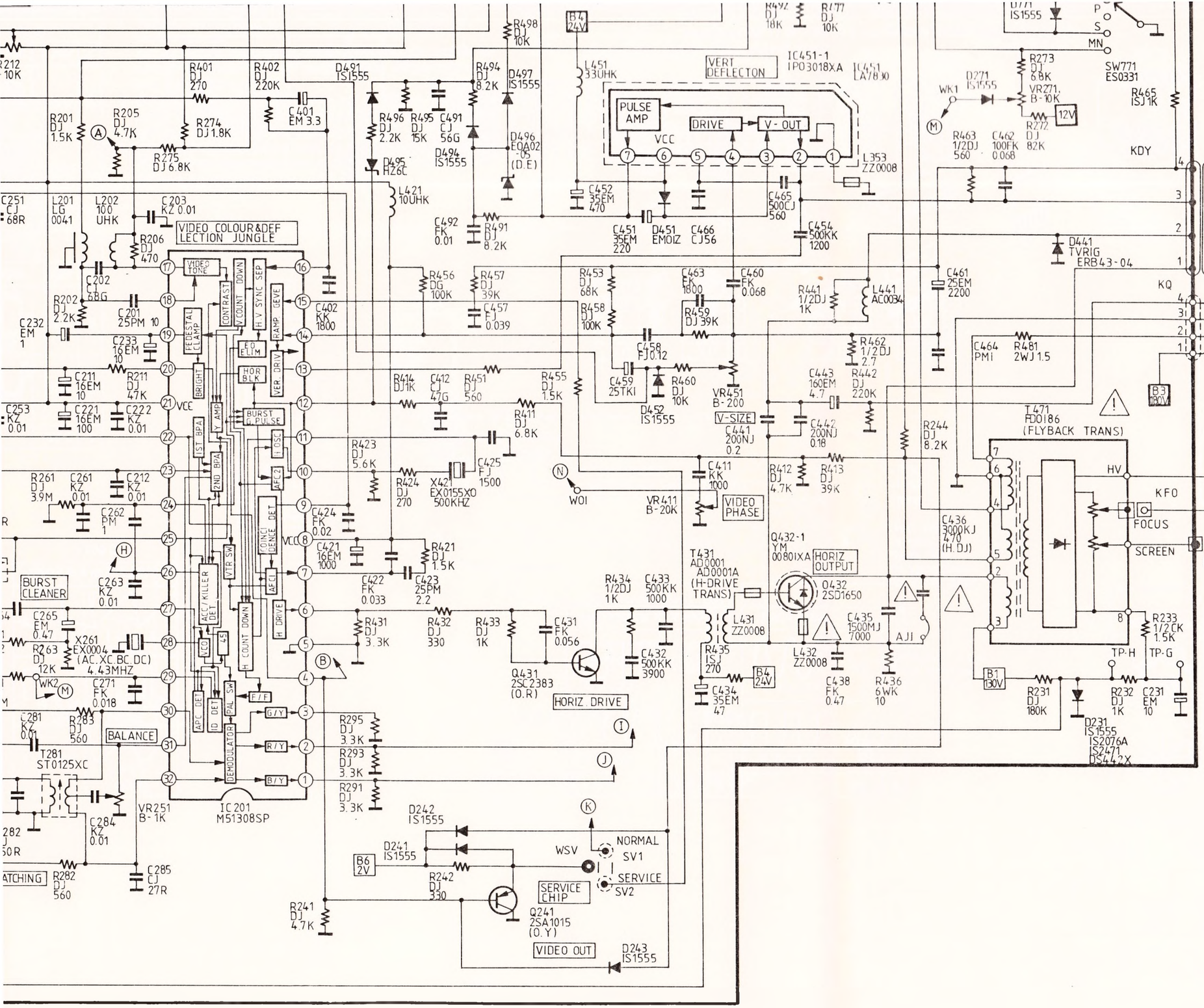


SANYO
CEM2130PV-20

UE1784CXA
SECAM UNIT D8KZ-C

IC1301 AN5635N

K6H CRT UNIT D8KE-A UE1658AXA

Q601/Q611/Q621/Q641
2SC2621RA(D.E)
2SC2688R(K.L.M)

