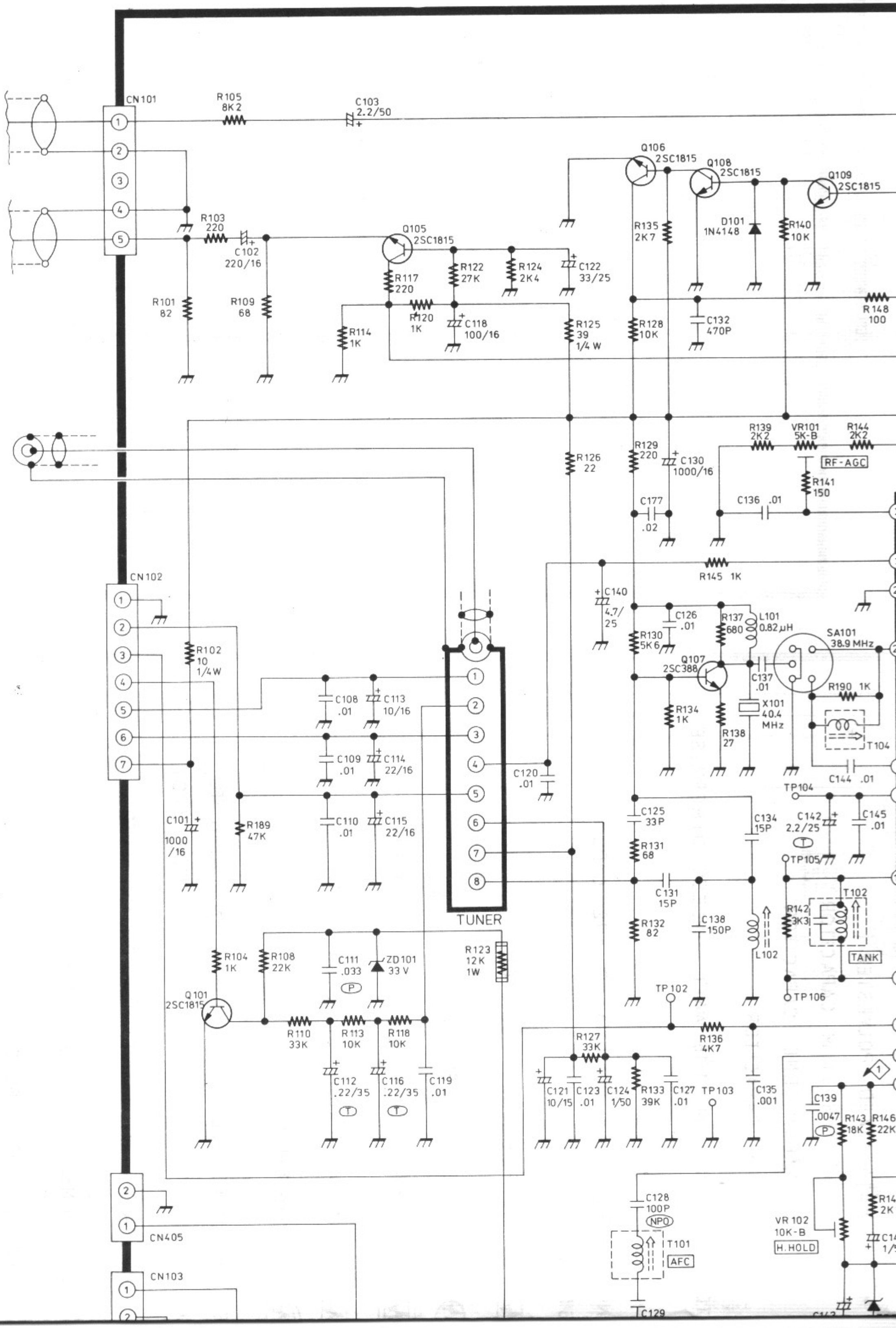

CN101
R105 8K2
C103 2.2/50
Q106 2SC1815
Q108 2SC1815
Q109 2SC1815
R103 220
C102 220/16
Q105 2SC1815
R135 2K7
D101 1N4148
R140 10K
R101 82
R109 68
R117 220
R122 27K
R124 2K4
C122 33/25
R114 1K
R120 1K
C118 100/16
R125 39 1/4 W
R128 10K
C132 470P
R148 100
R139 2K2
VR101 5K-B
R144 2K2
RF-AGC
R126 22
R129 220
C130 1000/16
R141 150
C177 .02
C136 .01
R145 1K
CN102
C140 4.7/25
C126 .01
R137 680
L101 0.82 µH
SA101 38.9 MHz
R130 5K6
Q107 2SC388
C137 .01
R190 1K
R134 1K
X101 40.4 MHz
R138 27
T104
C144 .01
TP104
R102 10 1/4W
C108 .01
C113 10/16
C109 .01
C114 22/16
C120 .01
C125 33P
C134 15P
C142 2.2/25
C145 .01
C101 1000/16
R189 47K
C110 .01
C115 22/16
TP105
C131 15P
T102
R142 3K3
TANK
R132 82
C138 150P
L102
TUNER
R104 1K
R108 22K
C111 .033
ZD101 33 V
R123 12K 1W
TP102
Q101 2SC1815
R110 33K
R113 10K
R118 10K
C112 .22/35
C116 .22/35
C119 .01
R127 33K
R136 4K7
TP106
C121 10/15
C123 .01
C124 1/50
R133 39K
C127 .01
TP103
C135 .001
C139 .0047
R143 18K
R146 22K
C128 100P NPO
VR 102 10K-B H.HOLD
T101 AFC
C129
CN405
CN103

TANTALUM CAPACITOR

METALLIZED POLYESTER

POLYESTER FILM CAPACITOR

POLYPROPYLENE CAPACITOR

MYLAR CAPACITOR

TORS ARE IN OHM 1/16 WATT UNLESS OTHERWISE

NOT SPECIFICALLY DESIGNATED ARE CARBON
TORS.

NONFLAMMBLE RESISTOR

FUSEBLE RESISTOR

CEMENT RESISTOR

METAL OXIDE RESISTOR

THERMISTOR

ARE MEASURED FROM POINTS INDICATED TO
T GROUND WITH A DIGITAL MULTIMETER TEST.

ARE TAKEN WITH SETTING CONTROLS TO

CONDITIONS (COLOR BAR PATTERN).

IT DIAGRAM IS SUBJECT TO CHANGE WITHOUT
ICE.

22	3.20			3.07	6.43
23	0.83			0.10	2.28
24	4.65			2.69	2.28
25	0.60			2.69	5.94
26	4.04			3.72	0
27	0.18			3.71	11.20
28	4.82			9.48	0.36

NOTE : VOLTAGE ARE TAKEN UNDER TUNED CONDITION WITH

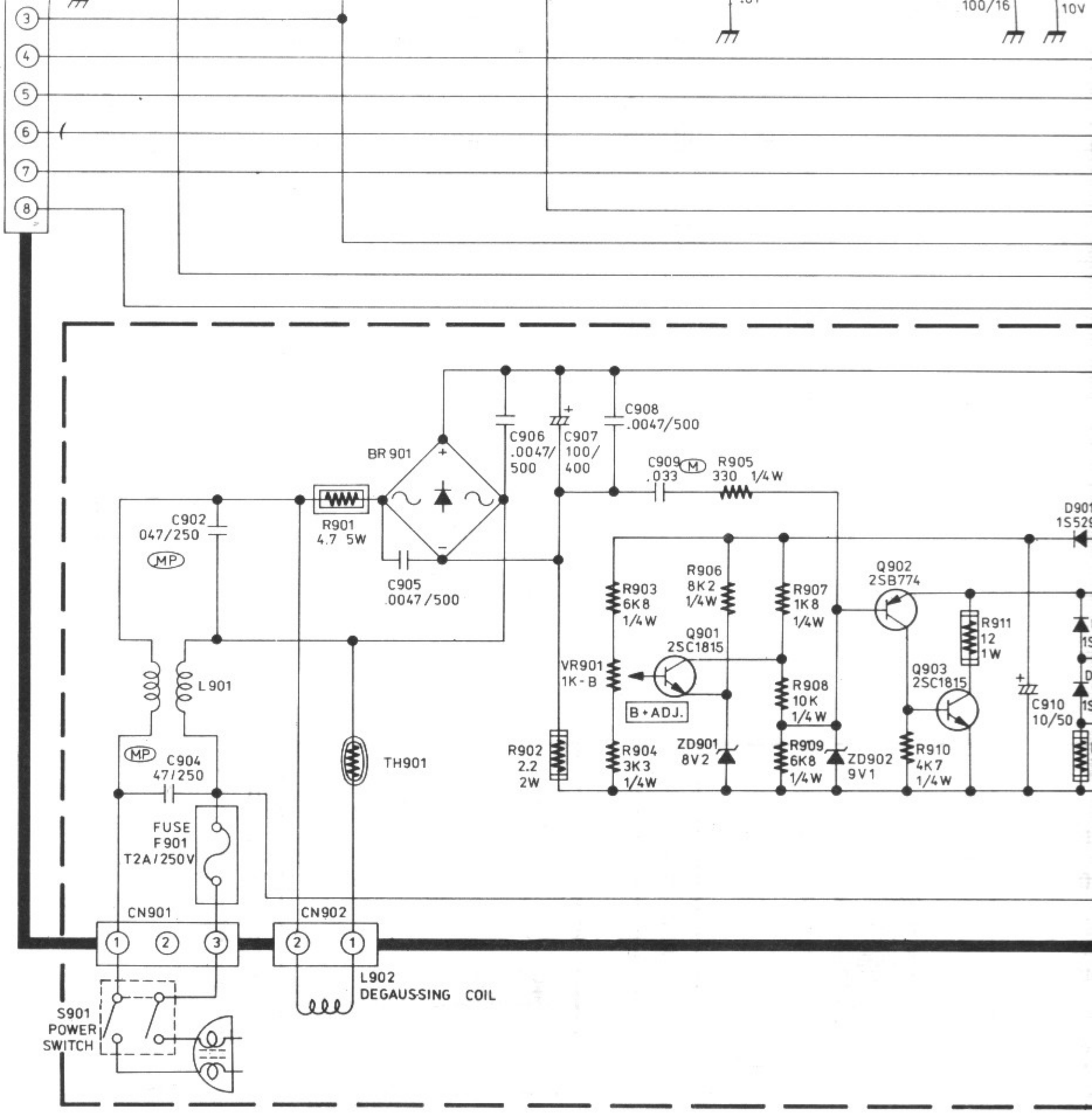
CONTRAST : MAXIMUM POSITION
BRIGHTNESS : CENTER POSITION
COLOR : CENTER POSITION
SIGNAL INPUT : 80 dBuV
CHANNEL SETTING : THE LAST CHANNEL OF VHF HIGH

