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ASM03

Digital Signal Meter for Satellite & Terrestrial signals

User Guide



Important Safety Notice

Thank you for purchasing this Antiference signal analyser product. Please read the following instructions carefully, retain for future reference and read the following safety considerations:

1. Do not place any items on the device
2. Ensure no liquids are on or near the device as splashes may damage the unit
3. For cleaning, use a damp cloth only without solvents
4. Do not attempt to open the case as there is a danger of electric shock
5. Repairs should be carried out by a qualified technician
6. Keep the protective jacket in place while using the meter
7. Store the meter in the carry case when not in use to protect the screen from damage
8. Use only the supplied power supply as 3rd party products may damage the product

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1. Introduction

The Antiference ASM03 is a signal analyser for satellite and terrestrial signals. It features an 5 inch TFT LCD display and simple to use menu system. It supports DVB-S/S2/DVB-T/T2/DVB-C. Modes of use include a spectrum function, real time constellation display, TP search and blind search. In addition there is an audio video in/out function and HDMI in/out for monitor or CCTV installation plus 12V DC line output powering for installing with a pre-amplifier (masthead).

2. Features

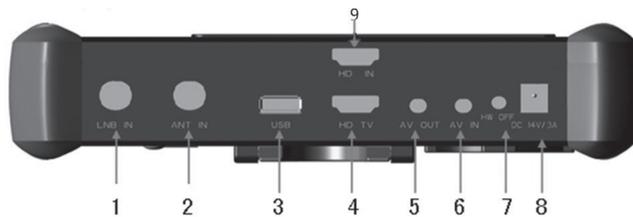
- 5 inch TFT LCD display
- Supports DVB-S/S2/DVB-T/T2/DVB-C.
- Video decoding: MPEG2/4, H.264, HVEC/H.265
- Audio decoding: MPEG-1, MPEG-2, ISO/IEC 13818-3 LAYER I&II
- Measurement values MER, $\text{db}\mu\text{V}$, VBER, CBER, LBER
- Internet connection with USB WiFi dongle (available from 3rd party supplier)
- Signal lock audible notification
- CVBS input/output (CCTV)
- USB interface for firmware updates and PVR function
- HDMI input/output (CCTV)
- LED flashlight
- Li-ion battery 4000mAh@12.6V
- OSD with multi-languages
- Loudspeaker for audio playback
- Protective case
- Power supply 100-240V/50/60Hz 12V 3000mA

3. Package contents

1. ASM03 Signal Meter
2. 12V 3000mA Mains Charger with 3 Pin UK Plug
3. 12V In-Car Charger
4. Soft Carry Case
5. RF Connector Adaptors
6. Shoulder Strap
7. User Guide

4. Front & Top Panel Layouts

4.1. Top Panel Description



1. Satellite LNB input
2. Terrestrial RF input
3. USB 2.0
4. HDMI output
5. AV output
6. AV input
7. Reset button
8. DC input
9. HDMI input

4. Front & Top Panel Layouts (cont)

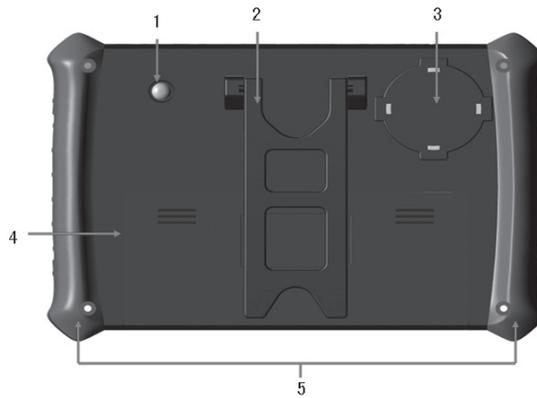
4.2. Front Panel Description



1. Power on switch
2. Power indicator
3. Battery indicator
4. 13V indicator
5. 18V indicator
6. 22KHz tone indicator
7. Signal lock indicator
8. F1-F4 Shortcut keys
9. Numeric keys
10. GOTO - select satellite or transponder
11. LIGHT - long press to activate LED flashlight
12. SCREEN - signal source switching
13. MUTE - turn audio on or off
14. SPEC - shortcut to spectrum
15. CONS - shortcut to constellation
16. FIND - shortcut to satellite finding
17. ANGLE - shortcut to angle calculation
18. Arrow keys to navigate menu
19. OK - confirm key
20. MENU - shortcut to main menu
21. EXIT - exit current menu
22. Current signal quality
23. LCD screen

