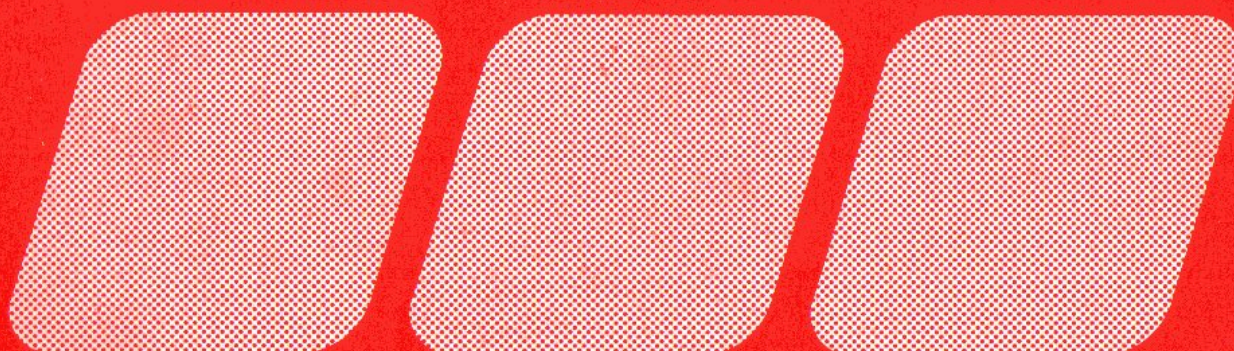


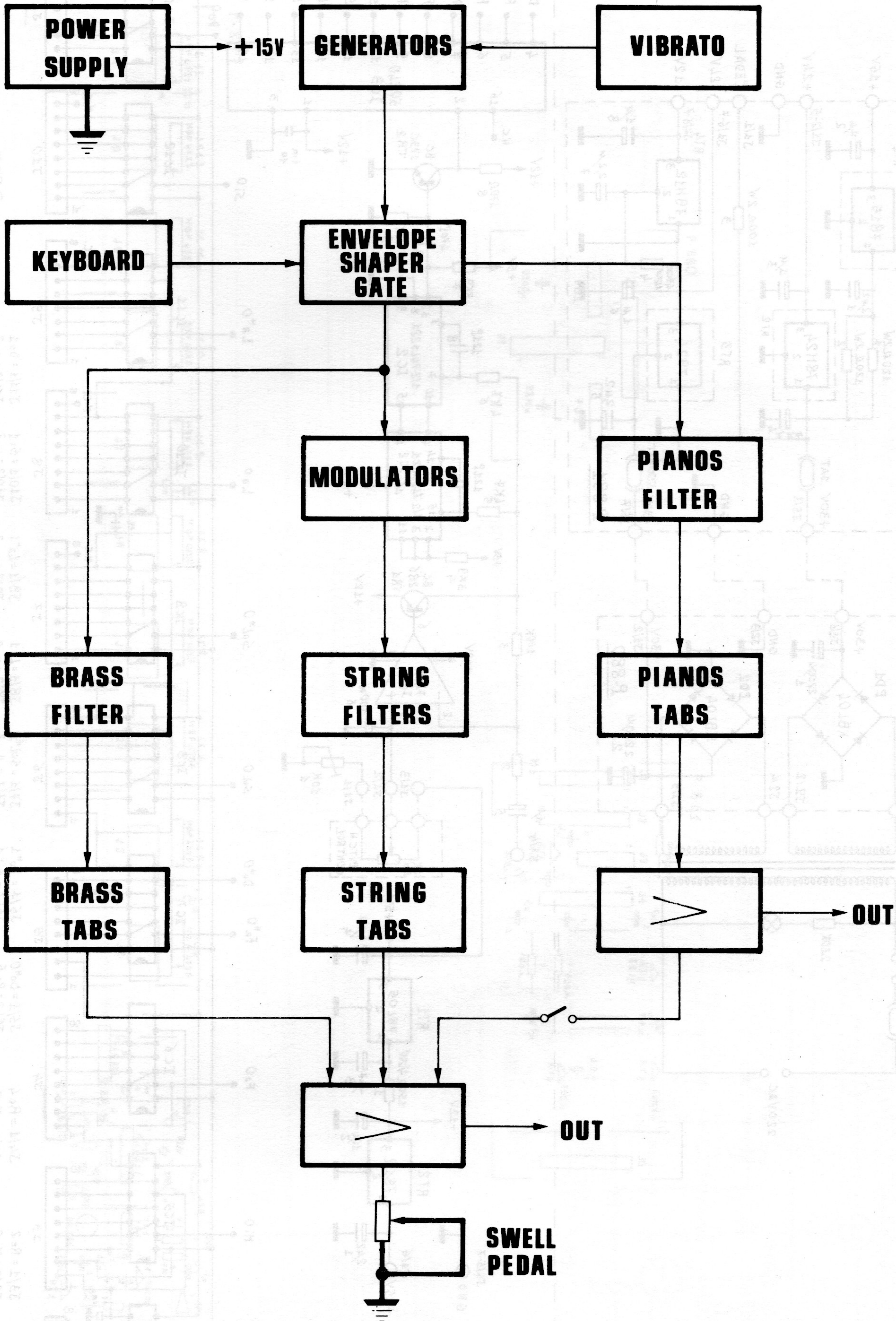
**SCHEMATIC
DIAGRAM**

CRUMAR[®]
Musical Instruments



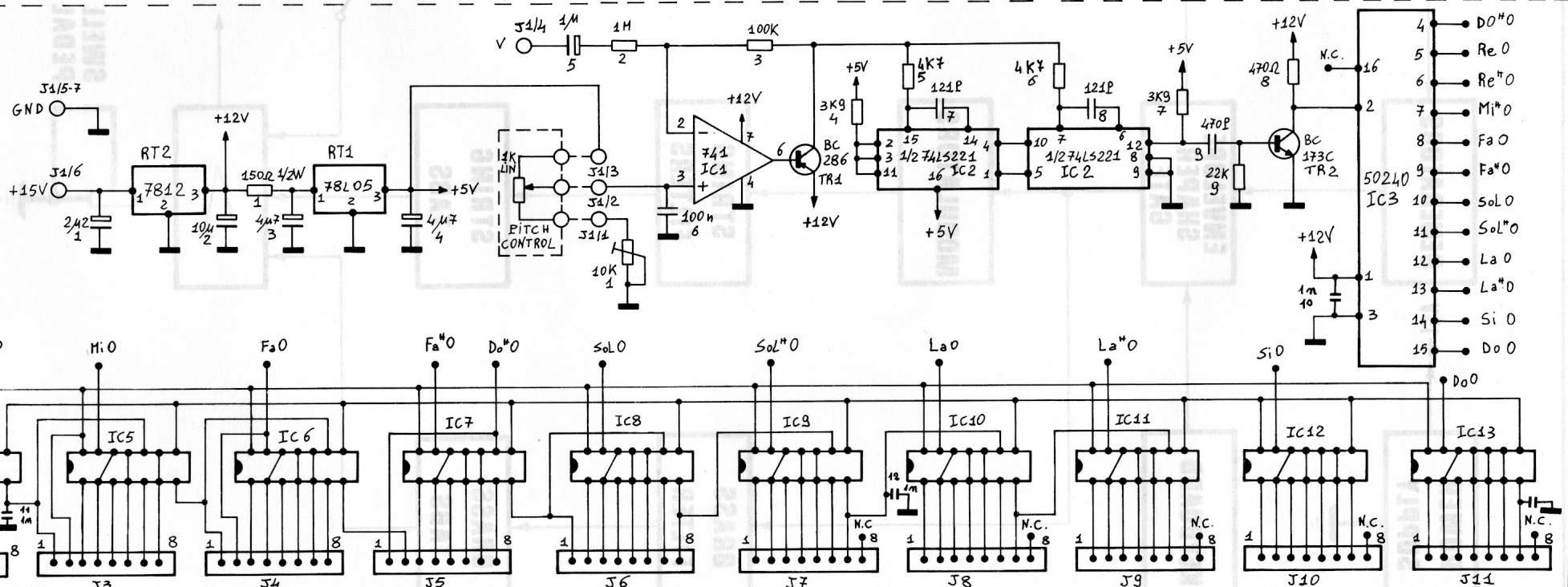
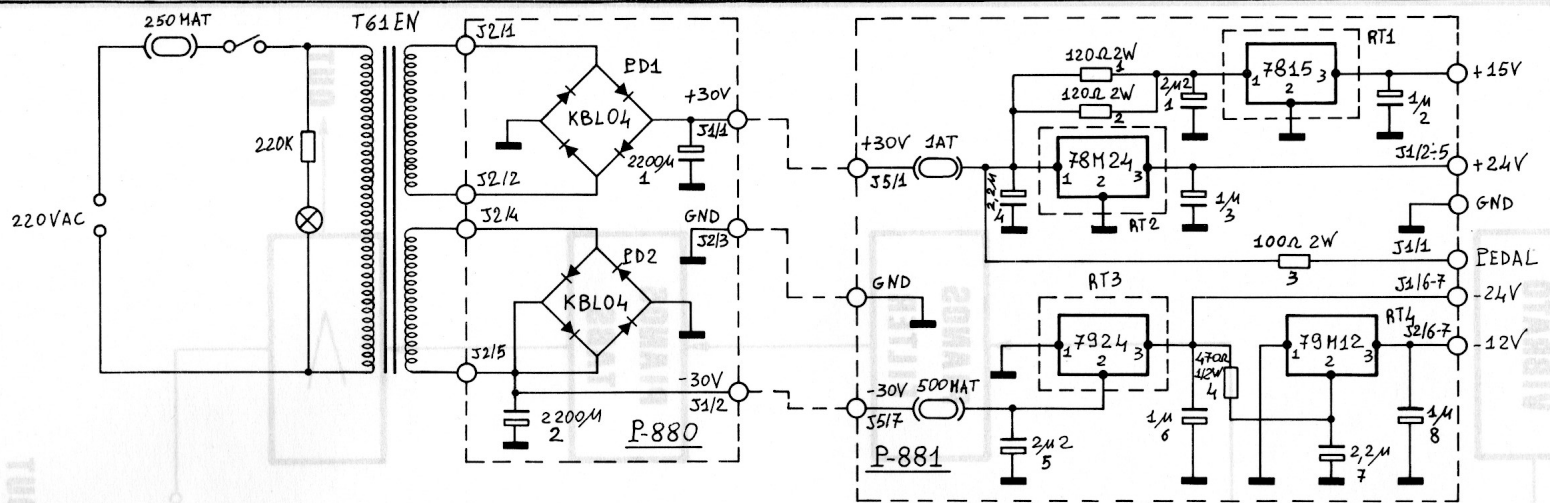
mod.
multiman s

