

HTL-TRX

REF. 3861



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General safety instructions

- Read all of this user manual carefully before plugging in the equipment.
- Always have these instructions to hand during installation.
- Follow all of the instructions and safety notices regarding equipment handling.



DANGER OF DEATH OR INJURY

- Do not install the equipment during an electrical storm. This could lead to electrostatic discharge from lightning.
- Do not open the equipment. This could lead to electric discharge.

RISK OF EQUIPMENT DAMAGE

- The equipment must be appropriately ventilated. Install the equipment in a dust-free location. Do not place the equipment in a location where the ventilation slots are covered or blocked. Install the equipment in a location with at least 20 cm around it free of other objects.
- Do not expose the equipment to rain or moisture. Install the equipment in a dry location with no infiltration or condensation of water. Should a liquid enter the equipment, disconnect it immediately from the mains.
- Keep the equipment away from flammable objects, candles and anything that may cause a fire.
- Connect the equipment to an easily accessible power socket. In the event of an emergency, it will then be possible to quickly unplug the equipment.
- Do not expose the equipment to sources of heat (sun, heating, etc.).



HANDLING THE INSIDE OF THE EQUIPMENT IS FORBIDDEN

This notice forbids any work that may affect the working order of the equipment or its warranty.



DO NOT DISPOSE OF AS URBAN WASTE

This type of notice indicates that the equipment must not be disposed of as unselected urban waste.

INTRODUCTION

This document explains how to perform a basic installation of a headend based on HTL-TRX modules.

The document describes how the headend is configured. For that, initially the physical mounting is described. After that, it explains how to connect the user pc to the headend through IKUSI HEADEND DISCOVERY application and how to convert one of the modules into master module. Finally, it describes the steps that must be followed in order to define a channel lineup, mainly focusing on the Wizard.

2. HEADEND CONNECTION

The instructions for connecting the headend are described in detail in the guide that is provided with the HTL-TRX module. Also, that guide can be downloaded from our web page www.ikusi.tv.

Briefly, the steps to follow are:

- Connect the different cables from the multiswitch to the module inputs
- Interconnect the modules through the supplied ethernet adapters
- Interconnect the output line bridges
- Connect the power line
- Connect the PC to a headend station module through its ethernet connection with an RJ-45 cable

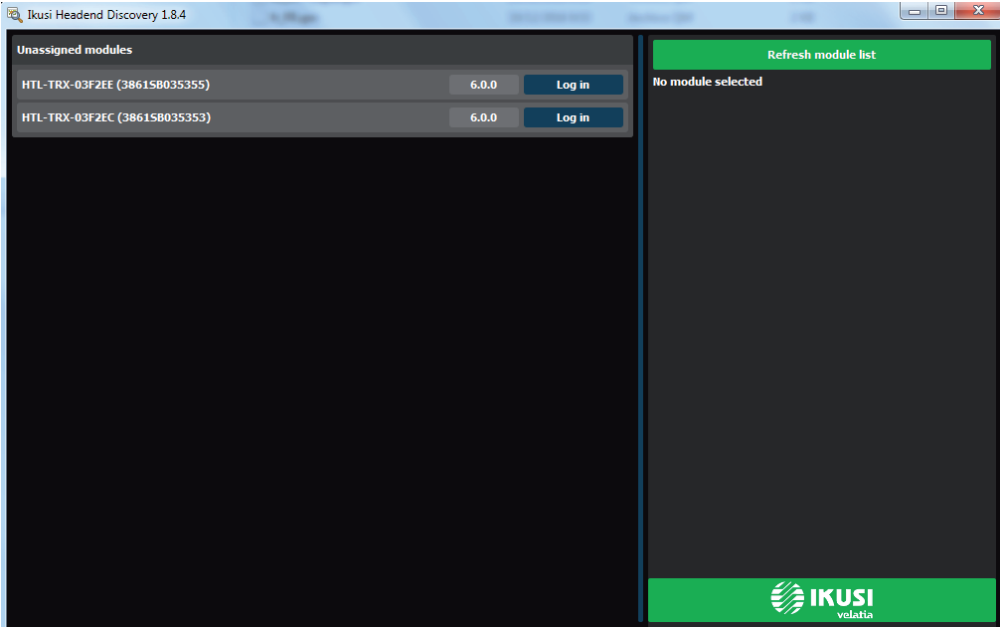
3. DEFINITION OF THE MASTER MODULE

Communication with the headend takes place based on the definition of a module as a master and the others as slaves. By default, all the modules are slaves. The first step consists on converting one of the modules in master. Control and access to the headend is done through the master module, which allows us to configure the other modules.

Use IKUSI HEADEND DISCOVERY application to communicate with the modules without modifying manually the network configuration of your pc. You can download the IKUSI HEADEND DISCOVERY application from www.ikusi.tv web page.

NOTE: You must use IKUSI HEADEND DISCOVERY version 1.8.4 or higher

Open IKUSI HEADEND DISCOVERY application (the network card IPV6 protocol will be automatically enabled or permission will be requested to do so).



The window will show the names of the connected modules along with the last six numbers of the MAC address and the batch serial number. Select the module you want to convert in master and push on “Log in” button.

