

CAD-704 Mont Blanc



CAD-704

Mont Blanc

DIGITAL PROGRAMMABLE AMPLIFIER

- 5 Inputs
- Auto-scan function
- Selectable LTE 700 5G / 800 4G SAW filters
- Up to 64 high selectivity filters with AGC
- Converts up to 32 single channels
- 24 Digits LCD display
- Zamak die casting chassis

High selectivity programmable compact headend to digitally filter, convert and equalize DVB-T/T2 channels.

The built-in high output amplifier allows the use in small or medium buildings installation.



CODE		9040145
MODEL		CAD-704
Number of inputs		2 x UHF 2 x UHF/BIII/DAB 1 x FM/BI
Frequency range	MHz	UHF (470..694/790/862 MHz) BIII/DAB (170..240 MHz) FM/BI (40..108 MHz)
Programmable filters		32
Number of channels per filters		1..2
Input level	dBμV	UHF 40..110 BIII/DAB 40..110 FM/BI 35..90
Input attenuator	dB	UHF 0..-20 BIII/DAB 0..-20 FM/BI 0..-20
AGC range	dB	40
Selectivity	dB	35 @1MHz
Interstage attenuator	dB	0..-20
Gain	dB	UHF 40 BIII/DAB 50 FM/BI 40
Max output level	dBμV	120 (IM3 DIN 45004B -60 dBc)
Return loss in/out	dB	>12
Test output		1 (-30dB)
USB connector		USB 1.0/2.0 Type B
Output voltage		12V / 24V 100 mA
Mains voltage		230 VAC +/-20% 16W Max. (External power supply DC 20V 2.25A)

Operating temperature	°C	-5..50
Dimensions	mm	192 x 217 x 37



Safety instructions

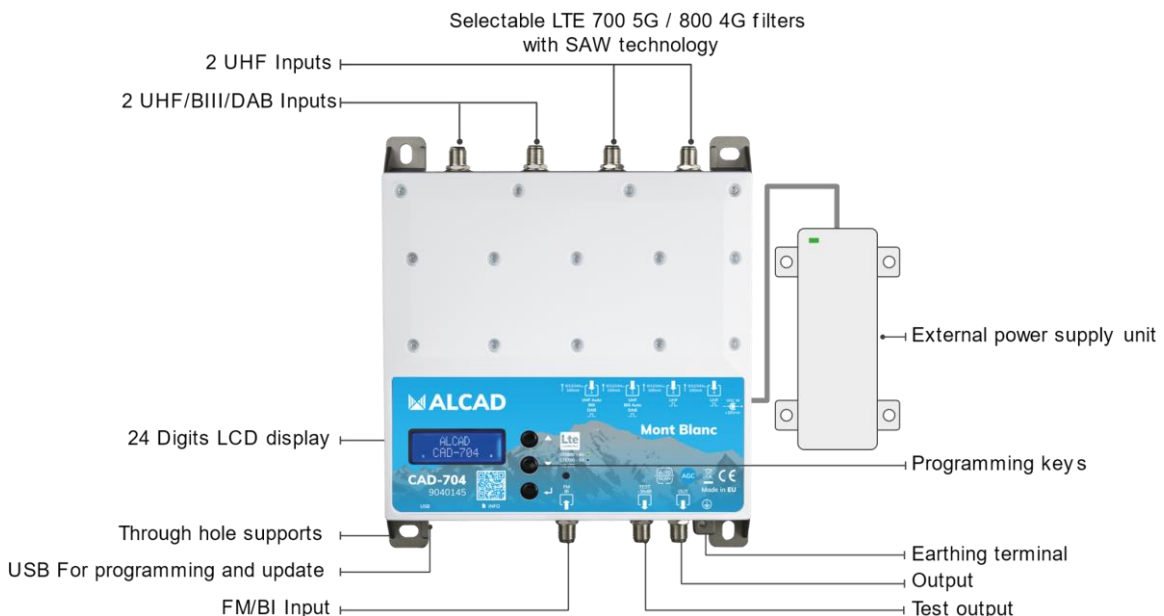
- Do not expose the amplifier to extreme temperatures.
- Place the amplifier in a dry and well-aired location.
- Install the unit on a vertical wall, or in a waterproof cabinet to a minimum IP55 rating, and fix it safely using the special through holes supports.

