



Sailor

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**INSTRUKTIONSBOG FOR
SAILOR T1130**

**INSTRUCTION BOOK FOR
SAILOR T1130**



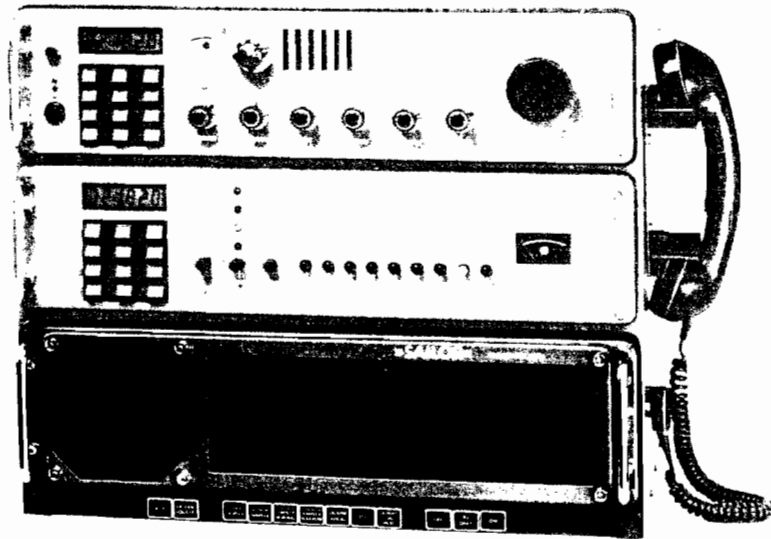
A/S S. P. RADIO · AALBORG · DENMARK



S.P. Radio A/S · Aalborg · Denmark



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INSTRUCTION BOOK FOR TRANSMITTER T1130

Valid from serial No. 261639

T1130

GENERAL DESCRIPTION

SAILOR T1130 is a 500 Watt PEP SSB transmitter.

SAILOR T1130 has 50 ohm output impedance.

SAILOR T1130 has continuously frequency covering from 1.6 MHz to 28 MHz.

SAILOR T1130 is constructed to be used together with AERIAL COUPLER AT1500.

SAILOR T1130 is automatically tuning the AT1500.

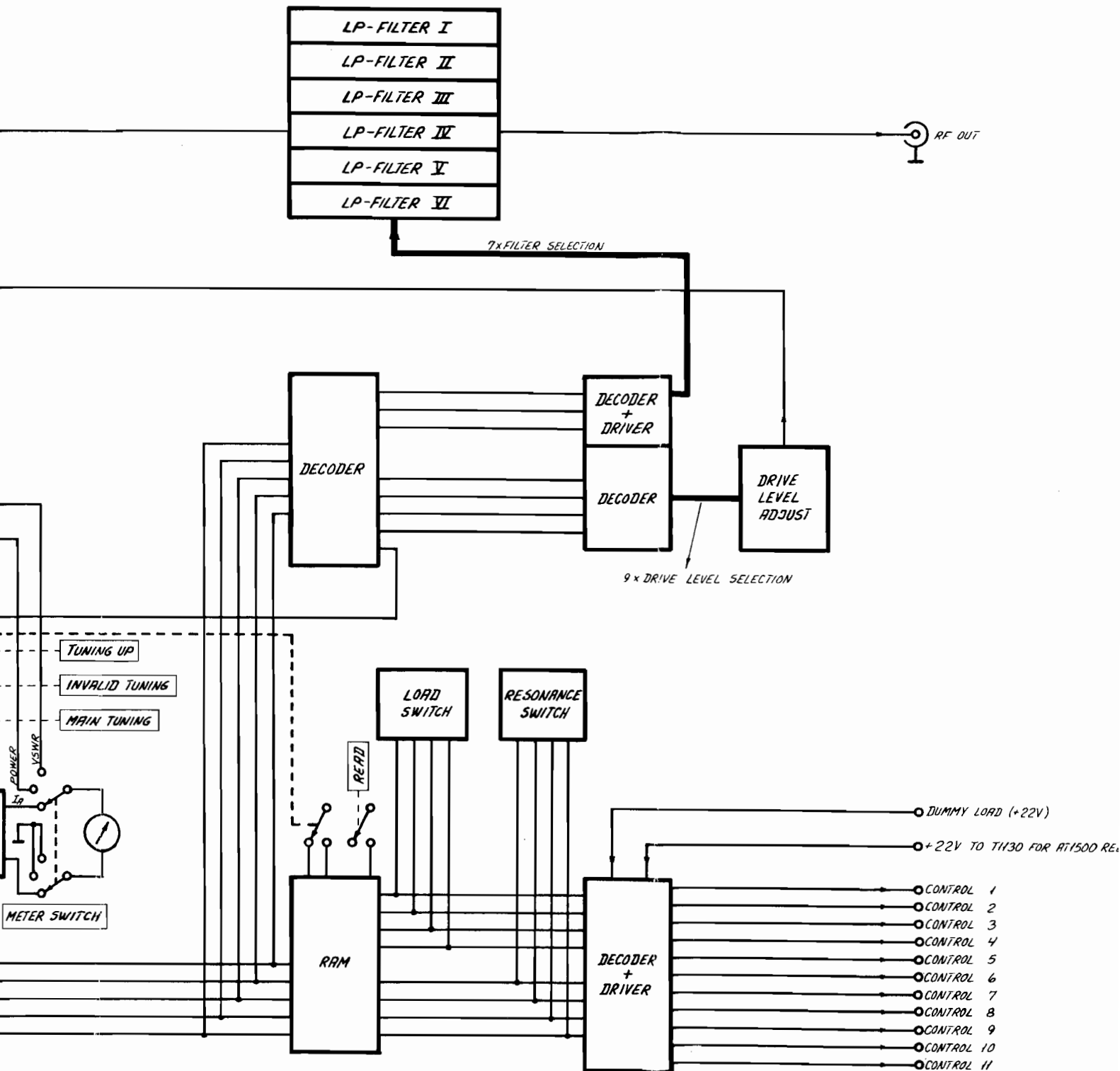
SAILOR T1130 has built-in power supply.

SAILOR T1130 can be supplied from:

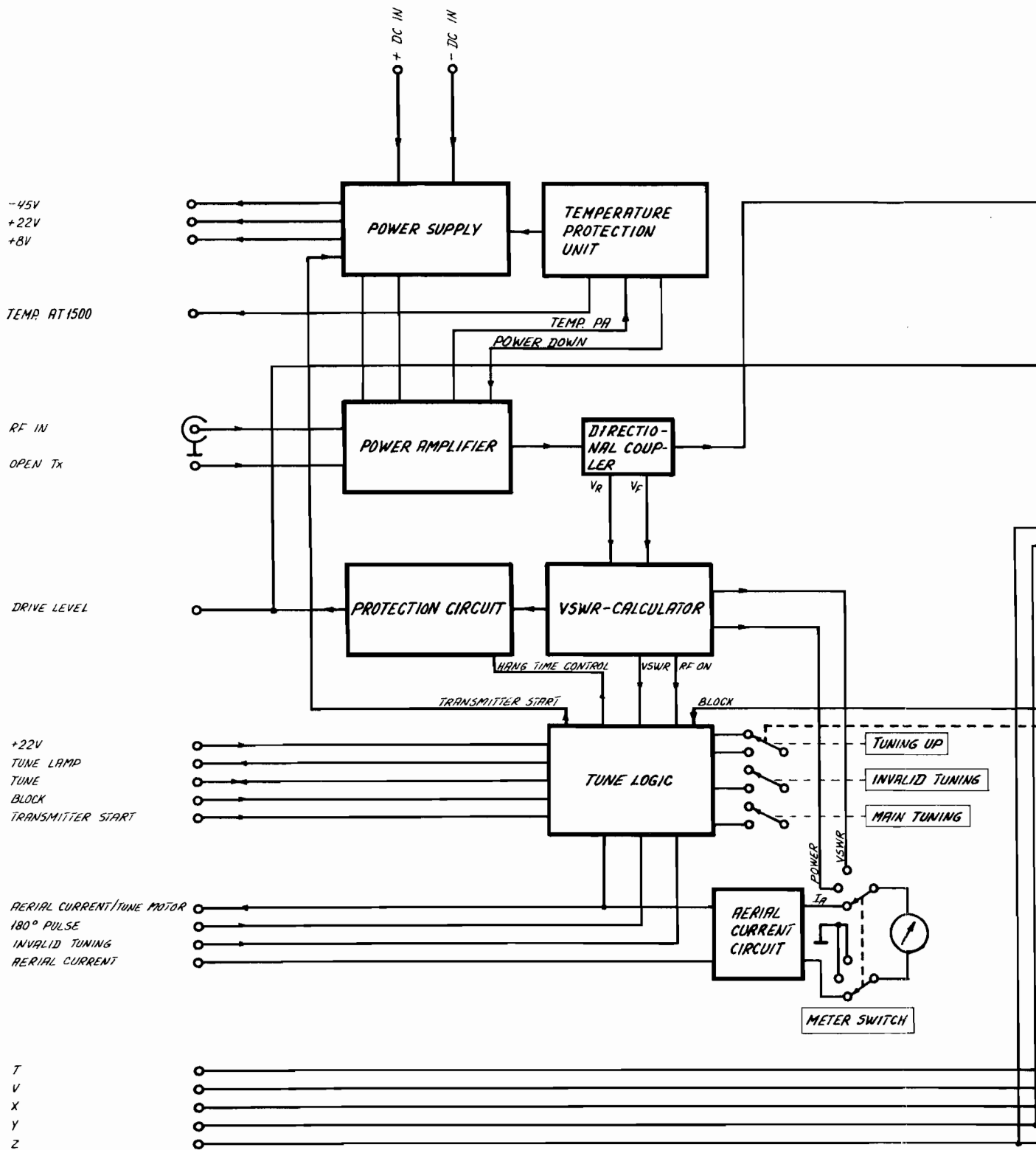
- N1406 12V DC
- N1407 24V DC
- N1408 32V DC
- N1409 110/220/240V AC

SAILOR T1130 can be used in conjunction with exciter S1302, S1303 and S1304.

SAILOR T1130 fits into SAILOR 19" rack system.



TRANSMITTER T1130



PRINCIPLE OF OPERATION

The SAILOR Transmitter T1130 has built-in power supply and is constructed to be used together with Aerial Coupler AT1500, Exciters S1302, S1303 and S1304. Receivers R1119 and R1120.

The RF signal from the exciter is amplified in a full-transistorized Power Amplifier delivering a power output of 550W PEP at 50 ohm. The power output from the Power Amplifier is feed through a Directional Coupler and then to a Low Pass Filter section. The output power after the low pass filter section is 500W PEP at 50 ohm and all harmonics are more than 43dB below the fundamental for the frequency range 1.6 MHz to 28 MHz.

The Directional Coupler is connected to a VSWR-CALCULATOR which is calculating the reflections coefficient. The output is connected to the Protection Circuit and the TUNE LOGIC.

The Protection Circuit is controlling the drive level from the exciter in such a way that the Power Amplifier is protected against excessive VSWR.

The TUNE logic is controlling the tune motor of the Aerial Coupler AT1500 and it is also controlling the power supply through Transmitter start.

The Aerial Current Circuit is receiving a DC voltage propotional to the aerial current from the Aerial Coupler AT1500.

By means of the METER SWITCH it is possible to measure the Aerial Current, Power output and VSWR.

From S130x a 5 bit Frequency Band code is received. This code is Decoded and then controlling the Low Pass Filter selection and drive level adjusting. Further more it is controlling the date selection of the RAM. This RAM is programmeable under tuning up by means of the Load Switch and Resonance Switch. These switches are controlling the presetings of the Aerial Coupler AT1500 through the Decoder and Driver. The RAM has litium battery back up so the pre- settings of the Load and Resonance will be remembered for at least 5 years. If the Aerial has been changed it is possible to change the presetings of Load and Resonance. The only necessary tool for tuning up is a screw-driver and all tuning up facilities are accessible, from the Front of the Transmitter.

TUNE-UP PROCEDURE

When installing T1130/AT1500 or changing the aerial it is necessary to retune the pre-settings of AT1500. The procedure for this is as follows:

COARSE TUNING

1. Remove the filter at the front of T1130.
2. Set the uppermost switch at the extreme right in position AUTO, the second in position TUNE-UP and the fourth in position S.
3. Select the highest programmed frequency in each band listed in table 1.
4. Select the lowest permitted resonance number on the RESONANCE switch (see fig. 1) for the band in question according to table 2.
5. Select the lowest permitted load number on the LOAD switch (see fig. 1), for the band in question according to table 2.
6. Push the TUNE button on the exciter, and wait until the tune lamp on the exciter stops lighting or starts to flash. (Max. tune time 20 secs).
7. If the TUNE lamp stops lighting then press the button INVALID TUNING (see fig. 1). (If the TUNE lamp starts to flash after pressing INVALID TUNING - don't care!)
 - a. If the red lamp below the push button does not light up you have found a tuning with a voltage standing wave ratio (VSWR) less than 2 and can go to FINAL TUNING point 1.
 - b. If the red lamp lights up, then select a resonance number higher according to table 2, and start from point 5.
 - c. If the TUNE lamp starts to flash, select the next load number according to table 2. Now repeat point 6 and 7, until the highest load number is reached.
8. Select the next resonance number on the RESONANCE switch and repeat point 5, 6 and 7.

FINAL TUNING

1. Set the uppermost switch in position MAN and record the reading on the AERIAL CURRENT meter and switch off again.
2. Select the next higher load number.
3. Push the TUNE button and wait for the tuning.
4. Set the uppermost switch in position MAN and record the reading on the AERIAL CURRENT meter, and switch off again.
5. If the TUNE lamp starts to flash or the reading is less than under previous tuning, then press the button INVALID TUNING (if the TUNE lamp starts to flash after pressing INVALID TUNING - don't care!)
 - a. If the red lamp does not light up, set the LOAD switch to the previous number and procede with BANDWIDTH CHECK point 1.
 - b. If the red lamp lights up then select a number higher resonance and continue from point 3.
6. If the reading is higher then press the button INVALID TUNING. *LOAD*
 - a. If the red lamp does not light up then select a number higher ~~resonance~~ and continue from point 3.
 - b. If the red lamp lights up then select a number higher resonance and continue from point 3.

TUNE-UP PROCEDURE

When installing T1130/AT1500 or changing the aerial it is necessary to retune the pre-settings of AT1500. The procedure for this is as follows:

COARSE TUNING

1. Remove the filter at the front of T1130.
2. Set the uppermost switch at the extreme right in position AUTO, the second in position TUNE-UP and the fourth in position S.
3. Select the highest programmed frequency in each band listed in table 1.
4. Select the lowest permitted resonance number on the RESONANCE switch (see fig. 1) for the band in question according to table 2.
5. Select the lowest permitted load number on the LOAD switch (see fig. 1), for the band in question according to table 2.
6. Push the TUNE button on the exciter, and wait until the tune lamp on the exciter stops lighting or starts to flash. (Max. tune time 20 secs).
7. If the TUNE lamp stops lighting then press the button INVALID TUNING (see fig. 1). (If the TUNE lamp starts to flash after pressing INVALID TUNING - don't care!)
 - a. If the red lamp below the push button does not light up you have found a tuning with a voltage standing wave ratio (VSWR) less than 2 and can go to FINAL TUNING point 1.
 - b. If the red lamp lights up, then select a resonance number higher according to table 2, and start from point 5.
 - c. If the TUNE lamp starts to flash, select the next load number according to table 2. Now repeat point 6 and 7, until the highest load number is reached.
8. Select the next resonance number on the RESONANCE switch and repeat point 5, 6 and 7.

FINAL TUNING

1. Set the uppermost switch in position MAN and record the reading on the AERIAL CURRENT meter and switch off again.
2. Select the next higher load number.
3. Push the TUNE button and wait for the tuning.
4. Set the uppermost switch in position MAN and record the reading on the AERIAL CURRENT meter, and switch off again.
5. If the TUNE lamp starts to flash or the reading is less than under previous tuning, then press the button INVALID TUNING (if the TUNE lamp starts to flash after pressing INVALID TUNING - don't care!)
 - a. If the red lamp does not light up, set the LOAD switch to the previous number and proceed with BANDWIDTH CHECK point 1.
 - b. If the red lamp lights up then select a number higher resonance and continue from point 3.
6. If the reading is higher then press the button INVALID TUNING. LOAD
 - a. If the red lamp does not light up then select a number higher ~~resonance~~ and continue from point 3.
 - b. If the red lamp lights up then select a number higher resonance and continue from point 3.

TABLE 1

BANDS in T1130	MARITIME BANDS
2182.0 kHz	
1 600.0 - 1 799.9 kHz	1 600.0 - 1 799.9 kHz
1 800.0 - 1 999.9 kHz	1 800.0 - 1 999.9 kHz
2 000.0 - 2 199.9 kHz	2 000.0 - 2 199.9 kHz
2 200.0 - 2 399.9 kHz	2 200.0 - 2 399.9 kHz
2 400.0 - 2 599.9 kHz	2 400.0 - 2 599.9 kHz
2 600.0 - 2 799.9 kHz	2 600.0 - 2 799.9 kHz
2 800.0 - 2 999.9 kHz	2 800.0 - 2 999.9 kHz
3 000.0 - 3 099.9 kHz	3 000.0 - 3 099.9 kHz
3 100.0 - 3 399.9 kHz	3 100.0 - 3 399.9 kHz
3 400.0 - 3 699.9 kHz	3 400.0 - 3 699.9 kHz
3 700.0 - 3 999.9 kHz	3 700.0 - 3 999.9 kHz
4 000.0 - 4 299.9 kHz	4 063.0 - 4 219.4 kHz
4 300.0 - 4 599.9 kHz	
4 600.0 - 4 999.9 kHz	
5 000.0 - 5 499.9 kHz	
5 500.0 - 5 999.9 kHz	
6 000.0 - 6 399.9 kHz	6 200.0 - 6 325.4 kHz
6 400.0 - 6 999.9 kHz	
7 000.0 - 7 599.9 kHz	
7 600.0 - 7 999.9 kHz	
8 000.0 - 8 499.9 kHz	8 195.0 - 8 435.4 kHz
12 300.0 - 12 699.9 kHz	12 330.0 - 12 652.3 kHz
16 400.0 - 16 899.9 kHz	16 460.0 - 16 859.4 kHz
22 000.0 - 22 399.9 kHz	22 000.0 - 22 310.5 kHz
25 000.0 - 25 199.9 kHz	25 070.0 - 25 110.0 kHz
Optional	
Optional	

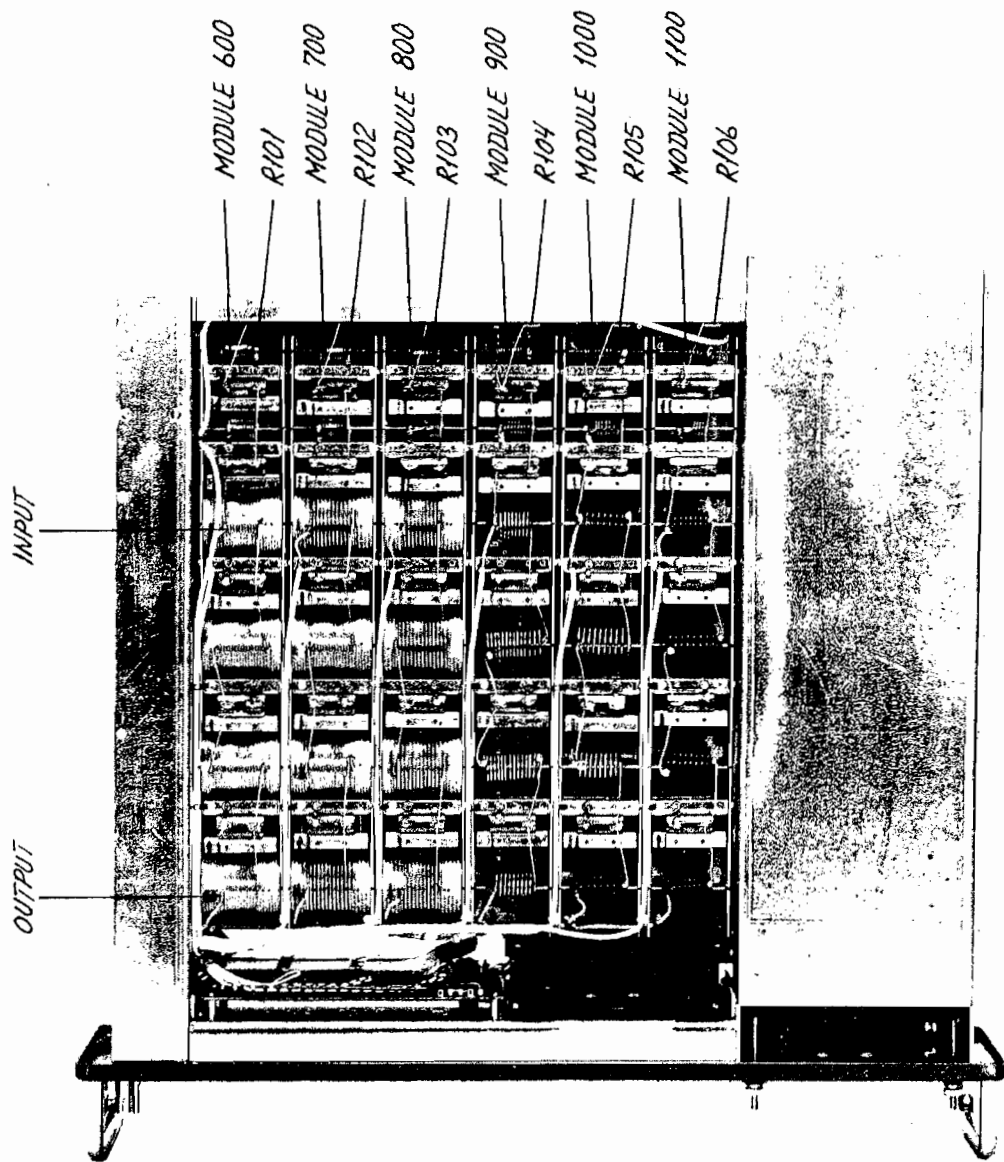
TABLE 2: PERMITTED RESONANCE AND LOAD NUMBERS

