

ANTTRON

# TM200HD

HD encoder  
DVB-T out  
Record and play



USER MANUAL V1.0

Features :

- HD encoder DVBT modulator
- HDMI Bypass
- USB record and play according to programmable time schedule. (to use this fonction the usage of a USB 3.0 KEY is mandatory).
- IR loop : this fonction let's you control your source over a distance using the coaxial connection.

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## **1 - Safety considerations**

### **1.1 CONNECTING TO THE MAINS SUPPLY**

This product has to be connected to the mains supply. If there is the slightest doubt concerning the type of connection available on the installation, please contact your supplier of electricity. Before carrying out maintenance operation or modification of the installation, the modulator has to be disconnected. Remark : only use the supplied power adaptor.

### **1.2 OVERVOLTAGE**

An overvoltage on the mains supply, can cause shortcircuits or fire. Never overload the power lines.

### **1.3 LIQUIDS**

This module should be protected from splashes. Please assure yourself that no containers containing liquids are placed on this module. Also be aware of other persons splashing liquids on the module.

### **1.4 CLEANING**

Disconnect the module before cleaning. Use only a humid cloth without solvent.

-

### **1.5 VENTILATION**

In order to assure an adequate air circulation and to prevent overheating, the ventilation holes should not be obstructed. The module may not be installed in a hermetically sealed environment. Other electronic products or heat producing items may not be placed upon or near the module.

### **1.6 ACCESSORIES**

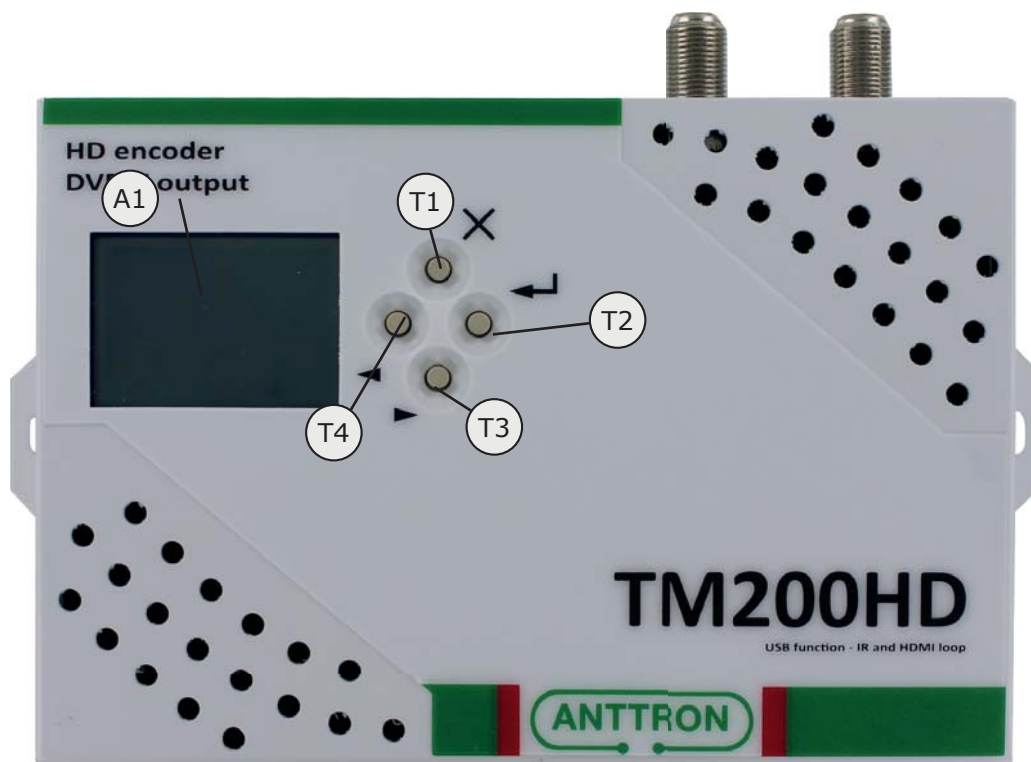
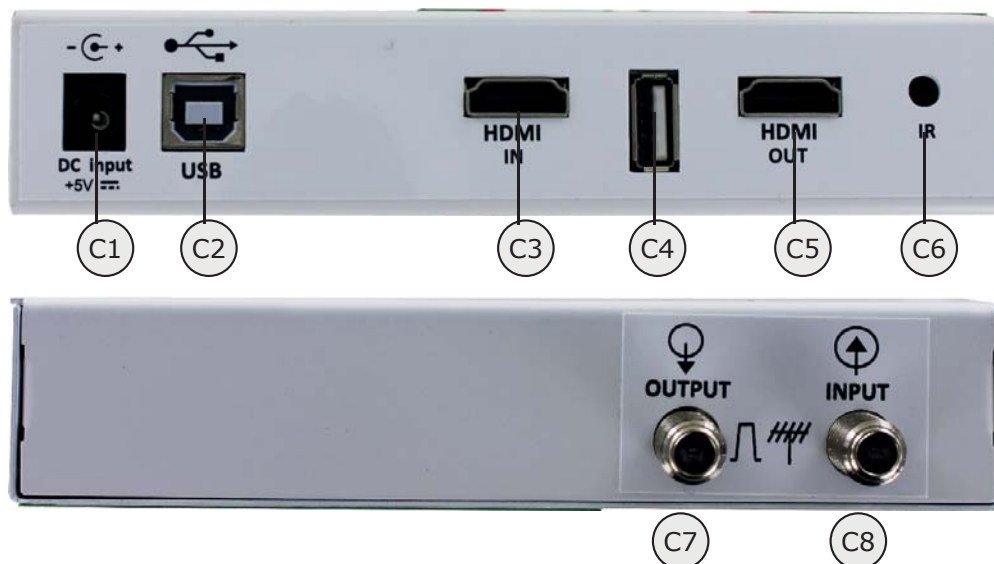
The use of accessories not manufactured by the manufacturer can cause damage to the module.