Do not place the equipment where water can drip or splash onto it. Do not place objects containing liquid, such as glasses, on the equipment. Do not place sources of naked flame, such as burning candles, on the equipment. Do not block the ventilation slots of the equipment with objects such as newspapers, curtains, etc. When installing the equipment, leave some free space around it to provide adequate ventilation. Install the equipment in such a way that the mains supply plug or the connector of the equipment can be easily reached.

IMPORTANT!

Use only the power pack supplied together with the amplifier. The use of other power packs can cause malfunctioning and irreversible damages which will invalidate any warranties.

Connections Schematic



Installation and start-up

- Connect an earth wire to grounding clamp
- Connect the TV aerials to the amplifier's inputs

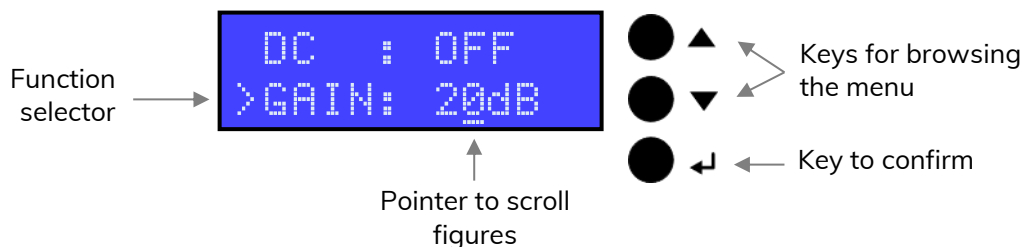
- Terminate the unused inputs with 75Ω loads
- Connect the power supply unit and then connect the amplifier to the mains plug

Programming via display



1. Press \downarrow to activate the display
2. Press \downarrow for three seconds to enter the programming menu

The display will go out after 3 minutes if inactive, but the menu will remain open on the last selected function. Press any key to resume to continue.



Password protection



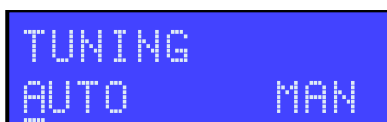
When a password has been set, the password must be entered before accessing the programming menu. To enter the password press the keys \blacktriangle \blacktriangledown then press \downarrow to confirm each password number.

Automatic channel research and memorization

AUTO-SCAN

The AUTO-SCAN function will scan the UHF band in input 1 and the BIII band in input 2.

The remote power is preset to OFF. It can be changed to ON in the INPUT V/U 1 and INPUT V/U 2 menu. The remote power voltage is preset to 24V in the ADVANCED menu. The AUTO-SCAN threshold is preset to 50dB μ V in the ADVANCED menu. The LTE filter is preset to 5G LTE700 in the ADVANCED menu.



To start the automatic programming, AUTO-SCAN, place the pointer $_$ below AUTO. Press \downarrow to proceed. The amplifier will start scanning the channels of the UHF band on input [1] and the III band on input [2].

To stop the AUTO-SCAN procedure press \downarrow for 5 seconds.



Wait for the AUTO-SCAN procedure to end, which depends on the number of channels received from the antennas.



When the AUTO-SCAN procedure is completed the display will show the output level depending on the number of channels automatically saved. Press \downarrow to confirm and complete the procedure. To change the output level press the keys \blacktriangle \blacktriangledown then press \downarrow to confirm.



Setting higher output levels than the one obtained through the AUTO-SCAN could reduce the quality of the received signals.

Manual programming



To start the manual programming, position the pointer $_$ on MAN through the \blacktriangle key and press \downarrow to continue.

FM/BI INPUT



Press \downarrow to enter the menu to set the FM/BI input parameters.

FM/BI OUTPUT VOLTAGE



Press \downarrow to start the pointer $_$ to scroll options then press \blacktriangle \blacktriangledown to select ON or OFF to enable the remote power supply on this input. Press \downarrow to confirm.

The remote power supply is set on 24V. It can be changed to 12V in the ADVANCED menu.

FM/BI GAIN



Adjustable from 0 to 30 dB

Position the function selector \blacktriangleright on GAIN and press \downarrow to start the pointer $_$ to scroll options, select the desired output level through the keys \blacktriangle \blacktriangledown and press \downarrow to confirm.



