION
TS SETTINGS
A/V
IP
USB
--- 1.98Mbps
  
```

3.2 Access TS Service menu

Service Name and ID
L.C.N.
PIDs assignment



```

TMAP4K V15
MODULATION
TS SETTINGS
A/V
IP
USB
--- 1.98Mbps
  
```

3.3 Access Audio/Video menu

H264/H265 selection
Video and Audio bitrate
Audio delay
HDMI In/Out max resolution definition



```

TMAP4K V15
MODULATION
TS SETTINGS
A/V
IP
USB
--- 1.98Mbps
  
```

3.4 Access IP and streaming menu

IP address, mask, gateway definition
Streaming mode selection (UDP, RTP, RTSP, HLS)
UDP/RTP multicast broadcast address selection



```

TMAP4K V15
MODULATION
TS SETTINGS
A/V
IP
USB
--- 1.98Mbps
  
```

3.5 Access USB Memory stick functions

Play/Record a TS file from/to USB
Select the overlay image to insert in the compressed video and/or modify its position



```

TMAP4K V15
TS SETTINGS
A/V
IP
USB
ADV. SETTINGS
--- 1.98Mbps
  
```

3.6 Access miscellaneous menu

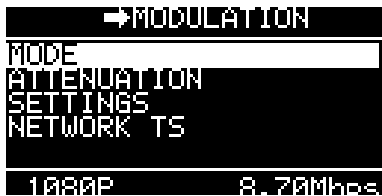
Change menu language
Set Clock
Restore default values

Once entered in the menu, the title bar displays the menu you are in (for example →MODULATION is displayed when you are in the modulation menu). Press ◀ to return to the previous menu.

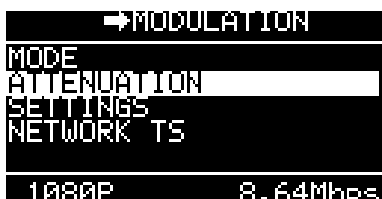
3.1 Modulation Menu

In this menu you can set the RF output modulation mode (DVB-T or DVB-C) and change various parameters (frequency, constellation, network service information table...).

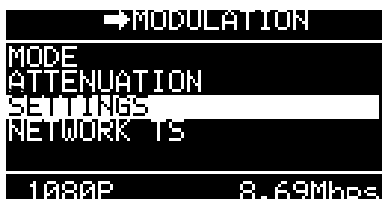
Use ▲ ▼ to move from one sub-menu to another and confirm with ● to enter the highlighted sub-menu. Press ◀ to return to the main menu.



3.1.1 switch between DVB-T and DVB-C mode



3.1.2 Change RF attenuation



3.1.3a/b Access DVB-T or DVB-C Settings menu

change channel/frequency
change bandwidth/constellation...

Ensure that correct mode has previously been selected



3.1.4 Access TS network settings

change country/network/LCN ID
change network version/name
change TS ID

3.1.1 Modulation ► Mode



Use ▲ ▼ to select the desired mode and press ● to confirm or press ◀ to cancel the modification

3.1.2 Modulation ► Attenuation



Use ▲ ▼ to set the required attenuation and press ● to confirm or press ◀ to cancel the modification

You can set the attenuation from 0 to 15dB. This will reduce the output RF level accordingly

3.1.3a Modulation (MODE DVB-T) ► Settings Menu

Use ▲ ▼ to move from one sub-menu to another and confirm with ● to enter the highlighted sub-menu. Press ◀ to return to the up-level menu.

