User manual



# MAC-HOME HD

REF. 4482

## High Definition Standalone Modulator DVB-T / DVB-C Outputs CVBS . HDMI Inputs



MAC HOME HD modulator guide

## Contents

- 4 General safety instructions
- 4 Types of notices
- 6 Introduction
- 6 General description
- 6 Main features
- 8 General use of the unit
- 9 Unit installation and configuration
- 9 Module assembly and connectorising
- 10 Cascade installation
- 10 Power supply connection
- 11 Display Menus Quick-guide
- 12 Initial configuration
- 12 Advanced mode
- 12 General
- 12 Block LCD and joystick/control button
- 13 Restoring factory settings
- 13 Fimware Update
- 13 Settings
- 13 Configuration of INPUT signals
- 14 Configuration of carrier services
- 14 Configuration of OUTPUT signals
- 14 Network configuration
- 16 Unit status
- 16 Unit information
- 16 Unblocking the unit
- 17 USB PLAYBACK Function
- 17 Video playback
- 18 Technical Specifications
- 21 Unit Maintenance, Warranty and Recycling
- 21 Characters table
- 21 CE Certificate
- 22 Safety Instructions

## **General safety instructions**

- Read this entire user manual carefully before plugging in the unit.
- Keep these instructions to hand during unit installation.
- Follow all the instructions and safety notices when handling the unit.

### **Types of notices**

The safety notices used in this manual and their meanings are described below:



#### DANGER OF DEATH OR INJURY

This safety notice indicates a potential hazard to people's lives and/or health. Failure to follow these instructions can lead to severe health consequences and may even cause fatal injuries.

- Do not install the unit during electrical storms. This could lead to electro-static discharge from lightning.
- Do not open the unit. You may suffer an electric shock.



#### **RISK OF DAMAGE TO THE UNIT**

This safety notice indicates a potentially hazardous situation. Failure to follow these instructions may cause material damage to the unit.

Keep the unit well-ventilated at all times. Install the unit in an area free of dust. Do not place the unit in a place where the ventilation slots may become blocked or obstructed.

Leave a distance of at least 20 cm all around the unit's sides. We recommend installing the unit in the VERTICAL position.

- Do not expose the unit to rain or moisture. Install in a dry location where potential leaks or condensation will not occur. In the event that liquid gets into the device, disconnect it immediately from the alternating current.
- Keep flammable objects, candles and anything that may cause a fire away from the unit.
- Connect the unit to an easily-accessible mains outlet, so that the unit can be quickly disconnected from the outlet in case of emergency.
- Do not expose the unit to sources of heat (sunlight, radiators, etc).

NOTE. Do not expose the unit to sources of heat (sunlight, radiators, etc).



#### DO NOT HANDLE ANY OF THE UNIT'S INTERNAL PARTS

This notice indicates that users should not handle any internal parts that could affect its working order or warranty.



#### DO NOT DISPOSE OF UNIT AS NORMAL DOMESTIC URBAN WASTE

This type of notice indicates that the unit should not be disposed of as unselected domestic urban waste.

## Introduction

## **General description**



#### LEGEND

- 1 Removable power source
- 2 Screen (LCD)
- 3 Control button for configuration
- 4 Network connector
- 5 HDMI input connector
- 6 CVBS video input connector
- 7 L and R audio analogue inputs
- 8 USB input for video playback and firmware upgrade
- 9 Loop-through for combination of external RF TV signals.
- 10 DVB-T/C RF output

## **Main characteristics**

The MAC HOME HD model is a standalone modulator unit which can handle different Audio and Video formats to make up a high-definition COFDM/QAM channel.

The unit has two types of input:

- An analogue audio and video channel through 3 RCA jacks.
- A digital audio and video channel in HDMI format through HDMI connector.

The multiplex signals allow the following operation modes:

- Ch1 HDMI SD/HD + USB
- Ch1 CVBS SD + USB

This product aims to meet video signal distribution requirements in residential facilities, hotels and landmark buildings, along with video surveillance installations with COFDM/QAM digital TV modulation, through a standalone unit.

#### Programming:

- User interface with LCD screen and control button for basic configuration.
- All adjustments are stored automatically.
- Reprogrammable as often as necessary.
- Easily configurable.

#### Signal processing:

- CVBS video and mono/stereo audio input.
- HDMI input.
- SD and HD standard signal quality.
- Video resolution (480i, 576i, 480p, 576p, 720p50, 720p60, 1080i50, 1080i60).
- Video compression MPEG2 and H.264.
- Audio compression MPEG2 L1/L2, LC-AAAC, HE-AAC.
- PAL/SECAM/NTSC/B&W colour standards supported.
- DVB-T/C RF output throughout the CATV band (45MHz-858MHz).
- Loop-trough for combination of external RF TV signals.
- User interface with LCD and joystick.
- USB interface to upgrade firmware or electronic signage applications.
- Removable power source.



### General use of the unit

The following sections describe how to operate the unit using the control button and how to interpret the visual prompts displayed on the LCD screen. The programme comprises a main menu made up of submenus that can be selected to modify the unit's basic operation settings.

#### **Visual prompts on LCD screen**



This symbol indicates that you can scroll vertically.

#### Vertical button movement



In the menus and submenus, you can move the button up or down to scroll upwards or downwards, one step at a time.

In the settings, move the button up or down to change the values, one step at a time.



**NOTE.** To browse or modify the values faster, keep the button pressed up or down.

#### Horizontal button movement



In the menus, you can move the button to the left or right to select or go back, one step at a time.

