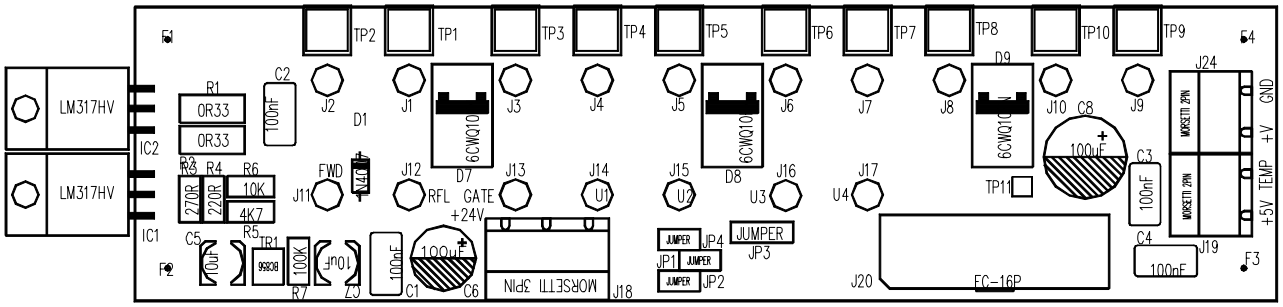
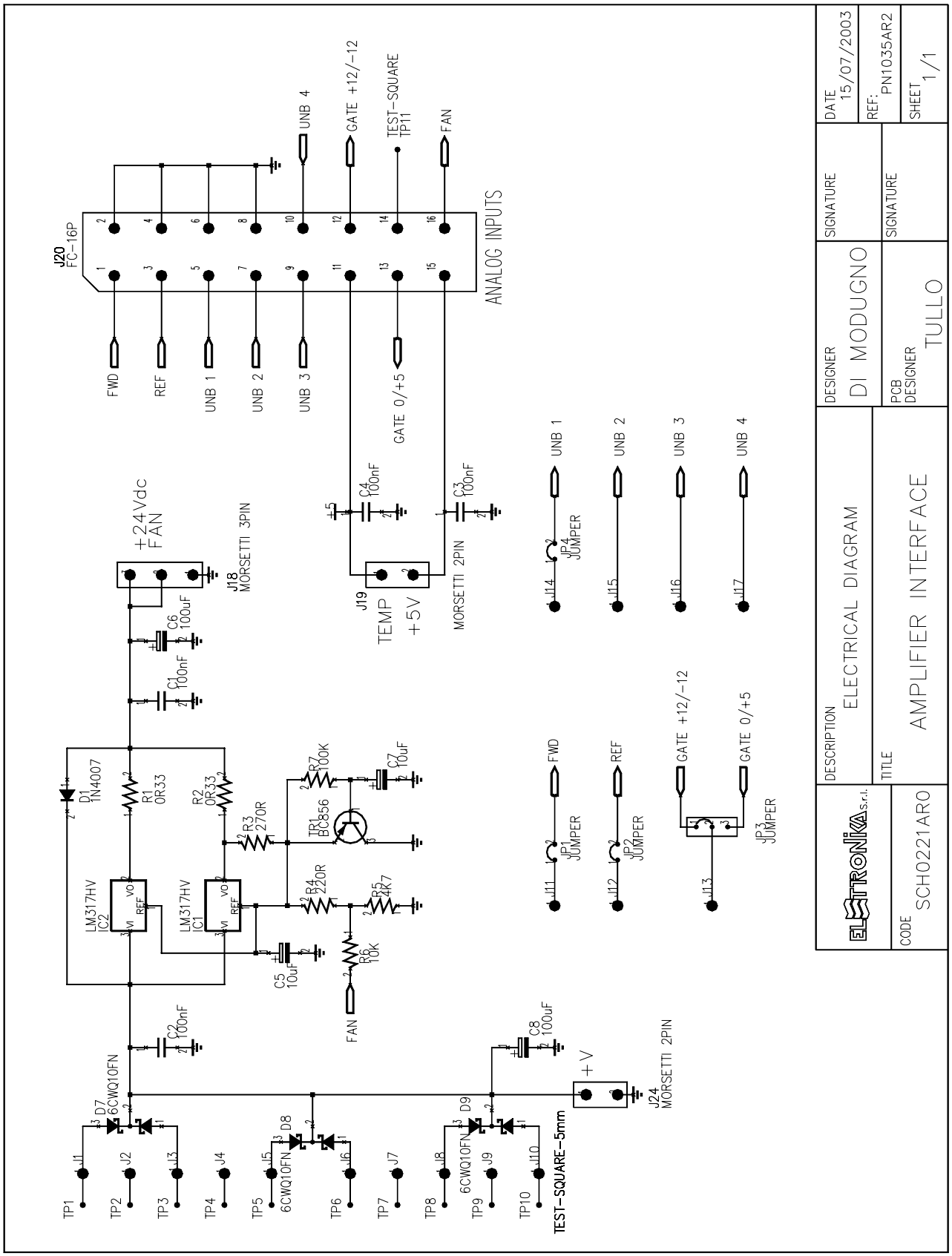
Component layout SCH0221AR0

