

# EDISION<sup>®</sup>



## MULTI FINDER

Satellite, Terrestrial, Cable & CCTV Testing Instrument



### User's Guide

DVB S2  
+  
DVB T2/C



# CONTENTS

- ▶ OVERVIEW ..... 3
- ▶ FEATURES ..... 3
- ▶ PRODUCT OVERVIEW ..... 4
- ▶ PACKAGE CONTENTS ..... 4
- ▶ FRONT PANEL KEYS ..... 5
- ▶ BACK PANEL ..... 5
- ▶ FRONT PANEL LED INDICATIONS ..... 5
- ▶ TECHNICAL SPECIFICATIONS ..... 6 - 7
- ▶ OSD MENU ..... 8 - 19
- ▶ SAFETY REQUIREMENTS ..... 20

## ► OVERVIEW

A brand new testing instrument, designed to meet the technical needs of DVB & CCTV installations. The EDISION MULTI-FINDER is a compact, 100% portable tester, complete with all the necessary features for testing devices and signals in installations, as well as examining any problems in signal reception and distribution. It features H.265 TV signal decoding, HD IN/OUT ports, AV IN/OUT, BNC IN/OUT and RS485 for PTZ Control. It covers television systems using DVB-S/S2,T/T2/C digital modulations, and the most widely used CCTV signals such as AHD/CVI/TVI/CVBS.

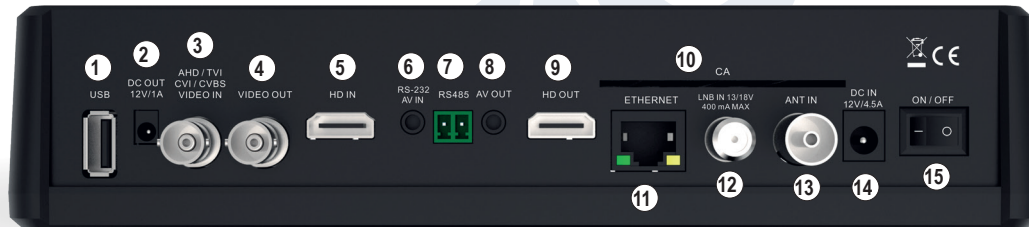


## ► FEATURES

- All in one: Satellite, Terrestrial, Cable & CCTV Testing Instrument
- Digital Combo Finder for DVB-S2, DVB-T2 and DVB-C
- H.265 HEVC decoding support
- DiSEqC 1.0, 1.1, 1.2, USALS and Unicable
- Fast Spectrum Analyzer
- Transponder Data parsing on DVB-S/S2
- Constellation Chart on DVB-S/S2
- Azimuth, Elevation & LNB skew tilt calculator
- 6000 channels TV & Radio programmable
- Favorite Channel list editing
- CCTV Cameras support: AHD/TVI/CVI/CVBS
- DC out support: 12V/1A
- RS485 PTZ Control
- HDMI & AV input/output support
- 7" LCD Display
- Display Buttons with quick access function
- Detachable Lithium Battery 6300mAh
- USB Wi-Fi Support
- Apps: YouTube, RSS Reader, Weather Forecast
- Ports: DC IN, ANT IN, LNB IN, LAN, HD OUT, AV OUT, RS485, RS232/AV IN, HD IN, BNC OUT, BNC IN, DC OUT, USB
- Smart Card Reader
- Software Upgrade by USB & HTTP