```

->SETTINGS
CHANNEL
FREQUENCY
BANDWIDTH
CONSTELLATION
F.E.C.
-----
1080P      8.57Mbps
    
```

3.1.3a.1 select the output channel



```

->SETTINGS
CHANNEL
FREQUENCY
BANDWIDTH
CONSTELLATION
F.E.C.
-----
1080P      8.67Mbps
    
```

3.1.3a.2 or Enter the output frequency in MHz



```

->SETTINGS
CHANNEL
FREQUENCY
BANDWIDTH
CONSTELLATION
F.E.C.
-----
1080P      8.73Mbps
    
```

3.1.3a.3 Select the output bandwidth



```

->SETTINGS
CHANNEL
FREQUENCY
BANDWIDTH
CONSTELLATION
F.E.C.
-----
1080P      8.74Mbps
    
```

3.1.3a.4 Select the DVB-T constellation



```

->SETTINGS
CHANNEL
FREQUENCY
BANDWIDTH
CONSTELLATION
F.E.C.
-----
1080P      8.71Mbps
    
```

3.1.3a.5 Select the DVB-T FEC



```

->SETTINGS
FREQUENCY
BANDWIDTH
CONSTELLATION
F.E.C.
GUARD INTERVAL
-----
1080P      8.70Mbps
    
```

3.1.3a.6 Select the DVB-T Guard interval

3.1.3a.1 Modulation (MODE DVB-T)► Settings► Channel



Use ▲▼ to set the required channel and press ● to confirm or press ◀ to cancel the modification

The corresponding frequency is automatically computed.

3.1.3a.2 Modulation (MODE DVB-T)► Settings► Frequency



Use ▲▼ to set the required frequency and press ● to confirm or press ◀ to cancel the modification

The corresponding channel is automatically computed

3.1.3a.3 Modulation (MODE DVB-T)► Settings► Bandwidth



Use ▲▼ to select the desired bandwidth and press ● to confirm or press ◀ to cancel the modification

3.1.3a.4 Modulation (MODE DVB-T)► Settings► Constellation



Use ▲▼ to select the desired constellation and press ● to confirm or press ◀ to cancel the modification

3.1.3a.5 Modulation (MODE DVB-T)► Settings► FEC



Use ▲▼ to select the desired F.E.C. and press ● to confirm or press ◀ to cancel the modification

3.1.3a.6 Modulation (MODE DVB-T)► Settings► Guard Interval



Use ▲▼ to select the desired guard interval and press ● to confirm or press ◀ to cancel the modification

3.1.3b Modulation (MODE DVB-C) ► Settings Menu

Use ▲ ▼ to move from one sub-menu to another and confirm with ● to enter the highlighted sub-menu. Press ◀ to return to the up-level menu.

```

➔SETTINGS
-----
CHANNEL
FREQUENCY
BANDWIDTH
CONSTELLATION
SYMBOL RATE
-----
--- 1.89Mbps
    
```

3.1.3b.1 Select the output channel



```

➔SETTINGS
-----
CHANNEL
FREQUENCY
BANDWIDTH
CONSTELLATION
SYMBOL RATE
-----
--- 1.89Mbps
    
```

3.1.3b.2 or Enter the output frequency in MHz



```

➔SETTINGS
-----
CHANNEL
FREQUENCY
BANDWIDTH
CONSTELLATION
SYMBOL RATE
-----
--- 1.89Mbps
    
```

3.1.3b.3 Select the output bandwidth



```

➔SETTINGS
-----
CHANNEL
FREQUENCY
BANDWIDTH
CONSTELLATION
SYMBOL RATE
-----
--- 1.89Mbps
    
```

3.1.3b.4 Select the DVB-C constellation



```

➔SETTINGS
-----
CHANNEL
FREQUENCY
BANDWIDTH
CONSTELLATION
SYMBOL RATE
-----
--- 1.89Mbps
    
```

3.1.3b.5 Select the DVB-C symbol rate

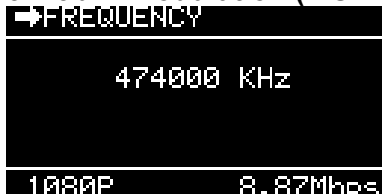
3.1.3b.1 Modulation (MODE DVB-C) ► Settings ► Channel



Use ▲ ▼ to set the required channel and press ● to confirm or press ◀ to cancel the modification

The corresponding frequency is automatically computed.

3.1.3b.2 Modulation (MODE DVB-C) ► Settings ► Frequency



Use ▲ ▼ to set the required frequency and press ● to confirm or press ◀ to cancel the modification

The corresponding channel is automatically computed

3.1.3b.3 Modulation (MODE DVB-C) ► Settings ► Bandwidth



Use ▲ ▼ to select the desired bandwidth and press ● to confirm or press ◀ to cancel the modification

3.1.3b.4 Modulation (MODE DVB-C) ► Settings ► Constellation



Use ▲ ▼ to select the desired constellation and press ● to confirm or press ◀ to cancel the modification

3.1.3b.5 Modulation (MODE DVB-C) ► Settings ► Symbol Rate



Use ▲ ▼ to set the required symbol rate and press ● to confirm or press ◀ to cancel the modification

You can choose a symbol rate between 2000 and 6960

3.1.4 Modulation ► Network TS Menu

Use ▲ ▼ to move from one sub-menu to another and confirm with ● to enter the highlighted sub-menu. Press ◀ to return to the up-level menu.

