DPF 008

Digital Performer
User manual

PROGRAMMABLE MULTIBAND AMPLIFIER

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Overview

The programmable amplifier DPF008 is produced according to the worldwide quality standards and complies to all certificats and homologations required for this type of product.
This product is developed and produced according to the ISO-9001 procedures using components of the latest generation.

1 - General information

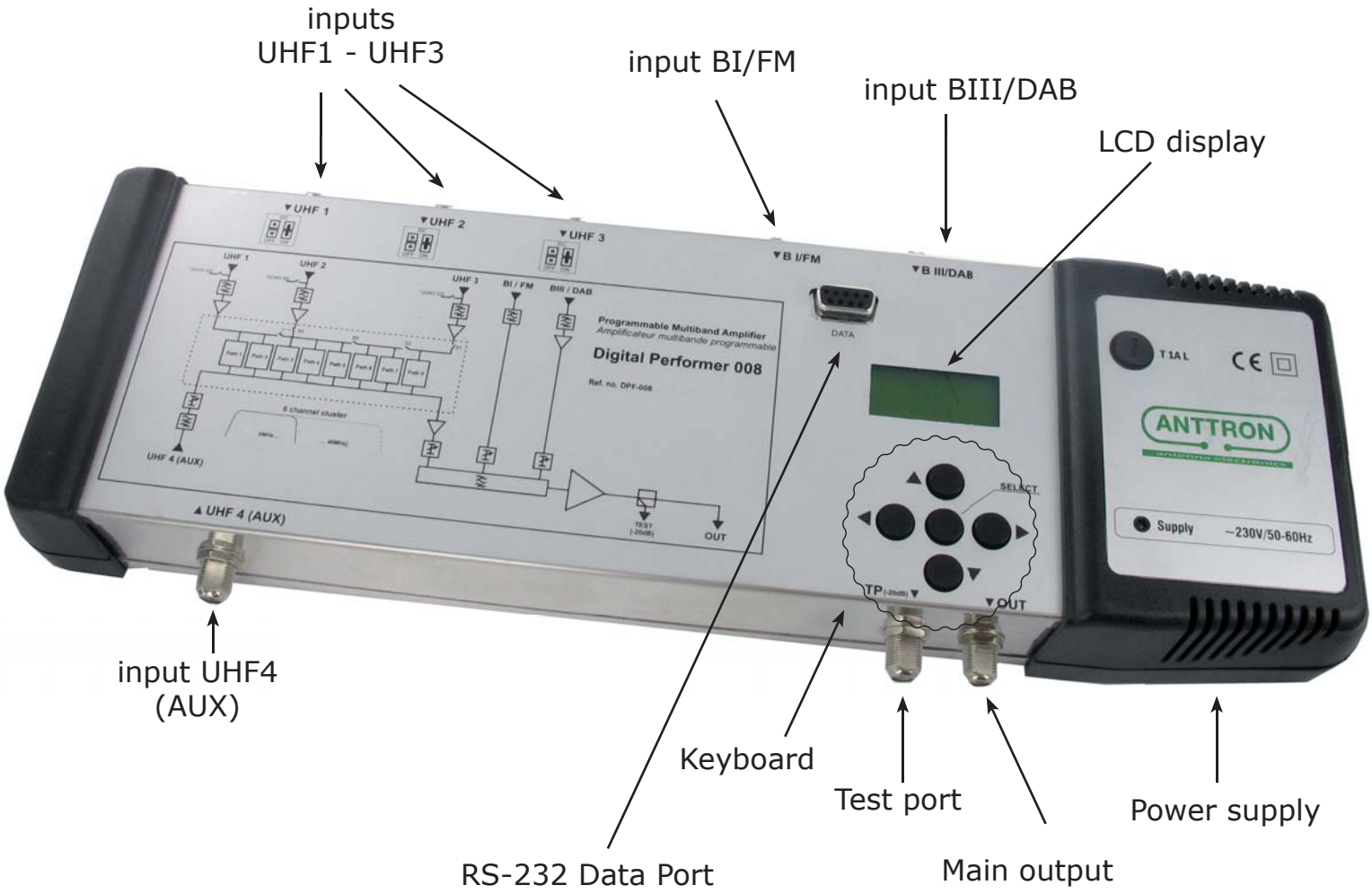
This manual gives the necessary information to install, activate and utilise the programmable DPF-008 Digital Performer. If you have any questions concerning our products, please contact Anttron or the distributor of Anttron nearest to you.