RESONANCE

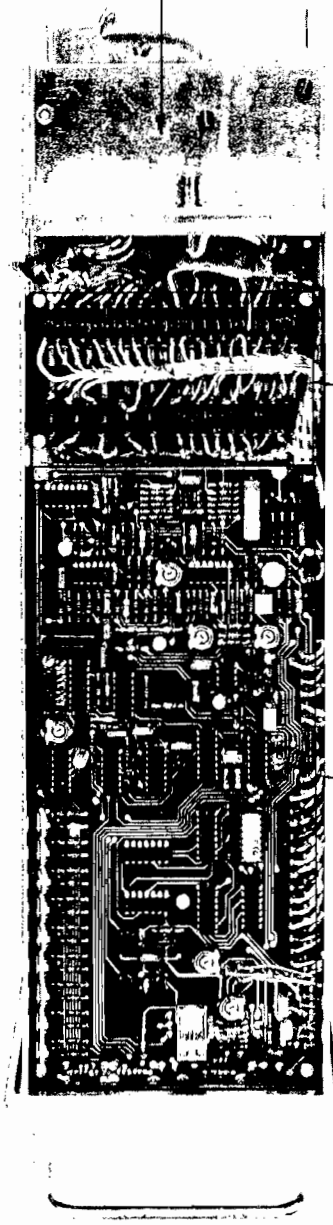
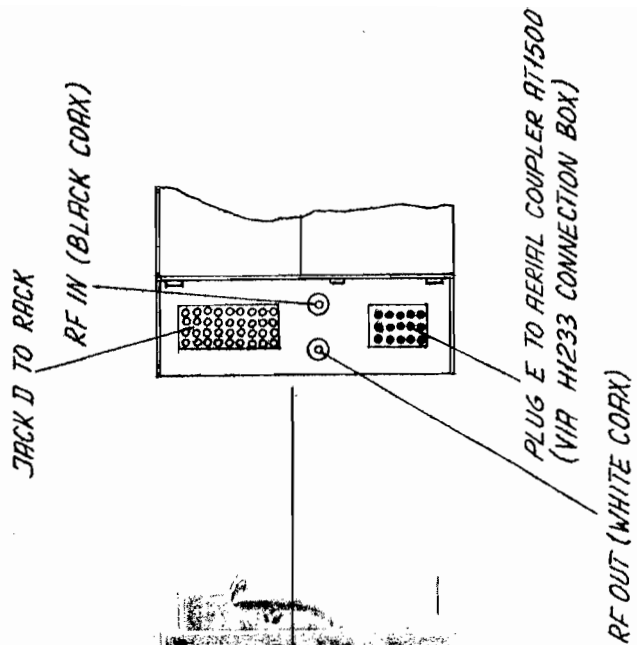
Frequency MHz	Permitted Numbers										
1.6 - 3.1	0	1	2	3							
3.1 - 4.3		1	2	3							
6.2 - 6.4			2	3	4	5					
8.1 - 8.5			2	3	4	5	6	7			
12.3 - 12.7							6	7	8	9	
16.4 - 16.9								7	8	9	10
22 - 22.4										10	11
25 - 25.2										10	11

LOAD

Frequency MHz	Permitted Numbers										
1.6 - 2.6	0	1									
2.6 - 3.1	0	1	2								
3.1 - 3.9	0	1	2	3	4	5	6				
4.0 - 4.3	0	1	2	3	4	5	6	7	8	9	10
6 - 8.5	0	1	2	3	4	5	6	7	8	9	
12.3 - 16.9	0	1	2	3	4	5	6	7			
22 - 25.1	0	1	2	3	4						



BOTTOM VIEW

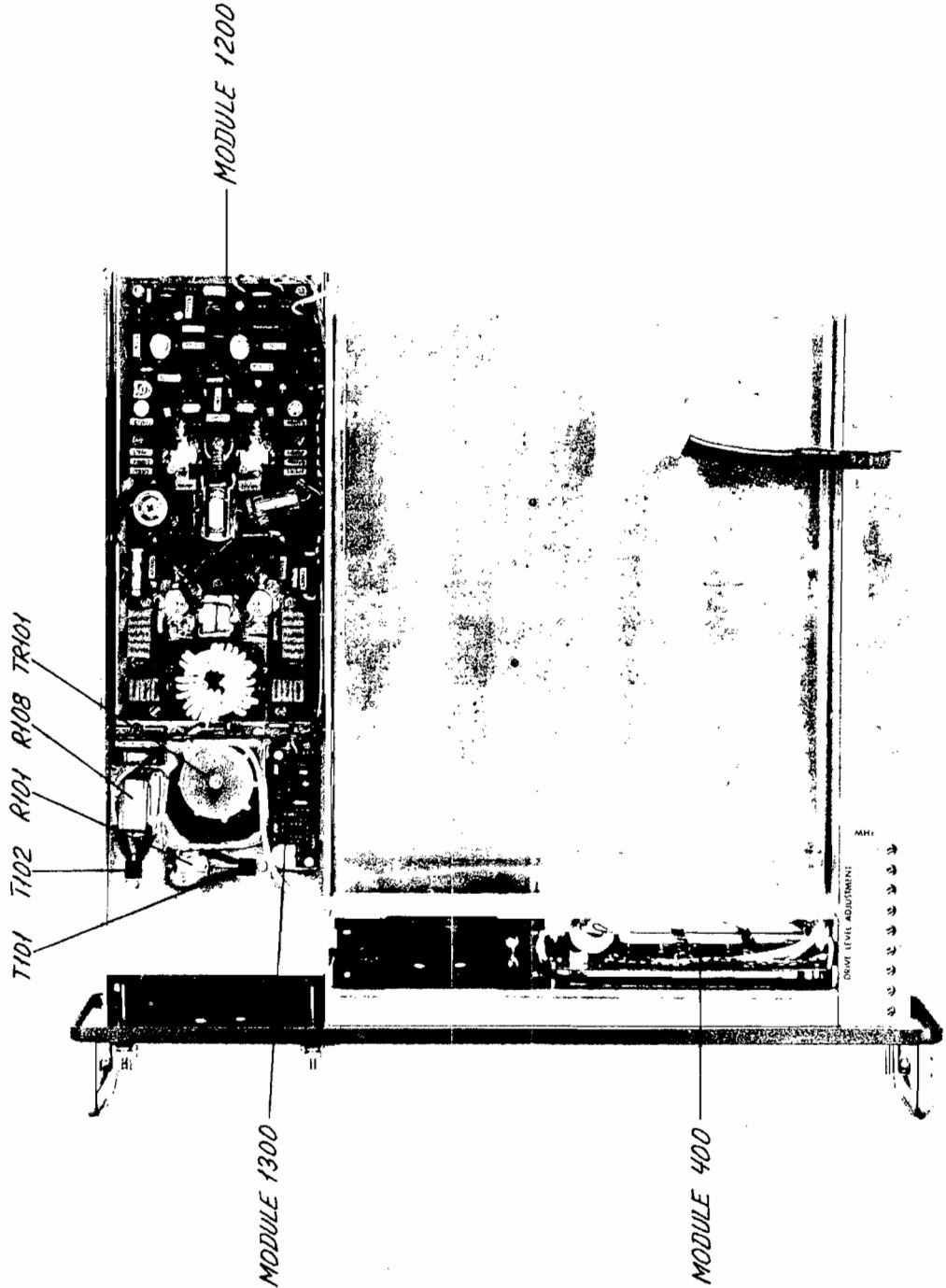


T101 T102 R101 R108 TR101

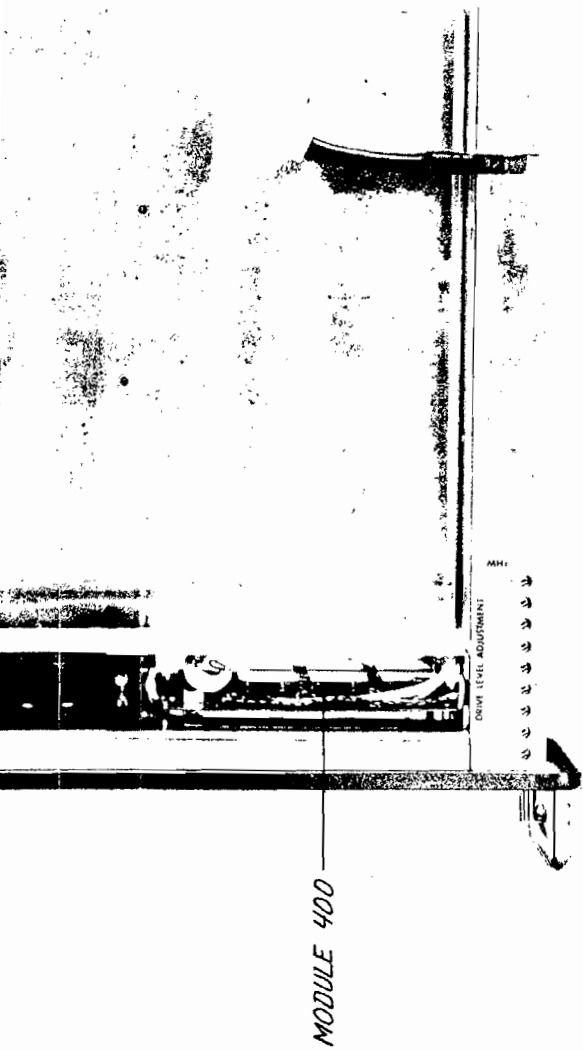
RIGHT SIDE VIEW

(VIA HI253 CONNECTION BOX)

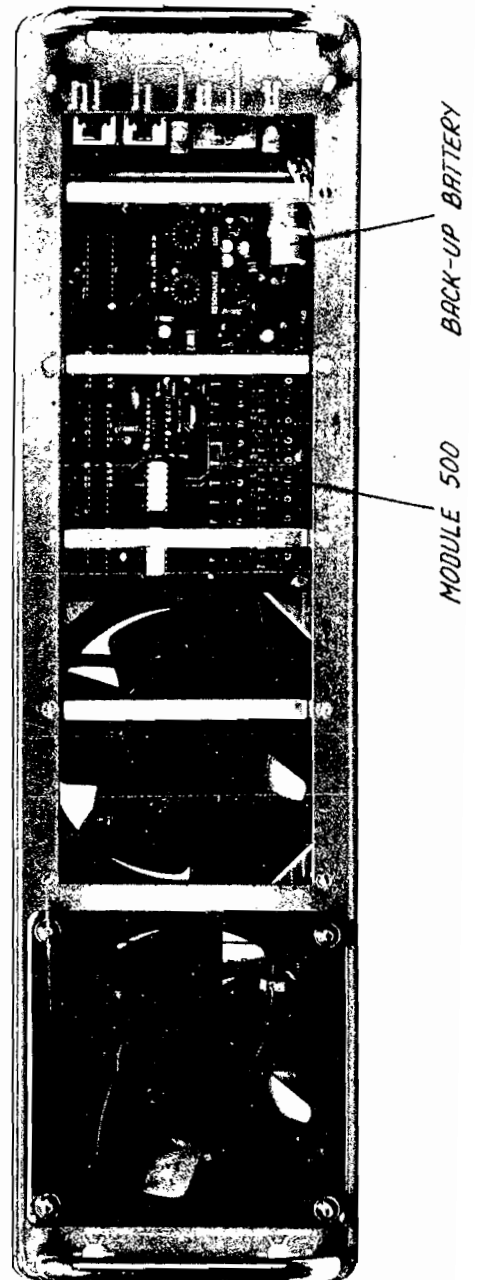
RF OUT (WHITE CORR)



TOP VIEW



TOP VIEW



FRONT VIEW

b

CHASSIS T1130

1/1

<i>Symbol</i>	<i>Description</i>		<i>Manufact.</i>	
M0101	Blower	24V 50 Hz	PABST	4624N
M0102	Blower	24V 50 Hz	PABST	4624N
R101	Resistor	100 ohm 5%	25W ARCOL/ DANOTHERM	NHS 25
R102	Resistor	100 ohm 5%	25W ARCOL/ DANOTHERM	NHS 25
R103	Resistor	100 ohm 5%	25W ARCOL/ DANOTHERM	NHS 25
R104	Resistor	100 ohm 5%	25W ARCOL/ DANOTHERM	NHS 25
R105	Resistor	100 ohm 5%	25W ARCOL/ DANOTHERM	NHS 25
R106	Resistor	100 ohm 5%	25W ARCOL/ DANOTHERM	NHS 25
R107	Resistor	22 ohm <u>+5%</u>	25W ARCOL/ DANOTHERM	HS 25
R108	Resistor	82 ohm <u>+5%</u>	10W ARCOL/ DANOTHERM	HS 10
R109	Resistor PTC	KTY-11-2D	Siemens	Q62705-K56
IC101	Voltage regulator	15V	Motorola	LM340T15
IC102	Voltage regulator	5V	Motorola	LM340T5
T101	Transistor		Motorola	BDX53
T102	Transistor		Motorola	BDX53
TR101	Balun.		S.P.	TL298

b	INPUT FILTER UNIT T1130				1/2	
Symbol	Description			Manufact.		
C201	Capacitor polyester	100 nF	+10%	100V	Siemens	B325 10-D1104-K
C202						
C203	Capacitor polyester	100 nF	+10%	100V	Siemens	B325 10-01104-K
C204						
C205	Capacitor polyester	100 nF	+10%	100V	Siemens	B325 10-D1104-K
C206						
C207	Capacitor polyester	100 nF	+10%	100V	Siemens	B325 10-D1104-K
C208						
C209	Capacitor polyester	100 nF	+10%	100V	Siemens	B325 10-D1104-K
C210						
C211	Capacitor polyester	1 nF	+10%	400V	Siemens	B325 10-D6102-K
C212	Capacitor polyester	100 nF	+10%	100V	Siemens	B325 10-D1104-K
C213	Capacitor polyester	1 nF	+10%	400V	Siemens	B325 10-D6102-K
C214	Capacitor polyester	100 nF	+10%	100V	Siemens	B325 10-D1104-K
C215	Capacitor polyester	100 nF	+10%	100V	Siemens	B325 10-D1104-K
C216	Capacitor polyester	100 nF	+10%	100V	Siemens	B325 10-D1104-K
C217	Capacitor polyester	100 nF	+10%	100V	Siemens	B325 10-D1104-K
C218	Capacitor polyester	100 nF	+10%	100V	Siemens	B325 10-D1104-K
C219	Capacitor polyester	100 nF	+10%	100V	Siemens	B325 10-D1104-K
C220	Capacitor polyester	100 nF	+10%	100V	Siemens	B325 10-D1104-K
C221	Capacitor polyester	100 nF	+10%	100V	Siemens	B325 10-D1104-K
C222	Capacitor polyester	100 nF	+10%	100V	Siemens	B325 10-D1104-K
C223	Capacitor polyester	100 nF	+10%	100V	Siemens	B325 10-D1104-K
C224	Capacitor polyester	100 nF	+10%	100V	Siemens	B325 10-D1104-K
C225	Capacitor polyester	100 nF	+10%	100V	Siemens	B325 10-D1104-K
C226	Capacitor polyester	100 nF	+10%	100V	Siemens	B325 10-D1104-K
C227	Capacitor polyester	100 nF	+10%	100V	Siemens	B325 10-D1104-K
C228	Capacitor polyester	100 nF	+10%	100V	Siemens	B325 10-D1104-K
C229	Capacitor polyester	100 nF	+10%	100V	Siemens	B325 10-D1104-K
C230	Capacitor polyester	100 nF	+10%	100V	Siemens	B325 10-D1104-K
C231	Capacitor polyester	100 nF	+10%	100V	Siemens	B325 10-D1104-K
C232	Capacitor polyester	100 nF	+10%	100V	Siemens	B325 10-D1104-K
C233	Capacitor polyester	100 nF	+10%	100V	Siemens	B325 10-D1104-K
C234	Capacitor polyester	100 nF	+10%	100V	Siemens	B325 10-D1104-K
C235	Capacitor polyester	100 nF	+10%	100V	Siemens	B325 10-D1104-K
C236	Capacitor polyester	100 nF	+10%	100V	Siemens	B325 10-D1104-K
C237	Capacitor polyester	100 nF	+10%	100V	Siemens	B325 10-D1104-K
C238	Capacitor polyester	100 nF	+10%	100V	Siemens	B325 10-D1104-K
C239	Capacitor polyester	100 nF	+10%	100V	Siemens	B325 10-D1104-K
C240	Capacitor polyester	100 nF	+10%	100V	Siemens	B325 10-D1104-K

a		INPUT FILTER UNIT T1130			2/2	
Symbol	Description			Manufact.		
FP201	Ferroxcube beads	3B		Philips	4322 020 34400	
FP202	Ferroxcube beads	3B		Philips	4322 020 34400	
FP203	Ferroxcube beads	3B		Philips	4322 020 34400	
FP204	Ferroxcube beads	3B		Philips	4322 020 34400	
FP205	Ferroxcube beads	3B		Philips	4322 020 34400	
FP206	Ferroxcube beads	3B		Philips	4322 020 34400	
FP207	Ferroxcube beads	3B		Philips	4322 020 34400	
FP208	Ferroxcube beads	3B		Philips	4322 020 34400	
FP209	Ferroxcube beads	3B		Philips	4322 020 34400	
FP210	Ferroxcube beads	3B		Philips	4322 020 34400	
FP211	Ferroxcube beads	3B		Philips	4322 020 34400	
FP212	Ferroxcube beads	3B		Philips	4322 020 34400	
FP213	Ferroxcube beads	3B		Philips	4322 020 34400	
FP214	Ferroxcube beads	3B		Philips	4322 020 34400	
FP215	Ferroxcube beads	3B		Philips	4322 020 34400	
FP216	Ferroxcube beads	3B		Philips	4322 020 34400	
FP217	Ferroxcube beads	3B		Philips	4322 020 34400	
FP218	Ferroxcube beads	3B		Philips	4322 020 34400	
FP219	Ferroxcube beads	3B		Philips	4322 020 34400	
FP220	Ferroxcube beads	3B		Philips	4322 020 34400	
FP221	Ferroxcube beads	3B		Philips	4322 020 34400	
FP222	Ferroxcube beads	3B		Philips	4322 020 34400	
FP223	Ferroxcube beads	3B		Philips	4322 020 34400	
FP224	Ferroxcube beads	3B		Philips	4322 020 34400	
FP225	Ferroxcube beads	3B		Philips	4322 020 34400	
FP226	Ferroxcube beads	3B		Philips	4322 020 34400	
FP227	Ferroxcube beads	3B		Philips	4322 020 34400	
FP228	Ferroxcube beads	3B		Philips	4322 020 34400	
FP229	Ferroxcube beads	3B		Philips	4322 020 34400	
FP230	Ferroxcube beads	3B		Philips	4322 020 34400	
R201	Resistor	47 ohm $\pm 5\%$	0.33W	Philips	2322 211 13479	
R202	Resistor	47 ohm $\pm 5\%$	0.33W	Philips	2322 211 13479	
R203	Resistor	47 ohm $\pm 5\%$	0.33W	Philips	2322 211 13479	
R204	Resistor	47 ohm $\pm 5\%$	0.33W	Philips	2322 211 13479	
R205	Resistor	47 ohm $\pm 5\%$	0.33W	Philips	2322 211 13479	

<i>Symbol</i>	<i>Description</i>		<i>Manufact.</i>		
C301	Capacitor polyester	100 nF $\pm 10\%$	100V	Siemens	B325 10-D1104-K
C302	Capacitor polyester	100 nF $\pm 10\%$	100V	Siemens	B325 10-D1104-K
C303	Capacitor polyester	680 nF $\pm 10\%$	100V	Siemens	B32560-D1684-K
C304	Capacitor polyester	150 nF $\pm 10\%$	100V	Siemens	B325 10-D1154-K
C305	Capacitor polyester	10 nF $\pm 10\%$	400V	Siemens	B325 10-D6103-K
C306	Capacitor polyester	47 nF $\pm 10\%$	250V	Siemens	B325 10-D3473-K
C307	Capacitor polyester	1 nF $\pm 10\%$	400V	Siemens	B325 10-D6102-K
C308	Capacitor polyester	1 nF $\pm 10\%$	400V	Siemens	B325 10-D6102-K
C309	Capacitor polyester	3.3 nF $\pm 10\%$	400V	Siemens	B325 10-D6332-K
C310	Capacitor polyester	470 nF $\pm 10\%$	100V	Siemens	B32560-D1474-K
C311	Capacitor polyester	1 nF $\pm 10\%$	400V	Siemens	B325 10-D6102-K
C312	Capacitor electrolytic	10 uF	35V	ERO	EKI 00 AA 210F
C313	Capacitor polyester	10 nF $\pm 10\%$	400V	Siemens	B325 10-D6103-K
C314	Capacitor electrolytic	10 uF	35V	ERO	EKI 00 AA 210F
C315	Capacitor polyester	100 nF $\pm 10\%$	100V	Siemens	B325 10-D1104-K
C316	Capacitor polyester	3.3 nF $\pm 10\%$	400V	Siemens	B325 10-D6332-K
C317	Capacitor polyester	100 nF $\pm 10\%$	100V	Siemens	B325 10-D1104-K
C318	Capacitor polyester	100 nF $\pm 10\%$	100V	Siemens	B325 10-D1104-K
C319	Capacitor polyester	1 nF	400V	Siemens	B325 10-D6102-K
C320	Capacitor polyester	1 nF $\pm 10\%$	400V	Siemens	B325 10-D6102-K
C321	Capacitor polyester	1 nF $\pm 10\%$	400V	Siemens	B325 10-D6102-K
C322	Capacitor polyester	1 uF $\pm 10\%$	250V	Siemens	B325 13-D3105-K
C323	Capacitor polyester	10 nF $\pm 50\%$	400V	Siemens	B325 10-D6103-K
C324					
C325					
C326	Capacitor polyester	220 nF $\pm 10\%$	100V	Siemens	B32560-D1224-K
C327	Capacitor polyester	220 nF $\pm 10\%$	100V	Siemens	B32560-D1224-K
C328	Capacitor polyester	100 nF $\pm 10\%$	100V	Siemens	B325 10-D1104-K
C329	Capacitor polyester	100 nF $\pm 10\%$	100V	Siemens	B325 10-D1104-K
C330	Capacitor polyester	100 nF $\pm 10\%$	100V	Siemens	B325 10-D1104-K
D301	Diode			Philips	AA143
D302	Diode			Philips	AA143
D303	Diode			Philips	BAV21
D304	Diode			Philips	BAV21
D305	Diode light emitting red.			Xciton	XC 5053Y
D306	Diode			Philips	BAV21

b

TRANSMITTER CONTROL UNIT T1130

2/7

<i>Symbol</i>	<i>Description</i>			<i>Manufact.</i>	
D307	Diode			Philips	BAV21
D308	Diode			Philips	BAV21
D309	Diode			Philips	BAV21
D310	Diode			Philips	BAV21
D311	Diode			Philips	BAV21
D312	Diode			Philips	BAV21
D313	Diode			Philips	BAV21
D314	Diode			Philips	BAV21
D315	Diode			Philips	BAV21
D316	Diode			Philips	BAV21
D317	Diode			Philips	BAV21
D318	Diode			Philips	BAV21
D319	Diode, zener			Philips	BZX 79 C15
D320	Diode			Philips	AA 143
D321	Diode			Philips	1N4448
D322	Diode			Philips	1N4448
D323	Diode			Philips	AA 143
D324	Diode			Philips	1N4448
D325	Diode			Philips	BAV21
D326	Diode			Philips	BAV21
D327	Diode			Philips	BAV21
D328	Diode			Philips	BAV21
D329	Diode			Philips	BAV21
D330	Diode			Philips	BAV21
D331	Diode			Philips	BAV21
D332	Diode			Philips	BAV21
D333	Diode			Philips	BAV21
D334	Diode			Philips	BAV21
D335	Diode			Philips	BAV21
RA301	Resistor array	8x 10 kohm $\pm 5\%$	0.125W	ITT	UR8 10 kohm $\pm 5\%$
R301	Resistor	22 kohm $\pm 5\%$	0.33W	Philips	2322 211 13223
R302	Preset potmeter	10 kohm		Philips	2322 410 03357
R303	Resistor	1.5 kohm $\pm 5\%$	0.33W	Philips	2322 211 13152
R304	Resistor	820 ohm $\pm 5\%$	0.33W	Philips	2322 211 13821
R305	Resistor	5.6 kohm $\pm 5\%$	0.33W	Philips	2322 211 13562

