



EKSELANS BY ITS

USER MANUAL

EKSEL compact

071015

PROGRAMMABLE DIGITAL AMPLIFIER

V03

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INTRODUCTION:

Description:

DIGITAL PROGRAMMABLE AMPLIFIERS: EK presents the new range of EKSEL programmable amplifiers developed with state-of-the-art digital filtering technology. EKSEL models incorporate 32 ultra-selective digital filters which enable the selection, filtering and amplification of each digital multiplex, guaranteeing the optimal output level for each type of installation - whether individual or collective - and a very high quality output. The amplifiers likewise incorporate an automatic search system for fast and efficient auto-programming of the DTT multiplexes of the UHF inputs. The EKSEL range complies with the requirements for header equipment stipulated by the Regulatory Regulations on Common Telecommunications Infrastructures (ICT2) on common infrastructure in buildings for access to telecommunications services, approved by Royal Decree 346/2011, of 11 March, given that it incorporates very high selectivity single-channel filters to guarantee a difference less than 3dB between channels of the same band.

Main Features:

- 4 inputs (1 x FM, 1 x VHF + DAB + VHF selectable)
- 2 x VHF/UHF selectable)
- 2 outputs (TER/TEST -30dB)
- 32 ultra-selective digital filters
- Gain >55dB
- Output level 120dBuV (45004B)/131dBuV (IMD3-36dB)
- Automatic digital multiplex search
- Buttons and display programming. User-friendly menu navigation
- Processing functionality for channel conversion
- Digital multiplex input level measurement
- Automatic real-time gain control
- Automatic detection of the required LTE1 (4G)/LTE2 (5G) filter
- Preamplifier power option
- Power supply via output connector option
- PIN protected
- Filters Sharpness adjust

Packaging Contents:

- 1.- EKSEL compact, code 071015.

CONNECTIONS AND INTERFACES:

5	1	2	3	4	5		
						<p>1.-VHF-UHF 1</p> <p>2.-VHF-UHF 2</p> <p>3.-DAB or VHF- UHF3, input, selectable</p> <p>4.- FM input</p> <p>5.-Earthing connection points</p> <p>6.- ENTER button</p> <p>7.-Data</p> <p>8.- LEFT button</p> <p>9.-Test output -30dB</p> <p>10.- RIGHT button</p> <p>11.-TV output</p> <p>12.-Vac 230V input</p> <p>13.-2x16 character display</p>	
	6	13	7	8	9	10 11	12

INSTALLATION RECOMMENDATIONS:

- 1.- Install the equipment vertically in a well-ventilated location, ensuring not to exceed the maximum recommended operating temperature.
- 2.- Leave a space between 15 cm and 20 cm, free of obstacles, around the equipment which ensures compliance with Point no.1.
- 3.- Connect a suitable earth cable to the equipment ground screw. 4.- Connect the equipment's input and output cables.
- 5.- Connect the power cable to the equipment. 6.- Configure.

EKSEL compact CONFIGURATION:

Note:

In case language is in Spanish, or any other, follow below steps in order to change language to English:

After power on reset procedure, once it has finished, press RIGHT key four times, then INTRO, select YES. Then you will in language menu; press ENTER and with RIGHT or LEFT key change language to de desired one.

Keyboard operation explanation:

The keyboard of this equipment consists of three buttons: ENTER, LEFT and RIGHT.

INTRO:

Enables the menu.

As this is the start menu, pressing the button will display the FW version. The different menu selections will be validated.

In certain menus it is necessary to hold the button down in order to vary values.

LEFT:

Allows navigating to the left in the menus.

Decreasing values where required.

RIGHT:

Allows navigating to the right in the menus.

Increasing values where required.

Menu Overview:

Pressing any key will access the main menu unless you have set a PIN. In such case proceed as 3.- Miscellaneous Menu:

EKSEL

COMPACT>

Note: The arrows to the right or left indicate that there are menu options in that direction. The main menu options are:

COMPACT> <FILTER MENU> <POWER MENU> <MISCELLANEOUS MENU

Using   to scroll through the first menu line, pressing ENTER for accessing that submenu.

