



Electronic Broadcast Equipment

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Coder MPX Kit

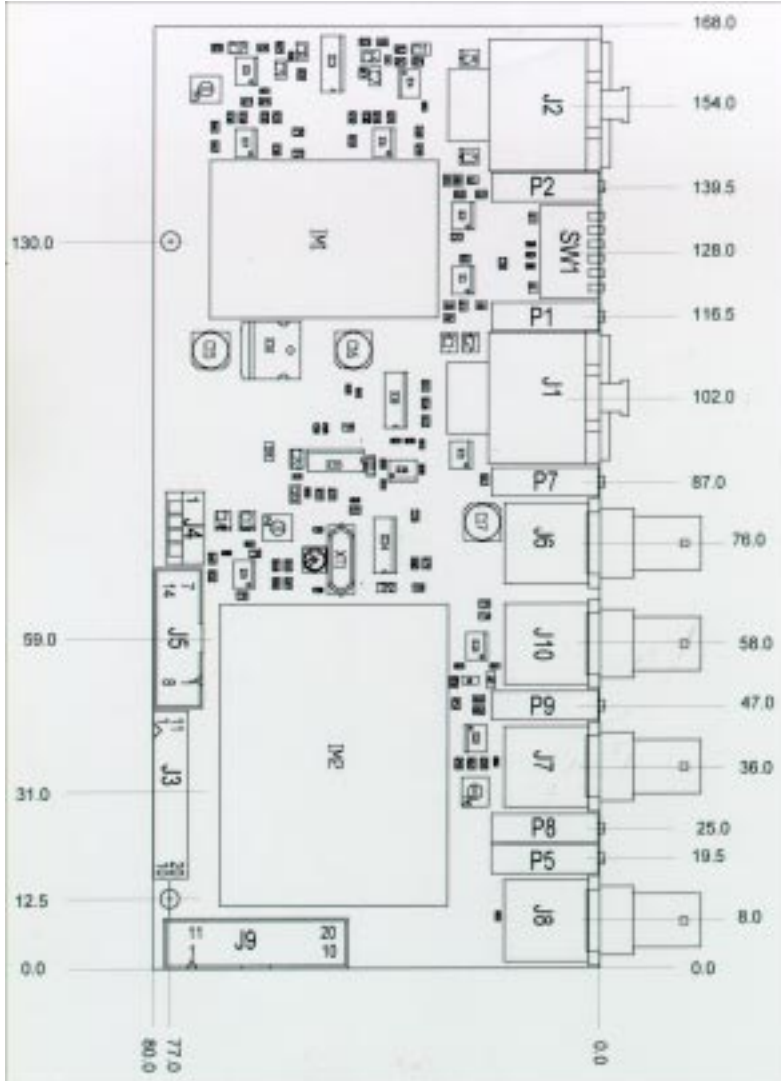
3001101300

V.1,01

By Roberto Paganelli 11-07-2000



Components / Mechanical Layout





Electronic Broadcast Equipment

J1 = LEFT INPUT

J2 = RIGHT INPUT

J3 = POWER SUPPLY

J4 = VU-METER

J5 = KEYBOARD

J6 = SCA IN

J7 = COMPOSITE OUTPUT

J8 = RDS IN*

J9 = EXPANSION TO RDS BOARD

J10 = PILOT SYNC IN/OUT (1.1Vpp Square wave)
see SW1 Dip-Switch Setup

* J8=RDS OUT if the Coder MPX Kit is used in combination with RDS 4500 Kit

J1-J2 LEFT/RIGHT INPUT	
PIN	FUNCTION
1	GND
2	+
3	-

J3 POWER SUPPLY		
PIN	FUNCTION	CONS.
3-4-13-14	-12V	95mA
5-6-15-16	+12V	122mA
1-2-11-12	+5V	106mA
7-8-9-17-18-19	GND	
10-20	NOT USED	

J4 VU-METER		
PIN	FUNCTION	LEVEL
1	+12V (OUT)	
2	GND	
3	OUT LEFT	+6dB (0dB input)
4	OUT RIGHT	+6dB (0dB input)