B-OUT
R-OUT
G-OUT
B-DRIVE
R-DRIVE
B-BIAS
R-BIAS
G-BIAS

W902
JG0141

Q901
A51JFC61X

K501
EK0618
(CRT SOCKET)

K13R
K13C
K13B
K13A
K6P
K6M
K6Q
K6D
K8B
K8A

50/60HZ
12V
AUTO
SECAM
VIDEO
EARTH
CONT
COLOR
KILLER
R-Y
S-Y
Y
EARTH
H.V.P
GATE
F.B.P

KVC3 DOWN
KVC2 NEUT
KVC1 UP

VIDEO AMP.VIDEO DET..AGC.AFT. SIF.AMP DCMCO

A101 TD0098EA

IF
MB
AFC
VL
AGC
VH
TU
UB

C101/..../C103 25 EM 4.7

L106 10UHK
C101
L107 10UHK
C102
C104 EM 0.47
C103

C105 CJ56R
C106 CJ56R
C110 16EM 47
L100 68UHK
B6 12V

TP-A
C107 CJ 100R
R101 DJ 1K
C109 KZ 0.01
R102 DJ 4.7K
R105 DJ 220
R106 DJ 220
C117 KZ 0.01
C111 KZ 0.01
Q101 2SC2570A
R103 DJ 1K
R104 DJ 22

X101 EX0015XS (38.9MHZ)
SAW FILTR
T103 ST0072XV IF MATCHING TRANS
C117 KK 1000
VR 101 B-10K

T101 ST0007XV

C113 25EM 4.7
R111 DJ 27K
R107 DJ 1.5K
C114 KZ 0.01

TP-C
R109 DJ 1.5K
C116 EM 0.47

12V
R137 DJ 100K
C136 FK 0.047
R139 DJ 270K
R136 DJ 100K

D371 EM01Z

WF
KF 2
D315 TLP634 PC1138

T371 PT0146

C303/..C306 1000KM 1000D
D301/..D304 ERC05-10 RM11C TVR4N(X)
C307 400EM100X 400ET100X

DEGAUSSING COIL
L301 LJ0110CHA

C310 500KK 0.01 KE
PS301 E1587P EV0019
R302 6WK 3.9
L302 LQ0003 LQ0005A

R320 1/2DJ 120K
R321 1/2DJ 120K
R322 DJ 15K
D314
C314 FK 0.039
R319 DJ 390
R324 2SJ 82
POWER SWITCHING

C302
C301/C302 250HM 0.1
L301 LQ0002 LQ0004A
C301
R301 1/2DJ 220K

R312 DJ 2.7K
D311 EQA02-06E EQA02-06F
BI ADJ
Q311 2SA608 (E.F)
VR-311 B 1K
R314 DJ 5.6K
R313 DJ 56K
R311 DJ 18K
D317 ESI
D316
R317 DJ 2.2K
R315 DJ 22K
R326 DJ 3.3K
C315 FJ 0.012

ERROR AMP
C311 FJ 0.015
D314/D316 IS1553 IS2076A IS2471 DS442X
L313 Z2003 Z2003(A.D)
D312 EU1

NEUT
LIVE
W901 EW0223KB EW0226KB EW0031KB
SW301 ES0210
F301 2.5A250VT
C333 400KM 470X

DEGAUSSING COIL

R154 DJ 6.8K
C155 FK 0.01
C156 16EM10
R155 DJ 12K
C154 25EM 4.7
C124 FK 0.1

2 ATT
3 AF AMP
4 IF AGC NC
5 VIF AMP
6 RF AGC
7 VIDEO DET
8 AFT
9 BUFFER
10 VIDEO AMP B/N NC
11 SIF DET
12 FM DET
13 LIMITER
14 MUTE
15 MUTE

R151 DJ 1K
C152 KK 4700
R150 DJ 560
C157 EM 2.2
C151 KK 4700
WT-3
WT-2
WT-1
TO.KI2A
TO.KI2A
WB 6

R122 DJ 56
C127 16EM 47
C125 16EM 47
C124 KZ 0.01
L105 15UHK
B6 12V

R123 DJ 27K
R124 DJ 120
C131 CD 82R
C130 CJ 82R
R130 DJ 1K
R131 DJ 1K
C132 KZ 0.01
TP-D1
TP-D2
R121 DJ 2.7K
C121 CJ 56C
T131 ST0084XV (ST0084AV (AFT)
T121 SC0005XV SL0005AV 38.9MHZ
C133 KK 1000

