



MODIG S

**USER'S MANUAL**



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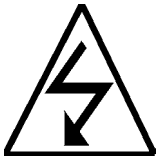
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# 1 Safety Rules

Please read the manual carefully before using the modulator.

You will receive a lot of information to use this product correctly and you will prevent incidents.

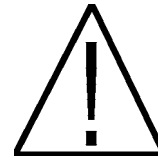
Please keep the manual on a safe place.



This sign warns you about high voltages, with risk of electric shock



**Caution:** Do not open the housing of this modulator. Repairs can only be made by professionals authorized by Fte maximal. If not, warranty will not be valid anymore.



This sign informs about special information which is important to know.

**Caution:** Keep this modulator far away from liquids. Do not place it on placements close to water like flowers vases, wash basin, aquariums or pools. There is a great risk of electric shock when liquid or excessive moisture enters the interior of the modulator. Never place other devices on it; they can overheat the modulator as well as daring fire risk. The modulator must be used only with original power supply. Please read carefully this manual and do not hesitate to contact to professional help if you have any doubt.

## Opening the modulator housing will mean a warranty void.

### Installation:

1. Respect the ventilation holes of the equipment without covering them with any object.
2. Keep clear the environment of the equipment, with a minimum ratio of 40 cm.
3. Do not place the equipment close to any heating source.
4. Do not make the equipment work at any temperature that exceeds the range of working temperatures.
5. Avoid placements with risk of dumping liquids inside and with big changes in temperature.
6. Never open the equipment by yourself, due to risk of electrocution. In case of problems, please get always qualified technicians.
7. Never open the equipment while it is plugged to the power socket.
8. It is preferable that the equipment is disconnected during the connection of it.
9. Respect the safety electrical rules during the installation. Use the materials that perform the current regulations.
10. The connection plug must be accessible in an easy and simple mode, and always to get a fast disconnection.
11. Never touch the power network plug with wet hands. Disconnect always the equipment before handling its connections.
12. Do not place any heavy object over the equipment, due to it could get damaged.

**Cleaning:** Before cleaning the modulator with a slightly damped cloth, please disconnect the main 230 Vac connection from the modulator. Please use only mild cleaners.

**Accessories:** Please, do not use accessories which are not agreed by the manufacturer of the modulator. Unsuitable accessories could increase the risk of getting on fire, an electrical impact or other damages.

**Placement:** Select a placement where the modulator has air circulation enough; otherwise it may have overheating accumulation.

**Power connection:** Select a main plug with easy access, in case of unplugging necessity; it will be easier and faster. Please, make sure that the cord as well as the plug is in perfect conditions. Do not pull the cable, use always the plug.

**Housing:** Please, make sure that no liquid will filter into the housing of the modulator. If so, disconnect immediately the modulator from the main 230 Vac plug and bring the modulator to a professional.

**Air humidity:** When you take the Modulator from a cold to a warm place, please wait until the modulator gets the same temperature as the new environment, in order to avoid problems of humidity condensation.

**Maintenance / Repairing:** Within the warranty time all the repairing processes should be done by Fte Maximal technical staff. Otherwise, the warranty will be lost.

## 2 Content of the box

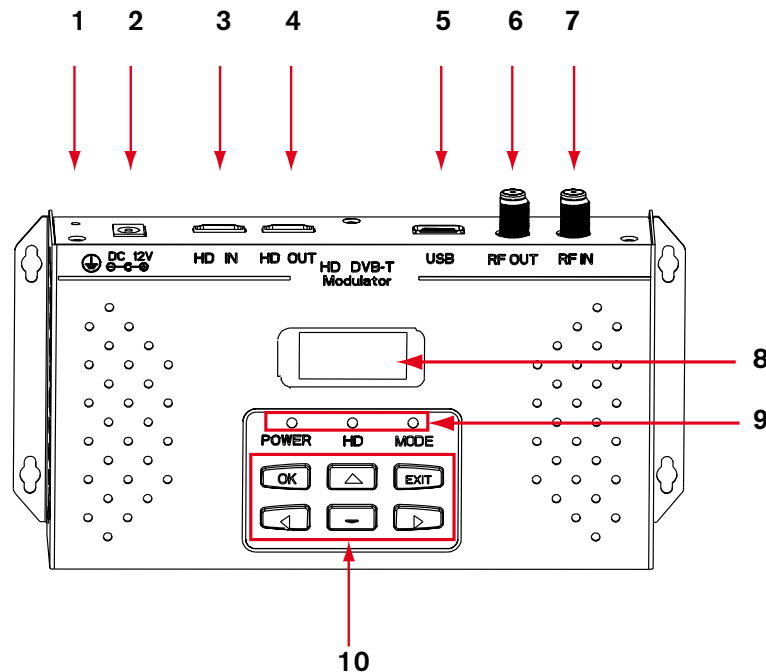
When you open the box or the first time, you will find the following content:

1. Modulator
2. Power supply 12Vdc-2A
3. User's manual

## 3 Description

This device allow connect in the HDMI input the Audio/video signal HD from a satellite receiver, a surveillance system or other equipment with HDMI output compatible and modulate in DVB-T in his RF Output to send to a coaxial distribution to see in several TV. The modulator has a RF input to mix the signal of the terrestrial aerial received with the output DVB-T channel in the RF output. It has a loop HDMI output to connect a TV using a HDMI cable.