2



MODEL MULTIMAN-S		REVISION		
DATE	DRAWN BY <i>G. Aspetti</i>	DESIGNED BY <i>R. Bravi</i>	DATE	

DWG1

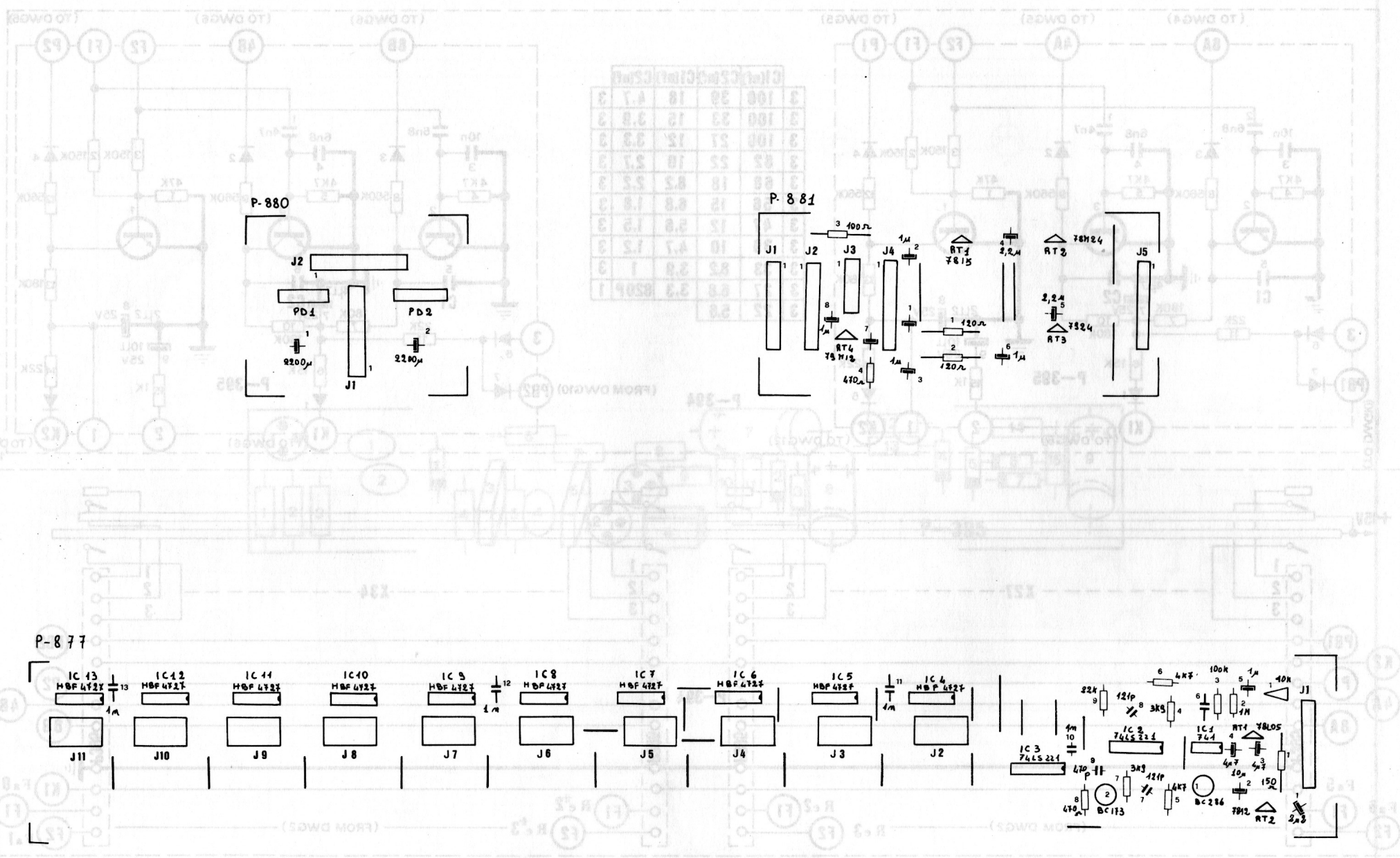


J2/1 = Re ⁰	J3/1 = Re ²	J4/1 = Re ⁴	J5/1 = Do ^{*0}	J6/1 = Do ^{*1}	J7/1 = SoL ^{*1}	J8/1 = La ¹	J9/1 = La ^{*1}	J10/1 = Si ¹	J11/1 = Do ¹
J2/2 = Re ^{*0}	J3/2 = Mi ⁰	J4/2 = Fa ⁰	J5/2 = Re ⁵	J6/2 = SoL ¹	J7/2 = " 2	J8/2 = " 2	J9/2 = " 2	J10/2 = " 2	J11/2 = " 2
J2/3 = " 1	J3/3 = " 1	J4/3 = " 1	J5/3 = Fa ^{*4}	J6/3 = " 2	J7/3 = " 3	J8/3 = " 3	J9/3 = " 3	J10/3 = " 3	J11/3 = " 3
J2/4 = " 2	J3/4 = " 2	J4/4 = " 2	J5/4 = " 2	J6/4 = " 3	J7/4 = " 4	J8/4 = " 4	J9/4 = " 4	J10/4 = " 4	J11/4 = " 4
J2/5 = " 3	J3/5 = " 3	J4/5 = " 3	J5/5 = " 3	J6/5 = " 4	J7/5 = " 5	J8/5 = " 5	J9/5 = " 5	J10/5 = " 5	J11/5 = " 5
J2/6 = " 4	J3/6 = " 4	J4/6 = " 4	J5/6 = " 4	J6/6 = " 5	J7/6 = " 6	J8/6 = " 6	J9/6 = " 6	J10/6 = " 6	J11/6 = " 6
J2/7 = " 5	J3/7 = " 5	J4/7 = " 5	J5/7 = " 5	J6/7 = " 6	J7/7 = Do ^{*3}	J8/7 = Do ^{*4}	J9/7 = Do ^{*5}	J10/7 = N.C.	J11/7 = N.C.
J2/8 = Re ¹	J3/8 = Re ³	J4/8 = " 6	J5/8 = " 6	J6/8 = Do ^{*2}	J7/8 = N.C.	J8/8 = N.C.	J9/8 = N.C.	J10/8 = N.C.	J11/8 = N.C.

