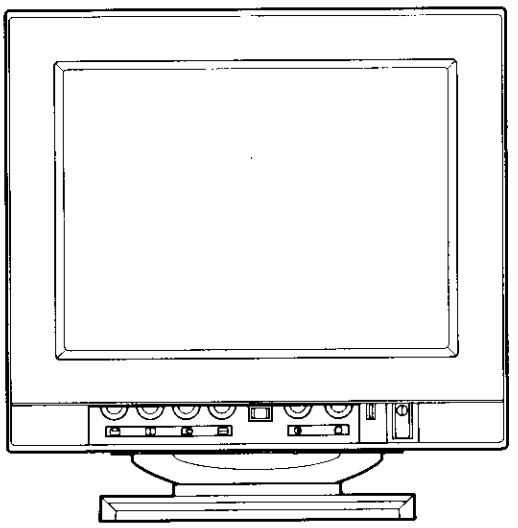
GoldStar

COLOR MONITOR SERVICE MANUAL

CAUTION
BEFORE SERVICING THE UNIT,READ THE "SAFETY PRECAUTIONS" IN THIS MANUAL.

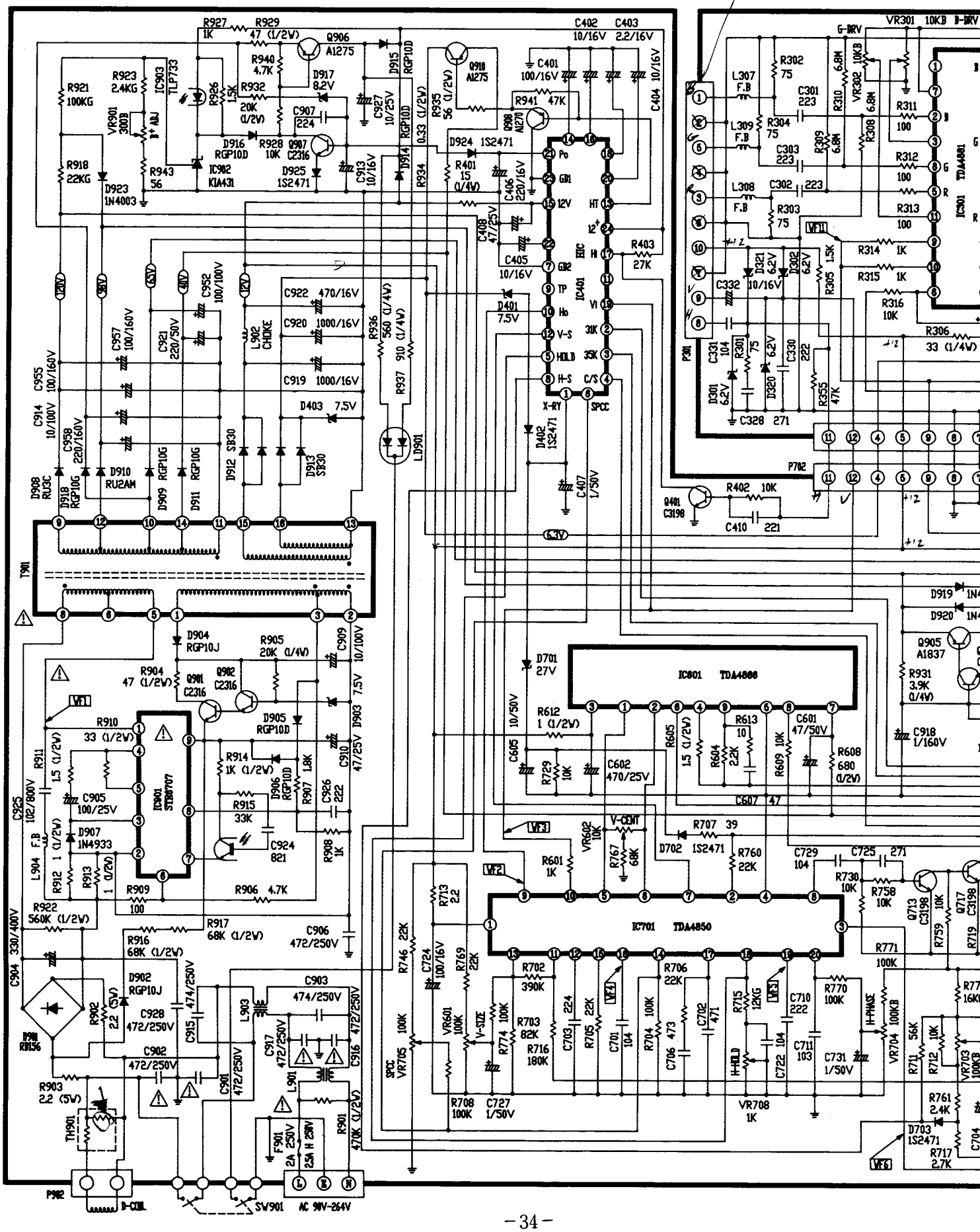


MODEL:CQ465, CQ466
1455D, 1455DL
1460DL, 1461D, 1462DM
(CA-25 CHASSIS)