4. Front & Top Panel Layouts (cont)

4.3. Rear Panel Description



1. LED flashlight
2. Desk stand
3. Loudspeaker
4. Battery compartment
5. Carry handles

5. Main Menu

5.1 Main menu navigation

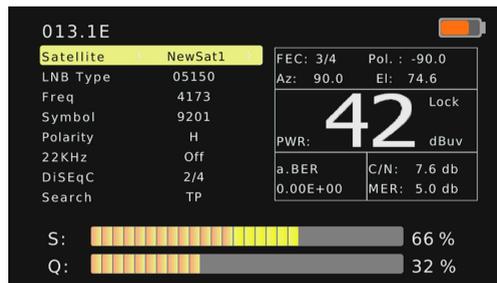
When the ASM03 is first powers up, the main menu will automatically appear. Use this menu to navigate to the various sub menus in DVB-S, DVB-T and settings etc.



6. DVB-S/S2 Mode

6.1. Satellite Finding

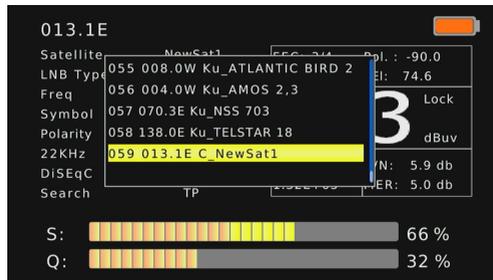
Highlight DVBS-S in the main menu to access the satellite finding option. Press [OK] to enter the menu.



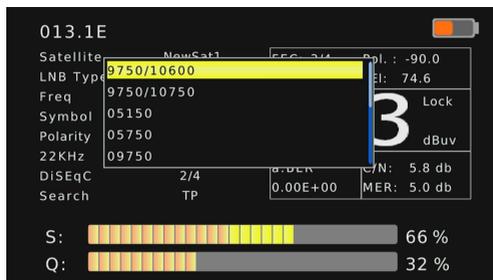
6. DVB-S/S2 Mode (cont)

6.1. Satellite Finding (cont)

With the satellite option highlighted, press [OK] to select the channel plan. Press [▲/▼] to select the required satellite channel plan. Press [OK] to select.



Press [OK] on the LNB type option. Press [▲/▼] to select the LNB type and press [OK] to confirm..



6. DVB-S/S2 Mode (cont)

6.1. Satellite Finding (cont)

Press [OK] on Freq to see the symbol rate and polarity options. Using the keypad, type in the frequency, symbol rate & polarity. Press [OK] to confirm.



When a signal lock is reached, the buzzer will sound with fastest repetition. The signal quality bar is displayed on the LCD and the LOCK LED will light. Press [OK] on the search option to scan for channels on the selected TP. It will switch to the Program Page after the search is complete.



6. DVB-S/S2 Mode (cont)

6.2. Dish Setting

Move cursor to Dish Setup and press [OK].



In the satellite list page, press [▲/▼] to select the required satellite channel plan. Press [F1] to add a new satellite with satellite name, longitude direction, longitude angle or band.



6. DVB-S/S2 Mode (cont)

6.2. Dish Setting (cont)

Press [F2] to edit an existing satellite channel plan. Options include satellite name, longitude direction, longitude angle or band.



Press [F3] to delete an existing satellite channel plan. Select the satellite channel plan to be deleted and press [OK]. Press [EXIT] to return to the previous menu



6. DVB-S/S2 Mode (cont)

6.2. Dish Setting (cont)

Press [F4] to start a scan. Select the required scan mode from the options.



Press [GOTO] to access the TP list. [F1], [F2], [F3] & [F4] can be used to add, edit, delete or begin the scan of the selected TP. Press [GOTO] to return to the satellite list.



6. DVB-S/S2 Mode (cont)

6.2. Dish Setting (cont)

Select a satellite and press [◀ / ▶] to choose the LNB type. Press [▲ / ▼] to select the LNB type from the options.