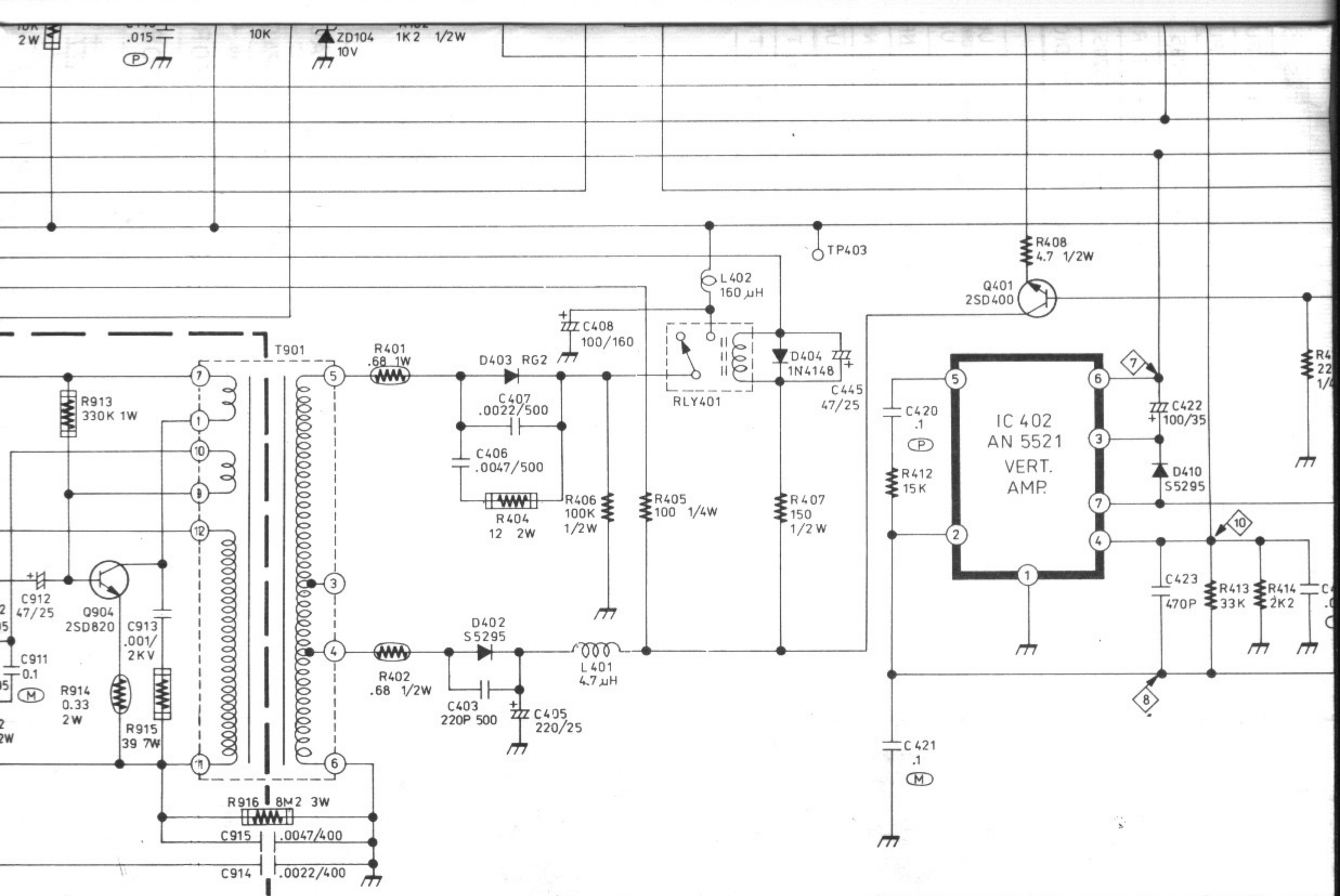
VOLTAGE TABLE FOR IC

SYMBOL / PIN NO.	IC 402 (V)	IC 601 (V)	IC 602 (V)	IC 603 (V)
1	GND	0.05	2.12	GND
2	12.00	GND	4.68	2.32
3	26.40	0.05	0.06	4.08
4	0.73	0	NC	4.46
5	0.25	0.01	GND	4.62
6	1.04	0.01	GND	4.59
7	26.00	4.70	2.14	3.78
8		-31.70	2.15	4.69
9		-7.26	5.25	4.51
10		0	1.35	4.61
11		-0		4.61
12		-0		4.61
13		-0		4.61
14		0.05		4.59
15		0.05		4.57
16				4.59
17				0.14
18				0.05
19				0.05
20				0.05
21				0.05
22				0.05
23				0.03
24				0
25				0
26				0
27				NC
28				NC
29				NC
30				0.14
31				NC
32				NC
33				NC
34				0.75
35				2.65
36				1.43
37				12.00
38				0.15
39				12.00
40				2.23
41				2.23
42				4.64

NOTE : Voltage are taken under tuned condition with

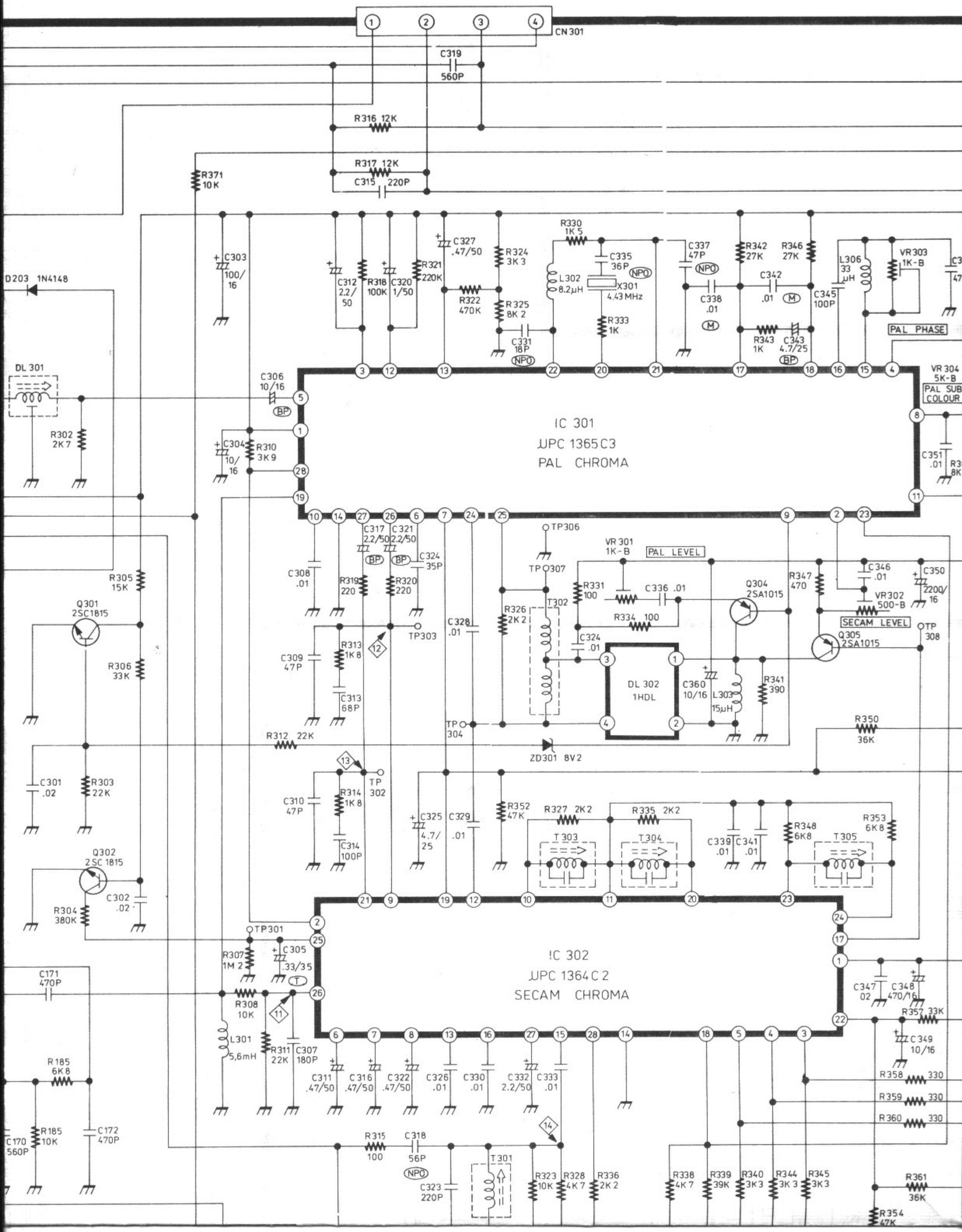
CONTRAST : Maximum Position
BRIGHTNESS : Center Position
COLOR : Center Position
SIGNAL INPUT : 80 dBuV
CHANNEL SETTING : The Last Channel of VHF High

