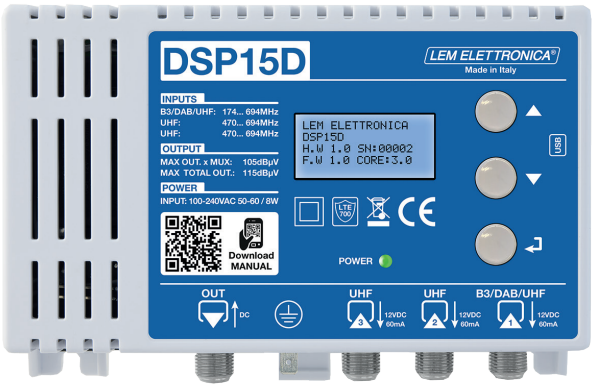
DSP15D

LEM ELETTRONICA®

Multi-input Tv terrestrial programmable amplifier

- OLED display for on-board programming
- AUTO-TUNING for automatic channel scanning
- 32 High Selectivity channel filters with ACG
- Lte700 4/5G filter technology protection
- DIN rail and wall mounting
- High efficiency built-in power supply
- DC powering by plug or coaxial



WARRANTY 5 YEARS · AUTO TUNING · LTE 700 · RED COMPLIANT

TECHNICAL SPECIFICATIONS		
NUMBER OF INPUTS	3	1xDAB/BIII/UHF - 2xUHF
INPUTS FREQUENCY RANGE	MHz	BIII (170... 230) / DAB (170... 240) - UHF (470... 694)
LTE PROTECTION		LTE 700
SINGLE CHANNEL FILTERS		32
NUMBER OF CHANNEL PER FILTERS		1... 2
CHANNEL TO CHANNEL CONVERSION		YES
INPUT LEVEL RANGE	dBµV	FM 35... 90 - BIII/DAB 45... 100 - UHF 45... 90
INPUT PRE-AMPLIFIER	dB	OFF= 0 / ON= +15
AUTOMATIC GAIN CONTROL RANGE	dB	40 dB
DIGITAL FILTERS SELECTIVITY	dB	≥ 50 (Adjacent channels)
BIII/DAB GAIN	dB	40... 50
UHF GAIN	dB	60
TOTAL OUTPUT LEVEL RANGE	dBµV	85... 105
BIII/DAB LEVEL ADJUSTMENT		0... -10
UHF SLOPE ADJUSTMENT	dB	0... +10
MAX. TOTAL OUTPUT LEVEL	dBµV	116
RETURN LOSS IN/OUT	dB	>10
AERIAL INPUTS REMOTE POWERING		12V/ 60mA
OLED DISPLAY		128 x 64 pixel 5 righe
INPUT VOLTAGE	V	100... 240VAC 50/60Hz
MAXIMUM CONSUMPTION	W	8
OPERATING TEMPERATURE	°C	-15... 40
DIMENSIONS	mm	135 x 91 x 42

Pictograms / symbols description

The DSP15D amplifier is covered by an extended 5-year warranty from the date of manufacture.

The programmable amplifier complies with the RED 2014/53/EU directive.

The AUTO-TUNING scanning function serves to speed up the programming procedure by automatically storing DVB-T/T2 Channels.

The UHF inputs are protected by filters against Lte 5G and 4G interference.

Heed the warning and safety instructions.

Hints and tips on the use of the product.

Symbols and electrical safety

Product complies with CE marking requirements.

For indoor use only.

Symbol indicating earth terminal

Symbol indicating that the supplied mains power supply complies with the safety requirements for class II devices.

To avoid risk of fire or electrocution, do not open the mains power supply provided.

Pursuant to Article 24 of Legislative Decree No. 49 of 14 March 2014 “Implementation of Directive 2012/19/EU on waste electrical and electronic equipment (WEEE)”.