```

→NETWORK TS
-----
COUNTRY
NET ID.
ORIG. NET ID.
LCN ID.
NETWORK NAME
-----
--- 1.98Mhz
    
```

3.1.4.1 Set TS country

When --- is selected, Network/Original network/LCN ID have to be manually set either this parameters are automatically set and are not displayed in the menu



```

→NETWORK TS
-----
COUNTRY
NET ID.
ORIG. NET ID.
LCN ID.
NETWORK NAME
-----
--- 1.98Mhz
    
```

3.1.4.2 Set network ID

Not available (automatically set) when a TS country is defined



```

→NETWORK TS
-----
COUNTRY
NET ID.
ORIG. NET ID.
LCN ID.
NETWORK NAME
-----
--- 1.98Mhz
    
```

3.1.4.3 Set original network ID

Not available (automatically set) when a TS country is defined



```

→NETWORK TS
-----
COUNTRY
NET ID.
ORIG. NET ID.
LCN ID.
NETWORK NAME
-----
--- 1.98Mhz
    
```

3.1.4.4 Set LCN type

Not available (automatically set) when a TS country is defined



```

→NETWORK TS
-----
COUNTRY
NET ID.
ORIG. NET ID.
LCN ID.
NETWORK NAME
-----
--- 1.98Mhz
    
```

3.1.4.5 Set network name



```

→NETWORK TS
-----
NET ID.
ORIG. NET ID.
LCN ID.
NETWORK NAME
NIT RELEASE
-----
--- 1.98Mhz
    
```

3.1.4.6 Set NIT table version number



```

→NETWORK TS
-----
ORIG. NET ID.
LCN ID.
NETWORK NAME
NIT RELEASE
TS ID.
-----
--- 1.98Mhz
    
```

3.1.4.7 Set TS ID

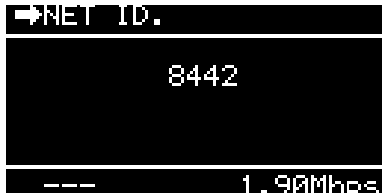
3.1.4.1 Modulation ► Network TS ► Country



Use ▲ ▼ to select the TS network country and press ● to confirm or press ◀ to cancel the modification

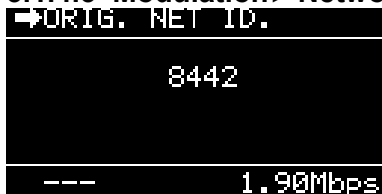
Select --- to manually enter the 3 following IDs

3.1.4.2 Modulation ► Network TS ► Net ID.



Use ▲ ▼ to set the network ID and press ● to confirm or press ◀ to cancel the modification

3.1.4.3 Modulation ► Network TS ► ORIG. NET ID.



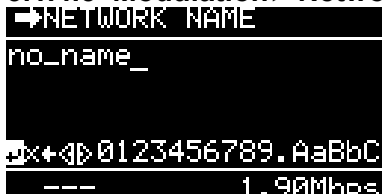
Use ▲ ▼ to set the original network ID and press ● to confirm or press ◀ to cancel the modification

3.1.4.4 Modulation ► Network TS Menu ► LCN ID.



Use ▲ ▼ to select the LCN type and press ● to confirm or press ◀ to cancel the modification

3.1.4.5 Modulation ► Network TS ► Network Name



Use ◀ ▶ and ● to set the name using the *edit text bar* (refer to appendix A) or press ▲ to cancel the modification

3.1.4.6 Modulation ► Network TS ► NIT Release



Use ▲ ▼ to set the TS network version number and press ● to confirm or press ◀ to cancel the modification

Changing network version will force an autoscan on most TVs

3.1.4.7 Modulation ► Network TS ► TS ID.

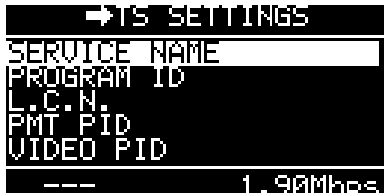


Use ▲ ▼ to set the required TS ID and press ● to confirm or press ◀ to cancel the modification

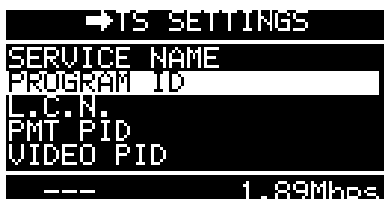
3.2 TS Settings Menu

In this menu you can redefine the service information like service name and ID and also the various used PID number.

Use ▲▼ to move from one sub-menu to another and confirm with ● to enter the highlighted sub-menu. Press ◀ to return to the main menu.



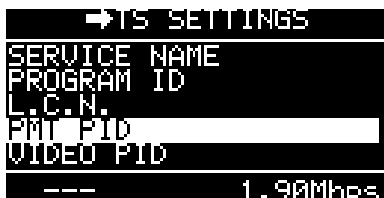
3.2.1 Set service name



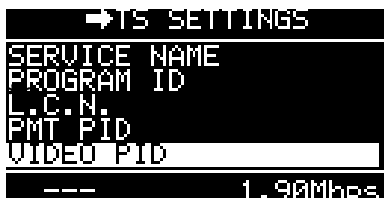
3.2.2 Set service ID (SID)



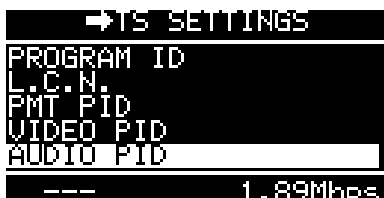
3.2.3 Set TV channel number (LCN)



3.2.4 Change PMT PID



3.2.5 Change Video PID



3.2.6 Change Audio PID

3.2.1 TS Settings ▶ Service Name

