

MAC-HOME HD

REF. 4482

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



Contents

4	General	safety	instruction

- 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-quide
- 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.



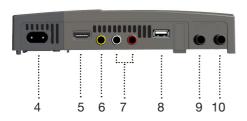
DO NOT DISPOSE OF UNIT AS NORMAL DOMESTIC URBAN WASTE

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.

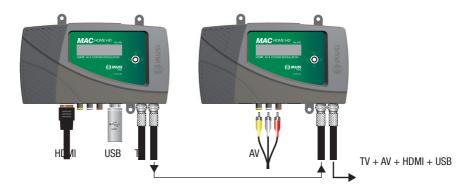




Cascade installation

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



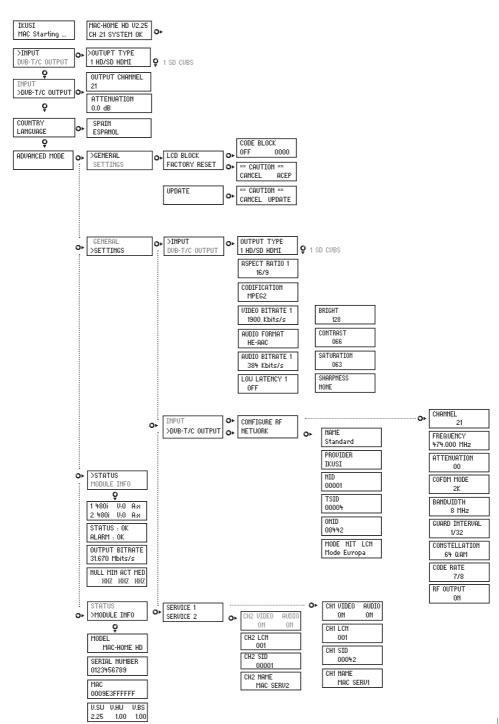
RISK OF DEATH OR INJURY

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

- 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



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).
- 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

- 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.

MAC HOME HD 1.00 CH 21 SYSTEM OK



>COUNTRY SPAIN



COUNTRY >LANGUAGE



INPUT >OUTPUT



OUTPUT CHANNEL 21



ATTENUATION 0.0 dB

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.



MAC HOME HD 1.00 CH 21 SYSTEM OK



>AVANCED MODE



>LCD BLOCK RESET FACTORY



CODE BLOCK OFF 0000

Restoring factory settings

- 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.

40►

LCD BLOCK >RESET FACTORY



** CAUTION ** CANCEL ACEPT

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.



>UPDATE



** CAUTION **
CANCEL UPDATE

Settings

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



GENERAL >SETTINGS



>INPUT DUB-T OUTPUT

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.



TYPE OF IMPUT 1 HD/SD HDMI



TYPE OF IMPUT



ASPEC RATIO 16/9



CODIFICATION MPEG2



VIDEO BITRATE 19000 Kbits/s



AUDIO FORMAT 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.
- 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.
- 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).

0

AUDIO BITRATE 384 Kbits/s



LOW LATENCY OFF



BRIGHT 128



CONTRAST OSS



SATURATION 063



SHARPNESS NINGUNO

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).

40>

>SERVICE 1 SERVICE 2



I VIDEO AUDIO ON ON



CH1 LCN 001



CH1 SID 00021



CH1 NAME MAC SERV1

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.

40>

IMPUT >DVB-T/C OUTPUT



>CONFIGURE RF NETWORK



OUTPUT CHANNEL 21



FREQUENCY 474.000 MHz



ATTENUATION 0.0 dB



COFDM MODE 8K



BANDWIDTH 8 MHz



GUARD INTERVAL 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.
- i) Locate and select the RF OUTPUT option. Allows the RF signal to be enabled/disabled..



CONSTELLATION 64 QAM



CODE RATE 1/4



RF OUTPUT ON

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.



CONFIGURE RF



MAME Standard



PROVIDER IKUSI



NID OOOO1



TSID 00021



ONID 00100



NIT LCN MODE OFF

DEFAULT PARAMETERS TABLE IN ACCORDANCE WITH THE COUNTRY SELECTED

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

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.

40►

>STATUS MODULE INFO

ۇ@

CH1: V: 0 A: x

ۉۿ

STATUS: OK ALARM: OK



OUTPUT BITRATE 19.216 MBits/s



NULL MIN ACT MAX 007 0007 0007

- 1) Locate and select the **STATUS** option.
 - a) Locate and show STATUS. The unit reports its status and alarms: OK / Frror.
 - 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).