J5 KEYBOARD					
PIN	FUNCTION	I/O TYPE	ON	OFF	FIG.
1 *	RDS OFF/LOW BATT.#	OUT	GND	+5V	1
9	PILOT ENABLE	IN	OPEN (+5V)	GND	2
8	STEREO ENABLE	IN	OPEN (+5V)	GND	2
10	LEFT ON	IN	OPEN (+5V)	GND	2
3	RIGHT ON	IN	OPEN (+5V)	GND	2
2	CLIPPER OFF	IN	OPEN (+5V)	GND	2
6-13	+12V	OUT			
7-14	-12V	OUT			
4-11	+5V	OUT			
5-12	GND	OUT			

* Available with AEV RDS 4500 Kit (P/N 3001101200) only
Low Batt : BLINKING



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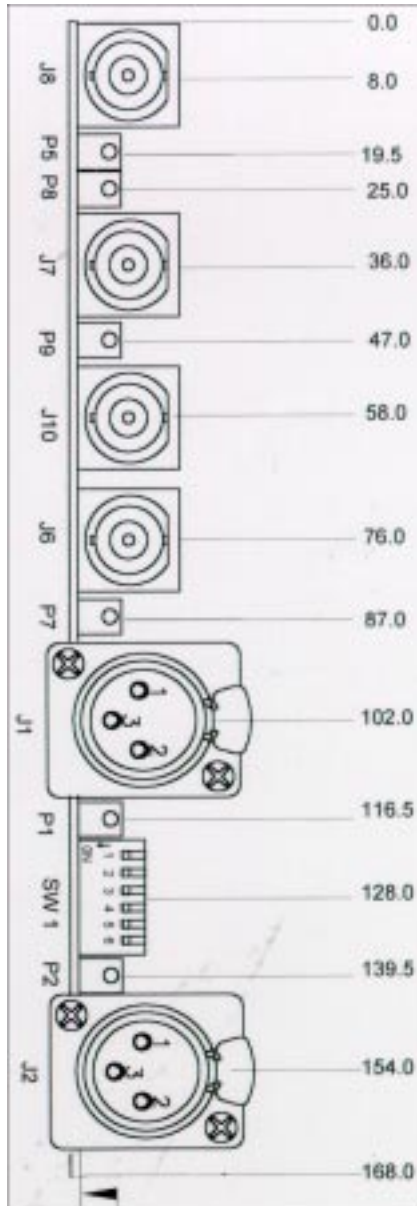
J9 CONNECTOR FOR RDS 4500 KIT EXPANSION						
PIN	FUNCTION	I/O TYPE	LEVEL	ON	OFF	FIG.
1	RDS SIGNAL	IN	0dB			
2	PILOT	OUT	5Vpp (Sq. wave)			
11	RDS OFF/LOW BATT.	IN		GND	OPEN	2
5-15	+12V	OUT				
4-14	-12V	OUT				
6-7-16-17	+5V	OUT				
8-9-10-18-19-20	GND	OUT				
3-12-13	NOT USED					

SW1 DIP SWITCH SETUP			
DIP	FUNCTION	ON	OFF
1	Z _{IN} LEFT	600R	>10K
2	PILOT SYNC	INP	OUT
3	50 / 75 μS	75μS	50μS
4	PREENPHASIS	ON	OFF
5	NOT USED		
6	Z _{IN} RIGHT	600R	>10K

	Dip 1	Dip 2	Dip 3	Dip 4	Dip 5	Dip 6
↑	Z _{IN} L 10K	Pilot Sync OUT	50 uS	Preenphasis OFF	Not Used	Z _{IN} R 10K
↓	Z _{IN} L 600	Pilot Sync IN	75 uS	Preenphasis ON	Not Used	Z _{IN} R 600



