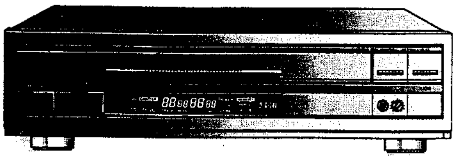
CD-Video player CDV475

/00R/02R/05R/13R

CDV988

/00R/05R

Service
Service
Service



CDV475

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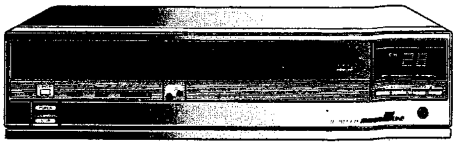

CDV988

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This manual replaces manual CDV475/00R/05R code nr.:4822 725 21983

Service Manual

CD VIDEO

CDV988 is the matchline version of the CDV475 the differences are:

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CLASS 1
LASER PRODUCT

Safety regulations require that the set be restored to its original condition and that parts which are identical with those specified be used.

Documentation Technique Service Dokumentation Documentazione di Servizio Huolte-Ohje Manual de Servicio Manual de Serviço

"Pour votre sécurité, ces documents doivent être utilisés par des spécialistes agréés, seuls habilités à réparer votre appareil en panne".

Subject to modification
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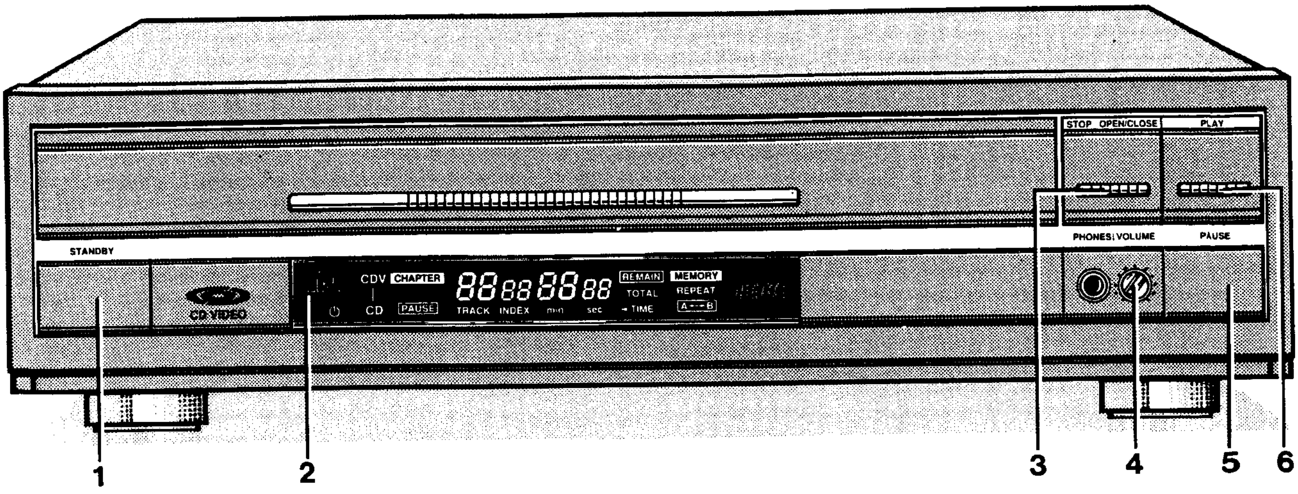
PHILIPS

1. Table of contents

2. CONNECTIONS AND CONTROLS



Front panel controls

1 'STANDBY' key
In 'Standby' mode, switches the player to 'On'. In 'On' mode switches the player to 'Standby'. Can be used to switch the player to 'Standby' from any operating condition.

2 'IR' eye
Receives the signals from the remote control handset. When a signal is received, a red LED lights on the player display, and a star appears on the TV screen.

3 'STOP OPEN/CLOSE' key
Opens and closes the disc tray and stops play.
With the disc tray closed, and the player stopped, pressing this key opens the disc tray. A second press closes the tray again. When a disc is playing, pressing this key once stops the player. Pressing it a second time opens the disc tray, after the disc has stopped rotating.
The key has a built-in LED which lights while the 'STOP OPEN/CLOSE' function is active.

4 'VOLUME' control
Controls the sound level when listening with headphones connected to the 'PHONES' socket.

5 'PAUSE' key:
Holds play at the start of a track, chapter or passage, or interrupts play.
Pressing this key closes an open tray and brings the laser pick-up head to the start of the first track or chapter, in readiness for a further command.
The key has a built-in LED which lights while the 'PAUSE' function is active.

6 'PLAY' key
Starts play, or returns to the beginning of a track or chapter.
Pressing this key closes an open tray and starts the disc playing.
Pushing the front of an open tray produces the same result.
The key has a built-in LED which lights while the 'PLAY' function is active.

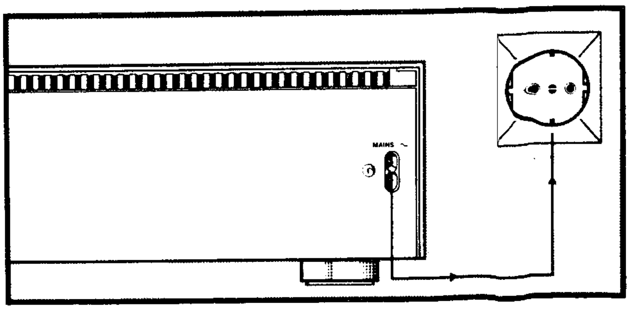
CONNECTIONS

At the back of the player you will find the following connection sockets:
- 'REMOTE OUT/IN' (2 × Cinch)
- 'VIDEO' (Cinch)
- 'OUT L/R' (2 × Cinch, gold plated)
- 'ANT.-IN'
- 'T.V.-OUT'
- 'DIGITAL OUT' (Cinch, gold plated)
- 'A/V EUROCONNECTOR'
- 'MAINS'

A 6.3 mm stereo headphone socket is located on the front panel ('PHONES').

The connection facilities are designed to give you the best possible CD-Video sound and pictures obtainable from your audio and video equipment.

Connecting to the mains



Connect the socket end of the power cable supplied to the 'MAINS' connector on the player, and plug the other end in to a wall socket. The red LED on the display will light up to indicate that the player is in 'Standby' mode. In this mode, only the remote control receiver and antenna amplifer are powered; the rest of the player is switched off.

Controls on the remote control handset

7 'DISPLAY' key
Selects the information, relating to disc play, shown on the player display and the TV screen. The information displayed depends on the type of disc being played.

8 'STANDBY' key
The same function as on the front panel.

9 NUMERIC PAD '1-0' keys
For track, chapter, frame and time selection.

10 'CLEAR' key
Clears incorrect Numeric Pad '1-0' entries for track, chapter, frame or time selections. Erases programmes.

11 'MEMO' key
Stores track or chapter numbers in the memory during programming.

12 'TRACK/CHAPTER' key
For selecting or programming tracks or chapters using the Numeric Pad.

13 'FRAME/TIME' key
For selecting frames or times using the Numeric Pad.

14 'A/B REPEAT' key
Defines and starts a continuous repeat cycle between two selected points on a disc.

15 'CONT. REPEAT' key
For repeating a disc or programme.

16 'STOP OPEN/CLOSE' key
The same function as on the front panel.

17 '− SPEED +' keys
For reducing ('−') or increasing ('+') the playback speed of Active Play discs.
'−' gives steps of ½, ¼ and ⅛ of the normal speed, 1 frame per second and 1 frame per 3 seconds; '+' gives steps of 2 ×, 4 ×, and 8 × the normal speed.

18 'REV SLOW FWD' keys
For reverse playback with the facility to change the speed ('REV') and for slow or fast motion playback in the normal direction ('FWD') with Active Play discs.

19 'REV STILL FWD' keys
For holding play at a particular frame, and for frame-by-frame playback in either reverse ('REV') or forward ('FWD') direction with Active Play discs.

20 'REV SCAN FWD' keys
For searching out particular passages in either reverse ('REV') or forward ('FWD') direction.

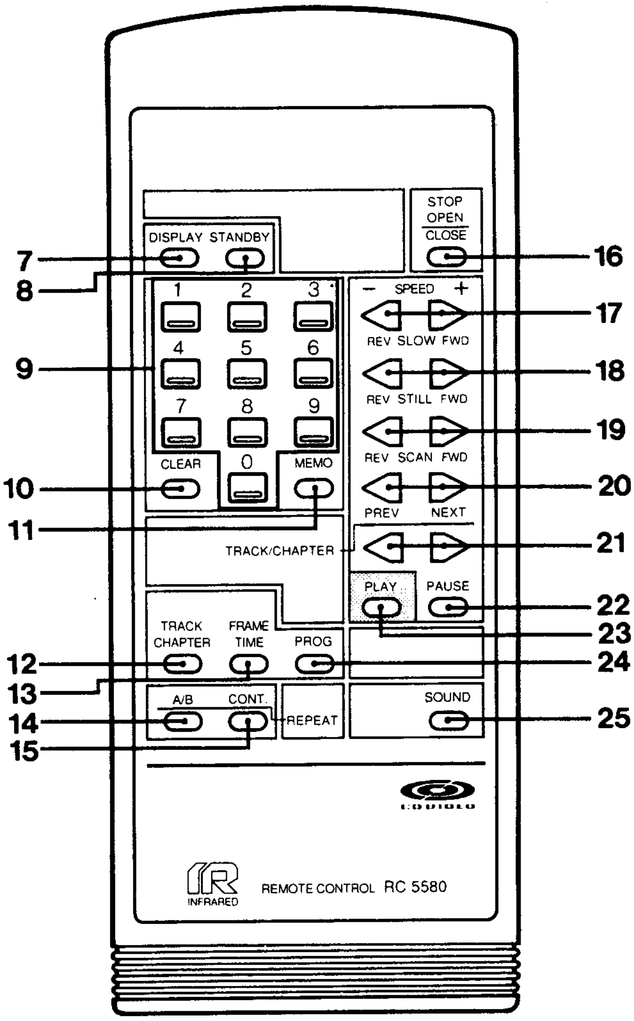
21 'TRACK/CHAPTER' 'PREV' 'NEXT' keys
For moving to a previous ('PREV') or following ('NEXT') track or chapter.

22 'PAUSE' key
The same function as on the front panel.

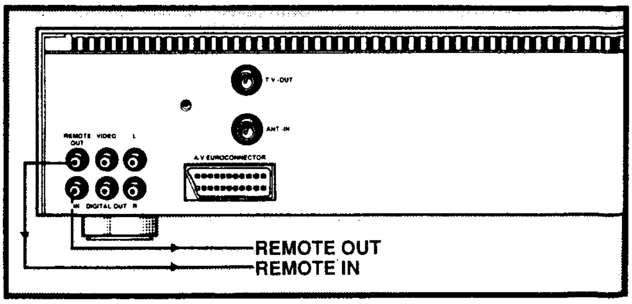
23 'PLAY' key
The same function as on the front panel.

24 'PROG' key
For the selection of the programming function.

25 'SOUND' key
Switches between stereo sound, sound track I and sound track 2 sequentially. Not operational for Compact Discs, or audio-only sections of CDV Singles.

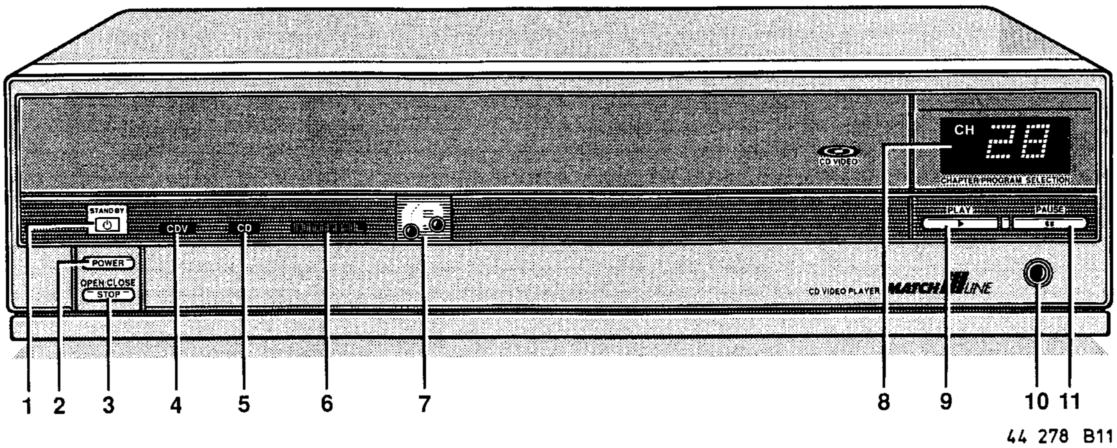


Connecting to another remote control receiver



If you have a TV or A/V system which is operated via a suitable 'RC5' Remote Control receiver, you can operate your CDV 475 via the remote control receiver of this system. Consult the directions for use of the system or TV, and connect the 'REMOTE OUT/IN sockets of of the CDV player with the System or TV. If the location of the player - for example in a cabinet - makes reception of the remote control signals difficult, you can also connect a separate remote control receiver and locate it at a suitable place. Such a receiver is available as an accessory under type number EM 2200, and should be connected to the 'REMOTE IN' socket on the player.

2. CONNECTIONS AND CONTROLS CDV988



You can play discs on your new CD Video player by following the foregoing simple instructions. It's as easy as that.
But of course, the CDV988 offers many more facilities. Before you try to use them, it is best to get to know the controls and indications, the display and the messages on the TV screen, and what they can do for you.

First, the controls on the front of the player are described, then those on the remote control handset. An explanation of the player's display, and the TV screen messages, then follows.

Front panel controls

1 'STAND BY' indication
Lights when the player is in 'stand by' mode.
2 'POWER' key
In 'stand by' mode, switches the player to "on". In 'on' mode switches the player to 'stand by. Can be used to switch the player to 'stand by' from any operating mode.
3 'STOP OPEN/CLOSE' key
Opens and closes the disc tray and stops play.
With the disc tray closed, and the player stopped, pressing this key opens the disc tray. A second press closes the tray again.
When a disc is playing, pressing this key once stops the player. Pressing it a second time opens the disc tray, after the disc has stopped rotating.
4 'CDV' indication
Lights when a CD Video or CD Video Single disc is being played and flashes when one of these discs, or a programme from one, is being repeated.
5 'CD' indication
Lights when a Compact Disc is being played and flashes when one of these discs, or a programme from one, is being repeated.
6 'DIGITAL' indication
Lights when digitally recorded sound is being played.
7 'IR' eye
Receives the signals from the remote control handset. When a signal is received, a red LED lights next to the eye, and a star appears on the TV screen.
8 Display
Informs you about the functioning of the player.
9 'PLAY' key
Starts play, or returns to the beginning of a track or chapter. Pressing this key closes an open tray and starts the disc playing. Pushing the front of an open tray produces the same result.
10 Headphones socket
For listening to discs without using an amplifier.
11 'PAUSE' key:
Holds play at the start of a track, chapter or passage, or interrupts play.
Pressing this key closes an open tray and brings the laser pick-up to the start of the first track or chapter, in readiness for a further command.