TO.KI2B
S1
S2
S3

R172 DJ 10K
R185 DJ 3.9K
R186 DJ 10K
C172 EM 0.47

CONVERTER TRANS
T311 AE0089
C364 2000KK220BG
D362 EU1C
C366 250ET 22
R362 1/2DJ 120K
B3 180V
D361 IS1835 EU2A
C361 2000KK330 (H.DG)
C362 160EM 220
B1 130V
IC351-1 2601152
C356 25EM 1000
D353
C355 1000KK 470(H.DG)
R354 2FJ 8.2
R353 2SJ 22
B5 15V
B6 12V
D352
R352 1/2FJ 1.2
C354 35EM 470
B4 24V
D351
R351 1FJ 3.9
C351 1000KK470 (H.DG)
C352 25EM 470
B2 14.8V
L352 ZZ0008
D351/D352/D353 IS1834 EU2Z

X122 E8328
L121 12UHK
X121 E8313 5.5MHZ TRAP
R125 DJ 1K
VR121 B-1K
Q121 2SC536 (E.F.G)
R126 DJ 470
R127 DJ 470
VIDEO AMP
B6 12V

TP-F
D221 EM01Z
L221 39UHK
X251 EX0179XT 5.74MHZ
C252 CJ 47R
R251 DJ 1.8K
L251 5.6UHK
R212 DJ 120K
SUB BRIGHT
R234 DJ 33K
R215 DJ 10K
VR 211 B-30K
R252 DJ 39K

C182 16EM 22
R184 DJ 56K
R183 DJ 330K
C214 EM 0.47
C21 CJ

AUDIO OUT
R171 1/2FJ 33
C171 16EM 1000
IC171 AN5265
IC351 TA78M12P L78M12-LB AN78M12-P
C173 FK 3300
R182 DJ 10K
R179 DJ 100
MUTE
DC VOLOME CONTROL
Q181 2SC536 (E.F.G)
C174 16EM 10
R173 DJ 680
C176 16EM 10
R174 DJ 10K
C358 16EM 220
C177 HJ 0.47
R176 DJ 1.5
AUDIO OUTPUT AMP
C178 25EM 470
VCC1
VCC2
GND
IC171-1 IP02934
L281 8.2UHK
L282 L7309A L7309B
C283 KZ 0.01
R238 DJ 27K
C181 KZ 0.01
KW
K171 EK1052
EARPHONE
R177 1/2DJ 56

LED UNIT D8RZ
UE1843X2A

D1701
SLP-5770

MAIN UNIT D8RZ
UE1843X1A

IC702
CXK101IP

IC701
MINI5245 SAY-1

IC101 LA7520

A701
UR0022
R/C PRE AMP

SW701 ES0332
SW702A-F ES0334
SW707A-D ES0333
SW703/..../SW706 ES0157

SW702B BAND
SW702E MEMORY
SW702C TU+
SW703 PRG+
SW702A MODE
SW702F RECALL
SW702D TU-
SW704 PRG-
SW701 TV/VIDEO
SW705 VOL+
SW707A CLR+
SW707C BRIT+
SW706 VOL-
SW707B CLR-
SW707D BRIT-

VIDEO IN
AUDIO IN
K801 EK1030Y
K821 EK1050W
D821/.. ISI556

Q802 / Q803
2SA608 (E.F)

Q731/...../Q733
2SA608 (E.F)

O371
2SC2568 (K.L)
.2SC2621 (D.E)

PRODUCT SAFETY NOTICE

Product safety should be considered when a component replacement is made in any area of a receiver. Components indicated by a mark ⚠ in this circuit diagram show components whose value have special significance to product safety. It is particularly recommended that only parts specified on the parts list of service manual be used for components replacement pointed out by the mark.