### **1.7 INSTALLATION OF THE MODULE**

The module must be installed in a place well protected from direct sunlight. All measures have to be taken to avoid installation in humid or sunny place. Do not install near heating elements or other devices producing heat. Assure yourself that the module is placed at least 10 cm from other equipment with is susceptible to electromagnetic radiation. Do not install the module on instable items. A fall can cause physical or material damage.

**2 - Description of the different elements**

- |    |                              |    |                       |
|----|------------------------------|----|-----------------------|
| C1 | Power supply input (5V/2A)   | C5 | HDMI output           |
| C2 | USB (for programming by PC)  | C6 | Connection for IR eye |
| C3 | HDMI input                   | C7 | RF output             |
| C4 | USB port for record and play | C8 | RF input              |

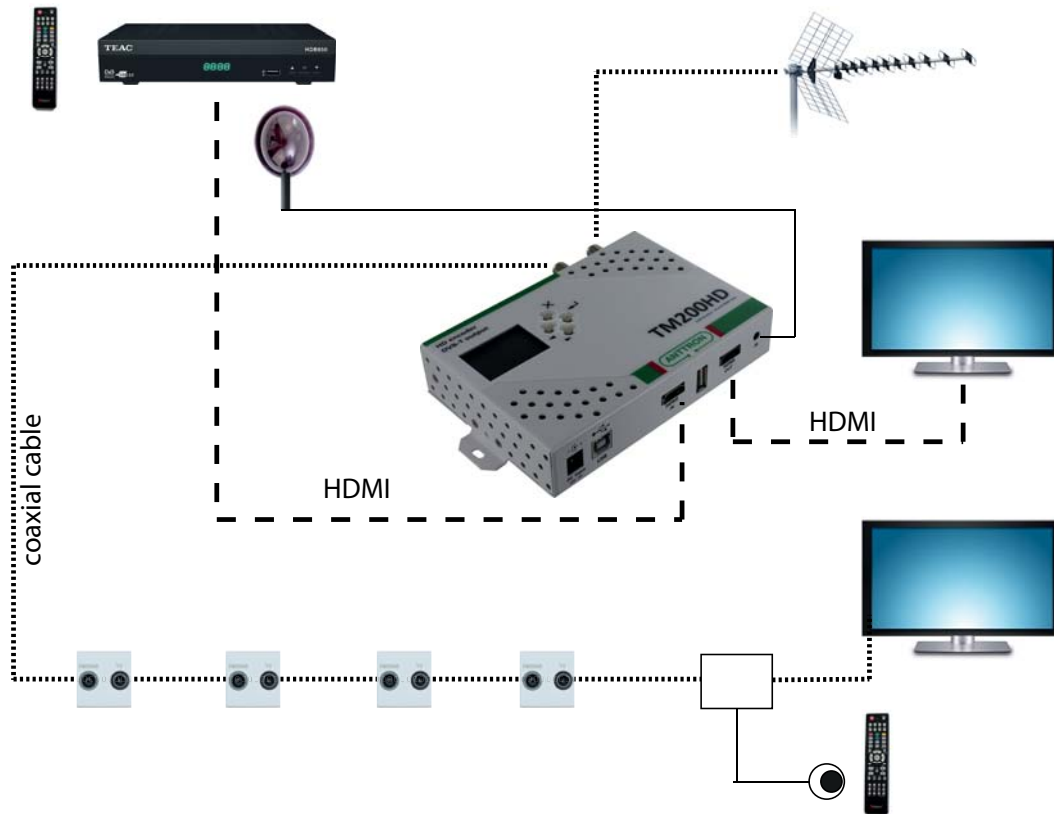


- |    |                             |    |                            |
|----|-----------------------------|----|----------------------------|
| A1 | Display                     | T2 | <b>ENTER</b> button        |
| T1 | <b>CANCEL/RETURN</b> button | T3 | (move forward/down) button |
|    |                             | T4 | (move backward/up) button  |

### 3 - Installation and menu structure

#### 3.1 - Installation

Please find below a typical connection and installation diagram for the TM200HD.



#### 3.2 - Powering up

Plug in the connector of the power supply. The display will show the ANTTRON logo while booting. Once the modulator has booted correctly the main menu will appear.

In the first line alternatively the model number is displayed (TM200HD) together with the installed firmware version, followed by the actual date and time.

