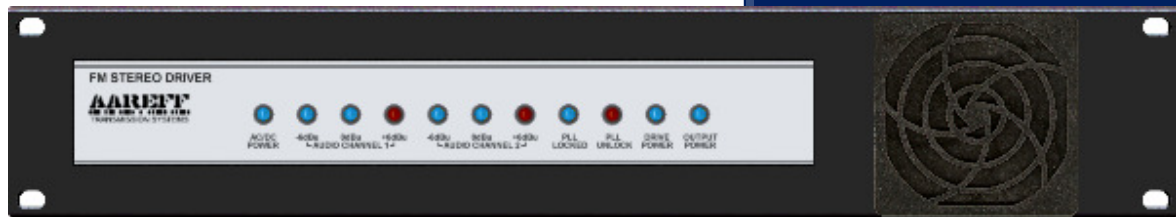


1W DRIVER EXCITER AND STEREO GENERATOR WITH LIMITERS



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1. INTRODUCTION

Dear Customer,

Please read this manual before assembling and starting the unit.

This will ensure that the product operates as intended.

1.1 Unpacking and Control

Please make sure the product is complete and it has not been damaged during transport.

In the case of any damage please contact us at info@aareff.com

1.2 General Information

This manual does not contain any kind of warranty. The terms of warranty are security in our general conditions of sale.

This product should only be installed and serviced by suitably qualified personnel.

If any difficulties arise during the installation or commissioning, please seek assistance at the official website. www.aareff.com

1.3 User Safety Responsibility

You are responsible for selecting the correct transmitter model appropriate for your application, installing it properly and ensuring the maintenance of all the components.



This symbol appears in the manual to call attention to instructions concerning the safety of the installation, operation and use of the product.

1.4 Electromagnetic Compatibility

This product complies with EMC directive EN 301 489 – 11 of the European Union.

To meet this directive. You must follow the wiring instructions

2. SPECIFICATIONS

2.1 Type of Transmitter Specifications

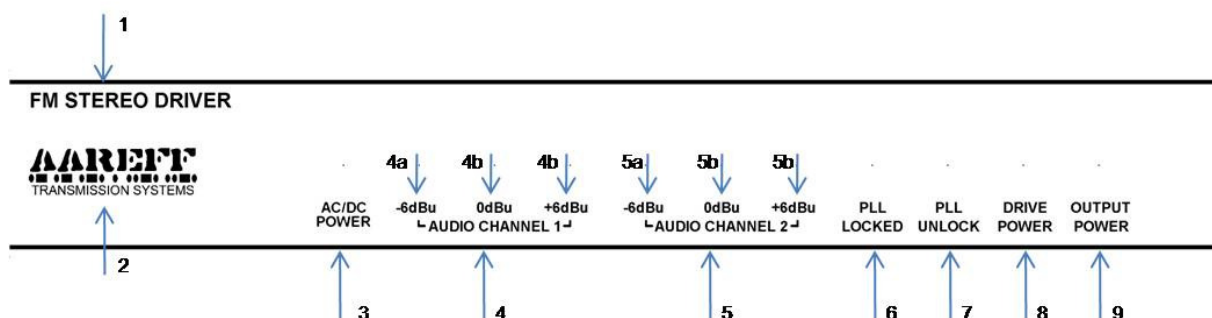
This equipment is two individual separate units that can be used alone, independent of one another. ALSCB the first unit accepts a stereo line level, limiting the maximum amplitude and converting it to a stereo MPX signal system based on GE zenith. The second unit is transmitter type 1WPLL driver for FM sound broadcasting, it can also drive a 50 – ohm amplifier or a 50 – ohm antenna or a combination of these.



This equipment is for use in a permanent fixed location with a license from the radio spectrum regulator in the EU Member State.

2.2 Description of the Label

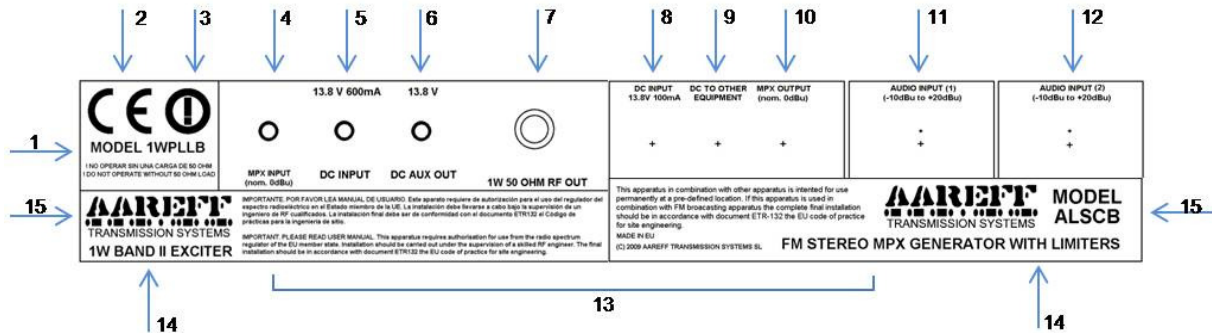
2.2.1 Front Label



1	Transmitter Model	5	Audio Channels 2
2	Manufacturer	5a	- 6dBu
3	Power Indicator	5b	0 dBu
4	Audio Channels 1	5c	+ 6dBu
4a	- 6dBu	6	PLL Locked Indicator
4b	0 dBu	7	PLL Unlocked Indicator
4c	+ 6dBu	8	Driver Power
		9	Output Power