CRUMAR		MODEL: MULTIMAN-5	
DRAWN BY	Bondini G.	REVISION	
DESIGNED BY	Pianchi	DATE	23/3/81

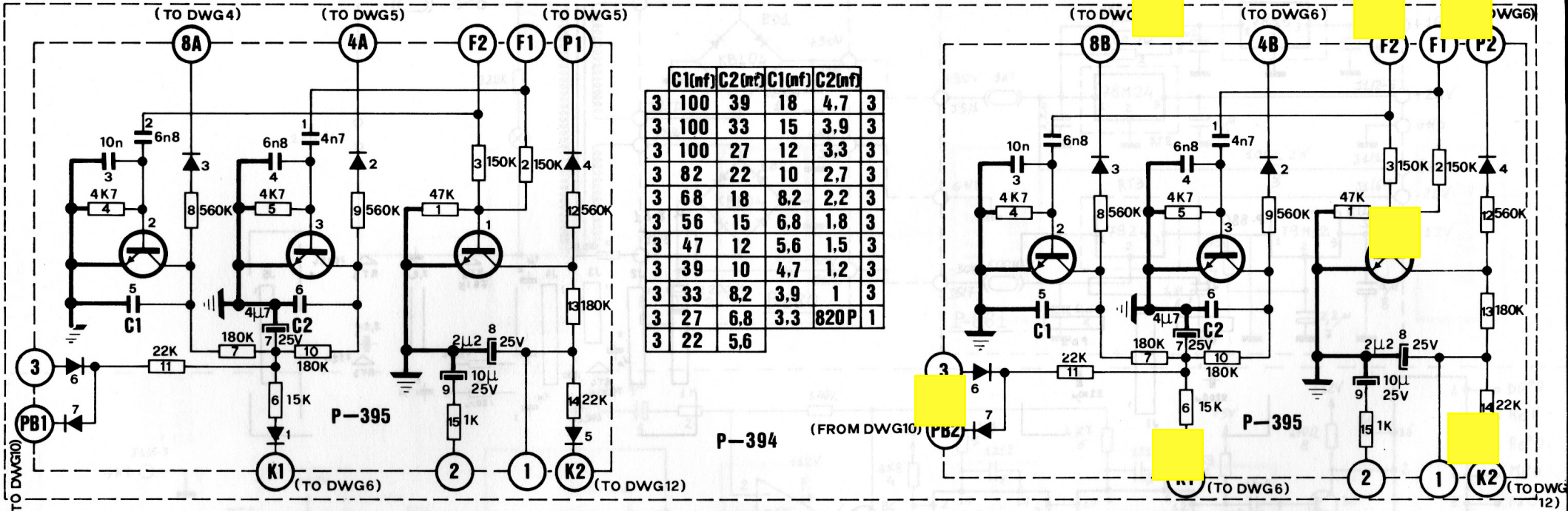
DWG2 QUESTO DISEGNO E PROPRIETÀ PRIVATA E NON PUÒ ESSERE COPIATO RIPRODOTTO MOSTRATO A TERZI SENZA NOSTRA APPROVAZIONE SCRITTA.

3	100	30	18	4.7	3
3	100	33	12	3.3	3
3	100	27	15	3.3	3
3	82	55	10	2.7	3
3	82	18	8.2	2.2	3
3	82	15	6.8	1.8	3
3	82	15	5.6	1.5	3
3	82	10	4.7	1.5	3
3	82	8.2	3.9	1	3
3	82	3.9	2.2	0.5	1
3	82	2.2	1.5	0.5	1
3	82	1.5	1	0.5	1
3	82	1	0.5	0.5	1
3	82	0.5	0.5	0.5	1

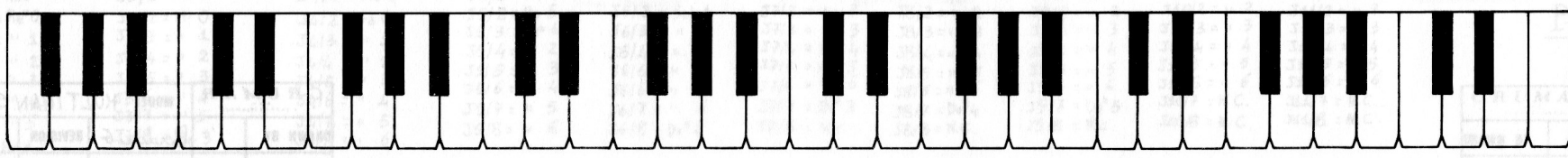
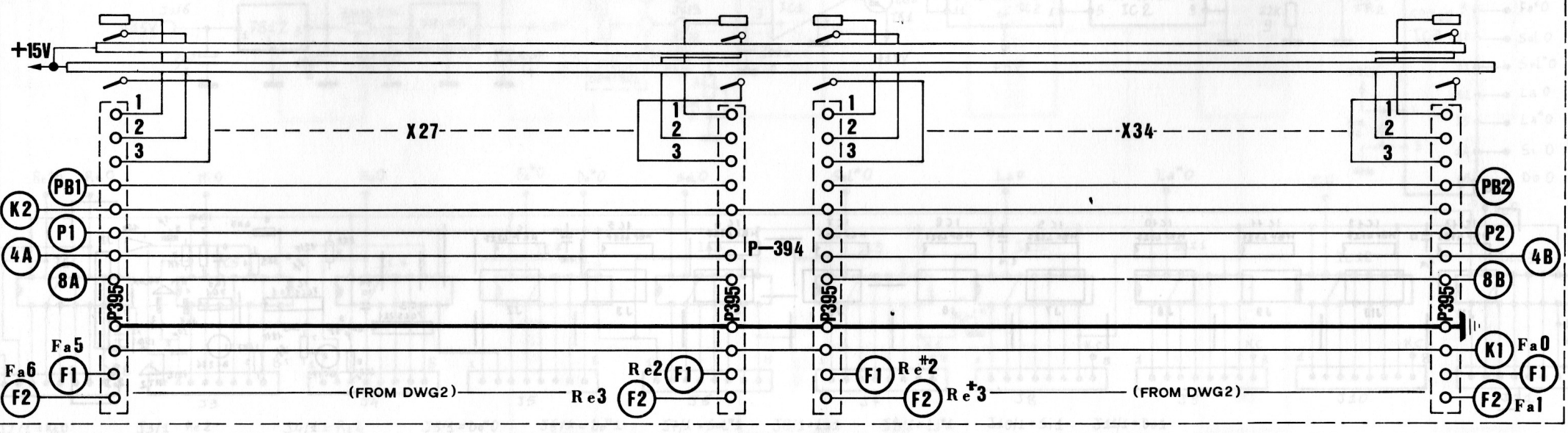


CRUMAR		MODEL: MULTIMAN 5	
DRAWN BY	Bardoni G	REVISION	
DESIGNED BY	Bianchi	DATE	23/3/81

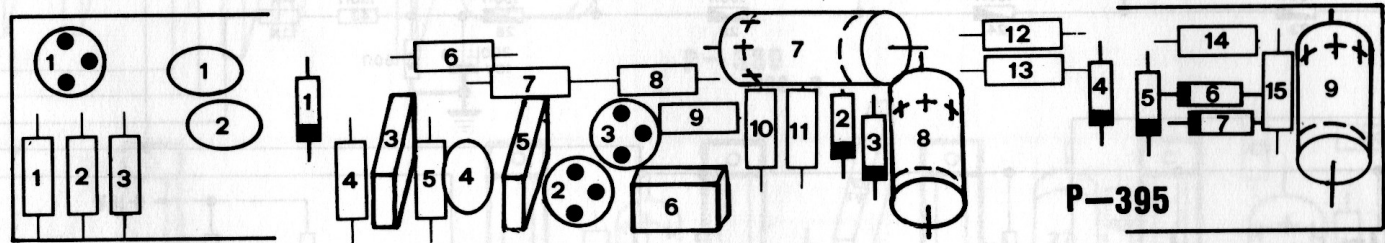
DWG 2A



	C1(mf)	C2(mf)	C1(mf)	C2(mf)
3	100	39	18	4.7
3	100	33	15	3.9
3	100	27	12	3.3
3	82	22	10	2.7
3	68	18	8.2	2.2
3	56	15	6.8	1.8
3	47	12	5.6	1.5
3	39	10	4.7	1.2
3	33	8.2	3.9	1
3	27	6.8	3.3	0.820P
3	22	5.6		