√0►

STATUS >MODULE INFO



MODEL MAC HOME HD



SERIAL NUMBER 0123456789



MAC 0009E1234567



V. HW V. SW V. BS 1.00 1.00 1.00

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.



MAC HOME HD 1.00 » 0009E1234567



>BLOCK CODE INFORMATION



BLOCK CODE 0001 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.



BLOCK CODE >INFORMATION



SERIAL NUMBER 4488SA123456

USB Player

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 playback

Once the pendrive is inserted in the USB connector of the MAC-HOME HD modulator, playback 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.



NOTE

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, 1080p60, 1080p50)			
Maximum resolution		1080i60			
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	dΒμV	≥ 80			
Output attenuation	dB	1			
Lever adjustment	dB	-25			
Frequency stability	ppm	≤±30			
Noise figure (ΔB = 8 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			

Yes OFF,Europe,Independent Television Comision (UK), Nordig mode V1, Nordig mode V2, Generic Mode 230 - 240 Yes, web or USB interface CBR / VBR Unicast / Multicast		
Nordig mode V1, Nordig mode V2, Generic Mode 230 - 240 Yes, web or USB interface CBR / VBR		
Yes, web or USB interface CBR / VBR		
CBR / VBR		
Unicast / Multicast		
officast / Mutticast		
UDP / RTP		
SPTS		
Sí		
Sí		
Joystick 5 posiciones		
Ethernet		
14 W		
0 to 45 °C		
Yes, via USB		
Yes		
16x2 characters		

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



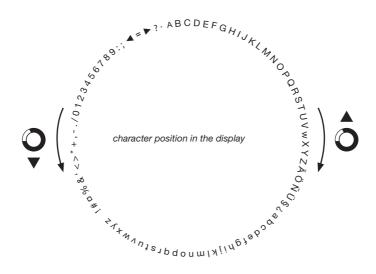
RECYCLING OF ELECTRICAL AND ELECTRONIC EQUIPMENT

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

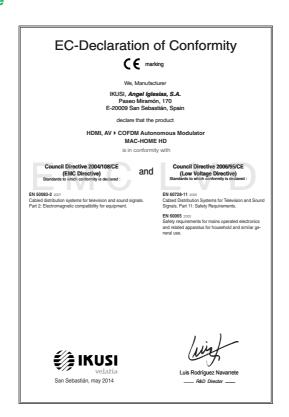


This symbol on your unit or its packaging indicates that this product cannot be treated as general domestic waste and must be handed in at the corresponding point of collection for electric and electronic equipment. By ensuring this product is disposed of correctly you will help prevent negative consequences 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 obstruje ni cubra las ranuras de venilación del aparato. Para que haya una venilación correcta, dele a frenos un espacio de 20 cm alredetico. No exponer el aparato a la fluvira o al gobre de agua. No colocar encima ningún recipiente con líquido. En caso de que un liquido cayera dentro del aparato, desconectar éste inimediatamente de la red alterna. Mantenga lejos del aparatol os objetos inflamables, velas y todo aquello que

- Mantenga lejos del aparatio los objetos intamables, velas y todo aquelle pudera cuisar in incendio.
 Siguiendo las instrucciones de instalación, fijar firmemente de aparato bi sea en la peur do inse sea nia tases-acoporte especialmente desfinada al el Comectar el aparatio a una torna de tensión de ned que sea fácilmente accesible, de forma que en caso de mengencia el aparatio pueda ser desconecidado rápidamente de § la torna.
 No abrir el aparatio, a que existe riesgo de descarga eléctrica.

Instruções de Segurança

- Não bloqueie nem cubra as aberturas de venitlação do aparelho. Para uma venitlação inelhor, deixe pelo menos 20 cm de espaço à victa do dispositivo. Não exponha o aparelho à chiva ou a gotise de ajua, nem coloque por criam enchum recipiente com água dentro. Caso entre água no aparelho, retire imediatamente a ficha da tomada.

 Alaste objectos inflamáveis, velas e qualquer coisa que possa provocar um
- 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 eléctrica de acesso fácil para que possa ser
- rapidamente desligado da tomada em caso de emergência.

 Não abra o aparelho, visto que pode provocar risco de descargas elétricas.

Sicherheitshinweise

Safety Instructions

from the device.

FS

Do not block or cover the device ventilation openings. For better ventilation, teave a surrounding space of at least 20 cm.
 Do not expose the device to rain or water drops. Do not put any kind of liquid container on top it. In the event that liquid gets into the device, disconnect it immediately from the attensing currier.
 Keep fammable objects, candes and anything that may cause a fire away.