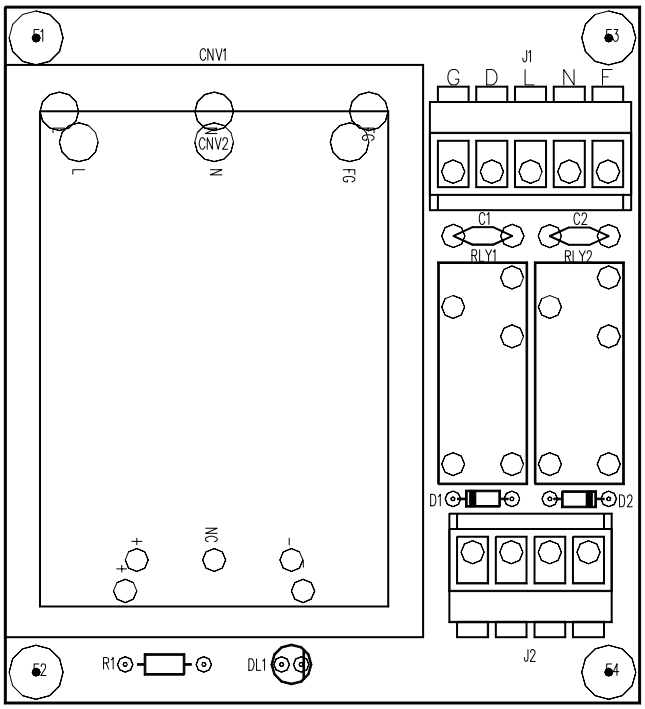


COMPONENT LIST *SCH0221AR0*

Part Name/Number	Description	Qty.	Comps.
CC 100nFAVX 01065A	01065A CERAMIC COND	4	C1-4
CE 100uF100V	01795B ELETT. COND.	1	C8
CE 100uF50V 01795	01795 ELETT. COND.	1	C6
CE 10uF35V-S 01778A	01778A ELETTR SMD COND	2	C5, C7
D 1N4007 03009	03009 DIODE	1	D1
D 6CWQ10FN	03026 SMD DIODE SCHOTTKY 3,5A	3	D7-9
IC LM317HV	04340A INTEG CIRCUIT	2	IC1-2
J FC-16P 02701-02700	02701+02700 PCB CONNECTOR POL	1	J20
J SCREWCONN2 02853	02853 PCB SCREW CONNECTOR	2	J19, J24
J SCREWCONN3 02860	02860 PCB SCREW CONNECTOR	1	J18
J TESTP1.3mm 07913	07913 TEST POINT	17	J1-17
JU JUMP2 02739-02742	02739+02742 MASCHIO PAN2	3	JP1-2, JP4
JU JUMP3 02707-02742	02707+02742 MASCHIO PAN3	1	JP3
R 0R33-1W-S	00380 RES 1W 5% SMD 2512	2	R1-2
R 100K-S 00065A	00065A RES 1/4W 5% SMD 1206	1	R7
R 10K-S 00053A	00053A RES 1/4W 5% SMD 1206	1	R6
R 220R-S 00033A	00033A RES 1/4W 5% SMD 1206	1	R4
R 270R-S 00034A	00034A RES 1/4W5% SMD 1206	1	R3
R 4K7-S 00049A	00049A RES 1/4W 5% SMD 1206	1	R5
TR BC856 03455	03455 PNP SMD TRANSISTOR	1	TR1