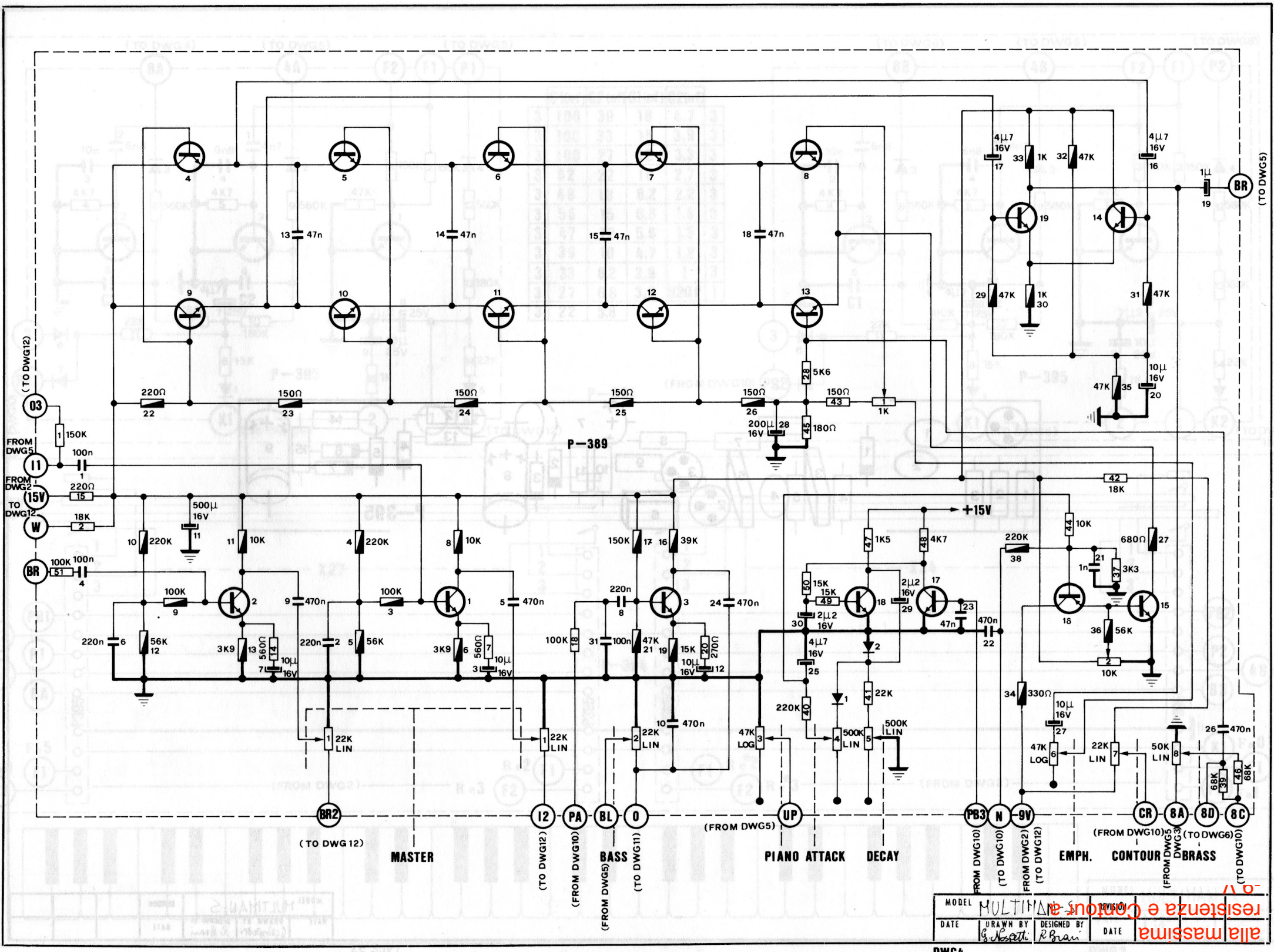


MODEL MULTIMAN-S
 DATE _____ DRAWN BY *Masotti G.* DESIGNED BY *R. Bran.*
 DWG3



MODEL MULTIMAN-S			REVISION		
DATE	DRAWN BY	DESIGNED BY	DATE		
	<i>R. Bran</i>	<i>R. Bran</i>			

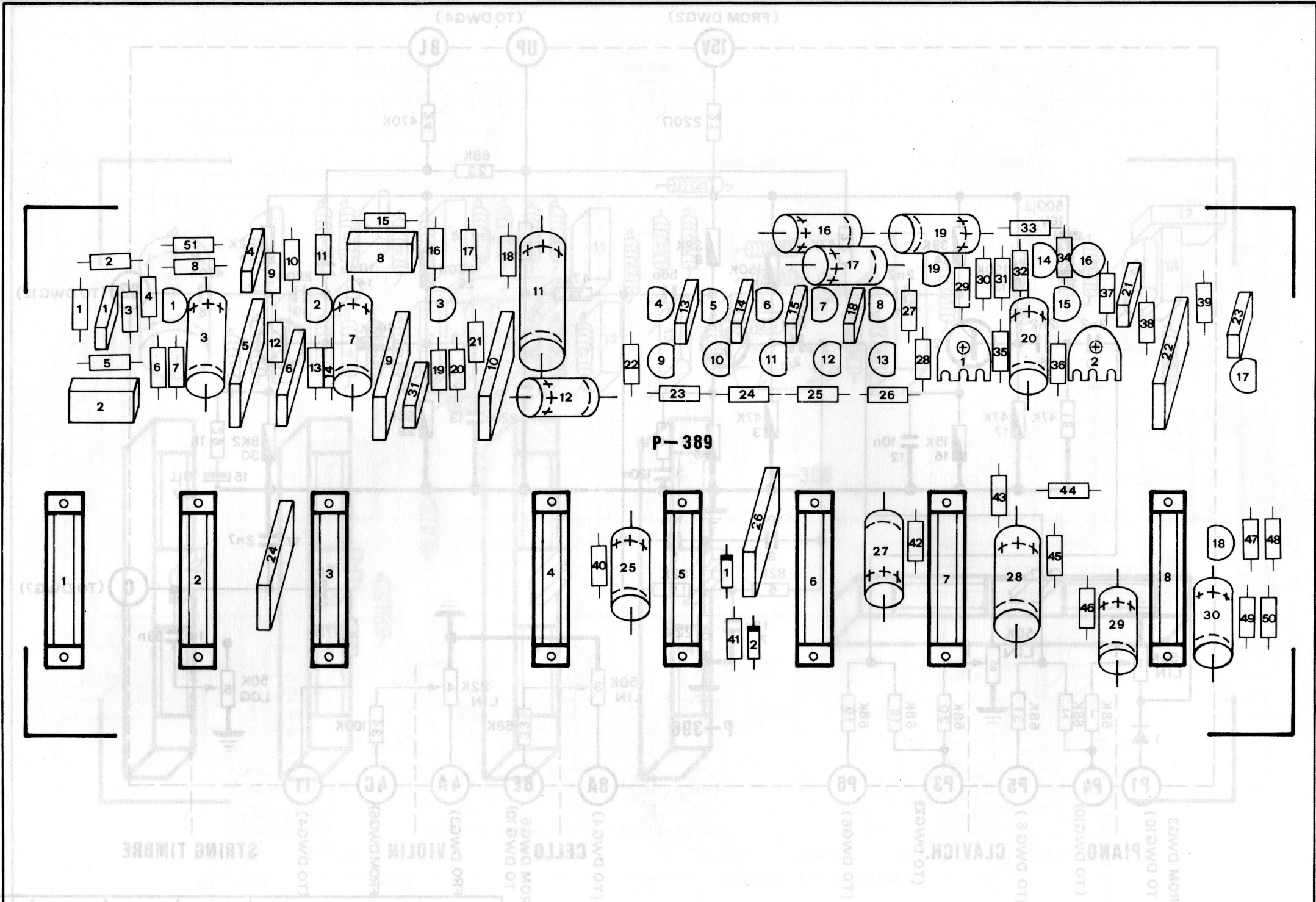
DWG 3A



MODEL	MULTIMAN	REVISION	
DATE	DRAWN BY	DESIGNED BY	DATE