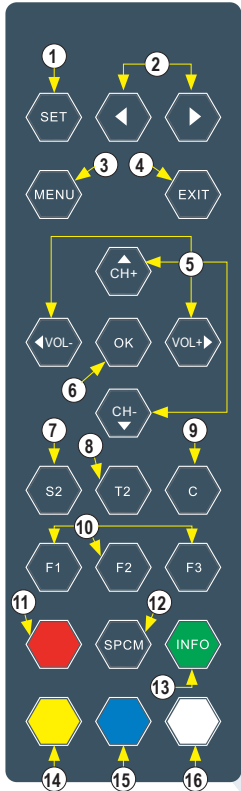
## ▶ PRODUCT OVERVIEW

1. **USB:** Connection for USB storage devices
2. **DC OUT:** Connection for camera power supply (DC 12V1.0A)
3. **VIDEO IN:** Connection for camera video input
4. **VIDEO OUT:** Connection for analog video output
5. **HD IN:** Connection for external HDMI sources
6. **RS 232:** Connection for analog video input & RS232 com port
7. **RS 485:** Connection terminals for PTZ control
8. **AV OUT:** Connection for analog video output
9. **HD OUT:** Connection for external HDMI monitor
10. **CA:** Embedded card reader
11. **ETHERNET:** Ethernet port RJ45 10/100 Mbps
12. **LNB IN:** Input for satellite signal
13. **ANT IN:** Input for terrestrial or cable signal
14. **DC IN:** Connection for power adapter (DC 12V4.5A)
15. **POWER:** ON/OFF power switch



## ▶ PACKAGE CONTENTS

1. MULTI-FINDER
2. Transportation Bag
3. Protective Bag
4. Remote Control
5. Car Charger
6. Jack to AV Cable
7. Jack to RS232 Cable
8. BNC to BNC Cable
9. DC-OUT Adaptor Cable
10. PSU
11. User's Guide EN/DE/GR

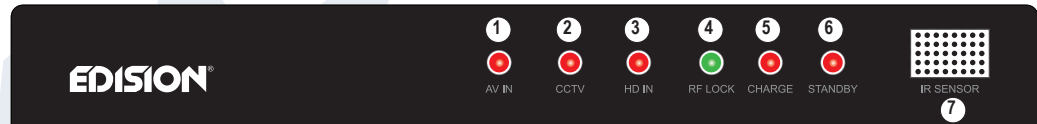


## ▶ FRONT PANEL KEYS

1. Enter monitor OSD menu
2. Monitor OSD menu adjustment keys
3. Enter the main menu
4. Exit or back
5. Navigation, CH & VOLUME keys
6. Enter or submit
7. Start satellite installation
8. Start terrestrial installation
9. Start cable installation
10. User programmable function keys  
F1 default: CVBS Video input  
F2 default: Camera Video Input  
F3 default: HDMI input
11. Audio menu or other function
12. Start spectrum analyzer
13. Subtitle or user defined
14. Teletext or user defined
15. Change output video resolution or user defined
16. TV / Radio or user defined

## ▶ BACK PANEL

1. Detachable battery
2. Flat surface stand



## ▶ FRONT PANEL LED INDICATIONS

1. Indicates that AV input is in operation
2. Indicates that CCTV input is in operation
3. Indicates that HDMI input is in operation
4. Indicates locking of selected RF channel
5. Indication for charging status
6. Indication for device status
7. IR sensor window



## ► TECHNICAL SPECIFICATIONS

### SYSTEM

<b>Main Processor</b>	800M Hz based CPU
<b>Flash Memory</b>	128M bits
<b>DDR SDRAM</b>	256MB

### TUNER/FRONT-END

<b>Tuner Type</b>	DVB-S / DVB-S2
<b>Input Connector</b>	F-type, Connector, Female
<b>Frequency Range</b>	950 MHz ~ 2150 MHz
<b>Signal Level</b>	-65 to -25 dBm
<b>LNB Power</b>	Current: Max. 400mA with Overload Protection
<b>Demodulation</b>	QPSK, 8PSK
<b>Input Symbol Rate</b>	1-45 Mbps, Convolutional Code Rate
<b>Forward Error Correction (FEC)</b>	1/2, 2/3, 3/4, 5/6, 7/8, 1/4, 1/3, 2/5, 3/5, 4/5, 8/9, 9/10 and Auto
<b>Tuner Type</b>	DVB-T/DVB-T2
<b>Input Connector</b>	IEC-Type, Connector, Female
<b>Signal Level</b>	Nordig Compliant DBOOK Compliant
<b>Forward Error Correction (FEC)</b>	DVB-T: Viterbi + Reed Solomon 1/2, 2/3, 3/4, 5/6, 7/8.
<b>Input Frequency</b>	DVB-T2: LPDC + BCH 1/2, 3/5, 2/3, 3/4, 5/6.
<b>Constellation</b>	QPSK, 16-QAM, 64-QAM, 256-QAM Both rotated and non-rotated
<b>Guard Interval</b>	1/4, 19/256, 1/8, 19/128, 1/16, 1/32, 1/128
<b>FFT Mode</b>	1k, 2k, 4k, 8k normal and extended, 16k normal and extended, 32k normal and extended.
<b>Channel Bandwidth</b>	6/7/8 MHz
<b>Antenna power output</b>	12V/24V, 50mA max
<b>Demodulation</b>	COFDM 2K/8K
<b>FEC Decoder</b>	1/4, 2/3, 3/4, 5/6, 7/8, k=7
<b>Tuner Type</b>	DVB-C
<b>Input Connector</b>	IEC-Type, Connector, Female
<b>Frequency Range</b>	47-862MHz
<b>Signal Level</b>	-20dBmV to +20dBmV
<b>Bandwidth</b>	8MHz
<b>Demodulation</b>	QAM
<b>Constellations</b>	8, 16, 32, 64, 128, 256
<b>Input Symbol Rate</b>	1.5 - 7Mbps



