

ANTTRON

# TM170HD

HD encoder  
DVBT modulator  
HDMI loop



USER MANUAL V1.0

Congratulations on your purchase of the TM170HD !

This 'state of the art' product, is a HD encoder. The video and audio input is taken from HDMI. The HDMI input signal is passed to the HDMI out connector.

After compressing the video into H264 and audio in AAC or MPEG1-L2, the output is available as DVB-T signal.

Stand-alone configuration is made easy through 3 tact switches and ergonomic menu's. To make the configuration of the TM170HD ultra simple, a special software TMHDIface is available that you can download on our website [anttron.com](http://anttron.com)

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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.

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### **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**

- |           |                            |           |             |
|-----------|----------------------------|-----------|-------------|
| <b>C1</b> | Power supply input (5V/2A) | <b>C4</b> | RF output   |
| <b>C2</b> | USB input (PC programming) | <b>C5</b> | HDMI input  |
| <b>C3</b> | RF input                   | <b>C6</b> | HDMI output |









- |           |                     |                                                                                     |
|-----------|---------------------|-------------------------------------------------------------------------------------|
| <b>A1</b> | Display             |                                                                                     |
| <b>T1</b> | <b>ENTER</b> button |  |
| <b>T2</b> | <b>LEFT</b> button  |  |
| <b>T3</b> | <b>RIGHT</b> button |  |









### 3 - Software settings :

The TM170HD has a quick menu to allow for quick basic settings. For advanced settings an advanced menu is available.

#### 3.1 - Quick menu :

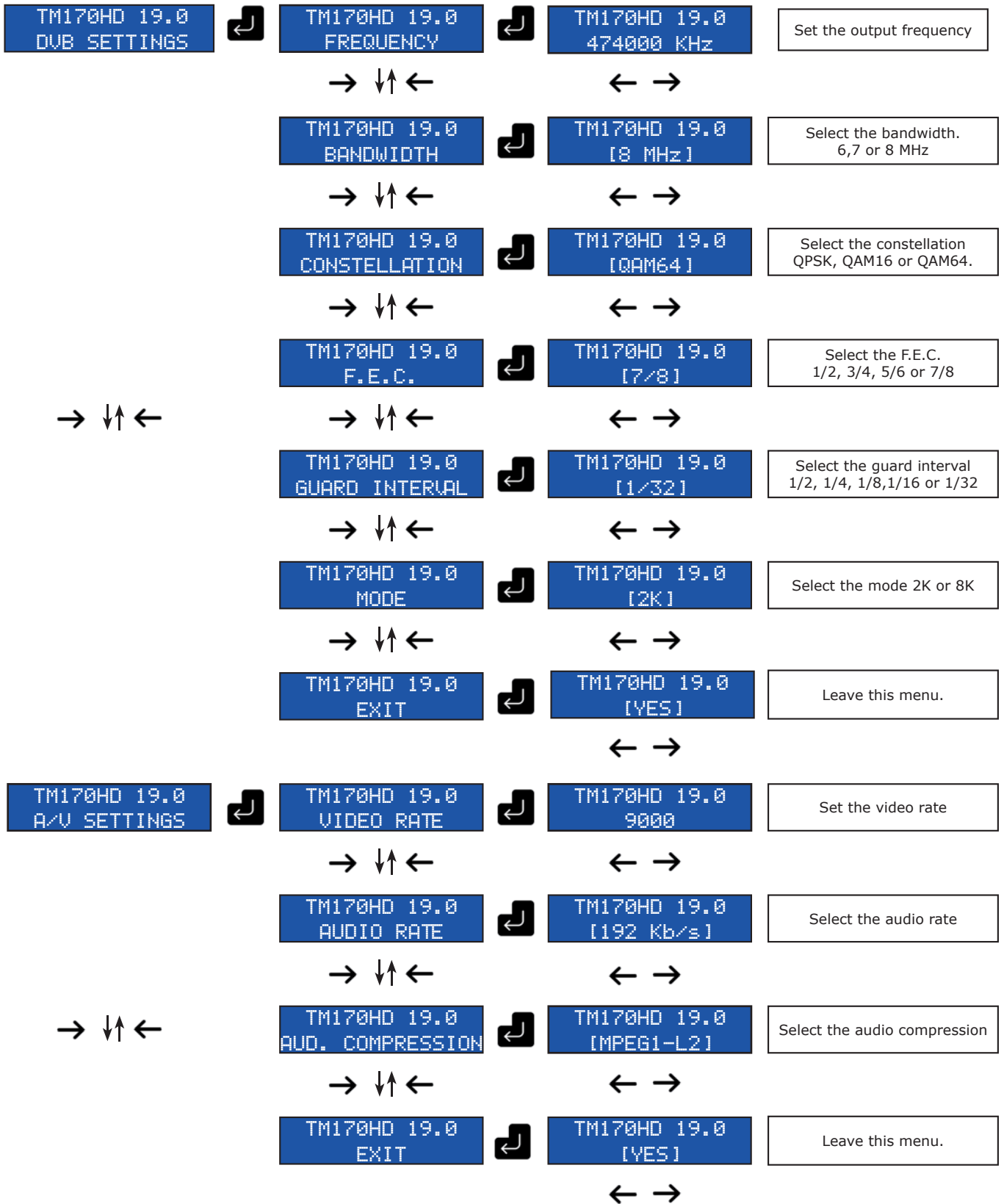
To enter the quick menu please push following sequence of buttons 