Controls on the remote control handset

12 'DISPLAY' key
Selects the information, relating to disc play, shown on the TV screen. The information displayed depends on the type of disc being played.
13 'STANDBY' key
The same function as the 'POWER' key on the front panel.
14 NUMERIC PAD '1-0' keys
For track, chapter, frame and time selection.
15 'CLEAR' key
Clears incorrect Numeric Pad '1-0' entries for track, chapter, frame or time selections.Erases programmes.
16 'MEMO' key
Stores track or chapter numbers in the memory during programming.
17 'TRACK/CHAPTER' key
For selecting or programming tracks or chapters using the Numeric Pad,
18 'FRAME/TIME' key
for selecting frames or times using the Numeric Pad.
19 'A/B REPEAT'key
Defines and starts a continuous repeat cycle between two selected points on a disc.
20 'CONT. REPEAT' key
For repeating a disc or programme.
21 'STOP OPEN/CLOSE' key
the same functions as on the front panel.
22 '– SPEED +' keys
For reducing ('–') or increasing ('+') the playing speed of Active Play discs.
'–' gives steps of 1/2, 1/4, 1/8 and 1/16 of the normal speed, 1 frame per second and 1 frame per 3 seconds; '+' gives steps of 2×, 4× and 8× the normal speed.
23 'REV SLOW FWD' keys
For reverse playback with the facility to change the speed ('REV') and for slow or fast motion playback in the normal direction ('FWD') with Active Play discs.
'REV STILL FWD' keys.
24 For holding play at a particular frame, and for frame-by-frame playback in either reverse ('REV') or forward ('FWD') direction with Active Play discs.
25 'REV SCAN FWD' keys
For searching out particular passages in either reverse ('REV') or forward ('FWD') direction.

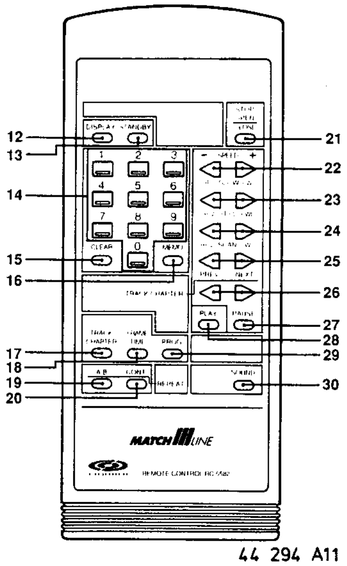
26 'TRACK/CHAPTER' 'PREV' 'NEXT' keys
For moving to a previous ('PREV') or following ('NEXT') track or chapter.

27 'PAUSE' key
The same function as on the front panel.

28 'PLAY' key
The same function as on the front panel

29 'PROG' key
For the selection of the programming function.

30 'SOUND' key
Switches between stereo sound, sound track 1 and sound track 2 sequentially. Not operational for Compact Discs, or audio-only sections of CD Video Singles.



Transporting the player

For transport, the player mechanism must be properly secured by re-fitting the packing piece and the transit screw with collar, or damage may result. For this purpose, the player must be connected to the TV set and mains supply.

- Take the black plug from the transit screw hole in the top panel and press it into the hole provided in the packing piece.
- Take the transit screw and red collar from the packing piece.
- Switch on the player by pressing 'STANDBY', and also switch on the TV.
- Open the drawer by pressing 'STOP OPEN/CLOSE'.
- Fit the packing piece in the position shown.
- Hold 'STOP OPEN/CLOSE' **pressed** and while the drawer is closing press 'STANDBY' as well.
- Immediately after 'TRANSPORT' appears on the TV screen, disconnect the player from the mains supply; also from the TV set after switching it off.
- Finally fit the transit screw and red collar.

Removing the transit clamps

- Open the partly open flap of the disc tray completely and remove the two red triangular blocks. Then allow the flap to shut.
- Clip the transit screw together with its red collar on to the packing piece. Keep this piece and the red triangular blocks in a safe place, because the blocks, packing piece, screw and collar must be refitted if you should need to transport the player again. See 'Transporting the Player' under 'ADDITIONAL INFORMATION'.

Transporting the player

For transport, the player mechanism must be properly secured by re-fitting the red triangular blocks, the packing piece and the transit screw with collar, or damage may result. For this purpose, the player must be connected to the TV set and mains supply.

- Hold 'STOP/OPEN/CLOSE' **pressed**, and while the tray is closing press 'POWER/STANDBY' as well. During this operation the flap of the tray must be kept open! The indication 'TRANSPORT' appears on the TV screen.
- While keeping the flap open, push the red triangular blocks in the corners of the tray opening. Then close the flap as far as possible.

4. Audio performance

4.1 Digital Audio

All values measured from 20 Hz to 20 kHz into nominal load except when indicated otherwise.

1 Number of channels : 2
2 Output voltage : 260 mV_{RMS} ± 0.5 dB at −20 dB, 1 kHz
3 Left-right unbalance : ± 0.6 dB max
4 Output impedance : 200 Ω
5 Nominal load impedance : 10 KΩ//300 pF
6 Amplitude response : ± 0.5 dB max
7 Phase non-linearity : ± 0.5 deg
8 SNR : > 94 dB
9 SNR (with SCART and TV-set on) : > 80 dB
10 Dynamic range : > 90 dB
11 THD + noise : − 90 dB min
12 Outband suppression : > 50 dB above 24.1 kHz
13 Channel separation (1 kHz) : > 96 dB
14 Mute during random acces : > 90 dB
15 Automatic switching deemphasis with 15/50 uS time constants

4.2 Analog Audio

All values measured at 1 kHz-100% modulation into nominal load except when indicated otherwise.

1 Number of channels : 2
2 Output voltage : 650 mV_{RMS} ± 1.5 dB at
3 Left-right unbalance : ± 1 dB max
4 Amplitude response : 40Hz-20kHz ± 3dB max
5 SNR : > 50 dB
6 Channel separation (1 kHz) : > 50 dB
7 Distortion : < −40 dB
8 Analog deemphasis : 75 uS
9 Audio only during play forward, 80 dB mute during other functions

4.4 Audio channels

1 CD and clip (audio tracks): Stereo only
2 Clip (video track), CDV 8" and 12" : Stereo & bilingual

Headphone amplifier performance : 20-20.000 Hz unless otherwise stated)
Load impedance range : 8 Ω-2 kΩ
Output power : 30 mW at 32 Ω
30 mW at 600 Ω
Frequency range : 20-20.000 Hz ± 0.1 dB
Channel unbalance : ± 0.5 dB
Signal-to-noise ratio : > 93 dB
Dynamic range : > 90 dB
Total harmonic distortion (incl. noise)(at 600 Ω) : < 0.003% (< −90 dB)
Intermodulation distortion (at 600 Ω) : < 0.003% (−90 dB)
Channel separation (at 600 Ω) : < 75 dB

Video performance

1 CVBS ouput (CINCH & SCART) : 1 V_{pp} into 75 Ω
2 RGB output (SCART) : 0.7 V_{pp} into 75 Ω
3 RGB unbalance : > 3%
4 Bandwidth after demod. & TBC : 5 MHz (-5 dB)
5 Rise/fall time : 130 ns
6 Overschoot : < 8%
7 SNR unweighted : > 40 dB (disc-SNR) 45 dB)
8 SNR Luminance : 40 dB
9 SNR Chrominance : 38 dB
10 Horizontal resolution : 440 lines
11 Video time base instability : < 10 ns, except during SCAN

Connections

CVBS output (cinch) : 1 Vpp into 75 Ω
RGB output (Euroconnector): 0.7 Vpp into 75 Ω
Digital output (gold-plated cinch) : 0.5 Vpp int 75Ω
Audio output (2x gold-plated cinch) : 2 V rms, typical, at 10 kΩ

Remote in/out (2x cinch) : 2 Vpp at 2.2 kΩ RC5
Headphone (6.3 mm socket) : 8-2 kΩ
RF output : 75Ω-UHF channel 32-40 adjustable
Antenna input : 75Ω

Power supply

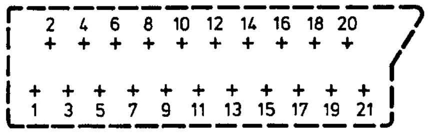
mains voltage : 185-265 V AC, with service soulution for 110, 127 and 240 V
Mains frequencies : 50 and 60 Hz
Power consumption : 55 W approx.; stand-by 8W
Electrical requirements : IEC

Cabinet, general

Material/finish : metal/ABS; brushed front
Dimensions (wxhxd)
Cabinet with tray closed : 420x100x393 mm approx.
Cabinet with tray opened : 420x100x613 mm approx.
Weight : 8 kg approx.

The right is reserved to change data if necessary
This CD-Video player complies with radio interference requirements as laid down in EEC regulations.

A/V Euro connector



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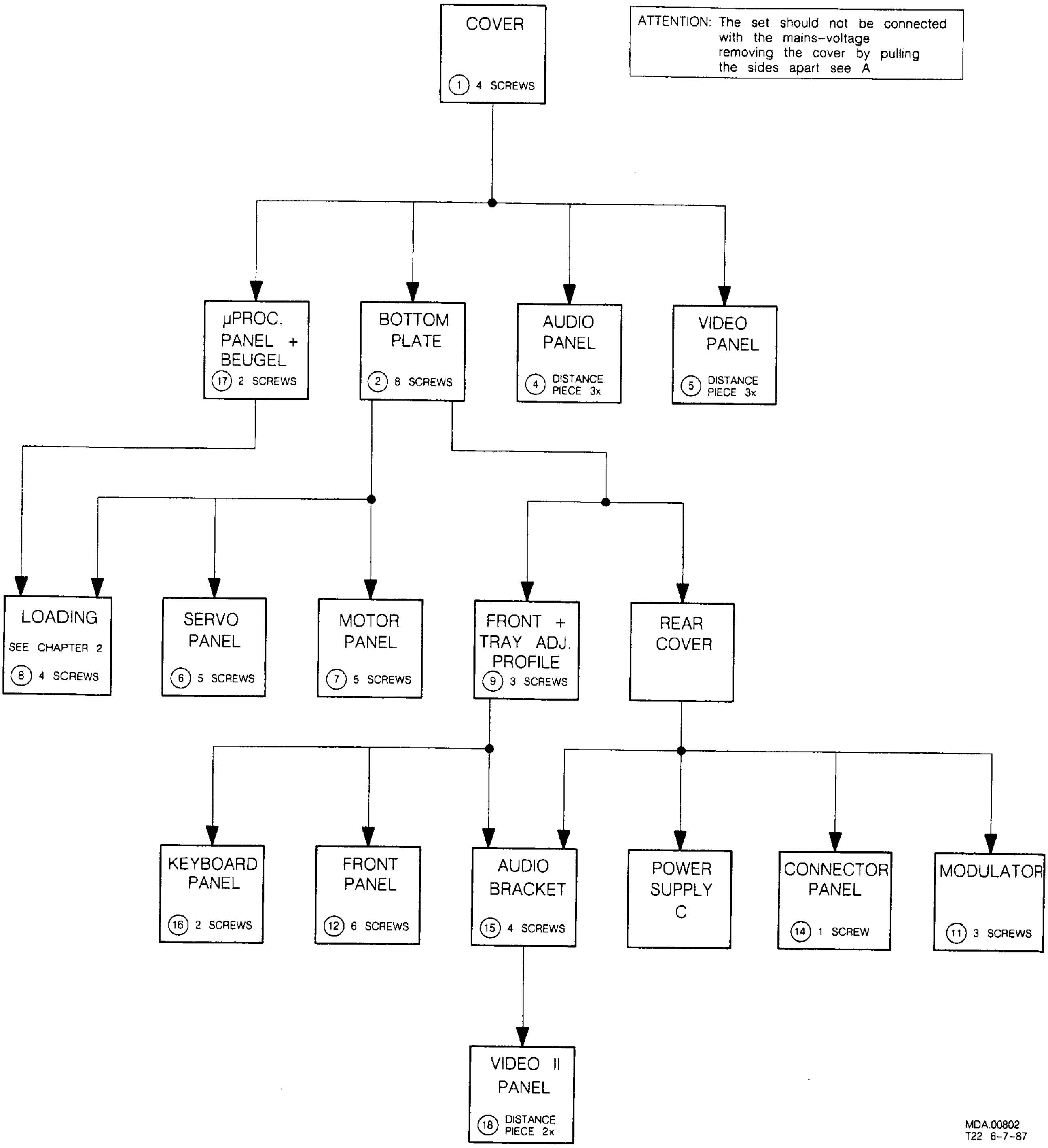
Pin Signal
1 audio out (right) 650 mV r.m.s./1 kΩ
3 audio out (left) 650 mV r.m.s./1 kΩ
4 audio earth
5 blue earth
7 blue out 0.7 V/75 ohm
8 RC-5 in/out; CVBS status 12 V
9 green earth
11 green out 0.7 V/75 Ω
13 red earth
15 red out 0.7 V/75 Ω
16 RGB status
17 CVBS earth
18 RGB status earth
19 CVBS out 1 V/75 Ω (also acts as sync out when using RGB)
21 socket earth

Service tools for the CDV475

1x flat cable	(28 p)	4822 321 22613
1x connector	(28 p)	4822 267 70219
1x connector cable	(12 p)	4822 321 22528
2x connector cable	(4 p)	4822 321 22529
1x connector cable (pal system	(6 p)	4822 321 22531
1x audio test disc 1 (type nr. 5/5a)	(set)	4822 397 30096
1x audio signals disc		4822 397 30185
1x cdv single test disc		4822
4x support (Loading)		4822 395 30202
Torx screwdriver set		4822 395 50145

CHAPTER 1
DISASSEMBLY



ATTENTION: The set should not be connected with the mains-voltage removing the cover by pulling the sides apart see A