NOTES:

1. RESISTORS INDICATED DJ ARE 1/4W UNLESS OTHERWISE NOTED.
   RESISTORS INDICATED ONLY ITS VALUE ARE 1/6W.
2. ALL CAPACITORS ARE 50WV RATING UNLESS OTHERWISE NOTED.
3. DIODE IS1555 MAY BE REPLACED WITH
   DS442, IS2473 OR IS2076
   UNLESS OTHERWISE NOTED.
4. TRANSISTOR 2SC536 MAY BE REPLACED WITH 2SC536(E,F,G), 2SC945A(P,Q,R), 2SC1815(O,Y,G), 2SC1740(Q,R,S) OR 2SC1740S(Q,R,S)
5. TRANSISTOR 2SA608 MAY BE REPLACED WITH 2SA608(E,F), 2SA564A(P,Q,R), 2SA933(Q,R), 2SA933S(Q,R) OR 2SA1015(O,Y,G)

SERVICE PRECAUTION

THE AREA ENCLOSED BY THIS LINE (▰▰) IS DIRECTLY CONNECTED WITH AC MAINS VOLTAGE, WHEN SERVICING THE AREA, CONNECT AN ISOLATING TRANSFORMER BETWEEN TV RECEIVER AND AC LINE TO ELIMINATE HAZARD OF ELECTRIC SHOCK.

FORM

P-P

Z

CIRCUIT DIAGRAM NOTES

1. All resistance values in ohms K=1.000 M=1.000.000
2. Excepting electrolytic capacitor, all capacitance values less than 1 are expressed in μF, and the values more than 1 are in pF

LIST OF TRANSISTORS AND DIODES

TYPE	SHORT DESCRIPTION; DATA	EQUIVALENTS
2SA608	PNP-Si ; Uni ; 30V ; 0,1A ; f_T=180 MHz	BC178 ; BC205 BC213 ; BC252 BC308 ; BC513 BC558
2SA1015	PNP-Si ; Uni ; 50V ; 0,15A ; 0,4W	BC177 ; BC204 BC213 ; BC251 BC307 ; BC512 BC557 ;
2SC536	NPN-Si ; Uni ; 40V ; 0,1A ; 180 MHz	BC107 ; BC171 BC183 ; BC237 BC382 ; BC547
2SC2216	NPN-Si ; TV-ZF ; 50V ; 0,05A ; 0,3A	BF199 ; BF523 BF959
2SC2383	NPN-Si ; S ; Vid ; 160V ; 1A ; 0,9W	BF391 ; MPS-U10
2SC2568	NPN-Si ; Vid ; 300V ; 0,2A ; 10W	BF459 ; BF417 BF471
2SC2570A	NPN-Si ; UHF ; 25V ; 0,07A ; 5GHz ; 0,6W	
2SC1923	NPN-Si ; 25V ; 0,07A ; 5GHz ; 0,6W	BF241 ; BF255 BF455 ; BF495 BF695
2SC2621RA	NPN-Si ; Vid ; 300V ; 0,2A ; 10W	BF457 ; BF417 BF471
2SC3807		
2SC608	NPN-Si ; Uni-L ; 75V ; 1,5A ; 10W	BD139 ; BD169 BD179 BD237
2SD1650	NPN-Si ; +Di ; TV-HA ; 1500V/800V ; 3,5A ; 50W	S2055AF ; BU508D (PHILPS)
2SD171	NPN-Si ; TV-HA ; 1500/800V ; 5A ; 100W	BU508A (PHILPS)

DIODES

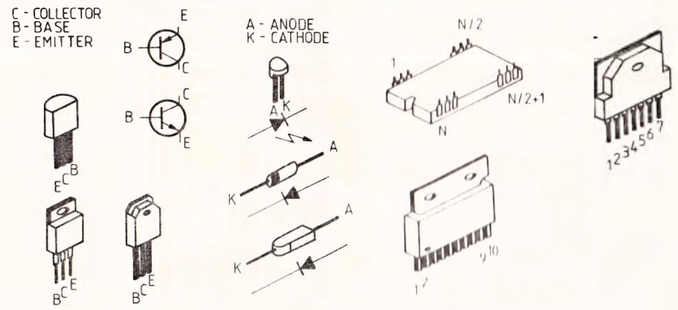
1S1553	FAST Sw ; DET ; Si ; U_{RV} = 200V ; I_o = 160mA ; t_{rr} = 50ns	EQUIV.
1S1834	GEN. PURP RECT ; FAST RECOVERY ; Si ; 600V ; 1A ; 200ns	
1S1835	GEN PURP RECT ; FAST REC. Si ; 600V ; 1A ; 200ns	
1SS131	FAST Sw DIODE ; Si ; 100V ; 0,2A ; 4ns	
1S1555	FAST Sw ; DET ; Si ; 200V ; I_o 016A ; 50ns	
EU1	GEN. PURP. RECT ; FAST RECOVERY ; Si ; 600V ; 1A ; 200ns	
EU2 FU2Z	GEN. PURP. REST ; FAST REC. Si ; 600V ; 1A ; 200ns	
EM01Z	GEN. PURP. RECT ; Si ; 600V ; 1A	
EQA02-05	ZENER DIODE ; 5V1 ; 0,5W	
EQA02-06	ZENER DIODE ; 6V ; 0,5W	
EQA03-114	ZENER DIODE 11V	
ERC05-10	GEN PURP RECT ; Si ; 1000V ; 2,5A (25°C LEAD TEMP.)	
HZ6C	ZENER DIODE 6V ; 0,5W	
TUR16	GEN PURP RECT ; FAST RECOVERY ; Si ; 600V ; 1A ; 200ns	