#### POWER SUPPLY

<b>Input Voltage Adapter</b>	100~240V AC, 50/60Hz
<b>Power Consumption</b>	20W MAX
<b>Power charger output</b>	12V DC 4.5A
<b>Battery</b>	Detachable 2 cell Lithium Battery 7.4 V/6300mAh
<b>Battery standard charging/discharging time</b>	4H/6-7H

#### MPEG TS A/V DECODING

<b>Input Rate</b>	Max.120Mbit/s
<b>Aspect Ratio</b>	4:3, 16:9, Letter Box
<b>Video Decoding</b>	MPEG-2, MP@ML, MPEG-4 part 10/H.264/H.265
<b>Video Resolution HDMI IN / OUT</b>	HDMI v1.4, 480p, 576p, 720p@50/60Hz, 1080i @50/60Hz, 1080p@50/60Hz
<b>Audio Decoding</b>	MPEG-1 layer I/II, MPEG-2 layer II, Dolby digital, Dolby digital plus
<b>Audio Mode</b>	Left / Right / Stereo/ Mono
<b>Sampling Rate</b>	32KHz, 44.1KHz and 48KHz

#### A/V & DATA INPUT/OUTPUT

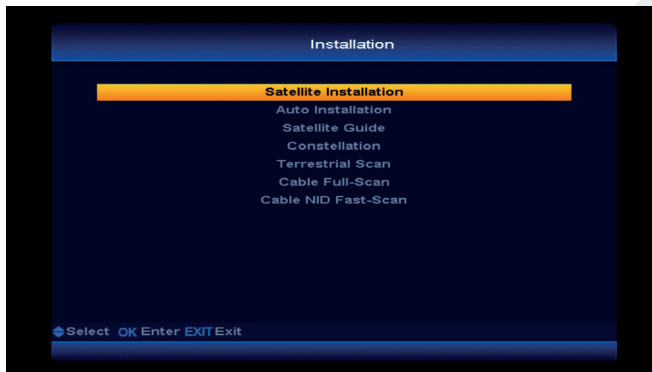
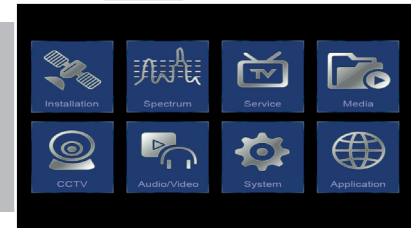
<b>A/V IN/OUT</b>	Video CVBS input/output & Audio L/R input/output
<b>RS-232C</b>	Transfer rate up to 115.2Kbps 3.5mm"Phone Jack Type
<b>Audio output</b>	Built-in speakers
<b>VIDEO OUT/IN</b>	BNC-Type, Video input/output AHD/TVI/CVI (max. 4MP) /CVBS (576)
<b>RS 485</b>	150~115200bps
<b>DC OUT</b>	12V 1A
<b>RJ-45</b>	10M/100M
<b>USB</b>	USB 2.0
<b>HDMI</b>	VER1.3 Type A