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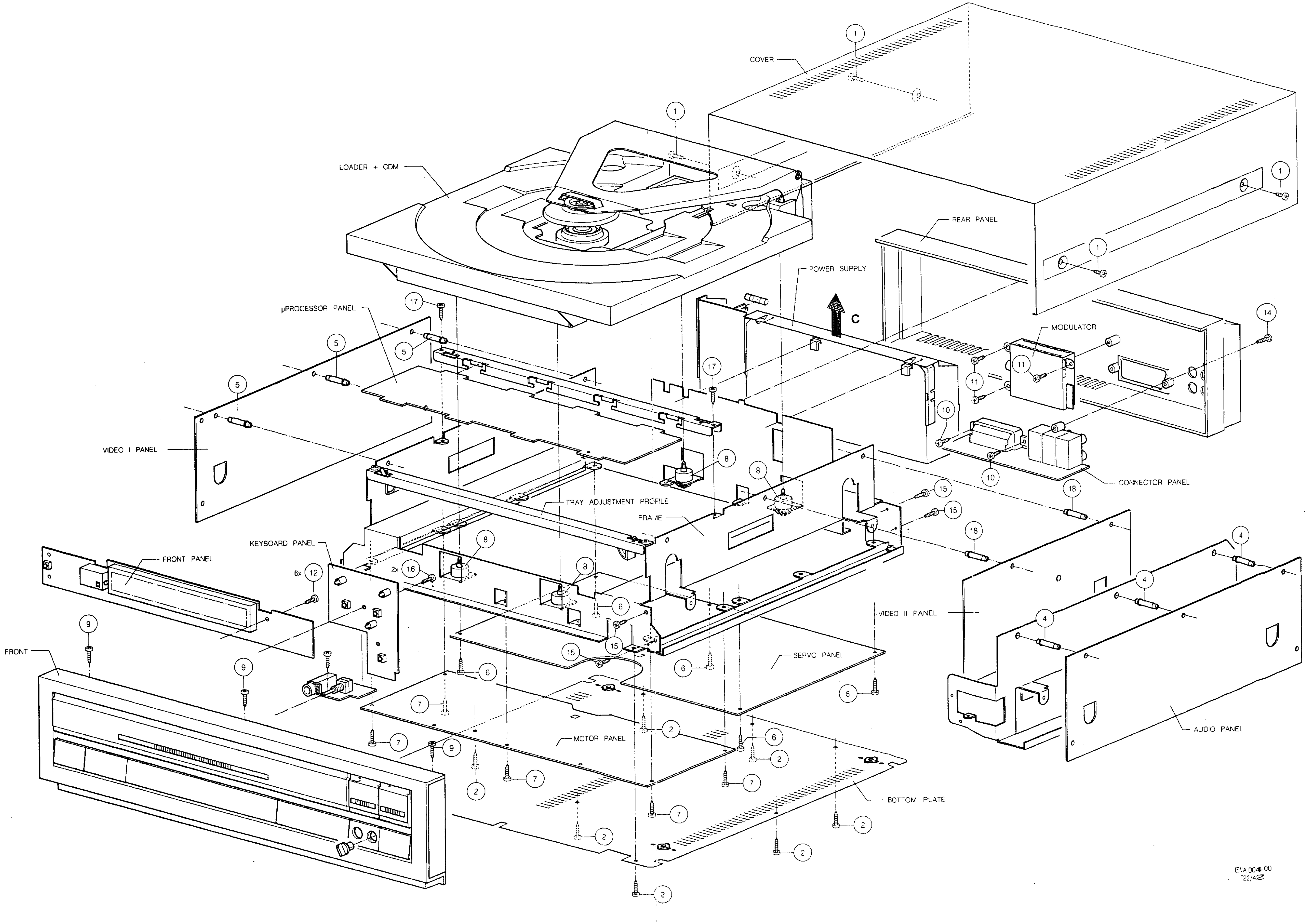
WARNING

ESD

All ICs and many other semi-conductors are susceptible to electrostatic discharges (ESD). Careless handling during repair can reduce life drastically.
When repairing, make sure that you are connected with the same potential as the mass of the set via a wrist wrap with resistance.
Keep components and tools also at this potential.

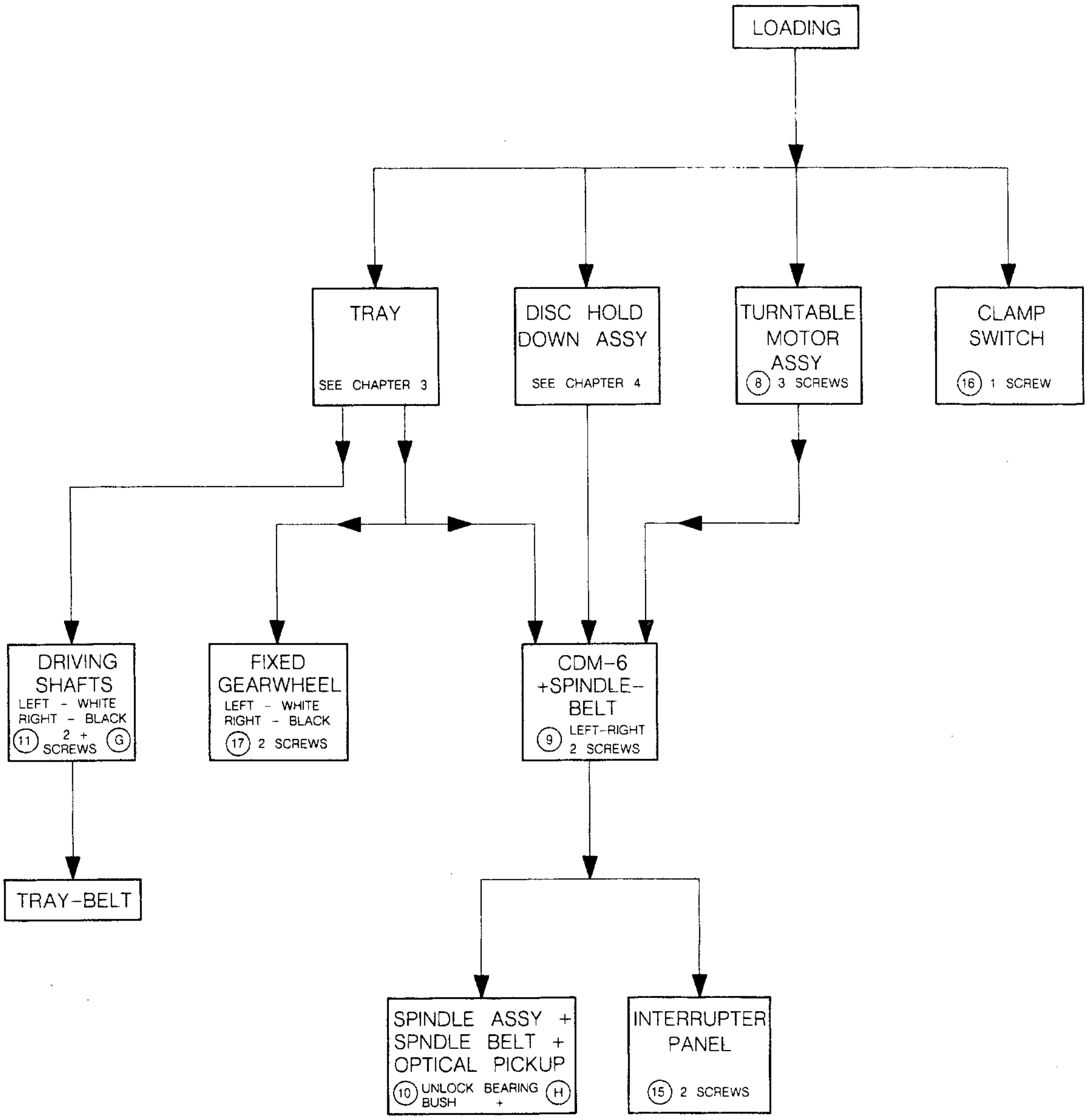
Radiation and ESD according to: VDE0872 part 4+5

DISASSEMBLY EXPLODED VIEW CABINET



CHAPTER 2

DISASSEMBLY LOADING



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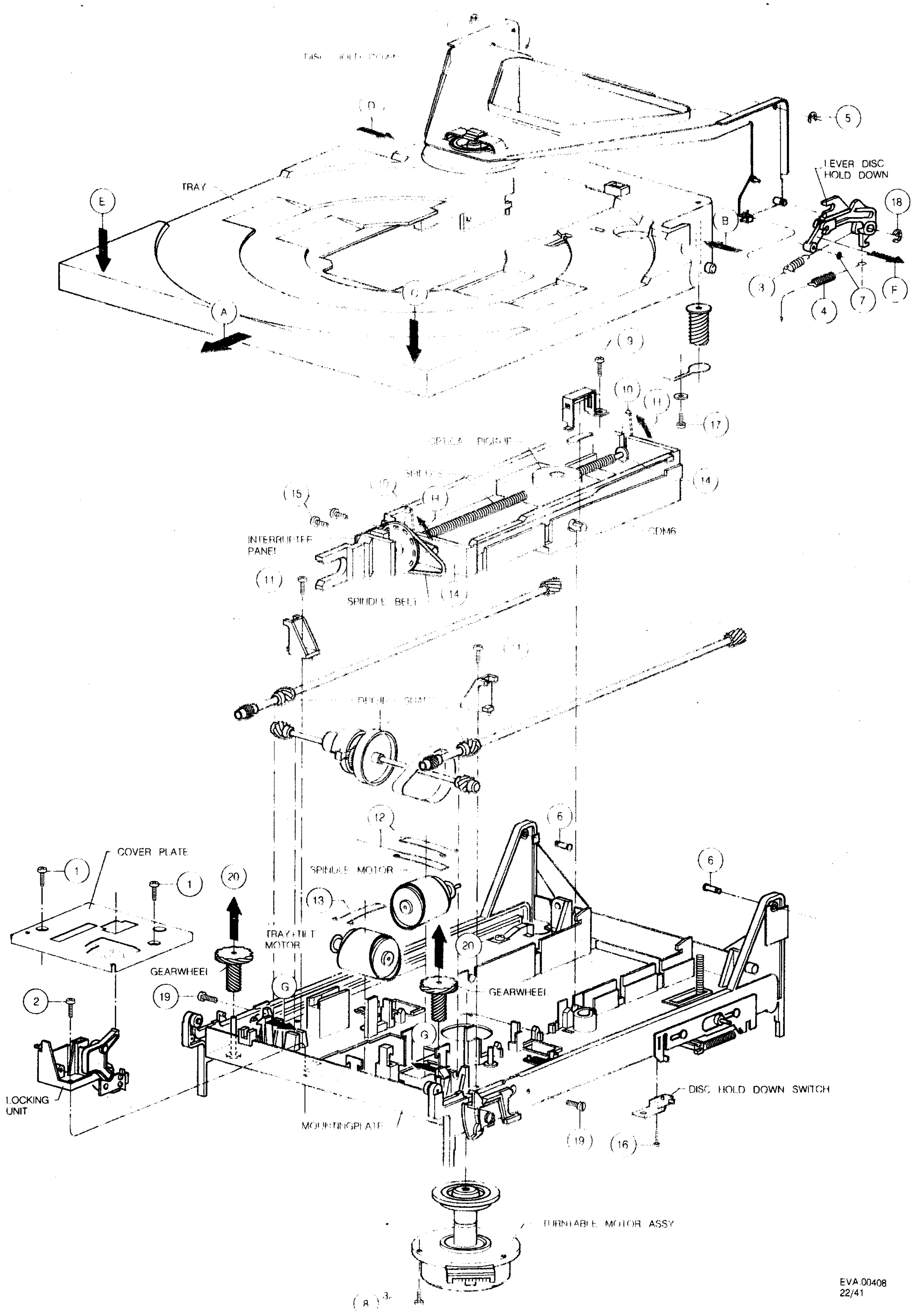

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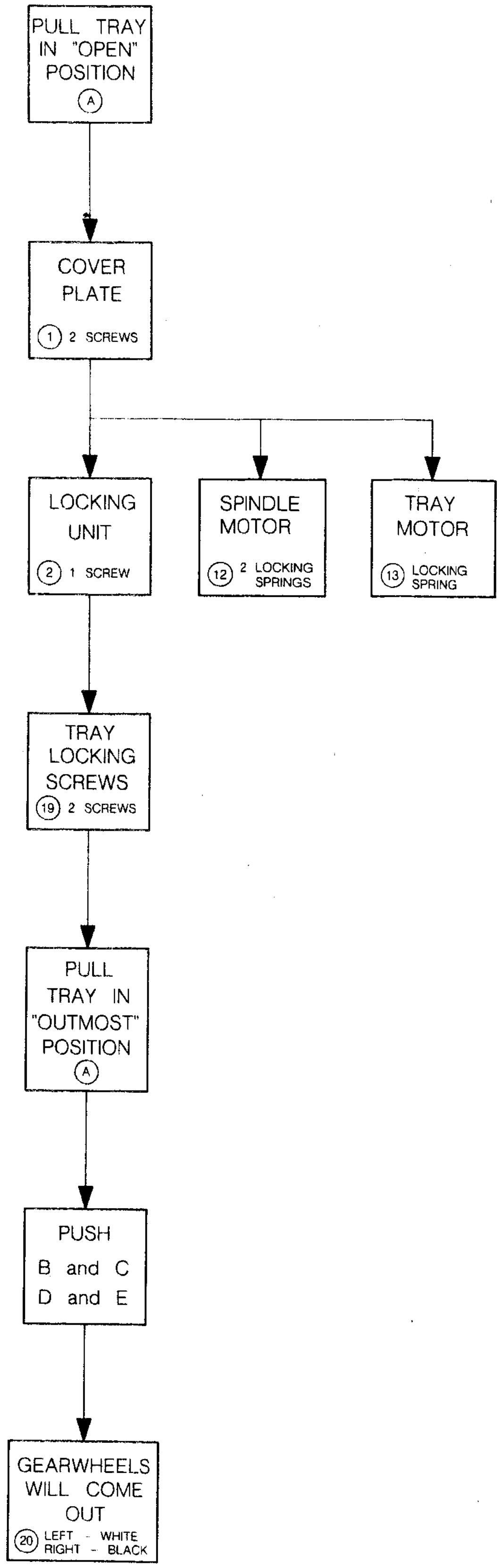
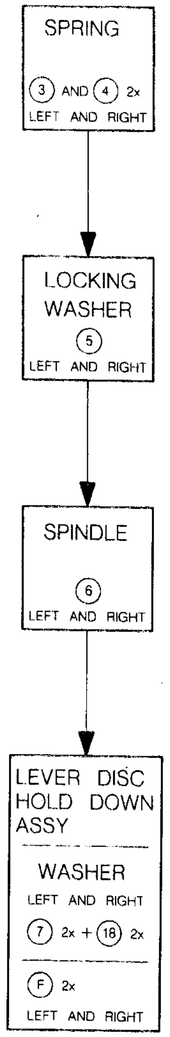
CHAPTER 3
DISASSEMBLY TRAY



CHAPTER 4
DISASSEMBLY DISC HOLD DOWN ASSY



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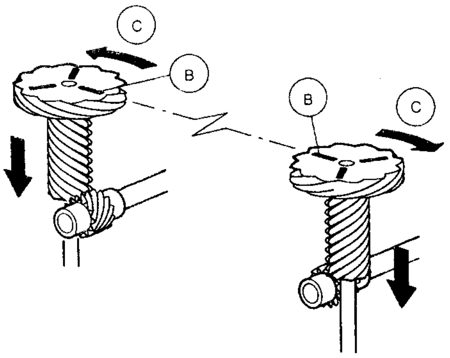
4-3 ASSEMBLY HINTS



ASSEMBLY

- GEARWHEEL

ATTENTION

LEFT - WHITE

RIGHT - BLACK

MARK (B) TO

THE INNER SIDE

AND TURN (C)