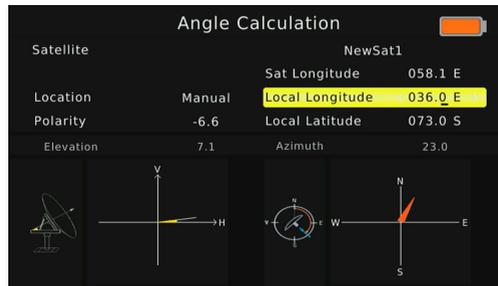


Select LNB power by pressing [◀ / ▶].
 Select 22KHz tone AUTO/ON/OFF.
 Press to chose the LNB type.
 Press [◀ / ▶] to choose the Toneburst
 Press [◀ / ▶] to choose DiSEqC 1.0
 Press [◀ / ▶] to choose DiSEqC 1.1
 Press [◀ / ▶] to select motor options

6. DVB-S/S2 Mode (cont)

6.3. Angle Calculation

Move cursor to Angle Calculation and press [OK] to enter the menu.



Press [◀ / ▶] on Satellite option to select the existing satellite, the longitude of the satellite will be changed correspondingly.

Press [▲ / ▼] on Sat Longitude option, you can use the keypad to input the required satellite longitude.

If you select Manual, you can move cursor to the Local Longitude and the Local Latitude and use the keypad to input the required number.

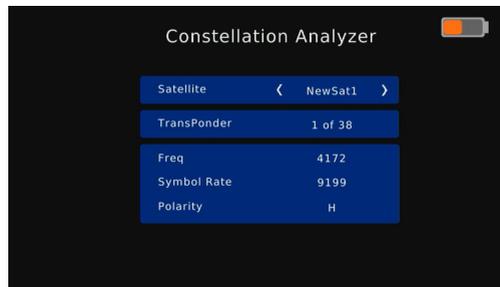
Press [◀ / ▶] to select east or west local longitude, south or north Hemisphere.

When a parameter has changed, the system will calculate the result and will show the picture on the screen automatically.

6. DVB-S/S2 Mode (cont)

6.4. Constellation Analyzer

Move cursor to Constellation Analyzer and press [OK].

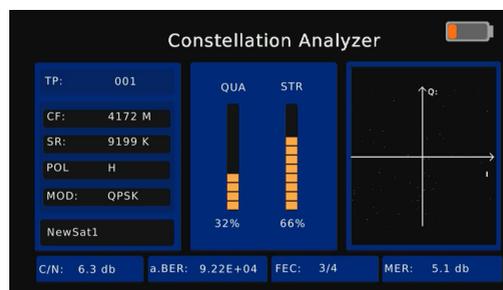


Press [◀ / ▶] to select satellite channel plan. Changes will be displayed accordingly.

Press [◀ / ▶] to select Transponder. Changes will be displayed accordingly.

Press [OK] to see the quality and strength bar.

Press [▲ / ▼] to switch between frequencies of selected channel plan.



7. DVB-T/T2 Mode

7.1. Terrestrial Mode

Move cursor to DVB-T2 option and press [OK]



Press [▲/▼] on Manual Search and press [OK] to see the following menu:



8. DVB-C Mode

8.1. Cable TV Mode

Move cursor to DVB-C and press [OK].



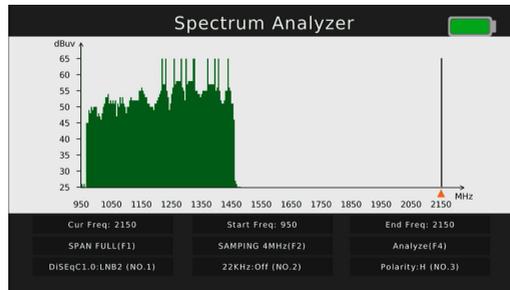
Press [▲/▼] on Manual Search and press [OK] to see the following menu:



9. Spectrum Mode

9.1. Spectrum Mode

Move cursor to Spectrum and press [OK].



Press [F1] to switch SPAN of spectrum frequency, FULL is default, Adjusting the span will show clearer detail of the spectrum.

Press [F4] to pause current status.

Press [▲/▼] to move vertical coordinate's position.

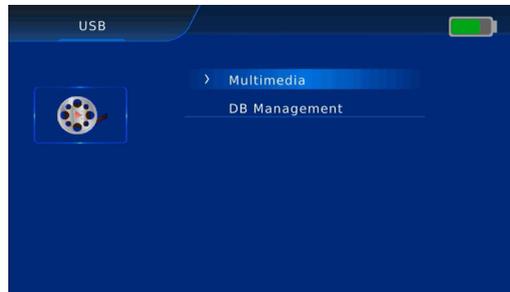
Press [◀/▶] to move cursor to select frequency, the signal strength of the selected frequency will be displayed on the left-top corner.