2 - Product caracteristics

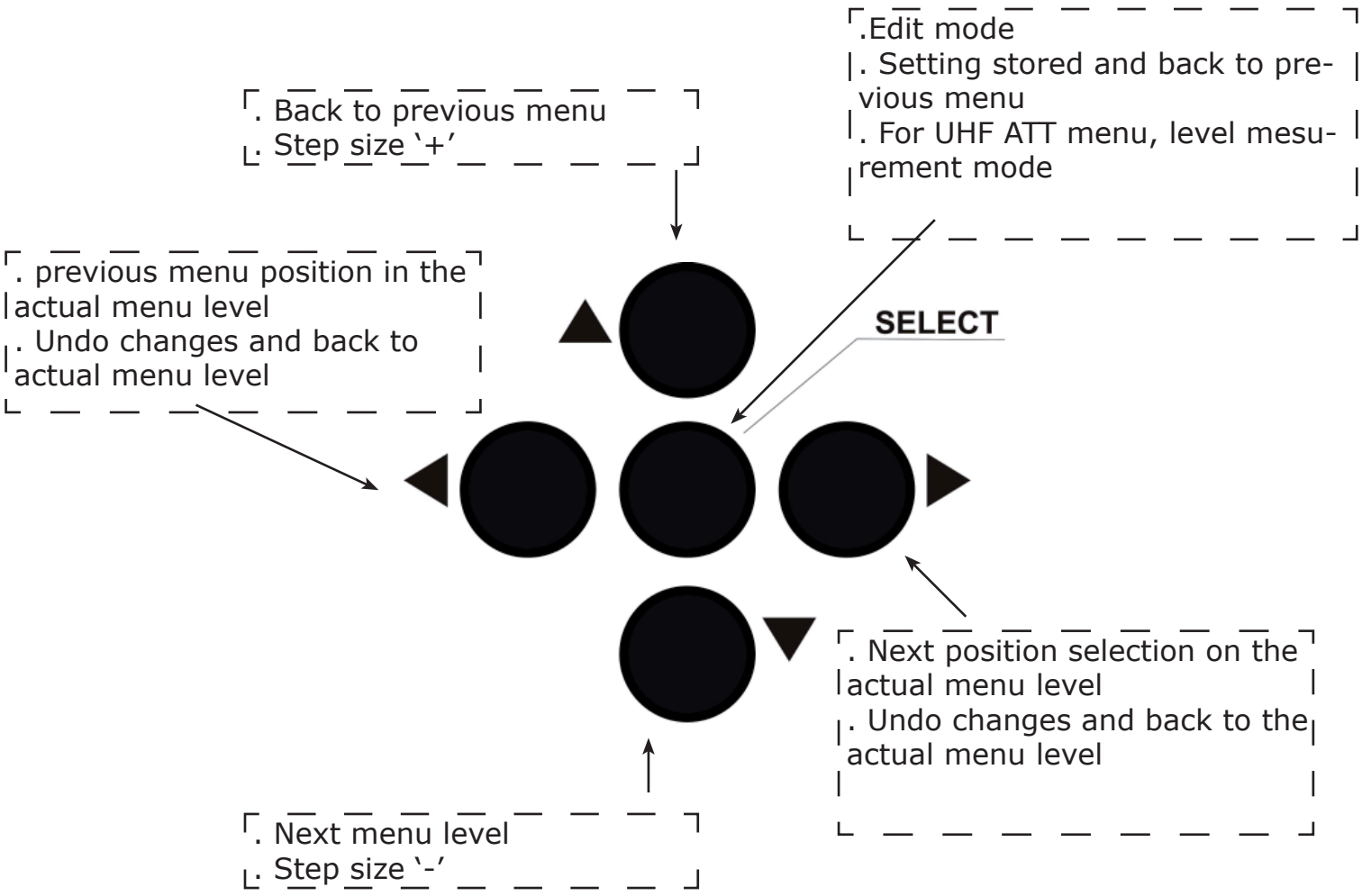
. Selective and individual amplification for 8 channels in UHF
. Possibility to expand the channel bandwith up to 6 TV channels (8..48 MHz)
. Powering preamplifiers for the inputs UHF1-UHF3
. Indication of preamplifier status : LED diode in two colors
. Appropriate for analogue and digital TV channels
. Low power consumption
. Easy installation and activation

The DPF008 is equipped with 8 channel paths P1…P8 for 3 inputs UHF1 - UHF3. Every channel has an adjustable filter,which can be tuned in the range 21..69. Furthermore, the frequency band of everu channel may be expanded from 8 up to 48 MHz (1 up to 6 TV channels). UHF1-UHF3 inputs enable to supply pre-amplifiers with +12V or +24V voltage. If the preamplifier power supply is not needed you can disable it by removing the straps located near the UHF input.
In case of short-circuit, this state will immediately be indicated by the LED going RED near the proper UHF input.
UHF4 input (AUX - 470-862 MHz) enables connection of an extra modulator (modulator is not a part of amplifier equipment) connecting additonal devices such as : video camera, satellite receiver DVD player etc.
The signal will be added to the amplifiers main TV signal path and can be easily transmitted to every cable TV user.