**TM200HD 10.0**

**04/03 08:24.18**

**DVB SETTINGS**  
**A/V SETTINGS**  
**TS SETTINGS**  
**USB**

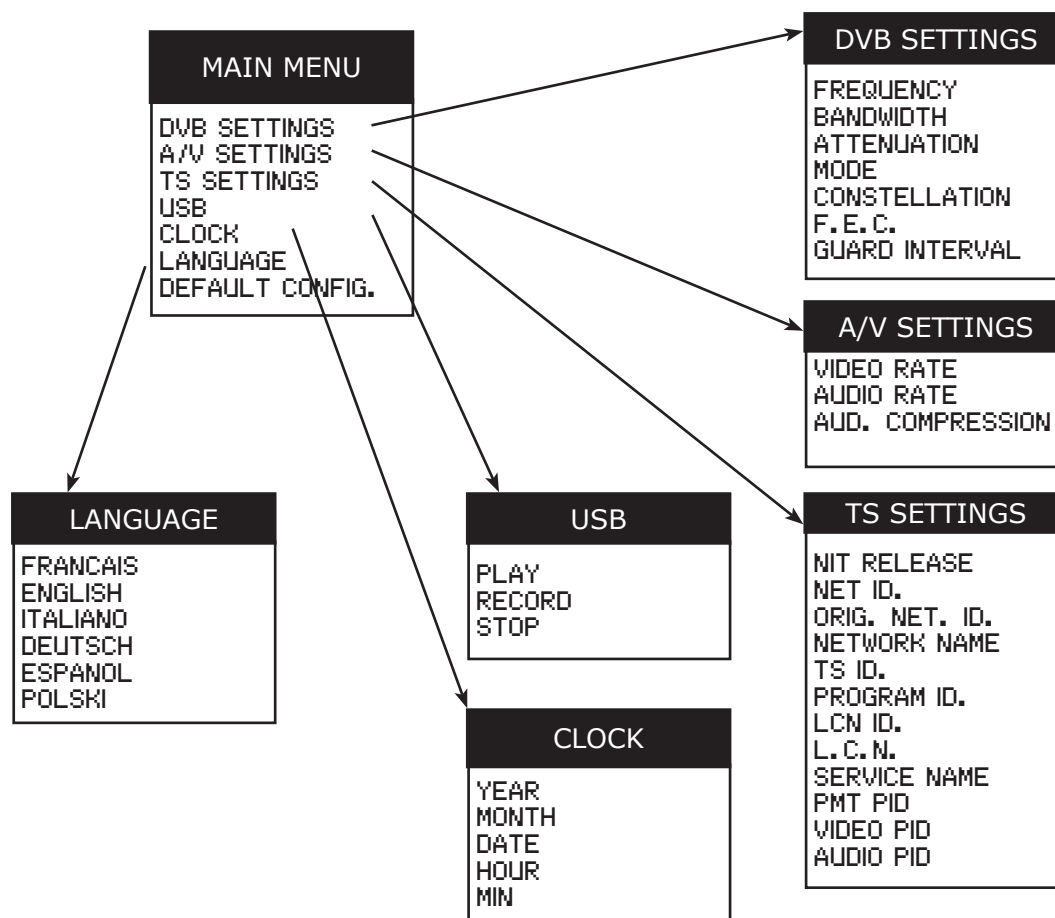
**DVB SETTINGS**  
**A/V SETTINGS**  
**TS SETTINGS**  
**USB**

**720P50 PCM**

**720P50 PCM**

### 3.3 - Menu structure

The TM200HD has different menus allowing easy access to the different parameters and to change them when necessary. Below you will find the structure of the different menus.



In order to go from one menu to the other use the MOVE **UP/DOWN** keys to select the menu option. Press the **ENTER** button to select this option. Press the **CANCEL** button to go back to the previous menu.

To set parameters, whether you have the option to select a specific value. In the other case some number or text string should be entered. In that case, use the buttons **▶** and **◀** to move to the desired character and press the ENTER button to confirm. Please note the following **SPECIAL CHARACTERS** :