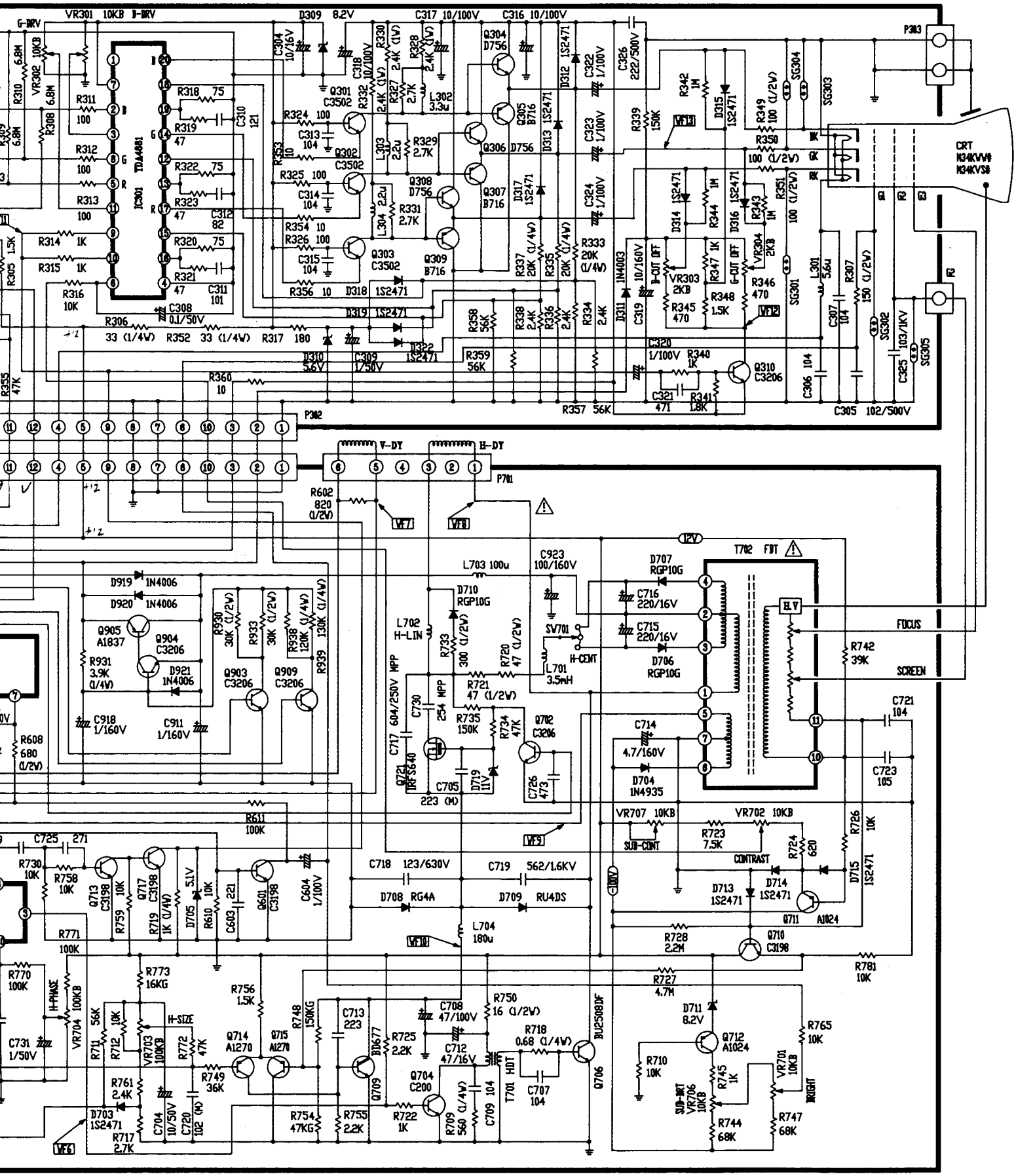
GoldStar

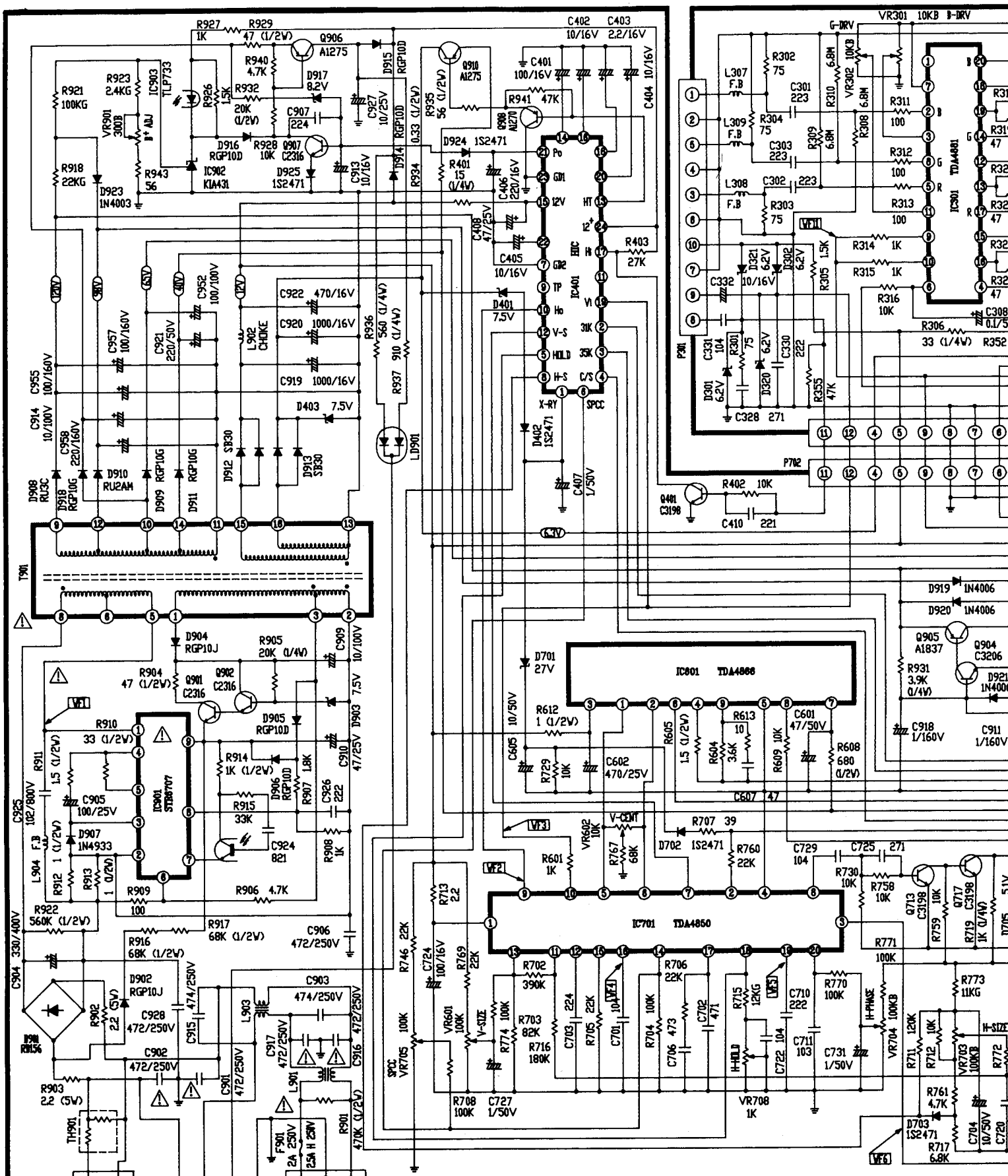
PINS ARENT IN ORDER

SCHEMAT