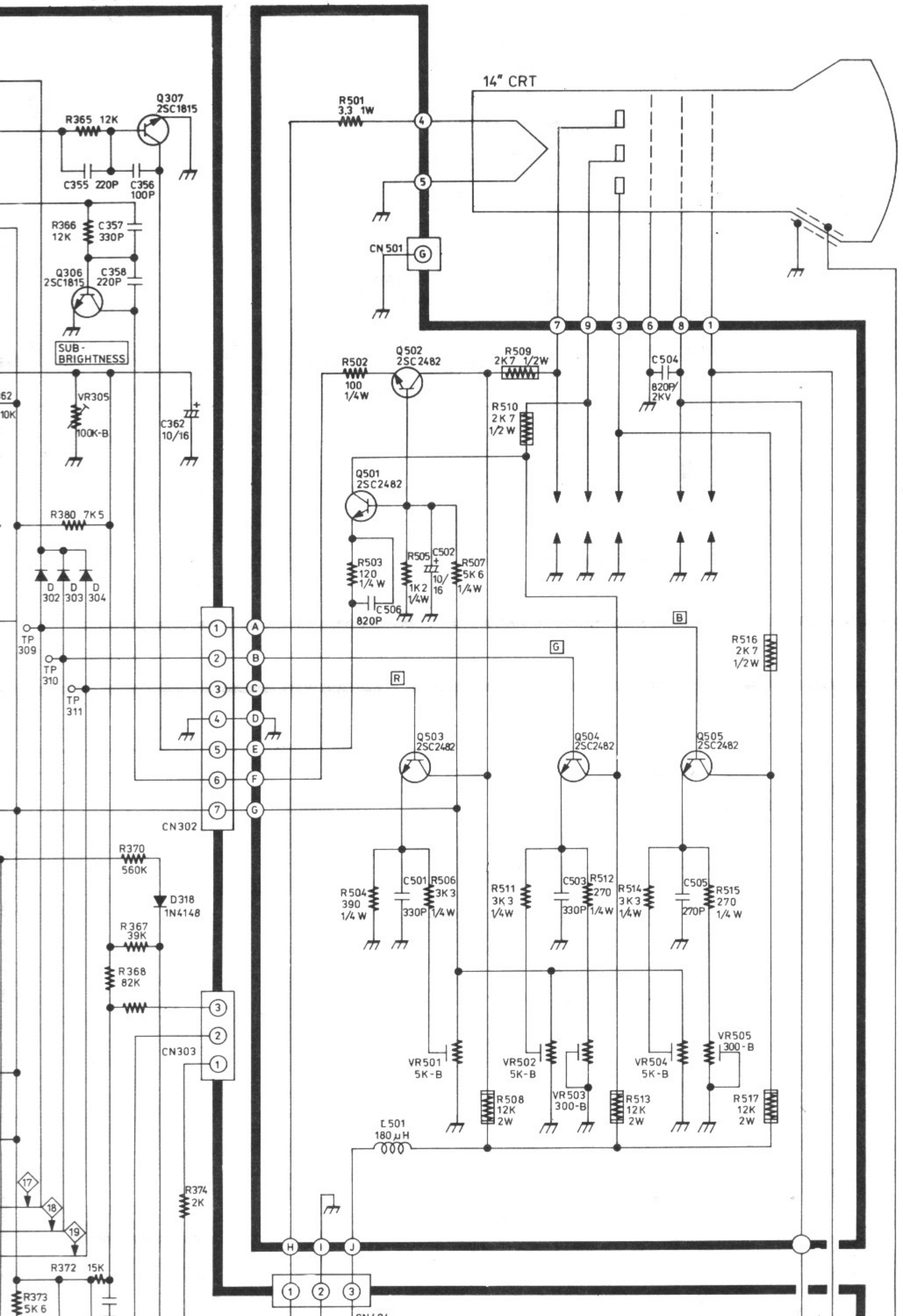

3
4
5
6
7
8
100/16
10V
C908
.0047/500
C906
.0047/
500
C907
100/
400
BR901
C909
.033
M
R905
330 1/4W
C902
047/250
MP
R901
4.7 5W
C905
.0047/500
R903
6K8
1/4W
R906
8K2
1/4W
R907
1K8
1/4W
Q902
2SB774
Q901
2SC1815
R911
12
1W
VR901
1K-B
B+ADJ.
Q903
2SC1815
R908
10K
1/4W
C910
10/50
L901
MP
C904
47/250
TH901
R902
2.2
2W
R904
3K3
1/4W
ZD901
8V2
R909
6K8
1/4W
ZD902
9V1
R910
4K7
1/4W
FUSE
F901
T2A/250V
CN901
CN902
1
2
3
2
1
L902
DEGAUSSING COIL
S901
POWER
SWITCH

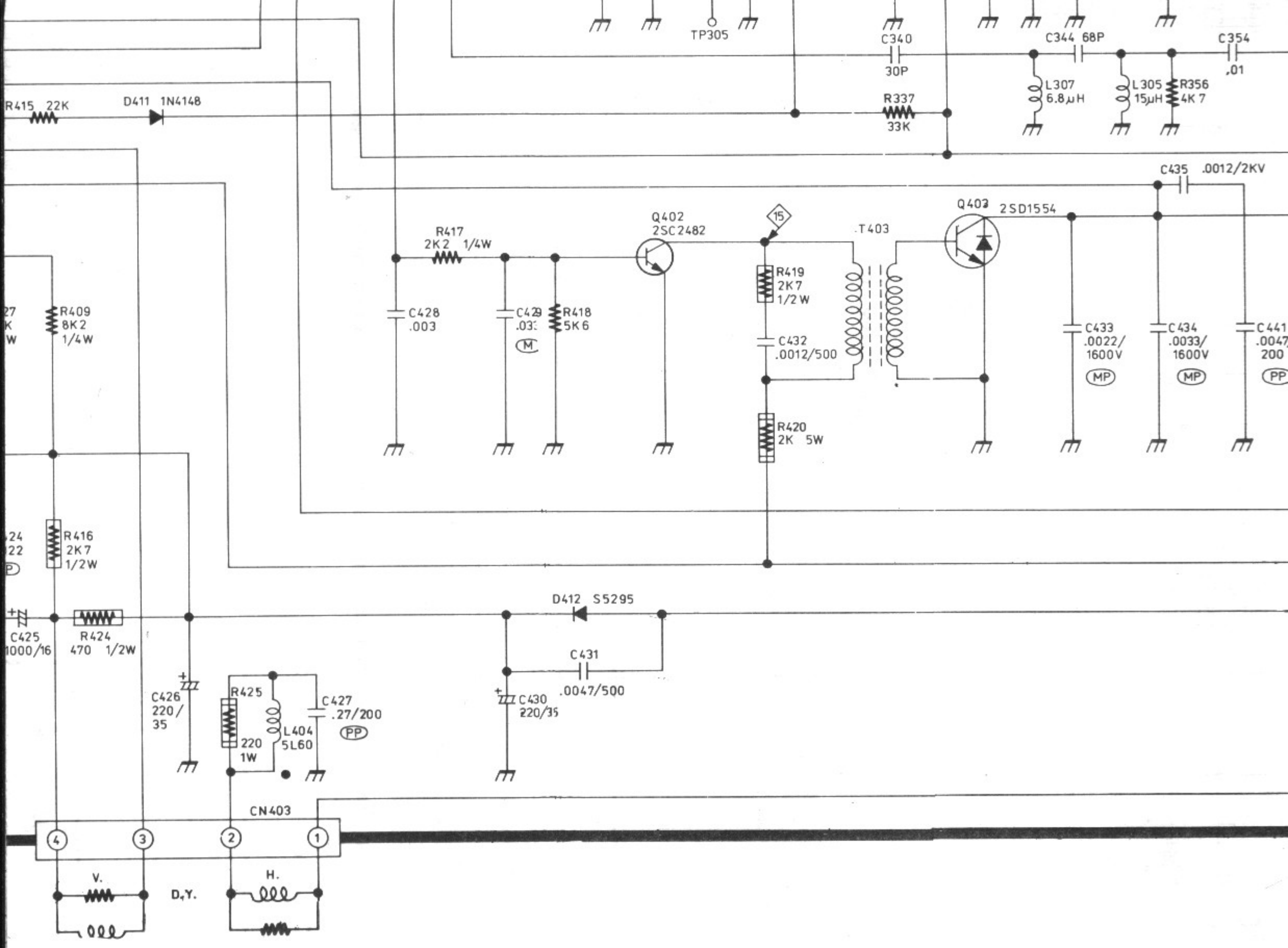


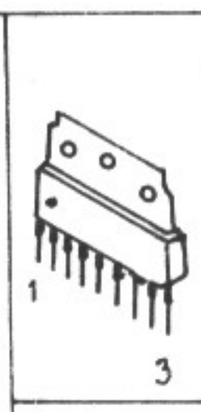
TRANSISTOR AND IC IDENTIFY:

TOP VIEW	MN 15245	TOP VIEW	AN 5150N UPC 1364C2 UPC 1365C3	TOP VIEW	MN 1220	TOP VIEW	HCF 4066		AN 50
	AN 5521		2SD 820		2SD1427		2SC 2068		2SD 2SC

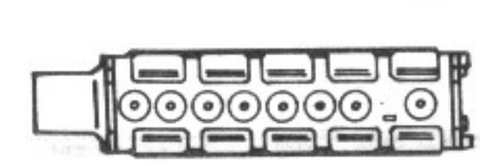

CN 301
C319 560P
R316 12K
R317 12K
C315 220P
R371 10K
C303 100/16
D203 1N4148
C312 2.2/50
R318 100K
C320 1/50
R321 220K
C327 .47/50
R322 470K
R324 3K 3
R325 8K 2
C331 18P NPO
R330 1K 5
L302 8.2µH
C335 36P NPO
X301 4.43 MHz
R333 1K
C337 47P NPO
C338 .01 M
R342 27K
R346 27K
C342 .01 M
R343 1K
C343 4.7/25 BP
C345 100P
L306 33 µH
VR303 1K-B
PAL PHASE
C347 47
DL 301
C306 10/16 BP
R302 2K7
C304 10/16
R310 3K9
IC 301
µPC 1365C3
PAL CHROMA
VR 304 5K-B
PAL SUB COLOUR
C351 .01
R3 8K
R305 15K
Q301 2SC1815
R306 33K
C308 .01
C317 2.2/50 BP
C321 2.2/50 BP
C324 35P
R319 220
R320 220
TP303
C328 .01
C309 47P
R313 1K8
C313 68P
TP306
VR 301 1K-B
PAL LEVEL
TP307
R331 100
C336 .01
R334 100
C324 .01
R326 2K2
T302
Q304 2SA1015
R347 470
C346 .01
C350 2200/16
VR302 500-B
SECAM LEVEL
Q305 2SA1015
TP 308
DL 302 1HDL
C360 10/16
L303 15µH
R341 390
TP 304
R312 22K
ZD301 8V2
R350 36K
C301 .02
R303 22K
C310 47P
R314 1K8
C314 100P
TP 302
C325 4.7/25
C329 .01
R352 47K
R327 2K2
R335 2K2
T303
T304
C339 .01
C341 .01
R348 6K8
T305
R353 6K8
Q302 2SC 1815
R304 380K
C302 .02
TP301
R307 1M 2
C305 .33/35 T
IC 302
µPC 1364C2
SECAM CHROMA
C171 470P
R308 10K
L301 5,6mH
R311 22K
C307 180P
C311 .47/50
C316 .47/50
C322 .47/50
C326 .01
C330 .01
C332 2.2/50
C333 .01
C347 02
C348 470/16
R357 33K
C349 10/16
R358 330
R359 330
R360 330
R185 6K8
R185 10K
C170 560P
C172 470P
R315 100
C318 56P NPO
C323 220P
T301
R323 10K
R328 4K7
R336 2K2
R338 4K7
R339 39K
R340 3K3
R344 3K3
R345 3K3
R361 36K
R354 47K