b		TRANSMITTER CONTROL UNIT T1130			3/7	
Symbol	Description			Manufact.		
R306	Resistor	5.6 kohm	+5%	0.33W	Philips	2322 211 13562
R307	Resistor	5.6 kohm	+5%	0.33W	Philips	2322 211 13562
R308	Resistor	5.6 kohm	+5%	0.33W	Philips	2322 211 13562
R309	Resistor	5.6 kohm	+5%	0.33W	Philips	2322 211 13562
R310	Resistor	5.6 kohm	+5%	0.33W	Philips	2322 211 13562
R311	Resistor	5.6 kohm	+5%	0.33W	Philips	2322 211 13562
R312	Resistor	5.6 kohm	+5%	0.33W	Philips	2322 211 13562
R313	Resistor	5.6 kohm	+5%	0.33W	Philips	2322 211 13562
R314	Preset potmeter	4.7 kohm		0.5W	Philips	2322 482 30472
R315	Resistor	100 kohm	+5%			
R316	Preset potmeter	4.7 kohm		0.5W	Philips	2322 482 30472
R317	Resistor	100 kohm	+5%	0.33W	Philips	2322 211 13104
R318	Preset potmeter	4.7 kohm		0.5W	Philips	2322 482 30472
R319	Resistor	100 kohm	+5%	0.33W	Philips	2322 211 13104
R320	Preset potmeter	4.7 kohm		0.5W	Philips	2322 482 30472
R321	Resistor	100 kohm	+5%	0.33W	Philips	2322 211 13104
R322	Preset potmeter	4.7 kohm		0.5W	Philips	2322 482 30472
R323	Resistor	100 kohm	+5%	0.33W	Philips	2322 211 13104
R324	Preset potmeter	4.7 kohm		0.5W	Philips	2322 482 30472
R325	Resistor	100 kohm	+5%	0.33W	Philips	2322 211 13104
R326	Preset potmeter	4.7 kohm		0.5W	Philips	2322 482 30472
R327	Resistor	100 kohm	+5%	0.33W	Philips	2322 211 13104
R328	Preset potmeter	4.7 kohm		0.5W	Philips	2322 482 30472
R329	Resistor	100 kohm	+5%	0.33W	Philips	2322 211 13104
R330	Preset potmeter	4.7 kohm		0.5W	Philips	2322 482 30472
R331	Resistor	100 kohm	+5%	0.33W	Philips	2322 211 13104
R332	Resistor	22 kohm	+5%	0.33W	Philips	2322 211 13223
R333	Resistor	2.7 kohm	+5%	0.5W	Philips	2322 212 13272
R334	Resistor	150 ohm	+5%	0.33W	Philips	2322 211 13151
R335	Resistor	270 kohm	+5%	0.33W	Philips	2322 211 13274
R336	Resistor	680 kohm	+5%	0.33W	Philips	2322 211 13684
R337	Resistor	1 Mohm	+5%	0.33W	Philips	2322 211 13105
R338	Resistor	330 kohm	+5%	0.33W	Philips	2322 211 13334
R339	Resistor	10 kohm	+5%	0.33W	Philips	2322 211 13103
R340	Resistor	1.8 Mohm	+5%	0.33W	Philips	2322 211 13185
R341	Resistor	10 kohm	+5%	0.33W	Philips	2322 211 13103
R342	Resistor	10 kohm	+5%	0.33W	Philips	2322 211 13103
R343	Resistor	1 Mohm	+5%	0.33W	Philips	2322 211 13105
R344	Resistor	1.8 Mohm	+5%	0.33W	Philips	2322 211 13185
R345	Preset potmeter	10 kohm			Philips	2322 410 03357
R346	Resistor	22 kohm	+5%	0.33W	Philips	2322 211 13223

b

TRANSMITTER CONTROL UNIT T1130

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Symbol	Description	Manufact.	
R347	Resistor 270 kohm \pm 5%	0.33W Philips	2322 211 13274
R348	Resistor 270 kohm \pm 5%	0.33W Philips	2322 211 13274
R349	Resistor 39 kohm \pm 5%	0.33W Philips	2322 211 13393
R350	Resistor 100 kohm \pm 5%	0.33W Philips	2322 211 13104
R351	Resistor 100 kohm \pm 5%	0.33W Philips	2322 211 13104
R352	Resistor 100 kohm \pm 5%	0.33W Philips	2322 211 13104
R353	Resistor 10 Mohm \pm 5%	0.33W Philips	2322 211 12106
R354	Resistor 47 kohm \pm 5%	0.33W Philips	2322 211 13473
R355	Resistor 100 kohm \pm 5%	0.33W Philips	2322 211 13104
R356	Resistor 33 kohm \pm 5%	0.33W Philips	2322 211 13333
R357	Resistor 10 kohm \pm 5%	0.33W Philips	2322 211 13103
R358	Resistor 10 kohm \pm 5%	0.33W Philips	2322 211 13103
R359	Resistor 22 kohm \pm 5%	0.33W Philips	2322 211 13223
R360	Resistor 1 Mohm \pm 5%	0.33W Philips	2322 211 13105
R361	Resistor 10 kohm \pm 5%	0.33W Philips	2322 211 13103
R362	Resistor 3.3 kohm \pm 5%	0.33W Philips	2322 211 13334
R363	Resistor 15 kohm \pm 5%	0.33W Philips	2322 211 13153
R364	Resistor 10 kohm \pm 5%	0.33W Philips	2322 211 13103
R365	Resistor 10 kohm \pm 5%	0.33W Philips	2322 211 13103
R366	Resistor 10 kohm \pm 5%	0.33W Philips	2322 211 13103
R367	Resistor 10 kohm \pm 5%	0.33W Philips	2322 211 13103
R368	Resistor 18 kohm \pm 5%	0.33W Philips	2322 211 13183
R369	Resistor 10 kohm \pm 5%	0.33W Philips	2322 211 13103
R370	Resistor 100 kohm \pm 5%	0.33W Philips	2322 211 13104
R371	Resistor 5.6 kohm \pm 5%	0.33W Philips	2322 211 13562
R372	Resistor 10 kohm \pm 5%	0.33W Philips	2322 211 13103
R373	Resistor 10 kohm \pm 5%	0.33W Philips	2322 211 13103
R374	Resistor 10 kohm \pm 5%	0.33W Philips	2322 211 13103
R375	Resistor 10 kohm \pm 5%	0.33W Philips	2322 211 13103
R376	Resistor 5.6 kohm \pm 5%	0.33W Philips	2322 211 13562
R377	Resistor 5.6 kohm \pm 5%	0.33W Philips	2322 211 13562
R378	Resistor 680 ohm \pm 5%	0.33W Philips	2322 211 13681
R379	Resistor 5.6 kohm \pm 5%	0.33W Philips	2322 211 13562
R380	Resistor 150 ohm \pm 5%	1.15W Philips	2322 214 13151
R381	Resistor 1 kohm \pm 5%	0.33W Philips	2322 211 13102
R382	Resistor 1.8 kohm \pm 5%	0.33W Philips	2322 211 13182
R383	Resistor 10 kohm \pm 5%	0.33W Philips	2322 211 13103
R384	Resistor 2.2 Mohm \pm 5%	0.33W Philips	2322 211 12225
R385	Resistor 10 kohm \pm 5%	0.33W Philips	2322 211 13103
R386	Resistor 3.9 Mohm \pm 5%	0.33W Philips	2322 211 12395
R387	Resistor 3.3 kohm \pm 5%	0.33W Philips	2322 211 13332

<i>Symbol</i>	<i>Description</i>			<i>Manufact.</i>		
R388	Resistor	5.6 kohm	+5%	0.33W	Philips	2322 211 13562
R389	Resistor	1 kohm	+5%	0.33W	Philips	2322 211 13102
R390	Resistor	10 kohm	+5%	0.33W	Philips	2322 211 13103
R391	Resistor	15 kohm	+5%	0.33W	Philips	2322 211 13153
R392	Resistor	5.6 kohm	+5%	0.33W	Philips	2322 211 13562
R393	Resistor	5.6 kohm	+5%	0.33W	Philips	2322 211 13562
R394	Resistor	5.6 kohm	+5%	0.33W	Philips	2322 211 13562
R395	Resistor	10 kohm	+5%	0.33W	Philips	2322 211 13103
R396	Resistor	1 kohm	+5%	0.33W	Philips	2322 211 13102
R397	Resistor	6.8 kohm	+5%	0.33W	Philips	2322 211 13682
R398	Resistor	33 kohm	+5%	0.33W	Philips	2322 211 13333
R399	Preset potmeter	10 kohm			Philips	2322 410 03357
R301a	Resistor	39 kohm	+5%	0.33W	Philips	2322 211 13393
R302a	Resistor	1 kohm	+5%	0.33W	Philips	2322 211 13102
R303a	Resistor	3.9 kohm	+5%	0.33W	Philips	2322 211 13392
R304a	Resistor	100 kohm	+5%	0.33W	Philips	2322 211 13104
R305a	Resistor	10 kohm	+5%	0.33W	Philips	2322 211 13103
R306a	Resistor	100 kohm	+5%	0.33W	Philips	2322 211 13104
R307a	Resistor	100 kohm	+5%	0.33W	Philips	2322 211 13104
R308a	Resistor	1 Mohm	+5%	0.33W	Philips	2322 211 13105
R309a	Resistor	3.3 kohm	+5%	0.33W	Philips	2322 211 13332
R310a	Resistor	10 kohm	+5%	0.33W	Philips	2322 211 13103
R311a	Resistor	100 kohm	+5%	0.33W	Philips	2322 211 13104
R312a	Resistor	100 kohm	+5%	0.33W	Philips	2322 211 13104
R313a	Resistor	3.3 kohm	+5%	0.33W	Philips	2322 211 13332
R314a	Resistor	5.6 kohm	+5%	0.33W	Philips	2322 211 13562
R315a	Resistor	10 Mohm	+5%	0.33W	Philips	2322 211 12106
R316a	Resistor	100 kohm	+5%	0.33W	Philips	2322 211 13104
R317a	Resistor	10 kohm	+5%	0.33W	Philips	2322 211 13103
R318a	Preset potmeter	4.7 kohm			Philips	2322 410 03356
R319a	Resistor	22 kohm	+5%	0.33W	Philips	2322 211 13223
R320a	Resistor	100 kohm	+5%	0.33W	Philips	2322 211 13104
R321a	Resistor	100 kohm	+5%	0.33W	Philips	2322 211 13104
R322a	Resistor	22 kohm	+5%	0.33W	Philips	2322 211 13223
R323a	Resistor	8.2 kohm	+5%	0.33W	Philips	2322 211 13822
R324a	Resistor	100 kohm	+5%	0.33W	Philips	2322 211 13104
R325a	Resistor	3.3 kohm	+5%	0.33W	Philips	2322 211 13332
R326a	Resistor	100 kohm	+5%	0.33W	Philips	2322 211 13104
R327a	Resistor	100 kohm	+5%	0.33W	Philips	2322 211 13104
R328a	Resistor	47 kohm	+5%	0.33W	Philips	2322 211 13473
R329a	Preset potmeter	10 kohm			Philips	2322 410 03357

b

TRANSMITTER CONTROL UNIT T1130

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<i>Symbol</i>	<i>Description</i>			<i>Manufact.</i>	
R330a	Resistor	820 ohm	+5%	0.33W Philips	2322 211 13821
R331a	Resistor	3.3 kohm	+5%	0.33W Philips	2322 211 13332
R332a	Resistor	100 kohm	+5%	0.33W Philips	2322 211 13104
R333a	Resistor	1 Mohm	+5%	0.33W Philips	2322 211 13105
R334a	Preset potmeter	100 ohm		Philips	2322 410 03352
R335a	Resistor	100 kohm	+5%	0.33W Philips	2322 211 13104
R336a	Resistor	10 kohm	+5%	0.33W Philips	2322 211 13103
R337a	Resistor	10 kohm	+5%	0.33W Philips	2322 211 13103
R338a	Resistor	180 ohm	+5%	0.33W Philips	2322 211 13181
R339a	Resistor	120 kohm	+5%	0.33W Philips	2322 211 13124
R340a	Resistor	2.7 kohm	+5%	0.33W Philips	2322 211 13272
R341a	Resistor	2.7 kohm	+5%	0.33W Philips	2322 211 13272
R342a	Resistor	82 ohm	+5%	0.33W Philips	2322 211 13829
R343a	Resistor	2.7 kohm	+5%	0.33W Philips	2322 211 13272
R344a	Resistor	2.7 kohm	+5%	0.33W Philips	2322 211 13272
R345a	Resistor	2.7 kohm	+5%	0.33W Philips	2322 211 13272
R346a	Resistor	2.7 kohm	+5%	0.33W Philips	2322 211 13272
R347a	Resistor	2.7 kohm	+5%	0.33W Philips	2322 211 13272
R348a	Resistor	2.7 kohm	+5%	0.33W Philips	2322 211 13272
R349a	Resistor	2.7 kohm	+5%	0.33W Philips	2322 211 13272
RE301	Relay	24V		National	HB2-DC-24V
S301	Switch			ALCO	MSSA 2350R
S302	Switch			ALCO	MSS 2250R
S303	Switch			C&K	SPDT AV2 8125
S304	Switch			C&K	SPDT AV2 8125
S305	Switch			ALCO	MSS 2250R
T301	Transistor			Philips	BC327-25
T302	Transistor			Philips	BC327-25
T303	Transistor			Philips	BC327-25
T304	Transistor			Philips	BC327-25
T305	Transistor			Philips	BC327-25
T306	Transistor			Philips	BC327-25

<i>Symbol</i>	<i>Description</i>	<i>Manufact.</i>	
T307	Transistor	Philips	BC327-25
T308	Transistor	Philips	BC327-25
T309	Transistor	Philips	BC327-25
T310	Transistor	Philips	BC338
T311	Transistor	Philips	BC338
T312	Transistor	Philips	BC338
T313	Transistor	Philips	BC338
T314	Transistor	Philips	BD138
T315	Transistor	Philips	BC328
T310	Transistor	Philips	BC338
T317	Transistor	Philips	BC328
T318	Transistor	Philips	2N2368
T319	Transistor	Philips	BC338
T320	Transistor	Philips	BC338
T321	Transistor	Philips	BC338
T322	Transistor	Philips	BC14 1-10
IC301	Integrated circuit	MMI	6330-1
IC302	Integrated circuit	Motorola	MC14028B
IC303	Integrated circuit	Motorola	MC14028B
IC304	Integrated circuit	Texas	SN74LS06
IC305	Integrated circuit	Texas	SN74LS06
IC306	Integrated circuit	Texas	SN74LS06
IC307	Integrated circuit	Motorola	LM324
IC308	Integrated circuit	Motorola	MC14093B
IC309	Integrated circuit	Motorola	MC14093B
IC310	Integrated circuit	Motorola	MC14049B
IC311	Integrated circuit	Motorola	LM339
IC312	Integrated circuit	Motorola	MC14071B
IC313	Integrated circuit	Motorola	MC14043B
IC314	Integrated circuit	Motorola	MC14072B
IC315	Integrated circuit	Texas	NE 555P
IC316	Integrated circuit	Motorola	LM1458
IC317	Integrated circuit	Motorola	MC 14007B
IC318	Integrated circuit	Motorola	MC 14017B

a

FILTER SWITCH/DIRECTION COUPLER T1130

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Symbol	Description			Manufact.	
C401	Capacitor, ceramic	5.6 pF ± 0.5 pF	400V	Ferroperm	9/0112.9
C402	Capacitor, ceramic	220 pF $\pm 10\%$	50V	K.C.K.	HE 11 SJ CH 221K
C403	Capacitor, ceramic	110 pF $\pm 10\%$	500V	K.C.K.	HM 11 SJ 111K
C404	Capacitor, ceramic	110 pF $\pm 10\%$	500V	K.C.K.	HM 11 SJ 111K
C405	Capacitor, trimmer	8-80 pF		DAU	009.4601.080
C406	Capacitor, ceramic	220 pF $\pm 10\%$	50V	K.C.K.	HE 11 SJ CH 221K
C407	Capacitor, ceramic	110 pF $\pm 10\%$	500V	K.C.K.	HM 11 SJ 111K
C408	Capacitor, ceramic	110 pF $\pm 10\%$	500V	K.C.K.	HM 11 SJ 111K
C409	Capacitor, polyester	1 nF $\pm 10\%$	250V	Siemens	B32510-D6102-K
C4 10	Capacitor, polyester	150 nF $\pm 10\%$	250V	Siemens	B32510-D1154-K
C4 11	Capacitor, polyester	150 nF $\pm 10\%$	250V	Siemens	B32510-D1154-K
C4 12	Capacitor, polyester	10 nF $\pm 10\%$	250V	Siemens	B32510-D6103-K
C4 13	Capacitor, polyester	10 nF $\pm 10\%$	250V	Siemens	B32510-D6103-K
C4 14	Capacitor, polyester	10 nF $\pm 10\%$	250V	Siemens	B32510-D6103-K
C4 15	Capacitor, polyester	10 nF $\pm 10\%$	250V	Siemens	B32510-D6103-K
C4 16	Capacitor, polyester	100 nF $\pm 10\%$	250V	Siemens	B32510-D1104-K
D401	Diode			Philips	BAV21
D402	Diode			Philips	BAV21
D403	Diode			Philips	BAV21
D404	Diode			Philips	BAV21
D405	Diode			Philips	BAV21
D406	Diode			Philips	BAV21
D407	Diode			Philips	AA143
D408	Diode			Philips	AA143
D409	Diode			Philips	1N4448
D4 10	Diode			Philips	1N4448
IC401	Integrated circuit			Motorola	LM324
R401	Resistor	3.9 kohm $\pm 5\%$	0.33W	Philips	2322 211 13392
R402	Resistor	56 kohm $\pm 5\%$	0.33W	Philips	2322 211 13563
R403	Resistor	100 ohm $\pm 5\%$	0.33W	Philips	2322 211 13101
R404	Resistor	100 ohm $\pm 5\%$	0.33W	Philips	2322 211 13101
R405	Resistor	100 ohm $\pm 5\%$	0.33W	Philips	2322 211 13101
R406	Resistor	100 ohm $\pm 5\%$	0.33W	Philips	2322 211 13101
R407	Resistor	56 kohm $\pm 5\%$	0.33W	Philips	2322 211 13563
R408	Resistor	220 kohm $\pm 5\%$	0.33W	Philips	2322 211 13224
R409	Resistor	220 kohm $\pm 5\%$	0.33W	Philips	2322 211 13224

<i>Symbol</i>	<i>Description</i>			<i>Manufact.</i>		
R503	Resistor	100 kohm	+5%	0.33W	Philips	2322 211 13103
R504	Resistor	8.2 kohm	+5%	0.33W	Philips	2322 211 13822
R505	Resistor	2.7 kohm	+5%	0.33W	Philips	2322 211 13272
R506	Resistor	10 kohm	+5%	0.33W	Philips	2322 211 13103
R507	Resistor	8.2 kohm	+5%	0.33W	Philips	2322 211 13822
R508	Resistor	2.7 kohm	+5%	0.33W	Philips	2322 211 13272
R509	Resistor	10 kohm	+5%	0.33W	Philips	2322 211 13103
R510	Resistor	8.2 kohm	+5%	0.33W	Philips	2322 211 13822
R511	Resistor	2.7 kohm	+5%	0.33W	Philips	2322 211 13272
R512	Resistor	10 kohm	+5%	0.33W	Philips	2322 211 13103
R513	Resistor	8.2 kohm	+5%	0.33W	Philips	2322 211 13822
R514	Resistor	2.7 kohm	+5%	0.33W	Philips	2322 211 13272
R515	Resistor	10 kohm	+5%	0.33W	Philips	2322 211 13103
R516	Resistor	10 kohm	+5%	0.33W	Philips	2322 211 13103
R517	Resistor	10 kohm	+5%	0.33W	Philips	2322 211 13103
R518	Resistor	10 kohm	+5%	0.33W	Philips	2322 211 13103
R519	Resistor	10 kohm	+5%	0.33W	Philips	2322 211 13103
R520	Resistor	8.2 kohm	+5%	0.33W	Philips	2322 211 13822
R521	Resistor	2.7 kohm	+5%	0.33W	Philips	2322 211 13272
R522	Resistor	10 kohm	+5%	0.33W	Philips	2322 211 13103
R523	Resistor	8.2 kohm	+5%	0.33W	Philips	2322 211 13822
R524	Resistor	820 ohm	+5%	0.5W	Philips	2322 212 13821
R525	Resistor	1 kohm	+5%	0.33W	Philips	2322 211 13102
R526	Resistor	8.2 kohm	+5%	0.33W	Philips	2322 211 13822
R527	Resistor	2.7 kohm	+5%	0.33W	Philips	2322 211 13272
R528	Resistor	10 kohm	+5%	0.33W	Philips	2322 211 13103
R529	Resistor	8.2 kohm	+5%	0.33W	Philips	2322 211 13822
R530	Resistor	820 ohm	+5%	0.5W	Philips	2322 212 13821
R531	Resistor	1 kohm	+5%	0.33W	Philips	2322 211 13102
R532	Resistor	8.2 kohm	+5%	0.33W	Philips	2322 211 13822
R533	Resistor	2.7 kohm	+5%	0.33W	Philips	2322 211 13272
R534	Resistor	10 kohm	+5%	0.33W	Philips	2322 211 13103
R535	Resistor	8.2 kohm	+5%	0.33W	Philips	2322 211 13822
R536	Resistor	2.7 kohm	+5%	0.33W	Philips	2322 211 13272
R537	Resistor	10 kohm	+5%	0.33W	Philips	2322 211 13103
R538	Resistor	8.2 kohm	+5%	0.33W	Philips	2322 211 13822
R539	Resistor	2.7 kohm	+5%	0.33W	Philips	2322 211 13272
R540	Resistor	10 kohm	+5%	0.33W	Philips	2322 211 13103
R541	Resistor	1 kohm	+5%	0.33W	Philips	2322 211 13102
R542	Resistor	10 kohm	+5%	0.33W	Philips	2322 211 13103

b

TUNER CONTROL UNIT T1130

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Symbol	Description	Manufact.	
R543	Resistor 100 ohm $\pm 5\%$	Philips	2322 211 13101
R544	Resistor 10 kohm $\pm 5\%$	ITT	UR 8 10 kohm $\pm 5\%$
R545	Resistor 10 kohm	ITT	UR 8 10 kohm $\pm 5\%$
R546	Resistor 10 kohm $\pm 5\%$	ITT	UR 8 10 kohm $\pm 5\%$
R547	Resistor 10 kohm $\pm 5\%$	ITT	UR 8 10 kohm $\pm 5\%$
R548	Resistor 10 kohm $\pm 5\%$	ITT	UR 8 10 kohm $\pm 5\%$
R549	Resistor 10 kohm $\pm 5\%$	ITT	UR 8 10 kohm $\pm 5\%$
R550	Resistor 10 kohm $\pm 5\%$	ITT	UR 8 10 kohm $\pm 5\%$
R551	Resistor 10 kohm $\pm 5\%$	ITT	UR 8 10 kohm $\pm 5\%$
R552	Resistor 33 kohm $\pm 5\%$	Philips	2322 211 13333
R553	Resistor 3.3 kohm $\pm 5\%$	Philips	2322 211 13332
R554	Resistor 100 ohm $\pm 5\%$	Philips	2322 211 13101
R555	Resistor 1 kohm $\pm 5\%$	Philips	2322 211 13102
R556	Resistor 390 ohm $\pm 5\%$	Philips	2322 211 13391
R557	Resistor 1 kohm $\pm 5\%$	Philips	2322 211 13102
R558	Resistor 2.7 kohm $\pm 5\%$	Philips	2322 211 13272
R559	Resistor 560 kohm $\pm 5\%$	Philips	2322 211 13561
R560	Resistor 10 kohm $\pm 5\%$	Philips	2322 211 13103
R561	Resistor 1 kohm $\pm 5\%$	Philips	2322 211 13102
R562	Resistor 47 ohm $\pm 5\%$	Philips	2322 211 13479
R563	Resistor 10 kohm $\pm 5\%$	Philips	2322 211 13103
R564	Resistor 390 ohm $\pm 5\%$	Philips	2322 211 13391
R565	Resistor 1 kohm $\pm 5\%$	Philips	2223 211 13102
S501	Switch, 16 pos.	AB	235-H
S502	Switch, 16 pos.	AB	235-H
T501	Transistor	Philips	BC548
T502	Transistor	Philips	BC548
T503	Transistor	Philips	BC327
T504	Transistor	Philips	BC548
T505	Transistor	Philips	BC327
T506	Transistor	Philips	BC548
T507	Transistor	Philips	BC327
T508	Transistor	Philips	BC548
T509	Transistor	Philips	BC327
T510	Transistor	Philips	BC548
T511	Transistor	Philips	BC327
T512	Transistor	Philips	BC548
T513	Transistor	Philips	BC327
T514	Transistor	Philips	BC548

MODULE NO: 900

a LP-FILTER 4.3 - 8.5 MHz T1130

1/1

<i>Symbol</i>	<i>Description</i>	<i>Manufact.</i>
C901	Capacitor, Mica 99.1 pF	S.P.
C902	Capacitor, Mica 136 pF	S.P.
C903	Capacitor, Mica 508 pF	S.P.
C904	Capacitor, Mica 536 pF	S.P.
C905	Capacitor, Mica 508 pF	S.P.
L901	Inductor 798 nH	S.P.
L902	Inductor 545 nH	S.P.
L903	Inductor 1.06 uH	S.P.
L904	Inductor 1.87 uH	S.P.
L905	Inductor 1.87 uH	S.P.
L906	Inductor 1.06 uH	S.P.

a

LP-FILTER 8.5 - 16.9 MHz T1130

1/1

<i>Symbol</i>	<i>Description</i>	<i>Manufact.</i>
C1001	Capacitor, Mica 50.2 pF	S.P.
C1002	Capacitor, Mica 68.7 pF	S.P.
C1003	Capacitor, Mica 255 pF	S.P.
C1004	Capacitor, Mica 282 pF	S.P.
C1005	Capacitor, Mica 255 pF	S.P.
L1001	Inductor 404 nH	S.P.
L1002	Inductor 275 nH	S.P.
L1003	Inductor 530 nH	S.P.
L1004	Inductor 940 nH	S.P.
L1005	Inductor 940 nH	S.P.
L1006	Inductor 530 nH	S.P.