 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.

- Geräf fernhalten.

 Das Geräf rehnsprechend den Installationsamweisungen stabil an der Wand oder auf dem speziell für diesen Zweck ausgelegten Sockel befestigen.

 Das Geräf an eine licht zugangliche Steckdose anschleßen, so dass dieses im Notfal schnell von der Steckdose geferennt werden kann.

 Das Geräf nicht öffinen, es besteht Stormschlaggefahr.

DE

IT

FI

Οδηνίες ασφαλείας

Ne bloquez ni ne couvrez les orifices d'aération de l'appareil

инструкции по основающем. Не издраживайте вентилиционные отверстив устройства. Для обеспечения порявляющей венталиции оставьте по меньшей мере 20 см. Для обеспечения порявляющей венталиции оставьте по меньшей мере 20 см. Небозацию облечит зашиту устройства и опадативия влаги внутра. пож-смет и кл. Не размещайте сверку устройства и опадативи кажитов. В случае попадалици жажитоств вмутра устройства, меньдешной оключите его от сети попадалиции жажитоств вмутра устройства, меньдешной оключите его от сети меньшей подативительного поставления по податительного податит

- Ne blougez ni ne couvrez les orifices d'adeixtion de l'appreil. Pour une neilleure servation, lisses bout our un espose d'environ 20 cm. - Neapousez par l'appareil à la plus ou aux goutiles d'eas. Ne mettez auxonité de l'experil de l'appareil d'étantiche le immédiatement de la coule à l'intérier de l'appareil d'étantiche le immédiatement de la couple et l'entre de la projete, d'entre le l'appareil d'étantiche le immédiatement auxorpité de vouvoueur un incertie bind d'appareil, d'appareil puis est position d'entre d'entre d'appareil puis et l'appareil puis et les replicatement et des des l'appareil puis et les replicatement de l'appareil puis d'appareil puis d'extraction ce us d'urgence.

- переменного тока. Не размещайте вблизи устройства легковоси источным

Instructions de sécurité

Не размещайте вбази и устройства астионостамизациями предметы, источными источными источными по установления по надар.
 — Сем у поструживи по установлена по надар.
 — Сем у поструживи по установлена по надар.
 — В поструживи по установлена по надар.
 — В поструживи по установления по надар.
 — Ростка сегля переменного тома, к которой показления устройство, востано биста регользовать да источными по установления по надар.
 — Ростка сегля переменного тома, к которой показления устройство, в дестаму по надар.
 — Ростка сегля переменного тожного устройство устройство, в постану стройство, в постану точными постройствого удара.
 — Не раборита, устройство, в достку пустам.

Μην ελείνετε και μην καλέπτετε τα ανοίγματα εξαερισμού της συσκευής. Για καιδίτερο εξαερισμό, κάφθητε χώρο τουλέχουτον 20 εκ. γέρω της.
 Μην επάξετε τη σκοιεκοή στη βομγή ή σε σταγόνε γαρού. Μην τοποθετείτε κοιτικός είδους δοχείο που περέξει υγγό πόνο στη σοκεική. Σε περίπτωση που διειοδύσει γυρό στη συκκειή, αποσυνδετεί την αμέσως από το ενάλλεσούρειο το φείρα.

 Διατηρείτε μακριά από τη συσκευή εύφλεκτα υλικά, κεριά και οτιδήποτε θα μπορούσε να προκαλέσει φωτιά. μπορούτο να προκαλοτοι φωτιάν.

Ακαλουθάθνικης τις φυθήτες γεκατάστευσης απερεώστε στουθερός τη συσκευή είτε στον τολρο είτε στην ειδική γι αυτόν το οκοπό βάση στήριξης.
Συνδάστε τη συσκευή και με είσολε προσταλέσμη πρόξιε ρεκετρικού ρετήμετος, έται ώστε η συσκευή να μπορεί να επιστουθεθεί γρήγορα από την πρίζει σε περίστευση είκευτης κούκγης.

Μην κουύγετε τη συσκευή, γιατί υπάρχει κίνθυνος ηλεκτροπληζίας.