In the settings, move the button to the left or to the right to browse, select or go back, step by step.



**NOTE.** Too browse faster, keep the button pressed to the left or to the right.

#### **Press button**



In the menus, this selects the submenu.

In the submenus, this selects the settings.

In the settings, this selects the parameter value.

## Unit installation and configuration

The unit can be adjusted with just the LCD screen and control button. Follow the steps indicated below to install the unit and configure the different parameters accessible from the user interface in the LCD screen.

### Module assembly and connectorising



#### **RISK OF DAMAGE TO THE UNIT**

Handling the unit mechanically may result in damage. Do not connect the unit to the power supply before or during assembly.

- 1 Assemble the mounts (\*) and tighten the screws and plugs to secure the unit to the wall.
- 2 Connect the inputs (HDMI or CVBS) in the corresponding connectors.
- 3 Optionally, connect the loop-through TV input coaxial cable (F connector).
- 4 Connect the output cable to the DVB-T/C unit.

(\*) The 3 wall attachments are supplied disassembled in order to install the unit horizontally. Their straightforward assembly consists of positioning the fastenings in the corresponding holes and pushing as far as possible (be sure to take your time doing this).





**NOTE.** It is recommended to assemble the equipment in upright position.





## **Cascade installation**

Several MAC HOME HD units can be cascaded in order to increase services capacity. To do this, connect the RF output of the preceding unit to the TV input (loop-through) of the next unit (see assembly example). The number of modules depends on the available channels and the output level.

To enable an assembly with 2 or more units, it is necessary to identify each service with a different SID and TSID value. The MAC HOME HD unit automatically adjusts these values when programming the channel of each modulator.



Two input modes:

- 1 SD/HD channel (HDMI) + 1 USB channel (through inserted flash-memory)
- 1 SD channel (CVBS) + 1 USB channel (through inserted flash-memory)

## **Electricity supply connection**



#### **RISK OF DEATH OR INJURY**

Connecting the power supply incorrectly can cause electrical shock. Follow these steps for the unit's electrical installation.

- 1 Connect the earth cable.
- 2 Connect the base of the network cable to the unit's network connector.
- 3 Connect the network cable input to the electricity supply input.



#### Fast menu guide

MAC HOME HD modulator guide



## **Initial configuration**



**NOTE.** To enter a digit or character sequence on screen, use the vertical control button to change the value of the current digit or character, and the horizontal control button to move between digits or characters.

Position the cursor to the right of the current value and use the vertical control button to increase or decrease the current value. Keep the control button pressed up or down to increase or decrease the current value more quickly.

 When the unit starts up, the start screen is displayed and prompts to enter **COUNTRY**. Move the button to the right and the cursor will flash next to the first country, then move the button down until you find the reference country. OK to save.

\* The unit automatically adjusts to the technical particularities of this country (see parameters table).

- 2) Move to the left and place the arrow in LANGUAGE, then move the button to the right and locate the required language by moving the button vertically. OK to save.
- 3) Move to the left through to the start screen, which shows the model, firmware version, channel and status..

Status:

- SYSTEM OK = correct status.
- NO input = input signal not detected
- SYSTEM NOK = no video, CVBS mode without video at input (black video is generated)

#### Change of output channel

- 1) From the start screen, move the button to the right through to the **OUTPUT CHANNEL**; the cursor will blink next to the channel.
- 2) Use horizontal scrolling to move between the digits and vertical scrolling to change the value. OK to save.

## Advanced mode

From the start menu, move a step to the right and down to locate the **ADVANCED MODE** screen.

#### General

From the GENERAL screen, move the button to the right to access the following menus:

#### **Block LCD and Joystick**

- Locate and select the LCD BLOCK to lock access to the configuration of the unit from the LCD display and using the control button.
  - a) Enable (ON) or disable (OFF) the locking option.
  - b) Set a code to unlock the unit whenever this option is enabled.







### **Restoring factory settings**

- 1) Locate and select the **RESET FACTORY** option to restore the default settings.
  - a) Select the ACCEPT option to remove all the changes made to the settings by the installer or operator of the unit. OK to save. After a few seconds the unit restarts with the default settings.

#### Firmware upgrade

- 1) Locate and select the **UPDATE** option.
  - a) Download the FIRMWARE from the website (www.ikusi.tv)
  - b) Decompress and enter it in the root directory of a flash-memory.
  - c) Insert the flash-memory in the USB port.



From the **SETTINGS** screen, move the button to the right to access the following menus:

#### Input signal configuration.

1) Locate and select the INPUT option



**NOTE**. Press the control button to the right to access one of the possible input types. Press "down" to access the settings for the following types of input signal.

- a) Locate and select the CH1 option to check the type of input signal, video detection (X) and audio detection (X). Only video values will be indicated in CVBS mode, there is no audio detection.
- b) Locate and select one of the two types of input, HDMI digital audio and video channel (SD/HD) or CVBS analogue audio and video channel (SD).
- c) Locate and select the option ASPECT RATIO (CVBS, HDMI). The image ratio values possible are 4:3 and 16:9.
- d) Locate and select the CODIFICATION option. Can be used to select the encoding standard of the audio and video digitalised signal from the options: MPEG2, MPEG4 and DEFAULT (if the input signal is SD, the default encoding will be MPEG2; if the signal is HD, encoding will be H.264) (1080p resolution only supports MPEG4).
- e) Locate and select the VIDEO BITRATE option. The unit can be configured for an input data encoding speed from 4000 to 19000 Kbits/s.
- g) Locate and select the AUDIO FORMAT option. Can be used to select audio encoding from three types: MPEG2 L1/L2, LC-AAC or HE-AAC.