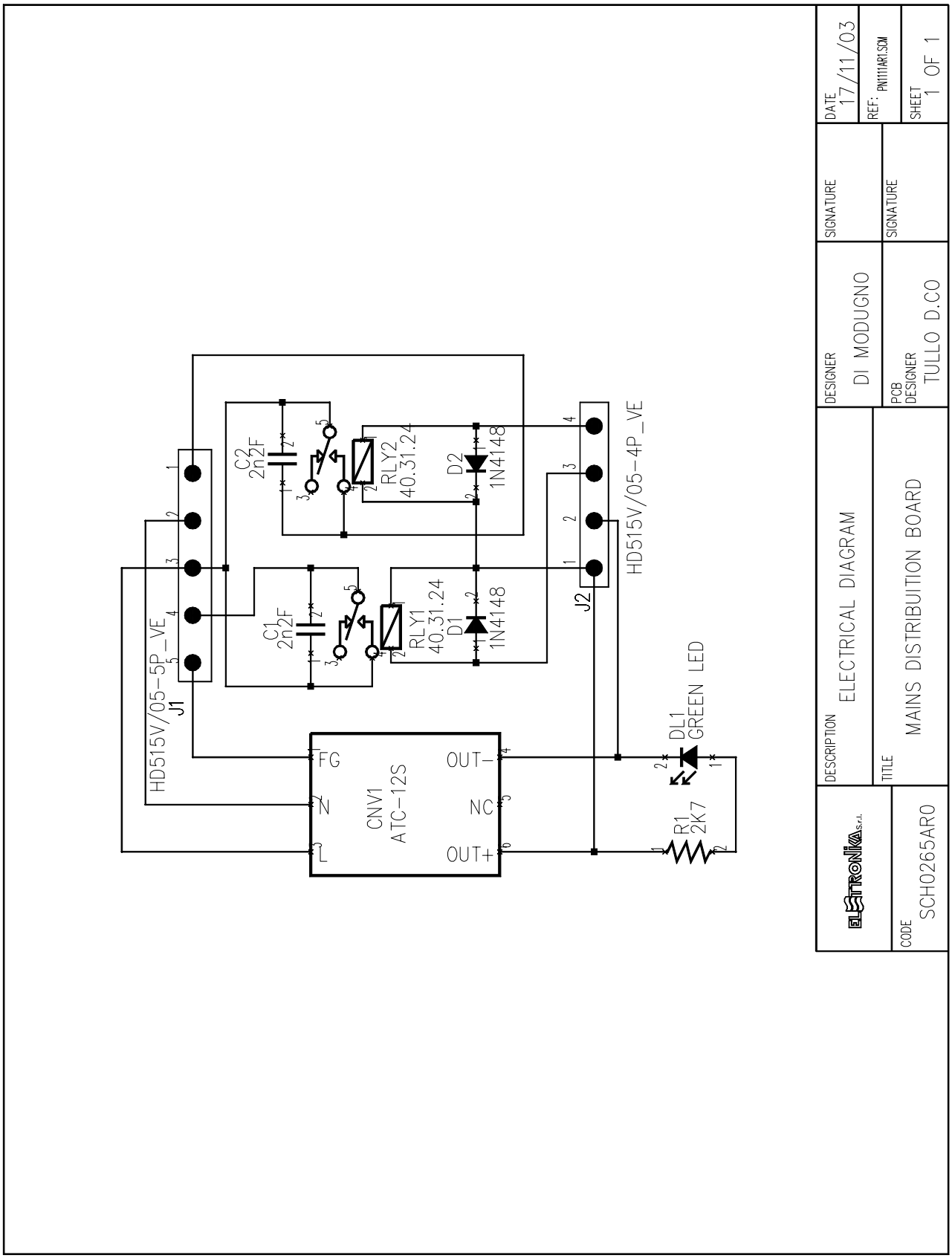

J20
FC-16P
ANALOG INPUTS
FWD
REF
UNB 1
UNB 2
UNB 3
GATE 0/+5
UNB 4
GATE +12/-12
TEST-SQUARE
TP11
FAN
+24Vdc
FAN
J18
MORSETTI 3PIN
J19
TEMP
+5V
MORSETTI 2PIN
C4
100nF
C3
100nF
C6
100uF
C1
100nF
D1
1N4007
R1
0R33
R2
0R33
R3
270R
R4
220R
R5
4K7
R6
10K
R7
100K
C7
10uF
C5
10uF
C2
100nF
C8
100uF
TR1
BC856
LM317HV
IC2
LM317HV
IC1
D7
6CWQ10FN
D8
6CWQ10FN
D9
6CWQ10FN
+V
J24
MORSETTI 2PIN
TEST-SQUARE-5mm
JP1
JUMPER
JP2
JUMPER
JP3
JUMPER
JP4
JUMPER
TP1
TP2
TP3
TP4
TP5
TP6
TP7
TP8
TP9
TP10
J1
J2
J3
J4
J5
J6
J7
J8
J9
J10
J11
J12
J13
J14
J15
J16
J17
DESCRIPTION
ELECTRICAL DIAGRAM
TITLE
AMPLIFIER INTERFACE
CODE
SCH0221ARO
ELETTRONIKA s.r.l.
DESIGNER
DI MODUGNO
PCB DESIGNER
TULLO
SIGNATURE
SIGNATURE
DATE
15/07/2003
REF:
PN1035AR2
SHEET
1/1

Component layout SCH0265AR0

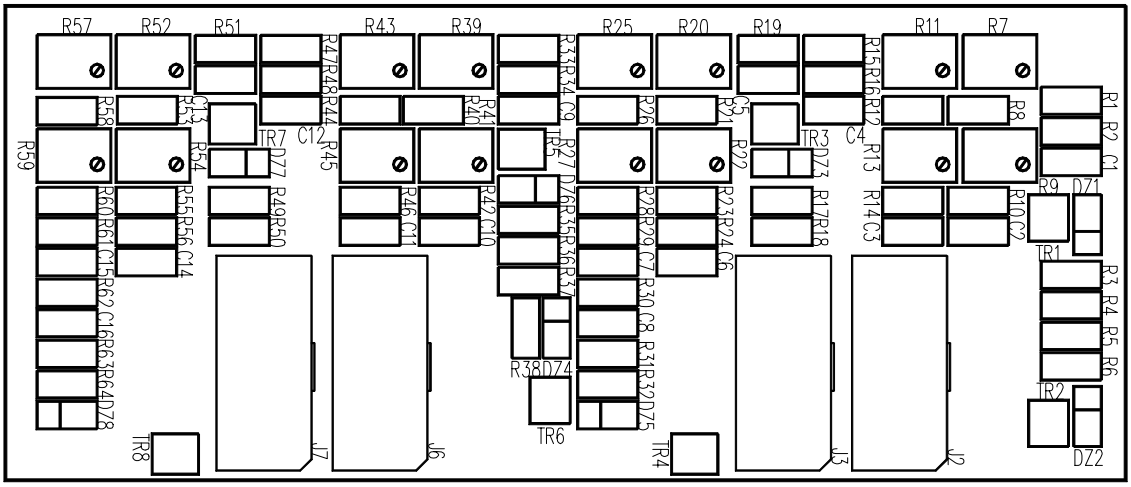


COMPONENT LIST *SCH0265AR0*

Part Name/Number	Description	Qty.	Comps.
CC 2nF2 2kV 01045A	01045A CERAMIC COND	2	C1-2
CNV AC-DC ATC-12S	E0037 AC DC CONVERTER	1	CNV1
D 1N4148 03001	03001 DIODE	2	D1-2
DL LEDG3 03053	03053 GREEN LED DIODE 3mm	1	DL1
J CON HD515V/05-4PVE	02881 + 02882 PANDUIT PCB CONN	1	J2
J CON HD515V/05-5PVE	PANDUIT PCB CO	1	J1
R 2K7 0046	0046 RES 1/4W 5%	1	R1
RL 40.31.24	7567C RELE	2	RLY1-2