When entered successfully, the quick menu comes accessible, use the   buttons to move between the different menu options, PRESS AND HOLD  to select that option and use   to change the value for that option. Changes are automatically saved.

<p>TM170HD 19.0 CHANNEL</p> <p>→ ↓↑ ←</p>		<p>TM170HD 19.0 21 (474 MHz)</p> <p>← →</p>	Change the output channel.
<p>TM170HD 19.0 ATTENUATION</p> <p>→ ↓↑ ←</p>		<p>TM170HD 19.0 5 dB</p> <p>← →</p>	Change the output level.
<p>TM170HD 19.0 COUNTRY</p> <p>→ ↓↑ ←</p>		<p>TM170HD 19.0 [FRANCE]</p> <p>← →</p>	Change the country
<p>TM170HD 19.0 L.C.N.</p> <p>→ ↓↑ ←</p>		<p>TM170HD 19.0 790</p> <p>← →</p>	Change the L.C.N. number
<p>TM170HD 19.0 TS ID.</p> <p>→ ↓↑ ←</p>		<p>TM170HD 19.0 100</p> <p>← →</p>	Change the TS ID.
<p>TM170HD 19.0 LANGUAGE</p> <p>→ ↓↑ ←</p>		<p>TM170HD 19.0 [ENGLISH]</p> <p>← →</p>	Change the language.
<p>TM170HD 19.0 DEFAULT CONFIG.</p> <p>→ ↓↑ ←</p>		<p>TM170HD 19.0 [YES]</p> <p>← →</p>	Go back to factory settings
<p>TM170HD 19.0 EXIT</p>		<p>TM170HD 19.0 [YES]</p>	Leave this menu.