14" CRT
R501
3.3 1W
CN501
G
Q307
2SC1815
R365 12K
C355 220P
C356
100P
R366
12K
C357
330P
Q306
2SC1815
C358
220P
SUB-
BRIGHTNESS
VR305
100K-B
C362
10/16
R380 7K5
D
302
D
303
D
304
TP
309
TP
310
TP
311
CN302
CN303
R370
560K
D318
1N4148
R367
39K
R368
82K
R372 15K
R373
5K 6
C364
.02
R355
R375
17
18
19
R374
2K
R502
100
1/4W
Q502
2SC2482
R509
2K7 1/2W
C504
820P/
2KV
R510
2K 7
1/2 W
Q501
2SC2482
R503
120
1/4 W
C506
820P
R505
1K2
1/4W
C502
10/
16
R507
5K 6
1/4W
R516
2K 7
1/2W
Q503
2SC2482
Q504
2SC2482
Q505
2SC2482
R504
390
1/4 W
C501
330P
R506
3K3
1/4 W
R511
3K 3
1/4W
C503
330P
R512
270
1/4 W
R514
3K 3
1/4W
C505
270P
R515
270
1/4 W
VR501
5K-B
VR502
5K-B
VR504
5K-B
VR505
300-B
R508
12K
2W
VR503
300-B
R513
12K
2W
R517
12K
2W
L501
180 µH
CN404



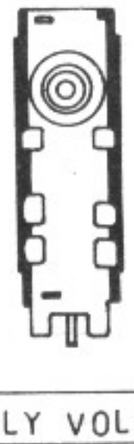
026K		AN 5265
400F		2SC 2482
388A		2SC 1815 2SA 1015 2SB 774T

PICTORIAL VIEW OF TUNER:

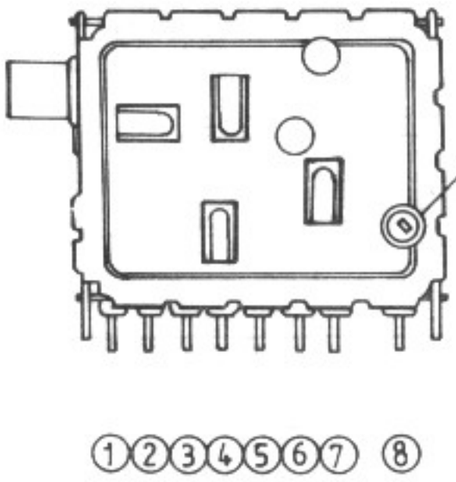


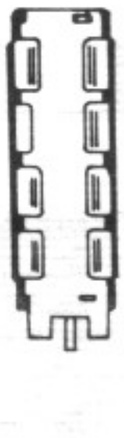
Terminal NO	1	2	3	4	5	6	7	8	9
Terminal name	BU	VT	B H	AGC	BL	AFT	BM	IF	V/U ANT

IFT TUNING ADJUST



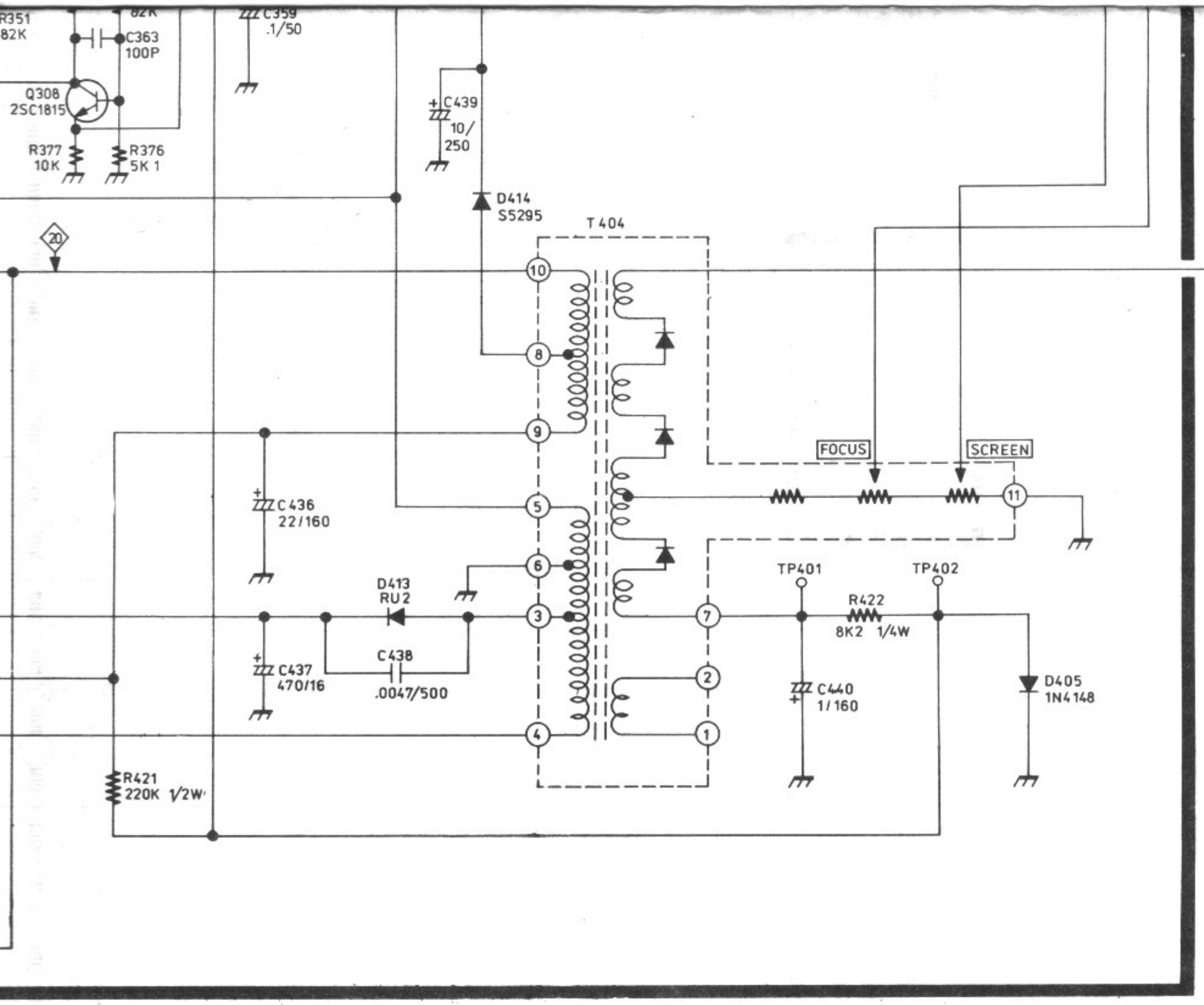
⑨





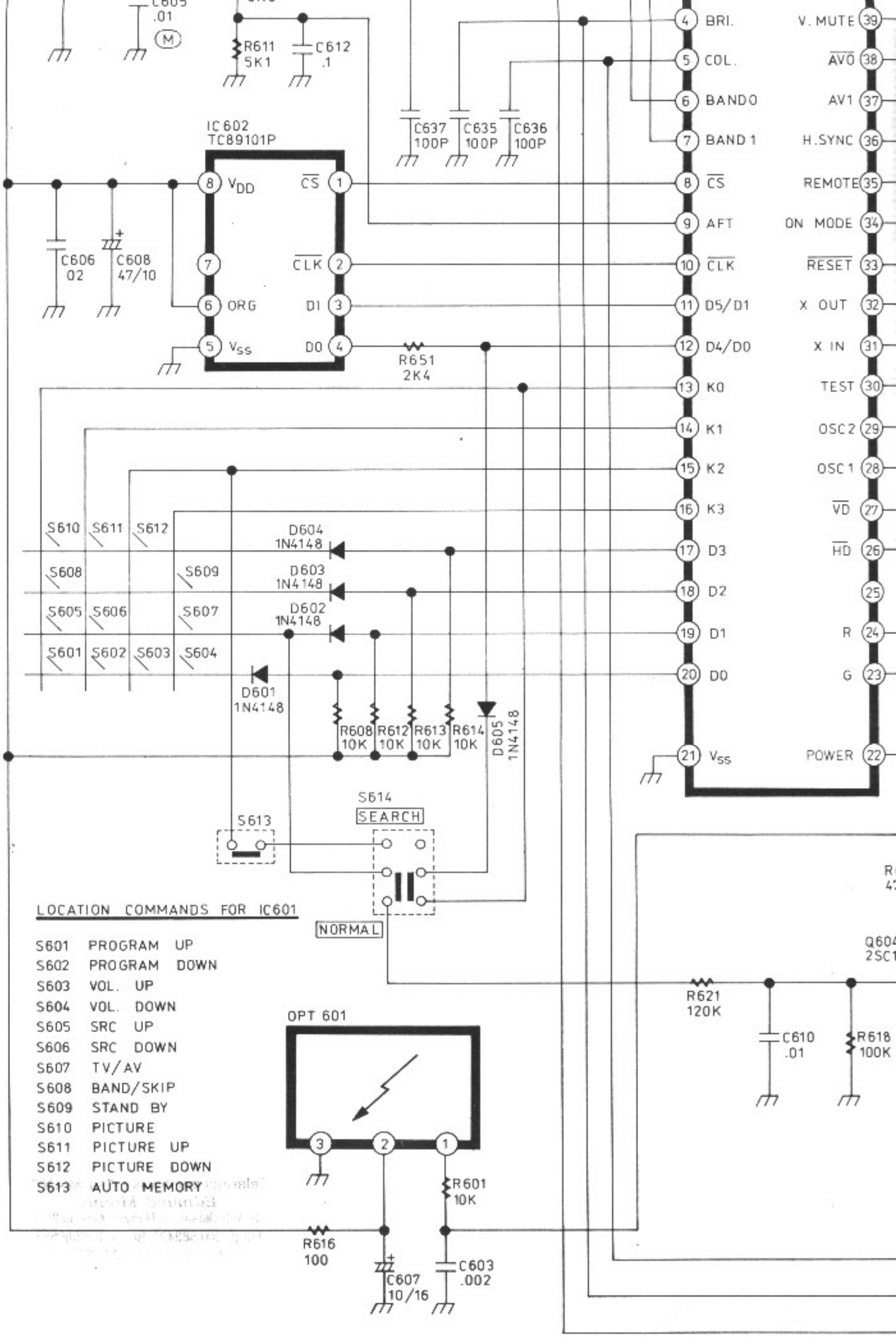
SUPPLY VOLTAGE (V)				
Term.	ch.	VHF LO	VHF HI	UHF
7	BM	12	12	12
5	BL	12	Open	12
3	BH	Open	12	Open
1	BU	Open	Open	12