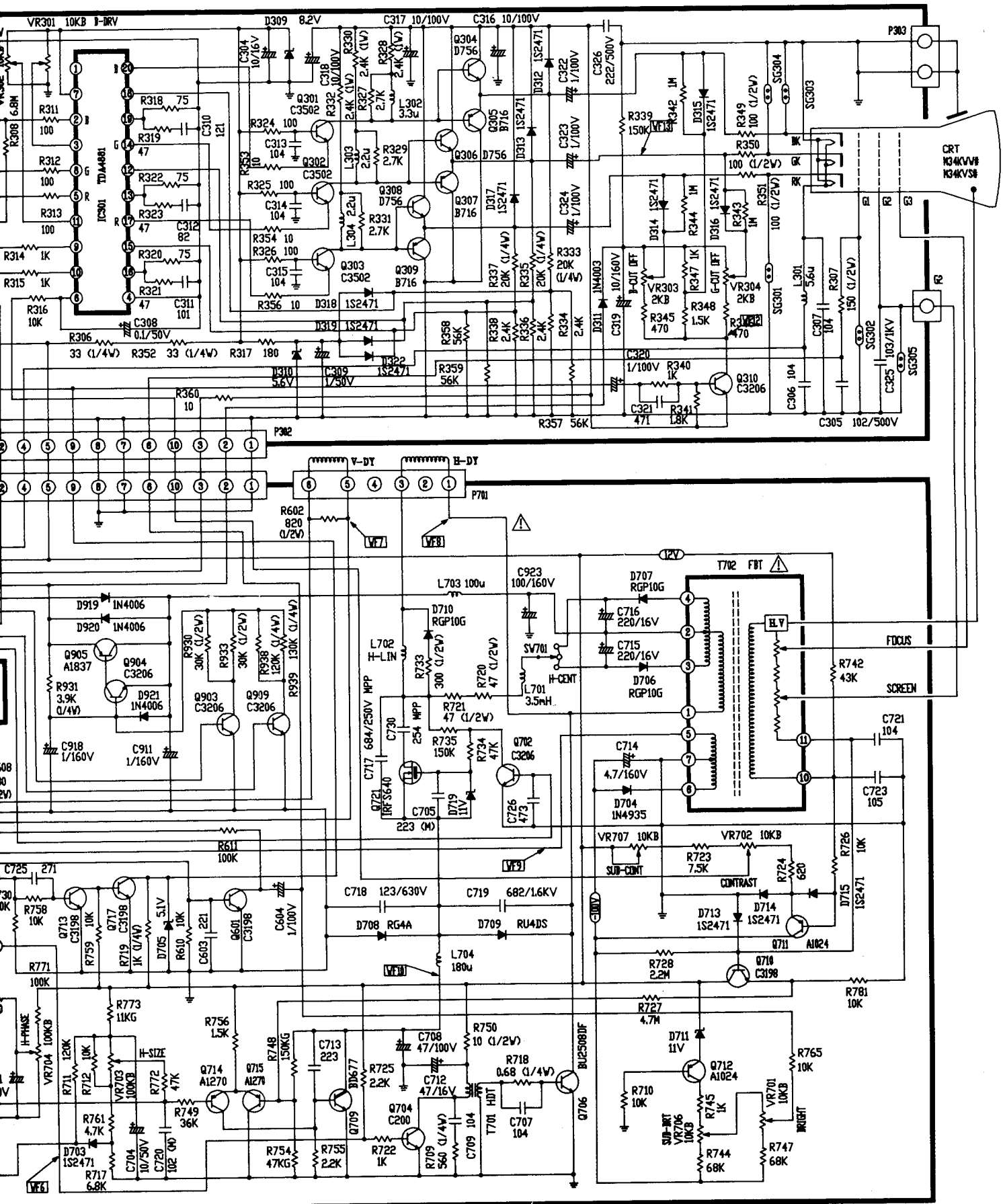


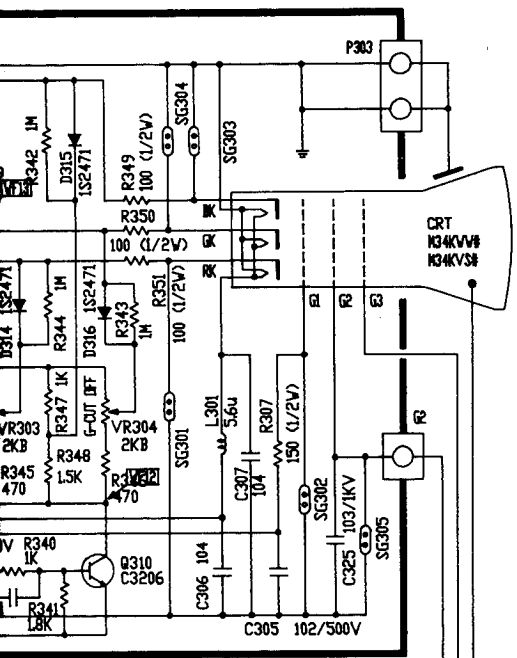
SCHEMATIC DIAGRAM(0.28mm dot)