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2.2.2 Back Label

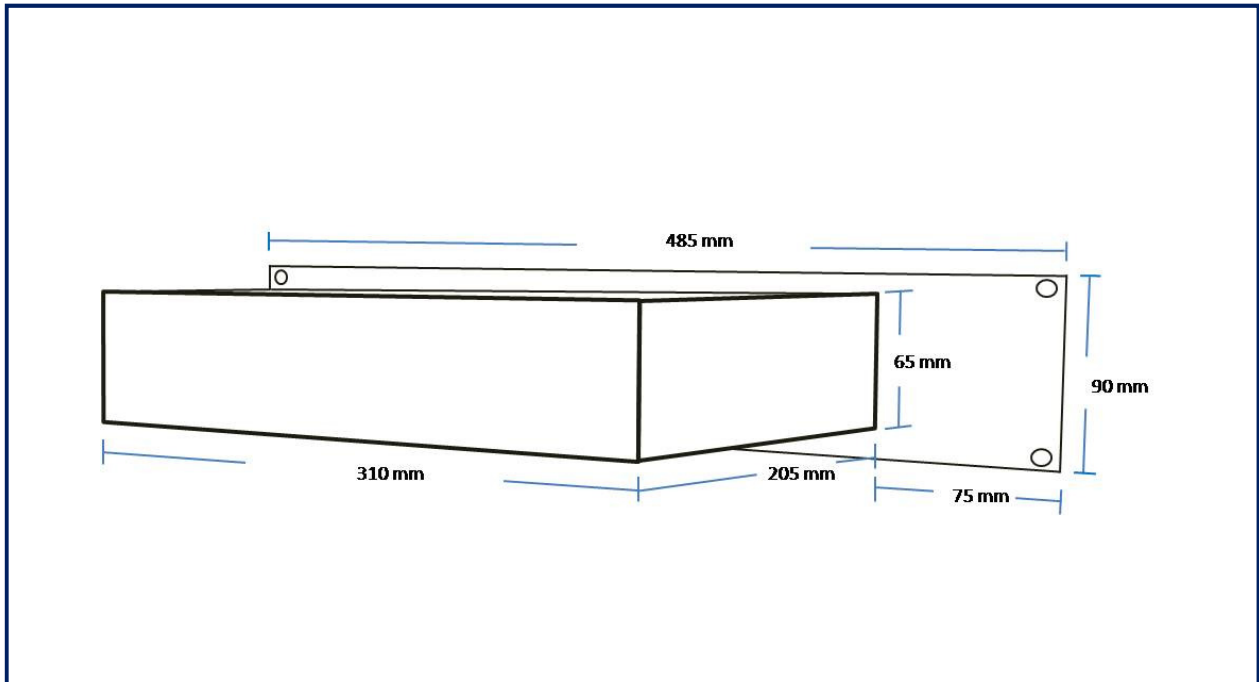


1	Connection Warning		9	Auxiliary DC OUTPUT
2	CE Marked		10	OUTPUT MPX
3	Marked Restrictions in EU		11	Input 0dBu Standard Audio
4	MPX INPUT		12	Input 0dBu Standard Audio
5	DC INPUT		13	User warning
6	Auxiliary DC OUTPUT		14	Model Details
7	Output 1W 50 Ohm		15	Manufacturer brand
8	DC INPUT			

2.3 Design

This equipment is two separate units that can be used alone, independent of each other. The first unit contains two modules ALS CB audio limiter that attacks very quickly to high – peak audio levels to prevent excessive FM deviation. Audio signals are converted to a single MPX output. The second unit 1WPLL B design uses a low power VHF oscillator amplified to 1 watt of power and phase locked to a reference quartz oscillator. The 1 watt signal is applied to a RF band pass filter RF at final output. The two sets are housed in aluminum enclosures fully screened to protect the user from direct contact with RF voltages and to prevent unwanted emissions, local interference and provide the RF unit with adequate immunity for the proper functioning in an industrial environment.

2.4 Transmitter Dimensions



2.5 Technical Data

Power Input	13.8VDC / 115/230 VAC 50/60 Hz with optional PSU
RF Power Output	1 Watt +/- 0.5 dB between -20 and +40 °C
RF Output Connector	BNC / 50 ohm
Spurious Emissions	>66dB rtc
Harmonic Emissions	>66dB rtc
Out of Lock RF Muting	>66dB rtc
Freq Range	100 KHz increment between 87.5 and 108MHz
Freq Stability	Better than +/- 2 KHz between -20 and +40 °C
Freq Fine Adj	> +/- 1000Hz
Freq Adj. Accuracy	+/- 50 Hz
Deviation Sensitivity Stability	+/-2% max
Audio Input Connector	Phono/ RCA type unbalanced
Pre-emphasis	(50uS/ 75uS/ None)
Audio Input Sensitivity	Nom. 0.775 V rms for +/- 75 KHz Dev. User adj.
Signal To Noise Ratio	>72 dB rel. +/-75KHz dev.
Freq Response (Mono/MPX)	+/-0.5dB between 30 Hz and 76 KHz
Audio Distortion	Better than 0.02 % THD

All stated measurements were made at 13.8 VDC at 23 C° ambient temperature

3. INSTALLATION



The installation must be by an engineer that has skills and competency in EMC and radio frequency systems. The final installation should be in accordance with the site engineering document at <http://www.aareff.com/ETR132.pdf>.

3.1 Input DC 13.8V 600 mA

DC input and DC output are simply connected together inside the unit. The purpose of this is to allow other DC equipment to be connected in “daisy chain” and share the same power supply. The current capacity of the DC connector is 5000 milliamps, so if the external power source can provide 5000 milliamps and exciter consumes 600 milliamps, this leaves 4400 mA of power available for other equipment using the AUX OUT DC. The DC input connectors are 5.5 mm in outer diameter and 2.1 mm in diameter in the central pin. The central pin is positive and the negative or ground outside. The unit has incorrect polarity protection. In the traditional power supplies you should pay particular attention to the rectifying diodes placing 1nF ceramic disc capacitors directly across each of them. Power supplies CE Marked often are suppressed and have no problem.