①②③④⑤⑥⑦ ⑧



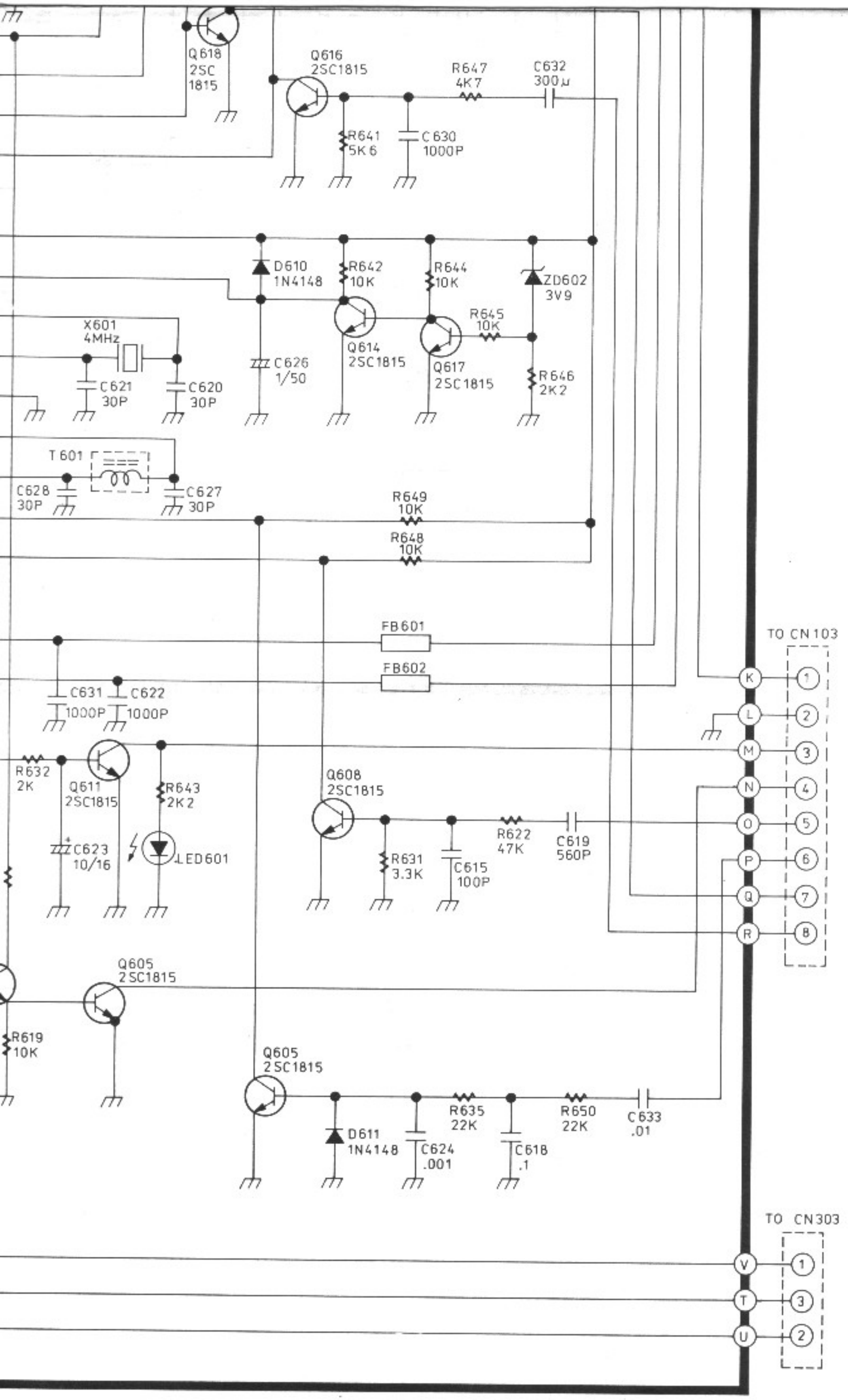
Teleradiomechanika **"ELMAX"**
Edmund Miglus
46-300 Olesno, ul. M.Przedmieście 20/4
Tel. (0-34) 583429, Regon 006560556
NIP 576-103-27-95