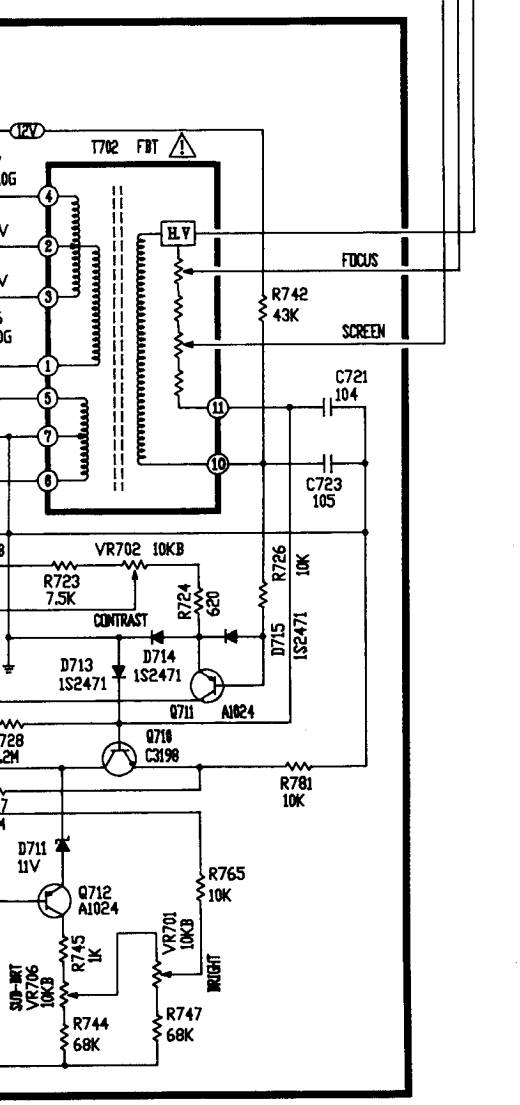



R927 1K
R929 47 (1/2W)
Q906 A1275
R940 4.7K
D917 8.2V
R932 20K (1/2W)
C907 224
R921 100KG
R923 2.4KG
IC903 TLP733
R926 1.5K
VR901 300B
B+ ADJ
R918 22KG
R943 56
D923 1N4003
D916 RGP10D
R928 10K
Q907 C2316
IC902 KIA431
D925 1S2471
C913 10/16V
D914 RGP10D
R934 0.33 (1/2W)
C927 10/25V
D915 RGP10D
Q910 A1275
R935 56 (1/2W)
C402 10/16V
C403 2.2/16V
C401 100/16V
R941 47K
Q908 A1270
C404 10/16V
D924 1S2471
R401 15 (1/4W)
C406 220/16V
C408 47/25V
C405 10/16V
D401 7.5V
R403 27K
IC401 HIC
Po
GD1
12V
GD2
TP
Ho
V-S
HOLD
H-S
HT
12+
Hi
Vi
3IK
3SK
C/S
SPCC
X-RY
D402 1S2471
C407 1/50V
R402 10K
C410 221
Q401 C3198
6.2V
C952 100/100V
C922 470/16V
C920 1000/16V
C919 1000/16V
L902 CHOKE
R936 560 (1/4W)
R937 910 (1/4W)
LD901
C957 100/160V
C921 220/50V
C955 100/160V
C914 10/100V
C958 220/160V
D908 RU3C
D918 RGP10G
D910 RU2AM
D909 RGP10G
D911 RGP10G
D912 SB30
D913 SB30
D403 7.5V
T901
D904 RGP10J
R905 20K (1/4W)
C909 10/100V
R904 47 (1/2W)
Q901 C2316
Q902 C2316
D905 RGP10D
D903 47/25V
C910 47/25V
R910 33 (1/2W)
R911 1.5 (1/2W)
C905 100/25V
C925 102/800V
IC901 STR8707
R914 1K (1/2W)
D906 RGP10D
R907 1.8K
C926 222
R915 33K
C924 821
R908 1K
D907 1N4933
L904 F.B
R912 1 (1/2W)
R913 1 (1/2W)
R909 100
R906 4.7K
R922 560K (1/2W)
R916 68K (1/2W)
R917 68K (1/2W)
C906 472/250V
C904 330/400V
D902 RGP10J
R902 2.2 (5W)
C928 472/250V
C915 474/250V
C903 474/250V
L903
C917 472/250V
C916 472/250V
C902 472/250V
C901 472/250V
L901
R903 2.2 (5W)
TH901
F901 2A 250V
2.5A H 250V
R901 470K (1/2W)
P902
D-COIL
SW901
AC 90-264
L
E
N
D701 27V
IC601 TDA4866
R612 1 (1/2W)
C605
R605 1.5 (1/2W)
R604 36K
R613 10
R609 10K
C601 47/50V
R608 680 (1/2W)
R729 10K
C602 470/25V
C607 47
VR602 10K
V-CENT
R707 39
D702 1S2471
R760 22K
R601 1K
R767 68K
IC701 TDA4850
R713 2.2
R746 22K
C724 100/16V
R769 22K
R702 390K
R706 22K
R703 82K
R716 180K
R774 100K
VR601 100K
V-SIZE
SPCC VR705 100K
R708 100K
C727 1/50V
C703
R705 22K
C701 104
R704 100K
C706 473
C702 471
R715 12KG
C710 222
R770 100K
H-PHASE
VR704 100KB
C711 103
C731 1/50V
H-HOLD
VR708 1K
C722 104
R729 10K
R730 10K
R758 10K
C729 104
C725 271
Q713 C3198
Q717 C3198
R759 10K
R719 1K (1/4W)
R771 100K
R773 11KG
R711 120K
R712 10K
VR703 100KB
H-SIZE
R772
R761 4.7K
D703 1S2471
C704 10/50V
C720
R717 6.8K
VR301 10KB B-DRV
G-DRV
R302 75
L307 F.B
C301 223
R310 6.8M
VR302 10KB
R311 100
L309 F.B
R304 75
C303 223
R309 6.8M
R308 6.8M
R312 100
L308 F.B
C302 223
R303 75
R313 100
IC301 TDA4881
R314 1K
R315 1K
R316 10K
C332 10/16V
D321 6.2V
D302 6.2V
R305 1.5K
C308 0.1/5
R306 33 (1/4W)
R352
C331 104
R301 75
C330 222
D320 6.2V
D301 6.2V
R355 47K
C328 271
P301
P702
D919 1N4006
D920 1N4006
Q905 A1837
Q904 C3206
R931 3.9K (1/4W)
C918 1/160V
C911 1/160V

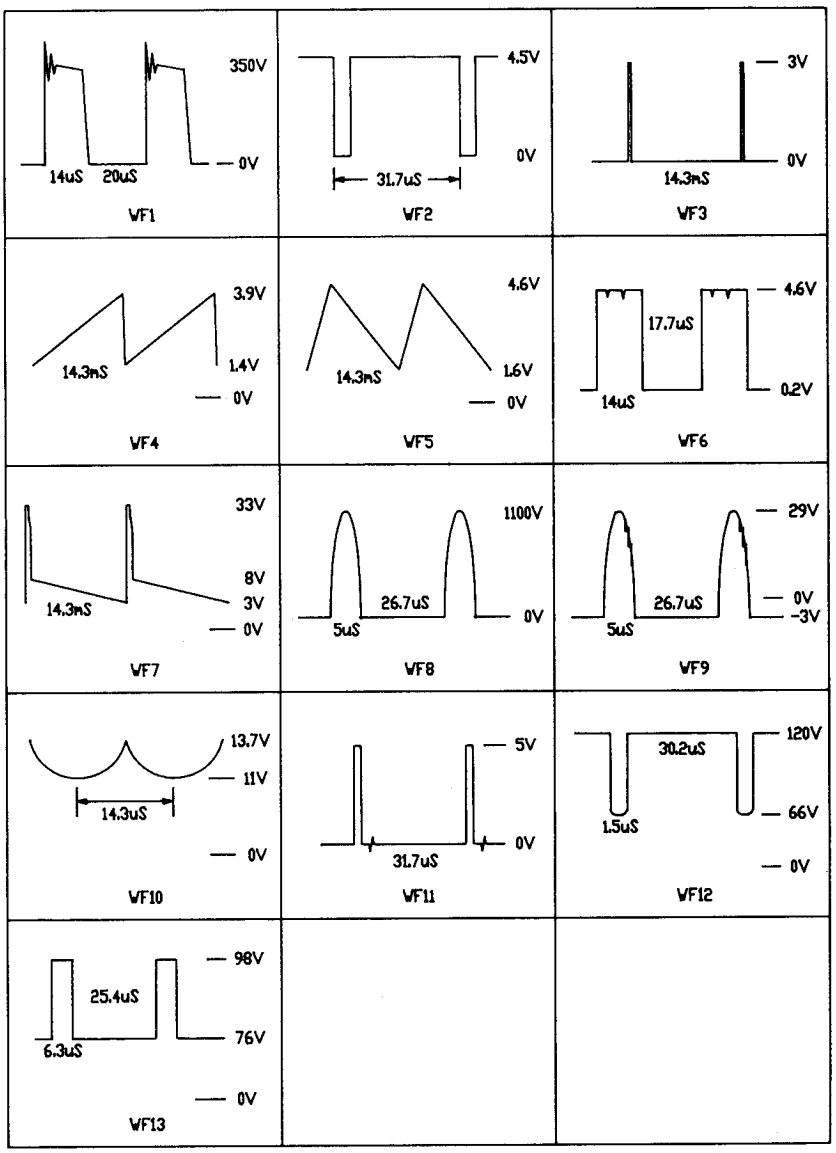
SCHEMATIC DIAGRAM(0.39mm dot)