#### PHYSICAL SPECIFICATION

<b>LCD display</b>	7 inch 640x480
<b>Size[W*H*D]</b>	233mmX 165mmX50mm
<b>Net Weight</b>	<2.0KG
<b>Operation Temperature</b>	0°C~+45°C
<b>Storage Temperature</b>	-10°C~+70°C
<b>Storage Humidity</b>	5%~95% RH (Non-Condensing)

## ► OSD MENU

- |                      |                |
|----------------------|----------------|
| 1. Installation Menu | 5. CCTV        |
| 2. Spectrum          | 6. Audio/Video |
| 3. Services          | 7. System      |
| 4. Media             | 8. Application |



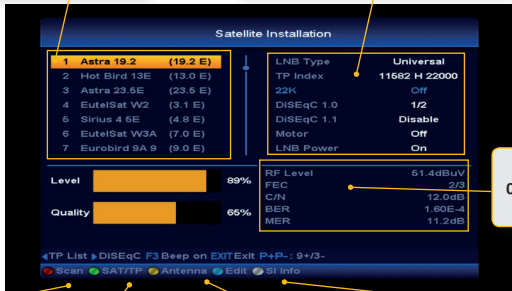
### 1. Installation Menu

- 1.1 **Satellite Installation** - Configure, control, scan, measure, edit or add satellites and transponders
- 1.2 **Auto Installation** - Automatically detects DiSEqC connections
- 1.3 **Satellite Guide** - Calculate the appropriate values for Dish calibration.
- 1.4 **Constellation** - Start a constellation chart.
- 1.5 **Terrestrial Scan** - Scan manually or automatically for Terrestrial services.
- 1.6 **Cable Full Scan** - Scan manually or automatically for Cable services.
- 1.7 **Cable NID Fast-Scan** - Scan and manage NID scan tables.




Available Satellites/TP List

Main satellite parameters (user can change it using V- V+)




List of measurements

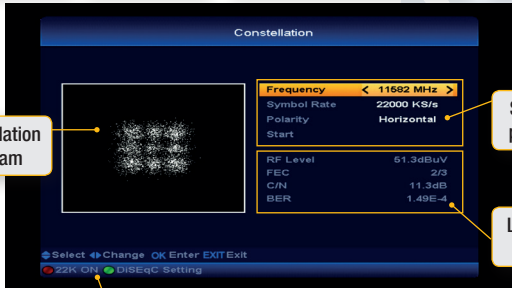
▶ Satellite Installation, here you can configure everything regarding the satellite services, add new satellites or transponders, move a motorized antenna and measure the received signal.

Press  to scan

Press  to switch list

Press  to switch between list and configuration mode

Press  to fetch SI info





Constellation diagram

Select tune parameters

List of measurements

▶ Constellation chart, will help you to detect a bad reception by showing the representing on the screen with modulation dots.

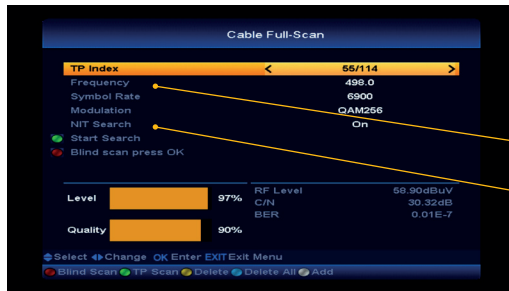
Use  &  key to configure the DISEqC parameters



Select terrestrial transponder

▶ Terrestrial Scan, the user can perform a manual or automatic scan, select the region and power the antenna if necessary.

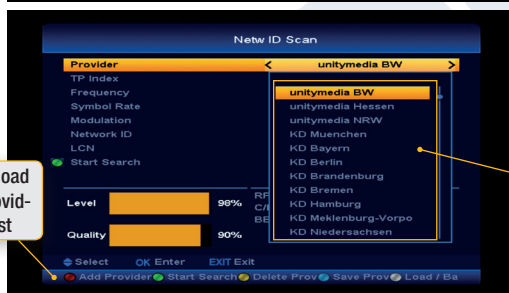
Use **●** & **●** key to scan



Configure the tuner parameters

Enable NIT Search, if it is available

▶ Cable Full-Scan, starts a full scan and allow you to enter a providers NIT frequency in order to finish the scan faster.