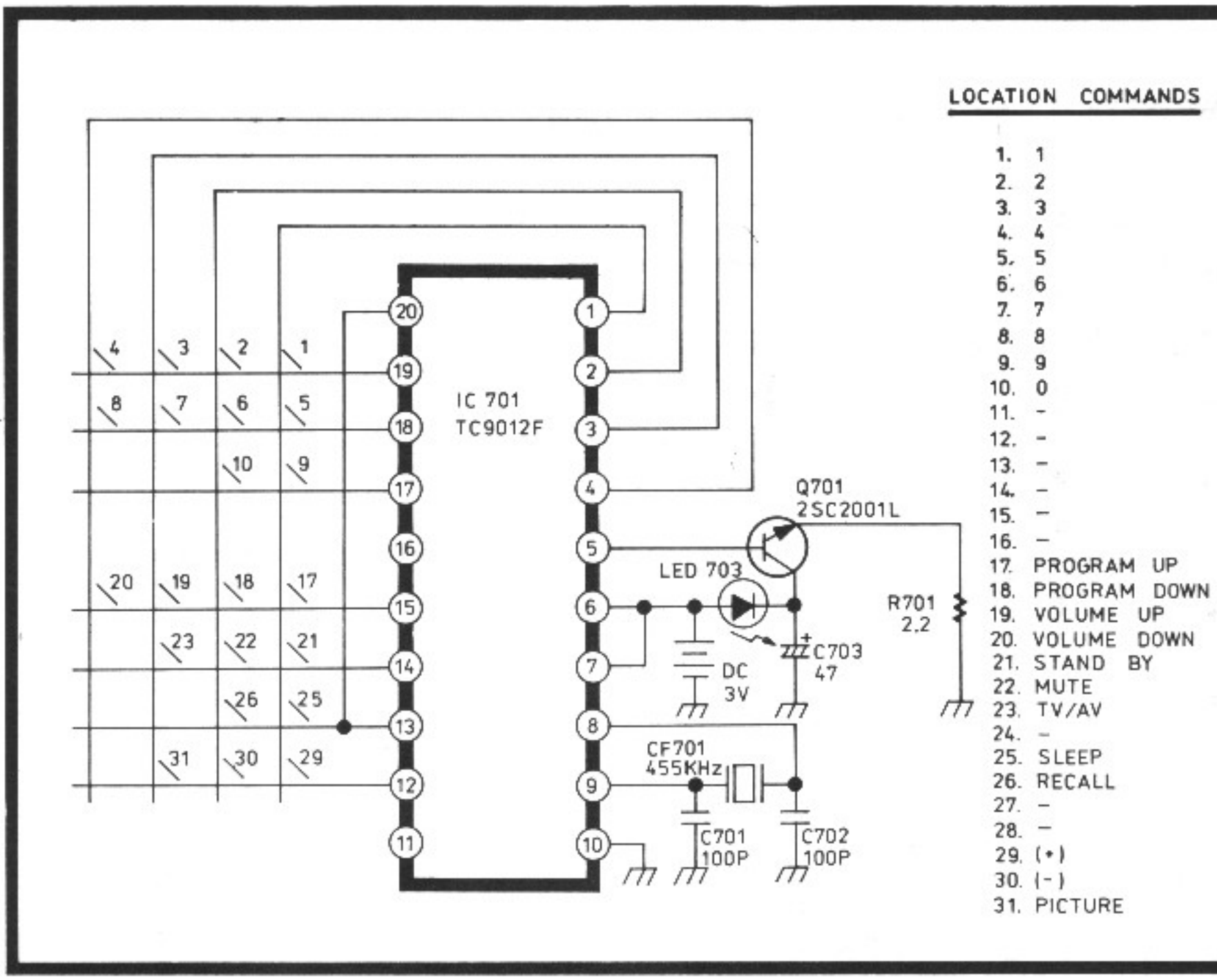
ice TV 1045/2



LOCATION COMMANDS FOR IC601

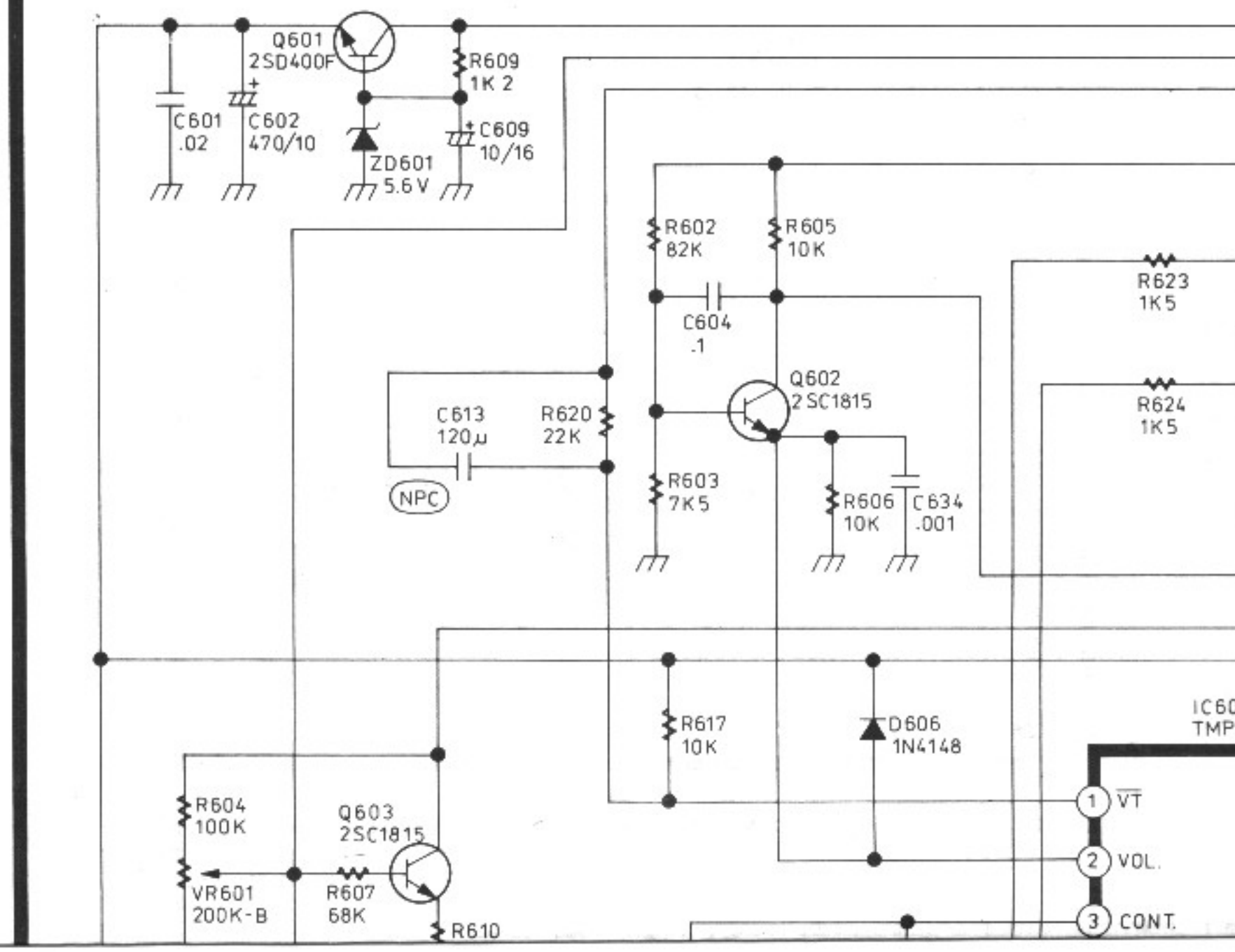
S601	PROGRAM UP
S602	PROGRAM DOWN
S603	VOL. UP
S604	VOL. DOWN
S605	SRC UP
S606	SRC DOWN
S607	TV/AV
S608	BAND/SKIP
S609	STAND BY
S610	PICTURE
S611	PICTURE UP
S612	PICTURE DOWN
S613	AUTO MEMORY

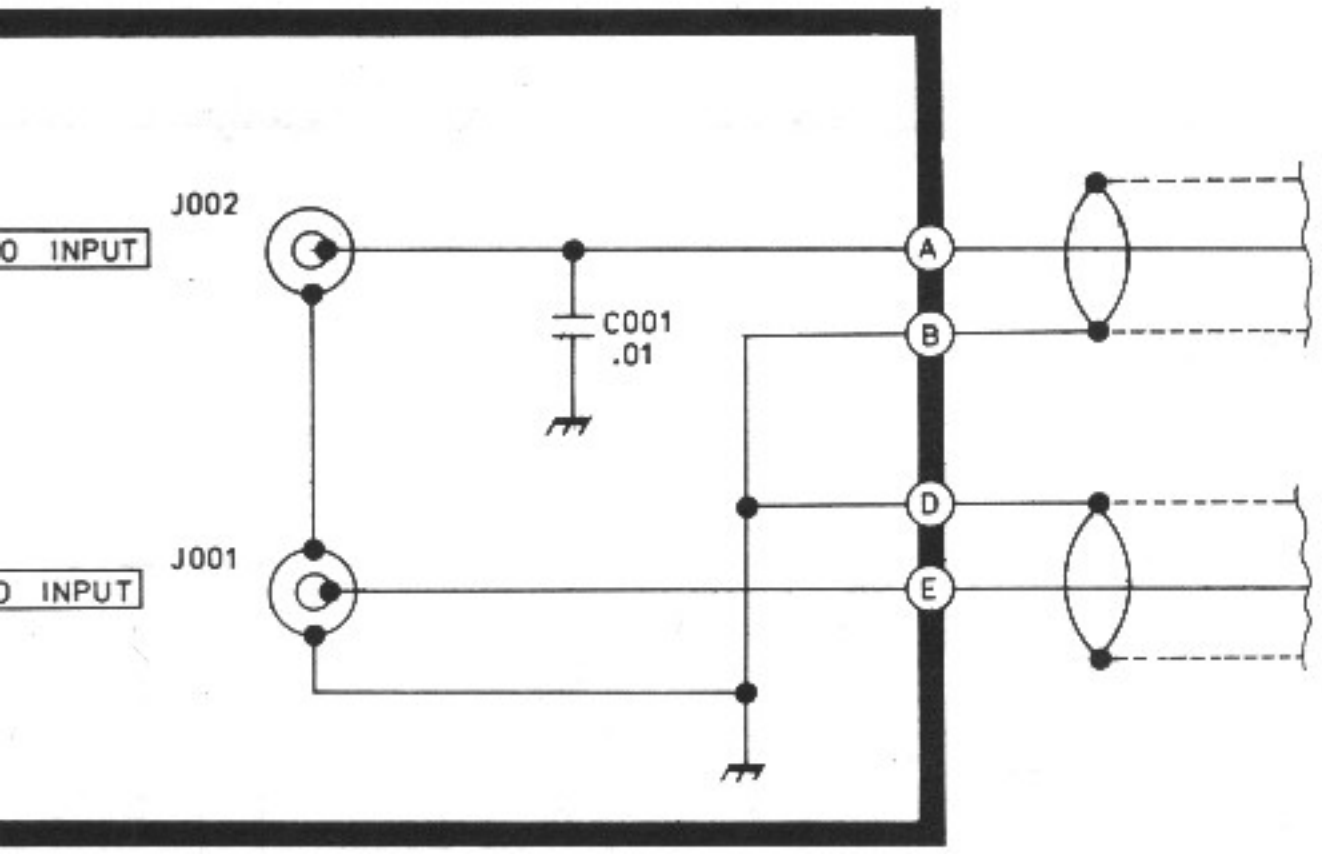

Q618
2SC
1815
Q616
2SC1815
R647
4K7
C632
300μ
R641
5K6
C630
1000P
D610
1N4148
R642
10K
R644
10K
ZD602
3V9
R645
10K
X601
4MHz
C621
30P
C620
30P
C626
1/50
Q614
2SC1815
Q617
2SC1815
R646
2K2
T601
C628
30P
C627
30P
R649
10K
R648
10K
FB601
FB602
C631
1000P
C622
1000P
R632
2K
Q611
2SC1815
R643
2K2
C623
10/16
LED601
Q608
2SC1815
R631
3.3K
C615
100P
R622
47K
C619
560P
Q605
2SC1815
R619
10K
Q605
2SC1815
D611
1N4148
C624
.001
R635
22K
C618
.1
R650
22K
C633
.01
TO CN103
K
L
M
N
O
P
Q
R
1
2
3
4
5
6
7
8
TO CN303
V
T
U
1
3
2
LIST
TYPE
64μs
20 ms
64μs



LOCATION COMMANDS

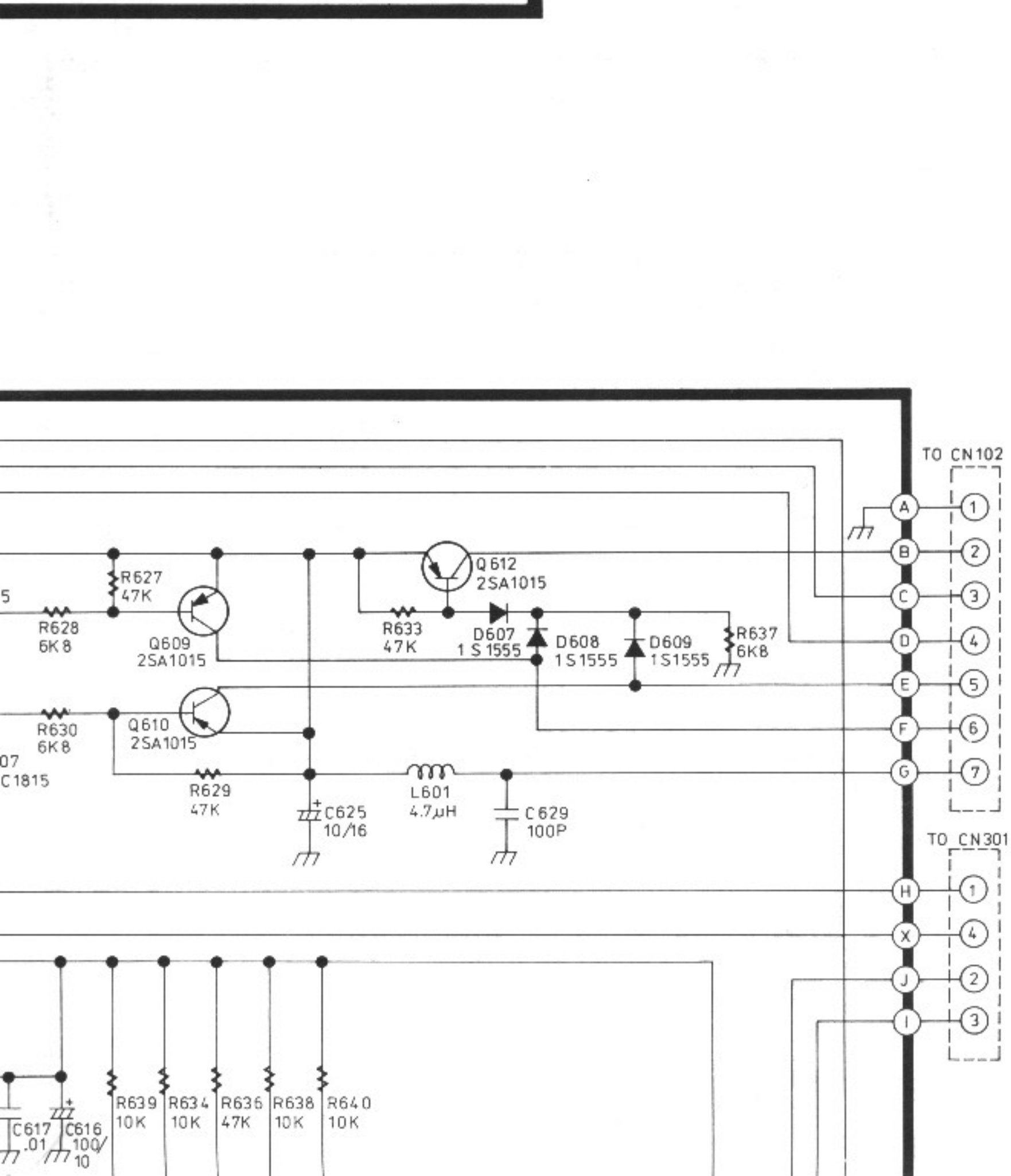
1. 1
2. 2
3. 3
4. 4
5. 5
6. 6
7. 7
8. 8
9. 9
10. 0
11. –
12. –
13. –
14. –
15. –
16. –
17. PROGRAM UP
18. PROGRAM DOWN
19. VOLUME UP
20. VOLUME DOWN
21. STAND BY
22. MUTE
23. TV/AV
24. –
25. SLEEP
26. RECALL
27. –
28. –
29. (+)
30. (-)
31. PICTURE