484-379B



< WAVE FORM > : VGA MODE 2
FULL WHITE PATTERN

< AC INPUT > : 115V

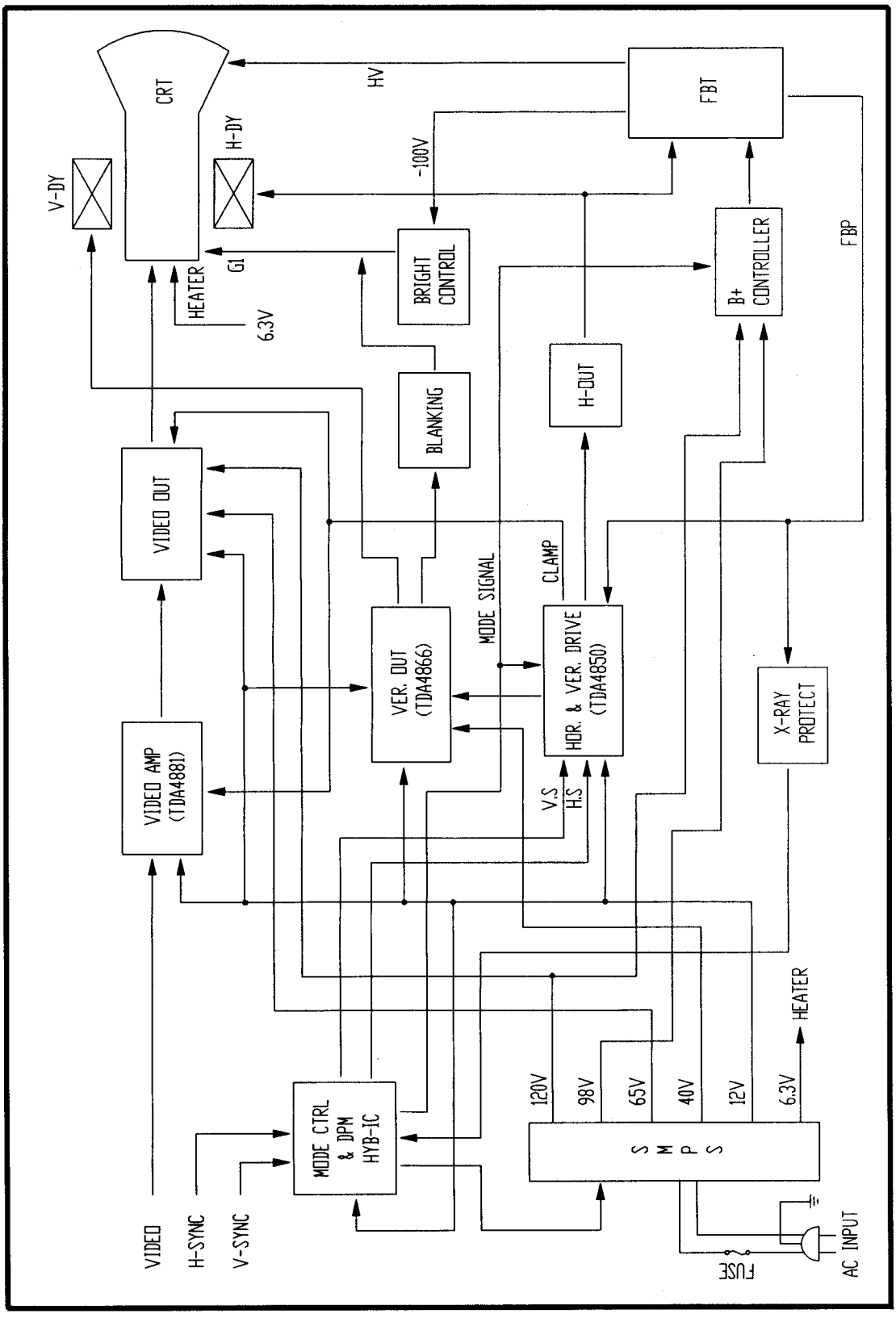
IMPORTANT SAFETY NOTICE

THE ⚠ SYMBOL MARK OF THIS SCHEMATIC DIAGRAM INCORPORATES SPECIAL FEATURES IMPORTANT FOR PROTECTION FROM X-RADIATION, FIRE AND ELECTRICAL SHOCK HAZARDS, WHEN SERVICING IT IS ESSENTIAL THAT ONLY MANUFACTURER'S SPECIFIED PARTS BE USED FOR THE CRITICAL COMPONENTS IN THE ⚠ SYMBOL MARK OF THE SCHEMATIC.

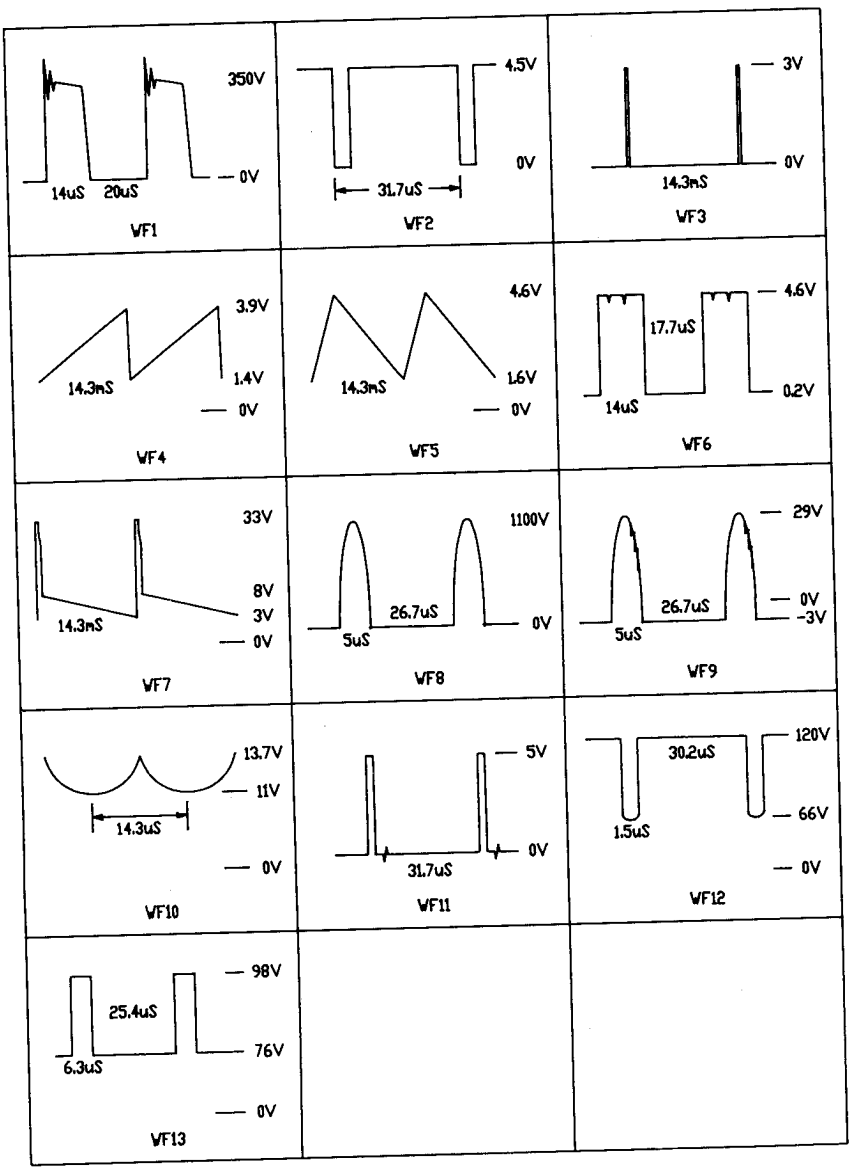
IMPORTANT AVIS SUR LA SÉCURITÉ

LA ⚠ SYMBOLE MARQUE DE CE DIAGRAMME SCHEMATIQUE COMPREND DIMPORTANTES CARACTÉRISTIQUES SPÉCIALES CONCUES POUR PROTÉGER DES RAYONS X, ET DES DANGERS DINCENDIE ET DE SECOUSSES ÉLECTRIQUES. EN CAS DE BESOIN SI DES PIECES DE CETTE ⚠ SYMBOLE MARQUE DOIVENT ETRE REMPLACE'S N'UTILISEZ QUE DES PIECES SPÉCIFIÉES PAR LE MANUFACTURIER.