NOTES

3. All inductance values in μH.
4. Voltage reading taken with "TESTER" from point indicated to chassis ground.
   Voltage reading taken using colour bar signal, all controls at normal, AFT switch in "OFF" position. Some voltage may vary with signal strength.
5. Waveforms were taken with colour bar signal and controls adjusted for normal picture. Waveforms were taken using a wide band oscilloscope and low capacity probe.
6. This circuit diagram covers basic or representative chassis only. There may be some component or partial circuit difference between actual chassis and circuit diagram.

ABBREVIATION : Si - silicon ; Sw - switch ; Uni - general purpose Di - integrate damper diode ; TV - ZF - intermediate freguency (IF) ; TV - HA - TV horizontal deflection Vid - video output stage

TRANSISTOR, DIODE & INTEGRATED CIRCUIT TERMINAL GUIDE



Expression of capacitance and resistance in circuit diagram

CAPACITANCE (Example)

1000 C M 2200 D

- Characteristic
- Capacitance value (2200 pf)
- Allowable error (+ 20%) — J ..... ±5% ; K ..... ±10% ; M ..... ±20%
- Kind (Ceramic) — T, A, E, U, D Electrolytic ; C, K, B Ceramic ; F ..... Mylar film ; M, N ..... Polypropylene ; Z ..... Metalized paper
- Rated voltage (1000V)

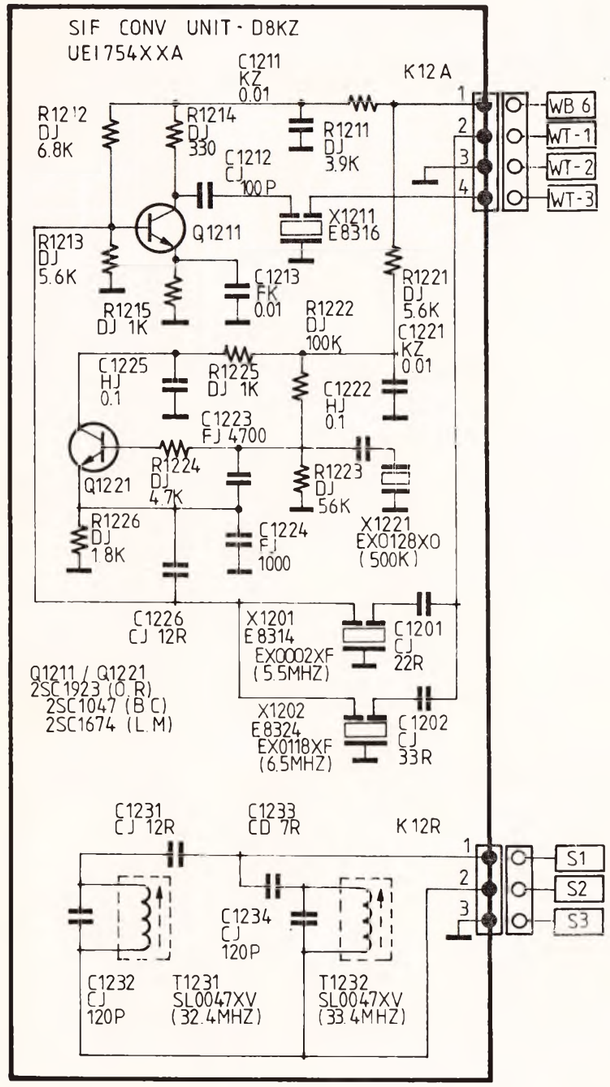
RESISTANCE (Example)