- f) Locate and select the option AUDIO BITRATE (CVBS, HDMI). The unit can be configured for an input data encoding speed of 96; 128; 160; 192; 224; 256; 320 and 384 Kbits/s.
- h) Locate and select the LOW LATENCY option. This reduces encoding time for those applications where reaction time is important (e.g. cameras), offset by a reduction in encoding efficiency and the quality of images with a lot of movement.
- i) Locate and select the option BRIGHT to configure the brightness of the video signal (1 to 255).
- j) Locate and select the option CONTRAST to configure the contrast of the video signal (1 to 255).
- k) Locate and select the option SATURATION to configure the configuration of the video signal (1 to 255).
- Locate and select the option SHARPNESS to configure the sharpness of video signal (High, Medium soft or None).

#### **Configuration of carrier services**

1) Locate and select the SERVICE 1 and 2 option.

- a) Locate and select the CH1 VIDEO AUDIO option. Enable (ON) or disable (OFF) the audio and/or video signals of the input (audio and video cannot be locked in the 2nd service).
- b) Locate and select CH LCN. Configure the signal LCN value.
- c) Locate and select CH SID (use the output channel value). Configure the Service Identifier.
- d) Locate and select CH NAME. Assign a name to the signal in CH (see characters table at the end of the manual).

#### **DVB-T/C Output signal configuration**

1) Locate and select CONFIGURE RF.

- a) Locate and select the OUTPUT CHANNEL. This option automatically modifies the frequency, adapting it to the centre of the channel frequency.
- b) Locate and select the FREQUENCY option. This option modifies the channel value, adapting it to the frequency. Configure the output frequency value between 474 MHz and 862 MHz in 125 kHz steps.
- c) Locate and select the ATTENUATION option. Select output attenuation between 0 and 25 dB.
- d) Locate and select the COFDM MODE option. Select COFDM/ QAM mode between 2K and 8K subcarriers.
- e) Locate and select the BANDWIDTH option. Select the bandwidth between 6, 7 and 8 Mhz.
- f) Locate and select the GUARD INTERVAL option. Select the save interval between symbols 1/32, 1/16, 1/8 and 1/4.





- g) Locate and select the CONSTELLATION option. Select modulation constellation between 16QAM and 64QAM.
- h) Locate and select the CODE RATE option. Select encoding rate between 1/2, 2/3, 3/4, 5/6 and 7/8.
- Locate and select the RF OUTPUT option. Allows the RF signal to be enabled/disabled..

#### **Network configuration**

1) Locate and select the NETWORK option.

- a) Locate and select the NAME option. Configure the network name.
- b) Locate and select the PROVIDER option. Configure the name of the network service provider.
- c) Locate and select the NID option. Configure the network identifier value.
- d) Locate and select the TSID option. Configure the TS or transport current identifier value.
- e) Locate and select the ONID option. Configure the original network identifier.
- f) Locate and select the NIT LCN MODE option. Can be used to select NIT LCN mode:
  - OFF: LCN descriptor not inserted in the NIT.
  - EUROPE MODE: Descriptor for Europe is inserted.
  - INDEPENDENT TELEVISION COMMISSION: Descriptor for UK is inserted.
  - NORDIG MODE V1: Descriptor is inserted in accordance with the Nordig V1 specification.
  - NORDIG MODE V2: Descriptor is inserted in accordance with the Nordig V2 specification.
  - GENERIC MODE: Generic LCN descriptor.



MAC HOME HD modulator guide

CONSTELL ATTON

64 Q.AM

Country	AUSTRALIA	FRANCE	GREAT BRITAIN	ITALY	PORTUGAL	SPAIN
Ch LCN	100	45	400	0	10	1
Ch SID	38	21	21	21	21	21
Channel	38	21	21	21	21	21
COFDM Mode	8k	8k	2k	8k	8k	8k
Bandwidth	7 MHz	8 MHz	8 MHz	8 MHz	8 MHz	8 MHz
NID	1	1	1	1	1	1
TSID	38	21	21	21	21	21
ONID	100	8442	9018	1	8904	100
NIT MODE	ON	ON	ON	ON	ON	ON

DEFAULT PARAMETERS TABLE IN ACCORDANCE WITH THE COUNTRY SELECTED

Note: When configuring the country, the equipment is always configured with the first channel allowed, with the frequency of the centre of this channel.

#### Status of the unit



**NOTE.** The unit shows its status in detail, along with the existence of active alarms in the module.

1) Locate and select the STATUS option.

- a) Locate and show STATUS. The unit reports its status and alarms: OK / Error.
- b) Locate and indicate OUTPUT BITRATE. The unit reports the output data speed as Mbits/s.
- c) Locate and indicate MIN ACT MAX NULL. The unit reports the volume of null data packages in the output, minimum, current and maximum as a percentage of the total.

#### Information of the unit

- 1) Locate and select the MODULE INFO option.
  - a) Locate and indicate the MODEL option. The unit reports the model and version of the unit.
  - b) Locate and indicate the SERIAL NUMBER option. The unit reports its serial number.
  - c) Locate MAC. Shows the number which identifies the unit for the network connection.
  - d) Locate and indicate the option V.SW V.HW V.BS. The unit reports the software version (V.SW), hardware version (V.HW) and system start-up version (V.BS).

#### **Equipment unlocking**

The unit can be locked, thus preventing anybody from using the display and control button to modify the settings.

To unlock the unit:

- 1) Locate and select LOCK CODE.
- 2) Enter the unlock code assigned by the unit operator.
- 3) The unit reports the code validity.