BLOCK DIAGRAM



4 : Hybrid



< WAVE FORM > : VGA MODE 2
FULL WHITE PATTERN

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BLOCK DIAGRAM DISCRIPTION

SMPS

When the power switch is turned on, the line voltage is applied to the rectifing diode(D901) and the rectified voltage is applied to the primary circuit. Depending on turn ratio of the transformer, the secondary voltages appear at the secondary. And it is rectified by each diode.
The output voltages are as follows;
DC 120V, 98V, 65V, 40V, 13V, 6.3V

2. **MODE CONTROL & DPM**
   Display modes are detected by horizontal and vertical sync signals, and the mode signals control the HOR. & VER. DRIVE IC (TDA4850). Display power management (DPM) modes are also detected by sync signals, and then the power saving circuit in HYB-IC is operated.

3. **HOR. & VER. DRIVE**
   The horizontal and vertical sync signal (31.5KHz / 35.5KHz / 37.9KHz) is applied, the IC (TDA4850) operates and drive the H-OUT and VER. OUT.

4. **VER. OUT**
   Based on the signal from HOR. & VER. DRIVE, amplifing the signal and drive the deflection coil on deflection yoke.

5. **H-OUT**
   Switching transistor (Q706) drives horizontal deflection coil and FBT with diode modulator.

6. **B+ CONTROLLER**
   This circuit changes the supply voltage of the FBT according to the mode signals as follows;

7. **X-RAY PROTECT**
   If the high voltage of FBT reaches to 29KV approximately in abnormal state, this circuit drives the DPM circuit. And whole deflection circuit stops its operating.

8. **VERTICAL BLANKING**
   This circuit makes the vertical retrace lines not be shown by controlling the G1 on CRT.

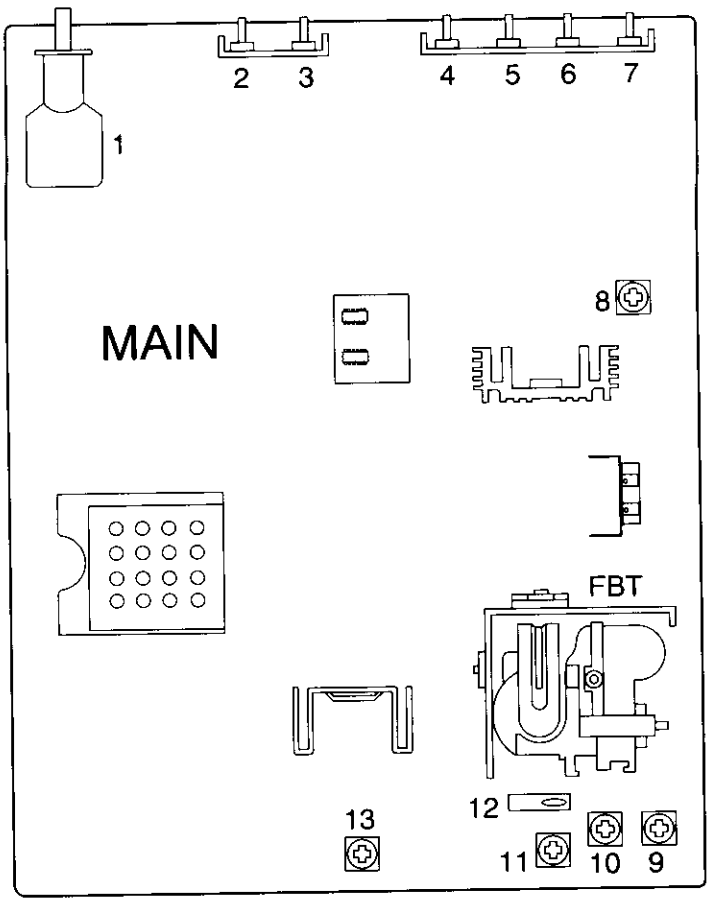
9. **BRIGHT CONTROL**
   This circuit make it possible varying the brightness of the video screen by controlling the G1.

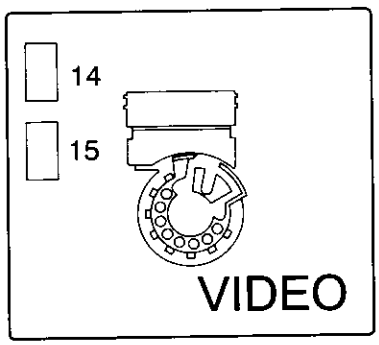
10. **VIDEO AMP**
    Amplifing the video signal from th PC, and drive the VIDEO OUT stage.

11. **VIDEO OUT**
    The video signal from the VIDEO AMP is amplified again, and applied to each cathode on CRT.