3 - Amplifiers connections and elements



3.1 - The keyboard :



4. Amplifier activation

Never connect or start the DPF008 amplifier until the installation of the receiving antennas has been completed. Antennas should
be placed in position of maximum signal reception. Use of signal level meter is recommended.

Le réglage de l'amplificateur doit être fait après 20 minutes de mise en route de l'alimentation.

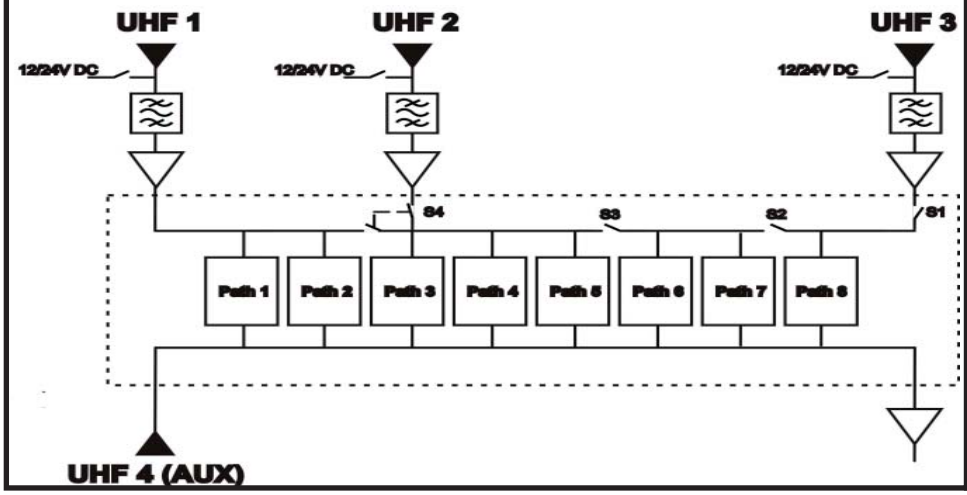
Amplifier tuning should be started after 20 minutes from setting the 230V power on.
1) Default setting of every attenuator for inputs and outpus is «»0»»»

2) Connect antennas to the amplifier inputs :
. TV bands IV and V antennas (470-862 MHz) - to UHF1, UHF2 and UHF3 inputs
. TV band II antennas (174..230 MHz) - to BIII/DAB input
. FM antenna (47…108 MHz) to BI/FM input

Caution !
It is recommended that UHF4 (AUX) input should be used for summation of additional signals coming from external devices such as : video camera
satellite receiver, DVD player etc. Unused UHF4 input should be closed by 75 Ohm resistor.

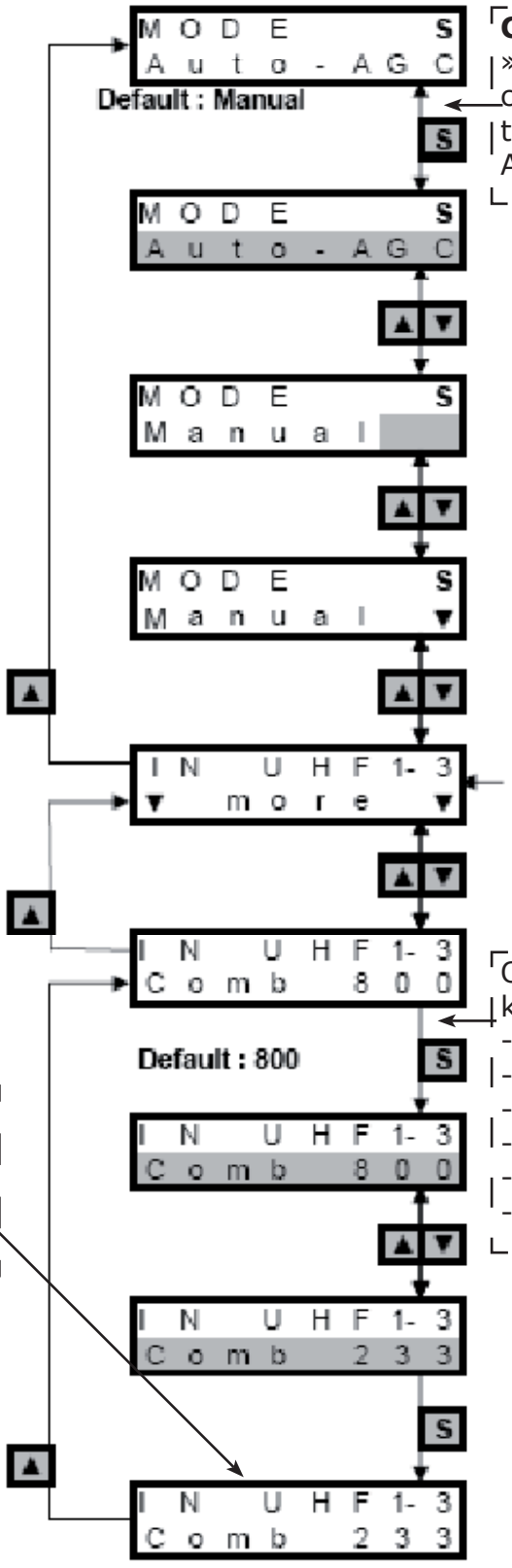
3) It is possible to connect to UHF1, UHF2, UHF3 inputs antennas with preamplifiers. To turn on the preamplifier power, strap should be placed near
proper UHF input. In case the power supply is not needed, strap should be displaced.