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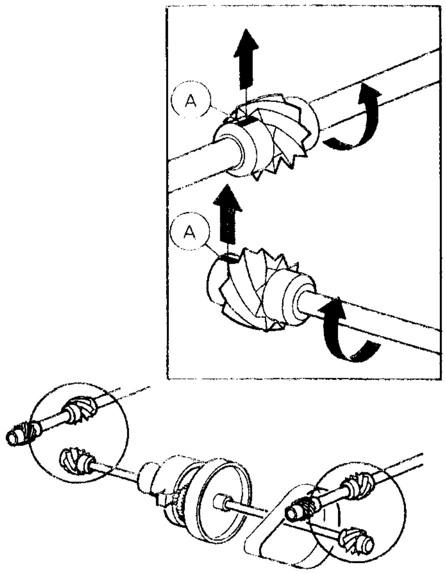

ASSEMBLY

- DRIVING SHAFTS

ATTENTION

LEFT - WHITE

RIGHT - BLACK

THE MARKS (A)

AT THE TOP SIDE

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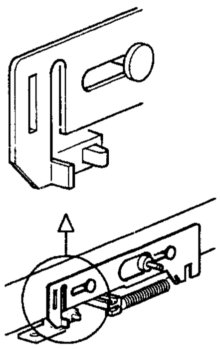
MECHANICAL ADJUSTMENT



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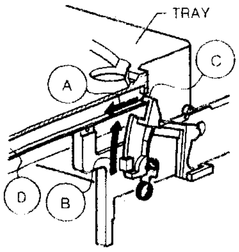

ASSEMBLY

- TRAY HOLD DOWN

TRAY OUT MOST POSITION

TRAY HOLD DOWN ASSY (B)

HOOK (C) IN GROOVE (D)

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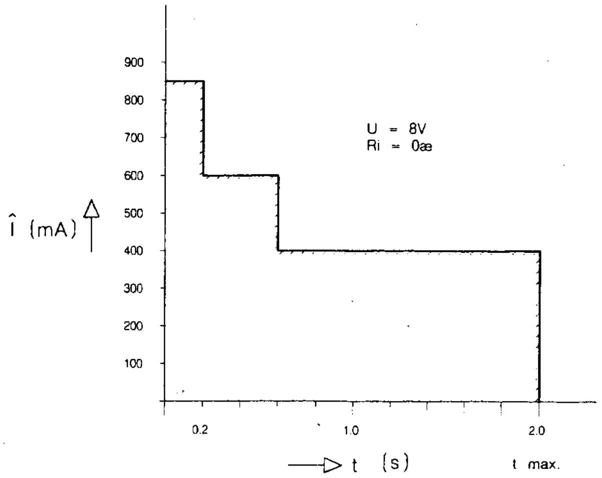

TRAY MOVING IN/OUT TIME

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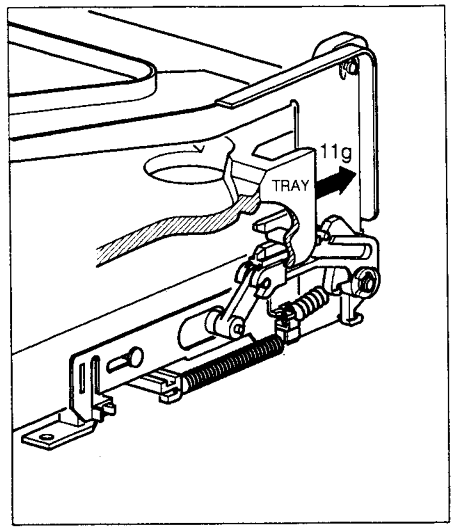
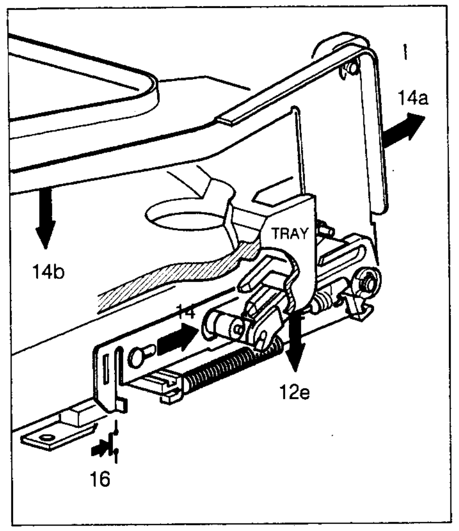
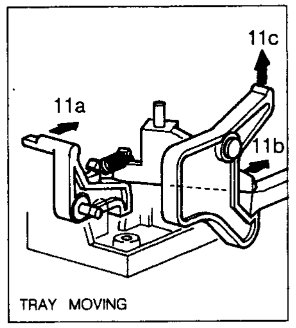
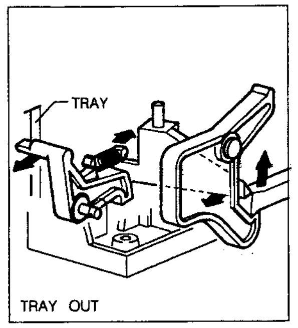
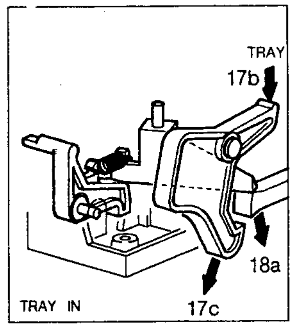
5. FUNCTIONING DRAWING PLAY/TILT