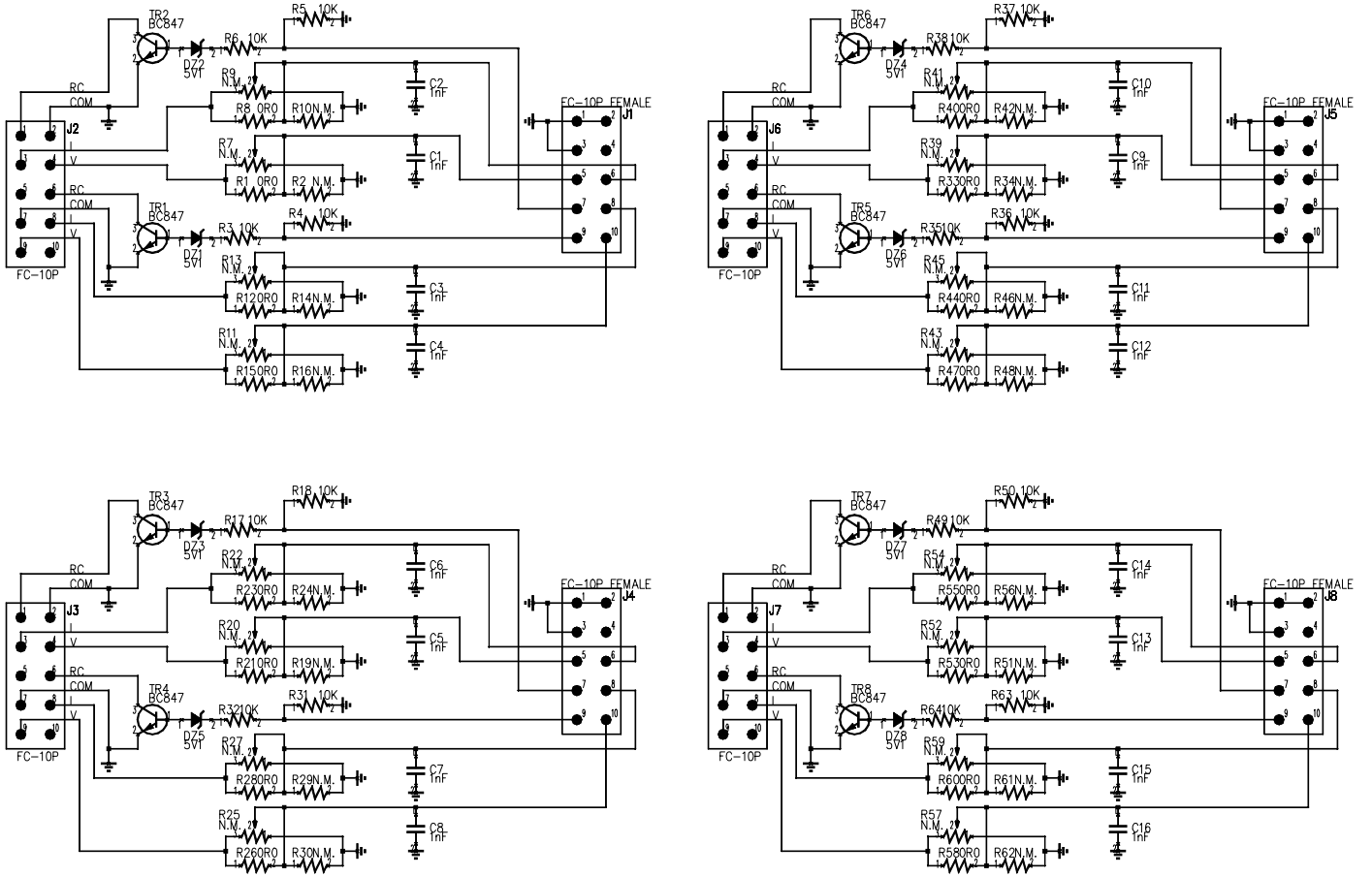

HD515V/05-5P_VE
J1
C2
2n2F
RLY2
40.31.24
D2
1N4148
C1
2n2F
RLY1
40.31.24
D1
1N4148
J2
HD515V/05-4P_VE
CNV1
ATC-12S
FG
N
L
OUT-
NC
OUT+
DL1
GREEN LED
R1
2K7
DESCRIPTION
ELECTRICAL DIAGRAM
TITLE
MAINS DISTRIBUITION BOARD
DESIGNER
DI MODUGNO
PCB DESIGNER
TULLO D.CO
SIGNATURE
SIGNATURE
DATE
17/11/03
REF: PN1111AR1.SCM
SHEET
1 OF 1
CODE
SCH0265AR0

Component layout SCH0288AR1



COMPONENT LIST *SCH0288AR1*

Part Name/Number	Description	Qty.	Comps.
CC 1nF-S 01096	01096 SMD 1206 COND	16	C1-16
DZ 5V1-S 03128	03128 SMD ZENER DIODE	8	DZ1-8
J FC-10P 02697-02699	02697+02699 PCB CONNECTOR POL	4	J2-3, J6-7
J FC-10P PCB FEMALE	02706 PCB FEMALE CONNECTOR POL	4	J1, J4-5, J8
R 0R0-S 00001	00001 RES 1/4W 5% SMD 1206	16	R1, R8, R12, R15, R21, R23, R26 R28, R33, R40, R44, R47, R53, R55, R58, R60
R 10K-S 00053A	00053A RES 1/4W 5% SMD 1206	16	R3-6, R17-18, R31-32, R35-38, R49-50, R63-64
R 1206 NOT MOUNTED	NOT MOUNTED RES 1/4W 5% SMD 12	16	R2, R10, R14, R16, R19, R24, R29, R30, R34, R42, R46, R48, R51, R56, R61-62
RV 3266W NOT MOUNT	NOT MOUNTED VARIABLE RESISTOR	16	R7, R9, R11, R13, R20, R22, R25, R27, R39, R41, R43, R45, R52, R54, R57, R59
TR BC847 03456	03456 NPN SMD TRANSISTOR	8	TR1-8