Neomezuje přístup k větracím otvorům zařízení ani je nezakrývejte. Pro lepší
větrání kolem nich ponechejte vdný postor nejměně 20 cm.
 Nevystavute zařoní dešt nebo kopajíci voda. Nestaváne na říjskékoli nádoby
obsahují kapajímy. V případě, že se do zařízení dostane voda, okamžitě je
odpoje od stövoh nackjení.
 Inklitávej ředníměy, svíčky a cokol, co by motto způsobit požár, neumistujte do
nátrianst avělne.

 Postupujte podle pokynů pro instalaci a zařízení řádně upevněte na zeď nebo umístěte na podstavec určený speciálně k tomu účelu. - Zařízení připojite ke snadno přistupné siťové zásuvce, aby v připadě nebezpečí

ΕL

Veiligheidsinstructies

- U mag de ventilatieopeningen van het apparaat niet blokkeren of bedekken - U mag de ventilatieopeningen van het appearat niet blokkeren of bedekken. Voor beteer ventilatie dien ul misietse 20 om uniter eorinden vijle bouden. - Siel het apperaat niet bloot aan regen of waterdruppies. Plaats er geen vibestohverpakkingen op, in gevel er volestoff in het apparaat somt, dient u het omstdedlijk van de wisselstoom af ie sluiten. - Houdt brandster woorwepen, kaastere en lek voorwerp dat brand kan veroorzieken, uit de buurt van het apparaat. - Veldg de Installiser-instructies op, Plaats in te opparaat slevig aan de muur of op de bassiendersleuming, welke hiervoor is besterant op de Veldge verstelliser-instructies op, Plaats is te opparaat slevig aan de muur of op de bassiendersleuming, welke hiervoor is besterant op well veldge verstelling veldge verstelling veldge veldge veldge op well veldge veldge op op aan veld veld het opporatiest, zodet u in well veld verprofie hat op op east wit eil af het opporatiest vall de kropontale kut het op.

Istruzioni di sicurezza - Non ostruire né coprire le aperture di ventilazione dell'appa

- Non ostruire nê coprire le aperture di ventilacione dell'apparecchiatura. Per un migione ventilacione, laciore altronu no spazio libero di almeno 20 cm. Non espono l'apparecchiatura alla poggia o a gocciolamento d'acqua. Non apporgiare sulla superficia contenienti oli riguldo. Nel caso penetraseo del fejudo rell'apparecchiatura, sociologiati a medidiamente datali rete di corrente la federa del apparecchiatura e l'apparecchiatura del pago del presenta del poggia del presenta del apparecchiatura del presenta della posta del presenta del poggia del presenta del paga del presenta del presenta

NL

- Nie nalaży blokować lub zakrywać otworów wentylacyjnych urządzenia. Aby uzyskać lepszą wentylację, nalaży pozostawić co najmniej 20 cm wolnego miejsca wokół urządzenia.
- usyalisi faseza wenfulogi, nalaki pozostanić co narpmija zi cim vicinego mjesca wiski urzudenia.

 Ne nalaki wystawiko turzudenia na działania disezcu lub wody. Ne nalaki na matswiać zienipo pojemnika z plymni. W przpadku przeoleku plynu do wniętrzu urzudenia, nalaky je nicytmiast odejczyć oż dośla prądu zmiernego. // P zodalu urzudenia na nalaky sawiko dojeczyć oż dośla prądu zmiernego. Jakoba bu przed naczy, klobe niego w wodel pozac. Jakoba bu przed naczy, klobe niego w wodel pozac. Sawiy u bia na podawie zaremacznej to biap celu.

 Uzragamie nalaky oznąkaczyć do tiewo dosejenego przedenia elektrycznego. Ne nalaky dwienał obudowy urządzenia; timię zagożenie pozażenia elektrycznego. Ne nalaky dwienał obudowy urządzenia; timię zagożenie pozażenia elektrycznego.

- Älä peitä laitteen tuuletusaukkoia. Jätä vähintään 20 cm tila laitteen ympärille
- säiliötä sen päälle. Jos nestettä pääsee laitteen sisään, kytke se välittömästi
- irit pisiokkeesia.
 Pida kaikki palavat esineet, kuten kynttilät ja muut jotka voivat sytyttä tulipalon, poissa laitteen lähettyviltä.
 Noudattaen asennusohjeita, kiinnitä laite tukevasti seinälle tai siihen tarkoitettuun

- hyvän tuuletuksen varmentamiseksi. Älä altista laitetta sateele tai vedelle. Älä aseta mitään nestettä sisältävää

Instrukcia bezpieczeństwa

- Bloker eller tildæk ikke anordningens ventilationsåbninger. Lad der være mindst 20 cm frit rum omkring den af hensyn til bedre ventilation. Udsæt likke anordningen for regn eller vandråber. Anbring ikke nogen form for væskebeholder på den. I tilkelde af, at der kommer væske ind 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
- næt insareringsarivsningerie inges, isasjøres attrouninger i søkert på
 væggen eller på den basisholder, som er specielt beregnet til dette formål.
 Tilsfut anordningen til en lettligængelig lysnetkontakt, så anordningen hurtigt
 kan frakobles sikkontakten i en nedsituation.
 Luk ikke anordningen op. Der er risiko for elektrisk stød.