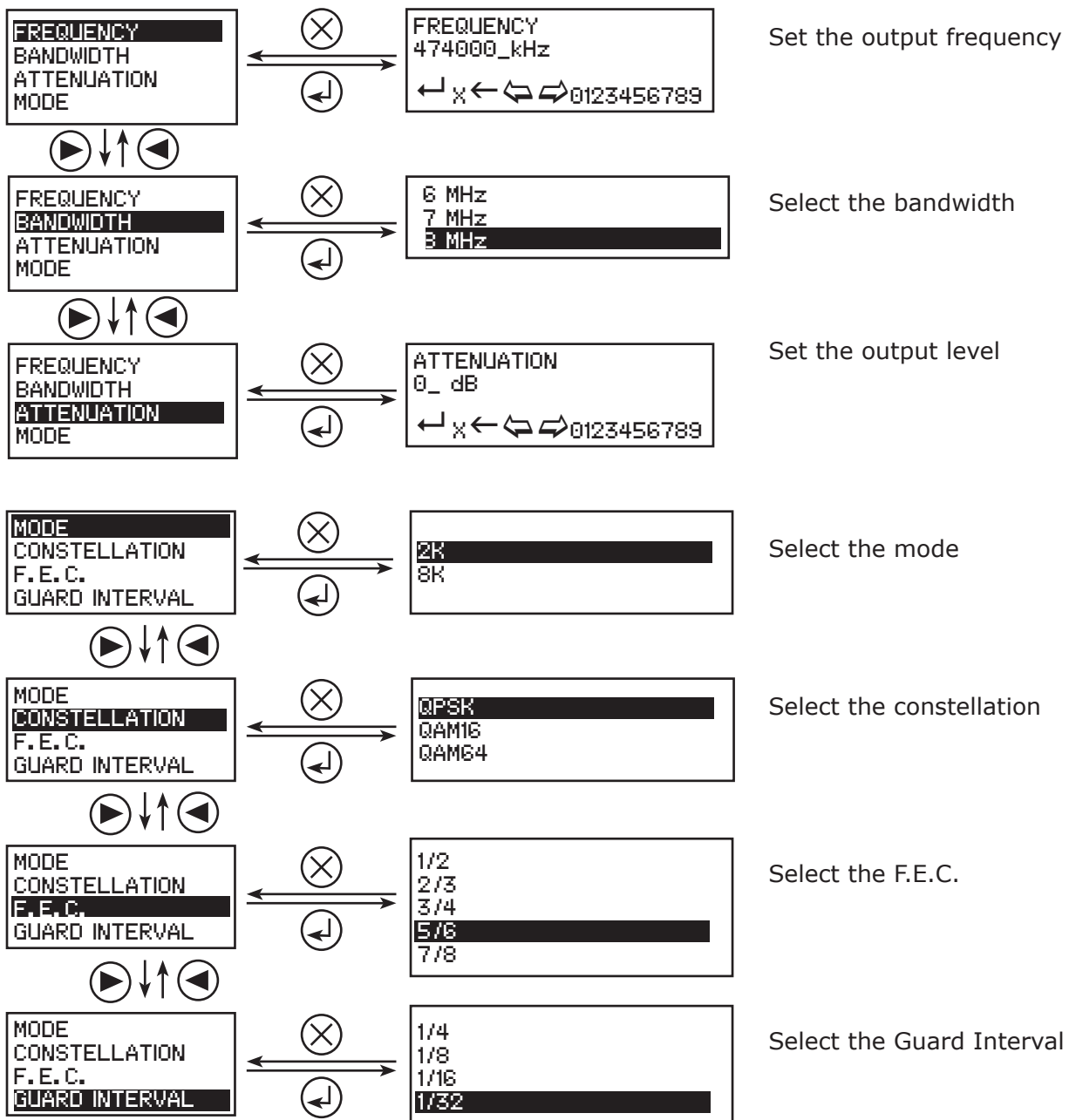
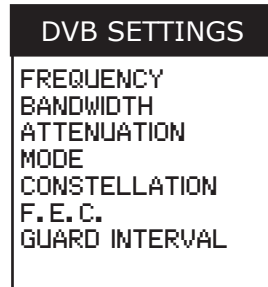
↵ confirm the modified value / ✕ erase all / ← backspace

↔ move cursor back or forward

## 4 - Setting up the TM200HD

### 4.1 - The DVB settings menu

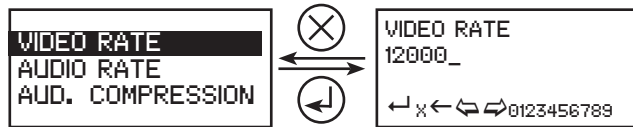
In this menu you can set the output frequency, bandwidth, output level and specific parameters for DVB-T.



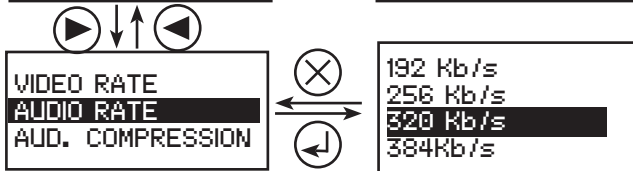
### 4.2 - The AV settings menu

In the A/V settings menu, you can set specific parameters for video and audio.

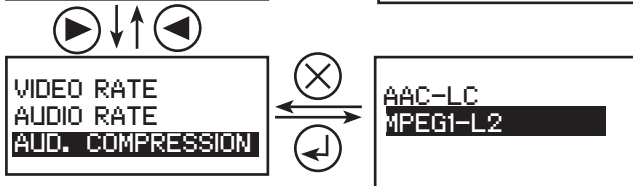
VIDEO RATE  
AUDIO RATE  
AUD. COMPRESSION