MODULE NO: 1100

a LP-FILTER 16.9 - 28 MHz T1130 1/1

<i>Symbol</i>	<i>Description</i>	<i>Manufact.</i>
C1101	Capacitor, Mica 26.7 pF	S.P.
C1102	Capacitor, Mica 36.5 pF	S.P.
C1103	Capacitor, Mica 147 pF	S.P.
C1104	Capacitor, Mica 163 pF	S.P.
C1105	Capacitor, Mica 147 pF	S.P.
L1101	Inductor 214 nH	S.P.
L1102	Inductor 146 nH	S.P.
L1103	Inductor 305 nH	S.P.
L1104	Inductor 542 nH	S.P.
L1105	Inductor 542 nH	S.P.
L1106	Inductor 305 nH	S.P.

a		P.A. UNIT T1130			1/4	
Symbol	Description			Manufact.		
C1201	Capacitor polyester	100 nF	100V	ERO	MKT1822-410-01	
C1202	Capacitor electrolytic	1 uF	50V	ROE	EKI 00AA 110H	
C1203	Capacitor electrolytic	1 uF	50V	ROE	EKI 00AA 110H	
C1204	Capacitor polyester	100 nF	100V	ERO	MKT1822-410-01	
C1205	Capacitor polyester	100 nF	100V	ERO	MKT1822-410-01	
C1206	Capacitor polyester	100 nF	100V	ERO	MKT1822-410-01	
C1207	Capacitor ceramic	150 pF 10%	25V	Ferroperm	9/0116.8	
C1208	Capacitor polyester	100 nF	100V	ERO	MKT1822-410-01	
C1209	Capacitor polyester	100 nF	100V	ERO	MKT1822-410-01	
C1210	Capacitor polyester	100 nF	100V	Siemens	B32510-D1104-K	
C1211	Capacitor polyester	100 nF	100V	ERO	MKT1822-410-01	
C1212	Capacitor polyester	100 nF	100V	ERO	MKT1822-410-01	
C1213	Capacitor polyester	100 nF	100V	ERO	MKT1822-410-01	
C1214	Capacitor polypropylen	560 pF	630V	Philips	2222 458 65601	
C1215	Capacitor polypropylen	1100 pF	630V	Philips	2222 458 61102	
C1216	Capacitor polypropylen	1100 pF	630V	Philips	2222 458 61102	
C1217	Capacitor electrolytic	100 uF	16V	ROE	EKM 00CC 310D	
C1218	Capacitor electrolytic	100 uF	16V	ROE	EKM 00CC 310D	
C1219	Capacitor polyester	100 nF	100V	ERO	MKT1822-410-01	
C1220	Capacitor polyester	100 nF	100V	ERO	MKT1822-410-01	
C1221	Capacitor polyester	100 nF	100V	ERO	MKT1822-410-01	
C1222	Capacitor polyester	100 nF	100V	ERO	MKT1822-410-01	
C1223	Capacitor polyester	100 nF	100V	ERO	MKT1822-410-01	
C1224	Capacitor polyester	100 nF	100V	ERO	MKT1822-410-01	
C1225	Capacitor polyester	100 nF	100V	ERO	MKT1822-410-01	
C1226	Capacitor polyester	100 nF	100V	ERO	MKT1822-410-01	
C1227	Capacitor polypropylen	33 nF 10%	250V	ERO	MKP1841-333-25-5	
C1228	Capacitor polypropylen	33 nF 10%	250V	ERO	MKP1841-333-25-5	
C1229	Capacitor polypropylen	100 pF	630V	Philips	2222 458 61001	
C1230	Capacitor polyester	100 nF	100V	ERO	MKT1822-410-01	
C1231	Capacitor electrolytic	470 uF	10V	ROE	EB00 GC 347C	
C1232	Capacitor mica	2.4 nF 10%	250V	JAHRE	49.54/2400/10/250	
C1233	Capacitor mica	2.4 nF 10%	250V	JAHRE	49.54/2400/10/250	
C1234	Capacitor mica	2.4 nF 10%	250V	JAHRE	49.54/2400/10/250	
C1235	Capacitor	Factory selected				
C1236	Capacitor polyester	100 nF	100V	ERO	MKT1822-410-01	
C1237	Capacitor polyester	100 nF	100V	ERO	MKT1822-410-01	
C1238	Capacitor polypropylen	100 nF 10%	100V	ERO	MKT1841-410-01	
C1239	Capacitor polypropylen	100 nF 10%	100V	ERO	MKT1841-410-01	
C1240	Capacitor polypropylen	100 nF 10%	100V	ERO	MKT1841-410-01	

MODULE NO: 1200

a							P.A. UNIT T1130		2/4	
Symbol	Description				Manufact.					
C1241	Capacitor polypropylen	100 nF	10%	100V	ERO	MKT1841-410-01				
C1242	Capacitor polypropylen	100 nF	10%	100V	ERO	MKT1841-410-01				
C1243	Capacitor polypropylen	100 nF	10%	100V	ERO	MKT1841-410-01				
C1244	Capacitor mica	270 pF	10%	500V	JAHRE	49.54/270/10/500				
C1245	Capacitor mica	15 nF	10%	100V	SOSHIN	DM20C153K1ICR				
C1246	Capacitor mica	15 nF	10%	100V	SOSHIN	DM20C153K1ICR				
C1247	Capacitor polypropylen	33 nF	10%	250V	ERO	MKP1841-333-25-5				
C1248	Capacitor polypropylen	33 nF	10%	250V	ERO	MKP1841-333-15-5				
C1249	Capacitor polypropylen	33 nF	10%	250V	ERO	MKP1841-333-15-5				
C1250	Capacitor polypropylen	33 nF	10%	250V	ERO	MKP1841-333-15-5				
C1251	Capacitor polypropylen	33 nF	10%	250V	ERO	MKP1841-333-25-5				
C1252	Capacitor polypropylen	33 nF	10%	250V	ERO	MKP1841-333-25-5				
C1253	Capacitor mica	2.4 nF	10%	250V	JAHRE	49.54/2400/10/250				
C1254	Capacitor mica	2.4 nF	10%	250V	JAHRE	49.54/2400/10/250				
C1255	Capacitor electrolytic	1 uF		50V	ROE	EK100AA110H				
C1256	Capacitor electrolytic	10 uF		63V	ROE	EBOOCA210J				
C1257	Capacitor electrolytic	10 uF		63V	ROE	EBOOCA210J				
R1201	Resistor	180 ohm	5%	0.33W	Philips	2322 211 13181				
R1202	Resistor	10 ohm	5%	0.33W	Philips	2322 211 13109				
R1203	Resistor	680 ohm	5%	0.33W	Philips	2322 211 13681				
R1204	Resistor	680 ohm	5%	0.33W	Philips	2322 211 13681				
R1205	Resistor	820 ohm	5%	0.33W	Philips	2322 211 13821				
R1206	Resistor	820 ohm	5%	0.33W	Philips	2322 211 13821				
R1207	Resistor	470 ohm	5%	0.33W	Philips	2322 211 13471				
R1208	Resistor	470 ohm	5%	0.33W	Philips	2322 211 13471				
R1209	Resistor	82 ohm	5%	2.5W	Philips	2322 192 38209				
R1210	Resistor	82 ohm	5%	2.5W	Philips	2322 192 38209				
R1211	Resistor	15 ohm	5%	0.33W	Philips	2322 211 13159				
R1212	Resistor	22 ohm	5%	0.33W	Philips	2322 211 13229				
R1213	Resistor	1.78kohm	1%	0.25W	Philips	2322 150 51782				
R1214	Resistor	2.67kohm	1%	0.25W	Philips	2322 150 52672				
R1215	Resistor	15kohm	5%	0.33W	Philips	2322 211 13153				
R1216	Resistor	1.8kohm	5%	0.33W	Philips	2322 211 13182				
R1217	Resistor	1.8kohm	5%	0.5W	Philips	2322 212 13182				
R1218	Resistor	3.3kohm	5%	0.33W	Philips	2322 211 13332				
R1219	Resistor	10 ohm	5%	0.33W	Philips	2322 211 13109				
R1220	Resistor preset	22 ohm			A.B.	HC10P-22 ohm				
R1221	Resistor	2.2kohm	5%	2.5W	Philips	2322 192 32202				
R1222	Resistor	22 ohm	5%	0.33W	Philips	2322 211 13229				
R1224	Resistor	8.2 ohm	5%	0.33W	Philips	2322 211 13828				

a		P.A. UNIT T1130			3/4	
Symbol	Description				Manufact.	
R1225	Resistor	8.2 ohm 5%	0.33W	Philips	2322 211 13828	
R1226	Resistor	2.2 ohm 5%	0.33W	Philips	2322 211 13228	
R1227	Resistor	2.2 ohm 5%	0.33W	Philips	2322 211 13228	
R1228	Resistor	18 ohm 5%	0.33W	Philips	2322 211 13189	
R1229	Resistor	18 ohm 5%	0.33W	Philips	2322 211 13189	
R1230	Resistor	33 ohm 5%	0.33W	Philips	2322 211 13339	
R1231	Resistor	33 ohm 5%	0.33W	Philips	2322 211 13339	
R1232	Resistor preset	5 ohm 10%		A.B.	TYP 115-Q8-5 ohm	
R1233	Resistor	560 ohm 5%	4W	Philips	2322 330 22561	
R1234	Resistor	22 ohm 5%	0.33W	Philips	2322 211 13229	
R1235	Resistor					
R1236	Resistor	6.8 ohm 5%	2.5W	Philips	2322 192 36808	
R1237	Resistor	6.8 ohm 5%	2.5W	Philips	2322 192 36808	
R1238	Resistor	6.8 ohm 5%	2.5W	Philips	2322 192 36808	
R1239	Resistor	6.8 ohm 5%	2.5W	Philips	2322 192 36808	
R1240	Resistor	2.7 ohm 5%	2.5W	Philips	2322 192 32708	
R1241	Resistor	2.7 ohm 5%	2.5W	Philips	2322 192 32708	
R1242	Resistor	2.7 ohm 5%	2.5W	Philips	2322 192 32708	
R1243	Resistor	2.7 ohm 5%	2.5W	Philips	2322 192 32708	
R1244	Resistor	10 ohm 5%	2.5W	Philips	2322 192 31009	
R1245	Resistor	10 ohm 5%	2.5W	Philips	2322 192 31009	
R1246	Resistor	10 ohm 5%	2.5W	Philips	2322 192 31009	
R1247	Resistor	10 ohm 5%	2.5W	Philips	2322 192 31009	
FP1201	Ferroxcube bead			Philips	4322 020 34400	
FP1202	Ferroxcube bead			Philips	4322 020 34400	
FP1203	Ferroxcube bead			Philips	4322 020 34400	
FP1204	Ferroxcube bead			Philips	4322 020 34400	
FP1205	Ferroxcube bead			Philips	4322 020 34400	
FP1206	Ferroxcube bead			Philips	4322 020 34400	
FP1207	Ferroxcube bead			Philips	4322 020 34400	
FP1208	Ferroxcube bead			Philips	4322 020 34400	
L1201	Coil	2.2 uH 10%		Ferroperm	1582	
L1202	Coil			S.P.	TL067	
L1203	Coil			S.P.	TL067	
L1204	Coil			S.P.	TL067	
L1205	Coil			S.P.	TL067	
L1206	Coil			S.P.	TL067	

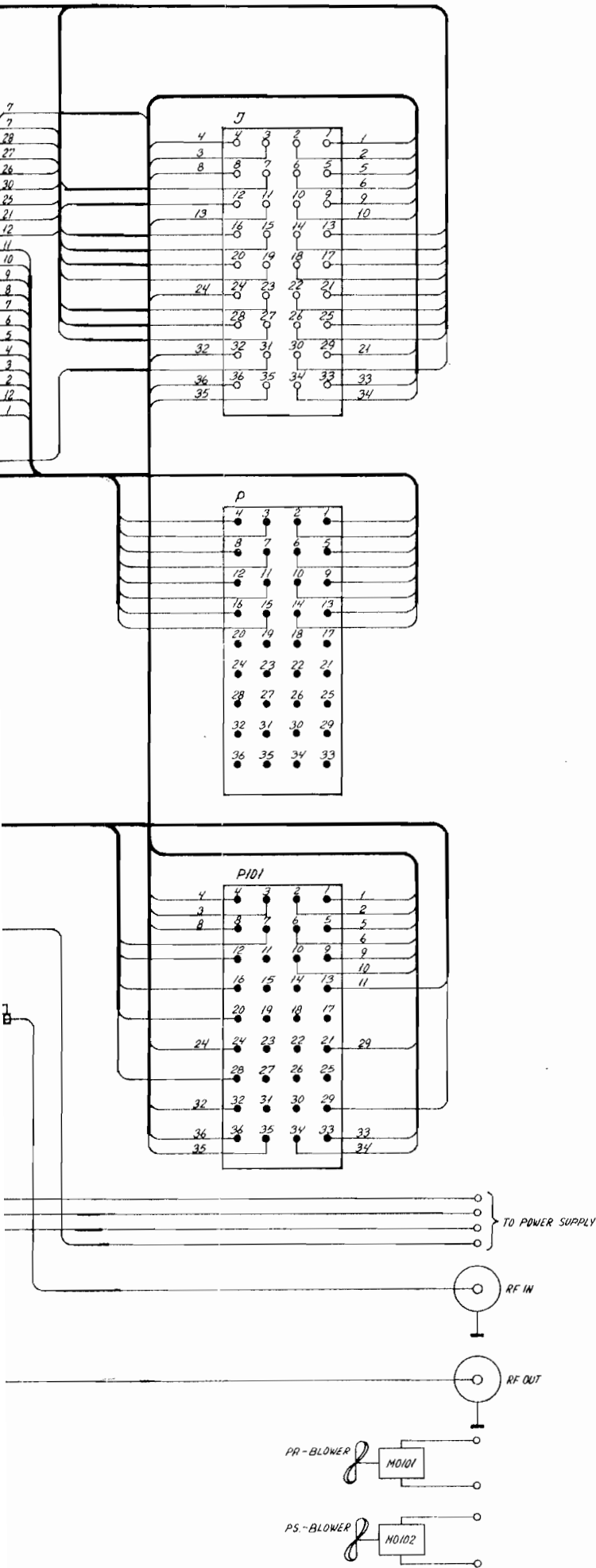
a

P.A. UNIT T1130

4/4

<i>Symbol</i>	<i>Description</i>	<i>Manufact.</i>	
L1207	Coil	S.P.	TL306
L1208	Coil	S.P.	TL306
L1209	Coil	S.P.	TL305
L1210	Coil	S.P.	TL305
L1211	Coil	S.P.	TL304
L1212	Coil	S.P.	TL304
L1213	Coil	S.P.	TL301
L1214	Coil	S.P.	TL301
TR1201	Transformer	S.P.	TL308
TR1202	Transformer	S.P.	TL307
TR1203	Transformer	S.P.	TL303
TR1204	Transformer	S.P.	TL302
TR1205	Transformer	S.P.	TL300
TR1206	Transformer	S.P.	TL299
T1201	Transistor	Motorola	BC328
T1202	Transistor	Motorola	BC548
T1203	Transistor	Motorola	BC548
T1204	Transistor	Motorola	BC548
T1205	Transistor	Motorola	BC548
T1206	Transistor	Motorola	2N3553
T1207	Transistor	Motorola	2N3553
T1208	Transistor	Motorola	2N5190
T1209	Transistor	Motorola	2N5190
T1210			
T1211			
T1212	Transistor	Motorola	MRF426
T1213	Transistor	Motorola	MRF426
T1214	Transistor	Thomson	TH430
T1215	Transistor	Thomson	TH430
D1201	Diode	Philips	BAV21

a TEMPERATURE PROTECTION UNIT T1130						1/
Symbol	Description			Manufact.		
C1301	Capacitor polyester	100 nF	$\pm 10\%$	Siemens	B325 10-D1104-K	
C1302	Capacitor polyester	100 nF	$\pm 10\%$	Siemens	B325 10-D1104-K	
C1303	Capacitor polyester	100 nF	$\pm 10\%$	Siemens	B325 10-D1104-K	
C1304	Capacitor polyester	100 nF	$\pm 10\%$	Siemens	B325 10-D1104-K	
R1301	Resistor	18.2 kohm	$\pm 1\%$	0.4W Philips	2322 151 51823	
R1302	Resistor	18.2 kohm	$\pm 1\%$	0.4W Philips	2322 151 51823	
R1303	Resistor	191 ohm	$\pm 1\%$	0.4W Philips	2322 151 51911	
R1304	Resistor	1.65 kohm	$\pm 1\%$	0.4W Philips	2322 151 51652	
R1305	Preset potentiometer	22 kohm	$\pm 10\%$	AB	HC 10-22k 10%	
R1306	Resistor	680 kohm	$\pm 5\%$	0.33W Philips	2322 211 13684	
R1307	Resistor	680 kohm	$\pm 5\%$	0.33W Philips	2322 211 13684	
R1308	Resistor	15 kohm	$\pm 1\%$	0.4W Philips	2322 151 51503	
R1309	Resistor	33 kohm	$\pm 5\%$	0.33W Philips	2322 211 13333	
R1310	Resistor	33 kohm	$\pm 5\%$	0.33W Philips	2322 211 13333	
R1311	Resistor	33 kohm	$\pm 5\%$	0.33W Philips	2322 211 13333	
R1312	Resistor	33 kohm	$\pm 5\%$	0.33W Philips	2322 211 13333	
R1313	Resistor	6.8 kohm	$\pm 5\%$	0.33W Philips	2322 211 13682	
R1314	Resistor	22 ohm	$\pm 5\%$	0.33W Philips	2322 211 13229	
R1315	Resistor	6.8 kohm	$\pm 5\%$	0.33W Philips	2322 211 13682	
R1316	Resistor	22 ohm	$\pm 5\%$	0.33W Philips	2322 211 13229	
R1317	Resistor	22 ohm	$\pm 5\%$	0.33W Philips	2322 211 13229	
T1301	Transistor			Philips	BC639	
T1302	Transistor			Philips	BC639	
T1303	Transistor			Philips	BC639	
T1304	Transistor			Philips	BC640	
T1305	Transistor			Philips	BC639	
IC1301	Integrated circuit			National	LM358	

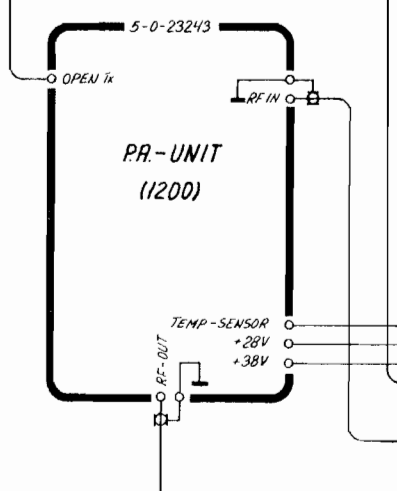
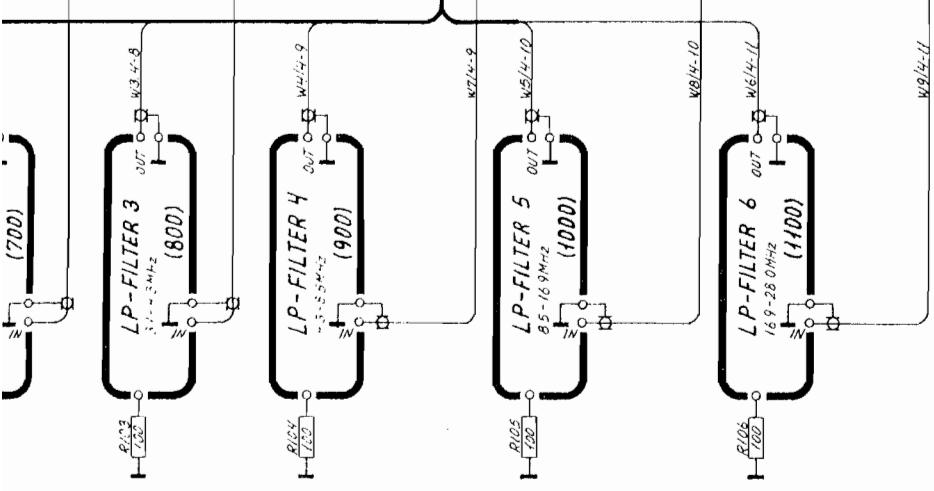
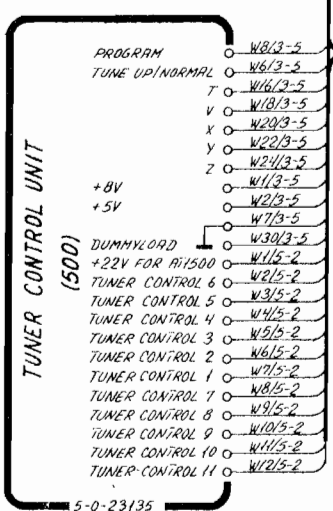
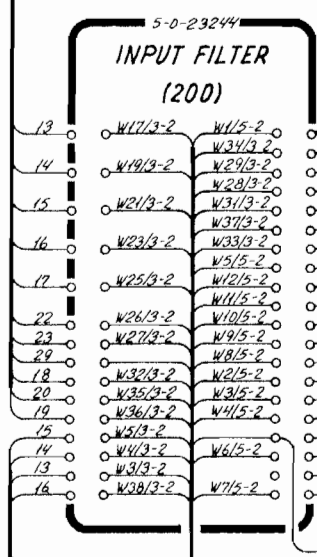
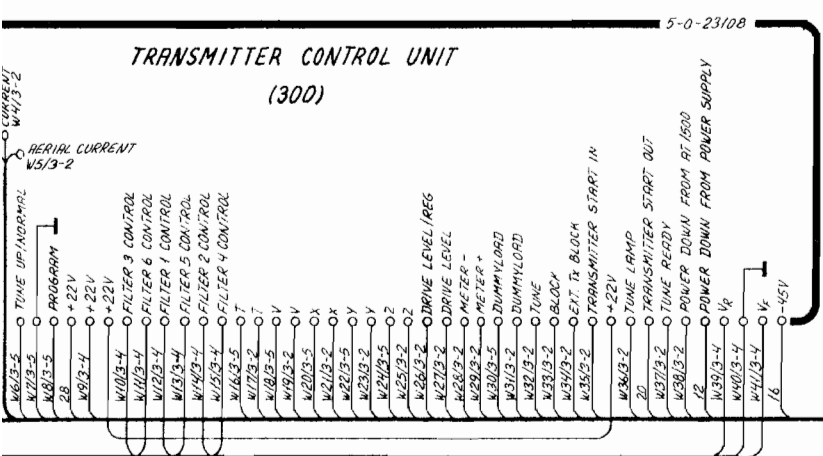