DVB-S/DVB-T/DVB-C are all supported in spectrum mode.

10. Multimedia Mode

10.1 Multimedia Main Menu

Plug a USB device into the USB 2.0 port and select Multimedia mode. Press [OK].



Press [▲/▼] in multimedia menu and then press [OK] to see the following menu.



10. Multimedia Mode (cont)

10.1 Multimedia Main Menu (cont)

Press [◀ / ▶] to select the required menu option. Press [OK] to select the relevant file.



Press [◀ / ▶] to select the PVR option and press [OK]. Press [▲ / ▼] to select the [HBPVR] file and press [OK]. The recorded file will show in the menu.

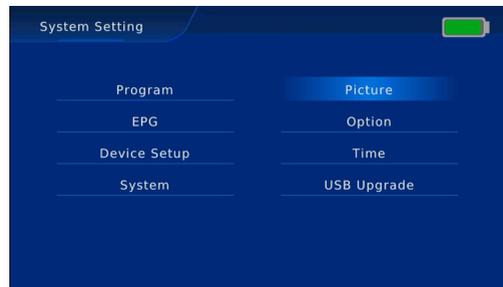


It is possible to back up the satellite channel plan to USB should a factory reset be required.

11. Settings

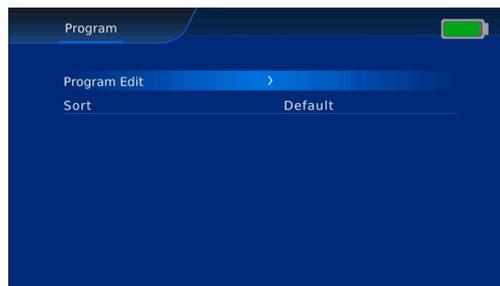
11.1. Settings Main Menu

Move cursor to Settings and press [OK].



11.2. Program Menu

Move cursor to Program and press [OK].



11. Settings (cont)

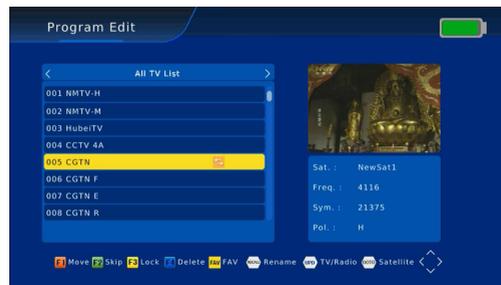
11.2. Program Menu (cont)

Press [▲/▼] on Program Edit option and press [OK]. Enter default password 000000 to see the TV channel list.



To move a channel press [▲/▼] on the channel list to select a channel. Press [RED/F1] to select channel to move.

Press [▲/▼] to move the cursor to the required position and press [OK]. Press [EXIT] to save changes.



11. Settings (cont)

11.2. Program Menu (cont)

To lock a channel press [▲/▼] on the channel list to select a channel.
 Press [YELLOW/F3] to select channel to lock. Enter the default password (000000).
 Press [YELLOW/F3] to lock or unlock a channel.
 Press [EXIT] to save changes.



To delete a channel press [▲/▼] on the channel list to select a channel.
 Press [BLUE/F4] to select channel to delete.
 Press [OK] to confirm channel delete.
 Press [EXIT] to save changes.



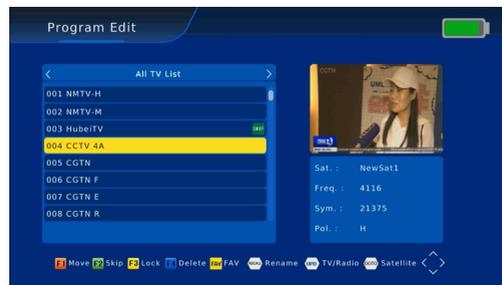
11. Settings (cont)

11.2. Program Menu (cont)

To set a favourite channel press [**▲/▼**] on the channel list to select a channel.
 Press [**FAV**] to select as favourite channel.
 Press [**▲/▼**] to select favourite type and press [**OK**].
 Press [**EXIT**] to save changes.