Set the video bit rate



Select the audio bitrate

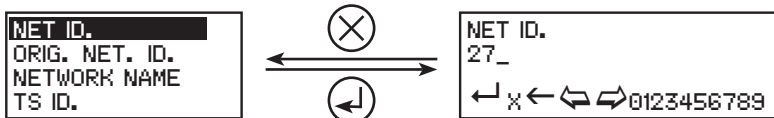


Select the compression type

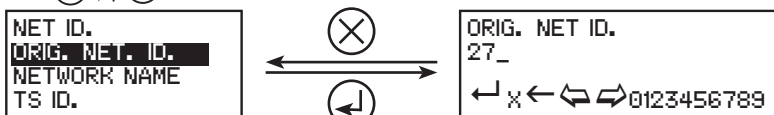
### 4.3 - The TS settings menu

#### TS SETTINGS

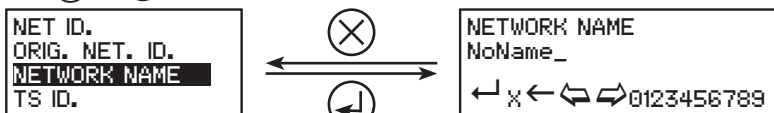
NIT RELEASE  
NET ID.  
ORIG. NET. ID.  
NETWORK NAME  
TS ID.  
PROGRAM ID.  
LCN ID.  
L. C. N.  
SERVICE NAME  
PMT PID  
VIDEO PID  
AUDIO PID



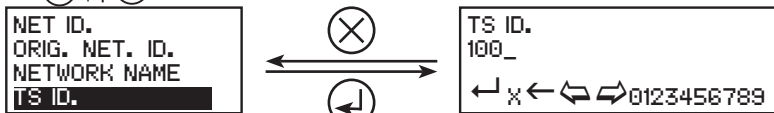
Set the Network ID.



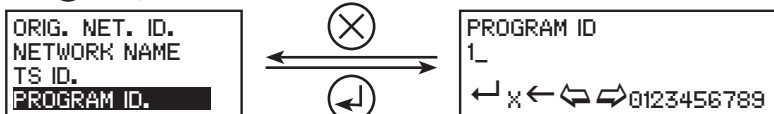
Set the Original Network ID.



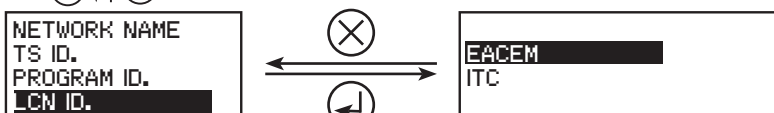
Set the NETWORK NAME



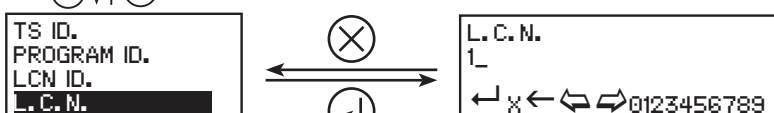
Set the Transport Stream ID.



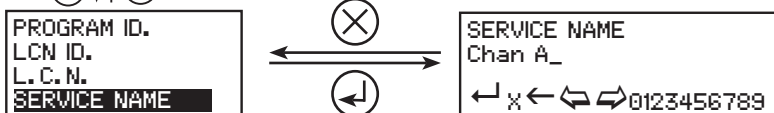
Set the PROGRAM ID.



Select the LCN ID.

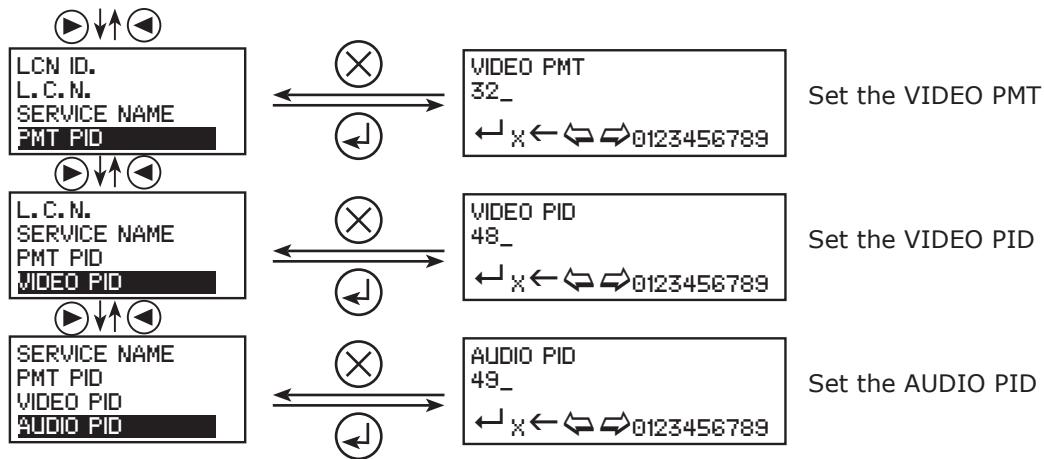


Set the LCN number.