The web browser of the PC will open automatically, showing the access page of the headend.

NOTE: HTL-TRX web interface uses https protocol. It is likely that your browser doesn’t recognize the security certificate generated by the HTL. To continue configuring the module without problems, add the security exception requested by your browser in a permanent way.




NOTE: To display the graphics provided in the system’s configuration programme, we recommend installing the Mozilla Firefox 1.5 web browser or later (www.mozilla.com) on the control PC.

Module HTL-TRX



Class A

User:
 password:

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By default, the language of the web interface is the same than the one used by the browser. If you want to change it, choose in the    icon, the flag related with the desired language.

Enter the folowing data, User: Admin Password: admin. Push **Accept** button. A window as the following one will open.

[Exit](#) [About](#)

Model:	HTL-TRX
Serial Number:	396158035355
MAC Address:	00:09:E3:03:F2:EE
Bootstrap Version:	1.06
Board Version:	1.06
Firmware Status:	✓
Firmware Version:	6.0.0+svn10828 (Updated on 03-15-2017)
Upgrade File:	<input type="button" value="Add Firmware file..."/>

Push Master Module mode enable button. The module will launch a readjustment process and, after few seconds, it will display again the access screen.

Module HTL-TRX

Class A

User:
 password:

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Enter again User: Admin, Password: admin. As it is the first connection, setup wizard will be launched automatically.

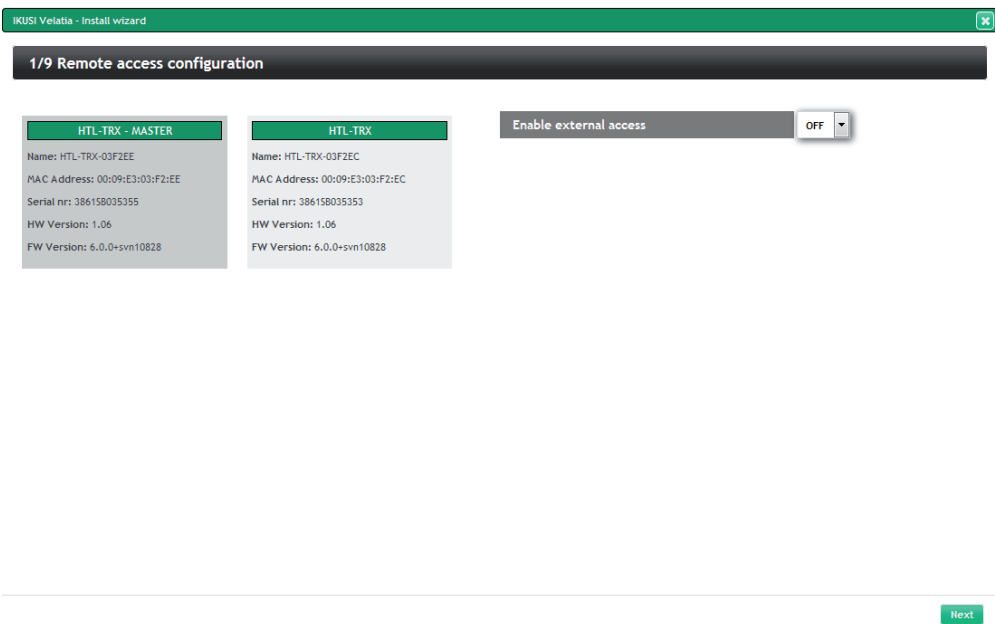
4. SETUP WIZARD

Setup wizard will guide you simply and quickly through set-up. It will be launched automatically the first time the headend is configured. To access to wizard subsequently, you can do it from the Advanced adjustment menu of the headend, selecting Wizard option.

Wizard will open indicating step by step the actions that must be done.

►4.1 Step 1: Remote access configuration

The first step consists on configuring the remote access.



A window with information about the modules of the headend will open. By default, external access option is disabled. To enable it, go to drop down Enable external access list and select ON.

1/9 Remote access configuration

HTL-TRX - MASTER

Name: HTL-TRX-03F2EE
MAC Address: 00:09:E3:03:F2:EE
Serial nr: 38615B035355
HW Version: 1.06
FW Version: 6.0.0+svn10828

HTL-TRX

Name: HTL-TRX-03F2EC
MAC Address: 00:09:E3:03:F2:EC
Serial nr: 38615B035353
HW Version: 1.06
FW Version: 6.0.0+svn10828

Enable external access

ON

Use DHCP

OFF

IP address

192.168.235.83

Netmask

255.255.255.0

Default gateway

192.168.235.1

Primary DNS Server

8.8.8.8

Secondary DNS Server

8.8.4.4

Next

Select DHCP ON when the network settings are provided automatically by a DHCP server. In other case, select OFF and enter the network parameters manually (IP address, Netmask, Default gateway, Primary DNS Server, Secondary DNS Server). Consult network manager to get those parameters.

Push **Next** button.