**NOTE.** Once the code has been entered, restart the unit in order to lock. This will remain until disabled by the operator.







To unlock the unit without lock code:

1) Locate and select INFORMATION.

2) Contact the supplier of the unit and report the serial number.

The unit supplier provides an unlock code for the indicated SERIAL NUMBER.

3) The unit reports the code validity.

## **USB** Plaver

The unit can be used to play back videos through the USB port. Using the software, the user can draw up a personalised list of images and videos in order to create the end file ("video-final.ts"), which can then be played back by the modulator through a pendrive (adding a new channel to the existing one in the input).

#### Software to create videos for playback through the MAC HOME HD.

Users should install the "conversor-mac-installer.exe" on their PC, after downloading it from the website www.ikusi.tv.

## Video plavback

Once the pendrive is inserted in the USB connector of the MAC-HOME HD modulator, plavback will start automatically after a few seconds without having to access the menu; if the file is not correct, the system will continue as a modulator (the application manual can be found at www. ikusi.tv).

> **NOTE.** The modulator sends the "USB" service signal for tuning by TVs, even when the pendrive is not connected, thus avoiding having to retune the TVs when connecting the USB pendrive.



In case of connecting only the USB flash drive, the input mode must be "CVBS".









## **Technical specifications**

## MAC HOME HD model (4482)

Input		CVBS, HDMI		
Video standard		PAL/NTSC/SECAM/B&W		
Audio input	1 (mono and stereo)			
Video		MPEG2 MP@ML, H.264/MPEG4 AVC MP L4.1		
Video quality		SD, HD (480i, 576i, 480P, 576P, 720p50, 720p, 1080i50, 1080i60, 1080p50, 1080p60)		
Maximum resolution		1080p60		
Audio		MPEG2 L1/L2, LC-AAC, HE-AAC		
Analogue audio		Yes		
Digital audio		Yes (HDMI)		
Audio output level (analogue)		0.5 - 2.5		
DVB-T / DVB-C Output		DVB-T accordance with ETSI EN 300 744 DVB-C accordance with ETSI EN 300 429		
Bandwidith	MHz	6/7/8		
Number of carriers		2K (UK) / 8K (FR)		
MER	dB	≥ 40		
Frequency range	MHz	45 - 858		
Outupt level	dBµV	≥ 80		
Output attenuation	dB	1		
Lever adjustment	dB	-25		
Frequency stability	ppm	≤±30		
Noise figure ( $\Delta B = 8 \text{ MHz}$ )		≤-60		
Loopthrough frequency		45 MHz to 2.5 GHz		
DVB-C symbol rate	Kbps	3000 - 8000		
Constellation		DVB-T: 16QAM , 64QAM DVB-C: 16QAM , 32QAM , 64QAM , 128QAM , 256QAM		
NIT adaptation		Yes (generated autimatically)		
SDT adaptation		Yes (entering configurable name)		
TS Monitoring		Yes		
PSI/SI adaptation		Generation and insertion of tables PAT, PMT, SDT, NIT		
Network configuration		NID, ONID, TSID, Network name, Provide		
SID configuration		Yes		

LCN processing		Yes		
LCN modes		OFF,Europe,Independent Television Comision (UK Nordig mode V1, Nordig mode V2, Generic Mod		
Mains voltage	VAC	230 - 240		
Firmware upgrade		Yes, web or USB interface		
Flujo de salida IP		CBR / VBR		
Direccionamiento IP		Unicast / Multicast		
Protocolos		UDP / RTP		
Formato encapsulado IP		SPTS		
Diffserv QoS, TTL, VLAN		Sí		
Anuncio SAP de servicios		Sí		
Teclado		Joystick 5 posiciones		
Web		Ethernet		
Consumption		14 W		
Operating temperature		0 to 45 °C		
Firmware updates		Yes, via USB		
Video playback through USB port		Yes		
LCD diaplay		16x2 characters		
Programming button		Joystick 5 positions		

### Maintenance

#### Unit care



HANDLING THE INSIDE OF THE UNIT IS FORBIDDEN

Do not dismantle or try to repair the unit, its accessories or its components. This will render the warranty null and void.

- Do not use the power cable if it is damaged.
- To disconnect the power cable, pull carefully on the plug and not the cable.
- To clean the panel and unit connections:
  - Unplug the unit.
  - □ Clean with a slightly damp, soft cloth.
  - □ Allow to dry completely before use.
- Do not spill liquid onto the unit.
- Keep ventilation slots free of dust and any foreign bodies.

#### Troubleshooting

The most frequent problems arising during unit installation are indicated below. If you encounter any other type of problem, please contact the unit sales team.

Problem	Possible cause	What to do	
Forgotten unlock code		Contact your supplier	
Nothing appears on LCD display	The power cable is not connected properly	Check the power cable	

#### Warranty

Notwithstanding any complaints made to the direct vendor of the product, IKUSI offers unit users a two-year warranty as of the invoice date, which shall become valid on presenting the receipt of purchase.

During the warranty period, IKUSI is responsible for any faults arising due to material or manufacturing defects and shall repair the receiver or replace it for another corresponding to the state of technology at that time. The warranty does not cover any faults or defects due to misuse or non-fulfilment of the information given in this installation manual.

All complaints other than those indicated are not included in the warranty. More specifically, the warranty does not cover services provided by the authorised vendor (e.g. installation, configuration or programme updates) or the repair of any damages or injuries caused to the client or others as a result of the installation or of receiver operations.