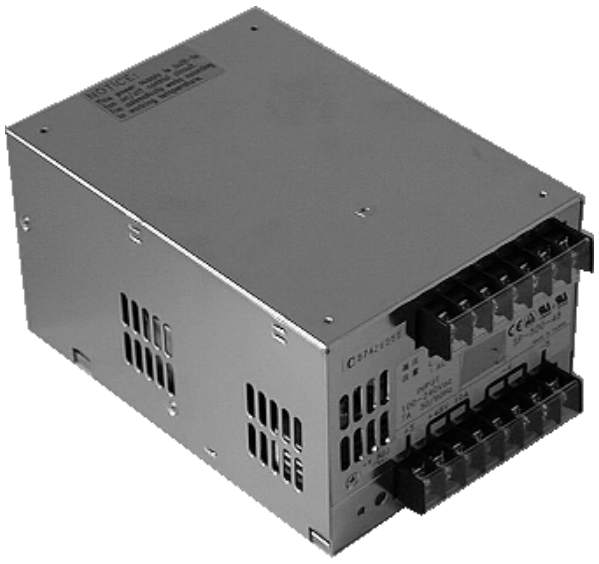


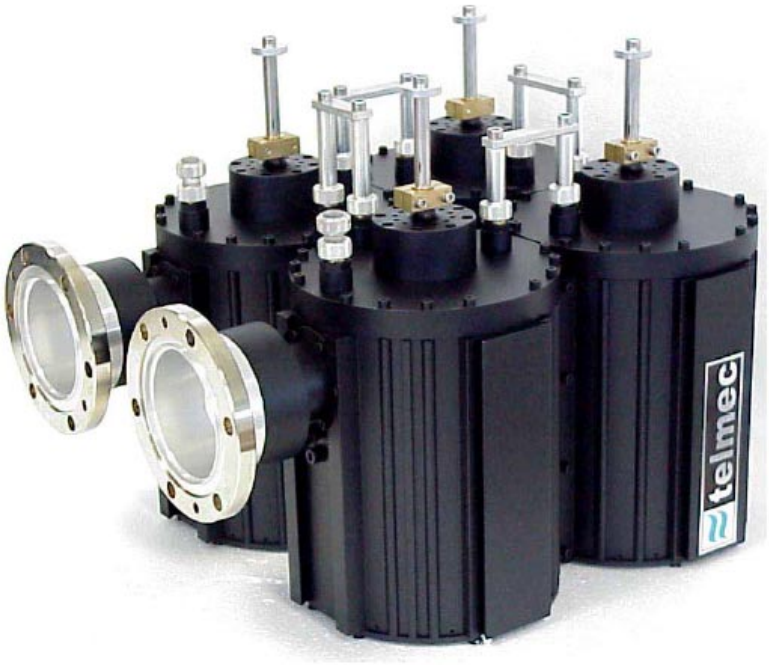
VARIANCE FOR POWER SUPPLY SP-500-XX-DE1	
R9 R13 R22 R27 R41 R45 R54 R59	TRIMMER BURNS 10K CASE 3266W
R2 R16 R19 R30 R34 R48 R51 R62	RESISTOR 27K 1% 1/4W CASE 1206
R8 R12 R23 R28 R40 R44 R55 R60	NOT MOUNT

ELETTRONIKA S.r.l.	DESCRIPTION: SCHEMATIC DIAGRAM	DESIGNER: MODUGNO	SIGNATURE	DATE: 27/09/2004
CODE: SCH0288AR1	TITLE: AMPLIFIER INTERFACE BOARD	PCB DESIGNER: TULLO	SIGNATURE	REF: PN1076AR2 SHEET: 1/1

SPECIFICATION

MODEL	**SP-500-27** ***(E0012 Code)***	**SP-500-48** ***(E0013 Code)***
DC Output Voltage	27Vdc	48Vdc
Output Rated Current	18A	10A
Output Current Range	0-18A	0-10A
Ripple & Noise (p-p)	200mVp-p	240mVp-p
DC Output Power	486W	480W
Efficiency	87%	87%
DC Voltage Adj.	24-30V	41-56V
Over V. Protection	31V-36.5V	57.6V-67.2V
Input Voltage Range	88-264Vac	
Input Frequency	47-63Hz	
Power Factor	0.95/100-240Vac	
Overload Protection	105%-135% Type: Foldback current limiting Recovery: Auto	
Over Temp. Protection	> =70°C Output Shutdown	
Fan Control	Temp. > =60°C Fan On < =50°C Fan Off	
Working Temp., Humidity	-10°C/+50°C, 20%-90% RH	
Dimension	185x120x93	
Weight	1.8Kg.	





Suitable for use in solid state A-AB class transmitter, in common amplification, to eliminate out of band products in all standard frequencies. Available connectors:

- EIA 1 5/8”
- RIGID LINE 1 5/8”
- EIA 3 1/8”

opposite or parallel position.