- jalustaan. Kytke laite joistokkeeseen johon on helppo päästä jotta laite voidaan kytkeä irti nopeasti pistokkeesta hätätläniteen sattuessa. -Älä avaa laitetta sähiköiskuvaaran takia.

Bezpečnostné pokyny

- Neobmedzujte pristup k vetracim otvorom zariadenia ani ich nezakrývajte. Pre lepšie vetranie nechajte okolo nich voľný priestor najmenej 20 cm.
 Nevystavujte zariadenie dažďu alebo kvapkajúcej vode. Nedévajte na zariadenie žiadne nádoby obsahujúce kvapaliny. V prípade, že sa do zariadenia dostane voda, okamžite ho odpojte od siefového napájania.
- Horfavé predmety, sviečky a čokoľvek, čo by mohlo spôsobiť požiar, neur do blizkosti zariadenia.
- do bitocost zariadenia, Postupute poda polynov na inštaláciu a zariadenia riadne upevnite na sta alabo umiestnite na podstavec určený špociálne na tento účel. Zariadenie projepte k lakino pristoruje sietívey záswike, aby ho bolo možne prípade nebezpečenstva nýchlo odpojí. Netovárade zariadenie, nak krod nebezpečenstvo úrazu elektrickým průd

Varnostna navodila

bylo možno je rychle odpojit.

Neotvirelte zařízení, linak hrozí nebezpečí úrazu elektrickým proudem,

- Ne prekrivajte ali biskirajte prezzačevalnih odprtin na naprak. Za bojšo prezzačevanje pustite najmenj 20 cm prostora okoli napravo.
 Ne topostavljede naprave na deži vodo. Na napravo na postavljetje posod s tekodino. Če tekočina prite v napravo jo takoj izitljučite iz izmenične napetesti.
 Nagravi na pritičinje vnetljih predmitov, sveća ili navelaj kar jariko pozoroči.
- požar. Po navodih za montažo napravo trdno pritrdite na zid ali podstavek, ki je za to
- namenjen. Napravo priključite v enostavno dostopen vtikač tako, da jo lahko v primeru
- Napravo priktucile v eriosiavno dostopen virkac tako, da jo i nevarnosti hitro izključite.
 Naprave ne odpirajte obstaja nevarnost električnega udara

Drošības instrukcija

- Neaizsprostojiet un neapkläjiet ierīces ventilācijas atveres. Labākai ventilācijai reatzsprostojiet un reapiscijet einizes vehilacijes atveres. Edoakai vehiliacijal astalijet vismaz 20 cm telpu ap tâm. Nepakļaujiet ierīci lietum vai ūdens pilleniem. Nelieciet uz to šķidrumu saturošus traukus. Gadījumā, ja ūdens iekļūst ierīcē, nekavējoties atvienojiet to no
- manjstrāvas.

 Neturiet ieriores tuvumā viegli uzliesmojošus objektus, sveces un citus priekāmetus, kas var aizdegties.

 Sekojot uzstādīšanas instrukcijām, cieši piestipriniet ierīci vai nu pie sienas, vai nu uz pamatu, kas īpašī domāts šim notlokam.
- ver nu uz pamaru, ikas ipaši domats šim notlokam.
 Pievienojie riici viegli pieejamai jaudas padeves iekārtai, lai ierīce var tikt ātrī atvienota no padeves galējas nepieciešamības gadījumā.
 Neatveriet ierīci; pastāv risks saņemt elektrisko šoku.

Ne zárja el és ne fedja le a készülék szelőztető nylássait. A megfeldőbb szelőztetés érőtekében, hagyjon legalább 20 cm-es nyllt helyet a nylási körül.
 A készüléket ne tegyel és elő valy vácsepeke hátásának. Ne helyezzen rá semmíféle folyadéktartályt. Ha a készülékbe folyadék kerül, azonnal válassza le

- Tartsa tivol a készüléhőt a gyülencny tergjerkül, syntysveut to soven very resembly tület öközölték el kölyekte.