Package Contents

01 DSP15D programmable amplifier

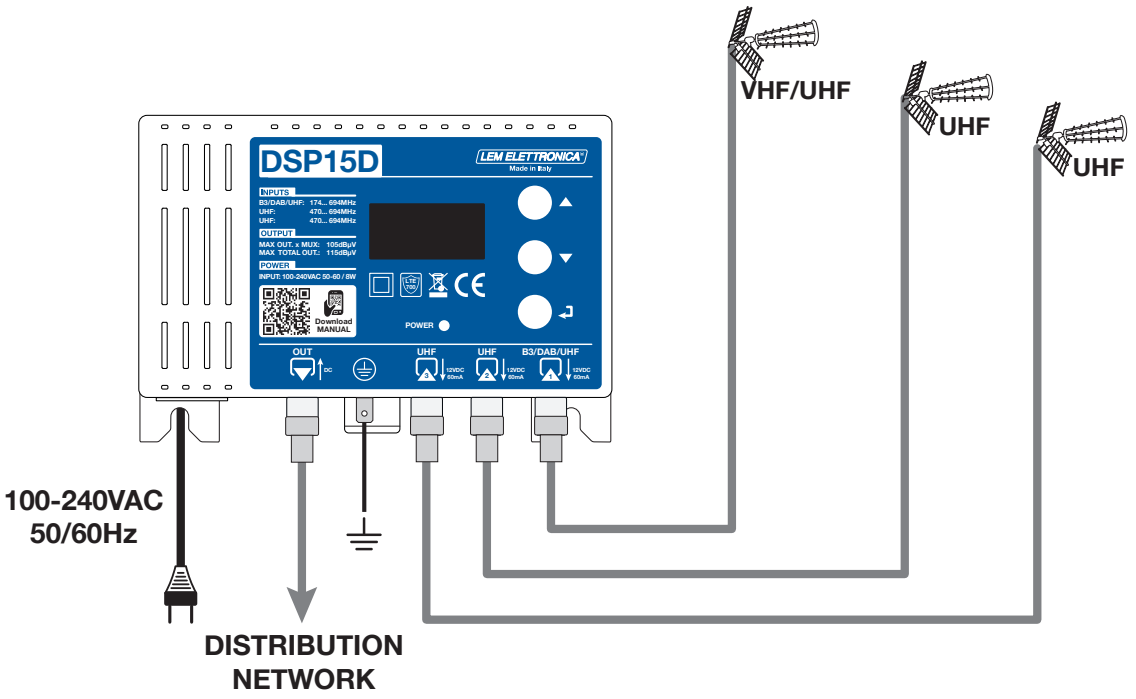
01 Euro plug power cord

01 User Manual

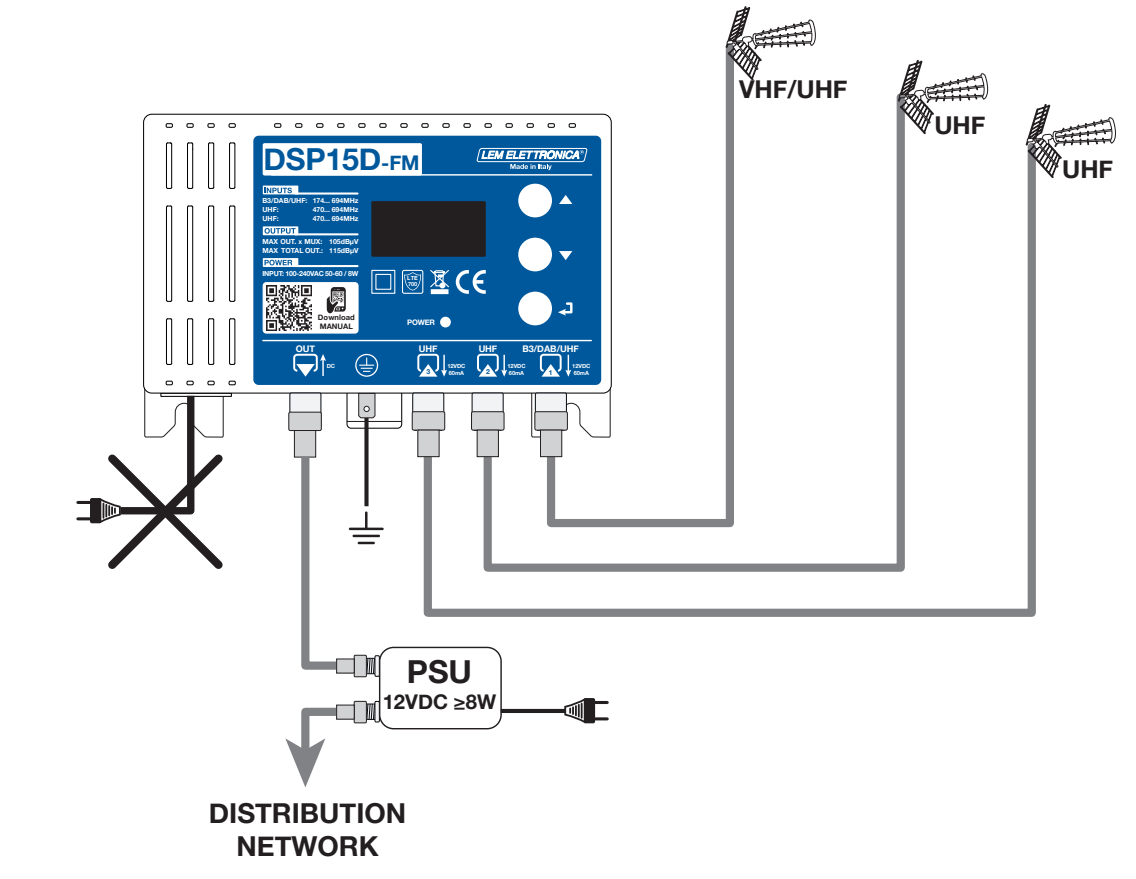
WARNINGS FOR INSTALLATION AND SAFETY

- Do not use this product for any purpose other than that for which it was designed.
- The product must not come into contact with water or be wet.
- Do not touch the product with wet or damp parts of the body.
- If liquid is spilled on the product, contact qualified personnel (authorised dealer or manufacturer).
- Do not place the product near heat sources or in damp places.
- To prevent fires, do not use in the presence of flammable substances or vapours such as alcohol, insecticides, petrol, etc.
- If installing in a cabinet or built-in compartment, ensure adequate ventilation.
- Do not use the product at an ambient temperature above 40°C.