TECHNICAL CHARACTERISTICS

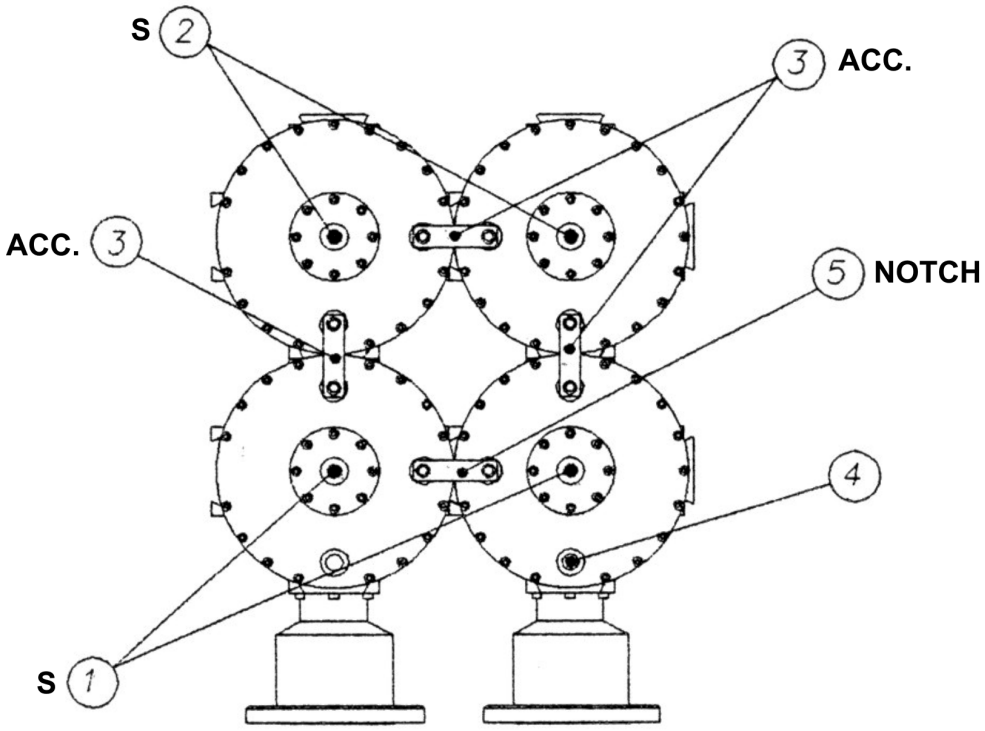
Configuration	4 Cavities
Max power output	10kW (cw)
Frequency range	470 - 860MHz
Insertion loss (Video c.)	< 0,2dB
Return loss	> 30dB
Temperature range	-10°C / +50°C
Temperature shift	< = 2kHz/K
Weight	20kg
Working position	Any
Dimensions	395x380x347mm

CALIBRATION PROCEDURE

In order to calibrate PBN153/44, a double-track Network Analyser is needed, in order to visualize the frequency response of the passing and reflected signals.

- Calibration procedure from 470MHz to 666MHz

1. Extract the coupling **5** (Fig. 1) until it stops.



2. Insert the couplings **3**, letting about 5mm out.

3. Connect the filter to the Network Analyser marking the input. Select the frequency of the desired channel centre and set a SPAN of 50MHz.

4. Act on the tuning rods **1** and **2** until the curve of the band-pass appears in the centre of the screeen, and adjust it by means of the couplings **3** to obtain a width of about 10MHz (Fig. 2).

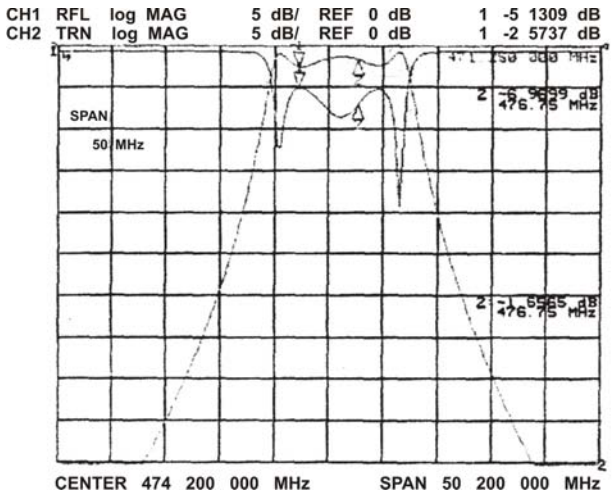


Fig. 2

5. Set a SPAN of 20MHz and act alternatively on:

- Interstage coupling **3** (rise and lower);
- IN/OUT couplings **4** (turn);
- Tuning **1** and **2** (rise and lower);

to obtain a bandwidth of 7-8MHz and an adaptation of about 25dB, composed by four peaks (Fig. 3).

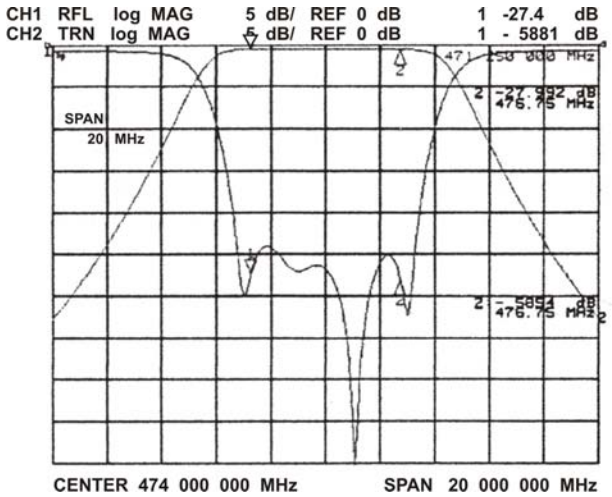


Fig. 3

6. Insert the coupling **5** (Fig. 1) to set the position of the notch attenuation on the desired frequencies (Fig. 4) (5.5MHz and +11MHz or 4-5MHz and +9MHz).