```

->SERVICE NAME
channel A_
0x+4D0123456789.AaBbC
--- 1.98Mhz

```

Use ◀▶ and ● to set the name using the *edit text bar* (refer to appendix. A) or press ▲ to cancel the modification

3.2.2 TS Settings ▶ Program ID

```

->PROGRAM ID
1
--- 1.98Mhz

```

Use ▲▼ to set the TS service ID (SID) and press ● to confirm or press ◀ to cancel the modification

3.2.2 TS Settings ▶ LCN

```

->TS SETTINGS ->LCN
1
--- 1.98Mhz

```

Use ▲▼ to set the TV channel number (LCN) and press ● to confirm or press ◀ to cancel the modification

3.2.4 TS Settings ▶ PMT PID

```

->PMT PID
100
--- 1.98Mhz

```

Use ▲▼ to set the TS PMT table packed ID and press ● to confirm or press ◀ to cancel the modification

3.2.5 TS Settings ▶ VIDEO PID

```

->VIDEO PID
101
--- 1.98Mhz

```

Use ▲▼ to set the TS Video packed ID and press ● to confirm or press ◀ to cancel the modification

3.2.6 TS Settings ▶ AUDIO PID

```

->AUDIO PID
102
--- 1.98Mhz

```

Use ▲▼ to set the TS Audio packet ID and press ● to confirm or press ◀ to cancel the modification

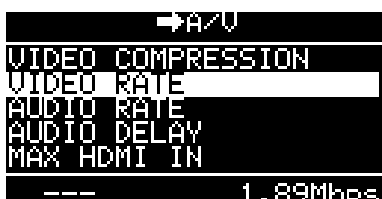
3.3 A/V Menu

In this menu you can select the used video compression standard, bitrates and provide information on HDMI input and output.

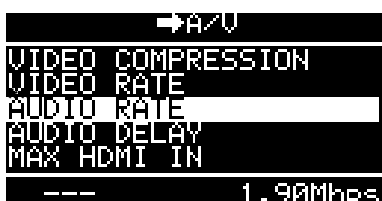
Use ▲▼ to move from one sub-menu to another and confirm with ● to enter the highlighted sub-menu. Press ◀ to return to the main menu.



3.3.1 Select the video compression standard



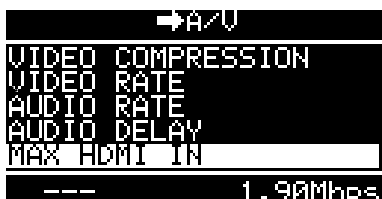
3.3.2 Set Video bitrate



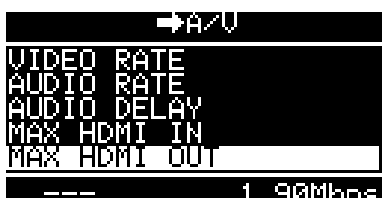
3.3.3 Set Audio bitrate



3.3.4 Set Audio/Video Delay



3.3.5 Set EDID table (not available on all models)



3.3.6 Indicate max. HDMI output resolution

3.3.1 A/V ► Video Compression



Use ▲ ▼ to select the video compression standard and press ● to confirm or press ◀ to cancel the modification

Use of H265 encoding is required for some TV Sets when 4K inputs are used

3.3.2 A/V ► Video Rate



Use ▲ ▼ to set the Video bitrate and press ● to confirm or press ◀ to cancel the modification

Bit rate can be set from 1000 to 15000Kbps

3.3.3 A/V ► AUDIO RATE



Use ▲ ▼ to select the Audio bitrate and press ● to confirm or press ◀ to cancel the modification

3.3.4 A/V ► AUDIO DELAY



Use ▲ ▼ to set the Audio Delay and press ● to confirm or press ◀ to cancel the modification

In most cases audio delay can be left to 0ms

3.3.5 A/V ► MAX HDMI IN



Use ▲ ▼ to select the used edid table and press ● to confirm or press ◀ to cancel the modification

Select 2160p to indicate the source that the streamer is 4K capable

3.3.6 A/V ► MAX HDMI OUT



Use ▲ ▼ to set the max HDMI output resolution and press ● to confirm or press ◀ to cancel the modification

Set this parameter to 1080P when a TV that is not 4K capable is connected (the input video resolution is downscaled only on the HDMI loop)

3.4 IP Menu

This menu helps you to configure the IP information of the streamer itself and select the streaming protocol.

Use ▲▼ to move from one sub-menu to another and confirm with ● to enter the highlighted sub-menu. Press ◀ to return to the main menu.

In this menu, the status line changes and displays the address at which the streamed service can be accessed according to the selected protocol (and eventually to the multicast address/port when UDP or RTP protocol is selected)