Add, delete or load a backup a provider backup list

List of cable providers for fast scan

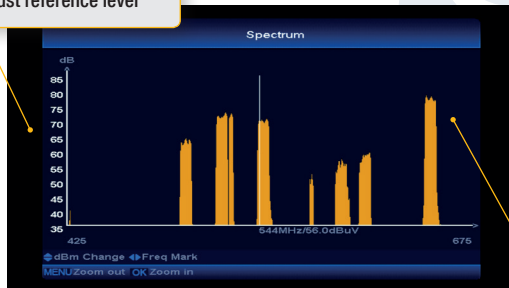
▶ Cable NID Fast-Scan, can perform a fast scan for the configured providers. You can also add manually new Providers depending on your needs.



## 2. Spectrum

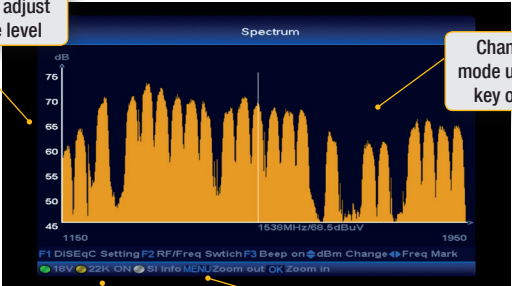
- 2.1 DVB-S2 - Start the spectrum view for satellite tuner.
- 2.2 DVB-T2/C - Start the spectrum view for terrestrial tuner.

Use keys (CH+) or (CH-) to adjust reference level



Change span mode using Menu key or OK key

- ▶ DVB-T2/C spectrum, real time spectrum preview helps you observe any malfunction, interference, ingress and other waveforms that may be affecting the RF installation.
- DVB-S2 spectrum, real time spectrum preview helps you quickly and easily with no hassle to finish the satellite dish pointing procedure with SI fetch capability which displays information about the selected transponder.



Use keys (CH+) or (CH-) to adjust reference level

Change span mode using Menu key or OK key

Use **Left** & **Right** to switch band

Press **Enter** to fetch data from the TP selected

**Spectrum**

dB

75

70

65

60

55

50

45

1150 1638MHz/66.6dBuv 1950

F1 DiSEqC Setting F2 RF/Freq Switch F3 Beep on dBm Change F4 Freq Mark

18V 22K ON SI Info MENU Zoom out OK Zoom in

▶ DVB-S2 spectrum, real time spectrum preview with SI fetch capability assures a hassle free satellite setup.



**Service**

**Organizing Services**

Organizing Favourites

Edivision

Select OK Enter EXIT Exit

### 3. Services

**3.1 Organize Services** - Edit your channel list service.

**3.2 Organize Favorites** - Organize the favorite lists of your choice.

**3.3 Edivision** - Show the EPG of the services.



Select the desired action (move, lock, delete, rename)

Press (V-) or (V+) to switch between list mode and edit mode

- Organizing Services, take complete control of how your services list looks like easily with functions as move, rename, lock and delete.

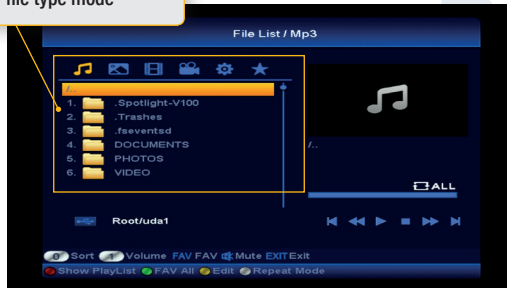


Organize your favourite channels

- Organizing Favourites, make your own favourites lists to enhance your everyday working experience. Additionally you can fully control the preinstalled favourites lists.