Mechanical Layout





Panel cut out

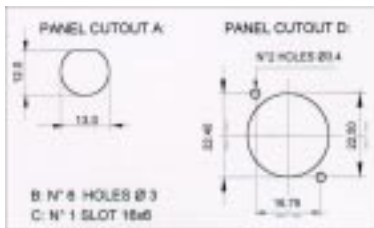
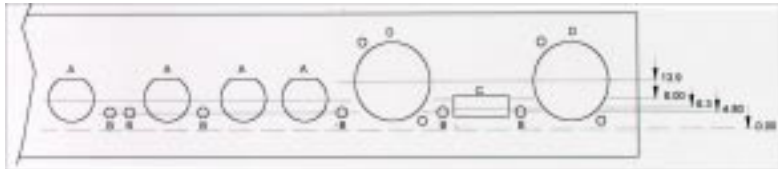


Fig 1

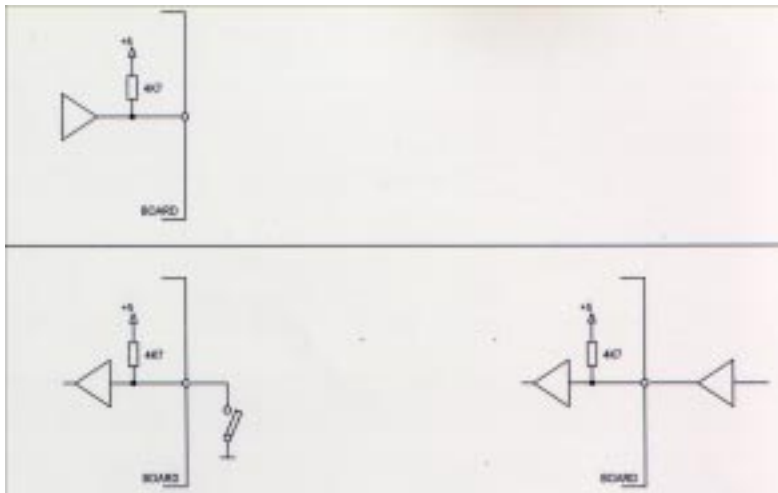
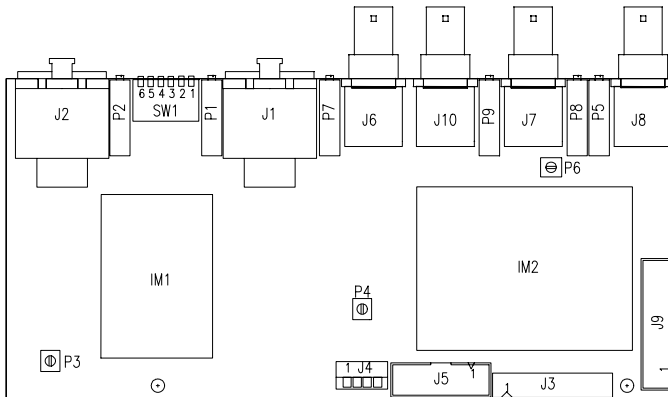


Fig 2



Adjustments



P1 = Left Level ADJ

P2 = Right Level ADJ

P3 = Right channel phase equalizer

P4 = 38KHz Subcarrier Suppression

P5 = Pilot Level ADJ

P6 = 19KHz Level ADJ

P7 = SCA Level ADJ

P8 = RDS Level ADJ

P9 = Composite Level ADJ



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TECHNICAL DATA

INPUT

Analog audio input configuration	Electronically balanced Left & Right
Input level	-10 ÷ +10 dBu
Input Impedance	> 10 Kohm or 600 ohm dip switch selectable
Common mode rejection	Greater than 50 dB (30 Hz ÷ 15 KHz)
Connectors	XLR Female, EMI suppressed

STEREO GENERATOR

MPX Output configuration	1 output with level control
Composite output level	0 ÷ +12 dBu
Output Impedance	50 ohm
Connector	BNC grounded to chassis
Pilot Frequency	19 KHz ± 0.001% Max over temp.
Pilot injection	4 ÷ 12 % adjustable
Frequency Response (± 0.1 dB)	30 Hz ÷ 15 KHz
Stereo Separation	Greater than 64 dB 30 Hz ÷ 15 KHz (78 dB @ 1 KHz)
Crosstalk Sub to Main	Greater than 40 dB 30 Hz ÷ 15 KHz (64 dB @ 1 KHz)