```

    →IP
    ADDRESS
    MASK
    GATEWAY
    IP MODE
    UDP/RTP SETTINGS
    5004 - udp://2239.192
  
```

3.4.1 Set the streamer ethernet IP address



```

    →IP
    ADDRESS
    MASK
    GATEWAY
    IP MODE
    UDP/RTP SETTINGS
    1:5004 - udp://2239.1
  
```

3.4.2 Set the network address mask



```

    →IP
    ADDRESS
    MASK
    GATEWAY
    IP MODE
    UDP/RTP SETTINGS
    2.1.1:5004 - udp://2
  
```

3.4.3 Set the network gateway address



```

    →IP
    ADDRESS
    MASK
    GATEWAY
    IP MODE
    UDP/RTP SETTINGS
    udp://2239.192.1.1:50
  
```

3.4.4 Set the streaming protocol



```

    →IP
    ADDRESS
    MASK
    GATEWAY
    IP MODE
    UDP/RTP SETTINGS
    //2239.192.1.1:5004 -
  
```

3.4.5 UDP/RTP broadcast address/port setting menu

This menu is not available when RTSP or HLS protocol are selected

3.4.1 IP ► ADDRESS



Use ◀▶ and ● to set the IP address using the *edit text bar* (refer to appendix A) or press ▲ to cancel the modification

3.4.2 IP ► MASK



Use ◀▶ and ● to set the network mask using the *edit text bar* (refer to appendix A) or press ▲ to cancel the

3.4.3 IP ► GATEWAY



Use ◀▶ and ● to set the IP gateway address using the *edit text bar* (refer to appendix A) or press ▲ to cancel the modification

3.4.4 IP ► IP MODE



Use ▲▼ to select the streaming protocol and press ● to confirm or press ◀ to cancel the modification
when UDP or RTP protocol is used, select in the following menu the required multicast or unicast address to be used

3.4.5 IP ► UDP/RTP SETTINGS Menu

Use ▲▼ to move from one sub-menu to another and confirm with ● to enter the highlighted sub-menu. Press ◀ to return to the up-level menu.



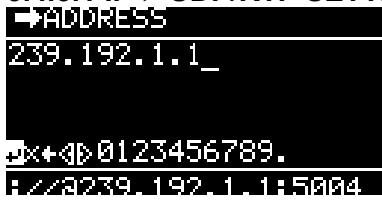
3.4.5.1 Set broadcast (unicast or multicast) IP address



3.4.5.2 Set broadcast IP port



3.4.5.1 IP ► UDP/RTP SETTINGS ► ADDRESS



Use ◀▶ and ● to set the IP broadcast address using the *edit text bar* (refer to appendix A) or press ▲ to cancel the

3.4.5.2 IP ► UDP/RTP SETTINGS ► PORT



Use ▲▼ to set the broadcast port and press ● to confirm or press ◀ to cancel the modification

3.5 USB Menu