Position the function selector \blacktriangleright on INPUT FM/BI and press \downarrow to go back to the main menu.

INPUT VHF-UHF [1]



To set the INPUT V/U 1 parameters press \downarrow to enter the menu.

Available channels:

- BIII E5..E13 – DAB
- UHF 21..48 with LTE700 5G filter
- UHF 21..60 with LTE800 4G filter
- UHF 21..69 without LTE filter

The input can be configured as BIII/DAB or UHF. Once a filter is selected in BIII/DAB or UHF, the rest of the filters must be from the same band.

The LTE filter is preset to 5G LTE700. It can be changed in the ADVANCED menu.



In any position of the menus INPUT U/V 1, INPUT U/V 2, INPUT U3 or INPUT U 4 press the keys \blacktriangle \blacktriangledown at the same time to go back to main menu.

OUTPUT VOLTAGE



Press \downarrow to start the pointer $_$ to scroll options then press \blacktriangle \blacktriangledown to select ON or OFF to enable the remote power supply on this input. Press \downarrow to confirm.

The remote power supply is set on 24V. It can be changed to 12V in the ADVANCED menu.

INPUT GAIN



Adjustable from 0 to 20 dB

Position the function selector $\>$ on GAIN and press \downarrow to start the pointer $_$ to scroll options, select the desired output level through the keys \blacktriangle \blacktriangledown and press \downarrow to confirm.

SINGLE CHANNEL FILTER



Press \blacktriangle \blacktriangledown to position the function selector $\>$ on ADD 1 CH and press \downarrow .

```
GAIN: 20dB
>21->21 L 65
```

To activate only the filtering function on a single channel set the desired channel through the ▲▼ keys then press ↵ twice to confirm.

```
GAIN: 20dB
>21->21 L 65
```

The L figure shows the input level of the selected MUX in dBμV.

CHANNEL CONVERSION

```
GAIN: 20dB
>36->36 L 65
```

To activate the filtering and conversion function on a single channel set the desired channel through the ▲▼ keys then press ↵ to confirm the input channel.

```
GAIN: 20dB
>36->41 L 65
```

Adjust the converted channel through the ▲▼ keys then press ↵ to confirm.



Regardless of the selected LTE filter, output conversions up to the UHF channel 69 are permitted.

TWO CHANNELS FILTER

```
ADD 1 CH
>ADD 2 CH
```

To add a filter for two adjacent channels, press ▼ and select ADD 2 CH. Press ↵ to confirm. Select the first channel with the ▲▼ keys. The second channel will automatically appear in second position. Press ↵ to confirm.

```
GAIN: 20dB
>21<>22 L 65
```

DELETE FILTER

```
CH DELETED
```

Position the function selector > on the channel filtering or conversion to be deleted using ▲▼ then press ↵ for five seconds.

MAIN MENU

```
>INPUT U/V 1
DC : OFF
```

To go back to the main menu, select INPUT U/V 1 and press ↵ to confirm.



In any position of the menus INPUT U/V 1, INPUT U/V 2, INPUT U3 or INPUT U 4 press the keys ▲▼ at the same time to go back to main menu.

INPUT VHF-UHF [2]



To set the INPUT V/U 2 parameters, press \downarrow to enter the menu.

Available channels:

- BIII E5..E13 – DAB
- UHF 21..48 with LTE700 5G filter
- UHF 21..60 with LTE800 4G filter
- UHF 21..69 without LTE filter

The input can be configured as BIII/DAB or UHF. Once a filter is selected in BIII/DAB or UHF, the rest of the filters must be from the same band.

The procedures described for input 1 apply to all settings.

INPUT UHF [3]



To set the INPUT U 3 parameters, press \downarrow to enter the menu.

Available channels:

- UHF 21..48 with LTE700 5G filter
- UHF 21..60 with LTE800 4G filter
- UHF 21..69 without LTE filter

The procedures described for input 1 apply to all settings.

INPUT UHF [4]



To set the INPUT U 4 parameters, press \downarrow to enter the menu.

Available channels:

- UHF 21..48 with LTE700 5G filter
- UHF 21..60 with LTE800 4G filter
- UHF 21..69 without LTE filter

The procedures described for input 1 apply to all settings.