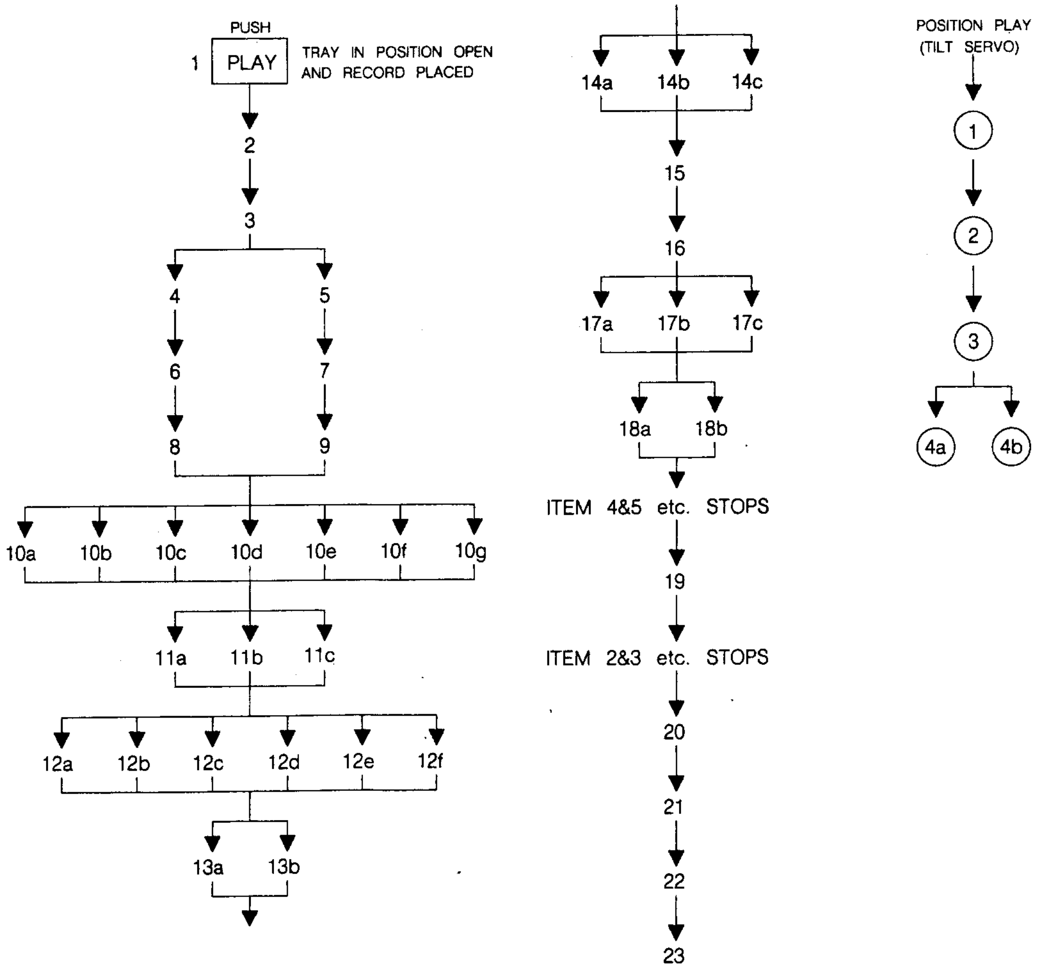


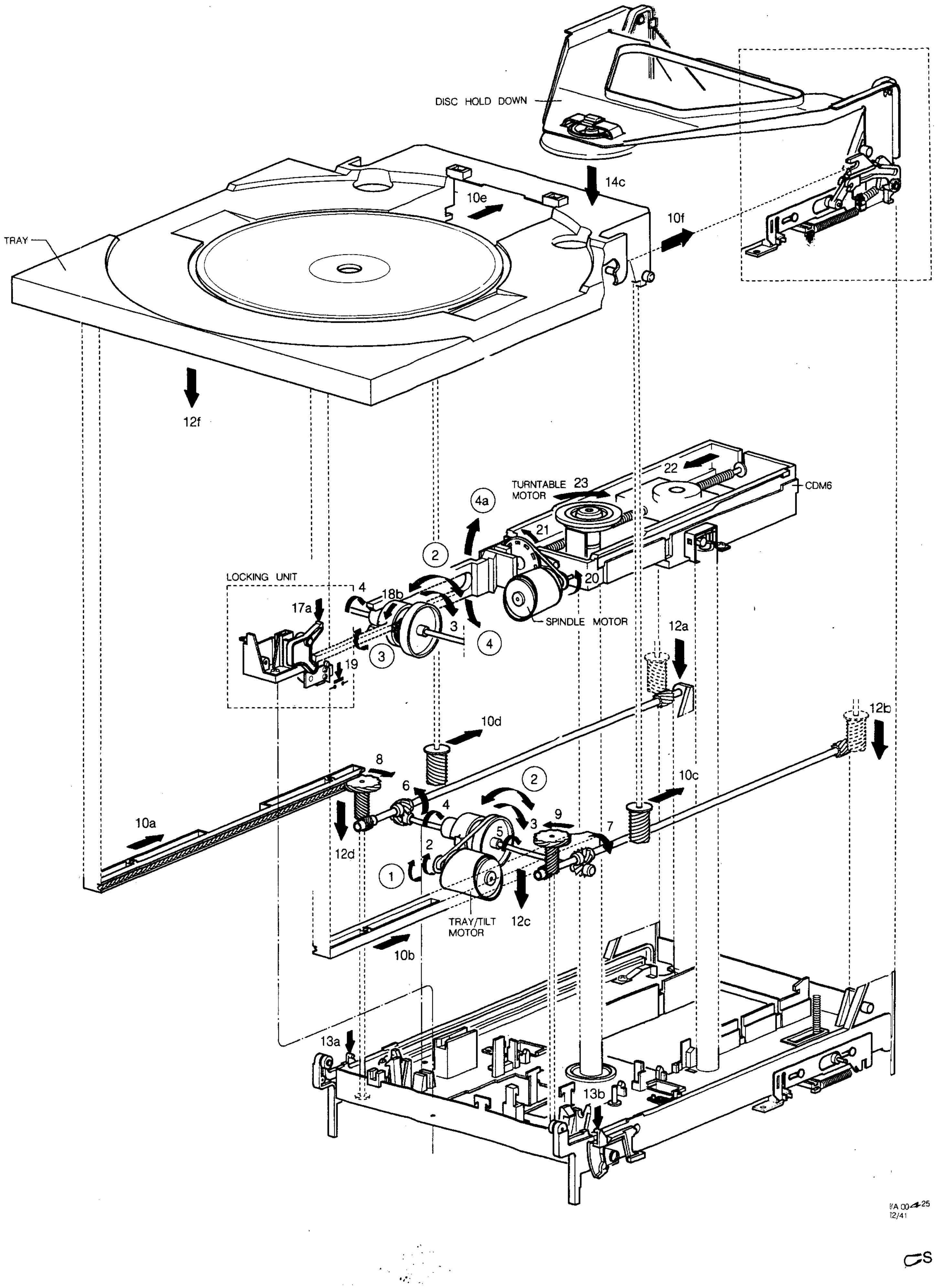




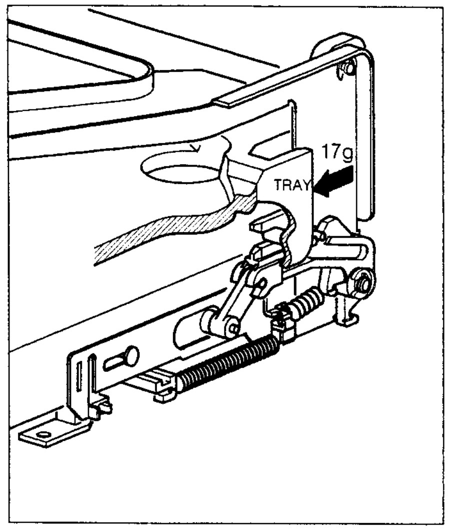


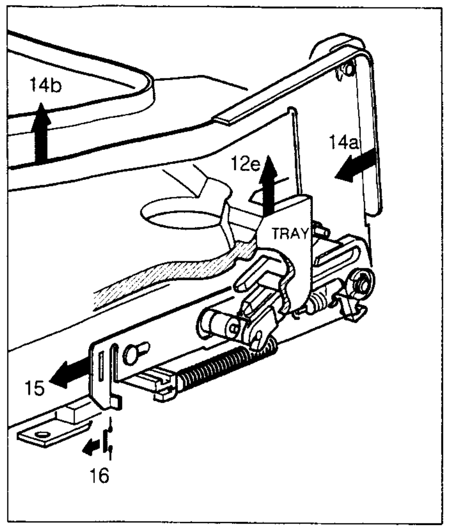


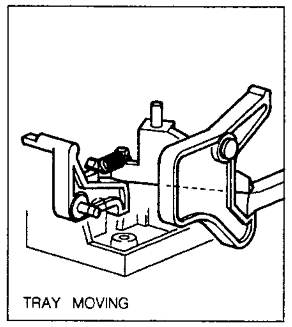


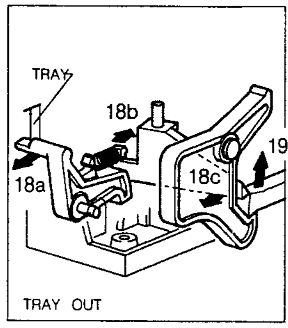


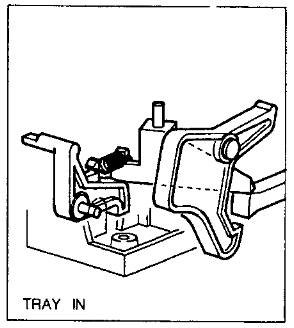
Functioning drawing STOP

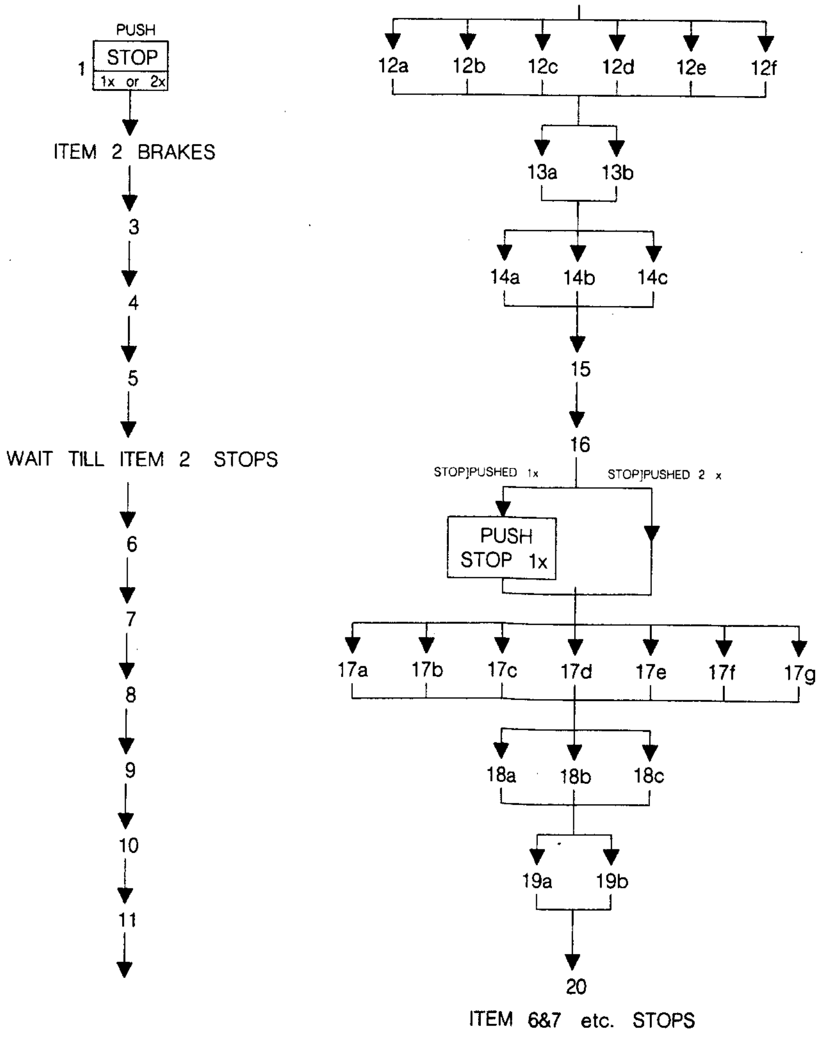


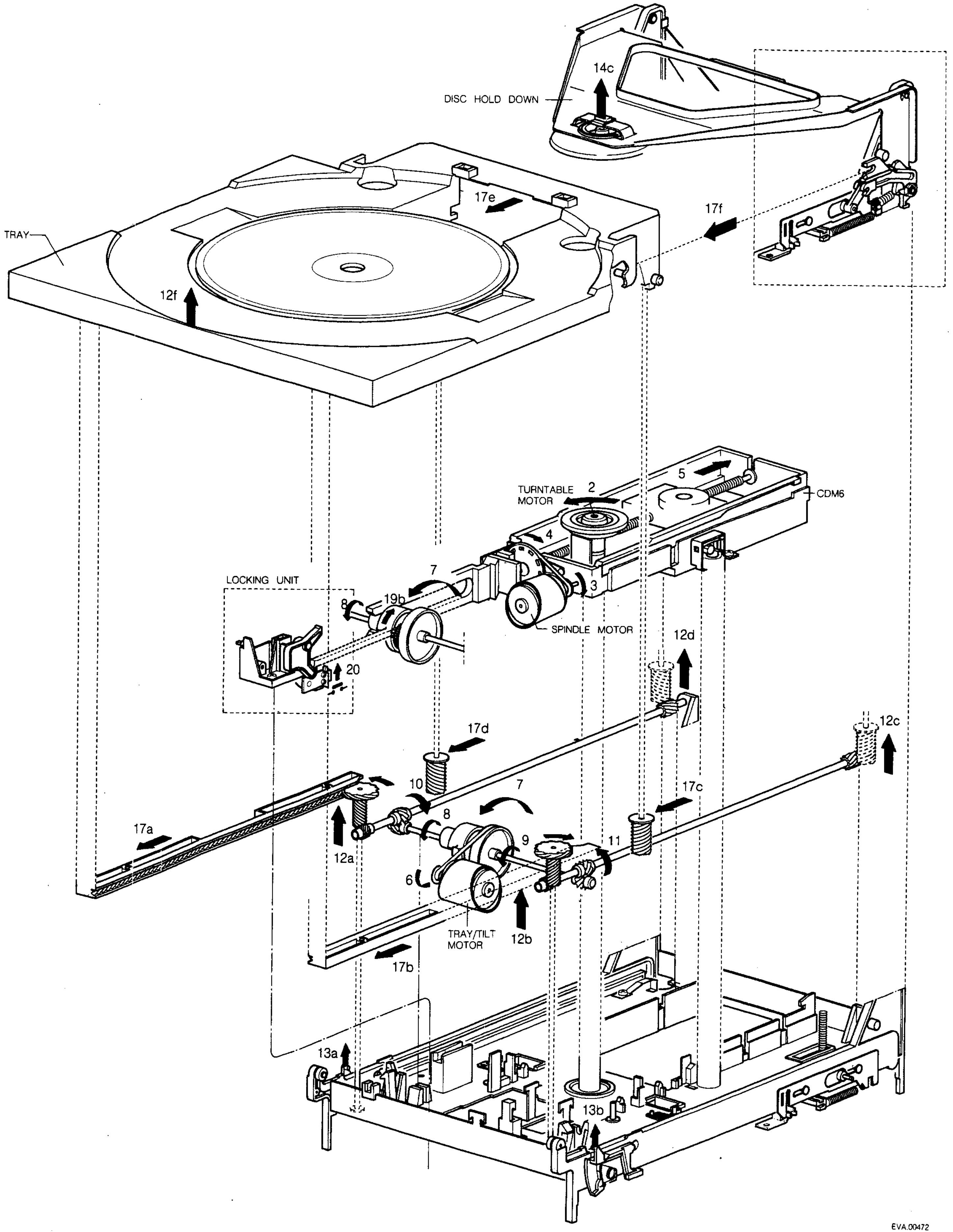




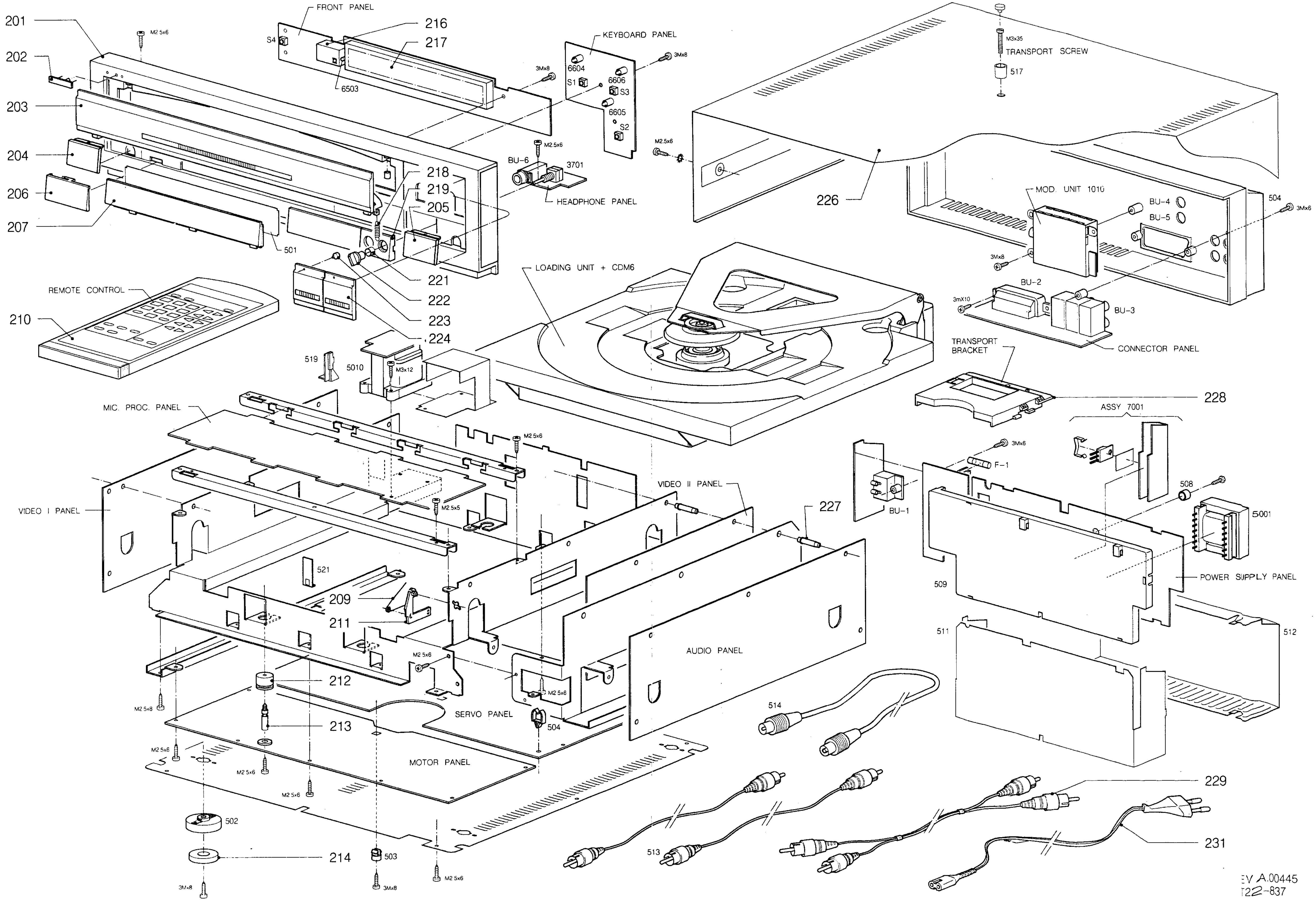








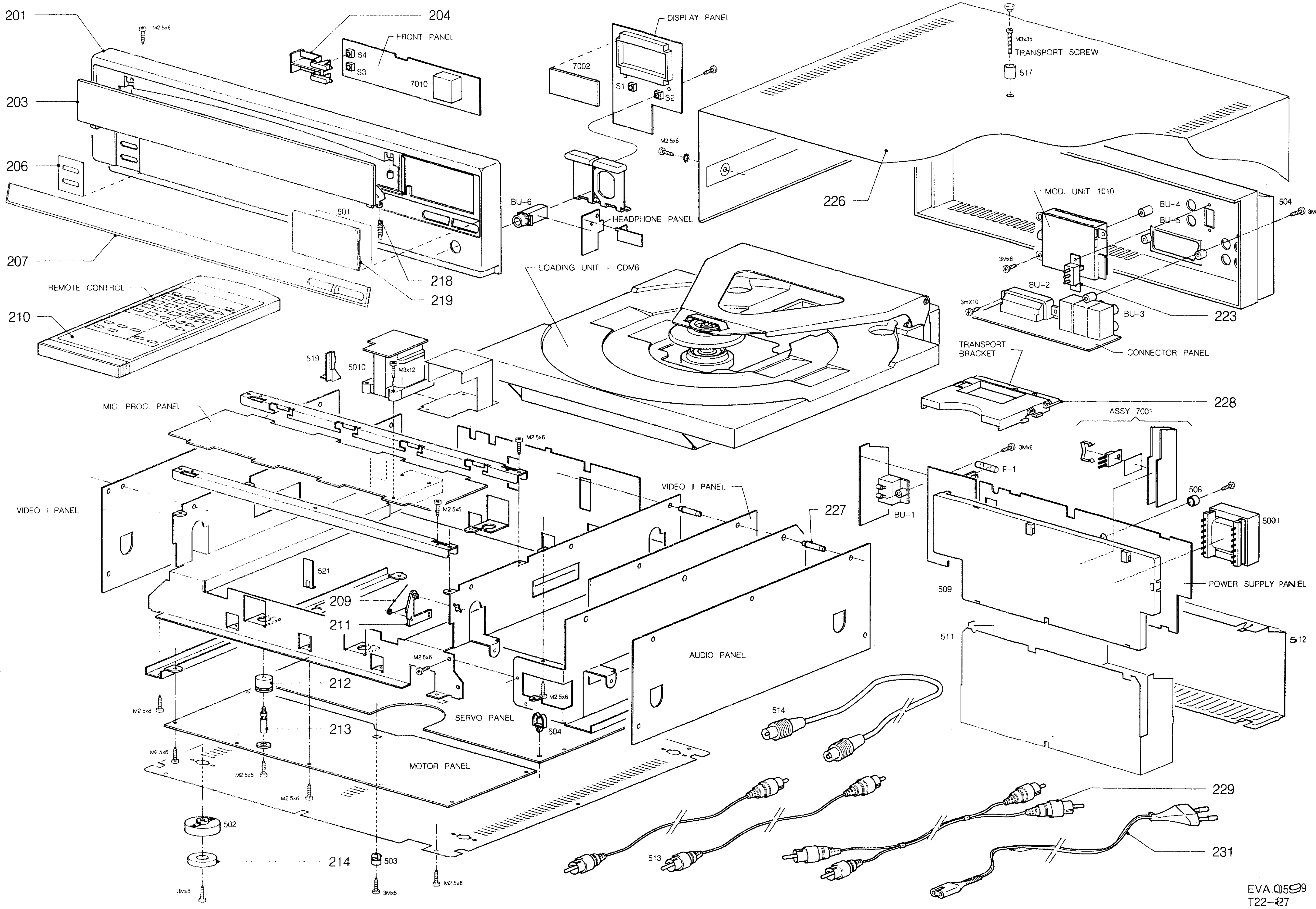
6. EXPLODED VIEW CABINET CDV475



EV A.00445
T22-837

MECHANICAL PARTS CABINET CDV475

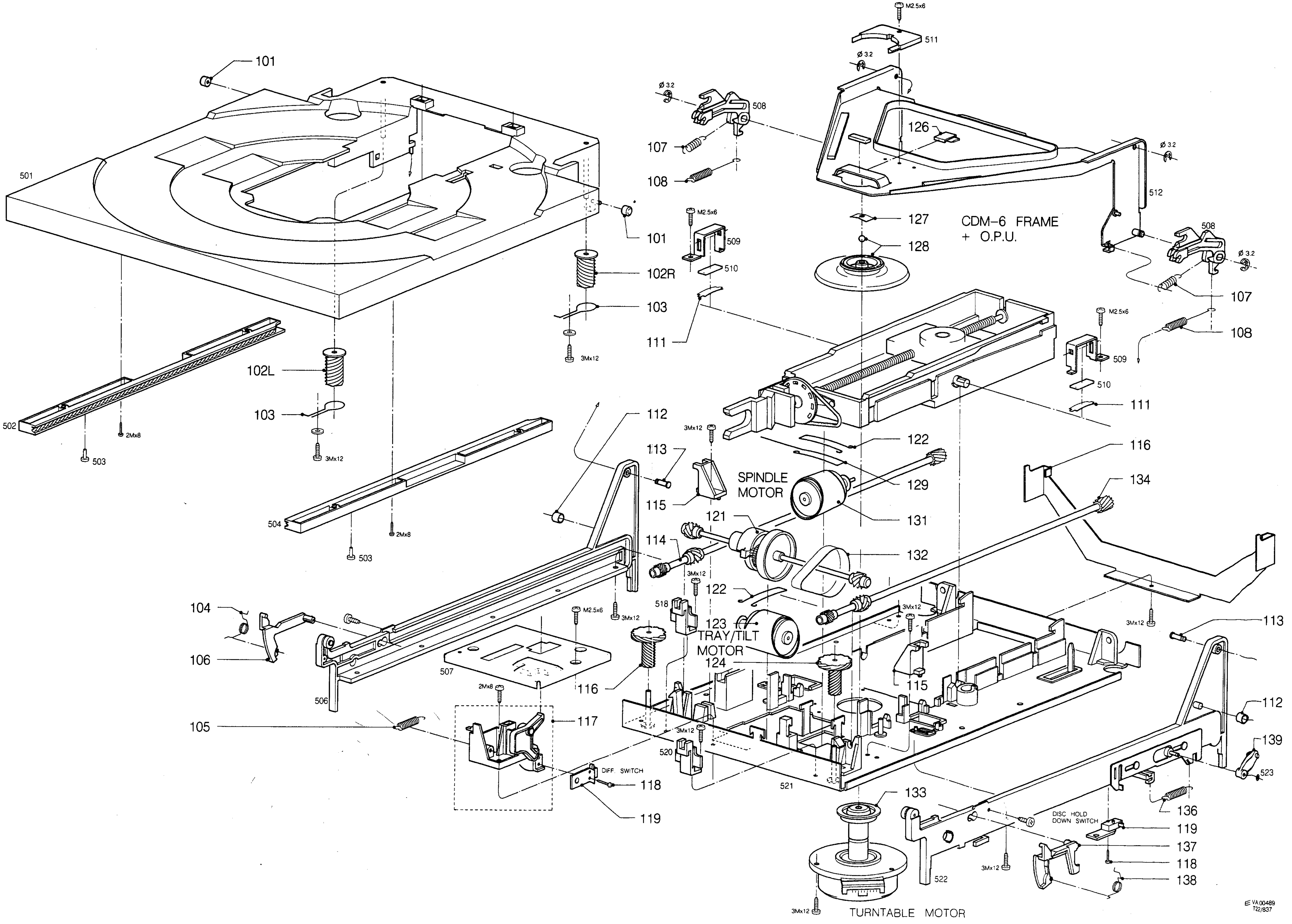
Pos	Code number	Descripton
S1	4822 276 11276	SWITCH STOP
S2	4822 276 11276	SWITCH PAUSE
S3	4822 276 11276	SWITCH PLAY
S4	4822 276 11896	SWITCH STANDBY
201	4822 444 40273	FRONT ASSY /95B
201	4822 701 10846	FRONT ASSY SILVER /95S
201	4822 444 40231	FRONT ASSY /00R/02R/05R/13R
202	4822 701 10854	WORDMARK/LOGO /95B/95S
202	4822 459 10771	WORDMARK/LOGO /00R/02R/05R/13R
203	4822 444 60539	DOOR ASSY /00R/02R/05R/13R
203	4822 701 10853	DOOR ASSY /95B/95S
204	4822 701 10851	KNOB ASSY STANDBY /95B/95S
204	4822 410 26187	KNOB ASSY STANDBY /00R/02R/05R/13R
205	4822 701 10852	KNOB ASSY PAUSE /95B/95S
205	4822 410 26187	KNOB ASSY PAUSE /00R/02R/05R/13R
206	4822 454 30396	PLATE /00R/02R/05R/13R
206	4822 701 10848	PLATE /95B/95S
207	4822 381 10937	LENS
209	4822 492 32794	SPRING
210	4822 701 10856	REMOTE CONTROL /95B/95S
210	4822 218 20683	REMOTE CONTROL /00R/02R/05R/13R
211	4822 526 50099	PAWL
212	4822 325 60324	GROMMET
213	4822 502 30524	SREW
214	4822 444 30404	PLATE
216	4822 218 10213	RECEIVER
217	4822 130 90495	DISPLAY 6-BT-1072K
218	4822 492 51956	SPRING
219	4822 701 10849	PLATE /95B/95S
219	4822 454 30397	PLATE /00R/02R/05R/13R
221	5322 492 64624	CLAMPING PIECE
222	4822 413 31495	VOLUME KNOB
223	4822 381 10944	LENS
224	4822 701 10847	KNOB ASSY /95B/95S
224	4822 410 26186	KNOB ASSY /00R/02R/05R/13R
226	4822 444 60599	COVER /95B
226	4822 444 60601	COVER /95S
226	4822 444 60538	COVER /00R/02R/05R/13R
227	4822 402 61155	CLAMP
228	4822 402 61156	BRACKET
229	4822 321 22603	CINCH CABLE
231	4822 321 10522	MAINS CABLE /05R
231	4822 321 10457	MAINS CABLE /00R/02R/13R/95B/95S
B-1	4822 267 30639	MAINS CONNECTOR
B-2	4822 267 60172	SCART CONNECTOR
B-3	4822 267 50801	CINCH CONNECTOR
B-6	4822 267 40661	HEADPHONE CONNECTOR
1010	4822 209 72943	MODULATOR 6 MHZ /05R
1010	4822 214 51691	MODULATOR 5,5MHZ /00R/02R/13R/95B/95S
5010	4822 146 30641	STAND BY TRAFO


201
M2.5x6
204
FRONT PANEL
S4
S3
7010
203
206
207
501
218
219
REMOTE CONTROL
210
DISPLAY PANEL
7002
S1
S2
M2.5x6
BU-6
HEADPHONE PANEL