- Connect the product to the mains power supply in accordance with the regulations in force in the country of installation, so that it can be easily disconnected.
- Only connect the product to the mains power supply if the mains voltage and frequency comply with the technical data table.
- If the product falls or is subjected to impact, contact qualified personnel (authorised dealer or manufacturer) to check that it is working properly.
- In the event of a fault, do not attempt to repair the product, otherwise the warranty will be invalidated.
- After removing the product from its packaging, check that it is intact; if in doubt, contact an authorised dealer or the manufacturer.

POWER SUPPLY BY THE ELECTRICAL NETWORK



POWER SUPPLY REMOTE OVER CABLE COAXIAL



INSTALLATION AND START-UP

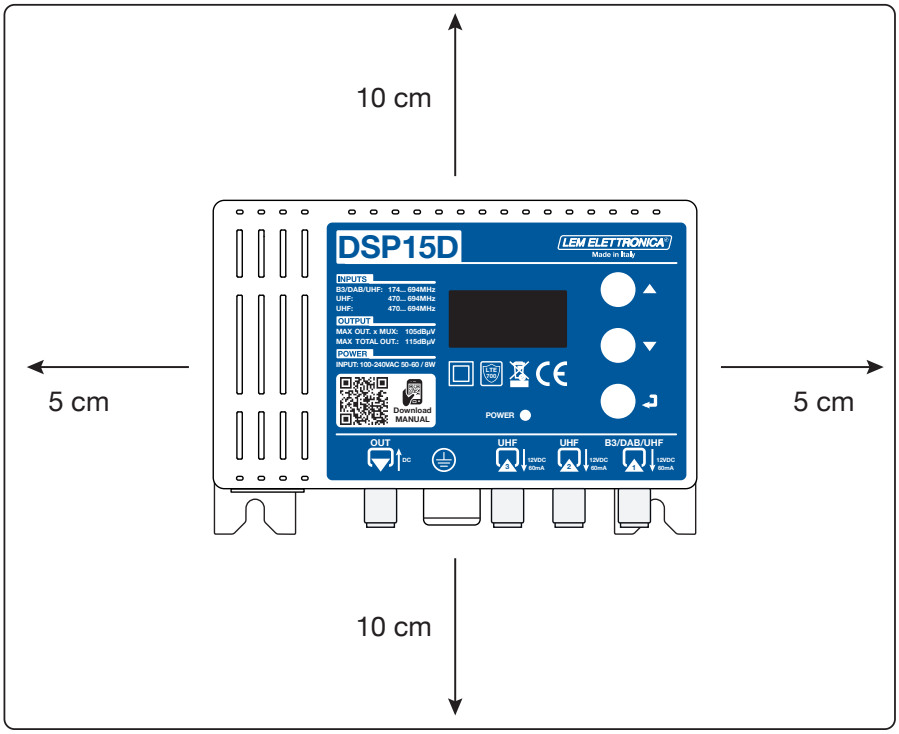
1 Connect the ground terminal.