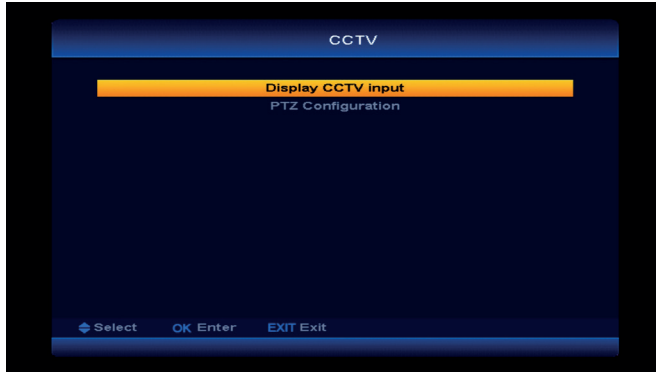
Use keys V- or V+ to switch file type mode



## 4. Media

- 4.1 **File List** - Browse the connected USB drives file system.
- 4.2 **Storage Information** - Display information about the connected USB drives.
- 4.3 **PVR Settings** - Configure the PVR settings.
- 4.4 **USB Speed Test** - Start a speed test of the connected USB drive.
- 4.5 **Remove USB Device safely** - Deactivates the USB drive safely.

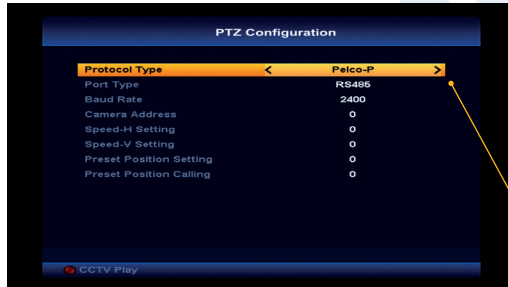
- ▶ File List, browse and preview files stored in your connected USB drive file system where you can filter out audio, image, video, recordings and s/w files.



## 5. CCTV

### 5.1 Display CCTV input.

### 5.2 PTZ Configuration.

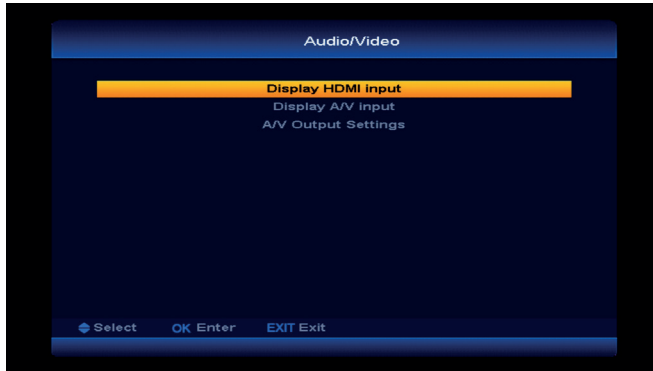


Select the protocol type, the baud rate and camera address accordingly

▶ PTZ Configuration, take control of your PTZ camera by setting the necessary connection details and use the remote control to Pan, Tilt, Zoom the camera and additionally control the Focus and Aperture size.

Use keys 1 and 4 to control focus, keys 2 and 5 to control zoom and keys 3 and 6 to control the Aperture size.



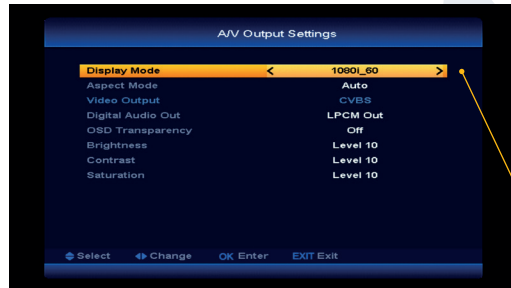


## 6. Audio/Video

6.1 Display HDMI input.

6.2 Display A/V input.

6.3 A/V Output Settings



- ▶ A/V Output Settings, control output video resolution and adjust the video Brightness, Contrast and Saturation. You can also select the OSD transparency.