►4.2 Step 2: Global configuration

A window as the following one will open:

IKUSI Velatia - Install wizard

2/9 Global configuration

TV Configuration

Spain

France

Australia

Italy

Sweden

Portugal

United Kingdom

Greece

Other

RF Input Mode

RF Input

DVB-S/S2

Time Zone

Country

United Kingdom

Time Zone

Europe/London

Transcoding

TV types

SD

RF Output mode

RF Output

DVB-T

Previous

Next

In this window you can configure the following parameters:

- TV Configuration: choosing an specific country, the headend will be configured respecting the particularities of the TV standards of that country (RF frequency plan, modulation scheme, LCN descriptors, etc). These parameters, selected automatically by the headend, can be modified subsequently form the Advanced adjsument menu
- Time zone: select the time zone where the headend is located.
- RF Input mode: choose the signal type is going to be received (DVB-S/S2, DVB-T/T2 or DVB-C)
- RF Output mode: select the type of modulation used in the RF distribution (DVB-T or DVB-C).

NOTE: When the selected country is "Others", besides selecting the modulation type, you must indicate the frequencies of the first and the last channels of the reserved spectrum for TV and the bandwidth of the TV channels

Once the desired parameters have been configured, push **Next** button.

►4.3 Step 3: Output channel configuration

This screen allows to select the output RF channels where the contents will be transmitted.

IKUSI Velatia - Install wizard

3/9 Output channel configuration

Drag and drop for change the channel

C21 - 474Mhz HTL-TRX-03FZEE	C22 - 482Mhz HTL-TRX-03FZEE	C23 - 490Mhz HTL-TRX-03FZEC	C24 - 498Mhz HTL-TRX-03FZEC	C25 - 506Mhz	C26 - 514Mhz	C27 - 522Mhz
C28 - 530Mhz	C29 - 538Mhz	C30 - 546Mhz	C31 - 554Mhz	C32 - 562Mhz	C33 - 570Mhz	C34 - 578Mhz
C35 - 586Mhz	C36 - 594Mhz	C37 - 602Mhz	C38 - 610Mhz	C39 - 618Mhz	C40 - 626Mhz	C41 - 634Mhz
C42 - 642Mhz	C43 - 650Mhz	C44 - 658Mhz	C45 - 666Mhz	C46 - 674Mhz	C47 - 682Mhz	C48 - 690Mhz
C49 - 698Mhz	C50 - 706Mhz	C51 - 714Mhz	C52 - 722Mhz	C53 - 730Mhz	C54 - 738Mhz	C55 - 746Mhz
C56 - 754Mhz	C57 - 762Mhz	C58 - 770Mhz	C59 - 778Mhz	C60 - 786Mhz	C61 - 794Mhz	C62 - 802Mhz
C63 - 810Mhz	C64 - 818Mhz	C65 - 826Mhz	C66 - 834Mhz	C67 - 842Mhz	C68 - 850Mhz	C69 - 858Mhz

PreviousNext

Setup wizard shows a frequency plan with all the available channels. By default, setup wizard proposes the lowest channels. To change that selection, move the channels manually, dragging and dropping them in an empty channel.

NOTE: As a useful aid, the unwanted channes can be marked (for example, because they are already occupied by other services which do not form part of this headend), clicking on the channel boxes (background colour will change).

3/9 Output channel configuration

Drag and drop for change the channel

C21 - 474Mhz HTL-TRX-03F2EE	C22 - 482Mhz	C23 - 490Mhz HTL-TRX-03F2EC	C24 - 498Mhz HTL-TRX-03F2EC	C25 - 506Mhz	C26 - 514Mhz	C27 - 522Mhz HTL-TRX-03F2EE
C28 - 530Mhz	C29 - 538Mhz	C30 - 546Mhz	C31 - 554Mhz	C32 - 562Mhz	C33 - 570Mhz	C34 - 578Mhz
C35 - 586Mhz	C36 - 594Mhz	C37 - 602Mhz	C38 - 610Mhz	C39 - 618Mhz	C40 - 626Mhz	C41 - 634Mhz
C42 - 642Mhz	C43 - 650Mhz	C44 - 658Mhz	C45 - 666Mhz	C46 - 674Mhz	C47 - 682Mhz	C48 - 690Mhz
C49 - 698Mhz	C50 - 706Mhz	C51 - 714Mhz	C52 - 722Mhz	C53 - 730Mhz	C54 - 738Mhz	C55 - 746Mhz
C56 - 754Mhz	C57 - 762Mhz	C58 - 770Mhz	C59 - 778Mhz	C60 - 786Mhz	C61 - 794Mhz	C62 - 802Mhz
C63 - 810Mhz	C64 - 818Mhz	C65 - 826Mhz	C66 - 834Mhz	C67 - 842Mhz	C68 - 850Mhz	C69 - 858Mhz

Previous

Next

Push **Next** button to accept the channel distribution.

►4.4 Step 4: Satellite

This screen allows to configure the parameters related with the used satellite installation.

It only appears when RF Input has been selected as DVB-S/S2 in the step 2. In other case, setup wizard skips this step and goes directly to step 5.