2 Connect the antennas in the system to the corresponding inputs on the control unit.

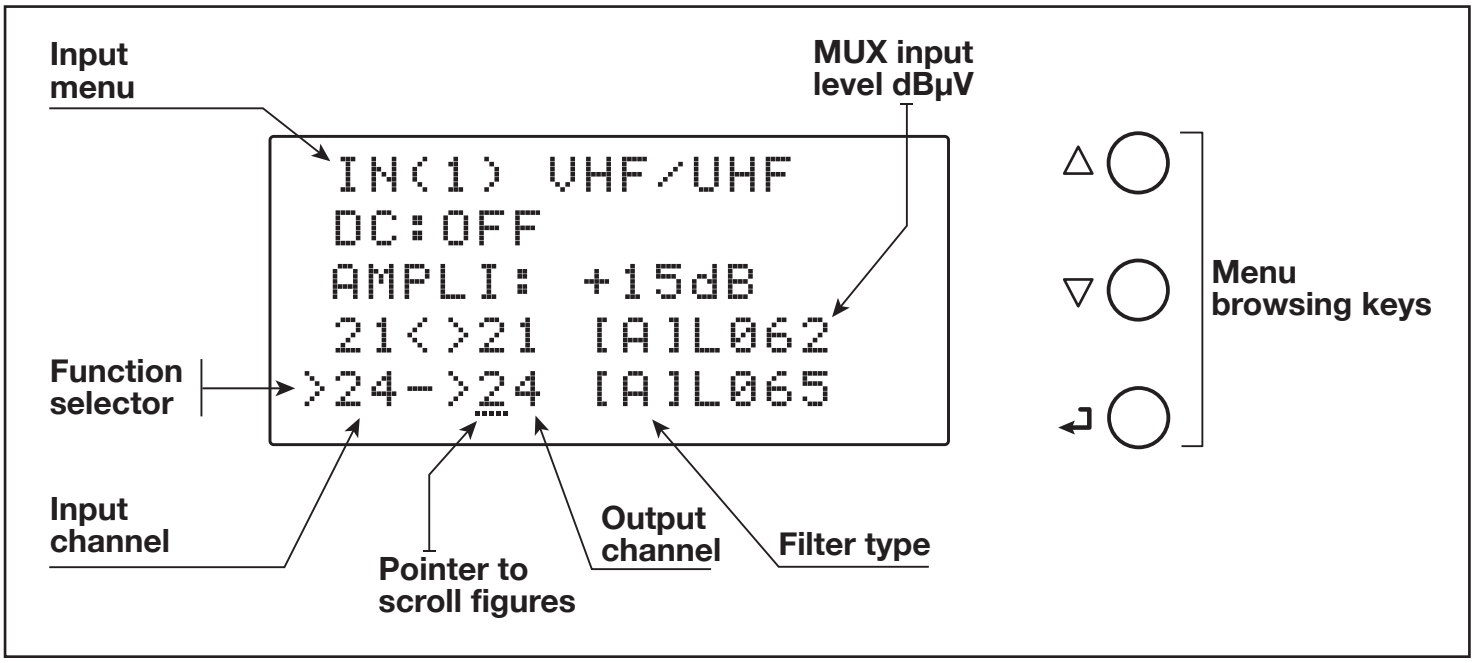
3 Connect the coaxial cable of the distribution system to the OUT output.

4 Connect the power cord to the mains socket.

If the POWER LED flashes red, this means that there is a short circuit or overload at one of the antenna inputs.



DISPLAY DESCRIPTION

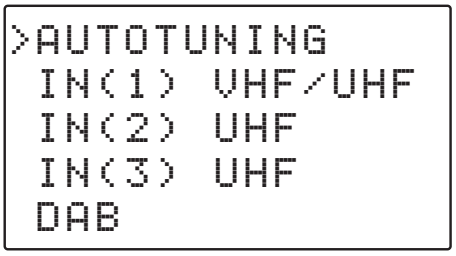


PROGRAMMING

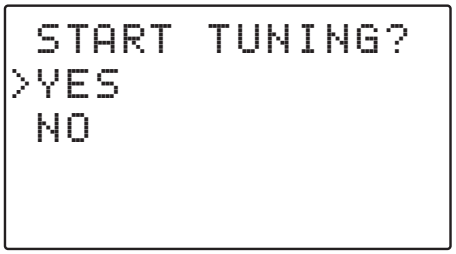
- To activate the display, briefly press the ↵ button.
- To access the menus, press the ↵ button for approximately 3 seconds.
- To make a value shown on the display editable, Place the selector > using the navigation buttons ∇ Δ; pressing ↵ will activate the pointer .... under the data that can be modified with the buttons ∇ Δ. To finish, press ↵.
- To exit the programming menu mode, select **EXIT**.