### **Unit recycling**



#### RECYCLING OF ELECTRICAL AND ELECTRONIC EQUIPMENT

(Applicable in the European Union and in European countries with selective waste collection systems.)

This symbol on your unit or its packaging indicates that this product cannot be treated as general domestic waste and must be handed in at the corresponding point of collection for electric and electronic equipment. By ensuring this product is disposed of correctly you will help prevent negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product. Recycling of materials helps preserve natural resources. For more detailed information on the recycling of this product, please contact your local council, your nearest collection point or the distributor from whom you purchased the product.

## **Characters table**



## **CE Certificate**



### **Safety instructions**

#### Instrucciones de Seguridad

- No obstruya ni cubra las ranuras de ventilación del aparato. Para que haya No obstruya ni cubra las ranuras de ventilación del aparato. Para que haya una ventilación correcto, doje el menos un espacio de 20 cm ateledaro.
   No exponer el aparato a la luvia o al goteo de agua. No colocar encima ningún necipiente con líquido. En caso de que un líquido cayera dentro del aparato, desconectar éste inmediatamente de la red alterna.
   Mantenga ligo del aparato los tobios rintimabies, velas y todo aquello que
- Mantenga lejos del aparato los objetos mitamates, velas y todo aquella judiera cuasar un incendo.
   Siguendo las instrucciones de instalación fijar firmemente el aparato bi sea en la pareto biones en ela tabas-exporte especialmente destrutada al el Conectar el aparato a una torna de tensión de end que sea tácilmente descusible, de forma que en caso de umergencia el aparato to bueda ser descuciador áplicamente de la forma.
   Na abrier el aparato, y que exista risegor de descarga eléctrica. inada al efecto

#### Instruções de Segurança

- Não bloqueie nem cubra as aberturas de ventilação do aparelho. Para uma ventilação methor, deixe pelo menos 20 cm de espaço à votta do dispositivo. Não exponta o aparelho à chuva ou godes de água, en coloque por criama nentrum recipiente com água dentro, Caso entre água no aparelho, retire imediatamente a ficha da tomada. Asseto objectos inflamâneis, vetas e qualquer coisa que possa provocar um
- incêndio. Seguindo as instruções de instalação, fixe bem o aparelho na parede ou no
- suporte especialmente destinado para esse efeito. Lique o aparelho a uma tomada electrica de acesso fácil para que possa ser
- najador oparotir o mila de mana em caso de emergência.
  Não abra o aparelho, visto que pode provocar risco de descargas elétricas.

#### Veiligheidsinstructies

- U mag de ventilatieopeningen van het apparaat niet blokkeren of bedekken U maj de ventilatisoperinigen van het apparaat niet blokkeren of bedekken. Voor betere ventilatie deruit unisterse zon nurime eronheen wijle houten. Sei het apparaat niet bloct aan regen of waterdruppels. Plaats er geen vleastofverpaktikken op. In geval er dorusich in het apparaat kont, dient u het omriddelijk van de wisselstoom af te sluten. Houd brandbee voorwerpel, kaaarse en ek voorwerp dab brand kan veroozaken, uit de buurt van het apparaat die die brandbee hernoort is bestand. og de bassinderstauming, welte hernoort is bestand. op wal van oor de haagsmaat mei die bat socontack zodet u het. • Maak het apparaat niet open. U rakeent hier dektrische schekken mee.

#### Instrukcia bezpieczeństwa

- Nie nalaży blokować lub zakrywać otworów wentylacyjnych urządzenia. Aby uzyskać lepszą wentylację, należy pozostawić co najmniej 20 cm wolnego miejsca wokół urządzenia.
- unplakel telesza, wert felsigi, natki pozostanki čo narmej zu om vormego miesca wich urządzenia. No natki vystalkwici urządzenia na działanie diszczu lub vody. No natejy na mi stawieć załodne porejminie z prłwni z Worpzadku przedzie urbinu do vorgtza urządzenia, natejy in natky in witodych telenopatych zacionatowa, w jedzilu urządzenia na rekniej stawio dolga od dziela praju zmierenego. 2. jodzilu z zadawiata na rekniej stawio telenoj telenoj telenoj telenoj dziela zakowie do 2. jodzilu z zadawiata natejw in natky in promocował urządzenie natejky ce urządzenie natejky orazlega na telenoj telenoj telenoj telenoj telenoj Urządzenie natejko orazlega na telenoj telenoj telenoj telenoj urbanjemie natejky czystączych do teleno dziestejenego prastelna dektyczenego. Ne natejky owienać obudowy urządzenie i telej zadzetnie porziteria dektycznego.

#### Sikkerhedsanvisninge

- Blokker eller tildæk ikke anordningens ventilationsåbninger. Lad der være mindst 20 cm frit rum omkring den af hensyn til bedre ventilation. U disæt ikke anordningen for regen eller vandråbære. Anbring ikke nogen form for væskebeholder på den. I tilfælde af, at der kommer væske ind i anordningen,
- skal den omgående frakobles vekselstrømmen. Hold brændbare genstande, stearinlys og alt, hvad der kan forårsage brand,
- væk fra anordningen. Idet installeringsanvisningerne følges, fastgøres anordningen sikkert på
- takt misateringsanvisningerine inges, usagares antoruningeri takket på væggen eller på den basisholder, som er specielt beregnet til dette formål. Tilstut anordningen til en lettilgængelig lysnetkontakt, så anordningen hurtigt kan frakobes stikkontakten i en nødsituation. Luk ikke anordningen op. Der er risiko for elektrisk stød.