### 3.1 Connections

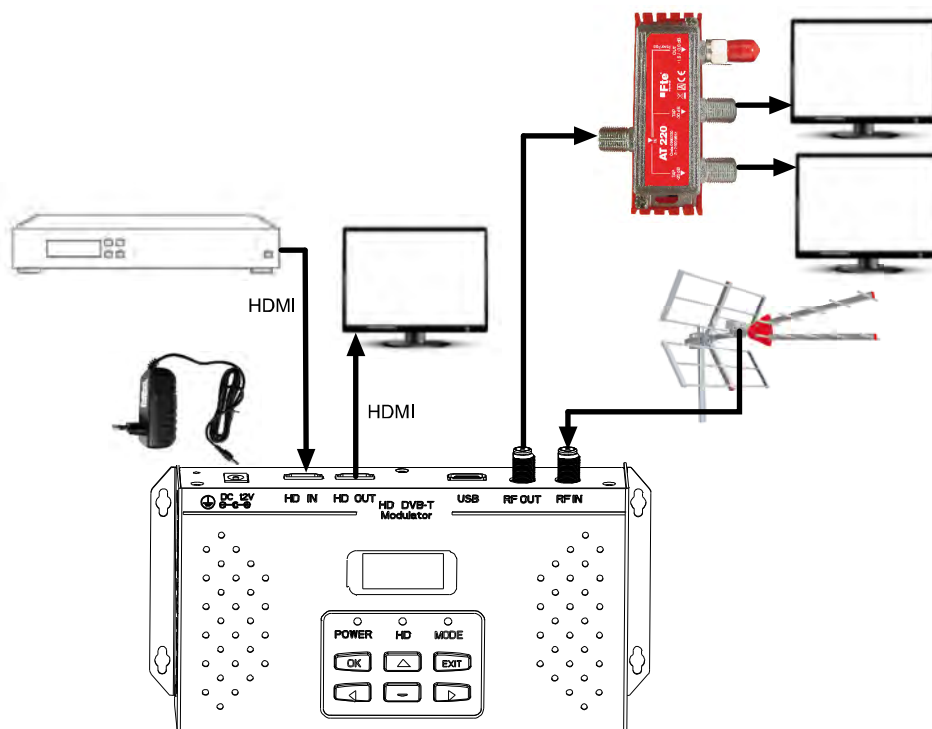


1. **Ground:** Ground connector.
2. **DC 12V:** 12Vdc connection (Power Supply).
3. **HDMI IN:** HD A/V input.
4. **HDMI OUT:** HDMI output to connect a nearby TV via HDMI.
5. **USB:** USB port used to upgrade the device.
6. **RF OUT:** RF output of the modulator.
7. **RF IN:** RF input of the modulator.
8. **DISPLAY:** Show the parameter of the modulator.
9. **LEDS indicators:**
  - a. **POWER:** When this led is on the device has power..
  - b. **HD:** This led is on when the modulator has A/V signal in HDMI IN.
  - c. **MODE:** This led is on when the user is editing the settings of the modulator.
10. **KEYBOARD:** The button of the keyboard is used to change the settings of the modulator.
  - a. **OK.** Press this button to enable the operation mode to edit the settings or confirm the new value of the parameter.

- b. ◀▶ In edit setting mode use Left/Right buttons to select the parameter to change the value.
- c. ▲▼ Use Up/down button to change the value of the current parameter in edition mode.
- d. **EXIT**. Store the last edition operation or return to the operation mode.

## 4 Installation

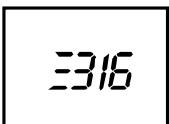
Connect a HDMI cable from the HDMI output of the HD audio / video source to the input HDMI IN of the modulator. If necessary, connect the HDMI OUT to a TV using an HDMI cable. The RF output must be connected to your coaxial cable distribution. Connect the input RF IN to your terrestrial antenna or your terrestrial TV socket. If the RF IN connector is not used, you must connect a 75  $\Omega$  type F load. Connect the jack of the external power supply to the input DC 12V of the modulator and finally connect the power supply to a power socket.