	<i>G. Notti</i>	<i>R. Bravi</i>	

DWG4

MAXIMA DIVISIONE S.p.A. alla massima resistenza e Contorno

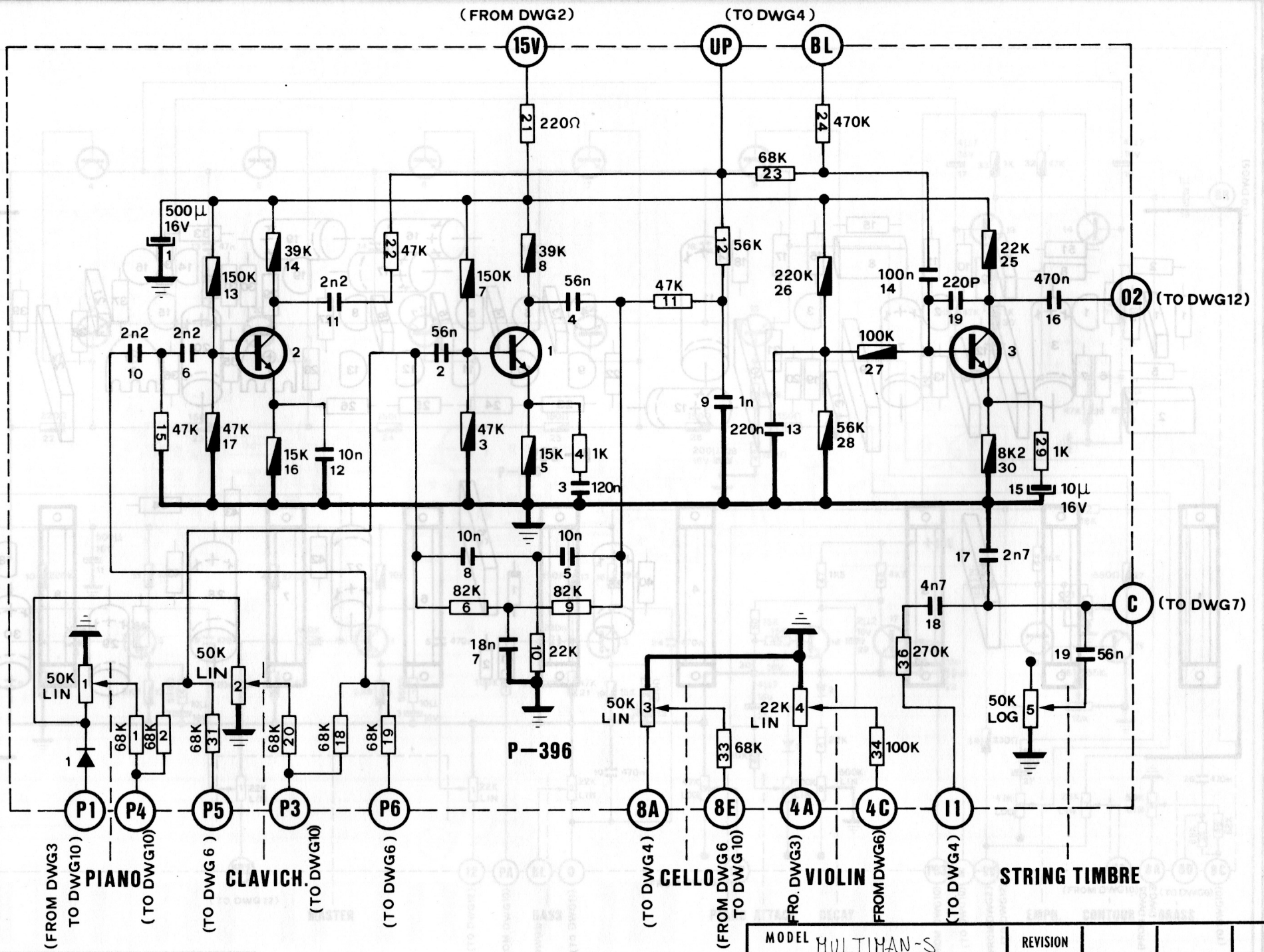


P-389

MODEL	MULTIMAN-2
DATE	DESIGNED BY
DATE	DRAWN BY
REVISION	

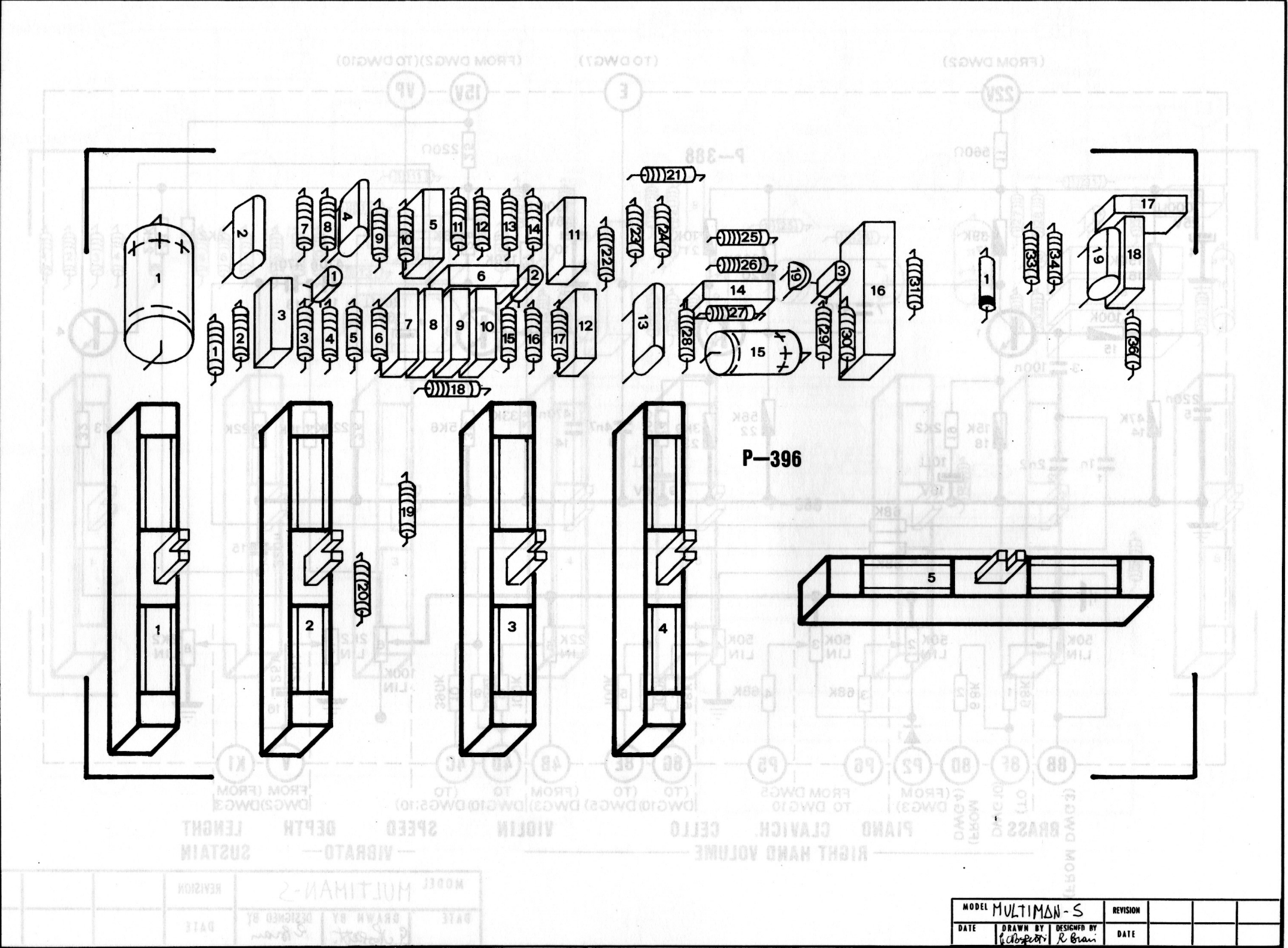
MODEL MULTIMAN-2		REVISION	
DATE	DRAWN BY	DESIGNED BY	DATE
	R. Bran	R. Bran	