Use ▲▼ to move from one sub-menu to another and confirm with ● to enter the highlighted sub-menu. Press ◀ to return to the main menu.

Ensure a USB memory stick is inserted in the USB connector 4 before selecting a function.



3.5.1 Access TS play/rec menu



3.5.2 Access Overlay (OSD) menu



3.5.1 USB ► VIDEO Menu

With USB video menu, you can indicate how data stored into the USB memory stick you have connected will be used.

It concerns not only the TS files that can be played or recorded but also pictures files you would like to be overlaid on the modulated/streamed video, allowing you to insert in the video your logo company or some other information.

Use ▲ ▼ to move from one sub-menu to another and confirm with ● to enter the highlighted sub-menu. Press ◀ to return to the up-level menu.

Note that whenever a TS file or an image file is used, the USB memory stick must stay connected to the streamer.



3.5.1.1 Play a TS file from USB

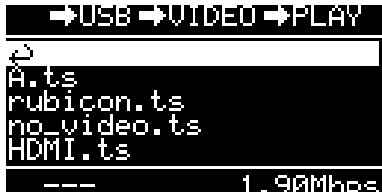


3.5.1.2 Record a TS File to USB



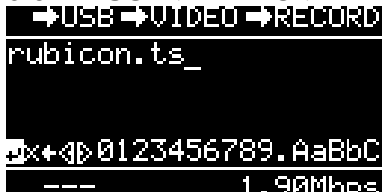
Stop playing/Recording

3.5.1.1 USB ► VIDEO ► PLAY



Use ▲ ▼ to select the TS file from the available ones and press ● to confirm or press ◀ to cancel

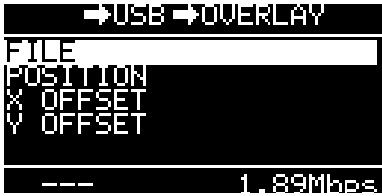
3.5.1.2 USB ► VIDEO ► RECORD



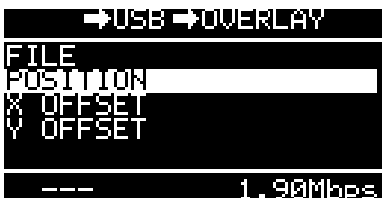
Use ◀▶ and ● to set the name of the file that will be recorded by using the edit text bar (refer to appendix A) or press ▲ to cancel

3.5.2 USB ► OVERLAY Menu

Use ▲ ▼ to move from one sub-menu to another and confirm with ● to enter the highlighted sub-menu. Press ◀ to return to the up-level menu.



3.5.2.1 Select the picture file to overlay on the video



3.5.2.2 Select its position on the screen

The screen is divided into 9 sectors (up left, up center...)

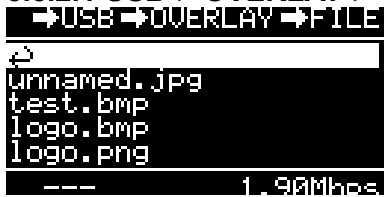


3.5.2.3 Change the X offset relative to the selected sector



3.5.2.4 Change the Y offset relative to the selected sector

3.5.2.1 USB ► OVERLAY ► FILE



Use ▲ ▼ to select the picture file from the available ones and press ● to confirm or press ◀ to cancel

All picture file formats can be used but .png files allow the alpha channel to be used as transparency channel