4) According to the amplifier's location (place of installation), the correct number of channel paths P1…P8 (should be assigned to proper UHF1-UHF3
inputs. Table 1 specifies possible combinations of channel paths for UHF1-UHF3 inputs. For example, if every TV signal is coming from one direction , you should chose 8/0/0 key setting and connect receiving antenna to UHF1 input. Remaining and unused inputs should be closed with 75 Ohm resistors.



UHF 1	UHF 2	UHF 3
2	3	3
2	5	1
2	6	0
5	0	3
7	0	1
8	0	0

5. Key combination setting for UHF1-UHF3 inputs.

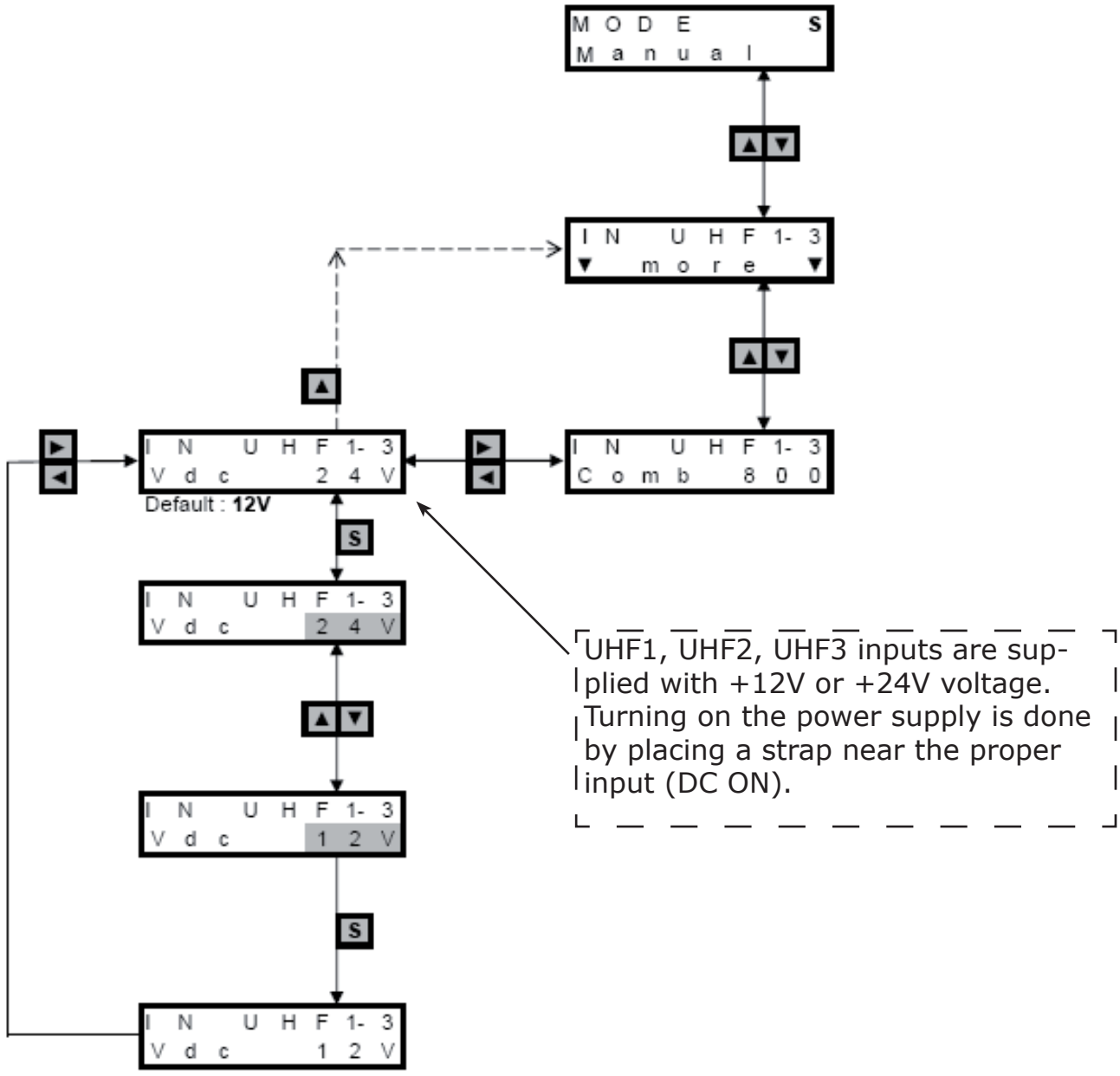


Caution :
»AGC» mode doesn't allow any changes in amplier's settings. In this mode you can only turn off/on AGC function**.**