AUTOMATIC CHANNEL PROGRAMMING

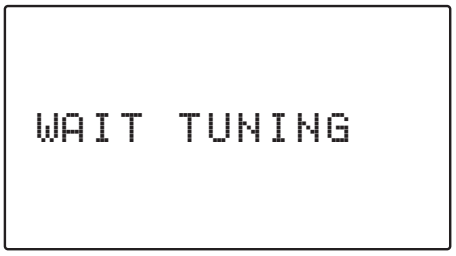
To speed up programming, you can use the AUTO-TUNING function. When this function is activated, the DSP15D amplifier will scan the antenna inputs and automatically store any DVB-T/T2 signals detected.



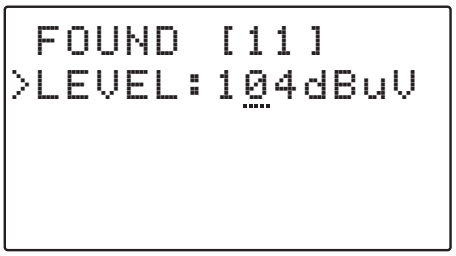
To start the automatic search procedure, select **AUTOTUNING** and press ↵.



Select **YES** to start automatic scanning of inputs and storage of filters corresponding to the MUX detected by the antenna.



During scanning and storage operations, **AUTO-TUNING** appears on the display and the LED flashes green.
The duration of the procedure depends on the number of MUX signals received by the connected antennas.
Once the procedure is complete, the display returns to the normal operating mode.



Once the **AUTO-TUNING** procedure is complete, the LED will stop flashing and remain green. If channels/MUXes have been found, the display will show, in brackets, the number of filters activated and the maximum optimal output level in dBμV based on the channels found. To confirm and complete the procedure, press the ↵ button. If you wish to change the output level value, use the ∇ Δ buttons and confirm by pressing the button ↵.

If no channel/MUX is detected, the display will show the message NO MUX FOUND. Check that the connections to the TV antennas are correct and repeat the search.

After performing AUTO-TUNING and saving the configuration, if the process is accidentally started without antennas, the system will still retain the last recorded scan. If you wish to delete all settings, select the RESET menu.

MANUAL PROGRAMMING

```
 AUTOTUNING
>IN(1) VHF/UHF
 IN(2) UHF
 IN(3) UHF
 DAB
```

Place the pointer --- and press ↵ to access the **IN(1) VHF/UHF** input menu.

VHF/UHF INPUT

```
>IN(1) VHF/UHF
 DC:OFF
 AMPLI:+15dB
 ADD 1CH
 ADD 2CH
```

Use the ∇ Δ keys to access the parameters for input **IN(1)VHF/UHF**.

INPUT POWERING

```
 IN(1) VHF/UHF
>DC:OFF
 AMPLI:+15dB
 ADD 1CH
 ADD 2CH
```

To activate/deactivate the 12 VDC remote power supply from the **IN(1) VHF/UHF** input, set the function selector > to DC and press ↵ to activate the pointer ---, select **OFF/ ON** using the ∇ Δ keys and press ↵ to confirm.

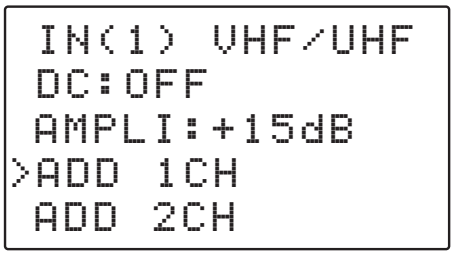
Short circuits or overload at the antenna inputs is indicated by the red POWER LED flashing.

INPUT AMPLIFIER

```
 IN(1) VHF/UHF
 DC:OFF
>AMPLI:+15dB
 ADD 1CH
 ADD 2CH
```

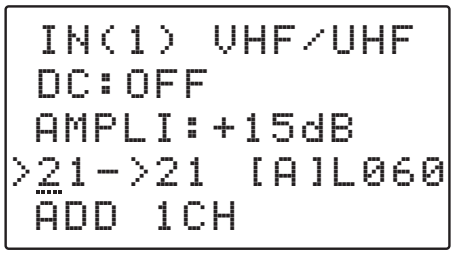
To activate/deactivate the input amplifier, place > next to **AMPLI** and press ↵ to activate the pointer ---, select +15dB or +00dB using the ∇ Δ keys and press ↵ to confirm.