4/9 Satellite

Multiswitch configuration

Enable DiSEqC DiSEqC ON ▾

Number of polarities 4 ▾

oscillators

Low oscillator 9750 Mhz

High oscillator 10600 Mhz

Multiswitch Input

DiSEqC A Astra 1KR, 1L, 1P, 1N (19.2E) ▾

Position	Voltage	Tone	Satellite	Polarity	Band	Multiswitch Input Name
1	13V	0Khz	Astra 1KR, 1L, 1P, 1N (19.2E) ▾	Vertical ▾	Low ▾	Astra 1KR, 1L, 1P, 1N (19.2E)VL
2	18V	0Khz	Astra 1KR, 1L, 1P, 1N (19.2E) ▾	Horizontal ▾	Low ▾	Astra 1KR, 1L, 1P, 1N (19.2E)HoL
3	13V	22Khz	Astra 1KR, 1L, 1P, 1N (19.2E) ▾	Vertical ▾	High ▾	Astra 1KR, 1L, 1P, 1N (19.2E)VHI
4	18V	22Khz	Astra 1KR, 1L, 1P, 1N (19.2E) ▾	Horizontal ▾	High ▾	Astra 1KR, 1L, 1P, 1N (19.2E)HoHI

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Next

When the satellite signal is delivered to the HTL through a multiswitch, select Enable DiSEqC: DiSEqC ON, introducing the number of inputs of the multiswitch in Number of polarities (in the example, 4 inputs, i.e., a complete satellite). In the case there is not a multiswitch, select DiSEqC OFF.

In oscillators box, introduce the oscillator frequencies used by your LNB..

Finally, Multiswitch Input box is displayed. For each of the inputs, defined by its position and grouped in fours, you must identify which polarity is (Vertical or Horizontal) and in which band is transmitted (Low or High). Setup wizard proposes a name for that input as a combination of the satellite name, polarity and band. This name can be edited.

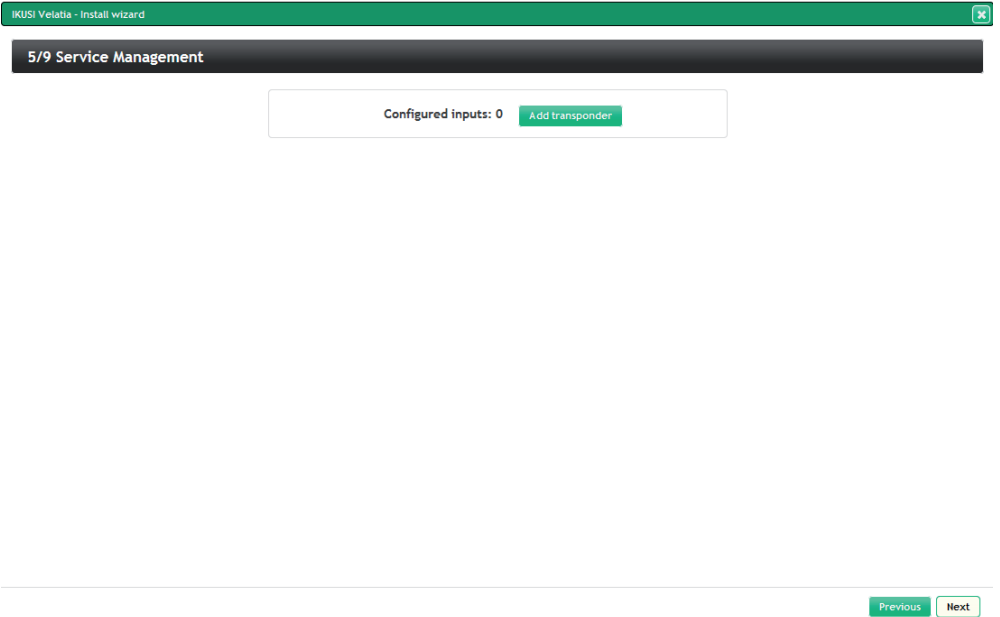
To go to the next step, push **Next** button.

►4.5 Step 5: Service management

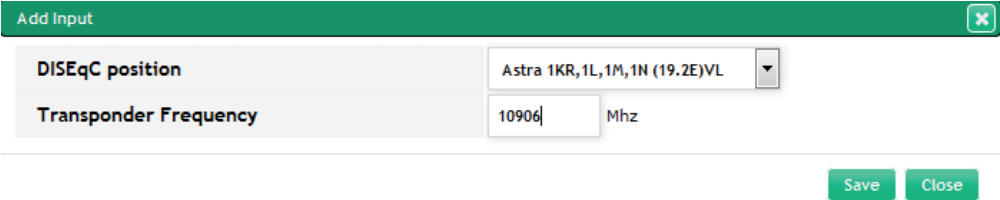
This screen allows to select which services must be received, and it is different depending on the value of RF Input that has been configured in step 2. Below, the two types of screens are described.

4.5.1 Satellite input case

In the case you have configured DVB-S/S2 as RF input in the step 2, a window as the following one will be displayed:



Push **Add transponder** button. A window will open, where you must indicate the frequencies of the transponders you want to receive and in which position of the multiswitch are.



After introducing a transponder, push **Save** button. The headend will try to tune it. Once it tunes it, a list with all the services of that transponder will be displayed.