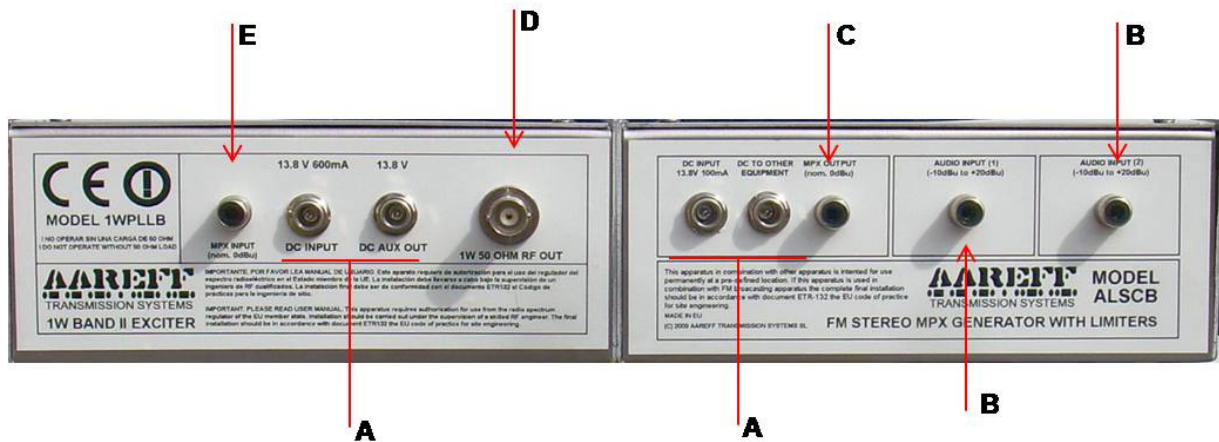
To comply with the Low Voltage Directive and to provide safe operation the external power supply must be current limited or fused to no more than 5 amps. This will prevent the connectors and wiring failing in a fault condition. We recommend that 5 amps or more red and black, figure of 8 cable is used for wiring DC

To comply with EMC directive this cable should **NOT** exceed 3 meters in length

To comply with the R&TTE directive the transmitter output power remains in compliance with +/- 0.5 db, if the power source delivers a constant level of output voltage. The DC can be between 12 and 14.5V, but it must be with +/- 6% of the nominal value over the temperature range of 0 – 40 degrees Celsius with a current consumption of 200 to 600 mA. This applies to all types of power supplies including, batteries, solar panels, photovoltaic, wind generators or any other energy sources that are innovative or a combination of the above. The AC power supply needs a constant DC output over the AC input, of 198 to 255V. To ensure the permitted level of residual AM is in of compliance there should not be more than 140mV ripple in DC output (See Fig 1: a)

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Fig. 1 Puertos



3.2 MPX

MPX is an abbreviation for Multiplex signal. Multiplex is the name commonly used to describe the encoding of stereo audio signal band developed by Zenith / GE and used for standard stereo FM broadcasting. There are two options for MPX output

- First, the MPX output can be connected directly to the MPX input with RCA to RCA cable included. This is the default condition.
- Second, is when you want to include an external encoder RDS in the system. The exact configuration will depend on the RDS encoder used, but the most basic level MPX output connects to the RDS encoder and the RDS encoder output is connected to the MPX input.

3.3 INPUT Audio (-10dBu a +20dBu)

- The connector is RCA / phono type of unbalanced with a Hi – Z input of 10K ohms. The typical input level is +4 dBu nominal. Any input level to +20 dBu can be applied. Any level higher than the -6 dBu will lead to a constant level output, this is the limiter threshold level. Any reduction in input level, below -6 dB will have a linear reduction in the output (See fig 1: C)

3.4 INPUT MPX

The MPX input also accepts simple mono audio signals and RDS (Radio Data System) or a combination of these. The connector is RCA / phono type unbalanced with a Hi – Z input of 10k ohms. You must use high quality shielded cable to connect other equipment. The exciter is factory set to give +/- 75 kHz deviation FM (maximum allowed) at 88.0 MHz to +4 dBu input.

To comply with EMC Directive screened cable used to connect this input to the other equipment should NOT exceed 3 meters in length.

To comply equipment with the R&TTE, it is imperative that the level of the signal to the MPX input is limited with a peak limiter or similar processor. After the installation the FM deviation needs to be checked and adjusted so that the peak limited MPX signal gives a maximum deviation of no more than +/- 75 KHz. The setting of this deviation is VR1 and shown in the picture of the bottom panel. (See fig 1: D)

3.5 1W 50 OHM RF OUTPUT

This produces the main RF output of 1 W into a 50 ohm resistive load. This can be used to drive a dummy load, power amplifier or antenna or any other system that is designed with an input of 50 ohms. This port should always be terminated with 50 ohms when the transmitter is powered. The lack of a termination does not cause immediate damage, however, will cause the internal amplifier to operate at high temperatures reducing the long – term life of exciter. (See Figure 1: E)

4. OPERATION

4.1 Setting the RF Output Power

Locate VR2 in the bottom panel (see Figure 2). For 1W (peak) maximum turn VR1 counter – clockwise. For virtually zero power output (about 30 mW) turn VR1 fully clockwise. No other adjustments are necessary

4.2 Changing Frequency

Select the frequency in the PLL look - up table (Annex 1) and then select the appropriate code on the PLL module DIP switches (S2 y S1). (See Fig. 2).

Connect the rear panel RF OUTPUT BNC connector to a dummy load or to the input of a suitable RF power amplifier. Connect the transmitter to the power supply and switch on.