LOADING UNIT + CDM6
M3x35
TRANSPORT SCREW
517
226
MOD. UNIT 1010
BU-4
BU-5
504
3Mx6
3Mx8
BU-2
3mX10
BU-3
223
CONNECTOR PANEL
TRANSPORT BRACKET
228
ASSY 7001
3Mx6
F-1
519
5010
M3x12
MIC PROC. PANEL
M2.5x6
VIDEO I PANEL
M2.5x5
VIDEO II PANEL
227
BU-1
508
5001
509
POWER SUPPLY PANEL
511
512
521
209
211
M2.5x6
AUDIO PANEL
212
M2.5x6
SERVO PANEL
504
514
M2.5x8
213
M2.5x6
M2.5x6
MOTOR PANEL
M2.5x6
502
214
503
3Mx8
3Mx8
M2.5x6
513
229
231
EVA.0599
T22-127

MECHANICAL PARTS CABINET CDV988

Pos	Code number	Descripton
S1	4822 276 11896	SWITCH PUSH PLAY
S2	4822 276 11896	SWITCH PUSH PAUSE
S3	4822 276 11896	SWITCH PUSH STOP
S4	4822 276 11896	SWITCH PUSH STANDBY
201	4822 426 51292	FRONT
203	4822 444 60573	DOOR
204	4822 410 26515	BUTTON POWER
206	4822 454 30409	PLATE ORNAMENT
207	4822 450 61229	WINDOW
209	4822 492 32794	SPRING
210	4822 218 20779	REMOTE CONTROL
211	4822 526 50099	PAWL
212	4822 325 60324	GROMMET
213	4822 502 30524	SCREW
214	4822 454 30387	PLATE
218	4822 492 32882	SPRING
219	4822 381 10998	LENS
223	4822 277 21237	RC-5 SWITCH
224	4822 410 26514	BUTTON
226	4822 444 60575	COVER
227	4822 402 61155	CLAMP
228	4822 402 61156	BRACKET
229	4822 321 22603	CINCH CABLE
231	4822 321 10457	MAINS CABLE /00R
231	4822 321 10522	MAINS CABLE /05R
B-1	4822 267 30639	MAINS CONNECTOR
B–2	4822 267 60172	SCART CONNECTOR
B–3	4822 267 50801	CINCH CONNECTOR
B–6	4822 267 40661	HEADPHONE CONNECTOR
1010	4822 209 72943	MODULATOR 6 MHZ /05R
1010	4822 214 51691	MODULATOR 5,5MHZ /00R
5010	4822 146 30641	STAND BY TRAFO

EXPLODED VIEW LOADING



PARTSLIST LOADING

Item	Code number	Description
101	4822 528 70506	
102	4822 522 32375	RIGHT BLACK
102	4822 522 32374	LEFT WHITE
103	4822 492 63788	
104	4822 492 63786	LEFT
105	4822 492 32506	
106	4822 402 61129	
107	4822 492 32867	SPRING
108	4822 492 32783	
111	4822 492 63791	
112	4822 532 51518	
113	4822 535 92392	
114	4822 535 92394	LEFT WHITE
116	4822 522 32372	LEFT WHITE
117	4822 402 30166	
118	4822 502 30505	M 1.6X10
119	4822 271 30597	DIFFERENTIAL SWITCH
121	4822 522 20388	
122	4822 492 63784	
123	4822 361 21025	TRAYTILT MOTOR
124	4822 522 32373	RIGHT BLACK
126	4822 535 92404	
127	4822 492 63823	
128	4822 528 60325	
129	4822 492 63787	
131	4822 361 21038	SPINDLE MOTOR.
132	4822 358 10116	
133	4822 361 21035	TURNTABLE MOTOR ASSY
134	4822 535 92395	RIGHT BLACK
136	4822 492 32781	
137	4822 402 61128	
138	4822 492 63785	RIGHT
139	4822 402 61125	

MECHANICAL PARTS CDM 6

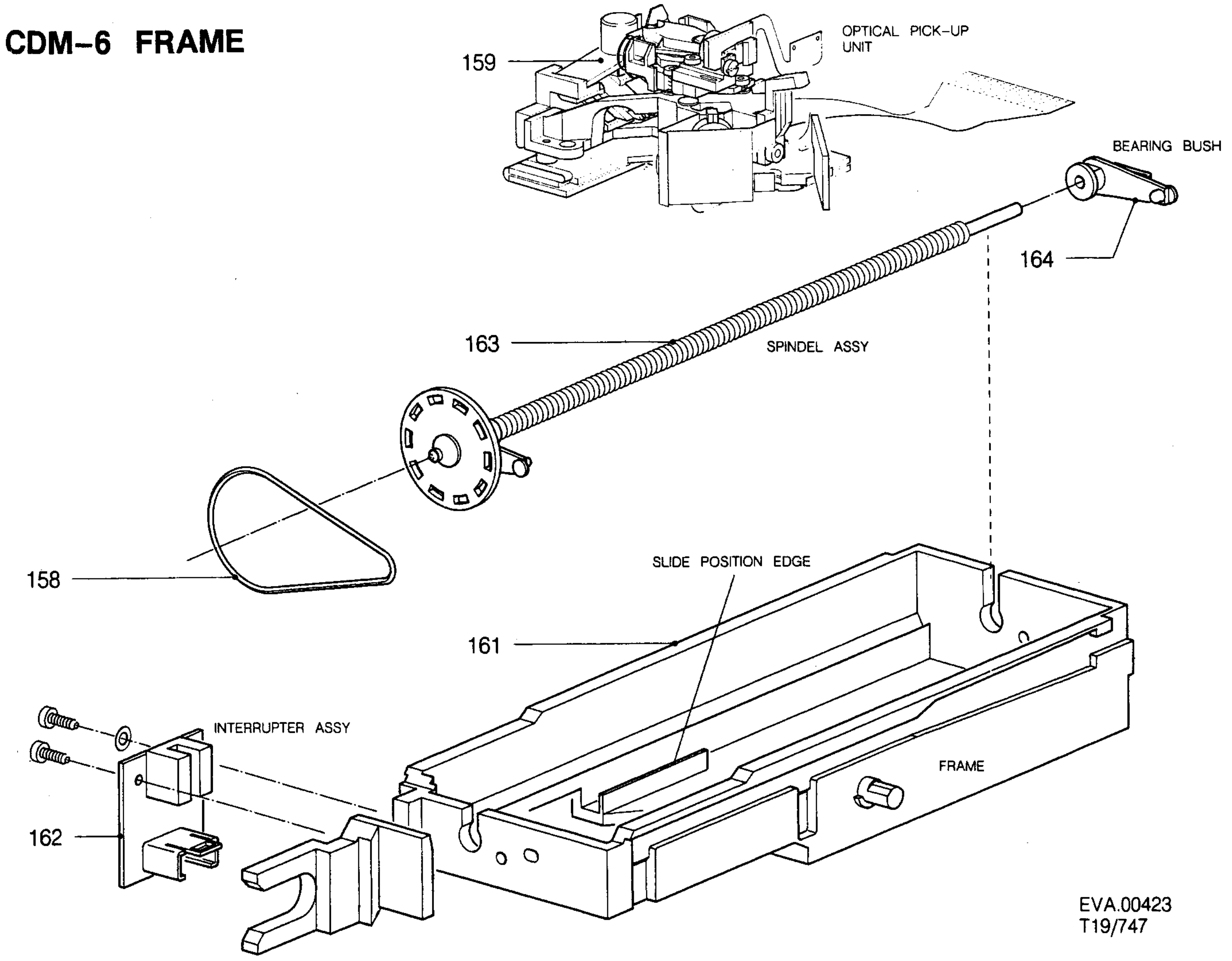
Item	Codenumber	
158	4822 358 10117	
161	4822 464 50686	
162	4822 214 51669	
163	4822 535 92409	
164	4822 520 30451	
159	4822 691 30195	158+161+162+163+164