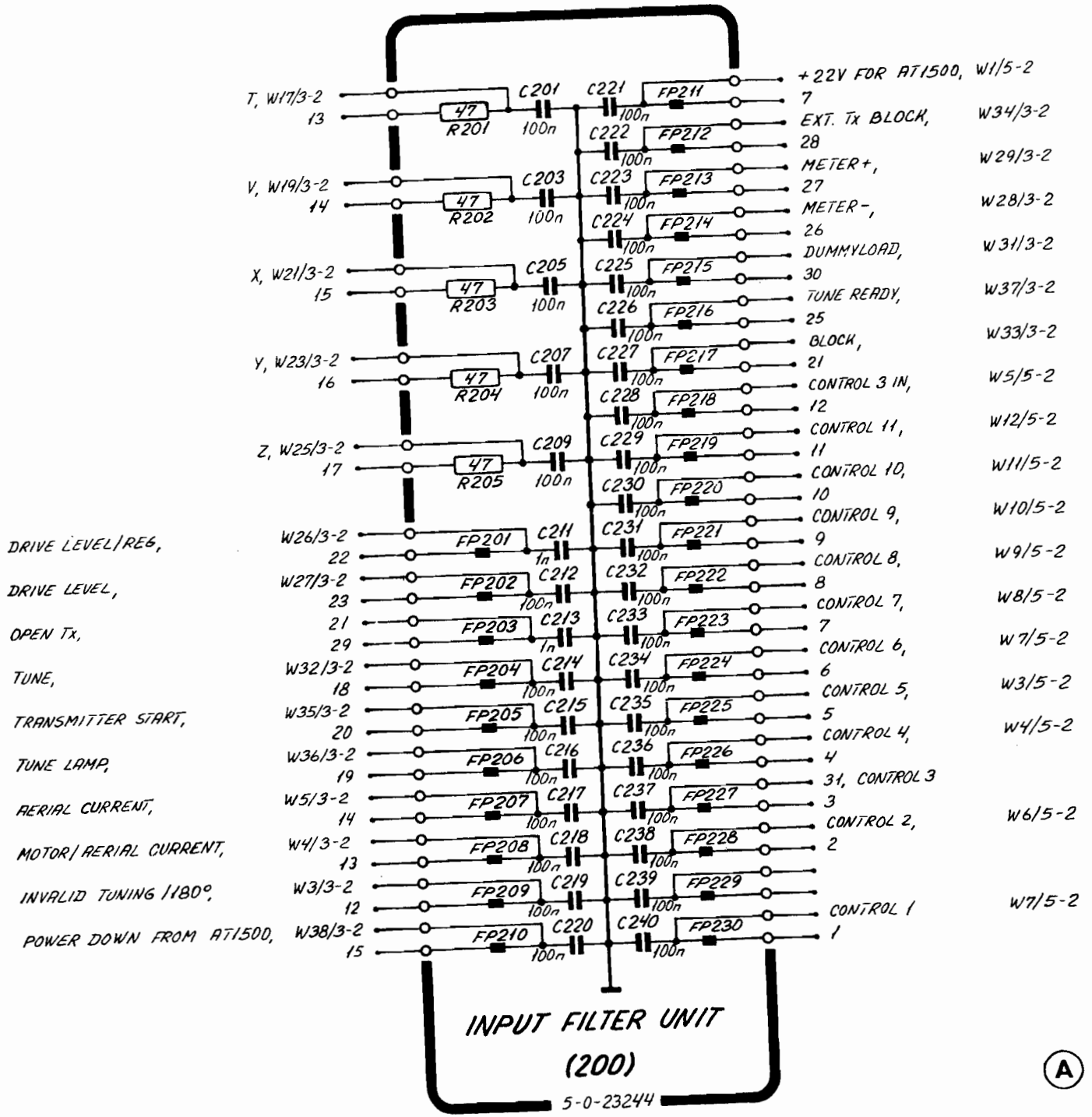
- | | | | |
|----|-----------------|----|---------------------|
| 1 | +22V TO Rx | 19 | TUNE LAMP |
| 2 | +8V TO Rx | 20 | TRANSMITTER START |
| 3 | -45V TO Rx | 21 | BLOCK |
| 4 | +22V TO Ex | 22 | DRIVE LEVEL/REG |
| 5 | +8V TO Ex | 23 | DRIVE LEVEL |
| 6 | -45V TO Ex | 24 | HT ON |
| 7 | +22V FOR AT1500 | 25 | TUNE READY |
| 8 | Rx ON | 26 | METER - |
| 9 | GROUND TO Rx | 27 | METER + |
| 10 | GROUND TO Ex | 28 | EXT TX BLOCK |
| 11 | GROUND | 29 | OPEN Tx |
| 12 | CONTROL 3 IN | 30 | DUMMYLOAD |
| 13 | T | 31 | CONTROL 3 TO AT1500 |
| 14 | V | 32 | OFF |
| 15 | X | 33 | +BAT |
| 16 | Y | 34 | +22V |
| 17 | Z | 35 | ON |
| 18 | TUNE | 36 | -45V |

- | | | | |
|----|------------------------|----|--|
| 1 | TUNER CONTROL 1 | 19 | |
| 2 | TUNER CONTROL 2 | 20 | |
| 3 | TUNER CONTROL 3 | 21 | |
| 4 | TUNER CONTROL 4 | 22 | |
| 5 | TUNER CONTROL 5 | 23 | |
| 6 | TUNER CONTROL 6 | 24 | |
| 7 | TUNER CONTROL 7 | 25 | |
| 8 | TUNER CONTROL 8 | 26 | |
| 9 | TUNER CONTROL 9 | 27 | |
| 10 | TUNER CONTROL 10 | 28 | |
| 11 | TUNER CONTROL 11 | 29 | |
| 12 | SPARE | 30 | |
| 13 | INVALID TUNING / 180° | 31 | |
| 14 | MOTOR/RETRIAL CURRENT | 32 | |
| 15 | RETRIAL CURRENT | 33 | |
| 16 | POWER DOWN FROM AT1500 | 34 | |
| 17 | | 35 | |
| 18 | | 36 | |

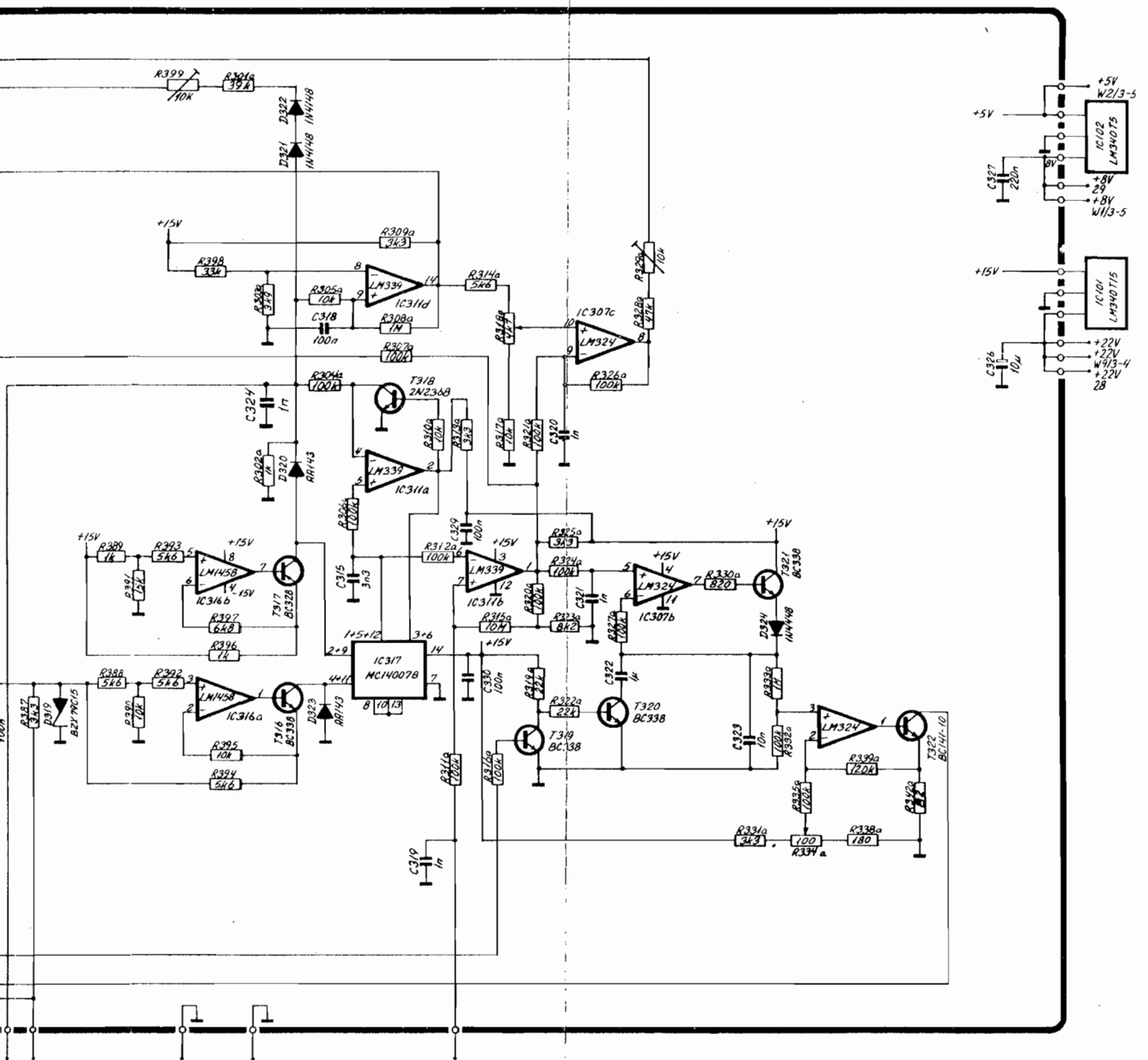
- | | | | |
|----|------------------------------|----|-------------------|
| 1 | +22V TO Rx | 19 | |
| 2 | +8V TO Rx | 20 | TRANSMITTER START |
| 3 | -45V TO Rx | 21 | OPEN Tx |
| 4 | +22V TO Ex | 22 | |
| 5 | +8V TO Ex | 23 | |
| 6 | -45V TO Ex | 24 | HT ON |
| 7 | +22V FOR AT1500 | 25 | |
| 8 | Rx ON | 26 | |
| 9 | GROUND TO Rx | 27 | |
| 10 | GROUND TO Ex | 28 | +22V TO T1130 |
| 11 | | 29 | +8V TO T1130 |
| 12 | POWER DOWN FROM POWER SUPPLY | 30 | |
| 13 | GROUND | 31 | |
| 14 | | 32 | OFF |
| 15 | | 33 | +BAT |
| 16 | -45V TO T1130 | 34 | +22V |
| 17 | | 35 | ON |
| 18 | | 36 | -45V |

MAIN SCHEMATIC DIAGRAM
FOR
SAILOR TRANSMITTER T1130





(A)

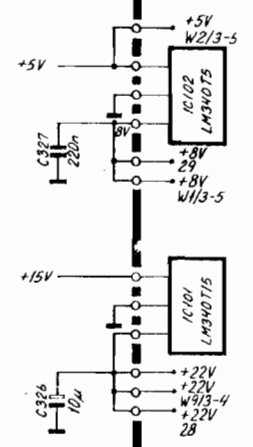


W41/3-4
-45V
16

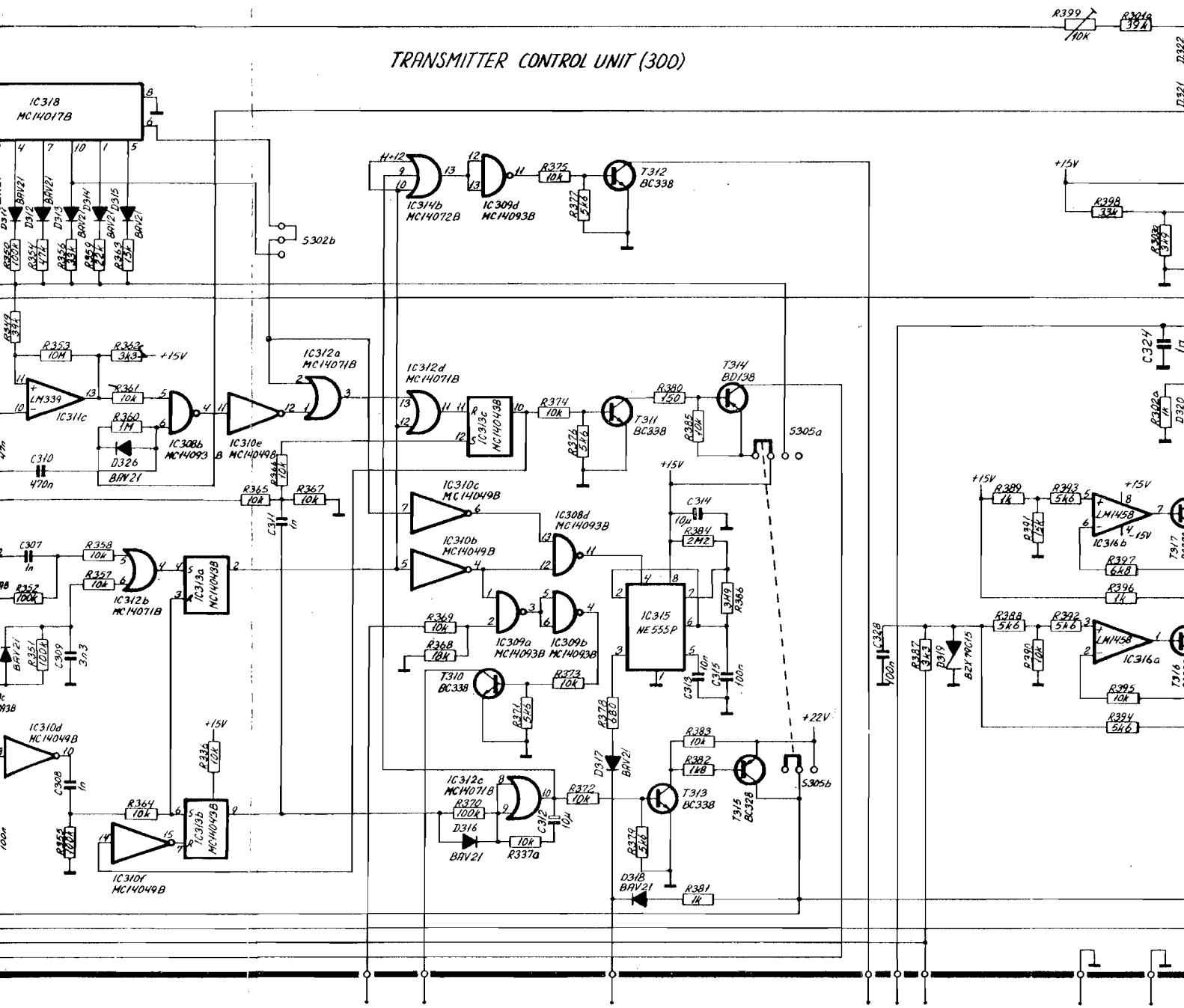
W719-5

W40/3-4

W49/3-4



TRANSMITTER CONTROL UNIT (300)



TRANSMITTER START IN
W35/B-2

TRANSMITTER START OUT
20

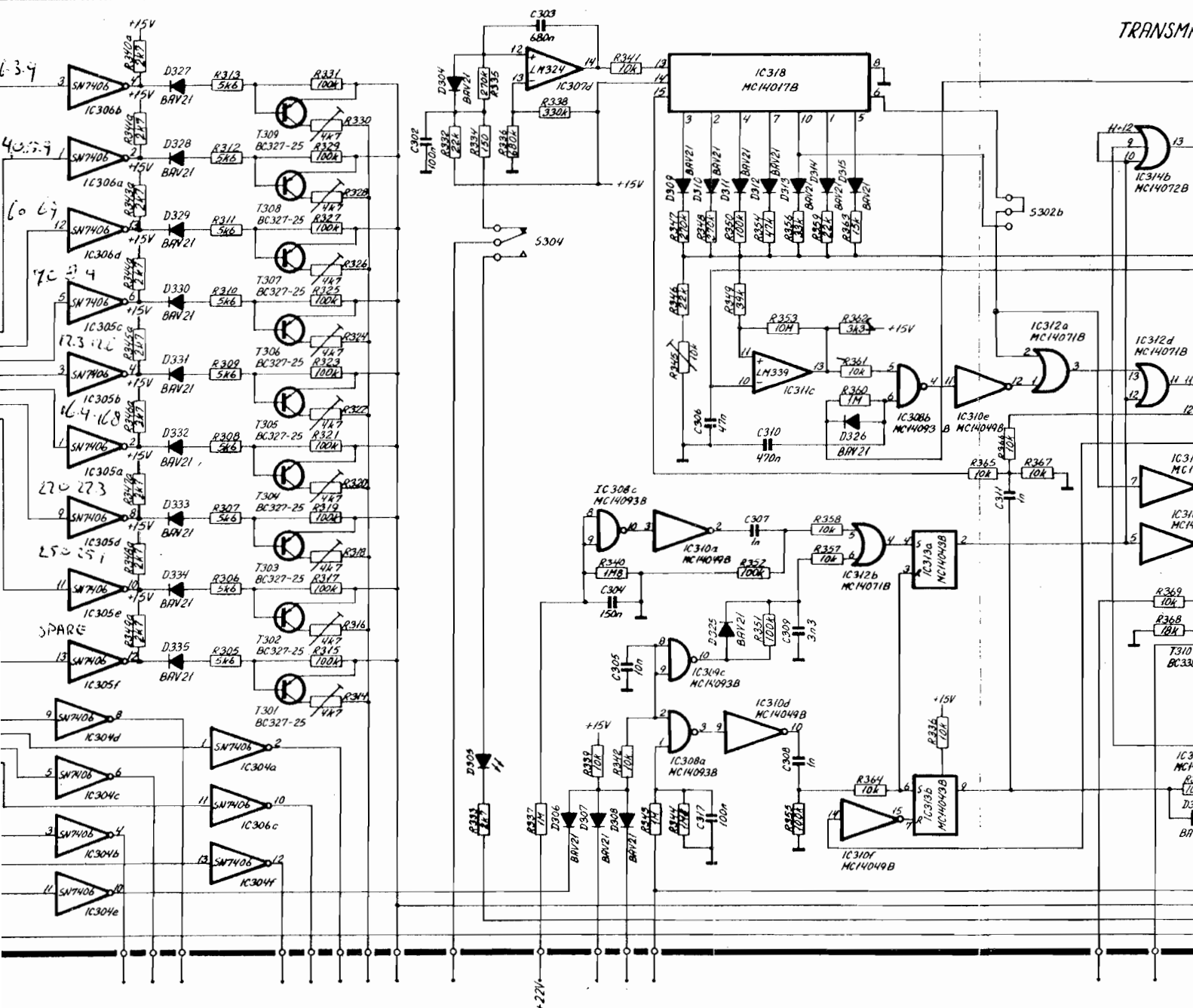
TUNE LAMP
W36/B-2

TUNE READY
W37/B-2

W41/B-4
-45V
16

W17/B-5

W40/B-4



8.7-16.9
 FILTER 5 CONTROL
 W1813-4
 FILTER 3 CONTROL
 W1019-4
 2.1-4.5
 FILTER 1 CONTROL
 W1213-4
 16.2

10.7-20
 FILTER 6 CONTROL
 W1113-4
 FILTER 4 CONTROL
 W1513-4
 4.3-3.5
 FILTER 2 CONTROL
 W1413-4
 DRIVE LEVEL
 W2713-2
 DRIVE LEVEL
 W2813-2

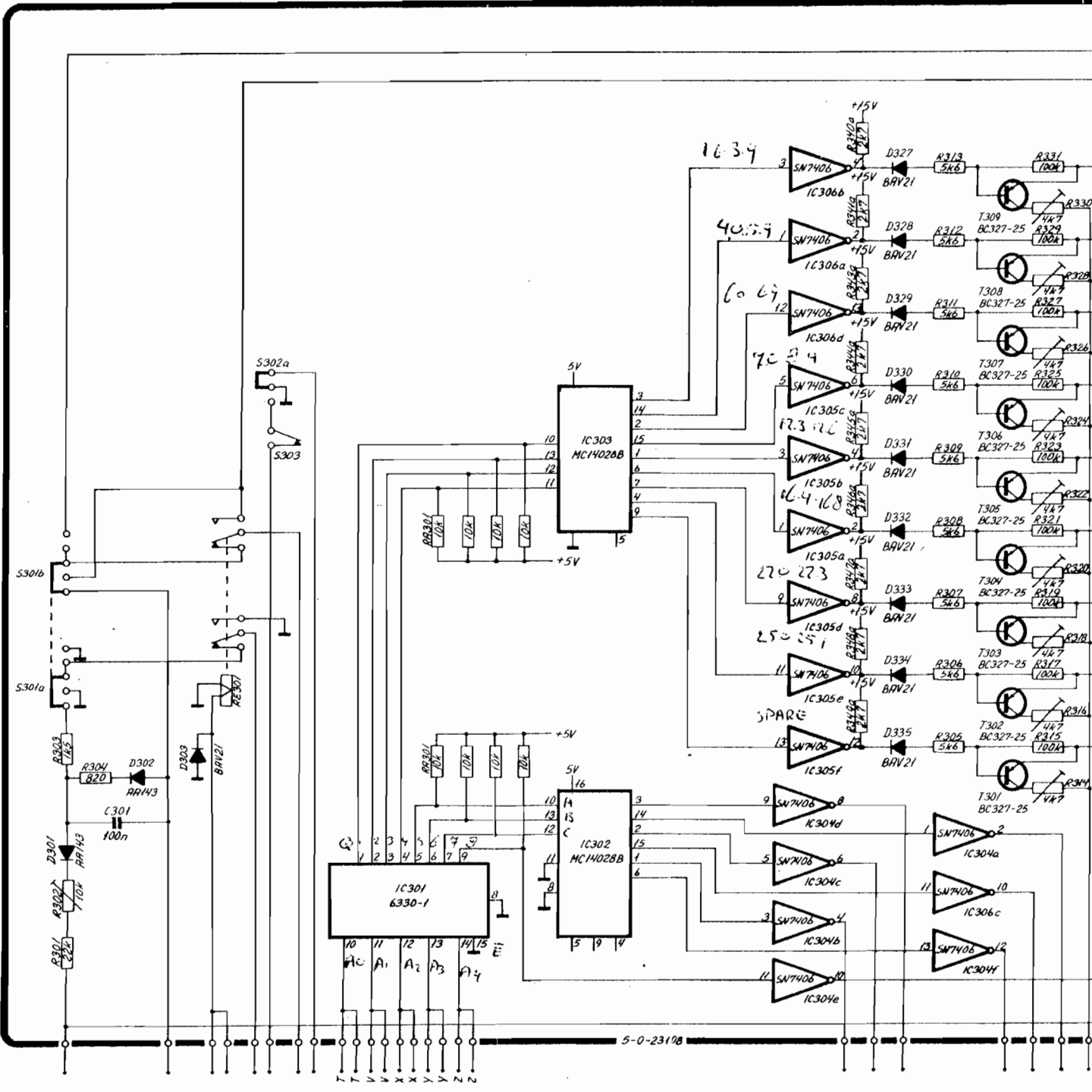
INVALID TUNING/180°
 W1913-2

*
 LOCK
 W313-2
 5
 EXT. BLOCK
 W3413-2
 6
 TUNE
 W3213-2

TRANSMITTER START IN
 W3513-2

TRANSMITTER START OUT
 20

TRANSMI...