Equipment Configuration:

<p>COMPACT></p>	<p>FW version of the system. Press ENTER. V3.1</p>
<p><FILTERS MENU></p>	<p>Filter configuration. Press ENTER to enter, ◀ ▶ to move between options and ENTER to enter the option. <LTE FILTER> <FILTER AUTO ADD> <FILTER ADD > < FILTER EDIT>< FILTER DELETE > <DELETE ALL> <D.A.B> <EXIT</p>
<p><POWER MENU></p>	<p>Configuration of input voltages and output power. Press ENTER to enter, ◀ ▶ to move between options and ENTER to enter the option. IN 1 POWER> <IN 2 POWER>IN 3 POWER> <FM GAIN> <OUT LEVEL> <OUT SLOPE> <EXIT</p>
<p><MISCELLANEOUS MENU</p>	<p>Miscellaneous configuration. Press ENTER to enter, ◀ ▶ to move between options and ENTER to enter the option. LANGUAGE> <DEFAULT VALUE. ><SET PIN> <BANDWIDTH COEF> <EXIT></p>

1.-Filter Menu:

<FILTER MENU>	
LTE FILTERS>	<p>Allows you to modify the LTE, LTE2 filter or not have either asset.</p> <p>Press ENTER, and hold tight; select [OFF]> <[LTE]> <[LTE2]> with ◀ ▶. Releasing ENTER will automatically select the selected option.</p>
FILTER AUTO ADD>	<p>Automatic MUX search and automatic filter configuration.</p> <p>Press ENTER, and press and hold down; select [NO]> <[YES] using ◀ ▶. When ENTER is released, the selected option is automatically selected. [YES] accesses the menu, [NO] remains in <[FILTER MENU]></p>
FILTER AUTO ADD IN PORT>	<p>Input selection.</p> <p>Press ENTER, and press and hold down; select [1]> <[2]> <[3]> <[1&2]> <[1&3]> <[2&3]> <[1&2&3] using ◀ ▶. When ENTER is released, the selected option is automatically selected.</p>
FILTER AUTO ADD <[START CHANNEL]>	<p>Autosearch start channel selection</p> <p>Press ENTER, and press and hold down; select the Autosearch channel start [5] [6] [7] [12] [21] [22].. using ◀ ▶. When ENTER is released, the selected option is automatically selected.</p>
FILTER AUTO ADD <[STOP CHANNEL]>	<p>Autosearch end channel selection</p> <p>Press ENTER, and press and hold down; select the Autosearch end channel [69] [68] [67].. using ◀ ▶. When ENTER is released, the selected option is automatically selected.</p>
FILTER AUTO ADD <[SEARCH]	<p>Automatic channel search run</p> <p>Press ENTER, and press and hold down; select option: []> <[ERASE & SEARCH]> <[SEARCH ONLY]> <[EXIT] Using ◀ ▶. When ENTER is released, the selected option will be automatically selected.</p> <p>[]> nothing occurs</p> <p>[ERASE & SEARCH]> deletes any prior search and runs a search.</p> <p><[SEARCH ONLY]> runs a search.</p> <p><[EXIT] Goes back without running a search.</p> <p>It is a sequential search for the various selected entries. The channel level found and their number is displayed.</p> <p style="text-align: center;">1 45>45 51dB 3 additions</p> <p>Once the search is complete, the total number of channels found will be displayed:</p> <p style="text-align: center;">PRESS KEY 10 additions</p>

<p><FILTER MENU></p>	
<p><FILTER ADD></p>	<p>Allows the manual addition of filters and/or output channel change (Channel Conversion).</p> <p>Press ENTER, and press and hold down; select <YES> <NO> using ◀ ▶. When ENTER is released, the selected option is automatically selected. SI accesses the menu, <NO> remains in <ADD FILTERS></p>
<p>FILTER ADD IN PORT></p>	<p>INPUT selection.</p> <p>Press ENTER, and press and hold down; select <1> <2> <3> using ◀ ▶. When ENTER is released, the selected option is automatically selected.</p>
<p>FILTER ADD <IN CHANNEL></p>	<p>Manual channel search selection</p> <p>Press ENTER, and press and hold down; select the searched channel 5 6 7 ... 21 22 ... using ◀ ▶. When ENTER is released, the selected option is automatically selected.</p> <p>Every time the channel number is changed, if it is valid, power supply will be displayed, and if not, the 0dB will be displayed.</p> <p style="text-align: center;"> INPUT CHANNEL 23 61dB </p>
<p>FILTER ADD <OUT CHANNEL></p>	<p>Manual output channel selection</p> <p>Press ENTER, and press and hold down; select the desired output channel 5 6 ... 21 ... using ◀ ▶. When ENTER is released, the selected option is automatically selected.</p> <p>In the event of not requiring a channel conversion, the output channel must match the input channel. (*)</p> <p>An already existing output channel cannot be selected.</p>
<p>FILTER ADD <SAVE></p>	<p>Saving an added channel.</p> <p>Press ENTER, and press and hold down; select the desired option <NO> <YES> <EXIT>... using ◀ ▶. When ENTER is released, the selected option is automatically selected.</p>