CHANNEL/MUX FILTER



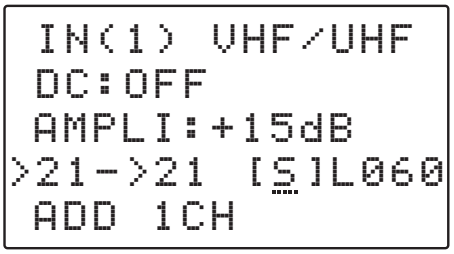
Set the function selector > to **ADD 1 CH** and press ↵.

CHANNEL /MUX FILTER SETUP



Select the filter input channel number using the ∇ Δ keys and press ↵ to move the pointer --- to select the output channel, press ↵ to confirm. Repeat the operation for each channel.

CHANNEL/MUX FILTER BANDWIDTH

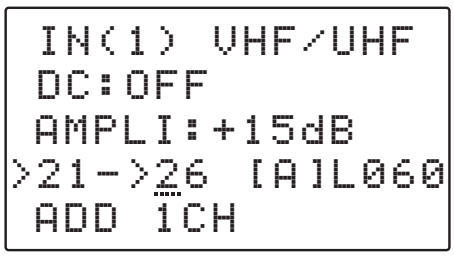


The default setting is **[A]** (Auto). In this mode, the filter width is selected automatically. If you want to manage the filters manually for each channel, access the **ADVANCED** menu and change the **BW** function from **AUTO** to **MAN**.

In manual mode **MAN**, place the pointer --- under the value in square brackets and select one of the three available filters **[S] [N] [W]** with different amplitudes.

FILTER		BANDWIDTH
A	AUTO	
S	STANDARD	8,00 MHz
N	NARROW	7,50 MHz
W	LARGE	8,75 MHz

CHANNEL/MUX FILTER CONVERSION



If you want to convert an input channel to a different output channel, place the pointer --- under the output channel and use the ∇ Δ keys to select the desired channel and press ↵.

INPUT	OUTPUT
E05÷E48	E05÷E69

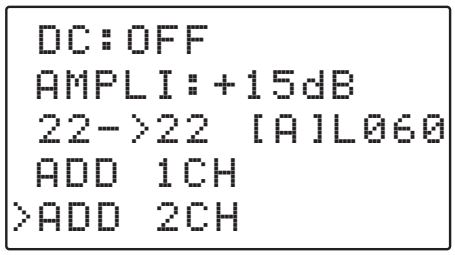
Output conversions are possible up to channel 69.

FILTER/MUX REMOVAL

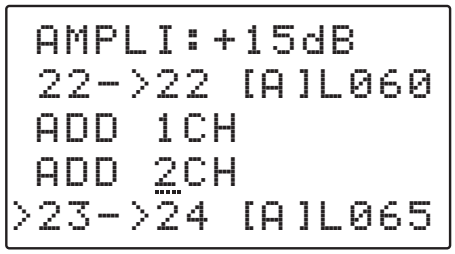
Place the selector > on the filter you want to delete and hold down the ↵ button for 5 seconds.

The display will confirm the deletion with the message **MUX DELETED**.

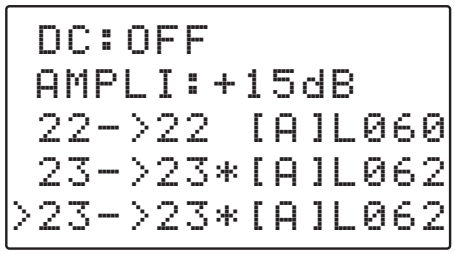
TWO CHANNEL/MUX FILTER



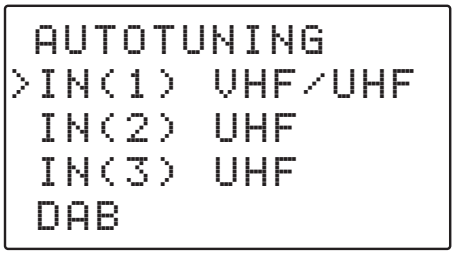
To activate a double filter that can accommodate two channels/MUX, select **ADD 2 CH** and confirm with ↵. Select the first of the two channels and the second will be set automatically. Press ↵ to confirm.