Example of connection

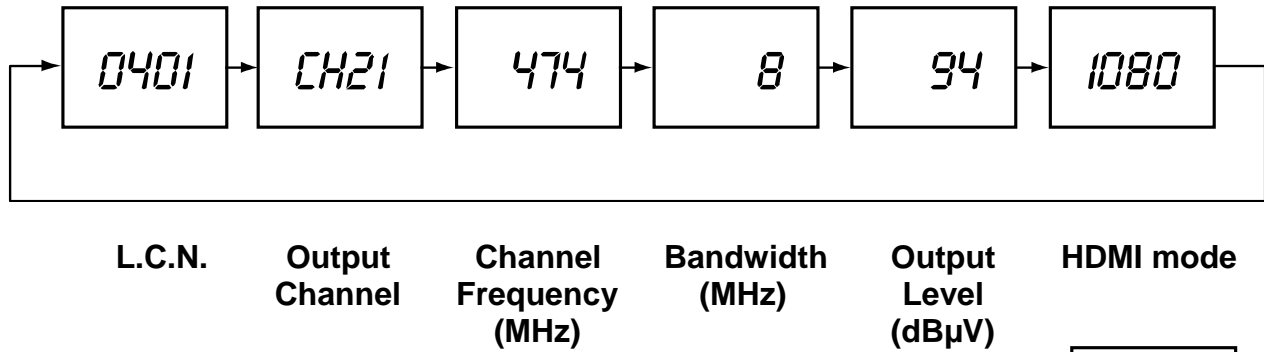
## 5 Modulator operation and configuration

Some second after power on the modulator, in the display appear the firmware version. In the next picture show the version 3.16 in the display.

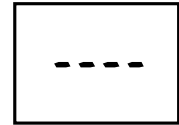


## 5.1 Normal operation mode

A few seconds after displaying the firmware version, the following information will be displayed sequentially:



If the input HDMI IN has not video signal the HDMI mode will be show as



## 5.2 Configuration

First press the OK key, the led "Mode" will light up, indicating that the modulator is in the editing mode of the configuration. The parameters that can be adjusted are: The output channel, the output level and the L.C.N. value.

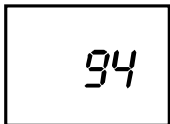
### Set the output channel



Press the buttons  $\blacktriangle$   $\blacktriangledown$  to modify the output channel of the modulator. The possible values are from CH05 to CH12 and from CH21 to CH69.

Press  $\blacktriangleright$  to edit the next parameter or press **OK** to confirm the value and return to the normal operation of the modulator.

### Modifying the output level



Use the buttons  $\blacktriangle$   $\blacktriangledown$  to select the output level of the modulator. The values of the output level are between 75 and 110 dB $\mu$ V.

Press  $\blacktriangleright$  to edit the next parameter, Press  $\blacktriangleleft$  to edit the previous parameter or press **OK** to confirm the value and return to the normal operation of the modulator.

### Set the value of the L.C.N. (Logical Channel Number)



Press **OK** and the digit furthest to the left of the number will begin to flash, indicating that it is the digit to be modified. Use the buttons  $\blacktriangleleft$   $\blacktriangleright$  to select another digit of the number. Use the buttons  $\blacktriangle$   $\blacktriangledown$  to change the value of the number.

Press **OK** to confirm the new value and finish the edition of the L.C.N.

The possible values of L.C.N. are between 0 and 999. If try to set a number higher than 999, the modulator store the higher value allowed "999" after press the button **OK**.

Press the button  $\blacktriangleright$  to edit the value of the channel, press the button  $\blacktriangleleft$  to return to the previous parameter or press **Exit** to return to the normal operation mode.

## 6 Technical specification

Model	MODIG S
Code	6000771
<b>input Audio/Video</b>	
Type of connector	1x HDMI Type A female
HDMI version	1.3
HDCP support	yes, v1.4
Video resolution	480i (30 fps), 576i (25 fps), 480 p (60 fps), 576p (60 fps), 720p-50 (50 fps), 720p-60, (60 fps), 1080i-50, 1080i-60, 1080p50, 1080p-60 fps.
Video encode	MPEG-4 AVC/H264
Video bitrate	Auto (8-18 Mbits)
Audio encode	MPEG 1 Layer2
Audio bitrate	192 Kbps
<b>Output Audio/Video</b>	
Type of connector	1x HDMI Type A female
<b>Transport Stream processing</b>	
LCN support	Yes
Automatic regeneration	NIT, PAT, CAT, SDT, PMT and EIT tables
<b>Input RF</b>	
Type of connector	F Female
Insertion loss RF IN-RF OUT	≤4 dB
<b>DVB-T parameters</b>	
Bandwidth	7 & 8 MHz (Automatic selection depend of the output channel)
Mode	8K
Constellation	64 QAM
Guard Interval	1/32
Code rate	7/8
<b>RF Output</b>	
Type of connector	F female
Type of output	DVB-T
Frequency range	174-230 MHz / 470-862 MHz
Channels	CH05-CH12 / CH21-CH69
Output level	110 dBμV
Regulation	0-35 dB
MER	> 31 dB
<b>Programming</b>	
Interface	4 x 7 segments display and keyboard with 6 buttons
<b>Supply</b>	
Supply voltage	12 Vdc
Power supply	100-240Vac/50-60Hz 0.6A / 12Vdc-2A
Ground connector in the chassis	Yes
<b>Others</b>	
USB port	1 used to upgrade the device
Working temperature	0-45°C
Dimensions	197x113x44
Net weight	601 g.