MOTOR SERIAL CURRENT
W413-2

SERIAL CURRENT
W513-2

DUMMY LOAD
W3013-5

DUMMY LOAD
W3113-2

METER - W2813-2

PROGRAM, W813-5

METER +
W2413-2

TONE UP/NORMAL
W613-5

W1613-5

W1713-2

W1813-5

W1913-2

W2013-5

W2113-2

W2213-5

W2313-2

W2413-5

W2513-2

FILTER 5 CONTROL
W11313-4

FILTER 3 CONTROL
W1013-4

FILTER 1 CONTROL
W1213-4

16.2 L

FILTER 6 CONTROL
W1113-4

FILTER 4 CONTROL
W1513-4

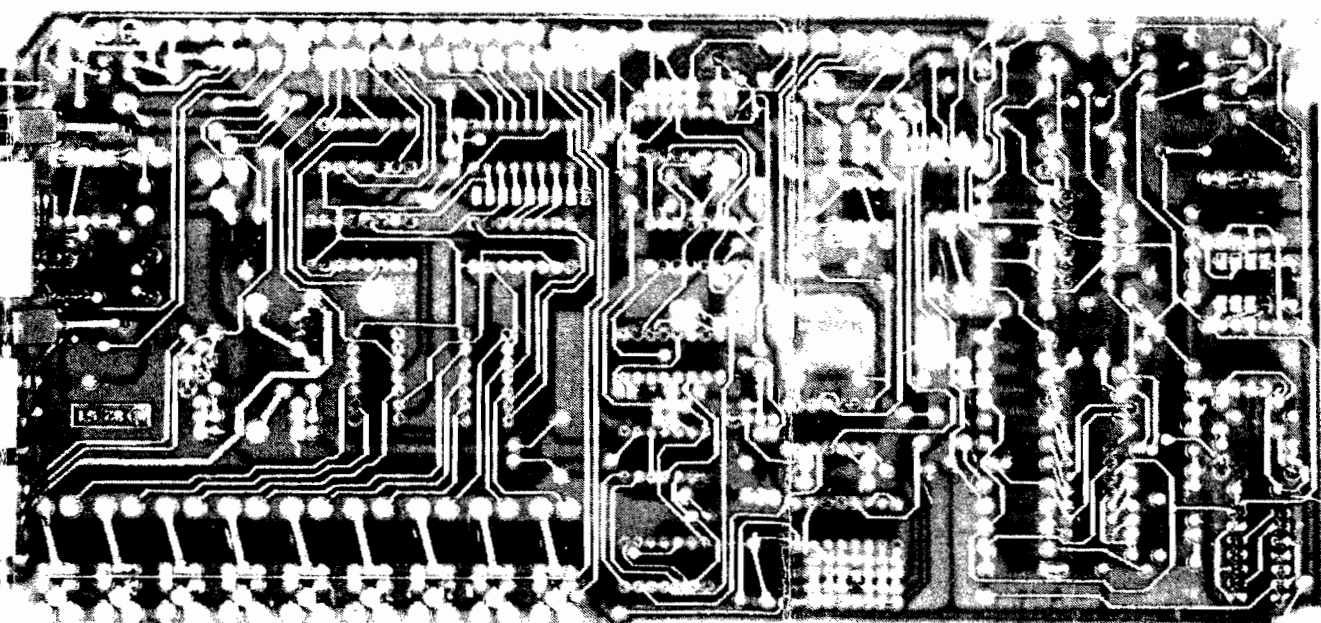
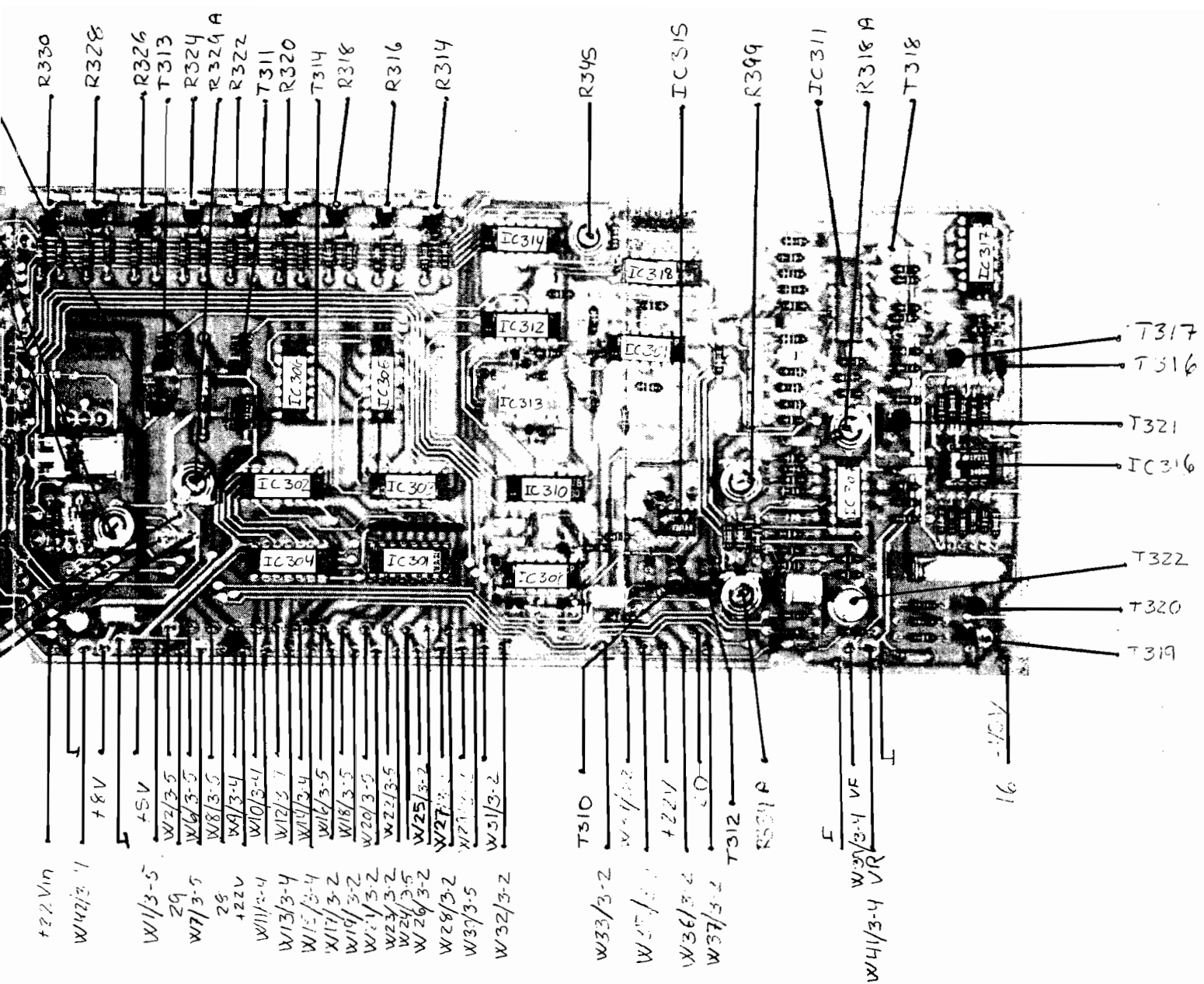
FILTER 2 CONTROL
W1413-4

DRIVE LEVEL
W2713-2

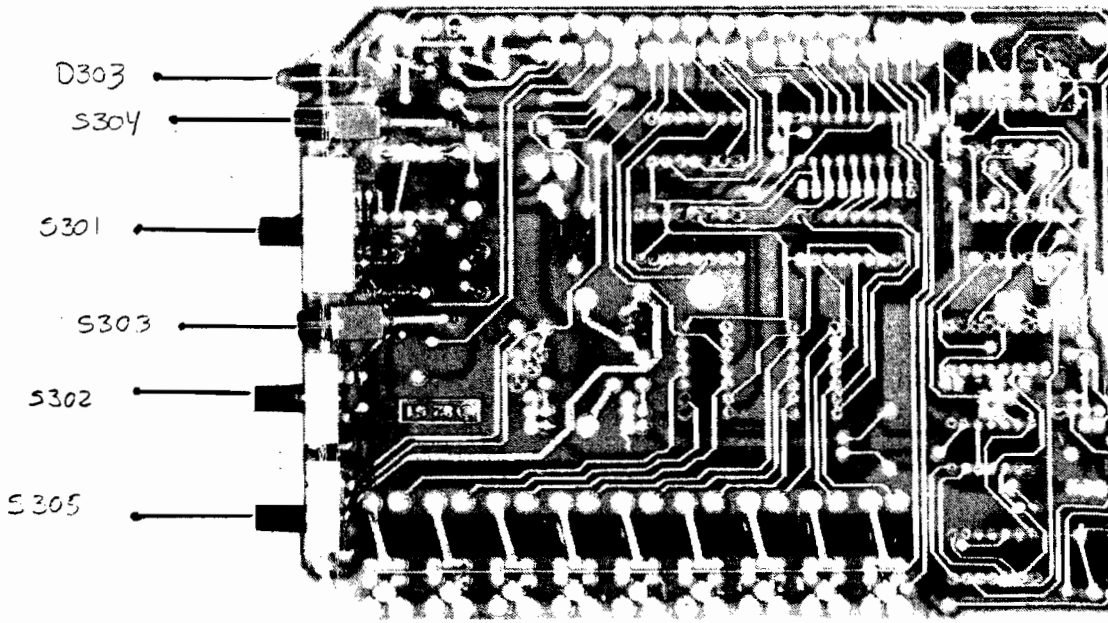
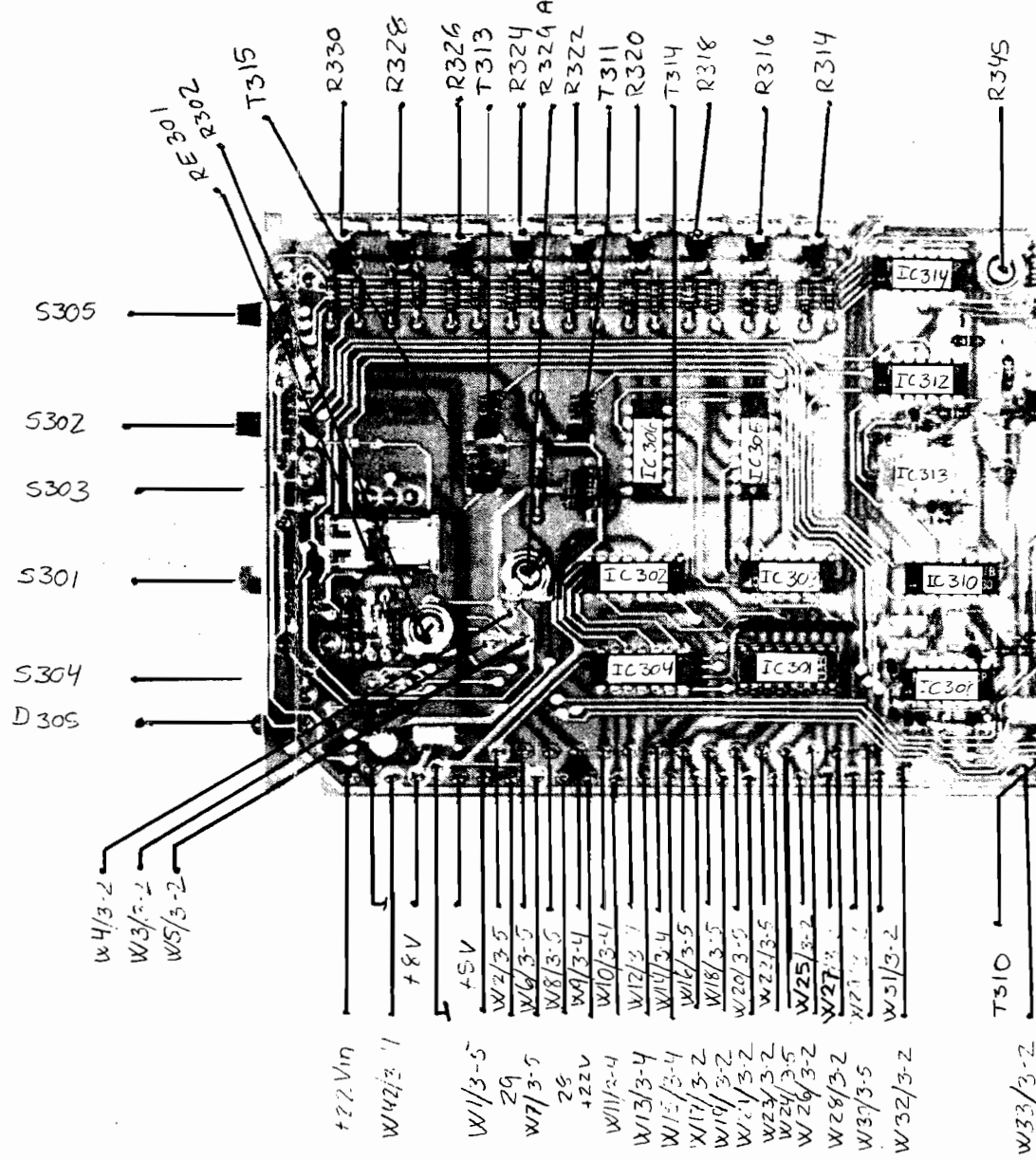
10.9 - 2.0

4.3 - 3.5

2.2 - 3.1



TRANSMITTER CONTROL UNIT



2.2 - 5.1

16-7.2

INPUT FROM LP-FILTER, W2/4-7
OUTPUT TO LP-FILTER

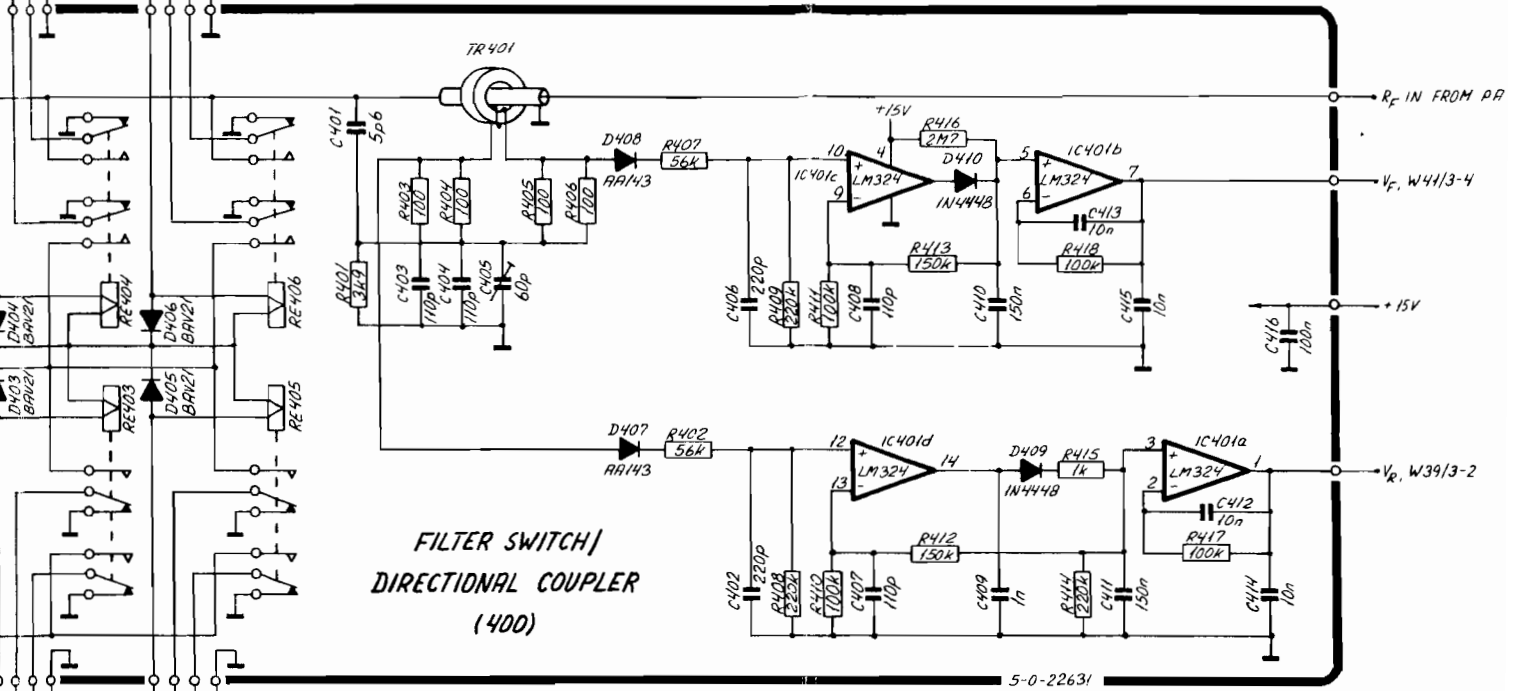
FILTER 1 CONTROL
INPUT FROM LP-FILTER, W1/4-6
OUTPUT TO LP-FILTER

INPUT FROM LP-FILTER, W5/4-10
OUTPUT TO LP-FILTER, W6/4-10

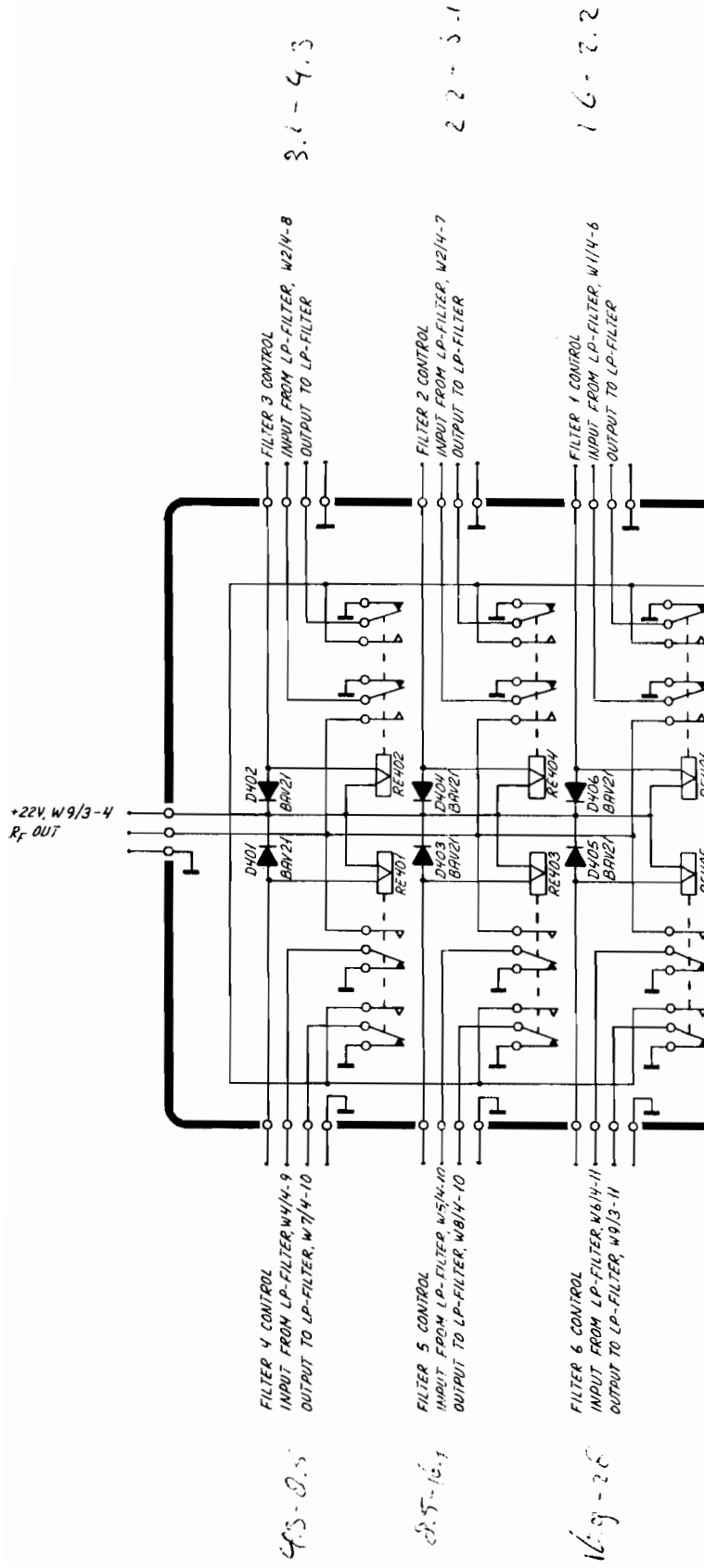
FILTER 6 CONTROL
INPUT FROM LP-FILTER, W6/4-11
OUTPUT TO LP-FILTER, W9/3-11

16.9 - 2.6

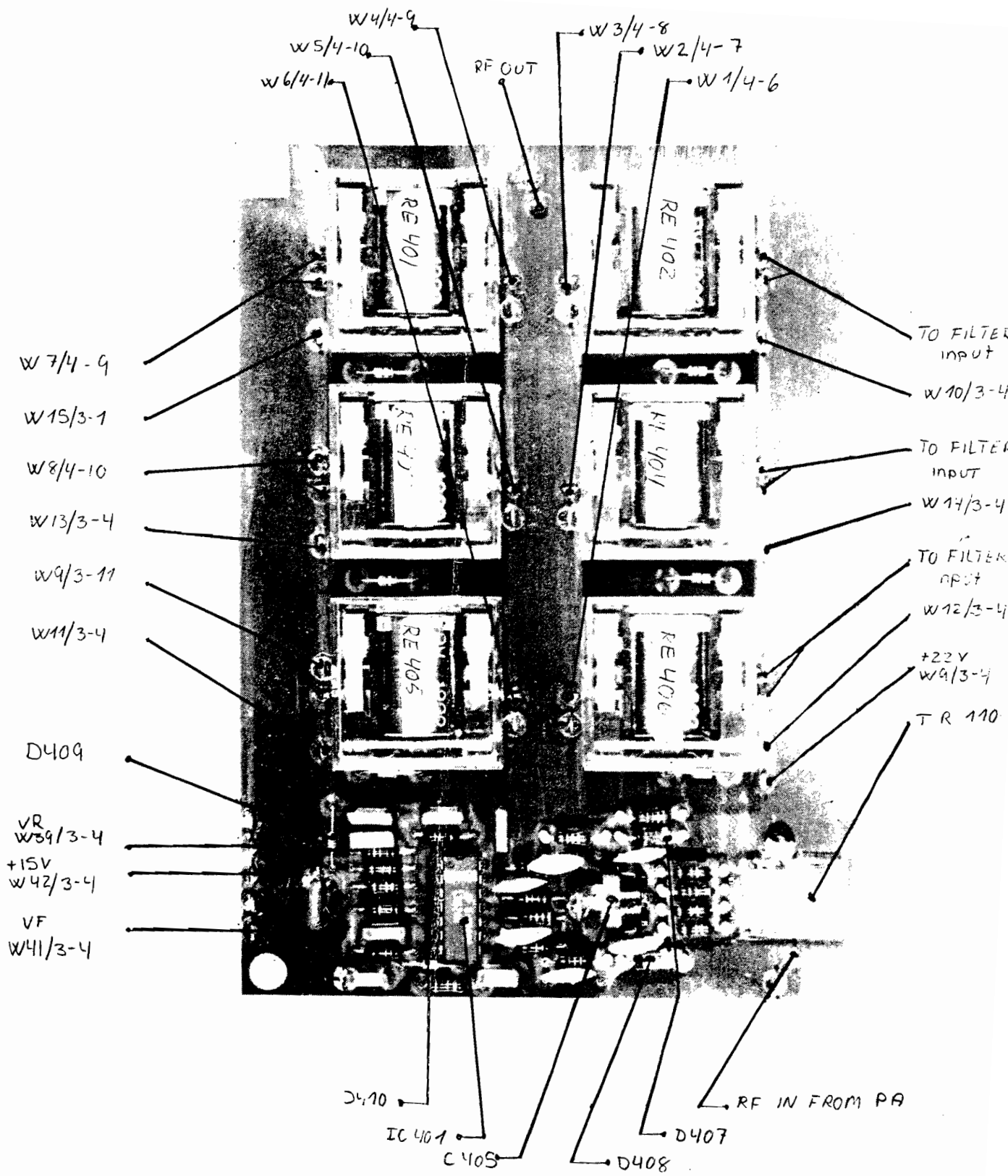
FILTER SWITCH/ DIRECTIONAL COUPLER (400)