VOLTAGE TABLE FOR TRANSISTOR

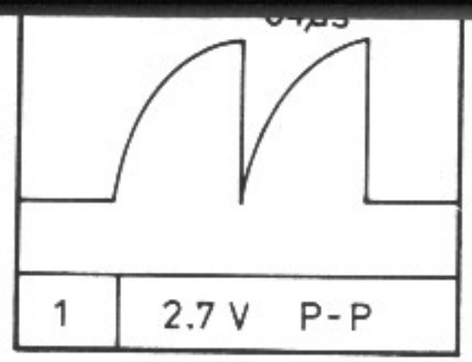
SYMBOL	B (V)	C (V)	E (V)	SYMBOL	B (V)	C (V)	E (V)

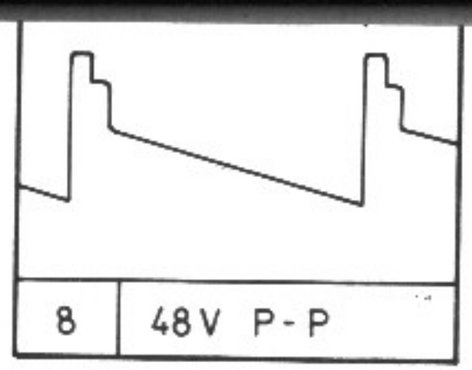


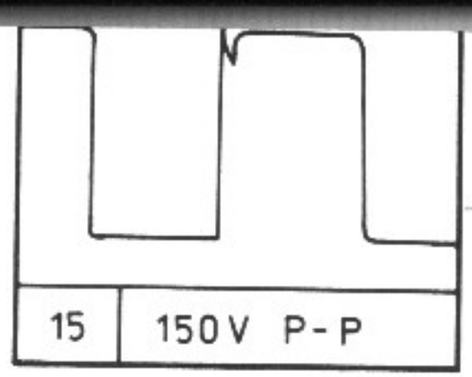
OF DIODES AND TRANSISTORS

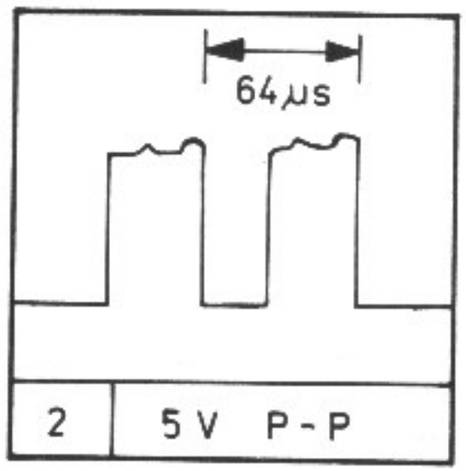
EQUIVALENTS

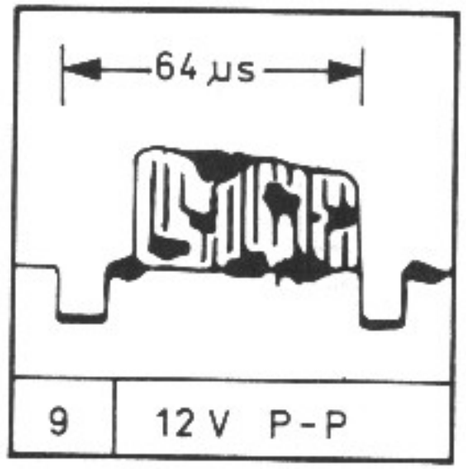
DESCRIPTION DATA

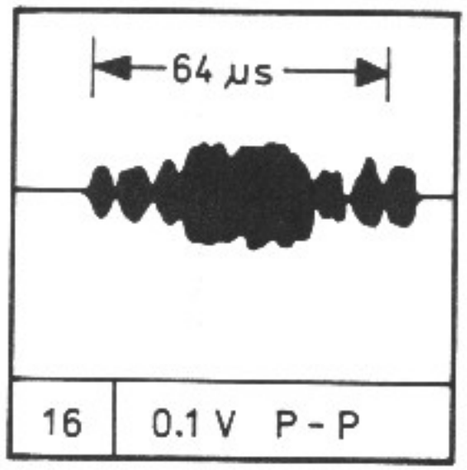


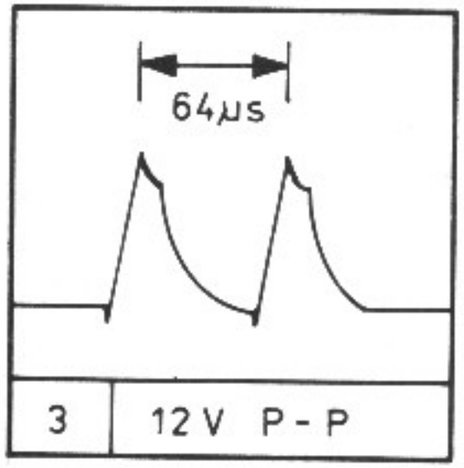


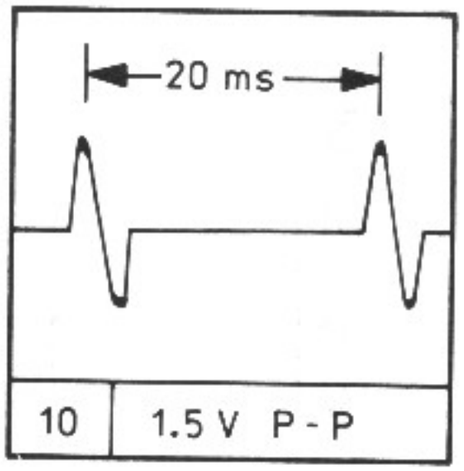


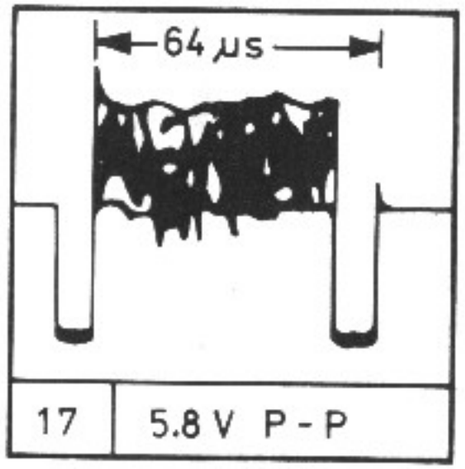


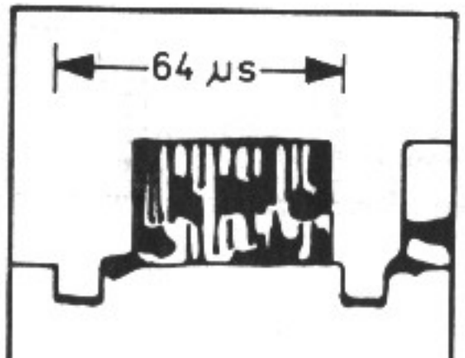


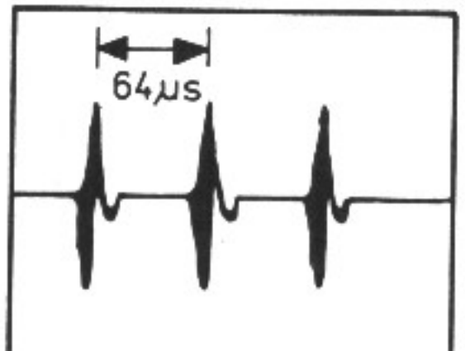


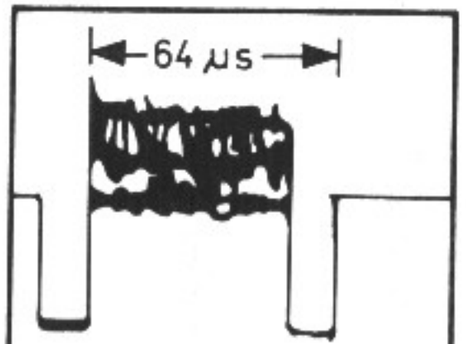












1N4148	Si; FAST
1S1555	Si; GEN.
1S5295	Si; GEN.
S5295	≡ 1S529
RG2	Si; FAST
RU2	≡ 1S529
ZD3,9÷33V	ZENER
2SA1015	Si; PNP;
2SB774	Si; PNP;
2SC1815	Si; NPN;
2SC2482	Si; NPN;
2SD400F	Si; NPN;
2SD820	Si; NPN;
2SD1554	Si; NPN;

NOTE

(1) ALL CAPA
ALL CAPA

(2) CAPACITO
CAPACITO

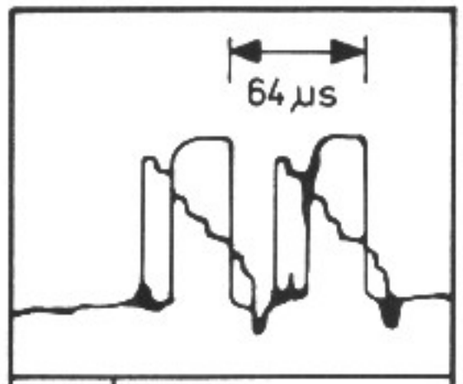
a)

b)