FIG 2: PANEL INFERIOR

Turn the small variable capacitor VC1 slowly until the PLL UNLOCK LED begins to dim, continue VC1 even more slowly, the PLL UNLOCK LED will become more dimmer then start flickering, then the PLL LOCK LED will light.

4.3 Deviation Adjustment

Locate VR1 bottom panel (see Figure 2), this will adjust the signal multiplex altogether, including the stereo pilot tone. This method should be used to adjust the deviation, after a frequency change or a change in an external stereo or RDS generator or audio limiter.

4.4 Frequency Adjustment

In normal and most circumstances, this never requires any adjustment. If you need to fine adjust the carrier frequency, this may be done by turning VC2 on the bottom panel (See Figure 2). To access VC2 you must remove the aluminum tape. The adjustment will make a smooth analog setting to the carrier frequency of approximately +/- 2000 Hz

ANNEXES

5. ANNEXE 1 Switch Configurator PLL DIL (S2 Y S1)

MHz	1	2	3	4	5	6	1	2	3	4	5	6
87.5	ON	ON	OFF	OFF	ON	OFF	OFF	ON	OFF	ON	OFF	ON
87.6	ON	ON	OFF	OFF	ON	OFF	OFF	ON	OFF	ON	OFF	OFF
87.7	ON	ON	OFF	OFF	ON	OFF	OFF	ON	OFF	OFF	ON	ON
87.8	ON	ON	OFF	OFF	ON	OFF	OFF	ON	OFF	OFF	ON	OFF
87.9	ON	ON	OFF	OFF	ON	OFF	OFF	ON	OFF	OFF	OFF	ON
88.0	ON	ON	OFF	OFF	ON	OFF	OFF	ON	OFF	OFF	OFF	OFF
88.1	ON	ON	OFF	OFF	ON	OFF	OFF	OFF	ON	ON	ON	ON
88.2	ON	ON	OFF	OFF	ON	OFF	OFF	OFF	ON	ON	ON	OFF
88.3	ON	ON	OFF	OFF	ON	OFF	OFF	OFF	ON	ON	OFF	ON
88.4	ON	ON	OFF	OFF	ON	OFF	OFF	OFF	ON	ON	OFF	OFF
88.5	ON	ON	OFF	OFF	ON	OFF	OFF	OFF	ON	OFF	ON	ON
88.6	ON	ON	OFF	OFF	ON	OFF	OFF	OFF	ON	OFF	ON	OFF
88.7	ON	ON	OFF	OFF	ON	OFF	OFF	OFF	ON	OFF	OFF	ON
88.8	ON	ON	OFF	OFF	ON	OFF	OFF	OFF	ON	OFF	OFF	OFF
88.9	ON	ON	OFF	OFF	ON	OFF	OFF	OFF	OFF	ON	ON	ON
89.0	ON	ON	OFF	OFF	ON	OFF	OFF	OFF	OFF	ON	ON	OFF
89.1	ON	ON	OFF	OFF	ON	OFF	OFF	OFF	OFF	ON	OFF	ON
89.2	ON	ON	OFF	OFF	ON	OFF	OFF	OFF	OFF	ON	OFF	OFF
89.3	ON	ON	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF	ON	ON
89.4	ON	ON	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF	ON	OFF
89.5	ON	ON	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF	ON
89.6	ON	ON	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF
89.7	ON	ON	OFF	OFF	OFF	ON	ON	ON	ON	ON	ON	ON
89.8	ON	ON	OFF	OFF	OFF	ON	ON	ON	ON	ON	ON	OFF
89.9	ON	ON	OFF	OFF	OFF	ON	ON	ON	ON	ON	OFF	ON
90.0	ON	ON	OFF	OFF	OFF	ON	ON	ON	ON	ON	OFF	OFF
90.1	ON	ON	OFF	OFF	OFF	ON	ON	ON	ON	OFF	ON	ON
90.2	ON	ON	OFF	OFF	OFF	ON	ON	ON	ON	OFF	ON	OFF
90.3	ON	ON	OFF	OFF	OFF	ON	ON	ON	ON	OFF	OFF	ON
90.4	ON	ON	OFF	OFF	OFF	ON	ON	ON	ON	OFF	OFF	OFF
90.5	ON	ON	OFF	OFF	OFF	ON	ON	ON	OFF	ON	ON	ON
90.6	ON	ON	OFF	OFF	OFF	ON	ON	ON	OFF	ON	ON	OFF
90.7	ON	ON	OFF	OFF	OFF	ON	ON	ON	OFF	ON	OFF	ON
90.8	ON	ON	OFF	OFF	OFF	ON	ON	ON	OFF	ON	OFF	OFF
90.9	ON	ON	OFF	OFF	OFF	ON	ON	ON	OFF	OFF	ON	ON
91.0	ON	ON	OFF	OFF	OFF	ON	ON	ON	OFF	OFF	ON	OFF
91.1	ON	ON	OFF	OFF	OFF	ON	ON	ON	OFF	OFF	OFF	ON
91.2	ON	ON	OFF	OFF	OFF	ON	ON	ON	OFF	OFF	OFF	OFF
91.3	ON	ON	OFF	OFF	OFF	ON	ON	OFF	ON	ON	ON	ON
91.4	ON	ON	OFF	OFF	OFF	ON	ON	OFF	ON	ON	ON	OFF
91.5	ON	ON	OFF	OFF	OFF	ON	ON	OFF	ON	ON	OFF	ON
91.6	ON	ON	OFF	OFF	OFF	ON	ON	OFF	ON	ON	OFF	OFF
91.7	ON	ON	OFF	OFF	OFF	ON	ON	OFF	ON	OFF	ON	ON
91.8	ON	ON	OFF	OFF	OFF	ON	ON	OFF	ON	OFF	ON	OFF