Other possible combinations of keys for UHF inputs :
- 2/3/3
- 2/5/1
- 2/6/0
- 5/0/3
- 7/0/1
- 8/0/0

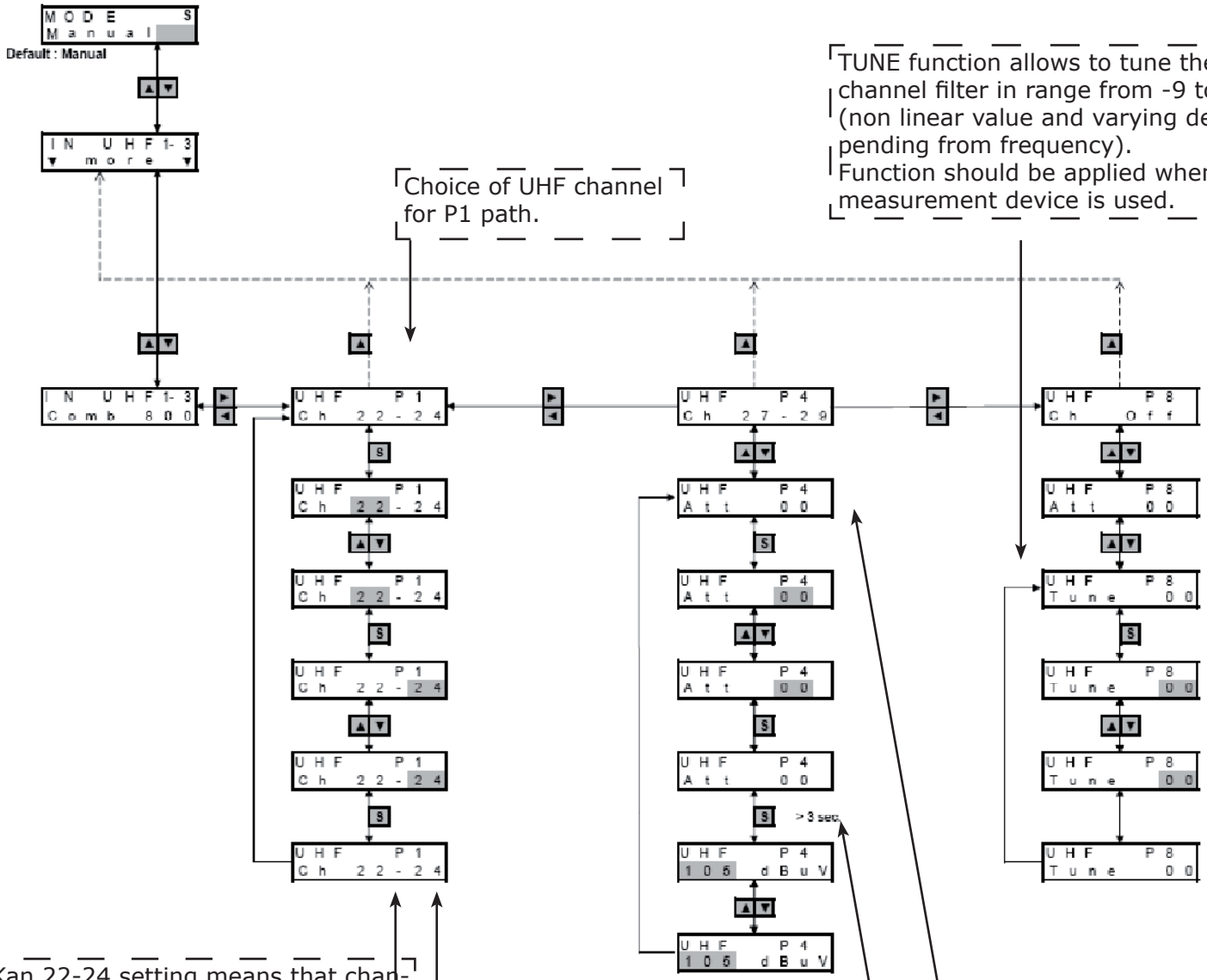
Key combination : 2/3/3
Marks channel paths :
UHF1 : -> 2 (P1,P2)
UHF2 : -> 3 (P3,P4,P5)
UHF3 : -> 3 (P6,P7,P8).)