(A)

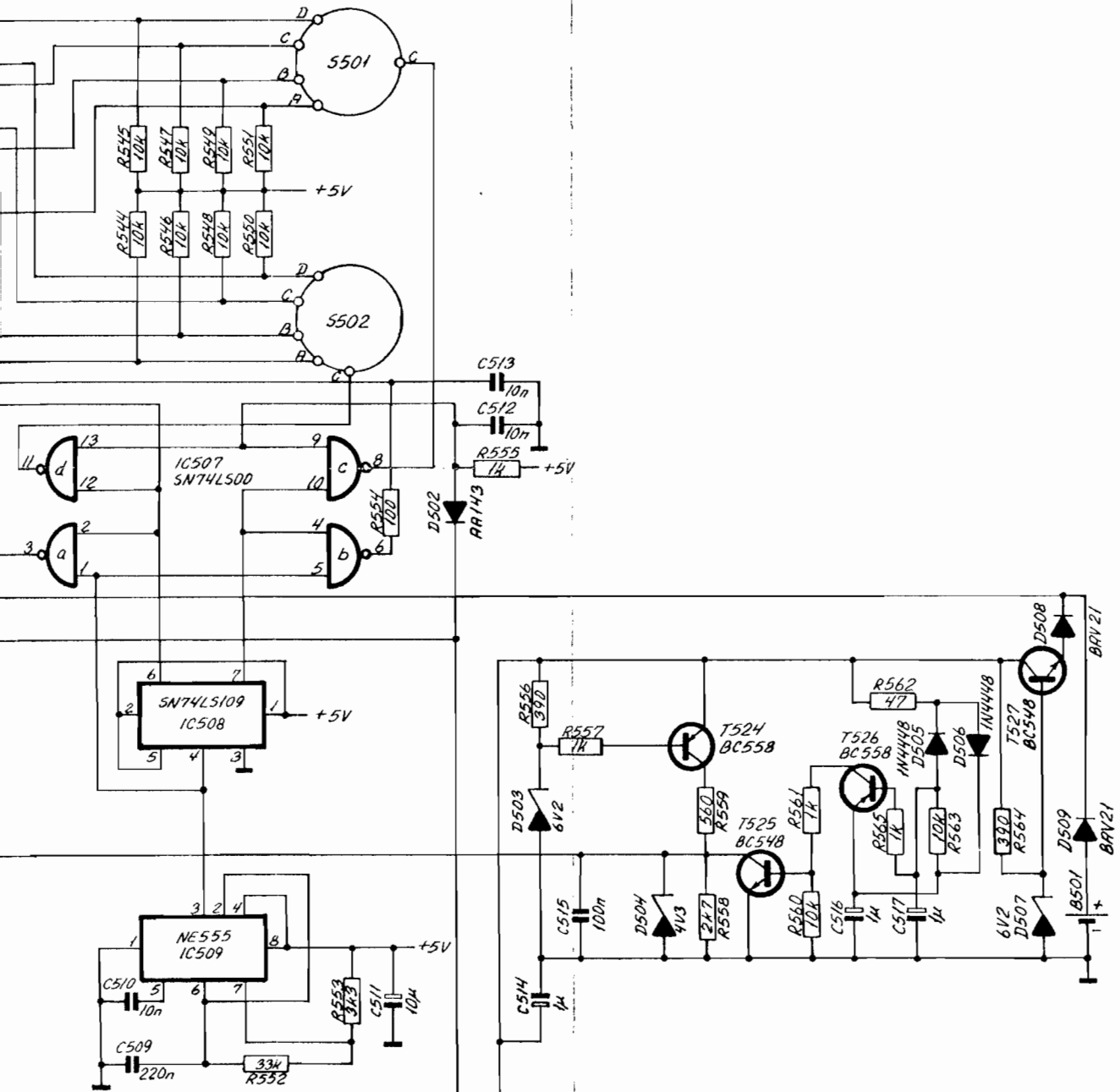


T1130



FILTER SWITCH/DIRECTIONAL COUPLER

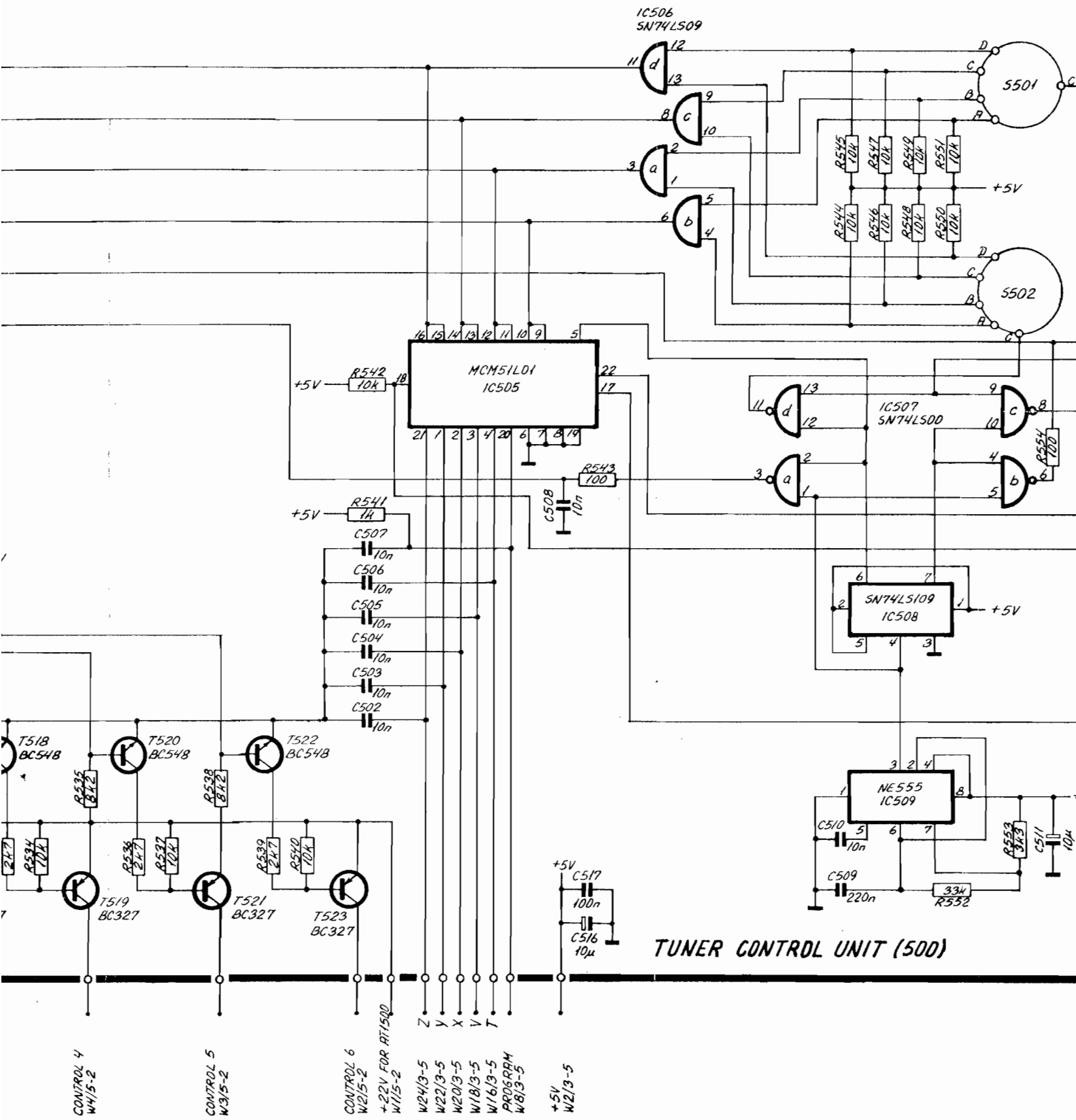
MODULE 400



CONTROL UNIT (500)

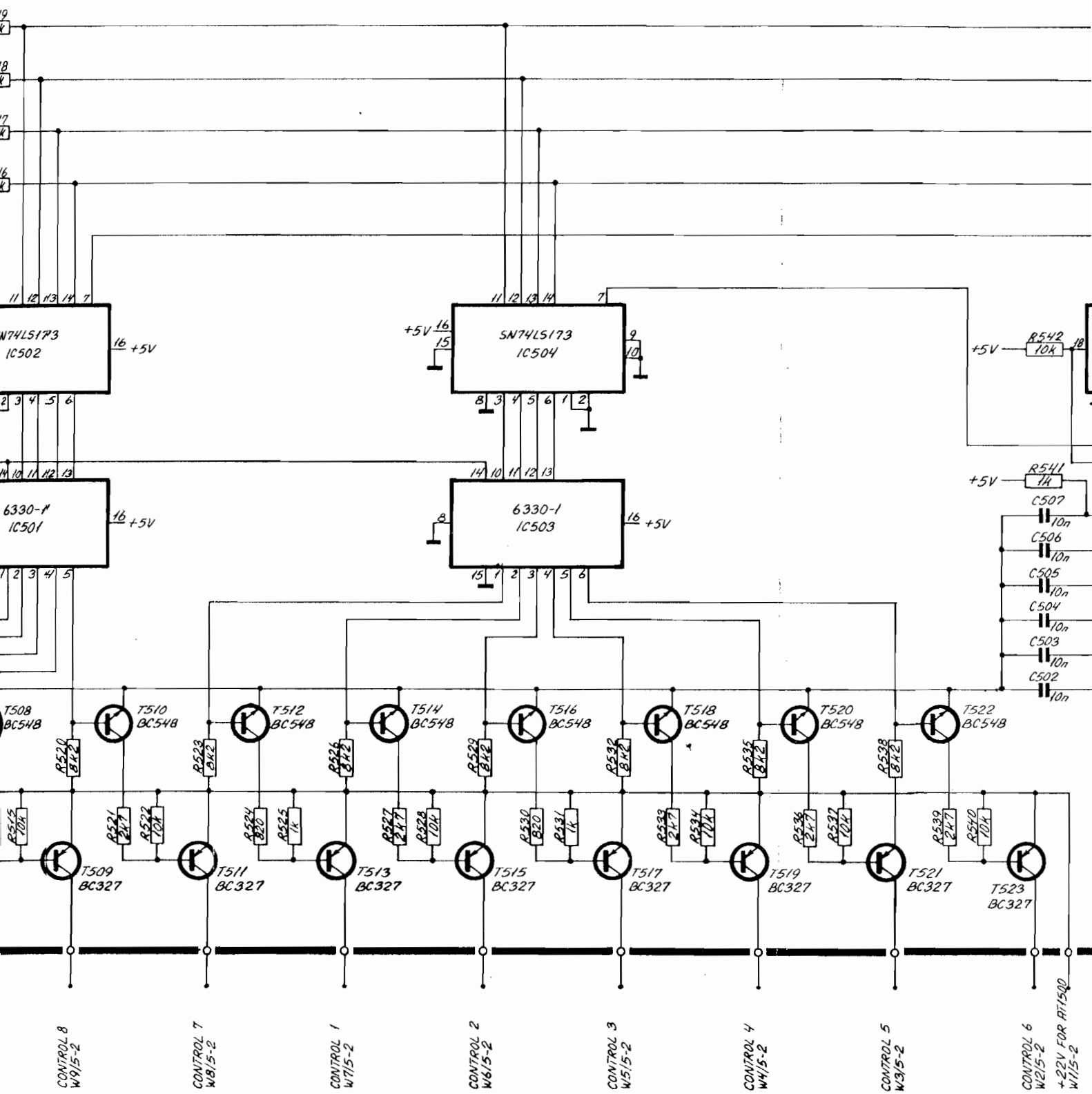
5-0-23135

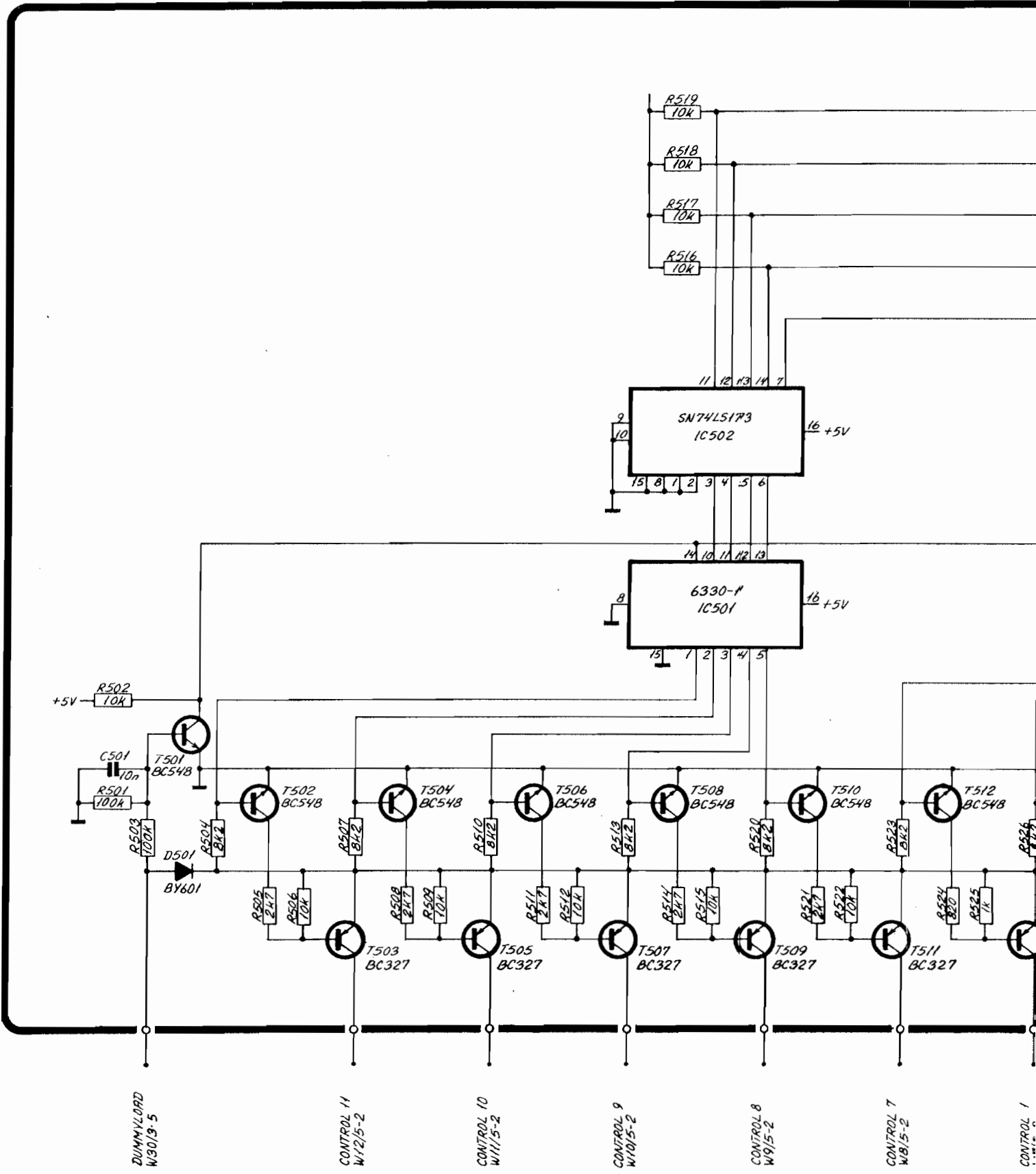
TUNE UP/NORMAL
W6/3-5
+8V
W1/3-5



TUNER CONTROL UNIT (500)

- CONTROL 4
W4/5-2
- CONTROL 5
W3/5-2
- CONTROL 6
W2/5-2
- +22V FOR RT/500
W1/5-2
- W24/3-5
- W22/3-5
- W20/3-5
- W18/3-5
- W16/3-5
- PROGRAM
W8/3-5
- +5V
W2/3-5