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91.9	ON	ON	OFF	OFF	OFF	ON	ON	OFF	ON	OFF	OFF	ON
92.0	ON	ON	OFF	OFF	OFF	ON	ON	OFF	ON	OFF	OFF	OFF
92.1	ON	ON	OFF	OFF	OFF	ON	ON	OFF	OFF	ON	ON	ON
92.2	ON	ON	OFF	OFF	OFF	ON	ON	OFF	OFF	ON	ON	OFF
92.3	ON	ON	OFF	OFF	OFF	ON	ON	OFF	OFF	ON	OFF	ON
92.4	ON	ON	OFF	OFF	OFF	ON	ON	OFF	OFF	ON	OFF	OFF
92.5	ON	ON	OFF	OFF	OFF	ON	ON	OFF	OFF	OFF	ON	ON
92.6	ON	ON	OFF	OFF	OFF	ON	ON	OFF	OFF	OFF	ON	OFF
92.7	ON	ON	OFF	OFF	OFF	ON	ON	OFF	OFF	OFF	OFF	ON
92.8	ON	ON	OFF	OFF	OFF	ON	ON	OFF	OFF	OFF	OFF	OFF
92.9	ON	ON	OFF	OFF	OFF	ON	OFF	ON	ON	ON	ON	ON
93.0	ON	ON	OFF	OFF	OFF	ON	OFF	ON	ON	ON	ON	OFF
93.1	ON	ON	OFF	OFF	OFF	ON	OFF	ON	ON	ON	OFF	ON
93.2	ON	ON	OFF	OFF	OFF	ON	OFF	ON	ON	ON	OFF	OFF
93.3	ON	ON	OFF	OFF	OFF	ON	OFF	ON	ON	OFF	ON	ON
93.4	ON	ON	OFF	OFF	OFF	ON	OFF	ON	ON	OFF	ON	OFF
93.5	ON	ON	OFF	OFF	OFF	ON	OFF	ON	ON	OFF	OFF	ON
93.6	ON	ON	OFF	OFF	OFF	ON	OFF	ON	ON	OFF	OFF	OFF
93.7	ON	ON	OFF	OFF	OFF	ON	OFF	ON	OFF	ON	ON	ON
93.8	ON	ON	OFF	OFF	OFF	ON	OFF	ON	OFF	ON	ON	OFF
93.9	ON	ON	OFF	OFF	OFF	ON	OFF	ON	OFF	ON	OFF	ON
94.0	ON	ON	OFF	OFF	OFF	ON	OFF	ON	OFF	ON	OFF	OFF
94.1	ON	ON	OFF	OFF	OFF	ON	OFF	ON	OFF	OFF	ON	ON
94.2	ON	ON	OFF	OFF	OFF	ON	OFF	ON	OFF	OFF	ON	OFF
94.3	ON	ON	OFF	OFF	OFF	ON	OFF	ON	OFF	OFF	OFF	ON
94.4	ON	ON	OFF	OFF	OFF	ON	OFF	ON	OFF	OFF	OFF	OFF
94.5	ON	ON	OFF	OFF	OFF	ON	OFF	OFF	ON	ON	ON	ON
94.6	ON	ON	OFF	OFF	OFF	ON	OFF	OFF	ON	ON	ON	OFF
94.7	ON	ON	OFF	OFF	OFF	ON	OFF	OFF	ON	ON	OFF	ON
94.8	ON	ON	OFF	OFF	OFF	ON	OFF	OFF	ON	ON	OFF	OFF
94.9	ON	ON	OFF	OFF	OFF	ON	OFF	OFF	ON	OFF	ON	ON
95.0	ON	ON	OFF	OFF	OFF	ON	OFF	OFF	ON	OFF	ON	OFF
95.1	ON	ON	OFF	OFF	OFF	ON	OFF	OFF	ON	OFF	OFF	ON
95.2	ON	ON	OFF	OFF	OFF	ON	OFF	OFF	ON	OFF	OFF	OFF
95.3	ON	ON	OFF	OFF	OFF	ON	OFF	OFF	OFF	ON	ON	ON
95.4	ON	ON	OFF	OFF	OFF	ON	OFF	OFF	OFF	ON	ON	OFF
95.5	ON	ON	OFF	OFF	OFF	ON	OFF	OFF	OFF	ON	OFF	ON
95.6	ON	ON	OFF	OFF	OFF	ON	OFF	OFF	OFF	ON	OFF	OFF
95.7	ON	ON	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF	ON	ON
95.8	ON	ON	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF	ON	OFF
95.9	ON	ON	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF	ON
96.0	ON	ON	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF
96.1	ON	ON	OFF	OFF	OFF	OFF	ON	ON	ON	ON	ON	ON
96.2	ON	ON	OFF	OFF	OFF	OFF	ON	ON	ON	ON	ON	OFF
96.3	ON	ON	OFF	OFF	OFF	OFF	ON	ON	ON	ON	OFF	ON
96.4	ON	ON	OFF	OFF	OFF	OFF	ON	ON	ON	ON	OFF	OFF
96.5	ON	ON	OFF	OFF	OFF	OFF	ON	ON	ON	OFF	ON	ON
96.6	ON	ON	OFF	OFF	OFF	OFF	ON	ON	ON	OFF	ON	OFF
96.7	ON	ON	OFF	OFF	OFF	OFF	ON	ON	ON	OFF	OFF	ON