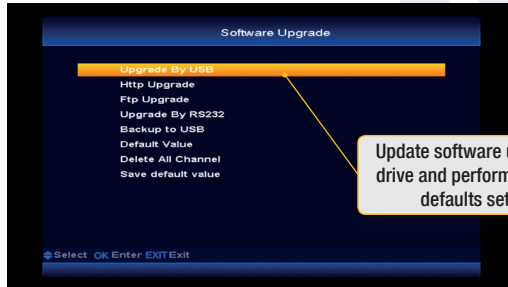
Select video output mode using keys V- or V+





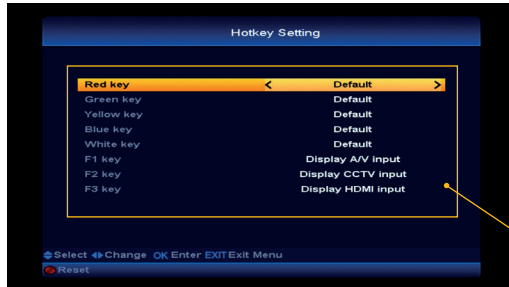
## 7. System

- 7.1 **Language** - Set your preferred OSD & Audio language.
- 7.2 **Ethernet Settings** - Configure your network interfaces.
- 7.3 **Time Settings** - Configure the system time.
- 7.4 **Miscellaneous settings** - Various general settings.
- 7.5 **Software Update** - Update or backup your firmware.
- 7.6 **Hotkey configuration** - Configure the hotkey function.
- 7.7 **Information** - Display general information about the device.
- 7.8 **Battery Information** - Display battery status.
- 7.9 **Conditional Access** - Show CA information about your card.



Update software using USB drive and perform a factory defaults setting

- ▶ Software Upgrade, get the best user experience and stay up to date by upgrading frequently the installed software in your MultiFinder. Additionally you can wipe channels, make your own firmware backups and overwrite default values. Please note that it is very important during firmware update to connect external power supply to avoid power loss!



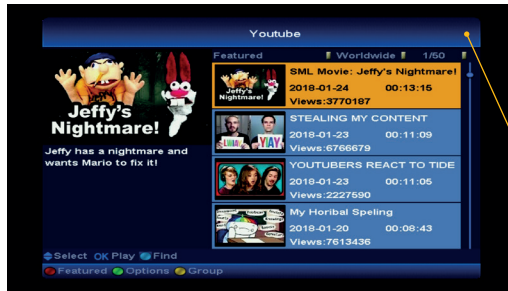
Configure the desired action for the hotkeys available

- ▶ Hotkey Setting, several keys can be programmed with different functionality depending on how each user likes to operate them. Please note, when at the very bottom of the OSD menu appears color button indications the colored Hotkeys defined are not in operation!



## 8. Application

- 8.1 **YouTube** - Start YouTube application.
- 8.2 **RSS Reader** - Show or add RSS feeds.
- 8.3 **Weather forecast** - Display the weather forecast of the selected cities.
- 8.4 **Web TV** - Start Web TV application.



YouTube application available

- ▶ YouTube, enjoy cable-less (requires external wifi adapter) video streaming service over IP. You can set the desired region to filter the displayed featured videos.



RSS Reader application available

- ▶ RSS reader, stay up to date with the latest news by using RSS feeds from various sites. Additionally, users can add their own desired feeds.



Web TV application available

- ▶ Web TV, access Web-TV streams by using this application. It is required from you to add any desired streams manually using the Web-TV list file in order to load it from USB by pressing the white key or manually through OSD.

## ► SAFETY REQUIREMENTS

**Product inspection:** Inspect the equipment for shipping damage. If you have discovered any damage, immediately file a claim to the carrier.

**Read and Follow All Instructions:** All the safety and operating instructions should be read prior to and followed while operating this product.

**Attachments:** Do not use attachments that are not approved by the product manufacturer.

**Water and Moisture:** This product is not waterproof.

**Power Sources:** This product should be operated only from the type of power source specified.

**Wire Protection:** Ensure all connected wiring is routed correctly to avoid damage including pinching, excessive bends, or compression.

**Power Lines:** Always use caution and avoid operating this or any connected equipment near uninsulated power lines or any other hazards.

**Servicing:** There are no user serviceable parts except the battery (replacement only). Do not attempt to service this product or remove covers other than the battery cover.

**Heat:** The product should be operated away from heat sources such as radiators, heat registers, stoves, or other products that produce heat.

**Maximum input Voltage:** Ensure that the voltage applied to the power connector does not exceed 12V. Higher voltages may damage the equipment!



Replace battery only with a new one of the same type.



Recycle or dispose used electrical and electronic devices properly.



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