Interrupterpanel

Various		
6001	4822 130 32114	GP-1S04
6002	4822 130 32114	GP-1S04

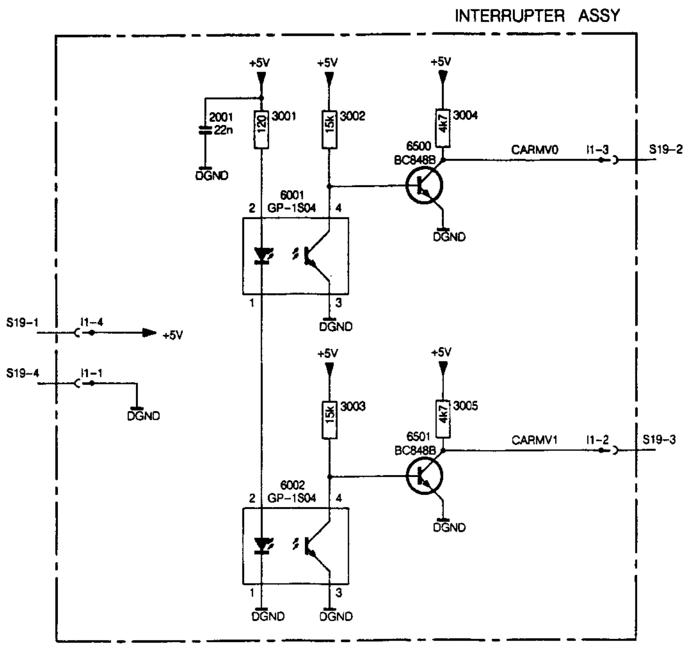
EXPLODED VIEW CDM

CDM-6 FRAME



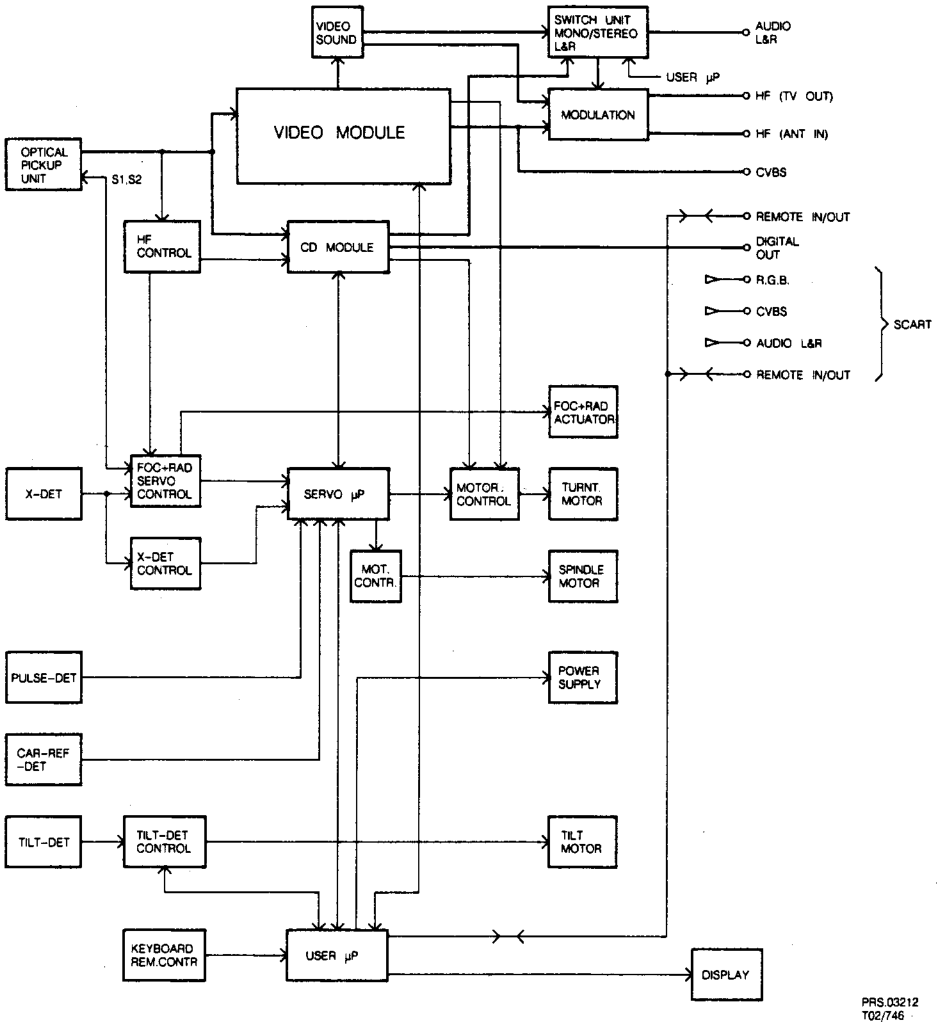
EVA.00423
T19/747

CIRCUIT DIAGRAM INTERRUPTER PANEL



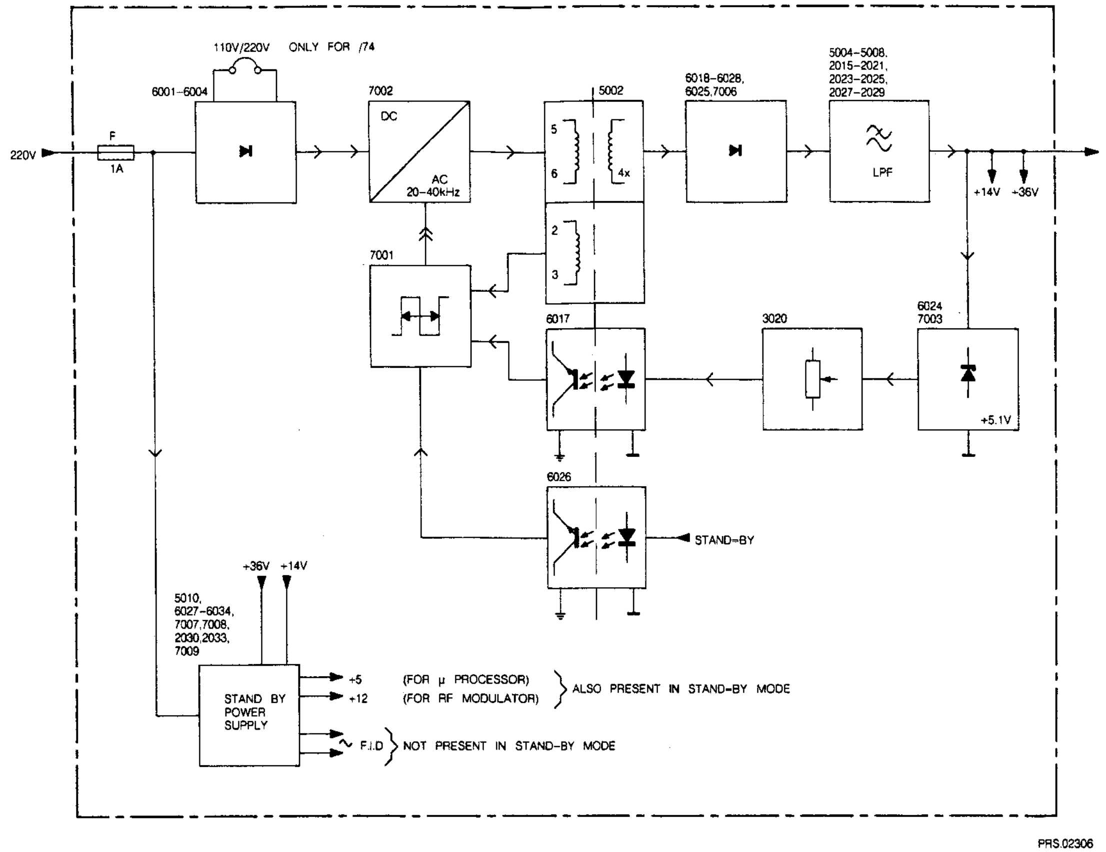
PRS.03955
T12 /811

7. OVERALL BLOCKDIAGRAM



8. POWER SUPPLY

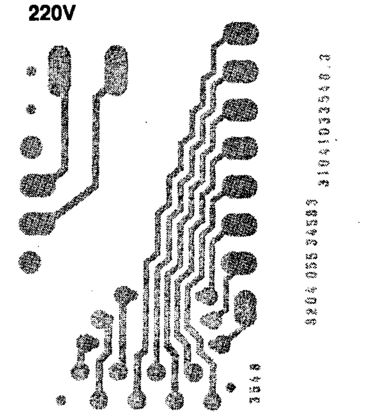
BLOCKDIAGRAM POWER SUPPLY



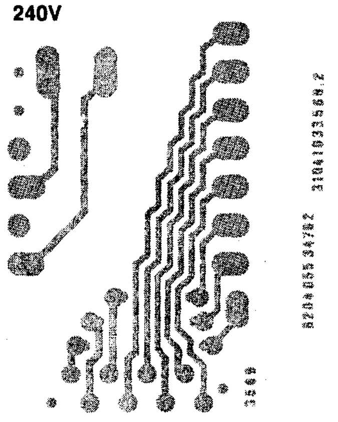
PRS.02306
T02/748

STANDBY TRANSFORMER PANEL

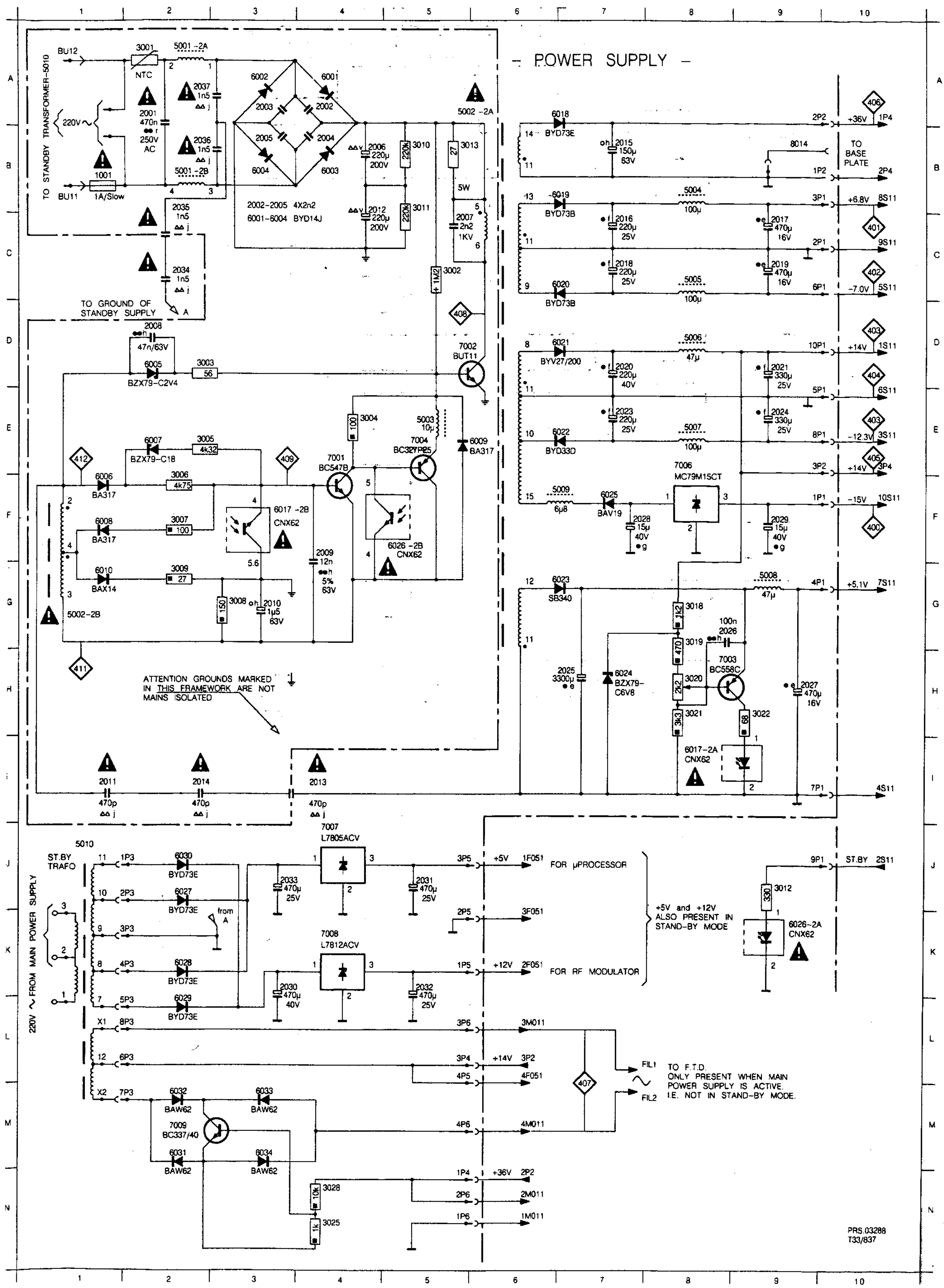
220V



240V



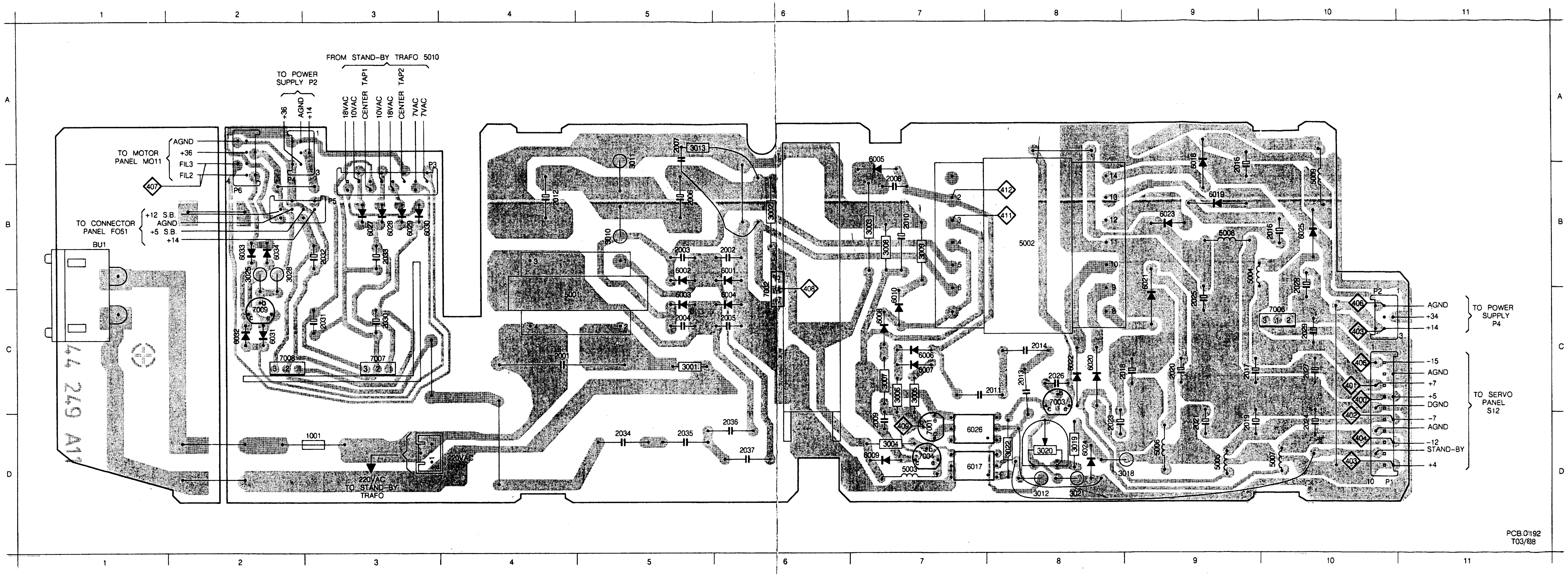
1001	B 1	2008	D 2	2016	C 7	2025	H 7	2033	J 3	3004	E 4	3012	J 9	3028	N 4	5006	D 8	6004	B 3	6017	I 8	6025	F 7	6032	M 2	7007	J 4
2001	A 2	2009	F 4	2017	C 9	2026	G 8	2034	C 2	3005	E 2	3013	B 6	5001	A 2	5007	E 8	6005	D 2	6018	A 7	6026	F 5	6033	M 3	7008	K 4
2002	A 4	2010	G 3	2018	C 7	2027	H 9	2035	B 2	3006	F 2	3018	G 8	5001	B 2	5008	G 9	6006	F 1	6019	B 7	6026	K 9	6034	M 3	7009	M 2
2003	A 3	2011	I 1	2019	C 9	2028	F 7	2036	B 2	3007	F 2	3019	G 8	5002	A 5	5009	F 7	6007	E 2	6020	C 7	6027	J 2	7001	E 4		
2004	B 4	2012	B 4	2020	D 7	2029	F 9	2037	A 2	3008	G 3	3020	H 8	5002	G 1	5010	J 1	6008	F 1	6021	D 7	6028	K 2	7002	D 5		
2005	B 3	2013	I 4	2021	D 9	2030	K 3	3001	A 2	3009	G 2	3021	H 8	5003	E 5	6001	A 4	6009	E 6	6022	E 7	6029	L 2	7003	H 8		
2006	B 4	2014	I 2	2023	E 7	2031	J 5	3002	C 5	3010	B 5	3022	H 9	5004	B 8	6002	A 3	6010	G 1	6023	G 7	6030	J 2	7004	E 5		
2007	C 5	2015	B 7	2024	E 9	2032	K 5	3003	D 2	3011	B 5	3025	N 4	5005	C 8	6003	B 4	6017	F 3	6024	H 7	6031	M 2	7006	E 8		