DWG 4A



MODEL	MULTIMAN-S	REVISION		
DATE	DRAWN BY G. Betti	DESIGNED BY R. Bran	DATE	

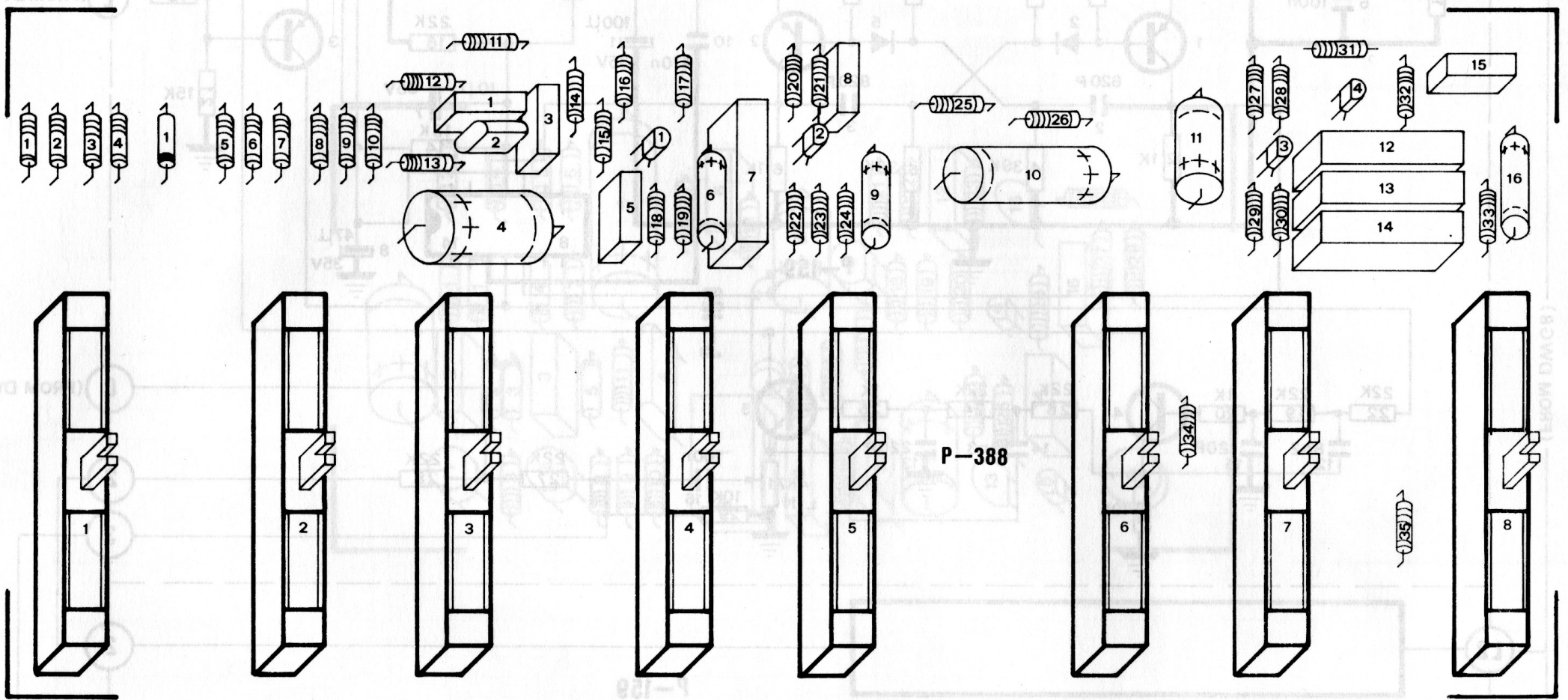
DWG5



P-396

MODEL MULTIMAN-S		REVISION	
DATE	DRAWN BY <i>R. Brani</i>	DESIGNED BY <i>R. Brani</i>	DATE

DWG 5A

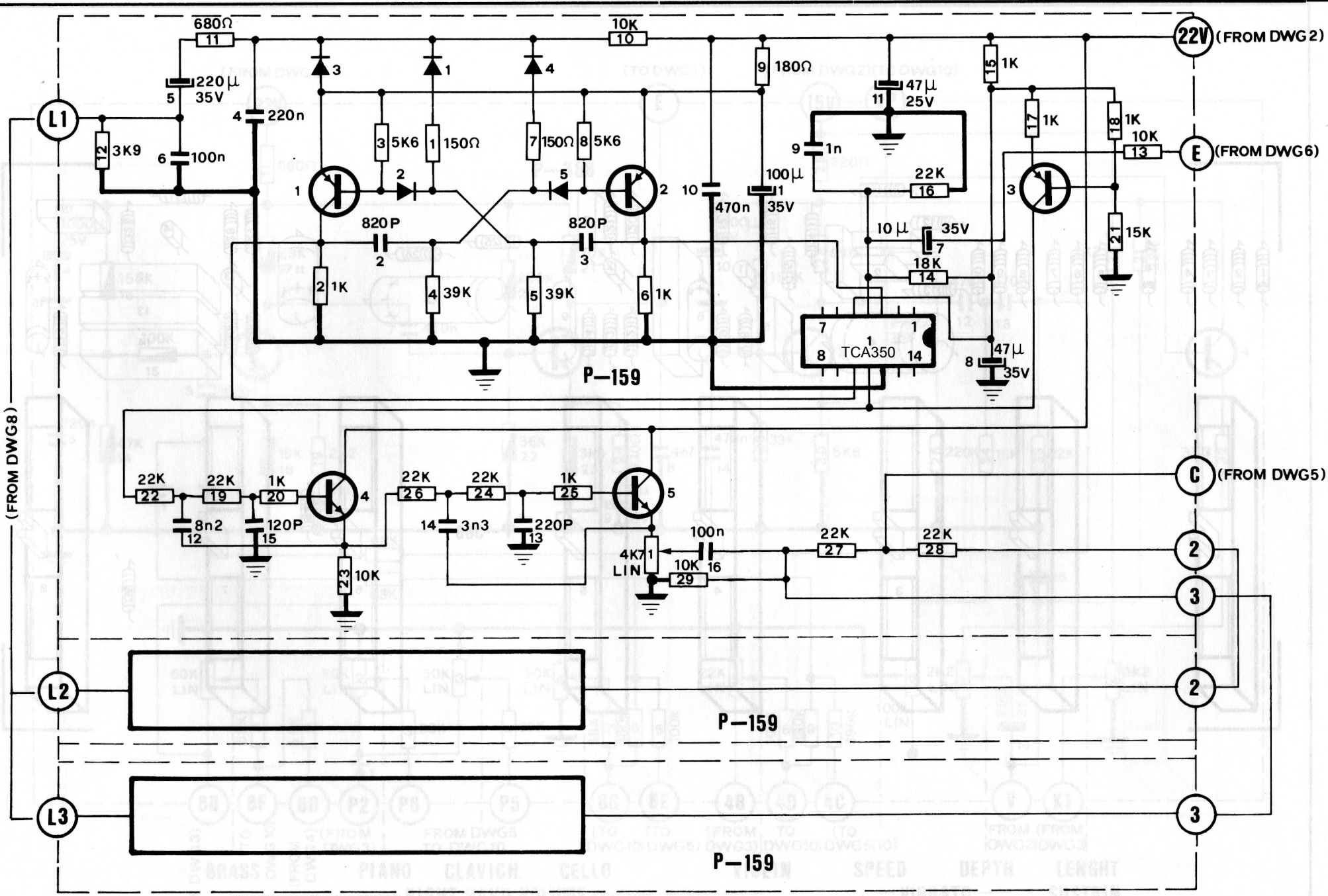


P-388

REVISION	2-MULTIMETER
DATE	DESIGNED BY
DATE	DRAWN BY

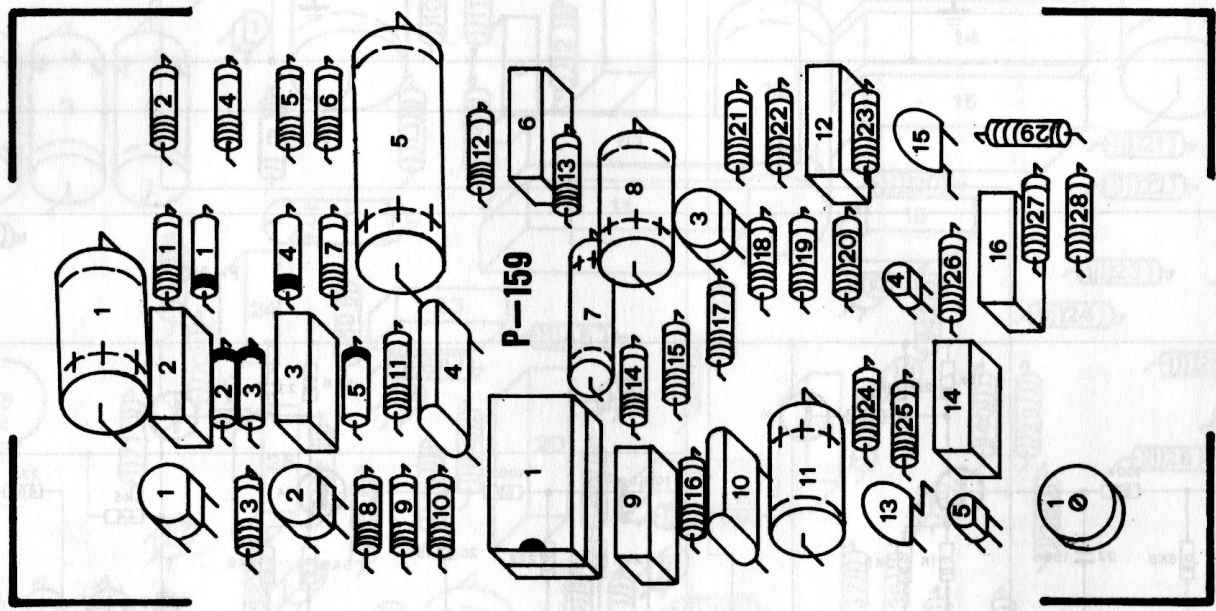
MODEL MULTIMETER-S		REVISION		
DATE	DRAWN BY	DESIGNED BY	DATE	
	R. Bran			

