

ANTTRON

TMZ160HD

HD encoder
DVB-T/C modulator



USER MANUAL V1.0

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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

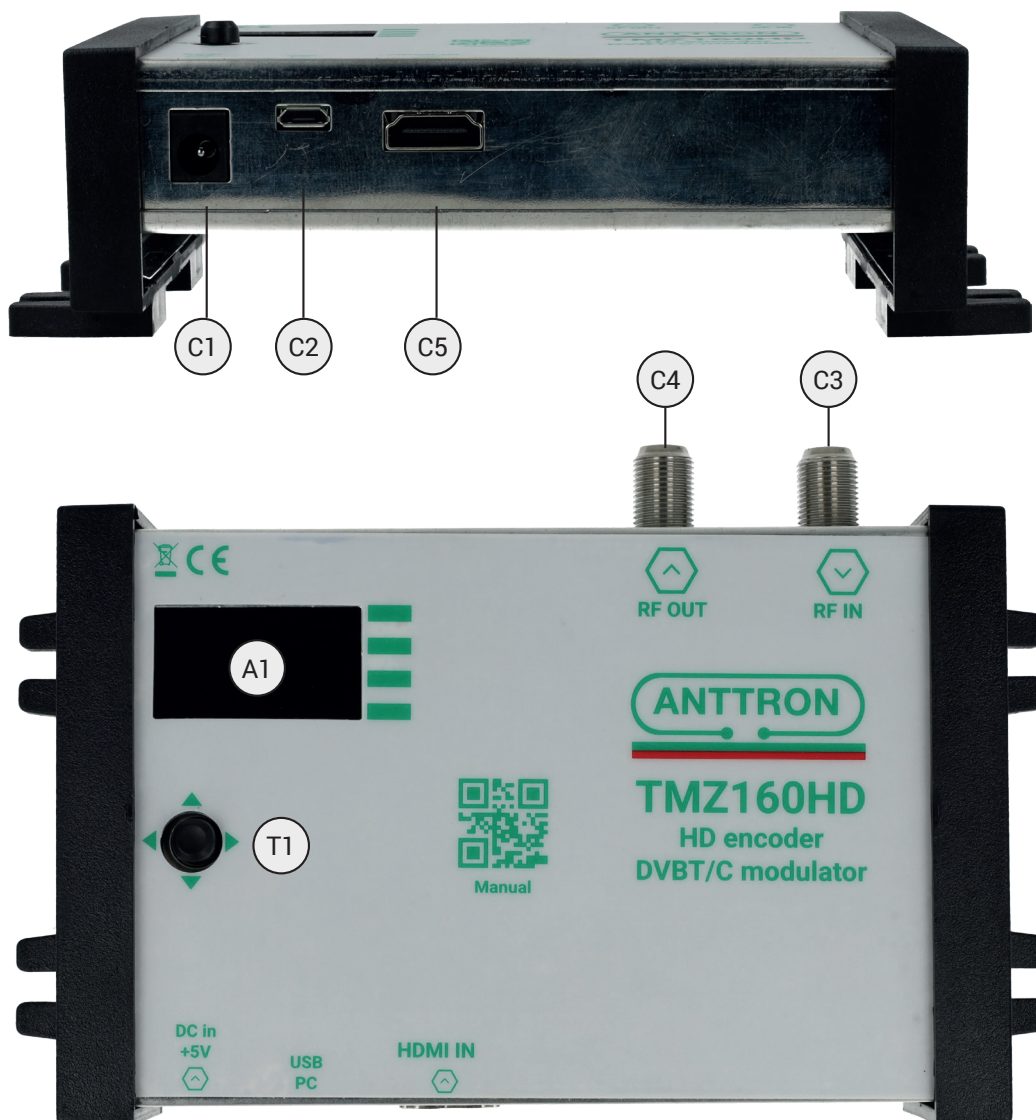
The use of accessories not manufactured by the manufacturer can cause damage to the module.

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)
- C2** USB input (programming by PC)
- C3** RF input
- C4** RF output
- C5** HDMI input



- A1** OLED screen
- T1** Joystick for setting parameters



3 - Settings

The TMZ160HD has different menus. All parameters that can be changed are grouped into 3 menus.

3.1 The MODULATION menu

The modulation menu has submenus : MODE / ATTENUATION / SETTINGS AND TS SETTINGS

In MODE menu you can select the modulation standard DVB-T or DVB-C

```

TMZ160HD V17
MODULATION
IN SETTINGS
ADV. SETTINGS
1080P
  
```

```

→MODULATION
MODE
ATTENUATION
SETTINGS
TS SETTINGS
1080P
  
```

```

→MODULATION→MODE
DVB-T MODULATOR
DVB-C MODULATOR
1080P
  
```

In ATTENUATION menu, you can set the value of the ATTENUATOR. The higher the value, the lower the RF output level.

```

→MODULATION
MODE
ATTENUATION
SETTINGS
TS SETTINGS
1080P
  
```

```

→ATTENUATION
0 dB
1080P
  
```

In the SETTINGS menu you can set the output CHANNEL, FREQUENCY, BANDWIDTH, CONSTELLATION, FEC or GUARD INTERVAL.

```

→MODULATION
MODE
ATTENUATION
SETTINGS
TS SETTINGS
1080P
  