5/9 Service Management

Configured inputs: 1/4

[Add transponder](#)

+ Astra 1KR,1L,1M,1N (19.2E)VL - 10906		
<input type="checkbox"/>	AMC HD	H.264 HD
<input type="checkbox"/>	ANTENA 3 HD	H.264 HD
<input type="checkbox"/>	CUATRO HD	H.264 HD
<input type="checkbox"/>	LA SEXTA HD	H.264 HD
<input type="checkbox"/>	M.FORMULA1HD	H.264 HD
<input type="checkbox"/>	M.MOTOGPHD	H.264 HD
<input type="checkbox"/>	TELECINCO HD	H.264 HD

[Previous](#)[Next](#)

Repeat the same process with all the satellite transponders. In this example, the headend is formed by 2 HTL-TRX modules, therefore you can receive up to 4 satellite transponders.

5/9 Service Management


Configured inputs: 4/4

[Add transponder](#)

+ Astra 1KR,1L,1M,1N (19.2E)VL - 10906			+ Astra 1KR,1L,1M,1N (19.2E)VL - 11259			+ Astra 1KR,1L,1M,1N (19.2E)HoL - 11362		
<input type="checkbox"/>	AMC HD	H.264 HD	<input type="checkbox"/>	BEIN SPORTS	H.264 HD	<input type="checkbox"/>	ZDF HD	H.264 HD
<input type="checkbox"/>	ANTENA 3 HD	H.264 HD	<input type="checkbox"/>	COMEDYCENTRALHD	H.264 HD	<input type="checkbox"/>	zdf_neo HD	H.264 HD
<input type="checkbox"/>	CUATRO HD	H.264 HD	<input type="checkbox"/>	COSMO HD	H.264 HD			
<input type="checkbox"/>	LA SEXTA HD	H.264 HD	<input type="checkbox"/>	FOX LIFE HD	H.264 HD			
<input type="checkbox"/>	M.FORMULA1HD	H.264 HD	<input type="checkbox"/>	M. GOLF HD	H.264 HD			
<input type="checkbox"/>	M.MOTOGPHD	H.264 HD	<input type="checkbox"/>	M. SeriesXtraHD	H.264 HD			
<input type="checkbox"/>	TELECINCO HD	H.264 HD						
+ Astra 1KR,1L,1M,1N (19.2E)HoL - 11494								
<input type="checkbox"/>	Das Erste HD	H.264 HD						
<input type="checkbox"/>	SWR BW HD	H.264 HD						
<input type="checkbox"/>	SWR RP HD	H.264 HD						
<input type="checkbox"/>	arte HD	H.264 HD						

[Previous](#)[Next](#)

If you want to remove any of the transponders, push button.

After that, select the services that are going to be included in the output channel lineup. To select a specific service, click in the check box next to that service. If you want to select all the services of a transponder, push  button.

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5/9 Service Management

Configured inputs: 4/4

Add transponder

Astra 1KR,1L,1M,1N (19.2E)VL - 10906

☐ AMC HD

H.264 HD

☐ ANTENA 3 HD

H.264 HD

☐ CUATRO HD

H.264 HD

☐ LA SEXTA HD

H.264 HD

☒ M.FORMULA 1HD

H.264 HD

☒ M.MOTOCPHD

H.264 HD

☐ TELECINCO HD

H.264 HD

Astra 1KR,1L,1M,1N (19.2E)VL - 11259

☒ SEIN SPORTS

H.264 HD

☐ COMEDYCENTRALHD

H.264 HD

☐ COSMO HD

H.264 HD

☒ FOX LIFE HD

H.264 HD

☐ M. GOLF HD

H.264 HD

☐ M. SeriesXtraHD

H.264 HD

Astra 1KR,1L,1M,1N (19.2E)HoL - 11362

☒ ZDF HD

H.264 HD

☒ kdf_neo HD

H.264 HD

Astra 1KR,1L,1M,1N (19.2E)HoL - 11494

☒ Das Erste HD

H.264 HD

☐ SWR BW HD

H.264 HD

☐ SWR RP HD

H.264 HD


☒ arte HD

H.264 HD

Previous

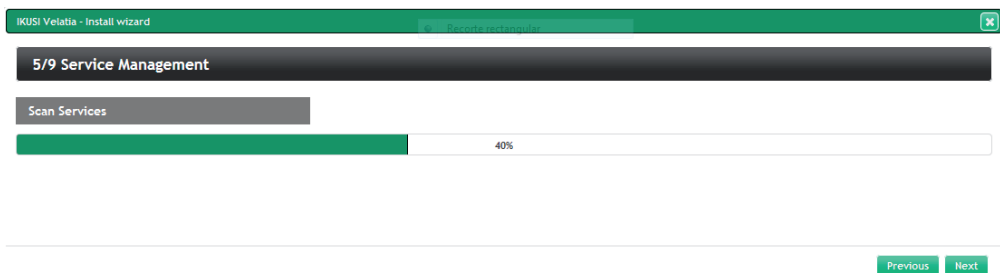
Next


NOTE: Each HTL-TRX module is able to transcode up to 4 HD services. If you select more HD services than the headend can trascode and the TVs are SD, a message will be displayed, indicating the transcoding capacity has been exceeded