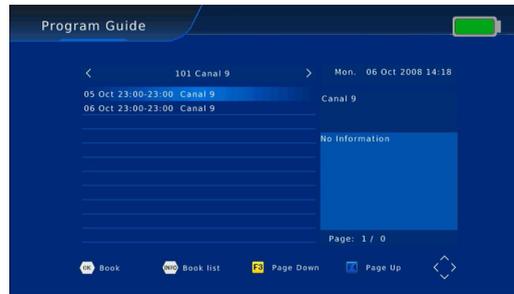
To skip and rename a channel press [**▲/▼**] on the channel list to select a channel.
 Press [**RECALL**] to select channel to adjust.
 Press [**OK**] to confirm channel delete.
 Press [**EXIT**] to save changes.



11. Settings (cont)

11.3. EPG

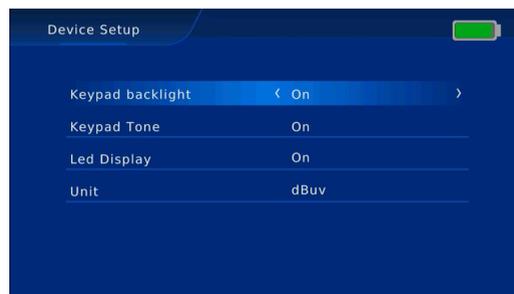
Press [▲/▼] on EPG option and press [OK] to see the program guide.



12. Device Setup

12.1. Device Set Up Main Menu

Press [▲/▼] on Device Set Up option and press [OK] to enter the menu.

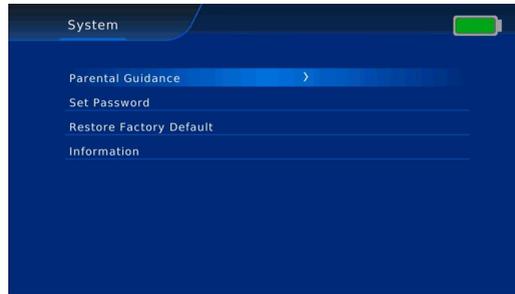


Press [▲/▼] on Keypad Backlight, Keypad Tone or LED Display option.
Press [◀ / ▶] to select options ON or OFF

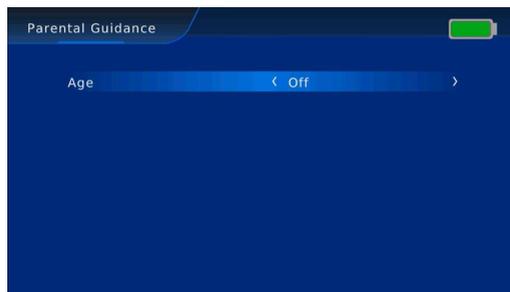
12. Device Setup (cont)

12.2. System Menu

Press [▲/▼] in System menu and press [OK] to enter the menu.



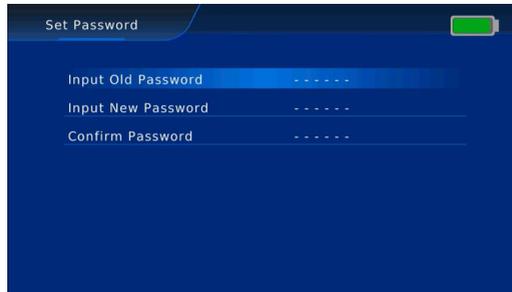
Press [OK] to enter Parental Guidance menu. The default password is 000000



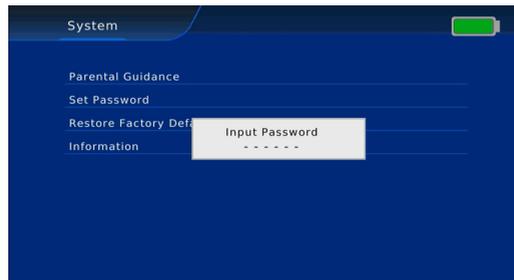
12. Device Setup (cont)

12.2. System Menu (cont)

Press [OK] on Set Password option to change the user password.



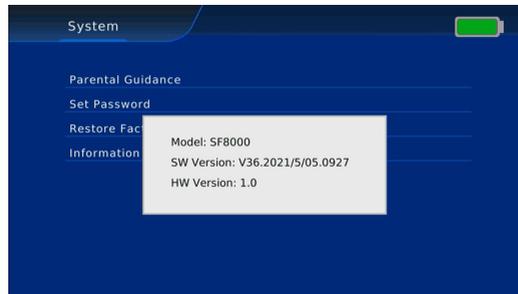
Press [OK] on Restore factory Default to Factory Reset the meter.