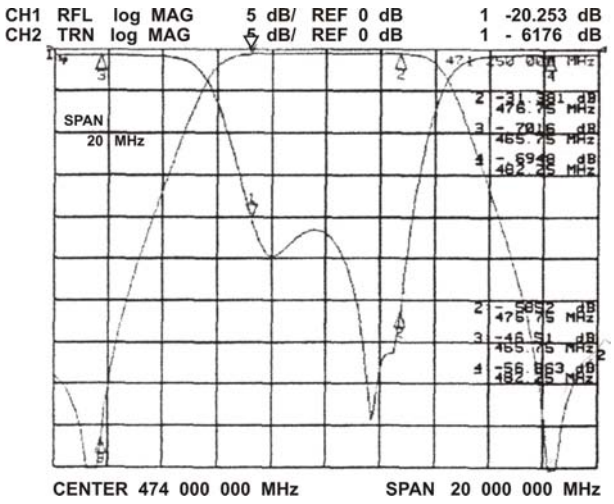


Fig. 4

7. The adaptation has moved; it can be adjusted by acting on the filter as per point 6, correcting each time the attenuation tuning by means of the coupling **5**, until a frequency response like that in the example (Fig. 5) is obtained.

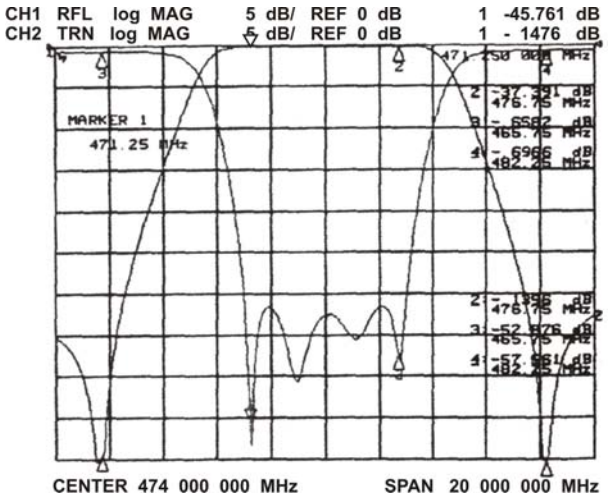
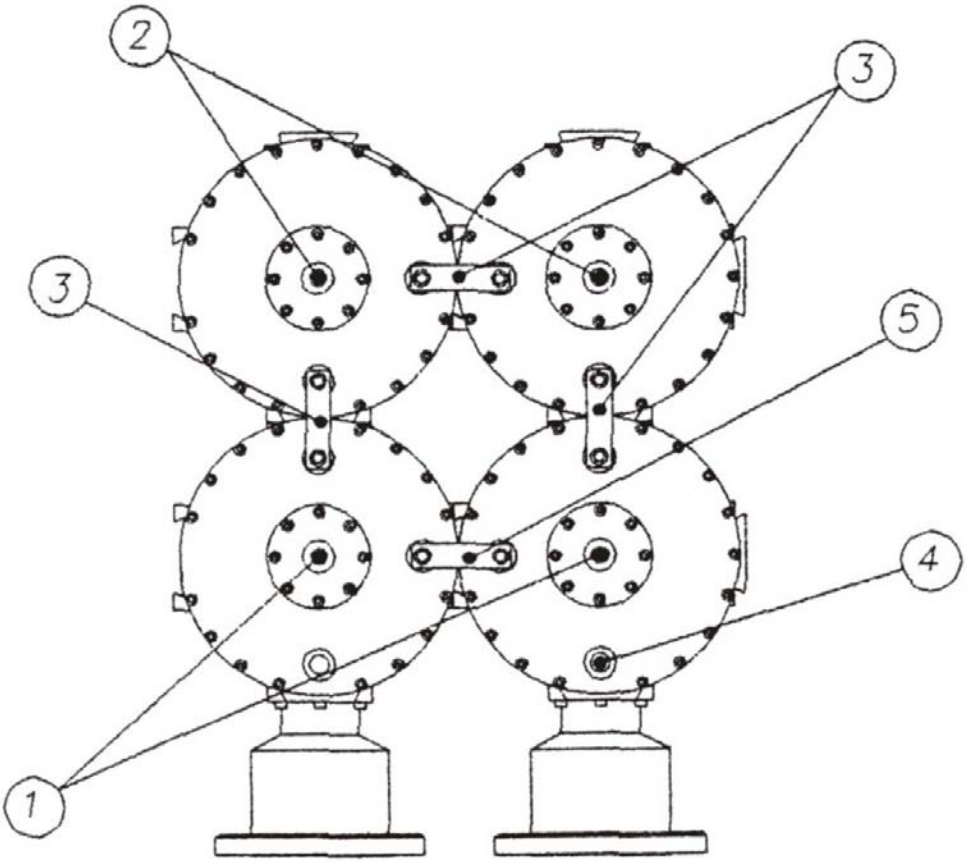


Fig. 5

8. Once the calibration is complete, the machanical movement during the locking stage will have to be compensator for, because a variation of the adaptation may occur. It only takes to extract slightly the tuning which is being fastened.

- Calibration procedure from 66MHz to 860MHz

1. Extract the coupling **5** (Fig. 1) until it stops.



2. Extract the couplings **3** making sure not to short-circuit them.

3.Connect the filter to the Network Analyser, marking the input. Select the frequency of the desired centre channel and set a SPAN of 50MHz.