ALIGNMENT AND ADJUSTMENT

PARTS LOCATION



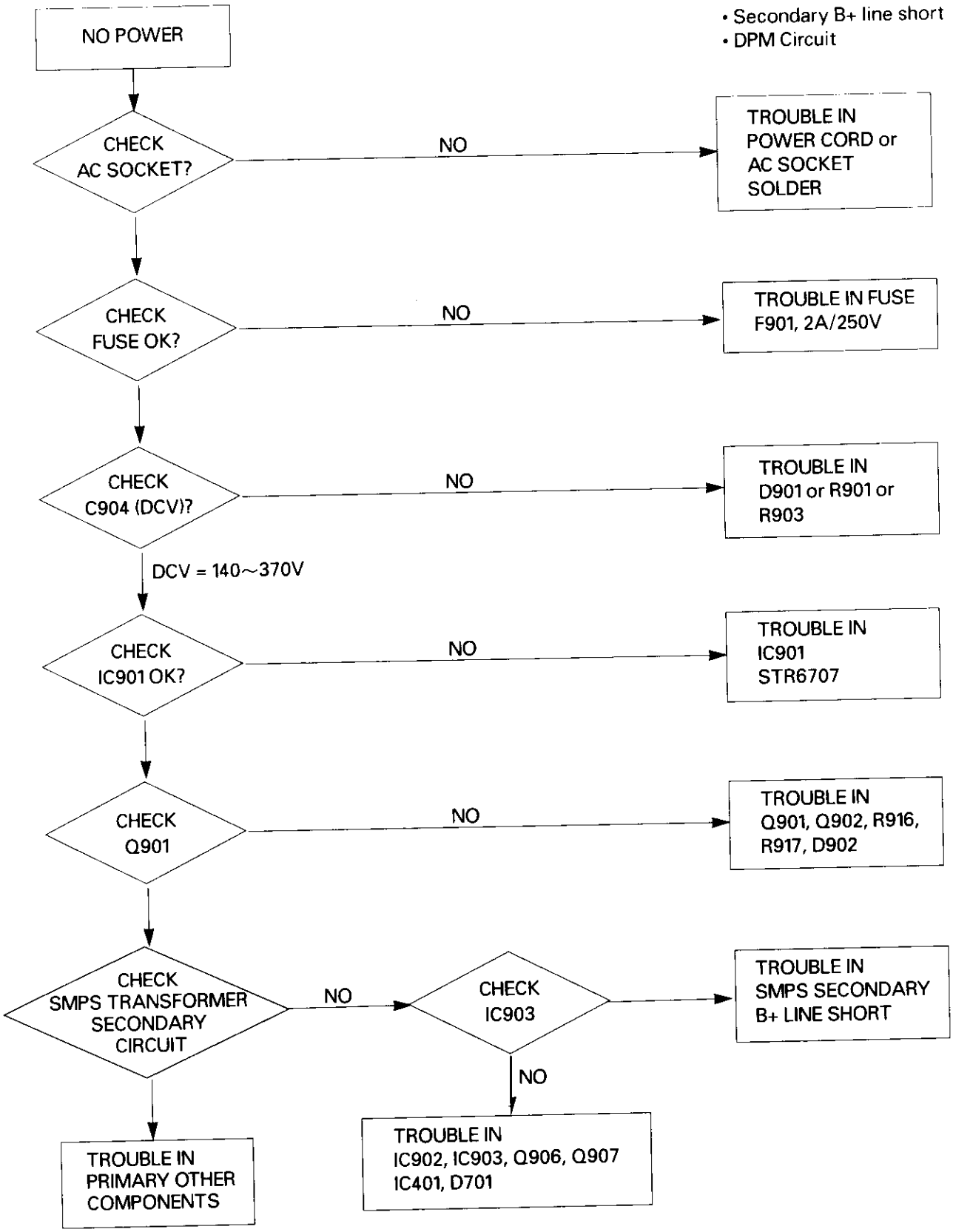


No.	Ref. No.	Control Function	No.	Ref. No.	Control Function
1	SW901	POWER SWITCH	9	VR707	SUB-CONTRAST
2	VR701	BRIGHT	10	VR706	SUB-BRIGHT
3		CONTRAST	11	VR705	SPCC
4	VR601	H-SIZE	12	SW701	H-CENTER
5		H-POSITION	13	VR901	+B ADJUSTMENT
6		V-SIZE	14	VR303	R-CUTOFF
7		V-CENTER	15	VR304	G-CUTOFF
8	VR702	H-HOLD			

TROUBLE SHOOTING GUIDE

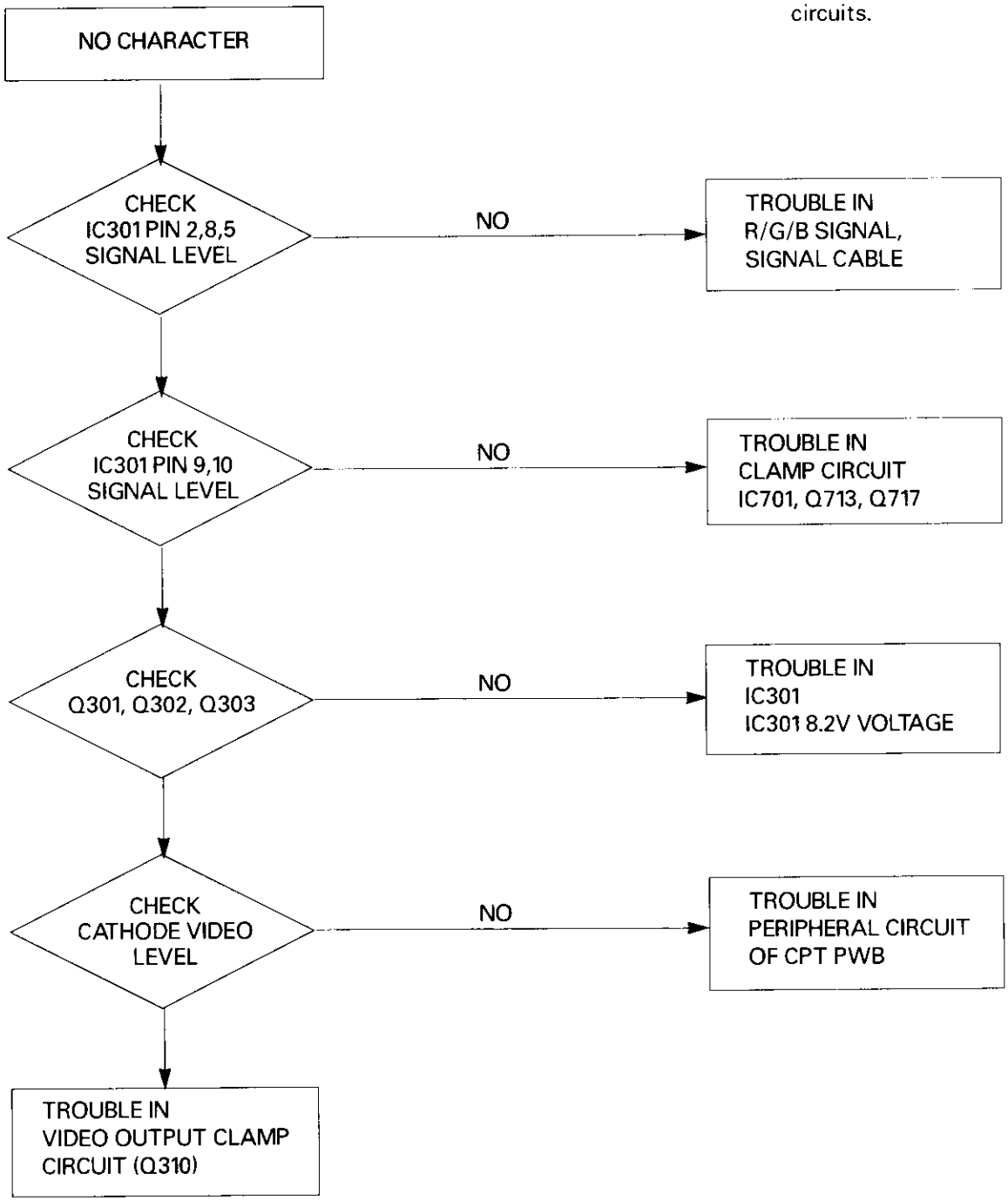
1. NO POWER

Circuits Checked:
- Power input
- Protection Circuit
- Secondary B+ line short
- DPM Circuit