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Crosstalk Main to Sub	Greater than 45 dB 30 Hz ÷ 15 KHz (61 dB @ 1 KHz)
Distortion @ 1 KHz	Less than 0.005 %
Signal to noise ratio	Greater than 96 dB DIN audio.
38 KHz Subcarrier Suppression	Greater than 80 dB
76 KHz and sideband Suppression	Greater than 90 dB
Preemphasis	50-75 uSec dip switch selectable
Pilot tone Sync	IN/OUT dip switch selectable
Connector	BNC grounded to chassis
Pilot Reference Output:	1 Vpp square wave
Impedance	600 ohm
Pilot Reference Input:	1 Vpp sin. wave
Impedance	10 Kohm
SCA Input	-14 ÷ +6 dBu for 10% modulation of main carrier.
SCA input Impedance	10 Kohm

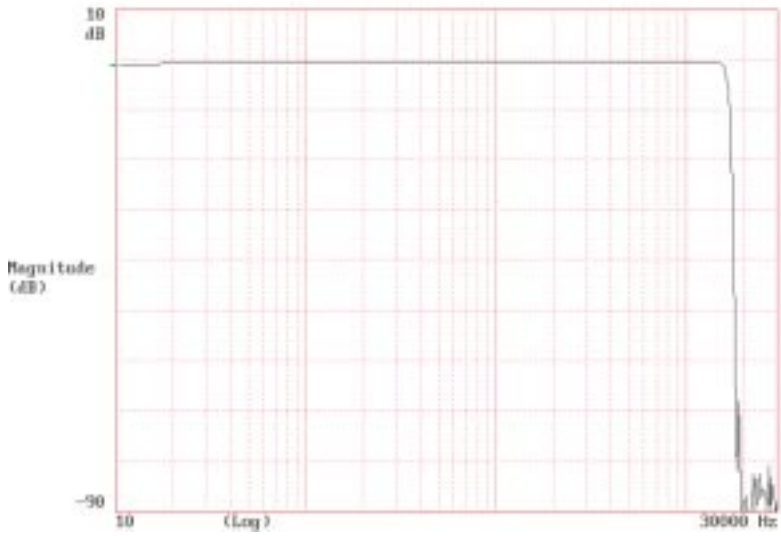
General Data

Power requirement	+ 5VDC, +/- 12 VDC
Consumption	see J3 Table
Dimension (WxHxD)	168 x 99 x 30 mm
Weight	262 g
Operating Temp.	0 ÷ 50° C.