#### Drošības instrukcija

- Neaizsprostojiet un neapkläjiet ierīces ventilācijas atveres. Labākai ventilācijai Neatsplostojne un neaprojne renos ventracijas atveres. Ladaka ventracija atstajiet vismaz 20 cm telpu ap tām. Nepakļaujiet ierici lietum vai ūdens pilieniem. Nelieciet uz to šķidrumu saturošus traukus. Gadījumā, ja ūdens iekļūst iericē, nekavējoties atvienojiet to no mainstelivos.
- manjatrávas. Neturiet irerces tuvumä viegli uzliesmojošus objektus, sveces un citus priekšmetus, kas var aizdegties. Sekojot uzstatišanas instrukcijām, cieši piestipriniet ierici vai nu pie sienas, vai nu uz pametu, kas īpaši domāts šim notūkam.
- ver nu uz pamatu, kas ipaši domāts šim holūkām. Pievienojiet ierici viegli pieejāmai jaudas padeves iekārtai, lai ierīce var tikt ātri atvienota no padeves galējas nepieciešāmības gadījumā. Neatveriet ierīci; pastāv risks saņemt elektrisko šoku.

#### Biztonsági előírások

22

- Na zárja el és ne fedjel e a készűkk szakűztető nylásait. A megfeldőbb szekűztetés érődekében, hagyon legalább 20 cm-es nylh helyet a nylás körül.
   A készülkében tegyel ke aló vyly vícsegnebe hatásának. Ne helyezzen rá semmítéle folyadéktartályt. Ha a készülékbe folyadék kerül, azonnal válassza le
- semmlete royourena wyn i ser a na na a váltakozó áramforrásról. Tartsa távol a készüléktől a gyűlákony tárgyakat, gyertyákat és bármilyen eszközt,
- Tärtsä tiikolla kisäutileittä ajulisionty tärgyinkii, syntyveisat tei suommyin taavaan, meh tuäse tööstä kuoksen kuoksen täytä saanaan täytä saanaan taavaan avaja usi ene sääri tähkinymä.
   Castilakoitassaa kisäutillä yöytä kuoksen taävää, kyyöstä saatkisöstä jaatkisä mel sääristä saasein, heitööh teisä käsisäkä kyyös keskastäsät.
   A käsistäkiett tilos kinytin; äramütis vesitelykse all ferm.

#### Safety Instructions

ES

PT

NL

PL

DA

LV

нu

- Do not block or cover the device ventilation openings. For better ventilation, leave a surrounding space of al teast 20 cm.
   Do not expose the device to rain or varied rogos. Do not put any kind of liquid container on top it. In the event that fluid gets into the device, disconnect it immediately from the alternating current.
   Keep flammable objects, candes and anything that may cause a fire away from the individual current.
- from the device.
- In accordance with the installation instructions, fix the device firmly either on
- the wall or on the base-support specially intended for this purpose. Connect the device to an easily accessible mains outlet, so that the device may be quickly disconnected from the outlet in case of emergency. - Do not open the device: there is a risk of electric shock.

#### Sicherheitshinweise

- Die Belüftungsöffnungen des Geräts nicht blockieren oder abdecken. Für
- Die bedunungspünnungen des Verlas nich ubbüterin oder ausbeken. Für eine korrekte Bedühung mindelserte 20 cm Abstand um das Gerät einhalten. Das Gerät weder Regen noch Wassertropfen aussetzen. Keine Hussigkeitsbahlter auf dem Gerät abstellen. Bei Einführigen von Flössigkeit in das Gerät, dieses solot von der Wechselstornversorgung trennen. Bernntare Objekk, Kurzen und andere mögliche Branduaußer von dem
- Geräf fernhalten. Das Geräf terhapten-Das Geräf terhapten-chend den Installationsanweisungen stabil an der Wand oder auf dem speziell für diesen Zweck ausgelegten Sockel befestigen. Das Geräft ante licht zugängliche Steckdose anchlefen, so das dieses im Notal schnell von der Steckdose getrennt werden kann. Das Geräft nicht föhnen, se bestellt Stormschlaggefähr.

#### Istruzioni di sicurezza

- Non ostruire né coprire le aperture di ventilazione dell'appa Non ostrutie ne dcoprie le apertura di ventitacione dal'apparecchiatura. Per una migiore verturazione, lasciare attorno uno spazio Berero di atteno 20 cm.
   Non esponer l'apparecchiatura alla poggia e a gocciatmento d'aciqua. Non appoggiare sulla specifica conteniento il tagició. Nel caso pentresse del fugició nel apparecchiatura di lagoracchiatura de gocgitti inflammabili, le candela o quatariasi cosa possa causare un incondo.
   Seguendo la estruccióni di installazione, físsare salatimente la granecchiatura al muno a l'appopaia base di supporto.
   Collegane l'apparecchiatura de supporto.
   Collegane l'apparecchiatura de supporto.
   Non appire l'apparecchiatura de supporto.
   Non appire l'apparecchiatura de supporto.
   Non appire la posta collegane e velocemente dalla receleratoria de sociatoria dalla posta collegane e sociatura de la comente la collegane i faporecchiatura.
   Non appire la posta collegane e velocemente della posta in caso di emergenza. niatura, Per

#### Turvaohjeet

- Älä peitä laitteen tuuletusaukkoia. Jätä vähintään 20 cm tila laitteen vmpärille hyvän tuuletuksen varmentamiseksi. Älä altista laitetta sateelle tai vedelle. Älä aseta mitään nestettä sisältävää
- säiliötä sen päälle. Jos nestettä pääsee laitteen sisään, kytke se välittömästi
- Int pisiokkeisia. Pidk akikki palavat esineet, kuten kynttilät ja muut jotka voivat sytyttä tulipalon, poissa laitteen lähettyviltä. Noudataen asennuschjeita, kiinnitä laite tukevasti seinälle tai siihen tarkoitettuun
- jalustaan. Kytke laitle pistokkeeseen johon on helppo päästä jotta laitle voidaan kytkeä irii nopeasti pistokkeesta hätätlaniteen sattuessa. Älä avaa laitetta sähköiskuvaaran takia.