3.5.2.2 USB ► OVERLAY ► POSITION



Use ▲ ▼ to select the region the picture will be displayed in and press ● to confirm or press ◀ to cancel

Region are resp. : none, up/left, up/center, up/right, left/center, center, right/center, down/left, down/center, down/right

3.5.2.3 USB ► OVERLAY ► X OFFSET



Use ▲ ▼ to set the X offset and press ● to confirm or press ◀ to cancel the modification

offset is relative to the selected region

3.5.2.4 USB ► OVERLAY ► Y OFFSET



Use ▲ ▼ to set the Y offset and press ● to confirm or press ◀ to cancel the modification

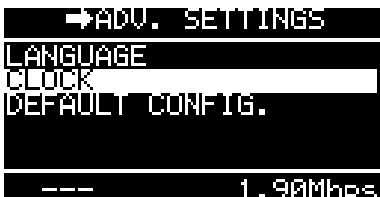
offset is relative to the selected region

3.6 Advanced settings Menu

Use ▲▼ to move from one sub-menu to another and confirm with ● to enter the highlighted sub-menu. Press ◀ to return to the main menu.



3.6.1 Change menu language



3.6.2 Set current date and time menu



Reset streamer to default configuration

Select this function to reset the configuration to the factory default values

Caution : no confirmation is asked for

3.6.1 ADV. SETTINGS ► LANGUAGE



Use ▲▼ to select the menu language from the available ones and press ● to confirm or press ◀ to cancel

3.6.2 ADV. SETTINGS ► CLOCK Menu

Use ▲▼ to move from one sub-menu to another and confirm with ● to enter the highlighted sub-menu. Press ◀ to return to the up-level menu.



3.6.2.1 Set year



3.6.2.2 Set month



3.6.2.3 Set day



3.6.2.4 Set hour



3.6.2.5 Set Minute

3.6.2.1 ADV. SETTINGS ► CLOCK ► YEAR

Use ▲▼ to set the year
and press ● to confirm or press ◀ to cancel the modification

3.6.2.2 ADV. SETTINGS ► CLOCK ► MONTH

Use ▲▼ to set the month
and press ● to confirm or press ◀ to cancel the modification

3.6.2.3 ADV. SETTINGS ► CLOCK ► DAY

Use ▲▼ to set the day
and press ● to confirm or press ◀ to cancel the modification

3.6.2.4 ADV. SETTINGS ► CLOCK ► HOUR

Use ▲▼ to set the hour
and press ● to confirm or press ◀ to cancel the modification

3.6.2.5 ADV. SETTINGS ► CLOCK ► MIN

Use ▲▼ to set the minute
and press ● to confirm or press ◀ to cancel the modification

4 PC Software

All the settings described in this document can also be modified using the TMHDIface software, which you can download from our website <https://anttron.com/>