DUNNVLORD
W/30/3-5

CONTROL 11
W/12/5-2

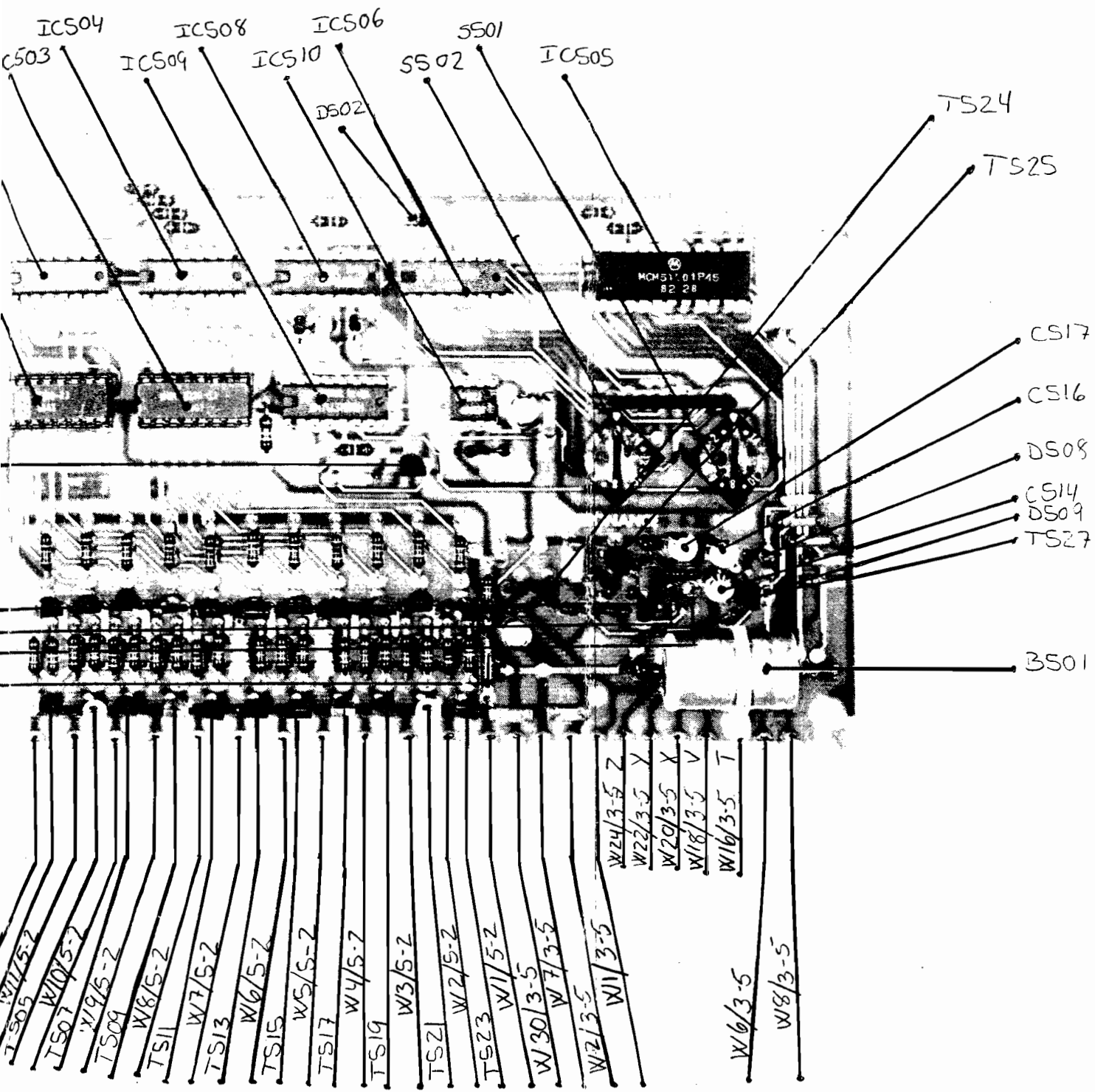
CONTROL 10
W/11/5-2

CONTROL 9
W/10/5-2

CONTROL 8
W/9/5-2

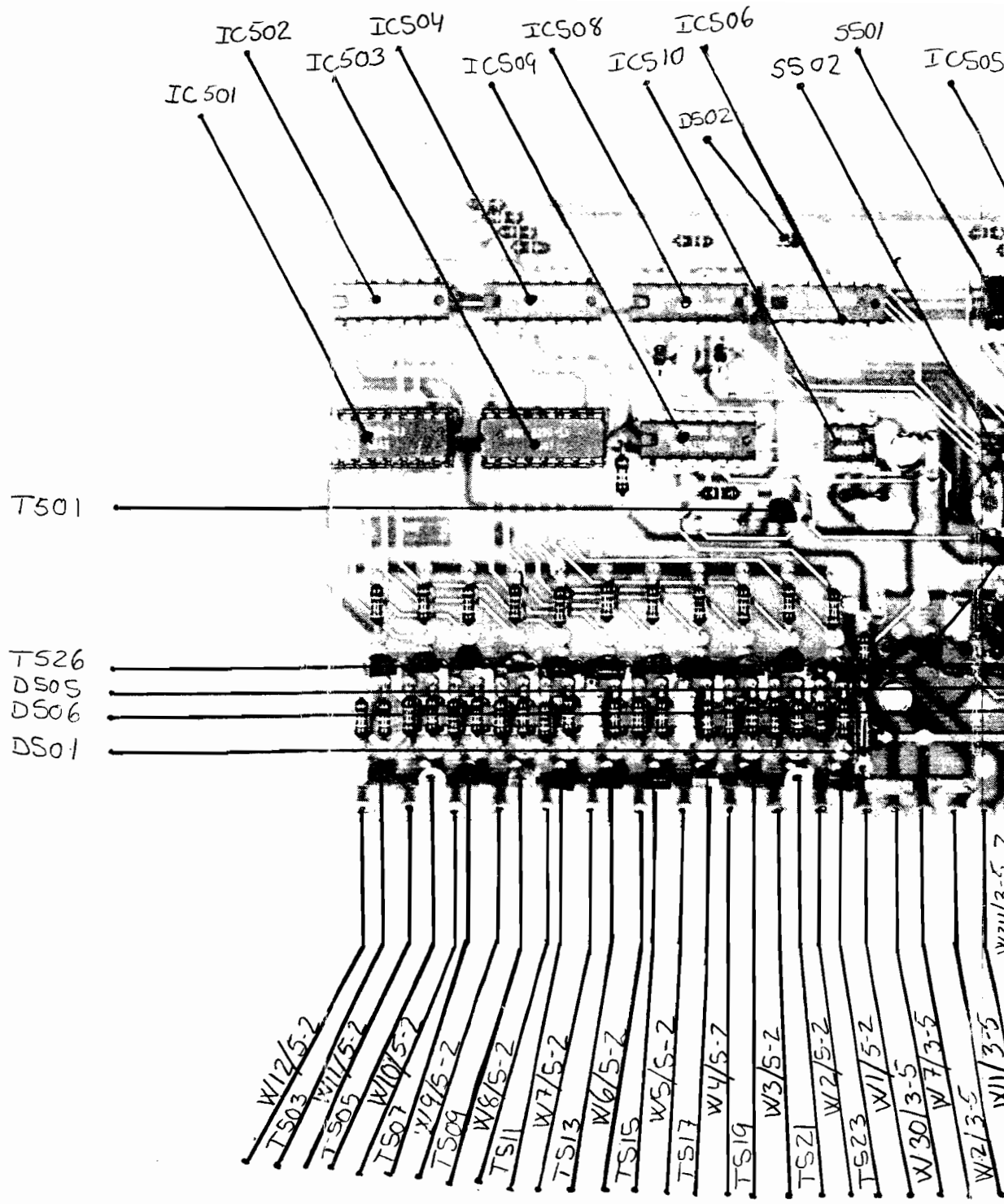
CONTROL 7
W/8/5-2

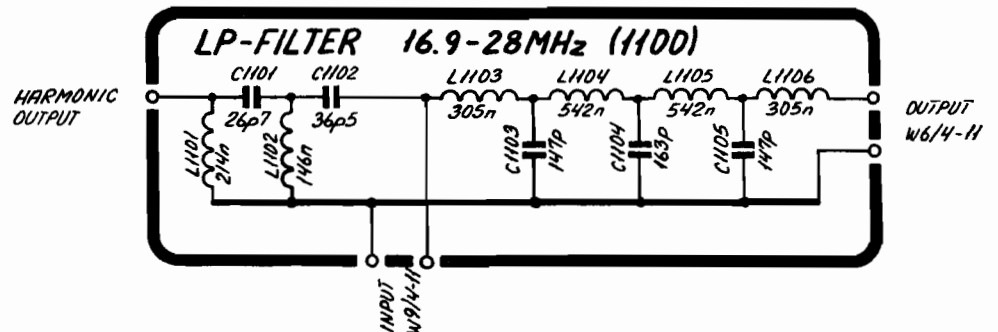
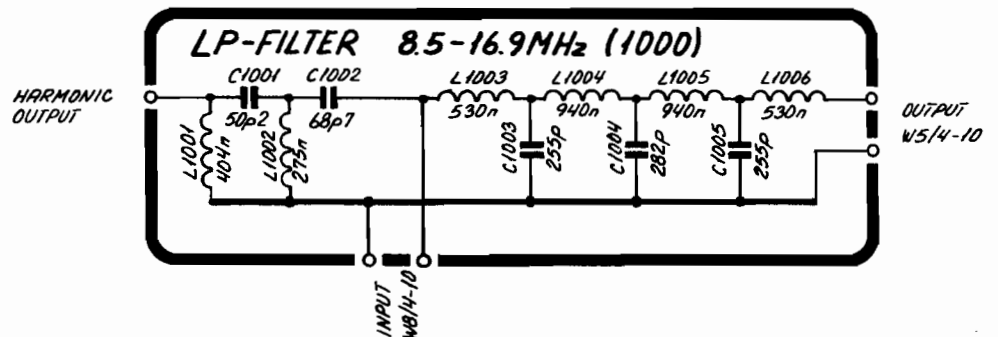
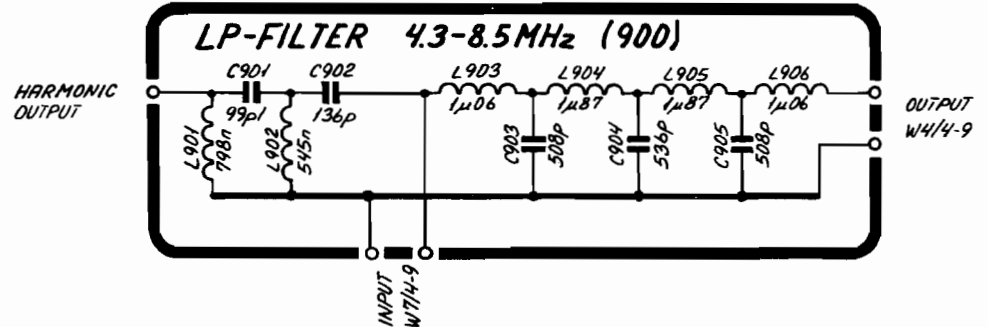
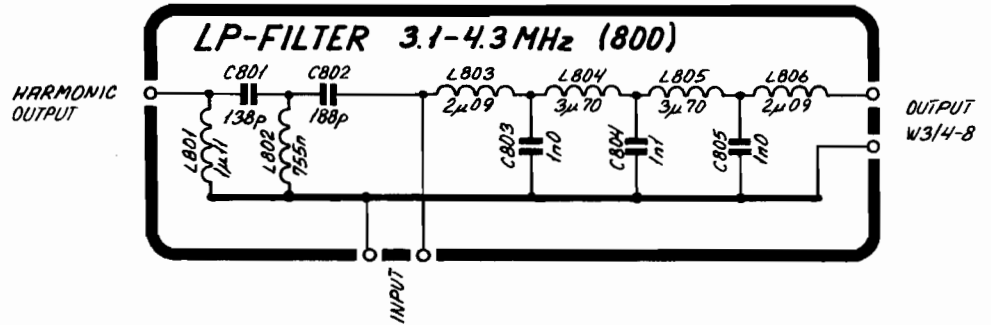
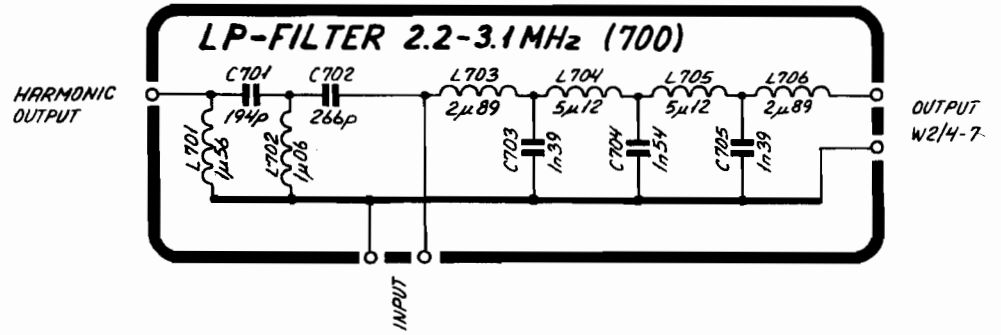
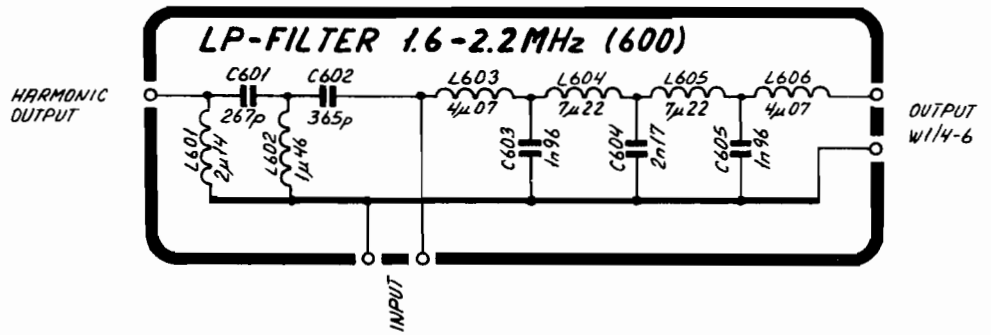
CONTROL 1

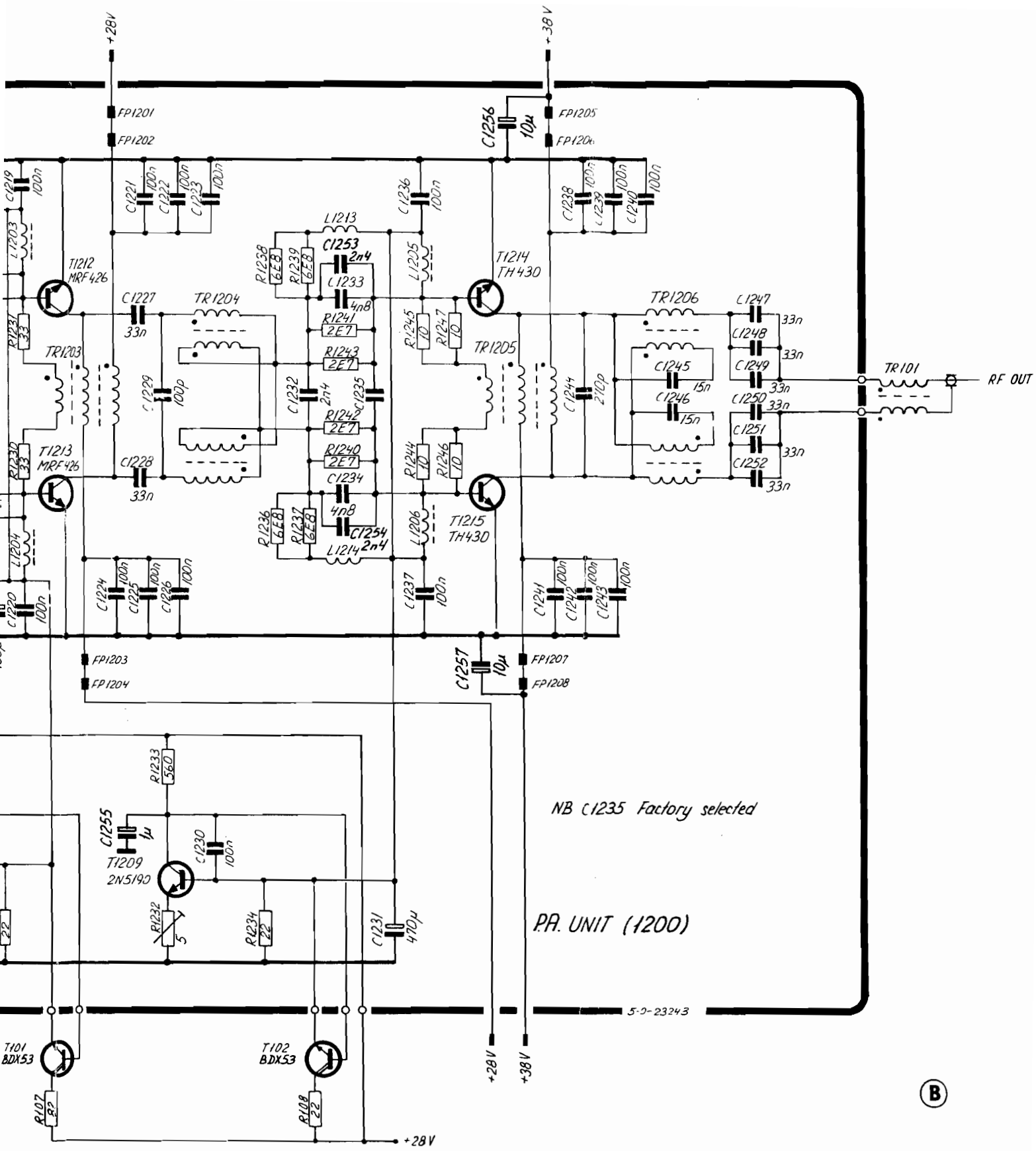


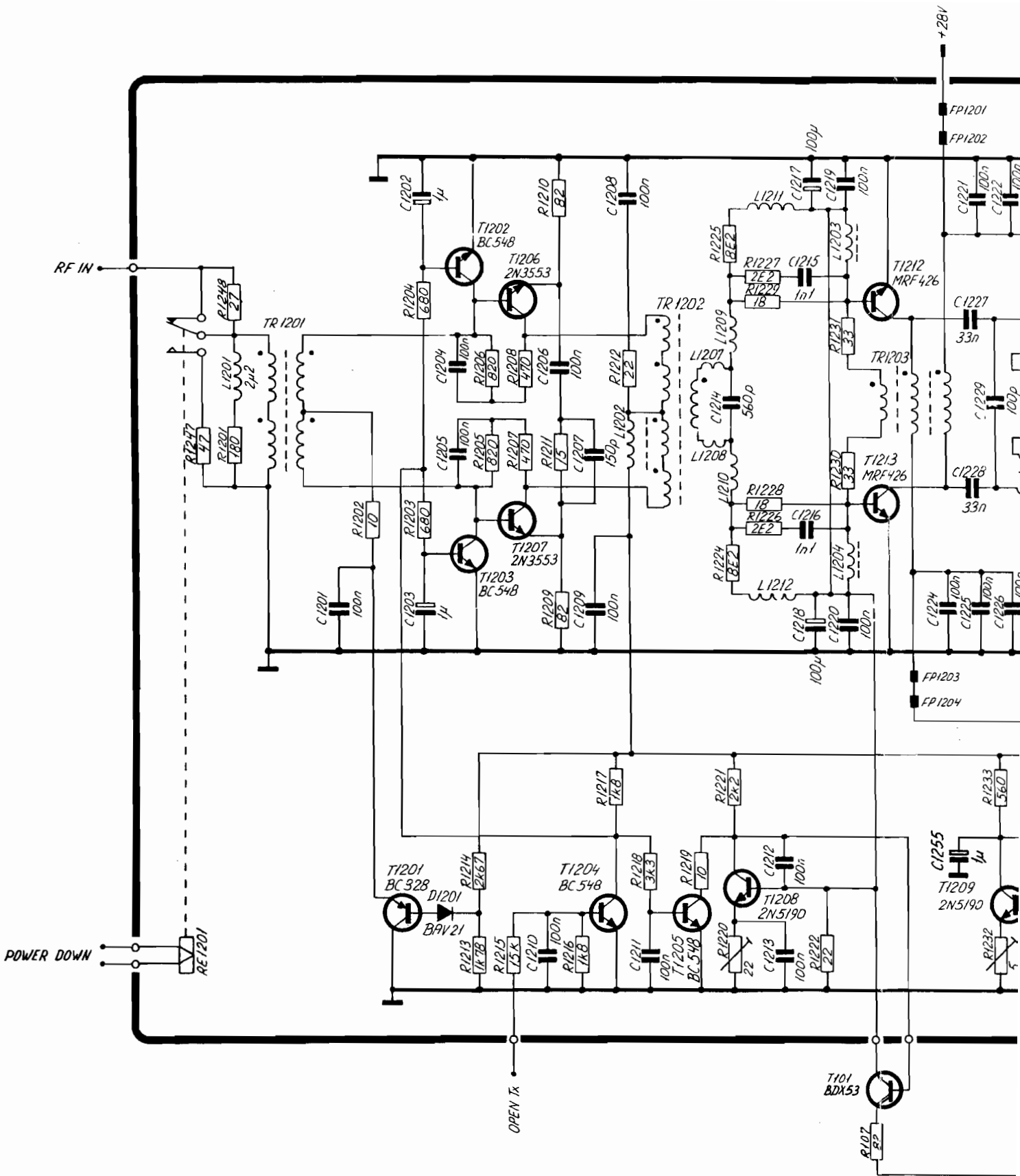
TUNER CONTROL UNIT

MODULE 500

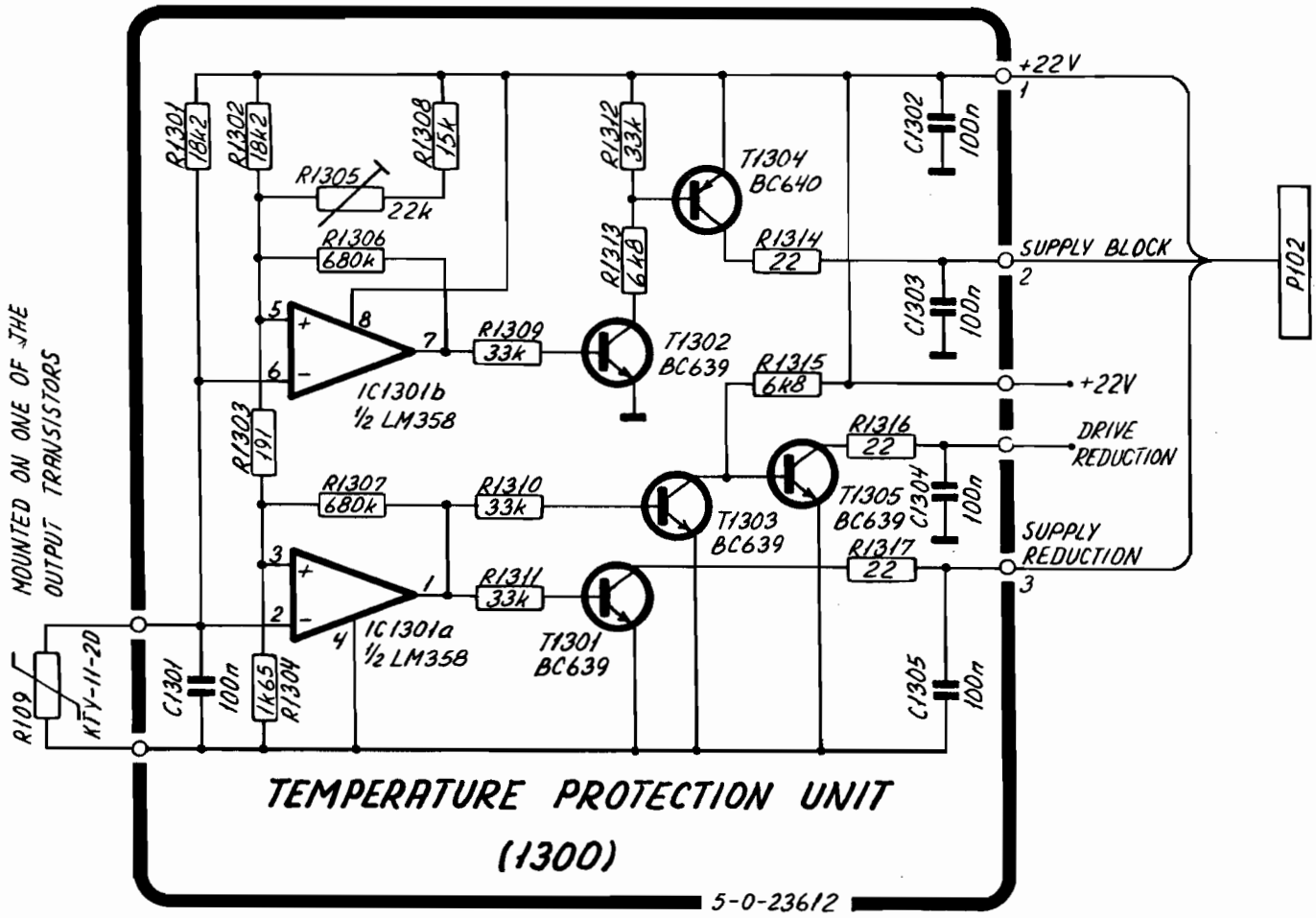






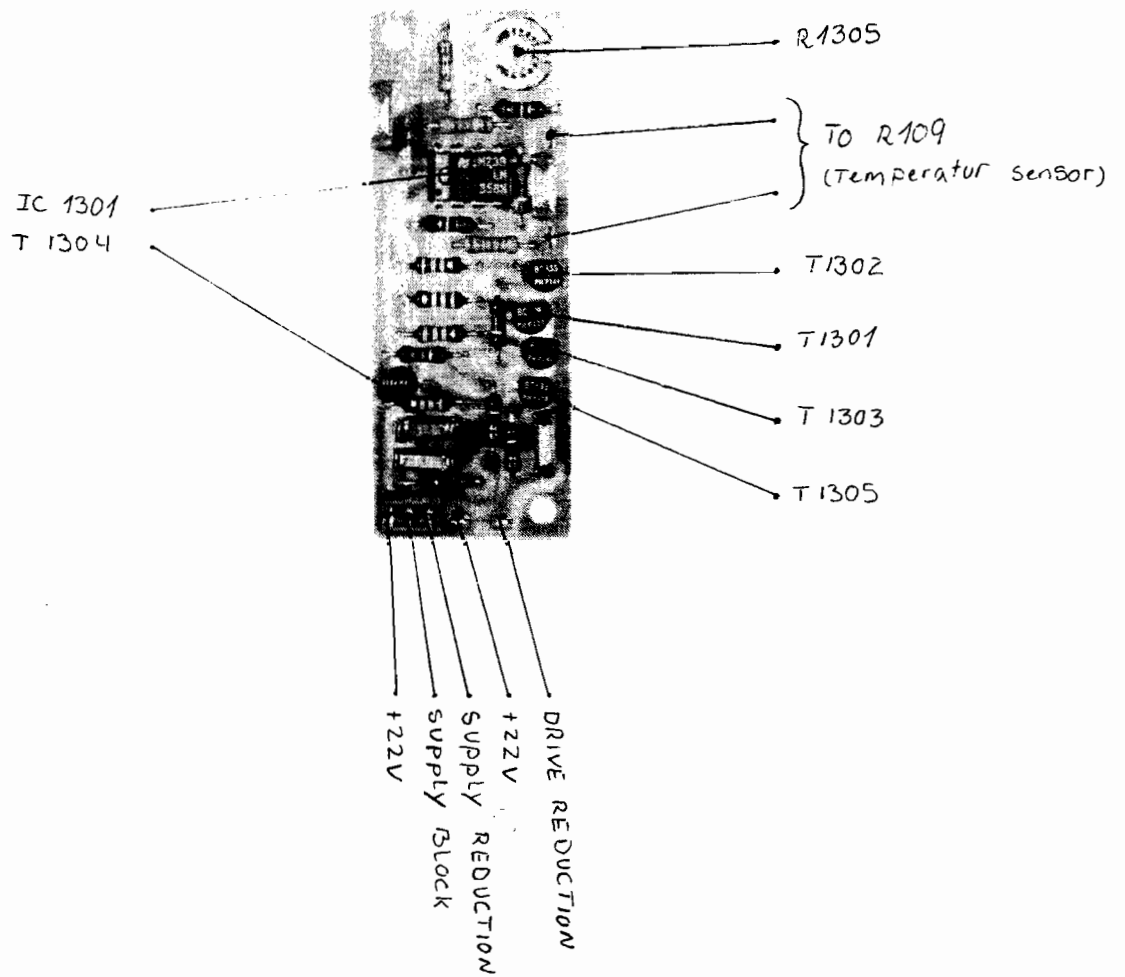


MOUNTED ON ONE OF THE
OUTPUT TRANSISTORS



TEMPERATURE PROTECTION UNIT
(1300)

5-0-23612



TEMPERATURE PROTECTION UNIT

MODULE 1300