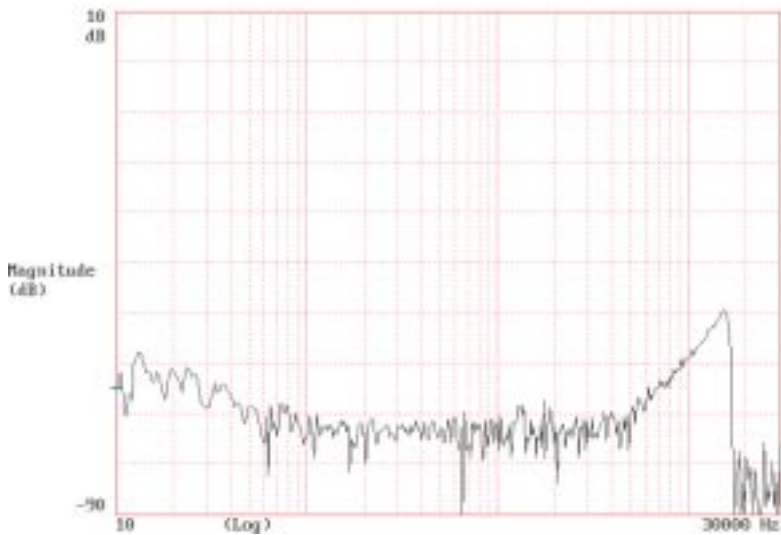


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15 KHz Low Pass Filter



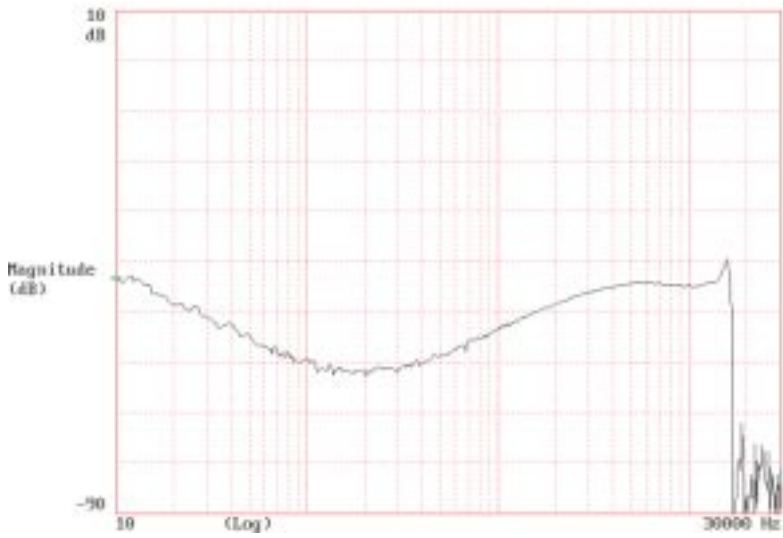
Stereo Separation



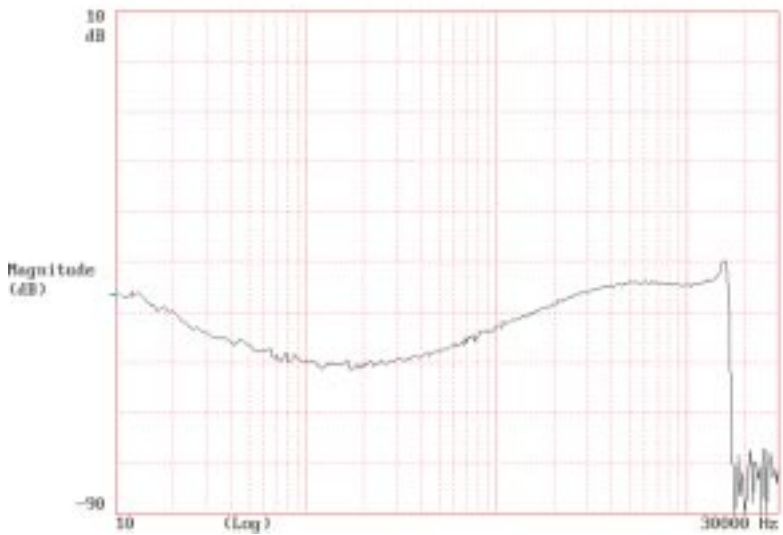


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Sub to Main



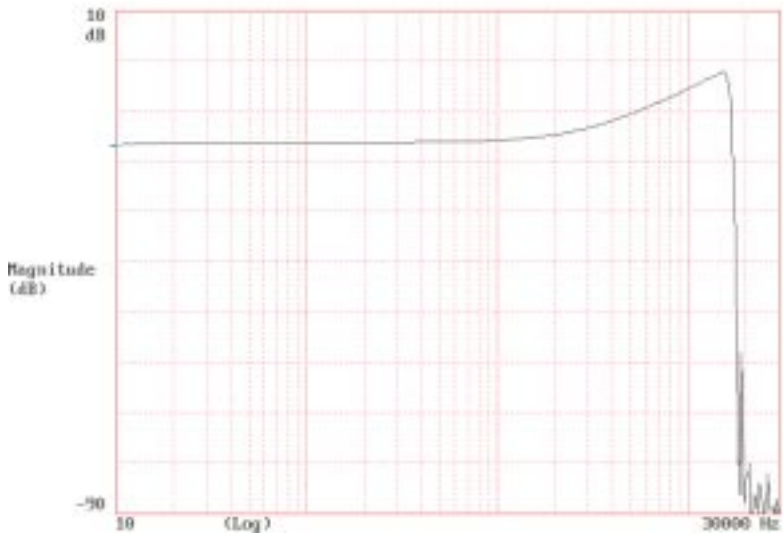
Main to Sub





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50 μ S Preenphasis



75 μ S Preenphasis