```

```

→SETTINGS
CHANNEL
FREQUENCY
BANDWIDTH
CONSTELLATION
F.E.C.
1080P
  
```

In the TS SETTINGS menu, following parameters can be changed. : COUNTRY, NET. ID. (network ID), ORIG.NET ID (ONID) LCN ID. (EACEM, ITC, NORDIG, AUSTRALIA), NETWORK NAME, NIT RELEASE and TS ID.

```

→MODULATION
MODE
ATTENUATION
SETTINGS
TS SETTINGS
1080P
  
```

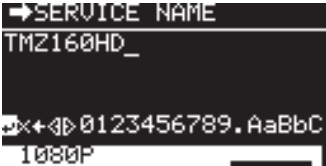
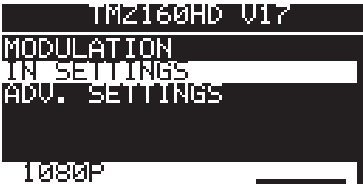
```

→TS SETTINGS
COUNTRY
NET ID.
ORIG. NET ID.
LCN ID.
NETWORK NAME
1080P
  
```

3.2 . The IN SETTINGS menu

The IN SETTINGS MENU has the following submenus :
SERVICE NAME, PROGRAM ID, L.C.N., PMT PID, VIDEO PID, AUDIO PID, VIDEO RATE and AUDIO RATE.

Use the joystick to move between the different options and press the joystick to confirm your selection.



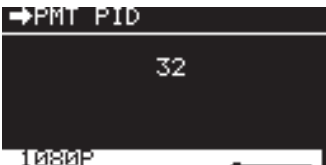
Change the SERVICE NAME



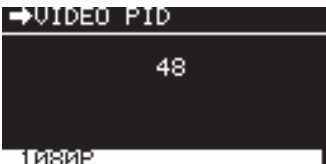
Change the PROGRAM ID



Change LCN number



Change the PMT PID



Change the VIDEO PID



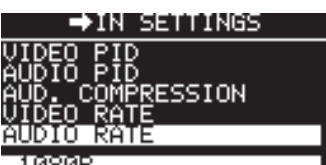
Change the AUDIO PID



Change the AUDIO COMPRESSION



Change the VIDEO RATE

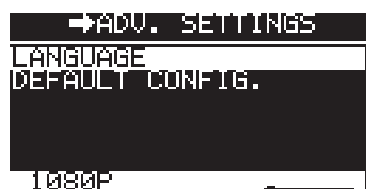


Change the AUDIO RATE

3.3 . The ADV. SETTINGS MENU

The ADV. SETTINGS MENU has the following submenus :
LANGUAGE and DEFAULT CONFIG..

Use the joystick to move between the different options and press the joystick to confirm your selection.



Select your language



Select this option to return to the
factory settings.

4 - TMHDIface

All parameters discussed in chapter 3 can also be changed using TMHDIface which can be downloaded from the Anttron website anttron.com

TMHDIface 9.2 (setup 191) (H159-17.0)

MULTIPLEX **SERVICE** USB (M1A) MISC. MANUFACTURER

IP Address : 192.168.1.10 Mask : 255.255.255.0 Gateway : 192.168.1.1

☒ DHCP

Vers. : 30 Name : ANTTRON LCN Country : FRANCE Id. : 8442 Original Id. : 10000 Id. LCN : EACEM

M1

☒ DVB-T ☐ DVB-C ☐ DVB-S

TS Id. : 100 Freq. (kHz) : 474000 Bandwidth : 8 Mhz Const. : QAM64 Sym. Rate : 6875 Mode : 2K F.E.C. : 7/8 Guard Int. : 1/32 Level Att. : 0dB

☐ IP Address : 239.192.1.0 Port : 5004 TTL : 64

Hardware connected

TMHDIface 9.2 (setup 191) (H159-17.0)

MULTIPLEX **SERVICE** USB (M1A) MISC. MANUFACTURER

M1A 1080P60 PCM

Id. : 1 Name : TMZ160HD LCN : 801 HD LCN : 0

PID : 32

VIDEO : 48 H264 HDMI Kb/s : 9000 0

AUDIO : 49 MPEG1-L2 HDMI 192 Kb/s +/- 0 ms

Name : Text :

E.I.T. : A.I.T. : 51 reserved 0

Hardware connected

5 - Technical specifications

Video input	Input	HDMI
	Resolutions	480p -576p -720p - 1080i - 1080P
	Compression	H.264 – bitrate 1-15 Mb/s
Audio input	Input	HDMI
	Sampling rate	HDMI (32kHz / 44.1 kHz / 48 kHz)
	Compression	AAC-LC / MPEG1-L2– bitrate 128-384 Kb/s
DVB treatment	Table insertion	PAT, PMT, SDT, NIT
	Configuration	Channel/network name, SID, LCN, TSID, ONID, NID, versions, audio, video PIDs...
DVBT output	Output frequency level	170-230 MHz + 470-862 MHz / > 84 dBμV
	Constellation - FEC	QPSK/16QAM/64QAM - 1/2, 2/3, 3/4, 5/6, 7/8
	BW - Guard interval	BW : 6/7/8 MHz GI 1/4, 1/8, 1/16, 1/32
	MER	2K/8K - 35dB
DVBC output	Frequency	47-862 MHz / > 82 dBμV
	Constellation - MER	QAM16,32,64,128,256 / MER > 40 dB
	Symbol rate	2000 - 7000
Power	DC connector - 2.1mm	+5V
	Power consumption	4 Watts
Dimensions	LxWxH	160x90x45mm
	Poids	0.9 kg
EAN code	TMZ160HD	5420037691629