DWG 6A



MODEL	MULTIHAN-S	REVISION			
DATE	DRAWN BY G. Nospelt	DESIGNED BY R. Bran	DATE		

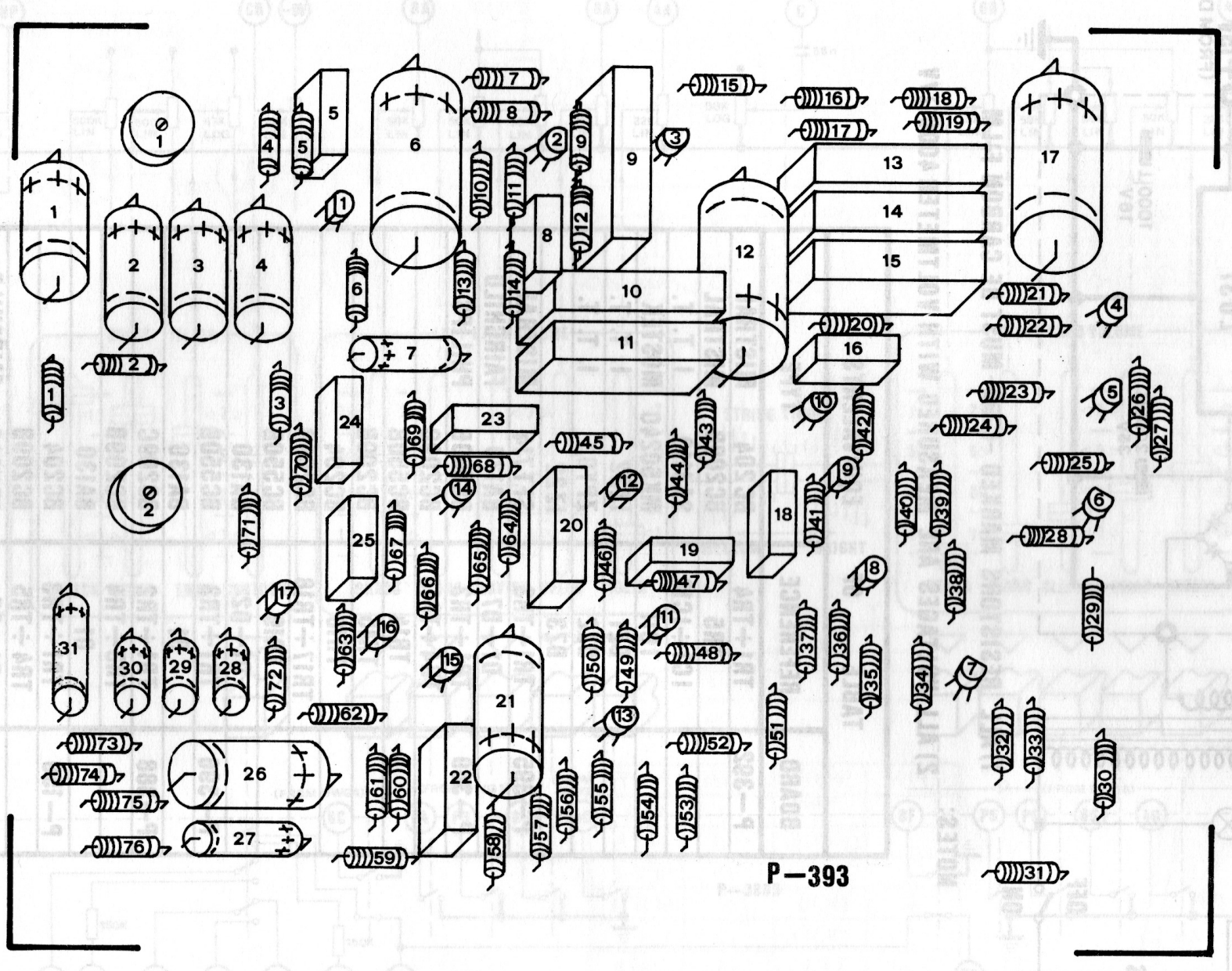
DWG7



QUANTITY	2-1000	13004
DATE	17-55	11-55

MODEL MULTIMAN-S			REVISION	
DATE	DRAWN BY	DESIGNED BY	DATE	
	G. Roberts	R. Brani		

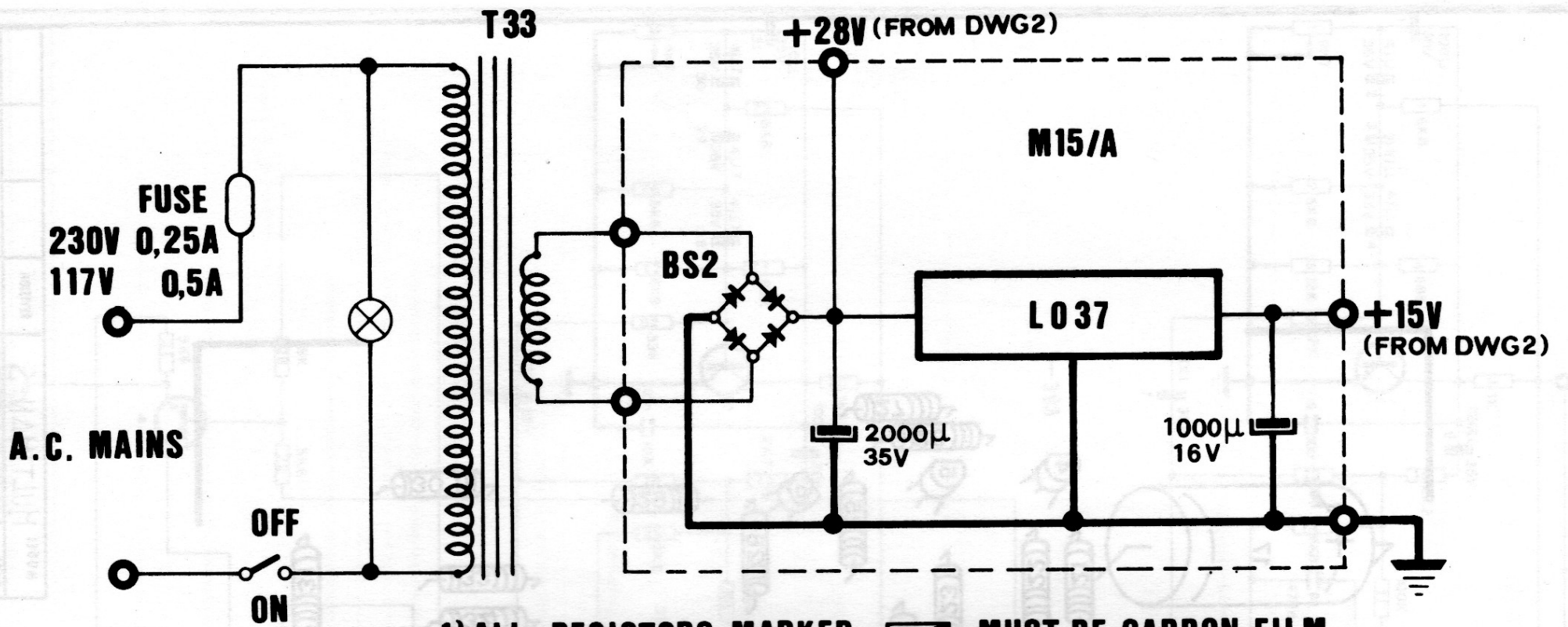
DWG 7A



P-393

MODEL MULTIMAN-S		REVISION	
DATE	DRAWN BY	DESIGNED BY	DATE
	<i>J. Cooper</i>	<i>R. Brani</i>	

DWG 8A



1) ALL RESISTORS MARKED MUST BE CARBON FILM

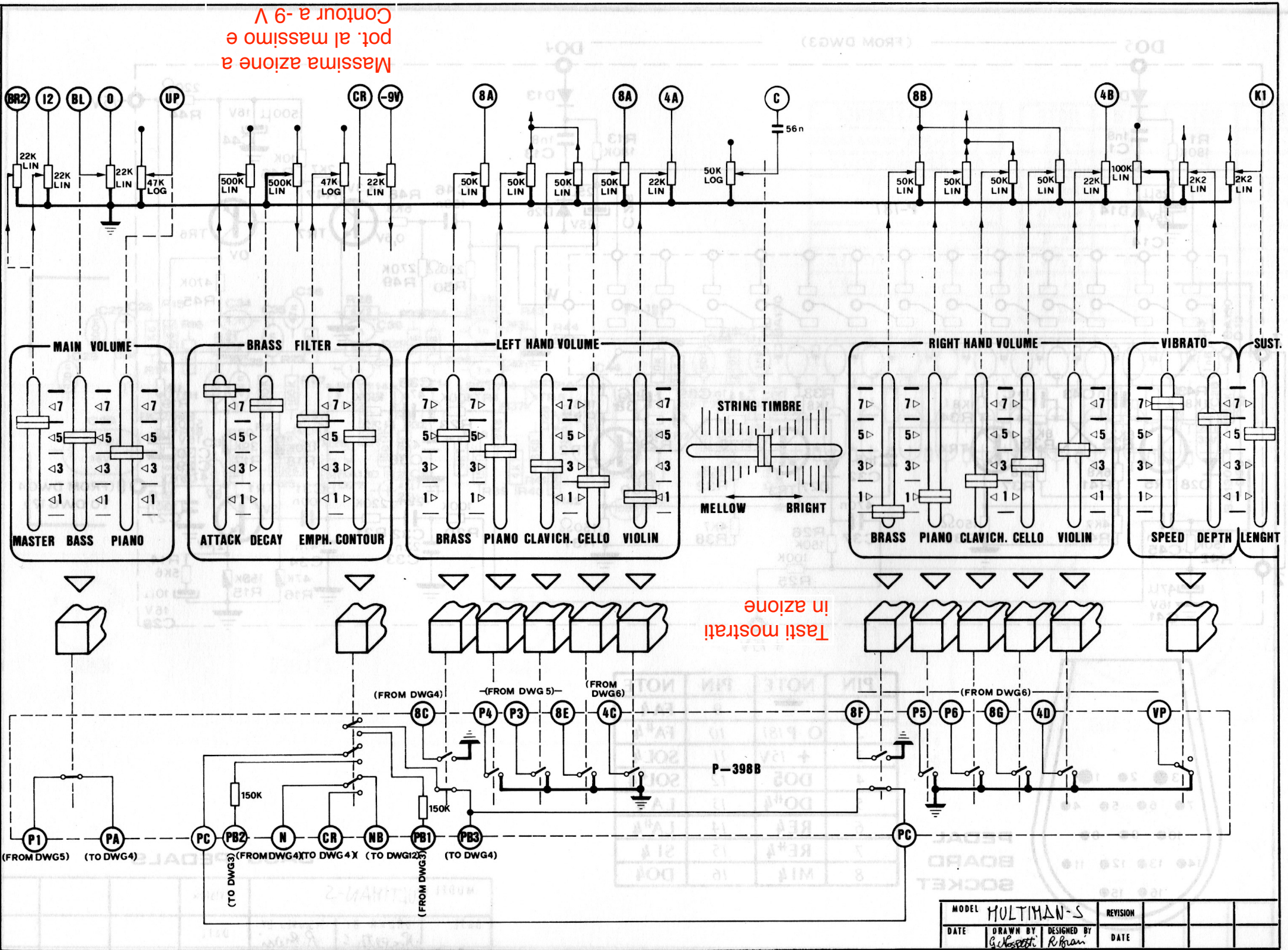
NOTES: 2) ALL VOLTAGES ARE MEASURED WITH VOLTMETER 4000Ω/V

TABLE OF EQUIVALENTS

BOARD	REFERENCE	TYPE
P-392	TR1÷TR4	BC 204 MISTRAL
	TR5	BC209B MISTRAL
	IC1÷IC10	SAJ110 I. T. T.
	IC11	MK50240 MOSTEK
	DZ1	IZ22 I. T. T.
	DZ2	ZPY9,1 I. T. T.
	DZ3	IZ22
P-395	TR1÷TR3	SFT714 MISTRAL
	D1÷D7	BA130 FAIRCHILD
P-389	TR1÷TR3	BC550B PHILIPS
	TR4÷TR13	BC209C
	TR14	BC550B
	TR15	BC209B
	TR16	BC204
	TR17÷TR18	BC209B
	TR19	BC550B
P-396	D1÷D2	BA130
	TR1÷TR3	BC550B
P-388	D1	BA130
	TR1÷TR2	BC209C
P-159	TR3÷TR4	BC209B
	D1	BA130
	TR1÷TR3	BC204
P-393	TR4÷TR5	BC209B
	D1÷D5	FDH900 FAIRCHILD
	TR1	BC209C
	TR2÷TR16	BC209B
	TR17	BC209C

MODEL	MULTIHAN-S	REVISION		
DATE	DRAWN BY.	DESIGNED BY	DATE	
	<i>G. Kostic</i>	<i>Abian</i>		