12. Device Setup (cont)

12.2. System Menu (cont)

Press [OK] on Information option to view hardware and software versions of the device.



12.3. Picture Menu

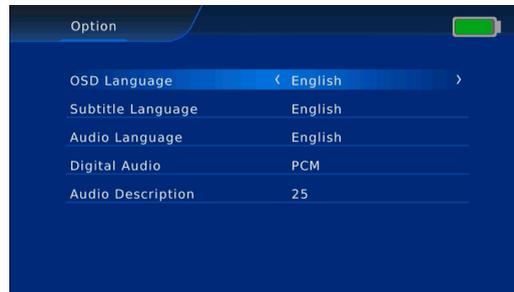
Press [OK] on Picture menu to adjust the Aspect Ratio, Resolution, TV Format, PQ level etc.



12. Device Setup (cont)

12.4. Option Menu

Press [OK] on access Options Menu. Use this menu to adjust Language, Subtitle, Audio Language etc.



12.5. Time Menu

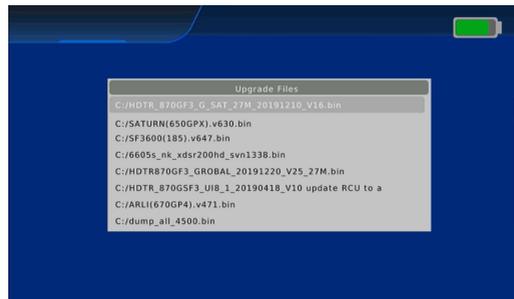
Press [OK] on Time option to adjust the time or time zone.
Press [▲/▼] to select options



12. Device Setup (cont)

12.6. USB Upgrade

Insert USB device into the USB drive and move cursor to USB Upgrade option. Press [OK]. Select the file by pressing [**▲**/**▼**] and press [OK] to select file.



13. Technical Specifications

Specification	
Part No.	ASM03
System	
Main Processor	600MHz based CPU
Flash memory	64Mb
DDR SDRAM	1024Mb
Tuner/Front End	
Tuner Type	DVB-S/DVB-T/DVB-C
Input Connector	F-Type Male
Frequency Range	170~230MHz(VHF)/470~863MHz(UHF)/950~2150MHz(IF)
Signal Level	-78~20dBm(UHF/VHF)/-65~25dBm(IF)
Impedance	75ohm
LNB Power & Polarisation	Vertical +13V/Horizontal +18V/Current Max. 500mA/Overload Protection
DiSEqC Control	Version 1.0/1.1/1.3/1.3, USALS Available
22KHz Tone	QPSK/8PSK
Symbol Rate	2~45Msps
Demodulation	QPSK/16QAM/64QAM/256QAM
Bandwidth	6/7/8MHz
Voltage Measurement Range	0~110V
Antenna Supply Max. Current	+5V 150mA/+12V 350mA/+24V 350mA
Power Supply & Battery	
Input Voltage Adaptor	110~240V AC 50/60Hz
Power Consumption	11W Max
Power Charger Output	12V DC 3.0A
Battery	12.6V/4000mAh
Battery Charging Time	3~6H
Battery Standard Discharge Time	>5H
A/V Data Input/Output	
A/V In/Out	CVBS Input (AHD/TVI/CVI/CVBS in optional)/CVBS Output
Audio Input	Audio L+R Input
Audio Output	Built-in Loudspeaker
HDTV Input	HDMI V1.4 up to 1080p
HDTV Output	HDMI V1.4 up to 1080p
USB Interface	USB 2.0
Transport Stream	MPEG2/4, H.264/H.265
Mechanical Data	
LCD Display	5 inch TFT LCD
Dimensions	210mm x 150mm x 52mm
Weight	0.93kg
Operating Temperature	0°C ~ +45°C
Storage Temperature	-10°C ~ +70°C
Storage Humidity	5% ~ 95% RH (non-condensing)

14. Declaration

We, ANTIFERENCE LIMITED herewith declare that this signal meter complies with all essential requirements and any other applicable conditions set forth on directive 1999/05/CE.

According to the WEEE (Waste Electrical and Electronic Equipment) EU Directive, do not dispose of this product as household waste or commercial waste. Waste Electrical and Electronic Equipment should be appropriately collected and recycled as required by practices established for your country. For information on recycling of this product, please contact your local authorities, your household waste disposal service or the shop where you purchased the product.



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Technology...since 1937