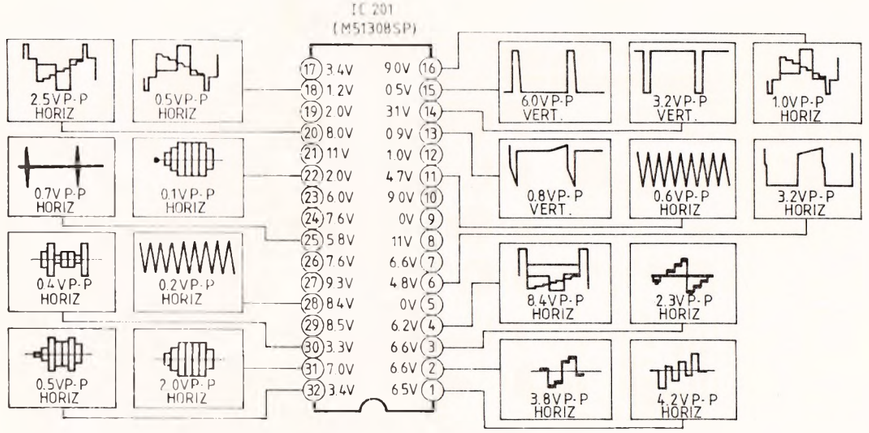
1/2 N J 12

- Resistance value (12Ω)
- Allowable error (+5%)
- Kind (Metalized carbon) — D ..... Carbon ; N ..... Metalized carbon ; S ..... Oxide metalized ; W ..... Wire wounding ; C ..... Solid
- Rated Wattage (1/2W)

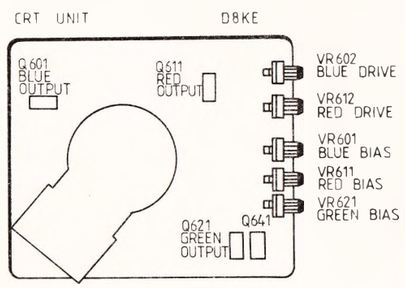
PARTICULAR PARTS SYMBOL

Q 432		
	VOLT	WAVEFORM
B	1.9V	1.4 V P-P HORIZ
C	137 V	1000V P-P HORIZ
E	1.95V	1.2 V P-P HORIZ

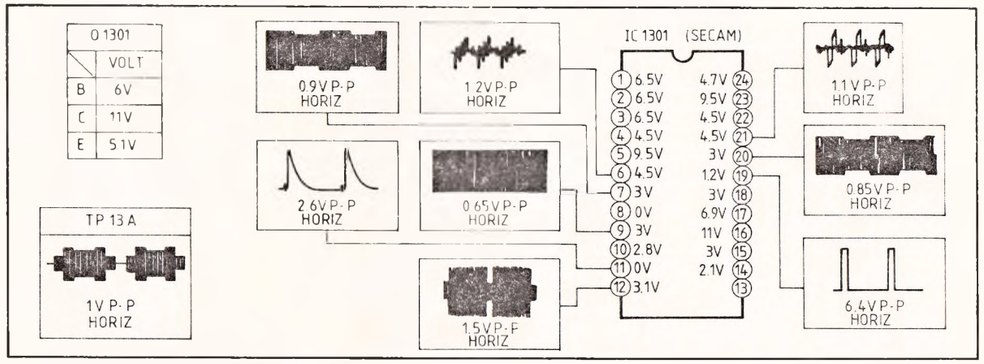




COMPONENT LOCATION



SECAM UNIT



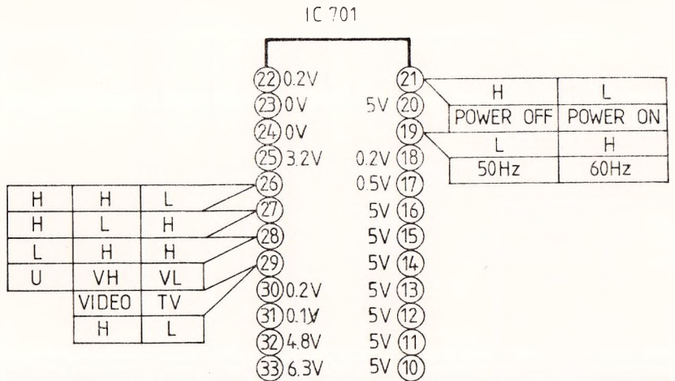
SECAM UNIT

Q1305	
	VOLT
C	11.8V(S)
B	11.1V(S)
E	10.7V(S)