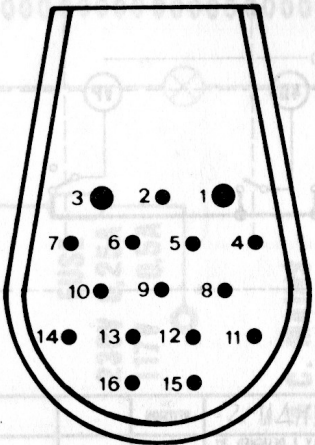
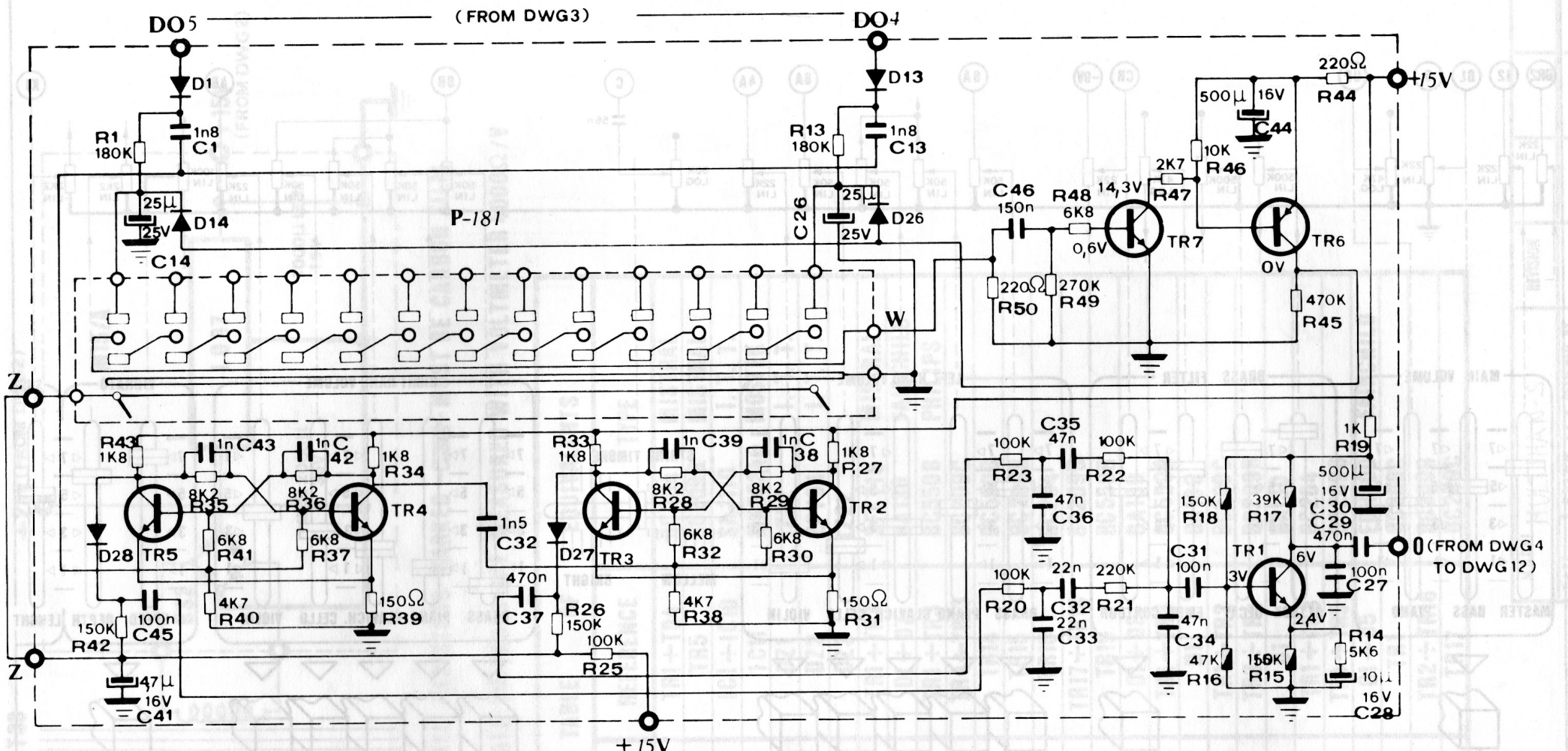
Massima azione e pot. al massimo e Contour a -9 V



Tasti mostrati in azione

MODEL	MULTIMAN-S	REVISION	
DATE	DRAWN BY G. Rossi	DESIGNED BY R. Bianchi	DATE

DWG10



PEDAL BOARD SOCKET

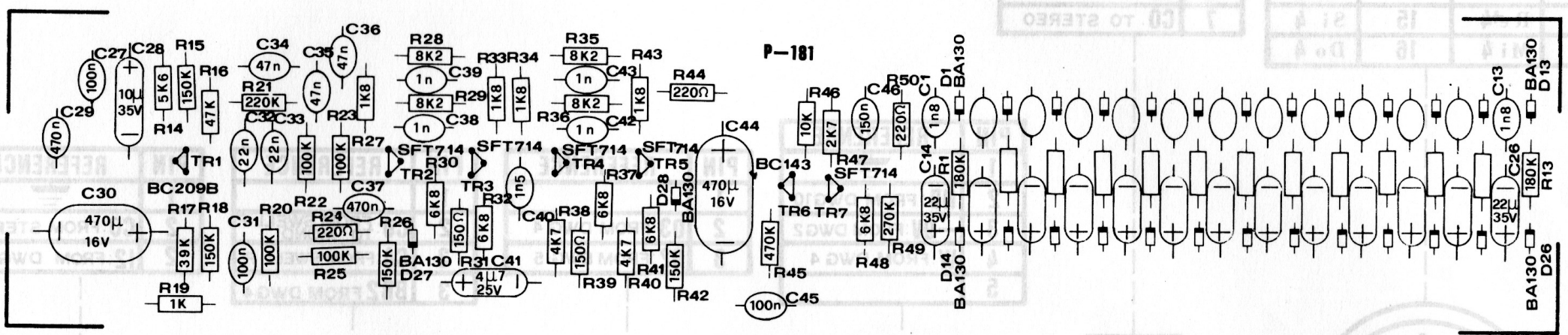
PIN	NOTE	PIN	NOTE
1	—	9	FA 4
2	O · P181	10	FA#4
3	+ 15V	11	SOL 4
4	DO5	12	SOL#4
5	DO#4	13	LA 4
6	RE 4	14	LA#4
7	RE#4	15	SI 4
8	MI 4	16	DO 4

BASS PEDALS

MODEL	MULTIHAN-S	REVISION		
DATE	DRAWN BY Rosetti G.	DESIGNED BY R. Brani	DATE	

REFERENCE	PIN
+50V FROM DWG 1	1
KS FROM DWG 2	2
	3
	4
	5
CA TO STEREO 6	6
CO TO STEREO 7	7

NOTE	PIN	NOTE	PIN
F ₂ A	9		
F ₂ A	10	0-P181	
Sol A	11	+15V	
Sol A	12	D ₂ A	
L ₂ A	13	D ₂ A	
L ₂ A	14	R ₂ A	
S ₁ A	15	S ₁ A	
D ₂ A	16	D ₂ A	



REVISION	DATE	DESIGNED BY	DATE
1	11/1/68	R. Brain	11/1/68

MODEL MULTIMAN-5			REVISION	
DATE	DRAWN BY	DESIGNED BY	DATE	
	faber	R. Brain		

DWG 11A

PIN	NOTE	PIN	NOTE
1		9	F _a 4
2	0-P181	10	F _a [#] 4
3	+15V	11	Sol 4
4	Do 5	12	Sol [#] 4
5	Do [#] 4	13	La 4
6	Re 4	14	La [#] 4
7	Re [#] 4	15	Si 4
8	Mi 4	16	Do 4

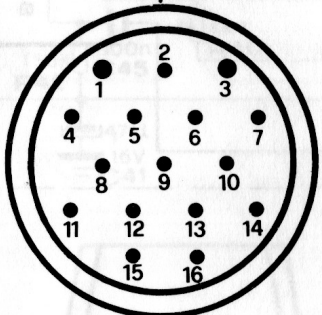
PIN	REFERENCE
1	+20V FROM DWG2
2	K2 FROM DWG3
3	
4	
5	
6	CA TO STEREO
7	CO TO STEREO

PIN	REFERENCE
1	
2	NB FROM DWG10
3	-9V FROM DWG2
4	W FROM DWG 4
5	

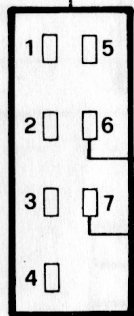
PIN	REFERENCE
1	
2	03 FROM DWG 4
3	02 FROM DWG 5

PIN	REFERENCE
1	
2	CO FROM SWELL P. TO MONO
3	CA FROM SWELL P.
3	BR2 FROM DWG 4

PIN	REFERENCE
1	
2	CO FROM STEREO
2	I2 FROM DWG 4



PEDAL BOARD



SWELL PEDAL

CA

CO



PEDAL FILTER



PIANOS



STEREO



MONO

MODEL	MULTIMAN-S	REVISION			
DATE	DRAWN BY <i>C. Nospelti</i>	DESIGNED BY <i>R. Bran</i>	DATE		

DWG12

CRUMAR S.p.A.
60022 CASTELFIDARDO - ITALY
c/p 98
Tel. (071) 79033 / 34