6. Setting appropriate power supply voltage for antenna preamplifiers.



7. Programming of channel paths UHF1-UHF3

Each of P1…P8 channel paths is designated for transmission from 1 up to 6 adjacent TV channels (filter's frequency band is 8 MHz up to 48 MHz).

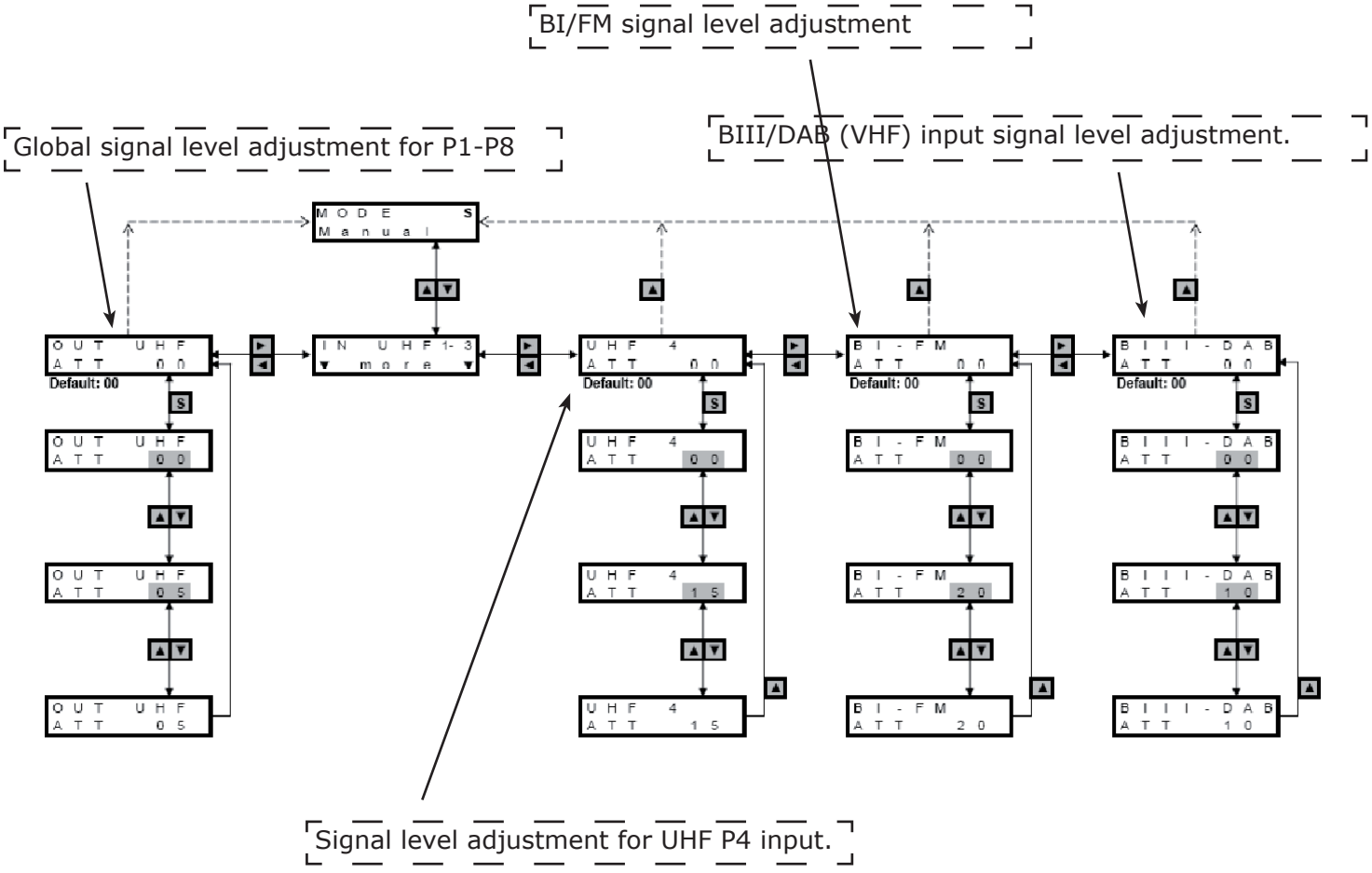


7.1. «Fine tuning» fonction

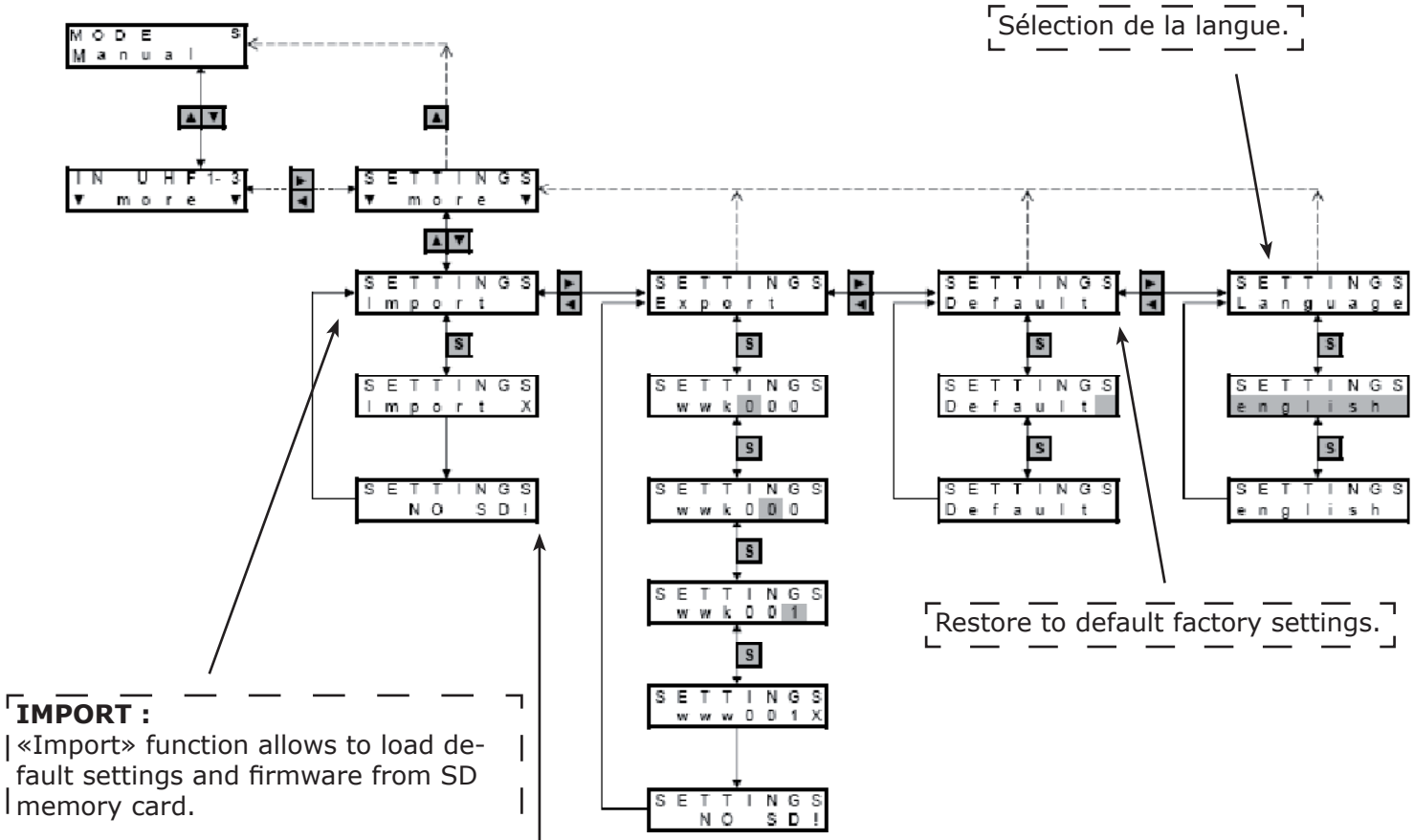
In particular cases, when automatic tuning to middle frequency of the channel is not giving subjective effect, manual retuning of some channel paths migt be needed.
This might happen in several cases :

. Cross-distortion , caused by receiving strong signal near weak signal from the same antenna - in this situation it is recommended to «move away» filters from each one.
. Reflection appearance (two images ocurring - the correct one and moved one), caused by receiving strong signal near weak signal from different antennas - in this situation it is recommended to »move away» filters from each one.
. Weak signal reception - »fine tuning» is used for filter tuning to vision carrier of the TV signal.