Firmware updates are also accomplished with the help of this software.

To let TMHDIface automatically detect the modulator, both your computer and the modulator must be on the same network.

Start by checking your computer's IP address and network mask. For example, if your PC has the IP address **192.168.1.50** and the subnet mask **255.255.255.0**, then your modulator must be set to a free IP address in the same range, such as **192.168.1.10** or **192.168.1.200** (just make sure no other device is already using it). The subnet mask should also match your PC (255.255.255.0 in this example).

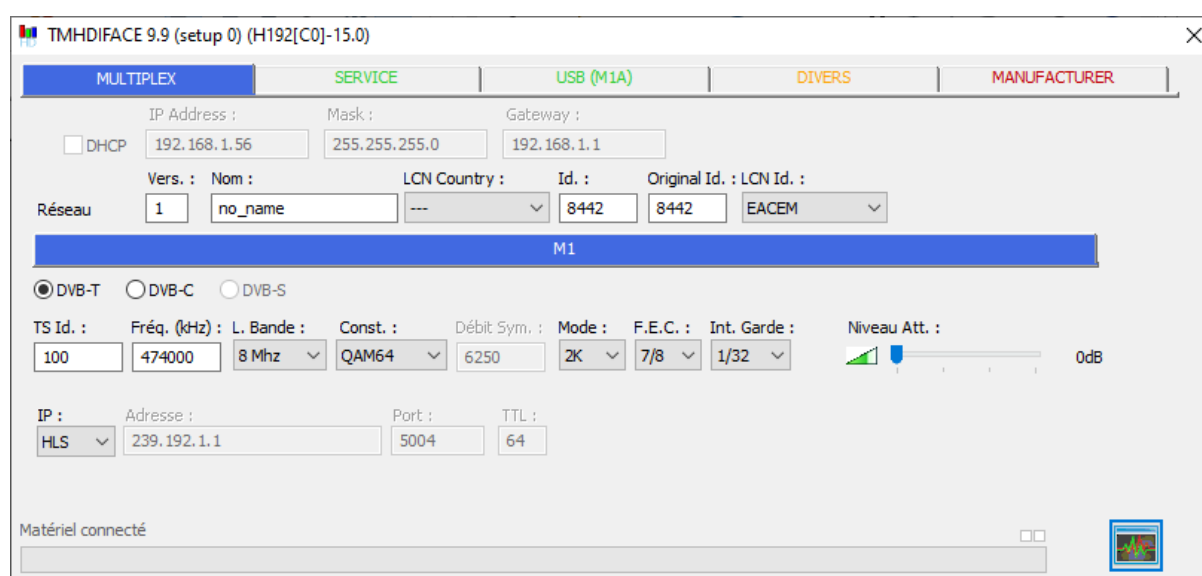
Once you have chosen an available IP address, enter it into the modulator's IP settings menu, and make sure the subnet mask is correct as well.

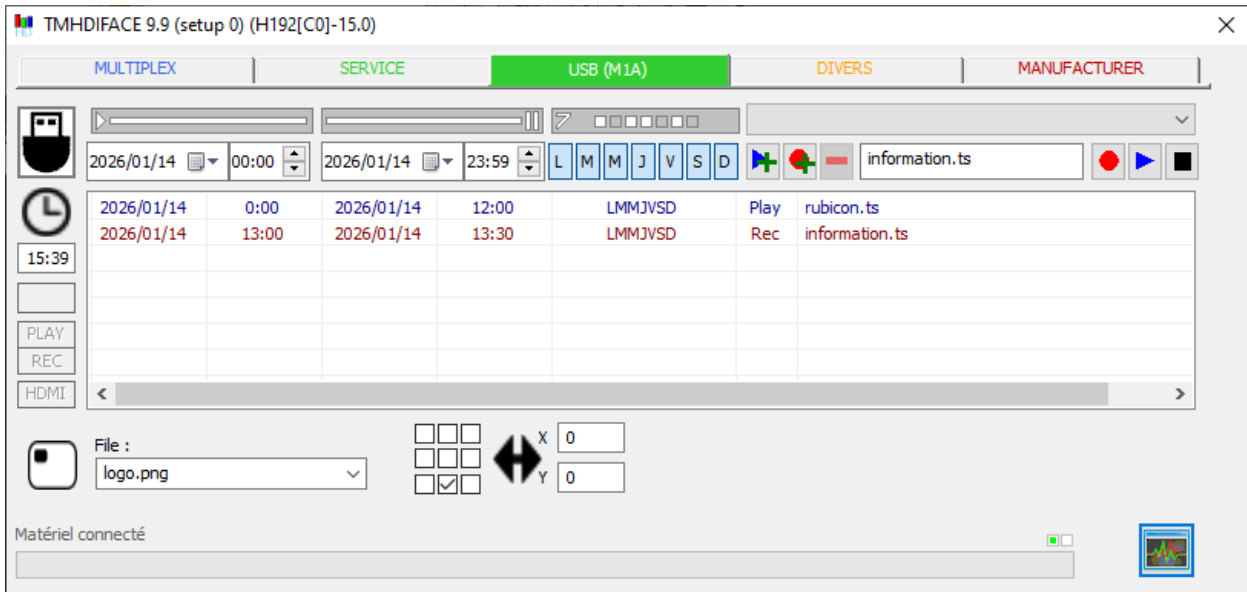
After the modulator is properly connected to the network and configured with the correct IP settings, it will automatically announce itself on the network. This allows the PC software to detect it and connect to it without any manual setup.

Each time a modulator is connected, TMHDIface checks whether its firmware is up to date. If an update is needed, it will start it automatically.

If this happens, just let the process finish before disconnecting the modulator. The update is usually quick and won't take long.

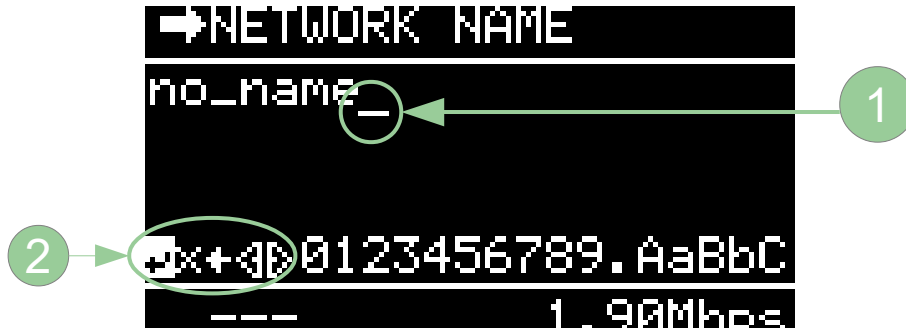
Below are some screenshots from this software





APPENDIX A

Texts and IP addresses are entered using an edit bar, the operation of which is explained below using the network name edition example.



Char are inserted in the name at the position specified by the cursor ①

Use ◀▶ on the joystick to select a char (0-9.A-Z) and press ● to insert it at the current cursor position in the name

Special chars in ② are respectively used to :

↵ confirm the edition

✕ delete the whole text

← delete the char just behind the cursor (like a backspace on a PC keyboard)

◀▶ move the cursor left or right (allowing insertion of characters in the already edited text)

At anytime you can cancel the modification by clicking the ▲ joystick button