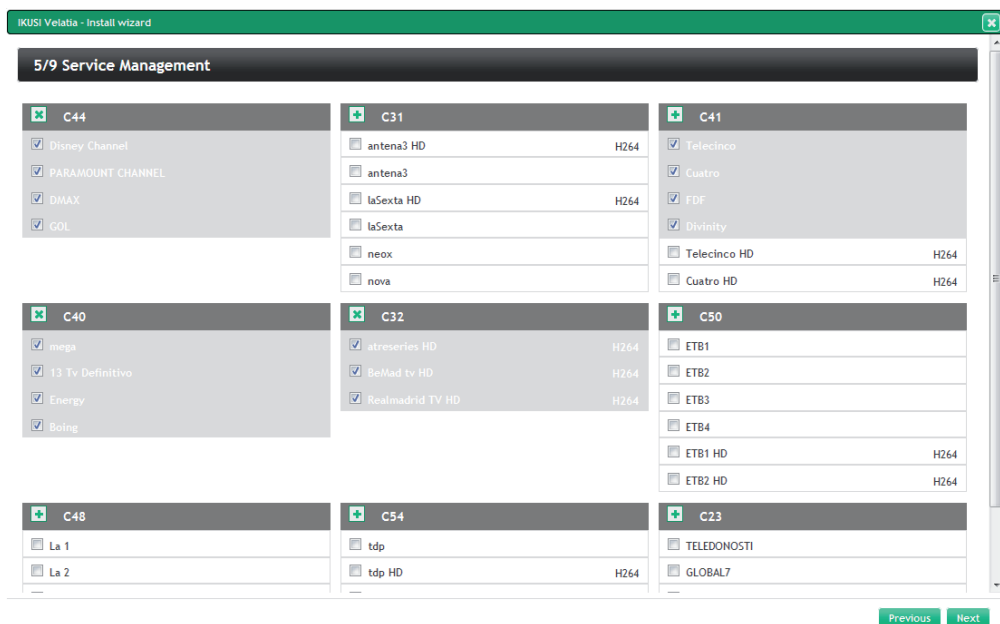
After selecting the desired services, push  button to go to step 6.

4.5.2 Caso entrada terrestre/cable

In the case you have configured DVB-T/T2 or DVB-C as RF input in the step 2, a window as the following one will be displayed:



The headend will scan the input signal automatically. A progress bar will be displayed, indicating the percentage of the scanning that has been performed. When the scanning finish, the information of the detected multiplexes will be displayed. Select the desired services clicking in the check box next to those services. If you want to select all the services of a multiplex, push  button.

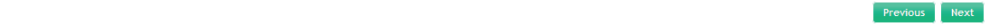
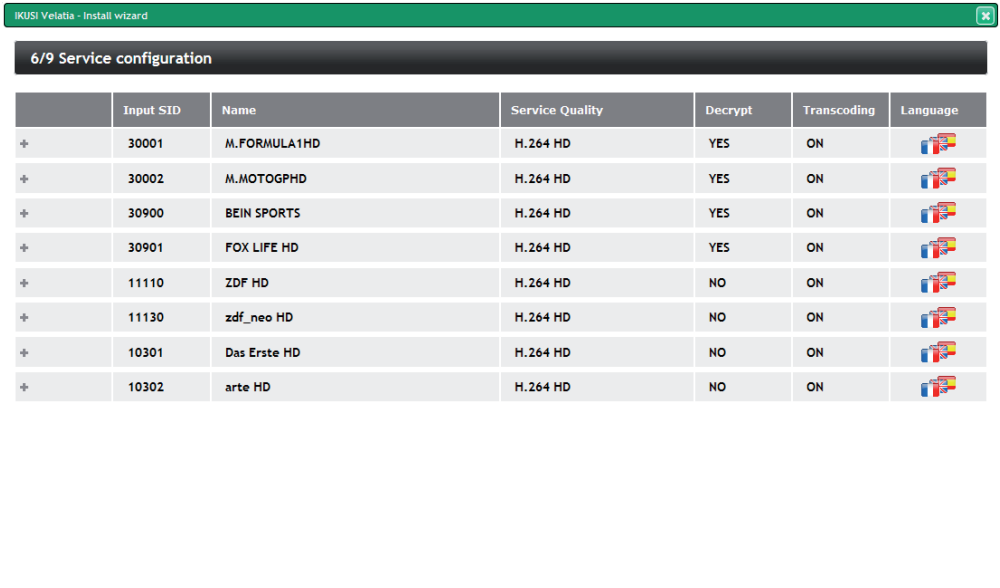


NOTE: Each HTL-TRX module is able to transcode up to 4 HD services. If you select more HD services than the headend can trascode and the TVs are SD, a message will be displayed, indicating the transcoding capacity has been exceeded.

After selecting the desired services, push **Next** button to go to step 6.

►4.6 Step 6: Service configuration

In this step, a window with a list of the selected services will open.



You can change the distribution mode of the services according to the audios. To do that, push button or over icon. Audio configuration box will open.