#### Bezpečnostné pokyny

- Naobmedzujte pristup k vetracim otvorom zariadenia ani ich nezakrývajte. Pre lepšie vetranie nechajte okolo nich voľný priestor najmenej 20 cm.
   Nevystavujte zariadenie daždu alebo kvapkajúcej vode. Nedávajte na zariadenia
- ziadne nádoby obsahujúce kvapalny. V prípade, že sa do zariadenia dostane voda, okamžite ho odpojte od sieťového napájania.
- Horfavé predmety, sviečky a čokoľvek, čo by mohlo spôsobiť požiar, neur do blizkosti zariadenia.
- do bitkosti zariadena, Postupute posta polynov na inštaláciu a zariadenie riadne upevnite na str alebo umiestnite na postativne určený špeciálne na tento úbel, Zariadenie pripipelk i liniko pristrupnie jeditovaj zásovka, aby ho bolo možné prípade nebezpečenstva nýchlo odpojiť, Na botivánjet zariadenie, inak itron nebezpečenstvo úrazu elektrickým průd
- istvo úrazu elektrickým prúdom

#### Saugumo taisyklės

- Neuždenkite jrenginio ventiliacinių angų. Laikykite jrenginį bent 20 cm atstur kitu obiektu dėl geresnės ventiliacijos kuų opjekų dei geresnes venimacijos. Saugokite įrenginį noo lietaus ar vandens lašų. Nedėkite jokio indo su skysčiu ant įrenginio. Jei įrenginio vidun pakliūtų skysčio, tuoj pat atjunkite jį nuo kintantosic
- Laikykite degius daiktus, žvakes ir viską, kas gali sukelti gaisri, kuo toliau nu
- ipenginia. Lakykitei suntaliavimo instrukciju, privininkite jrengini (virta prie sienos arba p pagrindo, specialiai skirto ikam tikdui. Prijunkte jrengini prie longva i prietamo pagrindinio lizdo taip, kad galima būtų fengrai įrengini jungiji suntariai sativeja. Netidarykite įrenginio, gali nutretski clektra.

#### Ohutusiuhend

- Seadme kaant ega ventilatsiooniavasid ei tohi kinni katta. Paremaki Seadme kaant ega ventlatiooninvasid ei toh kinni katta. Paremaks wentleerimises paas besedme ümbe ohen wenklamet. 20 on waha ruuni.
   Arga jäkse seadet vihma kätte ega niskkesse kotta. Arga esetage seadmeb vedkikke seisädet vihma kätte ega niskkesse kotta. Arga esetage seadmeb seade viiviannauht voduvörgast lähutada.
   Vennduge, et lukeinally jääksä esendensi päisavä haugeb.
   Jargides paaglauhjähed kinnänge seak indala semale või spekisalasle
- tugialusele. Ühendage toitejuhe kergelt ligipääsetavas kohas p
- a et hādajuhti korral oleks võimalik seadet kiiresti vooluvõrgust lahti ühendada - Elektrilöögi vältimiseks ärge avage seadme kaant.

#### Instructions de sécurité

FN

DE

IT

FI

SK

IT

ET

 Ne bloquez ni ne couvrez les orifices d'aération de l'appareil Ne stoquez ni ne couvrez les orificis d'adretion de flagareil. Pour une nelleur esterion, lisses cou aux grouties d'aux he mettez anou Negrouz que relleur esterion, lisses cou aux grouties d'aux he mettez anou liquide à l'intérence de la granet, détranche-le immidiatement.
 Cardez les objets inflammable, les boagies et tout éthiement ausceptible de provoque ni noisende bir de flagareil.
 Cardez les objets inflammable, les boagies et tout éthiement ausceptible de provoque ni noisende bir de flagareil.
 Cardez la subjets inflammable, les boagies et tout éthiement aux mar ou a support base spécialement conçu à out été.
 Cardez la une prése do court facement accessible, de sorte que la pareil publice d'annahé en cas d'upance.
 Nource pas flagareel din d'abient fortingue d'éthoranche.

FR

RU

EL

cs

SL

MT

s٧

- Не разволятияте в болка и устройства астоловствлятияниятся предметы, нетотивкая истотивкая с нелую инструмания по установать накра.
- Сведуя инструмания по установах, инстепля задершите устройства на степля с налуе инструмания по установах, инстепля задершите устройства на степля на ин монтажной планита, спеннально предлагниченной по узгой в слей.
- Роктая сетя переменното токах, конторой покахлючено устройство, какстая облаг достажився на источности устройство, контория покахи бытер отключить устройство в кетронном случае.
Не рабората устройство в кетронном случае.

Μην κλείνετε και μην καλύπτετε τα ανούγματα εξαερισμού της συσκευής. Για καλύτερο έξαειρισμό, αφήστε χώρο τουλάχορτον 20 κε, γόρα της.
 Μην εκθίτετε η σοκταίνη ση βορχή ή οι στοιχώνς το μουδ. Μην τοποθετείτε κοιντιός είδιοις δοχείο που περίεχει υγρό πόνω στη συκκευή. Σε περίπτωση που διειοθύσει υγρό στη συκκευή, αισσυνδάτετ την σμάδος από το υνολλασόμενο μος φείμα.