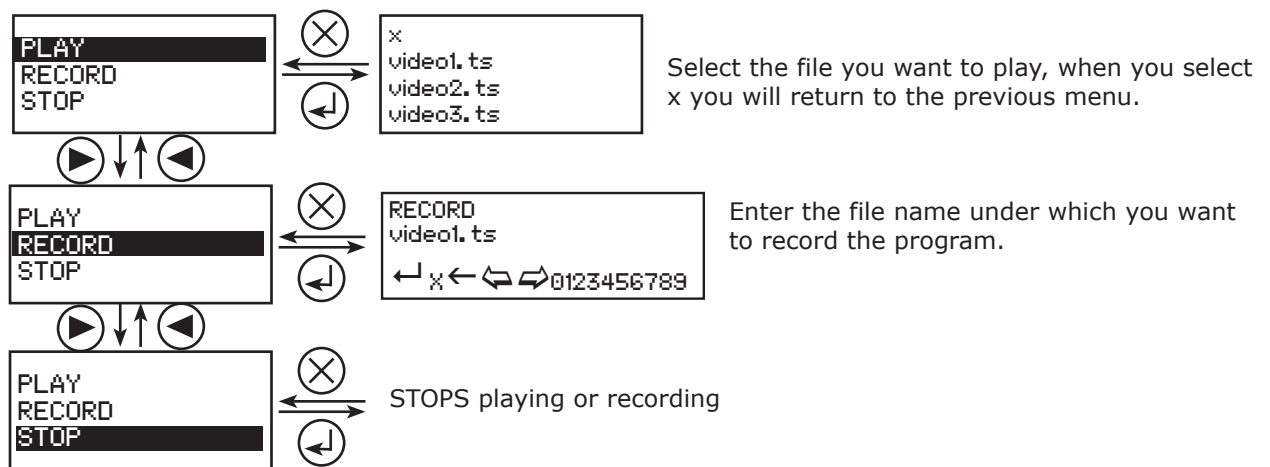


Set the Program Name.

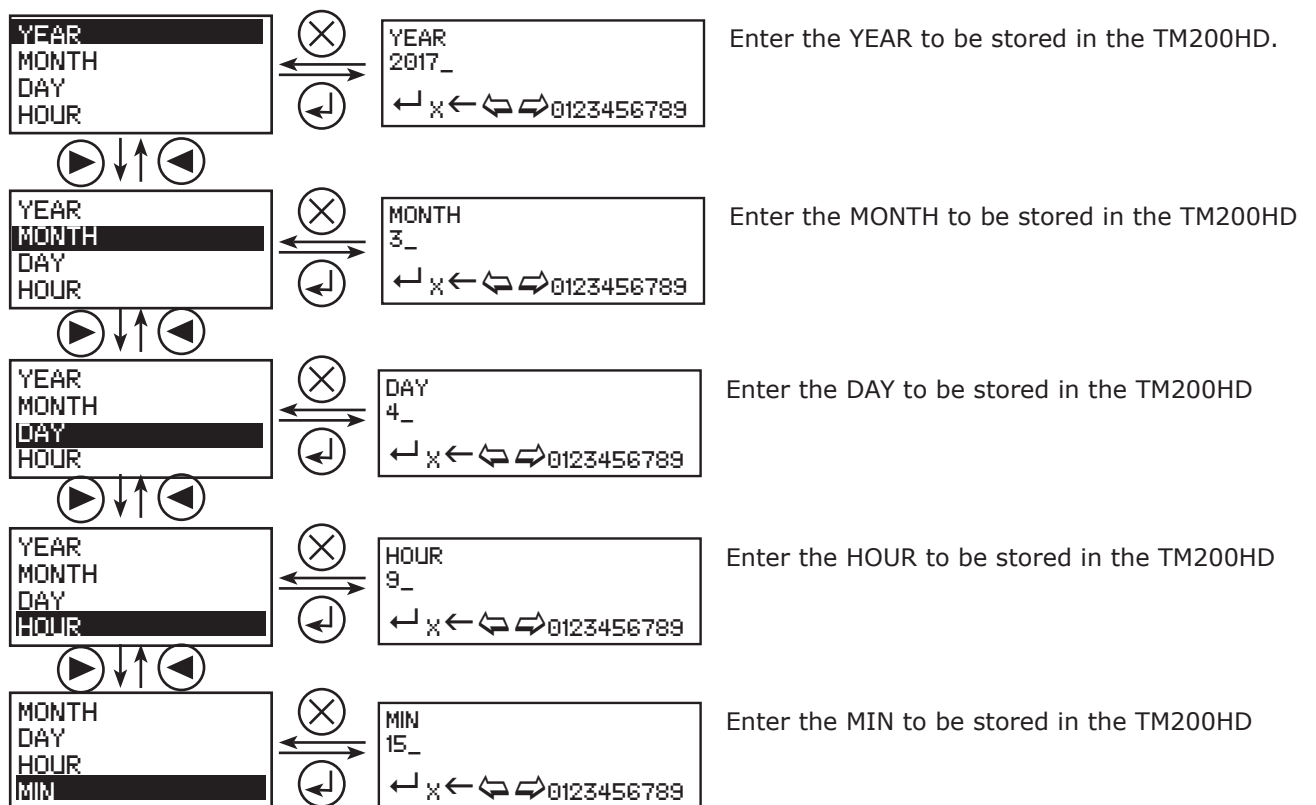




4.4 - The USB menu



4.5 - The CLOCK menu (battery inside automatically keeps date and time in memory)



### 4.6 - The language menu

Select in this menu your preferential language.

### 4.7 - Default configuration

When selecting this option, all your modifications will be lost, and the default factory settings will be restored.