6/9 Service configuration

	Input SID	Name	Service Quality	Decrypt	Transcoding	Language
+	30001	M.FORMULA1HD	H.264 HD	YES	ON	
+	30002	M.MOTOGPHD	H.264 HD	YES	ON	
+	30900	BEIN SPORTS	H.264 HD	YES	ON	
+	30901	FOX LIFE HD	H.264 HD	YES	ON	
+	11110	ZDF HD	H.264 HD	NO	ON	
+	11130	zdf_neo HD	H.264 HD	NO	ON	
+	10301	Das Erste HD	H.264 HD	NO	ON	
—	10302	arte HD	H.264 HD	NO	ON	

Audio mode

Aggregate

Audio mode

MPEG-1 audio

☒

MPEG-1 audio

☒

Dolby Digital

☒

MPEG-1 audio

☒









Previous





Next

The headend has two working modes, disaggregated languages or aggregated languages. When disaggregated languages mode is selected, in the case a multi-language service, one service will be generated for each language. The disaggregation is done at logical level, i.e., the used bandwidth is the same as the used with a single service conveying all the languages; however the TV is detecting several independent services. Therefore, the final user can select the desired language simply changing the channel. When aggregated languages mode is selected, a single service will all the languages will be generated.

Select Aggregate as audio mode to work with aggregated languages. However, if you want to work with disaggregated languages, select Disaggregate. In that case, also you can choose which audio channels are included and which aren't. Furthermore, when you select Disaggregate, that change will be reflected in Language icon, becoming to

6/9 Service configuration

	Input SID	Name	Service Quality	Decrypt	Transcoding	Language
+	30001	M.FORMULA1HD	H.264 HD	YES	ON	
+	30002	M.MOTOGPHD	H.264 HD	YES	ON	
+	30900	BEIN SPORTS	H.264 HD	YES	ON	
+	30901	FOX LIFE HD	H.264 HD	YES	ON	
+	11110	ZDF HD	H.264 HD	NO	ON	
+	11130	zdf_neo HD	H.264 HD	NO	ON	
+	10301	Das Erste HD	H.264 HD	NO	ON	
—	10302	arte HD	H.264 HD	NO	ON	

Audio mode	Audio mode
Disaggregate ▼	 MPEG-1 audio <input checked="" type="checkbox"/>
	 MPEG-1 audio <input checked="" type="checkbox"/>
	 Dolby Digital <input type="checkbox"/>
	 MPEG-1 audio <input type="checkbox"/>

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Next

After doing the desired adjustments, push **Next** button.

►4.7 Step 7: LCN, SID, Output Name configuration

In this step, a screen with a list of all the services that will be sent to the outputs will be displayed, with the LCN, SID and name values.

IKUSI Velatia - Install wizard

7/9 LCN, SID, Output Name configuration

LCN	SID	Name	Languages service	
400	30001	M.FORMULA 1HD	MPEG-1 audio MPEG-1 audio	
401	30002	M.MOTOGPHD	MPEG-1 audio MPEG-1 audio	
402	30900	BEIN SPORTS	Dolby Digital MPEG-1 audio MPEG-1 audio	
403	30901	FOX LIFE HD	Dolby Digital MPEG-1 audio	
404	11110	ZDF HD	MPEG-1 audio MPEG-1 audio MPEG-1 audio MPEG-1 audio	
405	11130	zdf_neo HD	MPEG-1 audio MPEG-1 audio MPEG-1 audio MPEG-1 audio	
406	10301	Das Erste HD	MPEG-1 audio MPEG-1 audio MPEG-1 audio	
407	10302	arte HD Deutsch	MPEG-1 audio	
408	10303	arte HD Français	MPEG-1 audio	

Previous Send

If you want it, you can edit those fields. Also, you can remove any of the the services, pushing button .

To send the configuration that has been defined through setup wizard, push **Send** button. A confirmation window will open, informing that the configuration will be stored in the modules.

Would you like to continue?

Processing selected data: Searching for a viable configuration for your current headend.

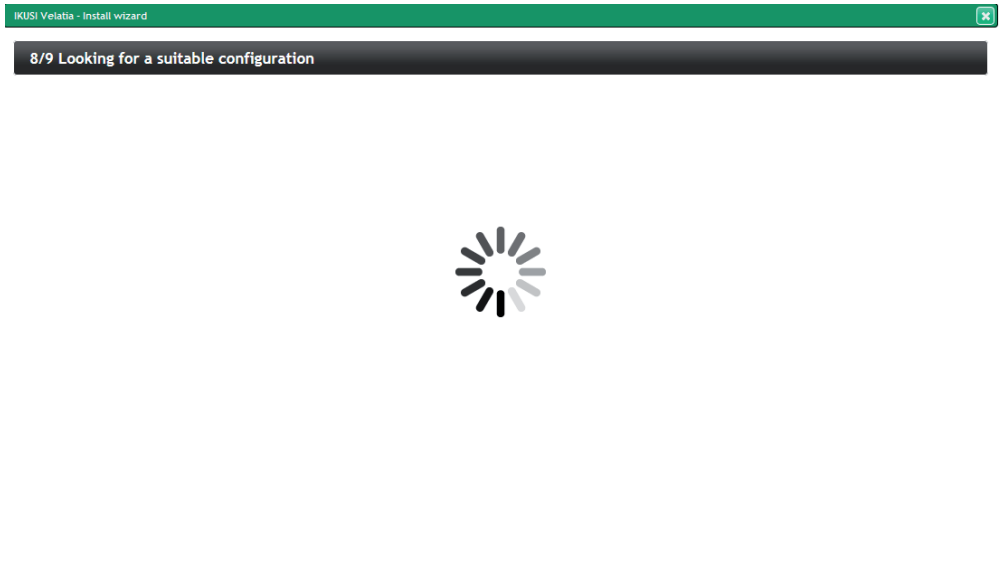
WARNING: The resulting configuration will be stored in the modules. Do you wish to continue?