3.2 - Advanced menu

To enter the advanced menu please push following sequence of buttons



TM170HD 19.0 TS SETTINGS	↩	TM170HD 19.0 NIT RELEASE	↩	TM170HD 19.0 30	Set the NIT version
	→ ↓↑ ←			← →	
TM170HD 19.0 NET ID.	↩	TM170HD 19.0 10000	↩	TM170HD 19.0 10000	Set the Network ID
	→ ↓↑ ←			← →	
TM170HD 19.0 ORIG. NET ID.	↩	TM170HD 19.0 8442	↩	TM170HD 19.0 8442	Set the original network ID for your country
	→ ↓↑ ←			← →	
TM170HD 19.0 LCN ID.	↩	TM170HD 19.0 [EACEM]	↩	TM170HD 19.0 [EACEM]	Set the LCN system, EACEM, ITC, Nordig or Austral.
	→ ↓↑ ←			← →	
TM170HD 19.0 NETWORK NAME	↩	6789.[A]BCDEF Anttron	↩	6789.[A]BCDEF Anttron	Set the network name
	→ ↓↑ ←			← →	
TM170HD 19.0 SERVICE NAME	↩	6789.[A]BCDEF Channel A	↩	6789.[A]BCDEF Channel A	Set the service name
	→ ↓↑ ←			← →	
TM170HD 19.0 PROGRAM ID	↩	TM170HD 19.0 1	↩	TM170HD 19.0 1	Set the Program ID
	→ ↓↑ ←			← →	
TM170HD 19.0 PMT PID	↩	[TM170HD 19.0 32	↩	[TM170HD 19.0 32	Set the PMT PID
	→ ↓↑ ←			← →	
TM170HD 19.0 VIDEO PID	↩	TM170HD 19.0 48	↩	TM170HD 19.0 48	Set the video PID
	→ ↓↑ ←			← →	
TM170HD 19.0 AUDIO PID	↩	TM170HD 19.0 49	↩	TM170HD 19.0 49	Set the audio PID
	→ ↓↑ ←			← →	
TM170HD 19.0 EXIT	↩	TM170HD 19.0 [YES]	↩	TM170HD 19.0 [YES]	Leave this menu.
				← →	

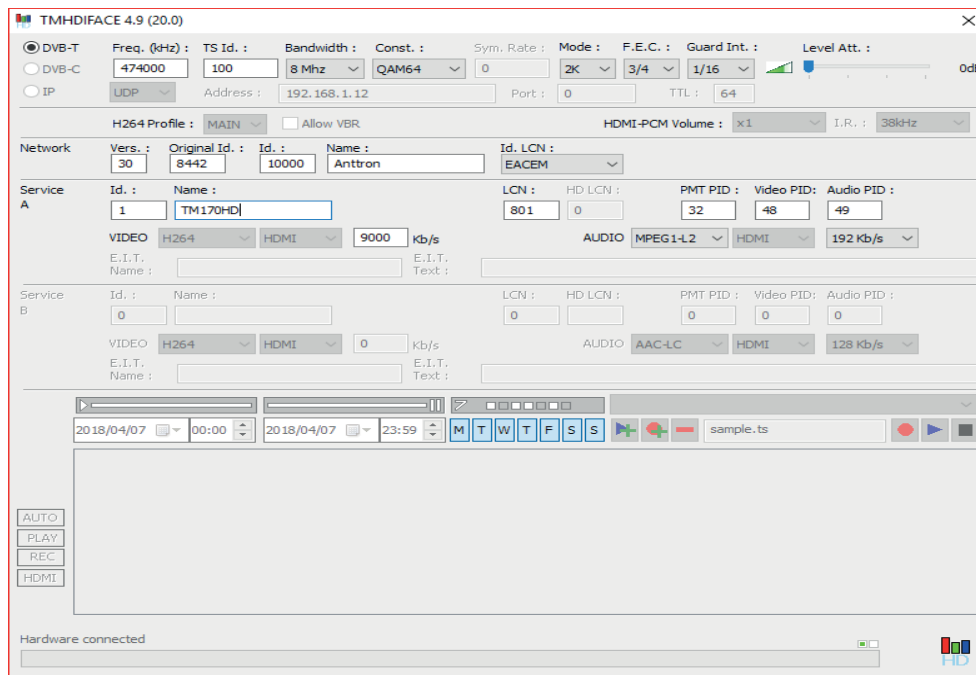
## 4 - Programming using a PC

The settings of the TM170HD can also be changed using a PC.

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

After installation of this software, connect the TM170HD using a USB cable (not included) to your personal computer. Then launch the program **TMHDIface**.

On the display of the TM170HD 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 3 of this user manual can be modified by TMHDIface.

## 5 - 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 128-320 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 - 33 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>	0.9 kg
<b>EAN code</b>	TM170HD	5420037691708