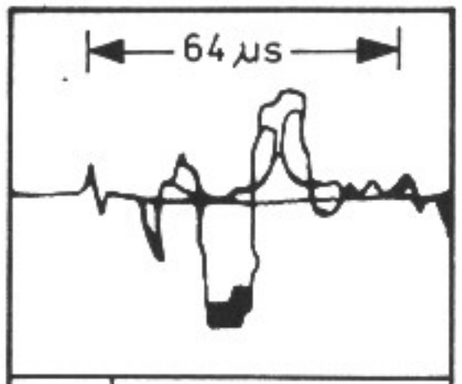
4	17 V P-P

11	3 V P-P

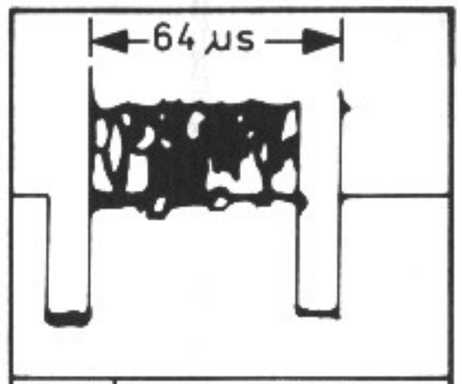
18	5.8 V P-P



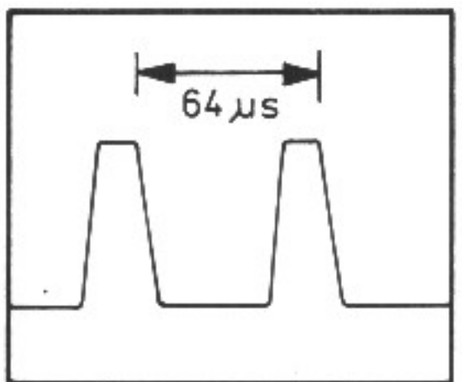
5	23 V P-P



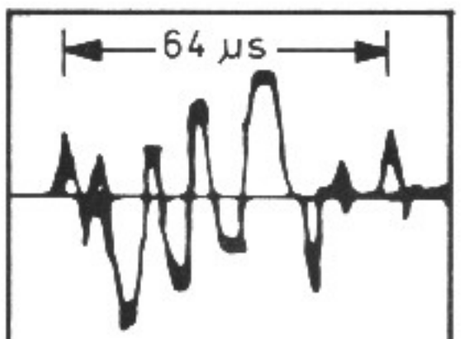
12	0.72 V P-P



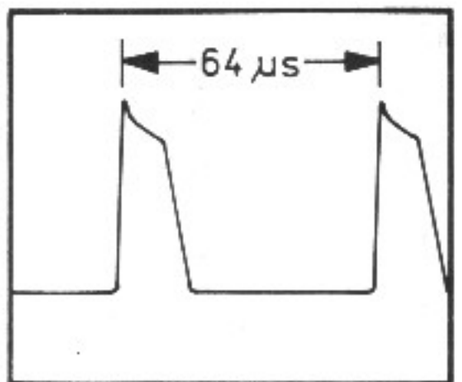
19	58 V P-P



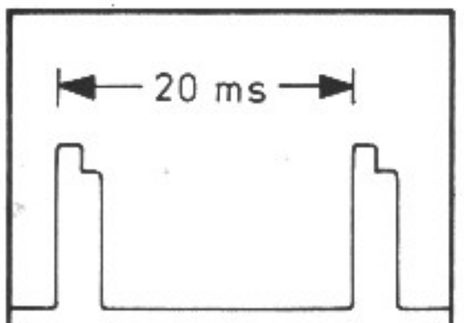
6	8 V P-P



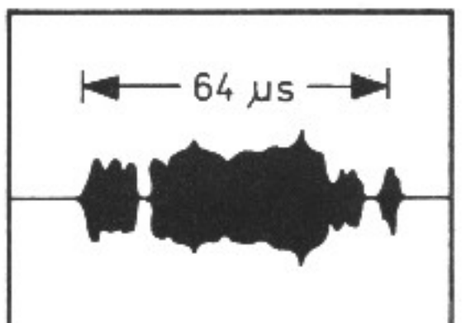
13	0.82 V P-P



20	1060 V P-P



7	20 V P-P



14	0 12 V P-P

d) (MP)

e) (P)

f) (PP)

g) (M)

(3) ALL RESIS
NOTED.

(4) RESISTOR
FILM RESI

a)

b)

c)

d)

e)

(5) DC VOLTAG
THE CIRCU

(6) WAVEFORMS
A NORMAL

(7) THIS CIRCU
PRIOR NOT

WITCH; 0,2A; 100 V; 4 ns;	BAY61
RPOSE; FAST SWITCH; DET; 0,16 A; 200 V; 50 ns;	
RP.; FAST RECOVERY; 1 A; 600 V; 200 ns;	
ECOVERY; GEN. PURP. RECT.; 3 A; 600 V; 250 ns;	
DE; 3,9 - 33 V; 1 W ($\frac{1}{2}$ W); 5 %;	
TRANSISTORS	
i; 50 V; 0,15 A; 0,4 W;	BC177; BC307
i; 30 V; 0,1 A; 0,25 W;	BC308; BC558
-ra; 60 V; 0,15 A; 0,4 W; Kompl. 2SA1015	BC414
/S-L; 300 V; 0,1 A; 0,9 W;	BF299
i; 25 V; 1 A; 0,75 W;	BC338
-HA; 1500 V; 3,5 A; 50 W;	BU208; BU308; BU500
-HA; 5 A; 1500 V; with Damper Diode; 120 W;	

ITORS ARE IN µF UNLESS OTHERWISE NOTED.

ITORS ARE 50 UNLESS OTHERWISE NOTED.

NOT SPECIFICALLY DESIGNATED ARE CERAMIC

S.

ELECTROLYTIC CAPACITOR

BI-POLAR ELECTROLYTIC CAPACITOR

Q104	0.1	3.5	GND	Q403	0.2	116	GND
Q105	0.8	2.9	0.1	Q501	2	112	1.8
Q106	0	12.8	0	Q502	2	116	1.9
Q107	5.9	11.5	5.1	Q503	2.7	114	2.3
Q108	0.6	0	0	Q504	3	112	2.7
Q109	0	0.6	0	Q505	2.9	109	2.5
Q110	0.6	0	GND	Q603	4.7	0.04	4.7
Q111	0	9.9	GND	Q604	0.05	4.7	0.03
Q112	2.9	12.8	2.3	Q605	0.08	0.04	0.04
Q113	3.3	7.7	2.7	Q606	-0.06	4.3	0.36
Q114	7.7	12.8	7	Q607	-0.09	4.2	0.03
Q115	2.7	12.8	2.11	Q608	-0.06	4.3	0.03
Q116	0.2	11.0	0	Q609	12.5	0	12.5
Q201	3.1	11.6	4.6	Q610	12.5	0	12.5
Q202	0	7.9	0	Q611	11.8	12.4	0
Q301	0.5	0	GND	Q612	0.7	0.1	0.2
Q302	0	7.8	GND	Q614	0.15	3.2	0.3
Q303	0	8.6	0.1	Q615	0.09	8.8	0.03
Q304	10.9	0	11.5	Q901	8.7	12.1	8
Q305	8.2	0	8.9	Q902	5.3	0	1.9
Q306	0	3	0	Q903	0	1.1	0
Q307	0	3	GND	Q904	-2.4	261	0
Q401	16.6	16.6	15.8				

NOTE : Voltage are taken under tuned condition with

CONTRAST : Maximum Position
BRIGHTNESS : Center Position
COLOR : Center Position
SIGNAL INPUT : 80 dBuV
CHANNEL SETTING : The Last Channel of VHF High

VOLTAGE TABLE FOR IC

SYMBOL / PIN NO.	IC 101 (V)	IC 102 (V)	IC 201 (V)	IC 301 (V)	IC 302 (V)
1	4.82	0	10.0	11.20	11.20
2	5.32	2.82	4.5	11.00	9.48
3	4.36	2.82	0	8.54	2.86
4	4.59	3.97	9.1	8.54	2.80
5	3.45	0.01	7.1	2.27	2.90
6	6.81	0.01	7.4	1.60	1.50
7	3.10	GND	GND	6.17	1.10
8	3.10	1.04	7.5	5.38	1.52
9	4.80	1.55	15.6	8.80	9.08
10	4.80	1.55		1.91	2.28
11	2.44	1.35		1.20	2.28
12	7.52	9.72		8.73	2.27
13	3.65	9.72		5.68	2.27
14	6.59	12.40		GND	GND
15	6.59			7.30	2.27
16	9.51			4.20	2.28
17	2.07			8.45	10.40
18	5.34			8.45	0.10
19	5.33			0	6.17
20	9.68			9.14	0.01
21	GND			3.05	9.02

SPEAKER
16 OHM
CN 201
C205
220/25
R202
4.7
R203
8K2
R206
1K5
C209
2.2/50
C202
.047
P
IC 102
HCF4066BE
SWITCH
Q112
2SC1815
R168
1K5
R157
10K
R150
15K
R153
10K
Q110
2SC1815
Q111
2SC1815
C150
.47/25
T
C173
100
/16
C158
.02
R163
33K
C165
.02
TP108
C151
.01
C201
.47/
35
T
R201
2K2
C203
.0047
P
IC 201
AN5265
AUDIO AMP.
R212
22K
C210
10/16
C204
4.7/25
C206
470/25
C207
100/16
R207
100
1/4W
S301
NORMAL
SERVICE
R301
1K8
R204
10 1/4W
C159
330/16
C162
.01
ZD105
9V1
R170
15K
C166
10/16
BP
R176
1K8
C169
470/
16
R205
150
Q114
2SC1815
Q113
2SC1815
T103
SOUND
R173
5K6
R179
1K8
R209 4K7
D204
1N4148
Q202
2SC1815
C156
12P
C178 47P
R152
680
L103
10μH
C163
47P
CF101
5.5MHz
C157
56P
NPO
C153
.015
M
TP107
Q115
2SC1815
R208
1K
C208
10/16
R210
39K
D202
1N4148
R181
10
3W
R174
51 2W
IC 101
AN5150N
VIF, SIF,
VERT. OSC.
HOR. OSC.
R160
330
L104
15μH
R154
1K8
CF102
5.5MHz
R177
1K
R180
1K
R211
10K
R213
4K7
VR105
20K-B
VR103
30K-B
R155 15K
SUB-V.HOLD
V.HOLD
C154
1/35
T
R158 100K
C155
.001
P
R165
330
R166
100K
C160 3.3/50
D201
1N4148
C211
.01
P
C161 47/25
R184
470
C168
1/35
T
Q116
2SC1815
R171
3K3
C167
1/35
T
R187
150
R182
2K2
C152
100P
ZD103
9V1
C148
.01
P
R167
22K
R168
10K
C164
10/16
R161
10K
C180
.01
R151
270K
±10%
R159
26K
±10%
R183
560
R172
4.7
1W
R175
220
R178
120
VR104
200-B
V.HEIGHT
VR106
500-B
R149