 Διατηρείτε μακριά από τη συσκευή εύφλεκτα υλικά, κεριά και οτιδήποτε θα μπορούσε να προκολέσει φωτιά. μπορούτα να προσκαλοται φωτικά. - Ακαλουθάνονται, το δορήκες έγκατατάπτουης, αταρεώστα σταθερώ τη αυσικανή είτα στον τοξιο είτα στην αδικού, για αυτολου ακοπό βάση στήριξης. - Συνδάντατ, παροκατοίς η αυμα τόλους ποροπολόμημη πρίξια (μαλατικού ρείματας, είται ώστα η ανοπατοίη να μποίους ποιοπολοθισμές γράγορια από την πρίζα σε περίσταση Γεταστικ, ανόχνης. - Μην αυνήνετε τη ανοπατοίη, γιαστι υπάρχει κύθυνος ηλιατιροποληβίας.

Neomezujte přístup i v větracím otvorům zařízení ani je nezakrývejte. Pro lepší větral ná kolem nich ponecheje vdrý postor nejméré 20 cm.
 Nevystavujte zařízení dest neb kojegoli vddy. Mastvar ne né jakávůl nádoby obstavlju i kojudiny. V případe, že se do zařízení dostane voda, okarnůtě je odpotpe od stloveho navájení.
 Hátlavé předměty, sklóvy a cokol, co by motlo způsobit požár, neumétujte do nětvert arbine.

 Postupujte podle pokynů pro instalaci a zařízení řádně upevněte na zeď nebo umístěte na podstavec určený speciálně k tomu účelu. - Zařízení připojte ke snadno přístupné sítové zásuvce, aby v případě nebezpečí

Ne prekrivajte ali bickirajte preznačevalnih odprtin na napravi. Za botišo preznačevanje pusite najmanj 20 cm prostona okoli naprave.
 Ne spostavljed naprave na de ži vodo. Na naprave na postavljajte posod s tekođro. Če tekočna pride v napravo jo takoj údljučite iz izmenične napetoši Napravi ne pritkalje ventijih njemetinov, sveća ili naci jak iz taki povzroči

požar. - Po navodilh za montažo napravo trdno pritrdite na zid al podstavek, ki je za to

namenjen. - Napravo priključite v enostavno dostopen vtikač tako, da jo lahko v primeru

- M'ghandekx timpedixxi jew tghatti l-ftuh ta' ventilazzjoni tat-taghmir. Ghal

responsev i traghmir phal siya gib ta' mhux angas min 20 cm madwaru.
 Tesponiex it taghmir ghal xita jew taqtir ta' ilma. M'ghandekx tqieghed l-ebda tip ta' recipjent ta' likwidu fuqu. Fil-taż li likwidu jidhol fil-taghmir, skonnettja minnufih

mill-kurrent li jalterna. - Žomm oggetti fjammabbli, xemghat u kull haga li tista' tikkaguna xi nar `il boghod

mit tagnmir. - Wara l-istruzzjonijiet ta' installazzjoni, wahhal it-taghmir sew jew mal-hajt jew fuq wara restruzzonijec u instanzzoni, waina reagnimi see jew martuji jew nu Lappogi buzi malsub specifikament fald ani tighan.
 Ikonnetija Haghmir ma provišta ta dawi facilment ačessibbi, sabiex istaghmir ikun jista již skonnetija timi massoki i Fazi «mengenza.
 M'ghandekx tifah istaghmir; Hemm riskju ta' xokk elettriku.

Ventilationsöppningarna på enheten får inte blockeras eller täckas över. För att uppnå en bättre ventilation bör minst 20 cm fritt utrymme lämnas runt

Utsätt inte enheten för regn eller vattendroppar. Placera aldrig någon som helst vätskebehållare på den. Om vätska skulle komma in i enheten måste

den omedelbart kopplas ur från nätspänningen. Brännbara föremål, stearinljus och alla andra föremål som kan orsaka brand

tar mit torvaras nara enteren. – Föj installationsankeringaran och montera enheten antingen på väggen eller på det stalv som är särskilt avvatt för ändamiket. – Anskt enheten til ett i tättiskömig infaspänningsuttag, så att enheten snabbt kan koptas ur vid en eventuell nödsikuation. – Oppna inte enheten eftersom det företigger risk för elektrisk chock.

Napravo priktucile v enostavno dostopen viikač tako, da jo nevarnosti hitro izključite.
 Naprave ne odpirajte – obstaja nevarnost električnega udara

bylo možno je rychle odpojit. - Neotvíreite zařízení, ilnak hrozí nebezpečí úrazu elektrickým proudem.

### Инструкция по безопасности инструкция по основаемости На карманія не на запражавайте вентилиционные отверстив устройства. Для обеспечения пормальзой непталиция оставьте по мевлией мере 20 со непосности и пормальзой посталиции и пормали и п

Οδηνίες ασφαλείας

Bezpečnostní pokyny

blizkosti zařízení.

Varnostna navodila

Struzzionijiet dwar is-Sigurtà

mit-taghmir.

Säkerhetsanvisningar

får inte förvaras nära enheten

переменного тока. Не размещайте вблизи устройства легковоси источныхи



P° Miramón, 1/U20014 San Sebastián - SPAINrel.: +34 943 44 88 00 - Fax: +34 943 44 88 20television@ikusi.com - www.ikusi.tv