<p><FILTER MENU></p>	
<p><FILTER EDIT></p>	<p>Allows for a manual filter edit</p> <p>Press ENTER, and press and hold down; select [BACK] <[15>5]>... using ◀ ▶. When ENTER is released, the selected option is automatically selected. [BACK] remains in <EDIT FILTER> if not, select the filter to be changed.</p>
<p>FILTER EDIT IN PORT></p>	<p>Modify Input.</p> <p>Press ENTER, and press and hold down, select [1] <[2] <[3]> using ◀ ▶. When ENTER is released, the selected option is automatically selected.</p>
<p>FILTER EDIT <IN CHANNEL></p>	<p>Manual input channel selection</p> <p>Press ENTER, and press and hold down; select the searched channel [5] [6] [7]... [12] [21] [22]... using ◀ ▶. When ENTER is released, the selected option is automatically selected.</p> <p>Every time the channel number is changed, if it is valid, the voltage will be displayed, and if not, the odB will be displayed.</p> <p style="text-align: center;">[INPUT CHANNEL [23 61dB]</p>
<p>FILTER EDIT <OUT CHANNEL></p>	<p>Manual output channel selection</p> <p>Press ENTER, and press and hold down; select the desired output channel [5] [6]... [21]... con ◀ ▶. When ENTER is released, the selected option is automatically selected.</p> <p>In the event of not requiring a channel conversion, the output channel must match the input channel. (*) (**)</p> <p>An already existing output channel cannot be selected.</p>
<p>EDIT FILTER <SAVE></p>	<p>Saving an added channel.</p> <p>Press ENTER, and press and hold down; select the desired option [NO] <[YES] <[BACK]>... using ◀ ▶. When ENTER is released, the selected option is automatically selected.</p>

<FILTER MENU>	
<FILTER DELETES>	<p>Allows deleting a specific filter</p> <p>Press ENTER, and press and hold down; select [BACK] <[1>5]>... using ◀ ▶. When ENTER is released, the selected option is automatically selected. [BACK] remains in <CANCEL FILTER> if not, select the filter to be deleted.</p>

<FILTER MENU>	
<DELETE ALL>	<p>Allows to delete all filters</p> <p>Press ENTER, and press and hold down; select [NO] <[YES]> using ◀ ▶. When ENTER is released, the selected option is automatically selected.</p>

<FILTER MENU>	
<D.A.B.>	<p>Activate/deactivate D.A.B.</p> <p>Press ENTER, and press and hold down; select [OFF] <[ON]> using ◀ ▶. When ENTER is released, the selected option will be automatically selected.</p>

<FILTER MENU>	
<EXIT>	<p>Go back to the main menu</p> <p>Press ENTER, and hold tight; select [YES] with ◀▶. Releasing ENTER will automatically select the selected option.</p>

2.-Power Supply Menu:

<POWER SUPPLY MENU>	
<IN 1 POWER>	<p>Enable/disable input 1 power supply</p> <p>Press ENTER, and press and hold down; select [OFF] <[ON] using ◀ ▶</p> <p>When ENTER is released, the selected option is automatically selected.</p>
<IN 2 POWER>	<p>Enable/disable input 2 power supply</p> <p>Press ENTER, and press and hold down; select [OFF] <[ON] using ◀ ▶</p> <p>When ENTER is released, the selected option is automatically selected.</p>
<IN 3 POWER>	<p>Enable/disable input 3 power supply</p> <p>Press ENTER, and press and hold down; select [OFF] <[ON] using ◀ ▶</p> <p>When ENTER is released, the selected option is automatically selected.</p>
<FM GAIN>	<p>Allows FM gain variance between 8dB and 28dB</p> <p>Press ENTER, and press and hold down; using ◀ ▶ the gain can be increased or decreased.</p>
<OUT LEVEL>	<p>Allows to adjust output level Vo (**)</p> <p>Press ENTER, and press and hold down; using ◀ ▶ the gain can be increased or decreased.</p>
<OUT SLOPE>	<p>Allows adjusting equalisation level in pass band</p> <p>Press ENTER, and press and hold down; using ◀ ▶ to increase or decrease the slope in a range of 0dB to 10dB.</p>
<EXIT>	<p>Go back to the main menu</p> <p>Press ENTER, and hold tight; select [YES] with ◀▶. Releasing ENTER will automatically select the selected option.</p>

3.-Miscellaneous Menu:

<MISCELLANEOUS MENU>	
<LANGUAGE>	<p>Change language</p> <p>Press ENTER, and press and hold down; select [ENGLISH] [FRENCH] [SPANISH] [ITALIAN] using [Left] [Right]. When ENTER is released, the selected option will be automatically selected.</p>
<DEFAULT VALUE>	<p>Default values reset</p> <p>Press ENTER, and press and hold down; select [CANCEL] [EUROPE] [BRAZIL] [THAILAND] [NEW ZEALAND] [AUSTRALIA] [MEXICO] using [Left] [Right]. When ENTER is released, the selected option is automatically selected.</p>
<SET PIN>	<p>Allows you to enter a 4-digit access code</p> <p>Press ENTER and hold tight; select [YES] [NO] with [Left] [Right]. Releasing ENTER will automatically select the selected option. [F] enters the menu, [NO] remains in <MENU SEVERAL>.</p>
<SET PIN> < *--->	<p>We introduce the first digit</p> <p>Press ENTER and hold tight; select [0 to 9] with [Left] [Right], drop ENTER to select number.</p>
<SET PIN> < *-->	<p>We introduce the second digit</p> <p>Press ENTER and hold tight; select [0 to 9] with [Left] [Right], drop ENTER to select number.</p>
<SET PIN> < *-->	<p>We introduced the third digit</p> <p>Press ENTER and hold tight; select [0 to 9] with [Left] [Right], drop ENTER to select number.</p>
<SET PIN> < ---*>	<p>We introduced the fourth digit</p> <p>Press ENTER, and hold tight; select [0 to 9] with [Left] [Right], drop ENTER to select number.</p>
<SET PIN> <Confirm>	<p>We confirm</p> <p>Press ENTER and hold tight; select [YES] or [NO] with [Left] [Right], release ENTER to select.</p>
<BANDWITH COEF>	<p>Select the input sensitivity level</p> <p>Press ENTER and hold tight; select [50-200%] with [Left] [Right]. Releasing ENTER will automatically select the selected option. Default [120%].</p>
<EXIT>	<p>Go back to the main menu</p> <p>Press ENTER, and hold tight; select [YES] with [Left] [Right]. Releasing ENTER will automatically select the selected option.</p>

(*) An already existing output channel cannot be selected.

(**) The same input channel can be selected ONLY if it is from a different input.

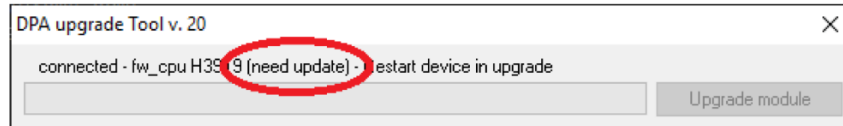
(***) The equipment calculates the maximum output level available according to the number of channels. The introduced level can only be decreased.

FACTORY DEFAULT

In case the control unit has a PIN and the user does not know THE , it is possible to reconfigure the control unit if we perform a factory reset. This is done by plugging in EKSEL compact while holding down the right and left keys.

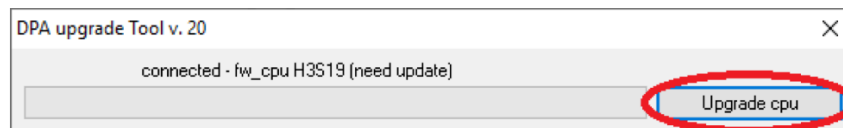
STEPS TO UPGRADE FW IN EKSEL COMPACT:

- 1.- Install DPA Upgrade SW on a PC and run it.
- 2.- Connect EKSEL compact to PC via USB/micro-USB cable.
- 3.- DPA Upgrade will indicate whether an FW upgrade is required.



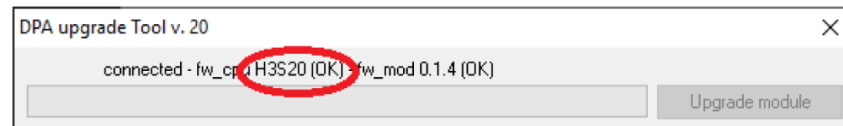
4.- EKSEL compact must be put into "upgrade mode" if an upgrade is required. To do this, plug in EKSEL compact by holding down the ENTER key.

5.- EKSEL compact will display "upgrade mode" on the display and the "upgrade CPU" button on the SW DPA Upgrade will be activated.



6.- Click the button and wait until the update is complete.

7.- EKSEL compact will restart and the DPA Upgrade will show OK.



8.- Note: In the event that the FW version to be installed is V_29 or higher and is done from a version less than V_29 the equipment will need to be factory reset.