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96.8	ON	ON	OFF	OFF	OFF	OFF	ON	ON	ON	OFF	OFF	OFF
96.9	ON	ON	OFF	OFF	OFF	OFF	ON	ON	OFF	ON	ON	ON
97.0	ON	ON	OFF	OFF	OFF	OFF	ON	ON	OFF	ON	ON	OFF
97.1	ON	ON	OFF	OFF	OFF	OFF	ON	ON	OFF	ON	OFF	ON
97.2	ON	ON	OFF	OFF	OFF	OFF	ON	ON	OFF	ON	OFF	OFF
97.3	ON	ON	OFF	OFF	OFF	OFF	ON	ON	OFF	OFF	ON	ON
97.4	ON	ON	OFF	OFF	OFF	OFF	ON	ON	OFF	OFF	ON	OFF
97.5	ON	ON	OFF	OFF	OFF	OFF	ON	ON	OFF	OFF	OFF	ON
97.6	ON	ON	OFF	OFF	OFF	OFF	ON	ON	OFF	OFF	OFF	OFF
97.7	ON	ON	OFF	OFF	OFF	OFF	ON	OFF	ON	ON	ON	ON
97.8	ON	ON	OFF	OFF	OFF	OFF	ON	OFF	ON	ON	ON	OFF
97.9	ON	ON	OFF	OFF	OFF	OFF	ON	OFF	ON	ON	OFF	ON
98.0	ON	ON	OFF	OFF	OFF	OFF	ON	OFF	ON	ON	OFF	OFF
98.1	ON	ON	OFF	OFF	OFF	OFF	ON	OFF	ON	OFF	ON	ON
98.2	ON	ON	OFF	OFF	OFF	OFF	ON	OFF	ON	OFF	ON	OFF
98.3	ON	ON	OFF	OFF	OFF	OFF	ON	OFF	ON	OFF	OFF	ON
98.4	ON	ON	OFF	OFF	OFF	OFF	ON	OFF	ON	OFF	OFF	OFF
98.5	ON	ON	OFF	OFF	OFF	OFF	ON	OFF	OFF	ON	ON	ON
98.6	ON	ON	OFF	OFF	OFF	OFF	ON	OFF	OFF	ON	ON	OFF
98.7	ON	ON	OFF	OFF	OFF	OFF	ON	OFF	OFF	ON	OFF	ON
98.8	ON	ON	OFF	OFF	OFF	OFF	ON	OFF	OFF	ON	OFF	OFF
98.9	ON	ON	OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF	ON	ON
99.0	ON	ON	OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF	ON	OFF
99.1	ON	ON	OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF	ON
99.2	ON	ON	OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF
99.3	ON	ON	OFF	OFF	OFF	OFF	OFF	ON	ON	ON	ON	ON
99.4	ON	ON	OFF	OFF	OFF	OFF	OFF	ON	ON	ON	ON	OFF
99.5	ON	ON	OFF	OFF	OFF	OFF	OFF	ON	ON	ON	OFF	ON
99.6	ON	ON	OFF	OFF	OFF	OFF	OFF	ON	ON	ON	OFF	OFF
99.7	ON	ON	OFF	OFF	OFF	OFF	OFF	ON	ON	OFF	ON	ON
99.8	ON	ON	OFF	OFF	OFF	OFF	OFF	ON	ON	OFF	ON	OFF
99.9	ON	ON	OFF	OFF	OFF	OFF	OFF	ON	ON	OFF	OFF	ON
100.0	ON	ON	OFF	OFF	OFF	OFF	OFF	ON	ON	OFF	OFF	OFF
100.1	ON	ON	OFF	OFF	OFF	OFF	OFF	ON	OFF	ON	ON	ON
100.2	ON	ON	OFF	OFF	OFF	OFF	OFF	ON	OFF	ON	ON	OFF
100.3	ON	ON	OFF	OFF	OFF	OFF	OFF	ON	OFF	ON	OFF	ON
100.4	ON	ON	OFF	OFF	OFF	OFF	OFF	ON	OFF	ON	OFF	OFF
100.5	ON	ON	OFF	OFF	OFF	OFF	OFF	ON	OFF	OFF	ON	ON
100.6	ON	ON	OFF	OFF	OFF	OFF	OFF	ON	OFF	OFF	ON	OFF
100.7	ON	ON	OFF	OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF	ON
100.8	ON	ON	OFF	OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF
100.9	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF	ON	ON	ON	ON
101.0	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF	ON	ON	ON	OFF
101.1	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF	ON	ON	OFF	ON
101.2	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF	ON	ON	OFF	OFF
101.3	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF	ON	OFF	ON	ON
101.4	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF	ON	OFF	ON	OFF
101.5	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF	ON	OFF	OFF	ON
101.6	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF

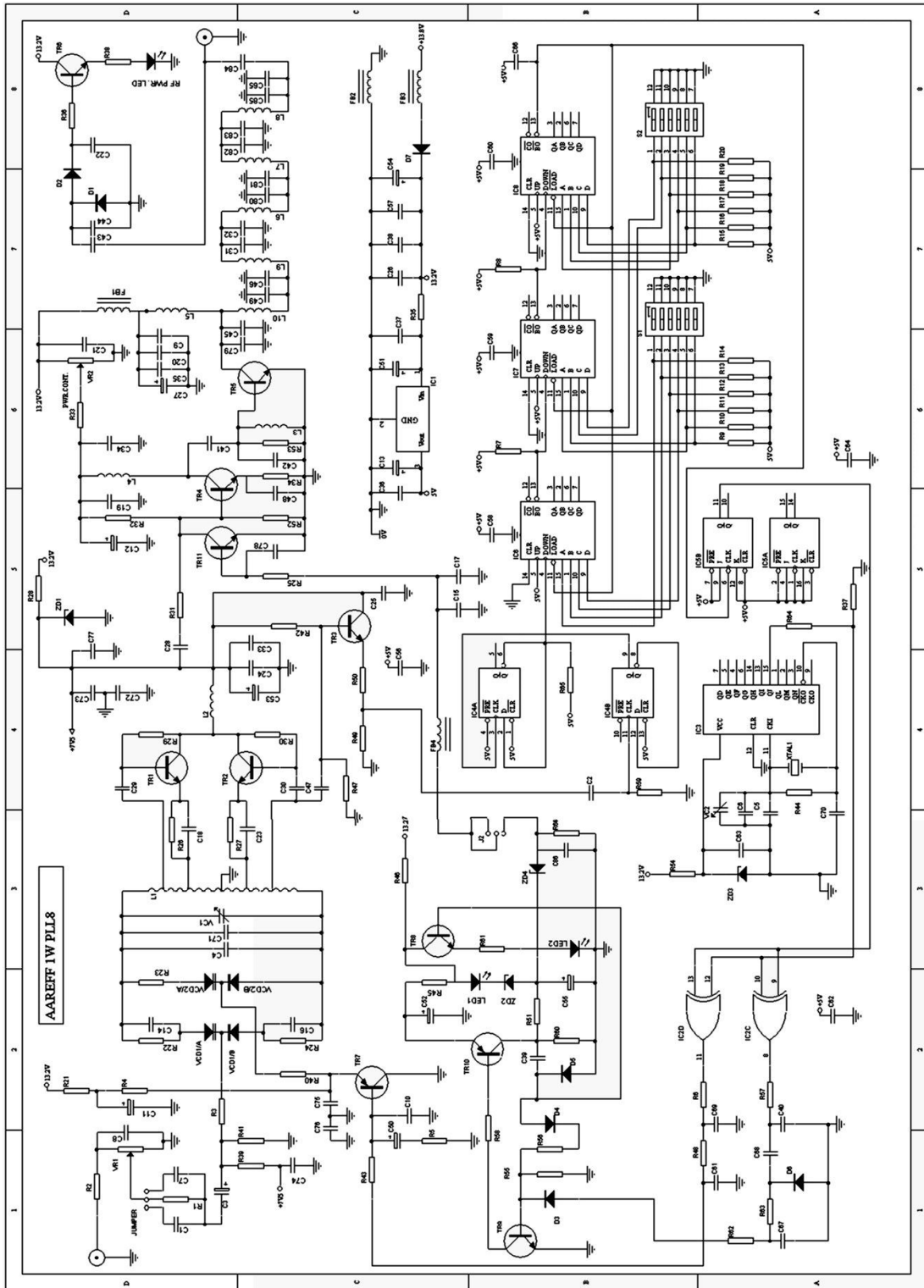
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101.7	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF	ON	ON	ON
101.8	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF	ON	ON	OFF
101.9	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF	ON	OFF	ON
102.0	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF	ON	OFF	OFF
102.1	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	ON	ON
102.2	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	ON	OFF
102.3	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	ON
102.4	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
102.5	ON	OFF	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
102.6	ON	OFF	ON	ON	ON	ON	ON	ON	ON	ON	ON	OFF
102.7	ON	OFF	ON	ON	ON	ON	ON	ON	ON	ON	OFF	ON
102.8	ON	OFF	ON	ON	ON	ON	ON	ON	ON	ON	OFF	OFF
102.9	ON	OFF	ON	ON	ON	ON	ON	ON	ON	OFF	ON	ON
103.0	ON	OFF	ON	ON	ON	ON	ON	ON	ON	OFF	ON	OFF
103.1	ON	OFF	ON	ON	ON	ON	ON	ON	ON	OFF	OFF	ON
103.2	ON	OFF	ON	ON	ON	ON	ON	ON	ON	OFF	OFF	OFF
103.3	ON	OFF	ON	ON	ON	ON	ON	ON	OFF	ON	ON	ON
103.4	ON	OFF	ON	ON	ON	ON	ON	ON	OFF	ON	ON	OFF
103.5	ON	OFF	ON	ON	ON	ON	ON	ON	OFF	ON	OFF	ON
103.6	ON	OFF	ON	ON	ON	ON	ON	ON	OFF	ON	OFF	OFF
103.7	ON	OFF	ON	ON	ON	ON	ON	ON	OFF	OFF	ON	ON
103.8	ON	OFF	ON	ON	ON	ON	ON	ON	OFF	OFF	ON	OFF
103.9	ON	OFF	ON	ON	ON	ON	ON	ON	OFF	OFF	OFF	ON
104.0	ON	OFF	ON	ON	ON	ON	ON	ON	OFF	OFF	OFF	OFF
104.1	ON	OFF	ON	ON	ON	ON	ON	OFF	ON	ON	ON	ON
104.2	ON	OFF	ON	ON	ON	ON	ON	OFF	ON	ON	ON	OFF
104.3	ON	OFF	ON	ON	ON	ON	ON	OFF	ON	ON	OFF	ON
104.4	ON	OFF	ON	ON	ON	ON	ON	OFF	ON	ON	OFF	OFF
104.5	ON	OFF	ON	ON	ON	ON	ON	OFF	ON	OFF	ON	ON
104.6	ON	OFF	ON	ON	ON	ON	ON	OFF	ON	OFF	ON	OFF
104.7	ON	OFF	ON	ON	ON	ON	ON	OFF	ON	OFF	OFF	ON
104.8	ON	OFF	ON	ON	ON	ON	ON	OFF	ON	OFF	OFF	OFF
104.9	ON	OFF	ON	ON	ON	ON	ON	OFF	OFF	ON	ON	ON
105.0	ON	OFF	ON	ON	ON	ON	ON	OFF	OFF	ON	ON	OFF
105.1	ON	OFF	ON	ON	ON	ON	ON	OFF	OFF	ON	OFF	ON
105.2	ON	OFF	ON	ON	ON	ON	ON	OFF	OFF	ON	OFF	OFF
105.3	ON	OFF	ON	ON	ON	ON	ON	OFF	OFF	OFF	ON	ON
105.4	ON	OFF	ON	ON	ON	ON	ON	OFF	OFF	OFF	ON	OFF
105.5	ON	OFF	ON	ON	ON	ON	ON	OFF	OFF	OFF	OFF	ON
105.6	ON	OFF	ON	ON	ON	ON	ON	OFF	OFF	OFF	OFF	OFF
105.7	ON	OFF	ON	ON	ON	ON	OFF	ON	ON	ON	ON	ON
105.8	ON	OFF	ON	ON	ON	ON	OFF	ON	ON	ON	ON	OFF
105.9	ON	OFF	ON	ON	ON	ON	OFF	ON	ON	ON	OFF	ON
106.0	ON	OFF	ON	ON	ON	ON	OFF	ON	ON	ON	OFF	OFF
106.1	ON	OFF	ON	ON	ON	ON	OFF	ON	ON	OFF	ON	ON
106.2	ON	OFF	ON	ON	ON	ON	OFF	ON	ON	OFF	ON	OFF
106.3	ON	OFF	ON	ON	ON	ON	OFF	ON	ON	OFF	OFF	ON
106.4	ON	OFF	ON	ON	ON	ON	OFF	ON	ON	OFF	OFF	OFF
106.5	ON	OFF	ON	ON	ON	ON	OFF	ON	OFF	ON	ON	ON