FILTERS/MUXs OVERLAP



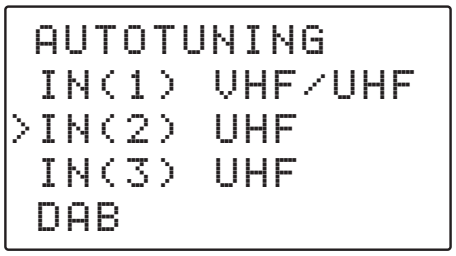
If a channel filter already present in the programming is set, the symbol will appear.*.



Once you have finished programming the filters associated with the first entry, to return to the main menu, set the selector to > on the **IN(1) VHF/UHF** line and press ↵.

To return the selector > to the first line of the menu, press ∇ Δ simultaneously.

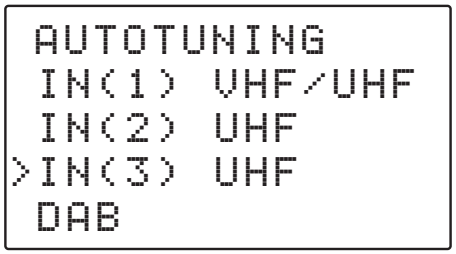
UHF (2) INPUT



To set the parameters for the **UHF 2** input, set the selector to > and follow the same procedure as for the **IN(1) UHF/VHF** input.

INPUT	OUTPUT
E21÷E48	E21÷E69

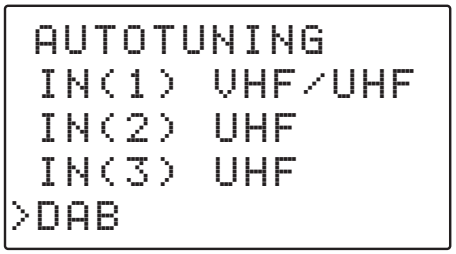
UHF (3) INPUT

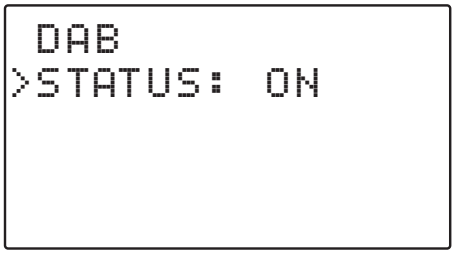


To set the parameters for the **UHF 3** input, set the selector to > and follow the same procedure as for the **IN(1) UHF/VHF** input.

INPUT	OUTPUT
E21÷E48	E21÷E69

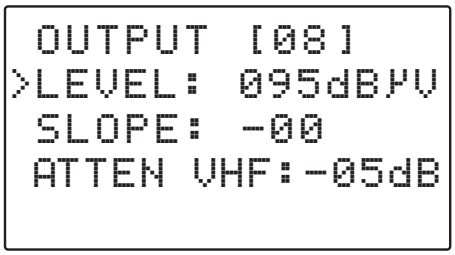
DAB FILTER





To activate the filter dedicated to **DAB** radio signals, select **ON** and confirm with ↵.

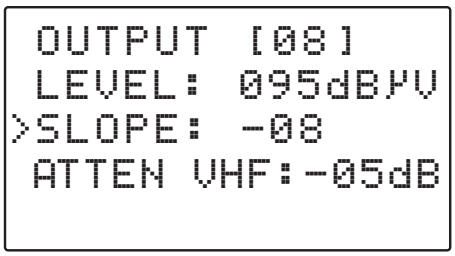
OUTPUT SETUP



The **OUTPUT** menu shows the total number of filters that have been activated in brackets and allows the output level to be adjusted in 1dB steps.
To set the desired output level, press ↵ to activate the pointer --- and select the desired level using the ∇ Δ keys and press ↵ to confirm.

Output range 85... 105dBµV

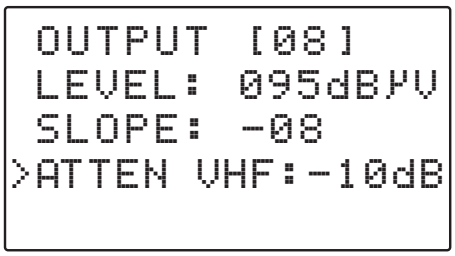
UHF SLOPE



To adjust the **SLOPE** output slope of the channels in the UHF band, press ↵ to activate the pointer --- and select the desired value using the ∇ Δ buttons, then press ↵ to confirm.