8. Input signal regulation



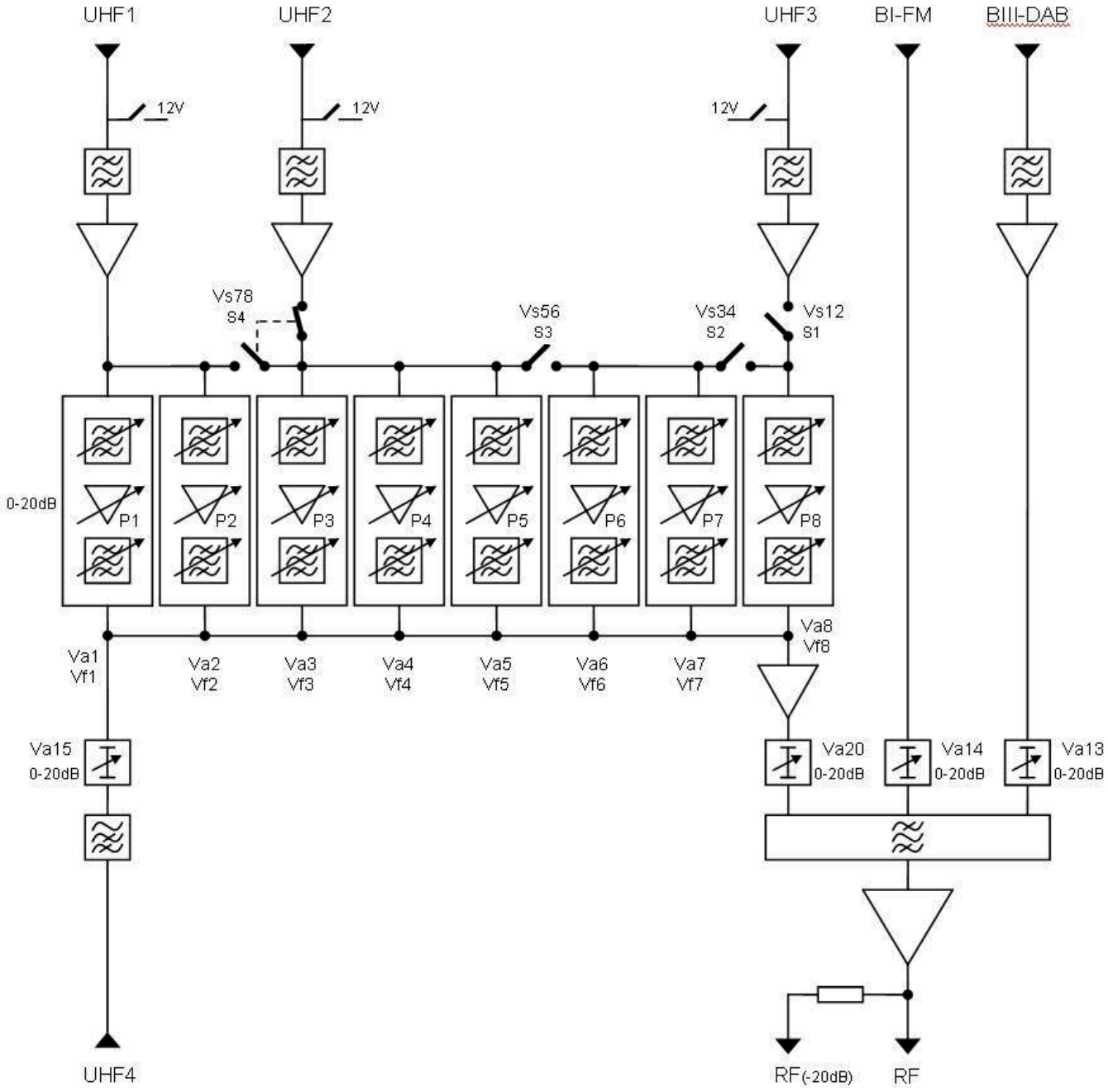
9. Extra functions



IMPORT :
«Import» function allows to load default settings and firmware from SD memory card.

EXPORT :
«Export» function allows to save amplifier's settings on SD memory card. Thus you can fast and easily copy settings to other amplifiers.

10. Block diagram



11. Technical specifications

TYPE							
Inputs		BI/FM	BIII	UHF1	UHF2	UHF3	UHF4
Frequency range	MHz	47-108	174-260	470-862			470-862
Possible combinations of S1-S4 switches for UHF1-UHF3 inputs.	\	\	\	2	3	3	\
				2	5	1	
				2	6	0	
				5	0	3	
				7	0	1	
				8	0	0	
Gain	dB	25 ±2	44 ±2	44 ±2			30 ±2
Gain regulation	dB	20 ±2	20 ±2	20 ±2 (for each filter)			20 ±2
Gain regulation after channel paths summing.	dB	--		20 ±2 (global)			--
Channel path selectivity	dB	--	--	> 22 ±20 MHz			--
Noise figure	dB	9	4	9			17
Max. input level	dBµV	90	80	80			80
Max. output level	dBµV	118		114			
Selectivity for F=Fp MHz±16 MHz	dB	--		>14			--
Programmable filter band	\	--		1-6 channels(8-48 MHz)			--
Gain variation (filter bandwidth = 8 MHz)	dB	--		max. 3			--
Gain variation (filter bandwidth = 16… 48 MHz)	dB			max. 6			--
Test point	dB	-20 ± 2					
Input / output impedance	ohm	75 / 75					
Preamplifiers power supply	VDC/mA	--		0-12-24/ 50			--
Preamplifiers closed circuit indicator	\	--		yes, LED red			--
Temperature working range	°C	-5 .... +50					
Power supply	VAC/Hz	230 / 50-60					
Power consumption	VA	20					
Dimensions	mm	370 X 130 X 50					
Weight	kg	0.9					
Code EAN		54 200 376 3 008 0					