A felszerelési utanátásokat kövelve, biztonságossan rögütse a készüléket a fatra, vegy az erre szárt al falványa.

- Quallákortassa a készüléket el falványa.

- Quallákortassa a készüléket el készőlek épen környen hozzálérhető hálozat csatlákozólágathoz, mely sürgősság sesélen, heltetővé tesel a készülék gyors levalásztását.

- A kászüléket tibo kinyári; áramútés veszellye ál fern.

Biztonsági előírások

Ohutusiuhend

- Neuždenkite įrenginio ventiliacinių angų. Laikykite įrenginį bent 20 cm atstur kitu obiektu dėl geresnės ventiliacijos saugotije i geresnes veninacijos.
 Saugokite įrenginį nuo lietaus ar vandens lašų. Nedėkite jokio indo su skysčiu ant įrenginio. Jei įrenginio vidun pakliūtų skysčio, tuoį pat atjunkite jį nuo kintamosic
- Laikykite degius daiktus, žvakes ir viską, kas gali sukelti gaisri, kuo toliau nu
- pronginio.

 Liakylitisi inalitisvimo instrukcija, petivirinkite įrenginį tvirtai prie sienos arba p
 pagrindo, specialiai skirto šiam tikslui.

 Prijunktai prenginį prie logvai prientamo pagrindinio lizdo taip, kad galima būtų
 elepvai įrengini pungui avarinia arbeju.

 Nentidaryktie įrenginio, gali nutrenkti ciektra.

FT

ΙT

- Seadme kaant ega ventilatsiooniavasid ei tohi kinni katta. Paremaki
- Seadme kaart ega verillationoriavasid el toh kinni katta. Paremaiss verilleerinnesies pales seadme ümber olem valhemat (20 m. vaha rumi.
 Arga litte seadet vihma kätte lega nisikesses kohta. Arga esettige seadmeis vedidikse seaddradik orinniered. Juhli, kui vedidik saub seadmesses, tubi seade viivlamatutti voduvõrgasi fahrüdadi.
 Veerenduge, et tuberillaksi esemerili (fuürladi ja teised objektid, mis võlvad kahalla) jäliksid seadmest pisevaht kaugelet.
 Singless paljaksihujuhest kirinnilge seade kiridati semale või spetisalabele hängles paljaksihujuhest kirinnilge seade kiridati semale või spetisalabele.

- tugialusele.

 Ühendage toitejuhe kergelt ligipääsetavas kohas p
- korral oleks võimalik seadet kiiresti vooluvõrgust lahti ühendada Elektrilöögi vältimiseks ärge avage seadme kaant.

Struzzionijiet dwar is-Sigurtà

- M'ghandekx timpedixxi jew tghatti l-ftuh ta' ventilazzjoni tat-taghmir. Ghal ventilazzoni ahjar, halli spazju ta' mhux anqas minn 20 cm madwaru.

 - Tesponiex it-taghmir ghal xita jew taqtir ta' ilma. M'ghandekx tqieghed l-ebda tip ta' recipjent ta' likwidu fuqu. Fil-tagʻi likwidu jidhol fil-taghmir, skonnettja minnufih
- mill-kurrent li jalterna. Žomm oģģetti (Jammabbli, xemghat u kull haģa li tista' tikkaģuna xi nar `il boghod
- mit-tagnmir.

 Wara I-istruzzjonijiet ta' installazzjoni, wahhal it-taghmir sew jew mal-hajt jew fuq
- wara Festuzzonnicz u nistanazzoni, wantan iraginini sew jew marinaj jew nu Jappogg bazi mahsub specifikament fishi dan itjahan.
 Ikonnettja Haghmir ma' provvista ta' dawl faciliment acessibbli, sablex it-taghmir ikun jista jiji skonnettja timi massokit fixa 'de merigenza.
 M'ghandekx tiftah it-taghmir, Hemm riskju ta' xokk elettriku.

Säkerhetsanvisningar

MT

- 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. Ptacera aldrig någon som hetst 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 får inte förvaras nära enheten
- tar inte torvarias nara enneuen.

 Főj installationsvinsingarian och montera enheten antingen på väggen eller på det stativ som är sisristil avvett för ändamålet.

 Anstat enheten til ett lättlätionsjill antisplanningsuttiga, så att enheten snabbt kan kopplas ur vid en eventuell nödsituation.

 Öppna linte enheten eflersom det företligger risk för elektrisk chock.

22