4. Act on the tuning rods **1** and **2** until the curve of the band-pass appears in the centre of the screen and adjust it by means of the coupling **3** to obtain a width of about 10MHz (Fig. 2). The tuning **2**, due to the elliptical system according to which the filter has been designed, will compose the attenuation of the notch as well as the curve of the band-pass.

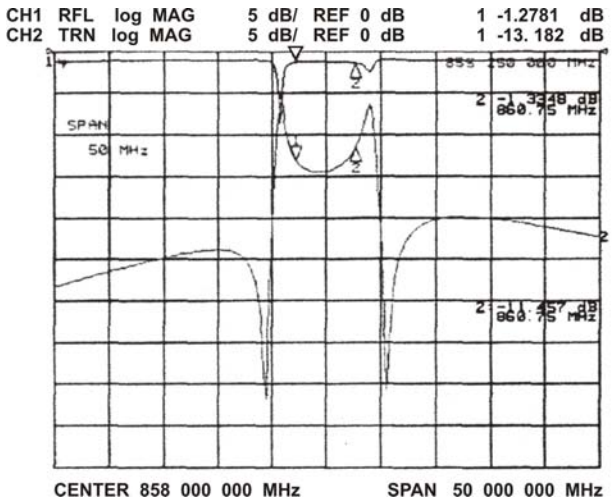


Fig. 2

5. Set a SPAN of 20MHz and act alternatively on:

- Interstage couplings **3** (rise and lower);
- IN/OUT couplings **4** (turn);
- Tuning **1** and **2** (rise and lower);

to obtain a bandwidth of 7-8MHz and an adaptation of about 25dB, composed by four peaks (Fig. 3).

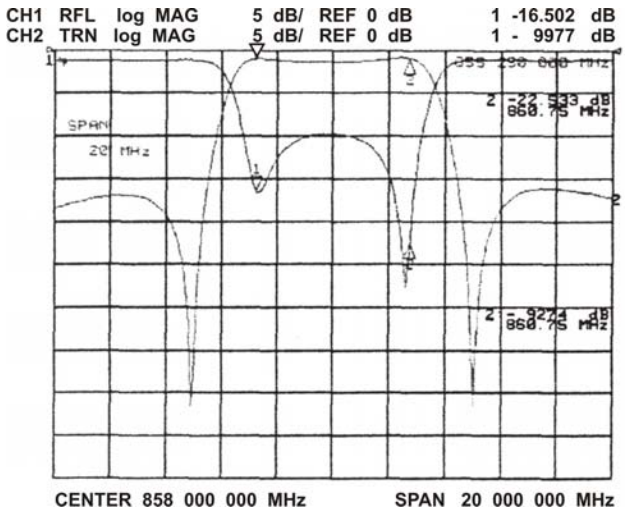


Fig. 3

6. Use the coupling 5 (Fig. 1) to set the position of the notch attenuation on the desired frequencies (Fig. 4) (5.5MHz and +11MHz or 4.5MHz and +9MHz).

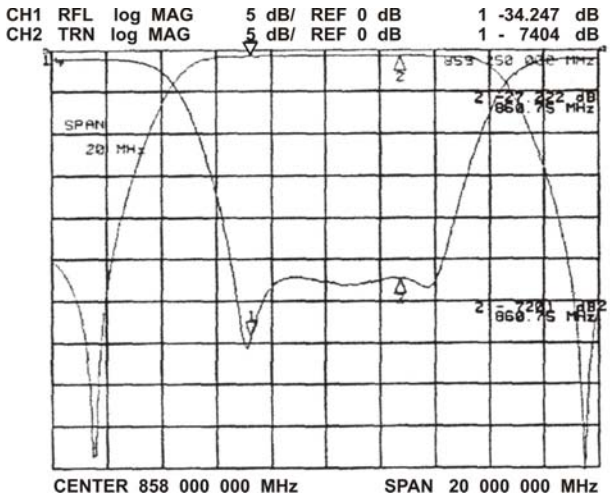


Fig. 4

7. It is possible to note that, by tuning the notch attenuation as described in point 6 above, the adaptation has moved. It can be adjusted by acting on the filter as per point 6, correcting each time the tuning of the notch attenuation by means of the coupling **5**, until a frequency response like the one in the example (Fig. 5) is obtained.

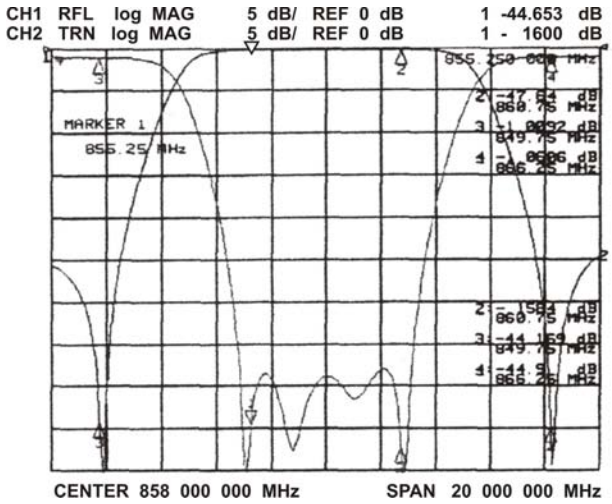


Fig. 5

8. Once the calibration is complete, the mechanical movement during the locking stage will have to be compensated for, because a variation of the adaptation may occur. It only takes to extract slightly the tuning which is being fastened.