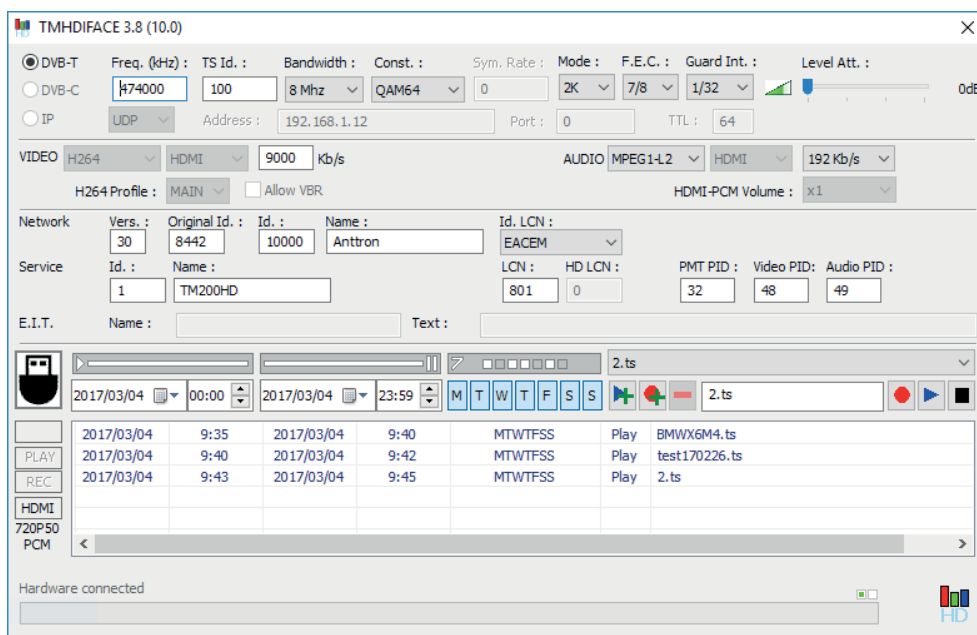
## 5 - Programming using a PC

The settings of the TM200HD can also be changed using a PC.

First, please install the software **TMHDI Face** on your PC. You can download this software from our internet site **anttron.com**

After installation of this software, connect the TM200HD using a USB cable (not included) to your personal computer. Then launch the program **TMHDI face**.

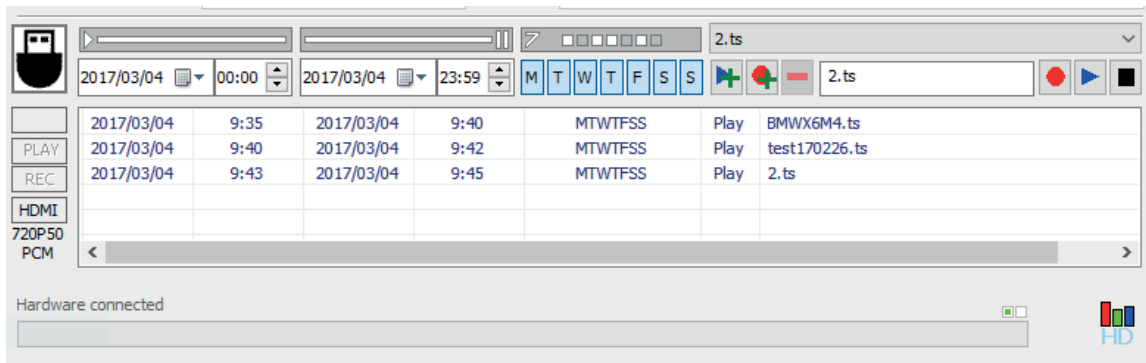
On the display of the TM200HD the message <USB> appears, indicating that the programming is now performed through your PC. The following window appears on your screen.



Now, all parameters discussed in Chapter 4 of this user manual can be modified by TMHDIface.

## 6 - Making play and recording lists using TMHDI face

Due to the ability of recording and playing using a USB 3.0 key, together with the presence of a clock, the TM200HD is an ideal product to use in **DIGITAL SIGNAGE APPLICATIONS**. Indeed different .ts files present on the USB key can be played over your DVB-T network according to a predefined time table, specifying over a given period the start time and end time and also the days of the week. TMHDIface allows easy setup of these timetables.

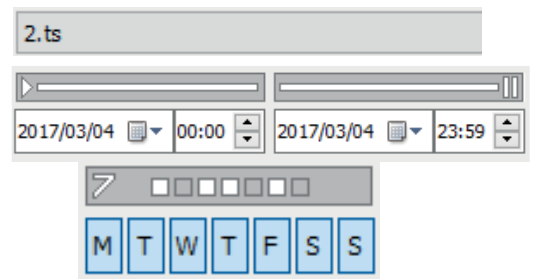


### 6.1 - Direct play and record.

Select a file in the dropdown list of files available on the USB key and press Create a "file.ts" in TMHDIface and press to record the HDMI source. Press to end playing or recording. Please note that .ts file will only be played over the DVBT network and NOT to the HDMI out.

### 6.2 - Making a playlist.

- a/ Select a .ts file from the files present on the USB key
- b/ Select the start date/time and the end date/time :
- c/ Select the days of the week when to play this.ts
- d/ Press the add to playlist button.