Q1304	
	VOLT
C	11.8V(S)
B	11.3V(S)
E	10.6V(S)

Q1303	
	VOLT
C	11.5V(S)
B	0V(S)
E	—

Q1302	
	VOLT
C	0V(S)
B	0.6V(S)
E	—



Q181	
	VOLT
C	19.5V
B	-0.6V
E	—

Q711	
	VOLT
C	4.9V
B	0V
E	0V

Q721	
	VOLT
C	8V
B	0.4V
E	—

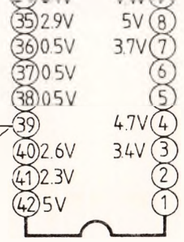
Q101	
	VOLT
B	1.0V
C	3.8V
E	0.2V

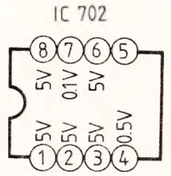
Q311	
	VOLT
B	37.5V
C	0.1V
E	38.0V

Q 24		
	VOLT	WAVEFORM

Q 601		
	VOLT	WAV
B	3.9V	
C	104V	

LINEAR AFT OFF	LINEAR AFT ON
L	H





Q701	
	VOLT
C	4.5V
B	0.2V
E	—

Q801	
	VOLT
C	11V
B	3.5V
E	3V

Q802	
	VOLT
C	—
B	7.2V
E	5.3V

Q803	
	VOLT
C	—
B	3.6V
E	4.3V

Q821	
	VOLT
C	5.5V
B	0V
E	—

Q741	
	VOLT
C	11V
B	6.5V
E	5.8V

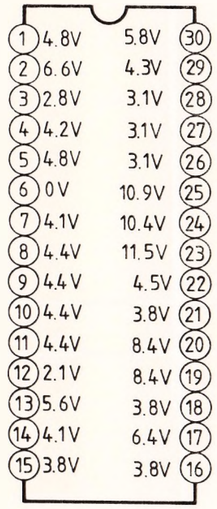
Q742	
	VOLT
C	0,1V
B	1V
E	0.1V

		8.5 V P-P HORIZ
C	0 V	- - - - - -
E	6.4 V	5.5 V P-P HORIZ

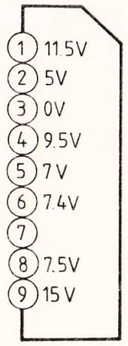
Q 611		
	VOLT	WAVE
B	4.0V	4.2V HOR
C	103V	100V HOR
E	3.4V	--

Q 621		
	VOLT	WAVE
B	3.9V	3.7V HOR
C	100 V	95V HOR
E	3.3V	--

IC 101



IC 171



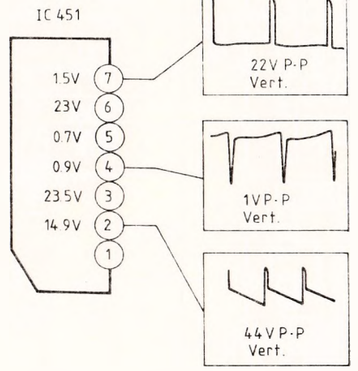
Q371	
	VOLT
C	16V
B	5.5V
E	5V

Q711	
	VOLT
C	0V
B	11V
E	11V

Q732	
	VOLT
C	11V
B	10V
E	11V

Q733	
	VOLT
C	0
B	11V
	11V

IC 451



Q 121		
	VOLT	WAVEFORM
B	1.9 V	1.0V P-P HORIZ
C	11 V	- - - - -
E	1.2 V	1.0V P-P HORIZ

Q 112		
	VOLT	WAVEFORM
B	0 V	1.1V P-P
C	-0.15V	1.5V P-P
E	0V	- - - - - -

Q 313		
	VOLT	WAVEFORM
B	0.15V	1.5V P-P
C	280V	560V P-P
E	0V	- - - - - -

Q 431		
	VOLT	WAVEFORM
B	0.015V	2.1V P-P HORIZ
C	18.1V	40V P-P HORIZ
E	0V	- - - - -