Range 0... 10dB

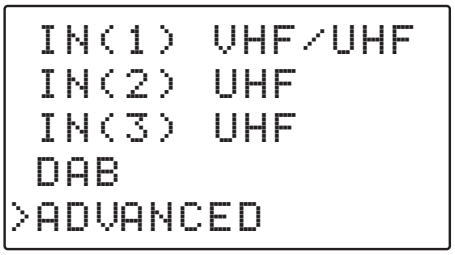
VHF ATTENUATOR



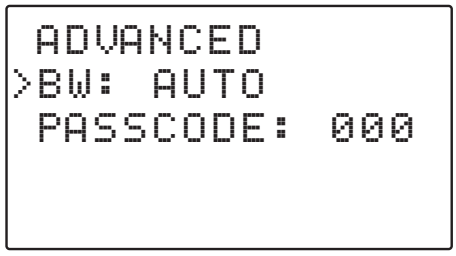
To adjust the attenuation of the VHF channels (B3°/DAB), press ↵ to activate the pointer --- and select the desired value using the ∇ Δ keys and press ↵ to confirm.

Range: 0... -10dB

ADVANCED SETTINGS

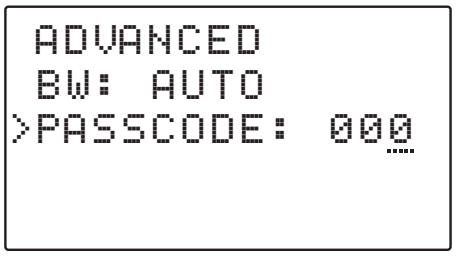


FILTER BANDWIDTH MODE



The default setting is A (Auto). In this mode, the filter width is selected automatically. If you want to assign filters manually for individual channels, change the **BW** function from **AUTO** to **MAN**.
In manual mode MAN, three different filter types with different widths are available in the channel filter settings menu.

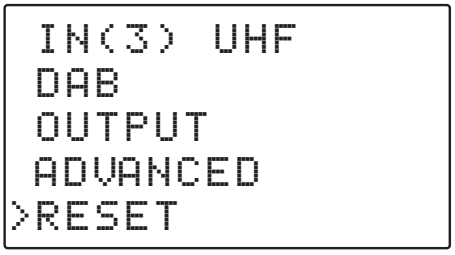
PROTECTION PASS CODE



Select **PASSCODE**, press ↵ and use the ∇ Δ keys to select the numerical value of the first digit on the right and confirm with ↵. Repeat the operation for the next two digits and press ↵ to confirm.

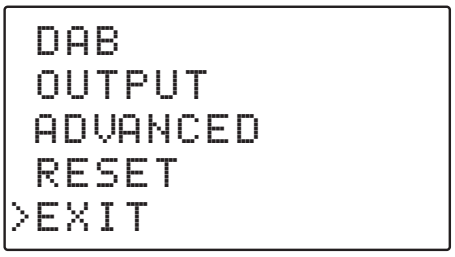
The code 0 0 0 is equivalent to no passcode protection.

SETTINGS RESET



To delete all stored settings, select the **RESET** function and press ↵.
If you want to delete all settings and restore the control unit to its original state, select **YES** and confirm with ↵. If you want to cancel the data deletion operation, select **NO** with the ∇ key and confirm with ↵.

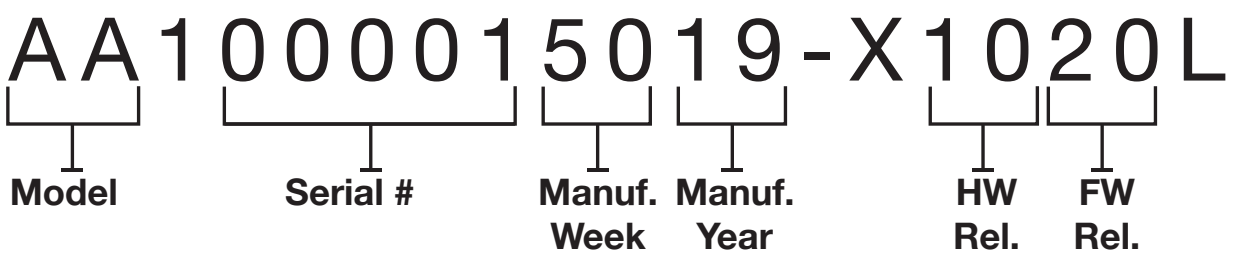
EXIT PROGRAMMING



To finish programming, select the **EXIT** menu, confirm by pressing ↵ and select **YES** with ∇ Δ, then press ↵ to confirm exit from the programming menu.
If you wish to cancel, select **NO**, confirm with ↵ and resume programming.

After exiting programming mode, the display will turn off automatically after 3 minutes of inactivity. To reactivate it, press any button.

Dati codice seriale



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