CancelContinue

If you agree, push **Continuar** button.

►4.8 Step 8: Search for supported configuration

The headend will calculate how to apply the proposed configuration over the headend. While this calculation process is in course, a waiting screen will be displayed.



When the process ends, the configuration will be stored in the modules and setup wizard will go to step 9.

►4.9 Step 9: Confirmation of the new service configuration

In the final step, a summarize window will be displayed, with a list of the services that forms the selected channel lineup, indicating in which RF channel will be transmitted each one.

9/9 Confirm new service configuration

LCN	SERVICE	MODULE	INPUT	OUTPUT
400	M.FORMULA1HD	HTL-TRX-03F2EE	10906 Mhz	C21
401	M.MOTOGPHD	HTL-TRX-03F2EE	10906 Mhz	C21
402	BEIN SPORTS	HTL-TRX-03F2EC	11259 Mhz	C23
403	FOX LIFE HD	HTL-TRX-03F2EC	11259 Mhz	C23
404	ZDF HD	HTL-TRX-03F2EC	11362 Mhz	C23
405	zdf_neo HD	HTL-TRX-03F2EC	11362 Mhz	C23
406	Das Erste HD	HTL-TRX-03F2EE	11494 Mhz	C21
407	arte HD Deutsch	HTL-TRX-03F2EE	11494 Mhz	C21
408	arte HD Français	HTL-TRX-03F2EE	11494 Mhz	C21

Previous

Close

If you want it, you can substitute that RF channel by other of the channels generated by the module that is processing that service.

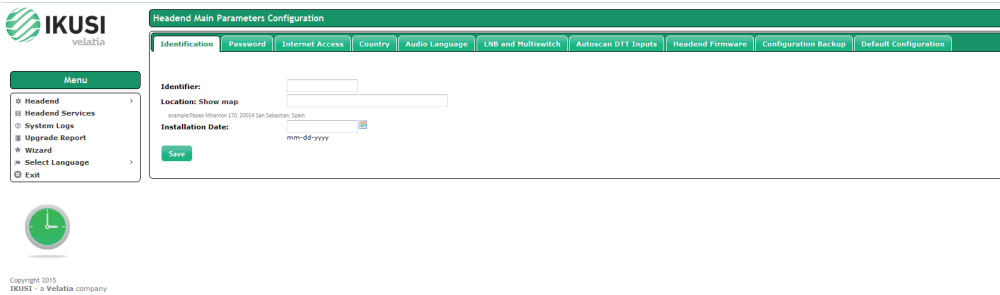
9/9 Confirm new service configuration

LCN	SERVICE	MODULE	INPUT	OUTPUT
400	M.FORMULA1HD	HTL-TRX-03F2EE	10906 Mhz	C21
401	M.MOTOGPHD	HTL-TRX-03F2EE	10906 Mhz	C21
402	BEIN SPORTS	HTL-TRX-03F2EC	11259 Mhz	C23
403	FOX LIFE HD	HTL-TRX-03F2EC	11259 Mhz	C23
404	ZDF HD	HTL-TRX-03F2EC	11362 Mhz	C23
405	zdf_neo HD	HTL-TRX-03F2EC	11362 Mhz	C23
406	Das Erste HD	HTL-TRX-03F2EE	11494 Mhz	C21
407	arte HD Deutsch	HTL-TRX-03F2EE	11494 Mhz	C21
408	arte HD Français	HTL-TRX-03F2EE	11494 Mhz	C21

Previous

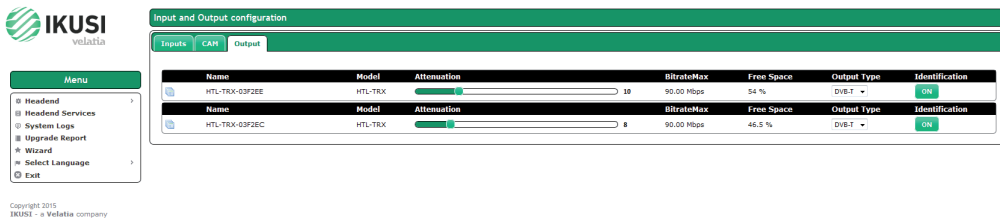
Close

To finish with setup wizard, push **Close** button. Browser will go automatically to the Advanced adjustment menu. From there, you can relaunch setup wizard when you want, selecting Wizard option.



5. OUTPUT LEVEL ADJUSTMENT

If you want to change the RF output power level, for example to equalize the headend, you can do it from the Advanced adjustment menu. To do that, select Headend→Input and Output Configuration. A window will open, displaying three tabs: Inputs, CAM and Output. Click in Output tab.



A slider associated with each module will be displayed. Move the slider to adjust the output level.



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