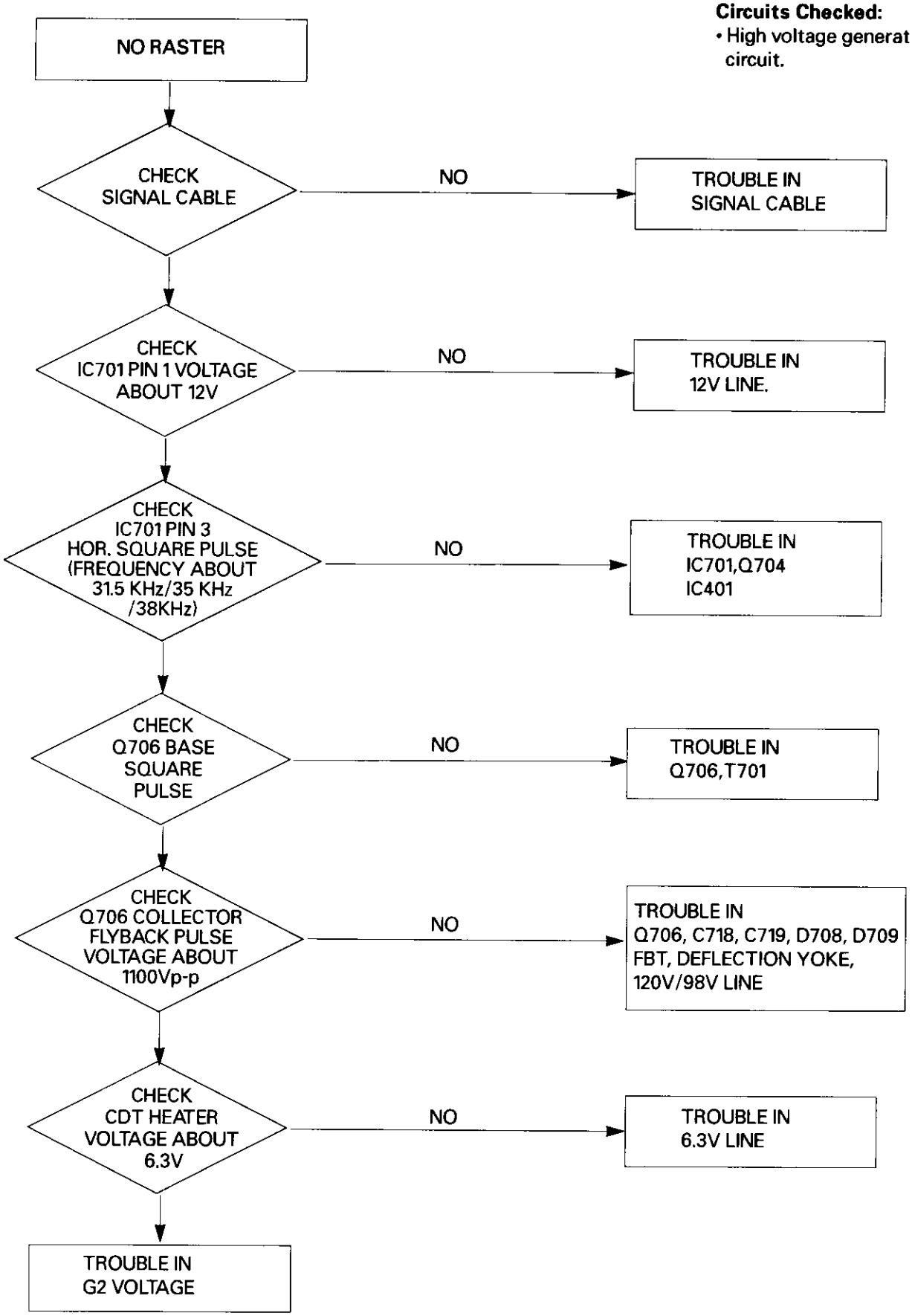
2. NO CHARACTER

Circuits Checked:
- Video Circuit and its related circuits.



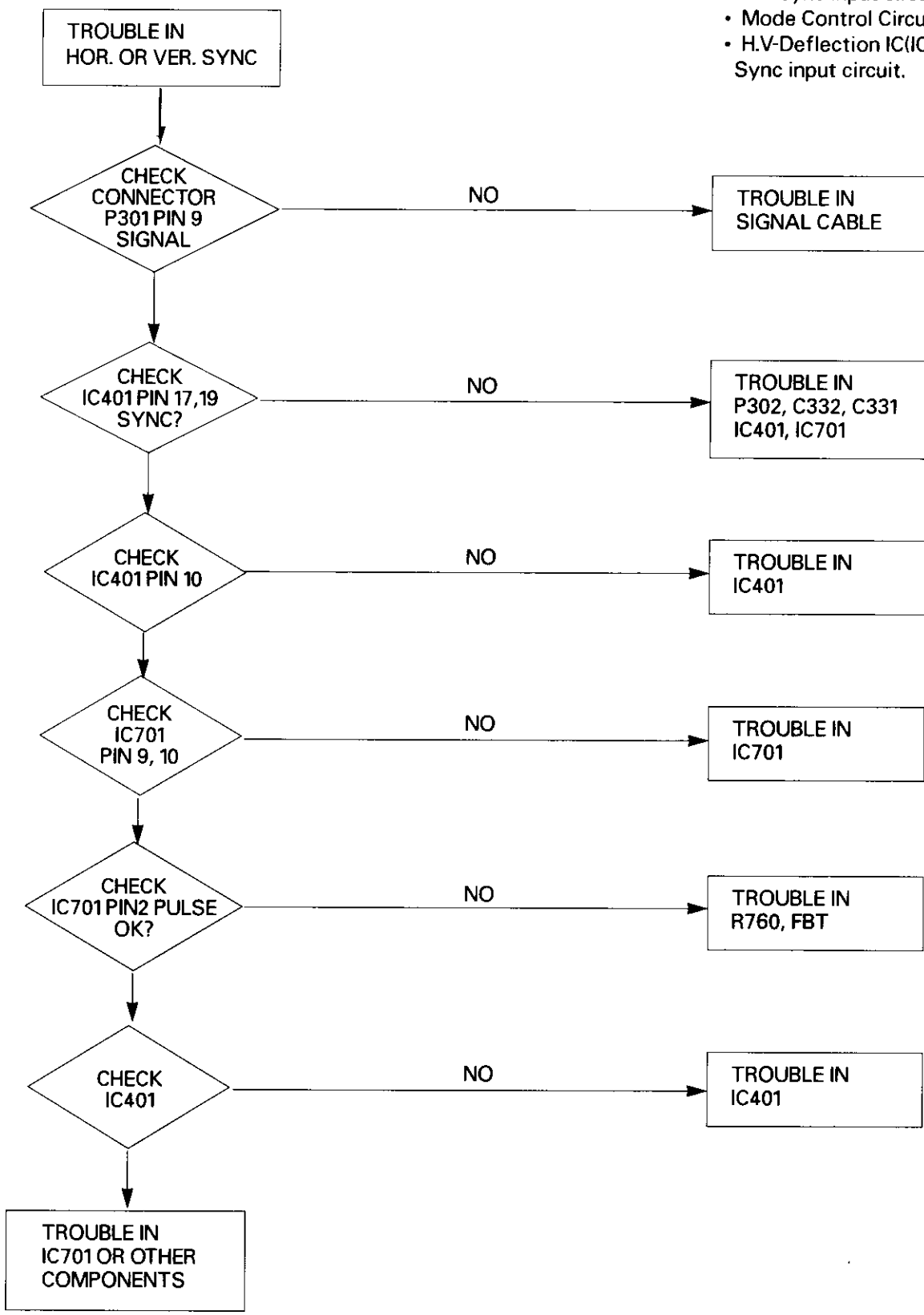
3. NO RASTER

Circuits Checked:
- High voltage generating circuit.



4. TROUBLE IN H.V SYNC

Circuits Checked:
- H.V-sync input circuit
- Mode Control Circuit(IC201)
- H.V-Deflection IC(IC601,701) Sync input circuit.



5. TROUBLE IN DPM