OUTPUT LEVEL



Adjustable from 93 to 113dB μ V

Press \blacktriangledown to select the menu OUTPUT and press \downarrow to confirm and check the selected output level.



To adjust the output level press \downarrow and change the figure where the pointer is positioned, to the required level. Press \downarrow to confirm.



To exit the submenu position the pointer \rightarrow on OUTPUT, press the \blacktriangle key and \downarrow to confirm.

ADVANCED SETTINGS



Press \blacktriangledown to select the menu ADVANCED and press \downarrow to confirm.



In any position of the ADVANCED menu press the keys $\blacktriangle\blacktriangledown$ at the same time to go back to main menu.

LTE FILTER



LTE Filter adjustable 800 4G, 700 5G or OFF

Press \downarrow and the $\blacktriangle\blacktriangledown$ keys to select the SAW filter LTE 800-4G, 700-5G or OFF. Press again \downarrow to confirm.



LTE Filter 800-4G - UHF channels 21..60

LTE Filter 700-5G - UHF channels 21..48

LTE Filter OFF - UHF channels 21..69



LTE800 - 4G ●

LTE700 - 5G ●

NO LTE ●

OUTPUT VOLTAGE



Select the DC voltage setting function and press \downarrow , press the $\blacktriangle\blacktriangledown$ keys to select the 12V or 24V tension then press \downarrow to confirm.



PROTECTION PASSWORD

```
DC:      24V
>PSW:    000
```

Select PSW and press \downarrow , press the \blacktriangle \blacktriangledown keys to select the first figure from the right. Press \downarrow to confirm. Repeat for the other figures and press \downarrow to confirm.

```
DC:      24V
>PSW:    000
```

AUTO-SCAN THRESHOLD

```
PSW:     000
>THR:    50dBuV
```

Adjustable from 45 to 90 dB μ V

Select THR, the AUTO-SCAN minimum threshold function and press \downarrow . Use the \blacktriangle \blacktriangledown keys to select the required value and press \downarrow to confirm.

```
PSW:     000
>THR:    50dBuV
```

RESET

```
THR:     50dBuV
>RESET
```

Select the RESET function and press \downarrow to enter a second safety menu RESET?

```
RESET?
YES      NO
```

If you wish to cancel the operation select NO by pressing \blacktriangledown then press \downarrow to confirm.

```
RESET OK
```

If you want to cancel all setting and restore the original settings, confirm YES by pressing \downarrow . The display will show RESET OK for a few second to confirm the operation.

SERIAL NUMBER

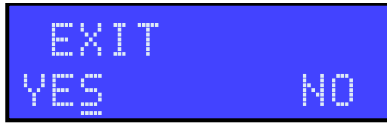
```
RESET
>SNBR:   00001
```

Select SNBR. The number displayed on the right is the univocal serial number of the product.

EXIT

```
EXIT
```

To close the procedure select EXIT and press \downarrow . Select YES by pressing the \blacktriangle \blacktriangledown keys and press \downarrow to confirm.



If you wish to cancel the operation, select NO by pressing ▼ then press ↵ to confirm and carry on your setting procedure.

Windows & Android applications

From the download area in our website www.alcadelectronics.com it is possible to download a free PC compatible software to operate the amplifier from your PC. It also allows to save and load configurations.

Hardware requirements

PC Windows compatible with USB interface
Processor 800MHz or more
256MB RAM
USB A-B cable

Software minimum requirements

Windows 7 or more recent operating system, Microsoft Framework .NET 3.5 or higher and langpack (free download from Microsoft website).

Installation procedure

Close all the active applications (included antivirus programs)

Start the Setup.exe program

Follow the guided procedure until the installation is completed

The program needs the Framework.NET 3.5 which is usually already installed on the PC. If it is not installed, Framework.NET can be freely downloaded from the Microsoft website.

Technical Information

The product is in compliance with the Radio Equipment Directive RED 2014/53/EU, The Low Voltage Directive LVD 2014/35/EU and the Risk of Hazardous Substances Directive RoHS 2011/65/EU, so it shows the CE mark.

Class A

This product meets the more stringent screening requirements according to EN 50083-2, quality grade A.



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