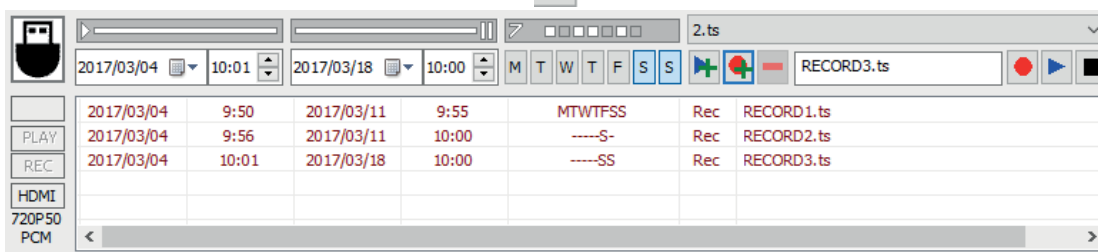


2017/03/04	9:35	2017/03/04	9:40	MTWTFSS	Play	BMW6M4.ts
2017/03/04	9:40	2017/03/04	9:42	MTWTFSS	Play	test170226.ts
2017/03/04	9:43	2017/03/04	9:45	MTWTFSS	Play	2.ts

- e/ For removing an item from the playlist, select that line and press the button

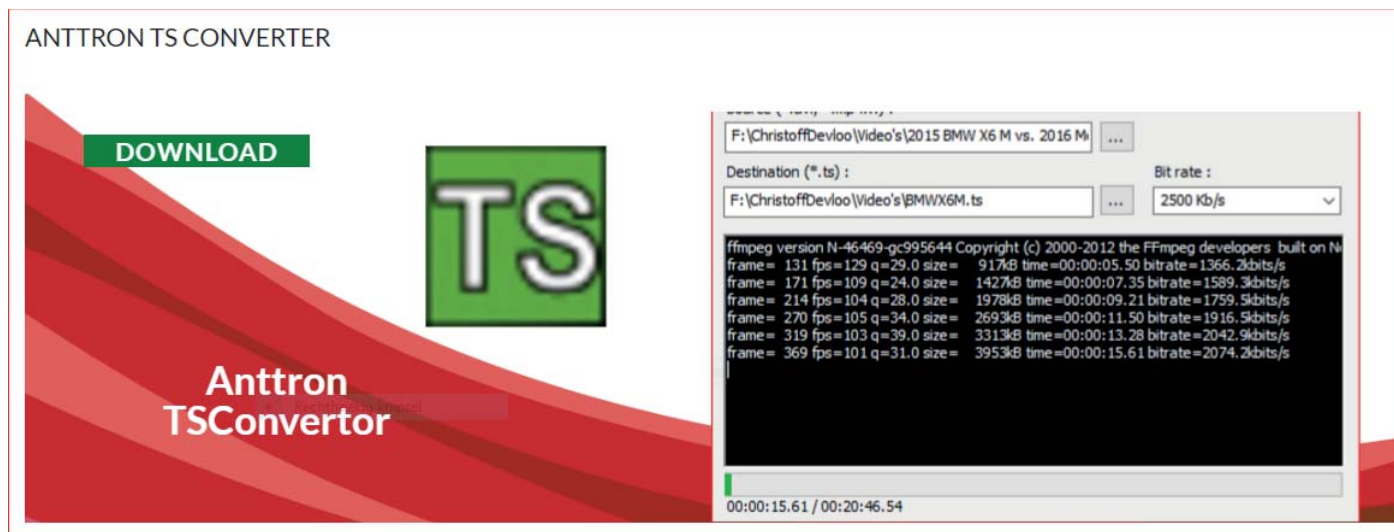
### 6.3 - Making a recordlist.

Similarly a recordlist can be created as described above. Instead, you have to first name the .ts file and then press the add to recordlist button



### 6.4 - Creating your .ts files

In order for you to create your .ts files, a **.ts convertor is available on the Antron website**. This allows you to easily convert your files from .avi or .mp4 into .ts



## 7 - Technical specifications

<b>Video input</b>	<b>Input</b>	HDMI
	<b>Resolution modes</b>	480p -576p -720p - 1080i - 1080P
	<b>Compression</b>	H.264 – bitrate 5-15 Mb/s
<b>Audio input</b>	<b>Input</b>	HDMI
	<b>Sample Rate</b>	HDMI (32kHz / 44.1 kHz / 48 kHz)
	<b>Compression</b>	AAC-LC / MPEG1-L2– bitrate 128-384 Kb/s
<b>DVB Processing</b>	<b>Table insertion</b>	PAT, PMT, SDT, NIT
	<b>Configuration</b>	Channel/network name, SID, LCN, TSID, ONID, NID, versions, audio, video PIDs...
<b>DVB-T output</b>	<b>Output frequency / level</b>	170-230 MHz + 470-862 MHz / > 85 dBµV
	<b>Constellation - FEC</b>	QPSK/16QAM/64QAM - 1/2, 2/3, 3/4, 5/6, 7/8
	<b>Guard interval</b>	1/4, 1/8, 1/16, 1/32
	<b>Mode - MER</b>	2K/8K - 31 dB
<b>Power</b>	<b>DC 2.1 mm connector</b>	+5V
	<b>Consumption</b>	10 Watts
<b>Dimensions</b>	<b>LxWxH</b>	150x130x35mm
	<b>Weight</b>	0.6 kg
<b>EAN code</b>	TM200HD	5420037692002