1W DRIVER EXCITER AND STEREO GENERATOR WITH LIMITERS

106.6	ON	OFF	ON	ON	ON	ON	OFF	ON	OFF	ON	ON	OFF
106.7	ON	OFF	ON	ON	ON	ON	OFF	ON	OFF	ON	OFF	ON
106.8	ON	OFF	ON	ON	ON	ON	OFF	ON	OFF	ON	OFF	OFF
106.9	ON	OFF	ON	ON	ON	ON	OFF	ON	OFF	OFF	ON	ON
107.0	ON	OFF	ON	ON	ON	ON	OFF	ON	OFF	OFF	ON	OFF
107.1	ON	OFF	ON	ON	ON	ON	OFF	ON	OFF	OFF	OFF	ON
107.2	ON	OFF	ON	ON	ON	ON	OFF	ON	OFF	OFF	OFF	OFF
107.3	ON	OFF	ON	ON	ON	ON	OFF	OFF	ON	ON	ON	ON
107.4	ON	OFF	ON	ON	ON	ON	OFF	OFF	ON	ON	ON	OFF
107.5	ON	OFF	ON	ON	ON	ON	OFF	OFF	ON	ON	OFF	ON
107.6	ON	OFF	ON	ON	ON	ON	OFF	OFF	ON	ON	OFF	OFF
107.7	ON	OFF	ON	ON	ON	ON	OFF	OFF	ON	OFF	ON	ON
107.8	ON	OFF	ON	ON	ON	ON	OFF	OFF	ON	OFF	ON	OFF
107.9	ON	OFF	ON	ON	ON	ON	OFF	OFF	ON	OFF	OFF	ON
108.0	ON	OFF	ON	ON	ON	ON	OFF	OFF	ON	OFF	OFF	OFF

6. ANNEXE 2: Card Scheme WPLL 8



DECLARACION DE CONFORMIDAD

AAREFF TRANSMISSION SYSTEMS SL

AVDA ANDALUCIA 1, LA ALFOQUIA-ZURGENA

04661, ALMERIA, ESPANA.

Declaramos bajo nuestra responsabilidad la

Conformidad del producto:

FM STEREO GENERATOR WITH LIMITERS (ALSCB)

al que se refiere esta declaración, con las normas u otros documentos normativos

- DIRECTIVA 2004/108/EC de 15 de diciembre de 2004 compatibilidad electromagnética / electromagnetic compatibility

Zurgena, Almería (ESPAÑA) a **01** de **Noviembre** de **2009**

Firmado por
PAUL HOLLINGS

Firma



DECLARACION DE CONFORMIDAD

AAREFF SYSTEMS

AVDA ANDALUCIA 1, LA ALFOQUIA-ZURGENA

04661, ALMERIA, ESPANA.

Declaramos bajo nuestra responsabilidad la

Conformidad del producto:

AAREFF 1 WATT BAND II MPX DRIVER EXCITER (1WPLL B)

al que se refiere esta declaración, con las normas u otros documentos normativos

- ETS 300 384/A1 ed.1 (1997-02) Sistemas de Radiodifusión. Transmisores de radiodifusión sonora de frecuencia modulada en muy alta frecuencia (VHF).
- EN 301 489-11 V1.3.1 (2006-05) Cuestiones de compatibilidad electromagnética y de espectro de radiofrecuencia (ERM). Norma de compatibilidad electromagnética (CEM) para equipos y servicios radioeléctricos. Parte 11: Condiciones específicas para los transmisores del servicio de radiodifusión sonora terrestre.
- 2006/95/EC DIRECTIVA 2006/95/CE de 12 de diciembre de 2006 sobre el material eléctrico destinado a utilizarse con determinados límites de tensión.

de acuerdo con las disposiciones de la directiva 99/05/CE del Parlamento Europeo y del Consejo de 9 de marzo de 1999, (transpuesta a la legislación española mediante el Real Decreto 1890/2000, de 20 de noviembre de 2000)

Zurgena, Almería (ESPAÑA) a **01** de **Noviembre** de **2009**

Firmado por
PAUL HOLLINGS

Firma





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Andalucía n ° 1 – La Alfoquía – 04661 – Almería – ESPAÑA

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