PRINT LAY-OUT

1001	D 3	2004	C 5	2008	B 7	2012	B 4	2016	B 9	2020	C 9	2025	C 9	2029	C10	2033	B 3	2037	D 6	3004	D 7	3008	B 7	3012	D 8	3020	D 8
2001	C 4	2005	C 6	2009	D 7	2013	C 8	2017	C 9	2021	D 9	2026	C 8	2030	C 3	2034	D 5	3001	C 5	3005	C 7	3009	B 7	3013	A 5	3021	D 8
2002	B 6	2006	B 5	2010	B 7	2014	C 8	2018	C 8	2023	D 8	2027	C10	2031	C 3	2035	D 5	3002	B 6	3006	C 7	3010	B 5	3018	D 9	3022	D 8
2003	B 5	2007	A 5	2011	C 8	2016	B10	2019	D 9	2024	D10	2028	B10	2032	B 3	2036	D 6	3003	B 7	3007	C 7	3011	A 5	3019	D 8	3025	B 2

3028	B 2	5004	B 9	5008	B 9	6003	C 5	6007	C 7	6017	D 7	6021	B 9	6025	B10	6029	B 3	6033	B 2	7003	C 8	7008	C 2	P2	C10	P6	B 2
5001	C 4	5005	D 9	5009	B10	6004	C 6	6008	C 7	6018	A 9	6022	C 8	6026	D 7	6030	B 3	6034	B 2	7004	D 7	7009	C 2	P3	B 4		
5002	B 8	5006	D 9	6001	B 6	6005	A 7	6009	D 7	6019	B 9	6023	B 9	6027	B 3	6031	C 2	7001	D 7	7006	C10	BU1	B 1	P4	B 2		
5003	D 7	5007	D10	6002	B 5	6006	C 7	6010	C 7	6020	C 8	6024	D 8	6028	B 3	6032	C 2	7002	B 6	7007	C 3	P1	D10	P5	B 3		



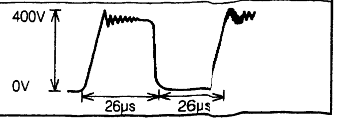
MEASUREMENTS & ADJUSTMENTS

FAULT FINDING POWER SUPPLY

2010	SHORT CIRCUITED	OSCILLATOR DOES NOT START UP
	INTERRUPTED	HIGH TONE
5002 SEC.WINDING	SHORT CIRCUITED	OSCILLATOR DOES NOT START UP
6026	PRIM/SEC INTERRUPTED	OSCILLATOR START UP
	PRIM/SEC SHORT CIRCUIT	OSCILLATOR START UP
6024	SHORT CIRCUITED	OSCILLATOR START UP
7003	CE SHORT CIRCUITED	OSCILLATOR START UP
6018–6023	SHORT CIRCUITED	OSCILLATOR DOES NOT START UP
7001 OR 6009	SHORT CIRCUITED	OSCILLATOR DOES NOT START UP
6005 OR 2008	SHORT CIRCUITED	OSCILLATOR DOES NOT START UP
6007 OR 6008	SHORT CIRCUITED	OSCILLATOR START UP

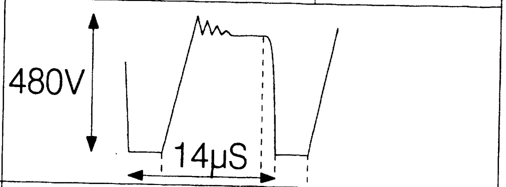
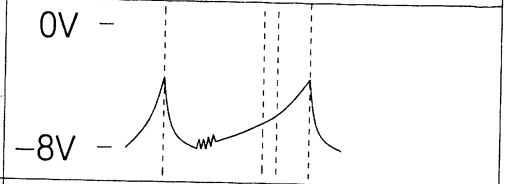
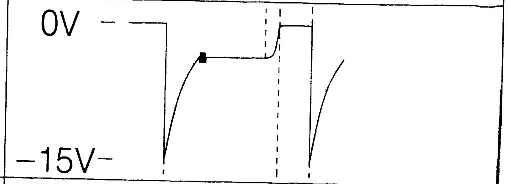
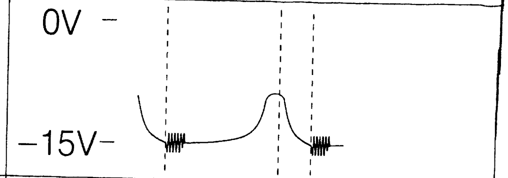
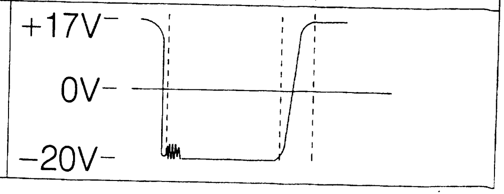
MDA.01559
T28/837

SERVICING HINTS POWER SUPPLY

STEP	COMPONENT	MODE	
1		POWER SUPPLY OPERATES ONLY WITH SECUNDARY LOAD!	
2	SECUNDARY LOAD	CHECK FOR SHORT CIRCUIT SECUNDARY SIDE 5002	
3	7001	INTERRUPT BASIS	
4		MAINS INPUT 80V AC VIA VARIAC	
5	C–7002 408	OSCILLATOR START UP	

MDA.01558
T28/837

MEASUREMENTS & ADJUSTMENTS

STEP	SIGNAL	MODE	◇				REMARKS
1	+5	"ON"	400	3020	5.1V ± 0.025V		
	+6.8	"ON"	401		+6.77 ± 0.10		
	−7.0	"ON"	402		−6.99 ± 0.10		
	+1.4	"ON"	403		+13.97 ± 0.15		
	−12.3	"ON"	404		+12.33 ± 0.15		
	−15	"ON"	405		−15.0 ± 0.75		
	+36	"ON"	406		+36.14 ± 0.40		
	+5.4AE	"ON"	407		+5.3 ± 0.30AC		
	UCE 7002	"ON"	408				
	UB 7001		409				
	UB 7002		410				
	3−5002		411				
	2−5002		412				

MDA.01561
T07−837

POWERSUPPLY 3122 137 21170

1001	4822 253 30021	FUSE 1.0 A SLOW

2001	4822 121 50627	POLCAP 250V 470NPM10
2006	4822 124 22354	ELCAP 200V 220MPM20
2007	4822 122 32071	1KV 2N2 PM10
2009	4822 121 51165	12N PM5
2011	4822 122 33284	470P PM20
2012	4822 124 22354	ELCAP 200V 220MPM20
2013	4822 122 33284	470P PM20
2014	4822 122 33284	470P PM20
2025	4822 124 22352	ELCAP 16V 3300 µF PM20

3001	4822 116 30069	NTC 82R/25PQPM20
3005	4822 116 80507	4K32 PM1
3006	4822 116 80507	4K75 PM1
3010	5322 116 60459	220K PM5
3011	5322 116 60459	220K PM5

Various

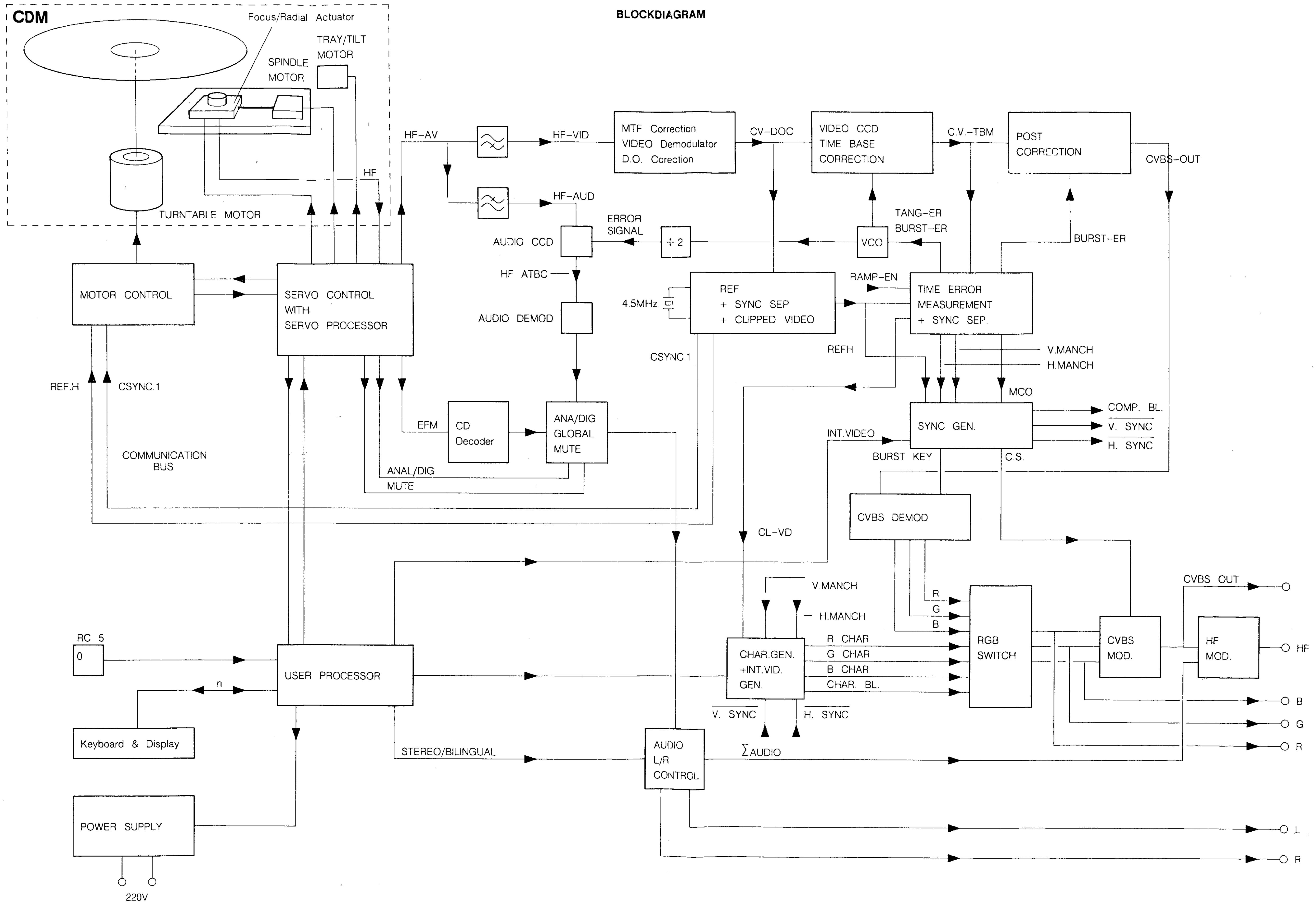
5001	4822 142 40315	MAINS FILTER
5002	4822 146 30617	TRANSFORMER
5010	4822 146 30641	STANDBY TRAFO

4822 130 80229	BYD14J
4822 130 30847	BA317
4822 130 34193	BAX 14
4822 130 60779	BYD73E
4822 130 60778	BYD73B
4822 130 42488	BYD33D
4822 130 32715	SB 340
4822 130 30967	BAV19
4822 130 31253	BZX79-C2V4
4822 130 31024	BZX79-C18
4822 130 34278	BZX79-C6V8

4822 130 40959	BC547B
4822 130 42229	BUT11
5322 130 60068	BC558C
4822 130 41246	BC327-25
4822 130 41344	BC337-40

5322 209 86361	MC79M15CT
4822 209 72743	L7805
4822 209 72742	L7812
4822 130 90121	CNX62

BLOCKDIAGRAM



Block diagram
CDV combi player

MDA.00908
T28/801

MEASUREMENTS & ADJUSTMENTS VIDEO I-4

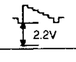
MEASUREMENTS & ADJUSTMENTS VIDEO & MTF

STEP	SIGNAL	MODE	◇	↗	⊡	▣	REMARKS
1	HF IN	STOP	100	5106		MIN AMPLITUDE	DISCONNECTED V24 INJECT 875kHz ≈80m Vpp IN 2V24
2	MTF 8MHz ADJ	STOP	101	5107		MAX. AMPLITUDE	DISCONNECTED V24 INJECT 8kHz ≈40m Vpp IN 2V24
3	AUDIO 2.8MHz SUPPRESSION	STOP	102	5102		MIN AMPLITUDE	DISCONNECTED V24 INJECT 2.8kHz ≈40mVpp
4	MTF GAIN	VIDEO TEST DISC PICT NR 515 STILL PICTURE	103	3145		SEE DRAWING MDA 01556	ADJUST FOR MULTI BURST I MULTI BURST VI

MEASUREMENTS & ADJUSTMENTS DROP-OUT CIRCUIT

STEP	SIGNAL	MODE	◇	↗	⊡	▣	REMARKS
1	FREQUENCY	STOP	109	5105	FREQUENCY COUNTER 13.3MHz		COARSE
2	DELAY-TIME	VIDEO TEST DISC PICT NBR 10800	A=103 B=111	5105		A CHANNEL B CHANNEL	FINE ADJUST DELAY TIME BETWEEN EA AND B FOR 64μ s
3	AMPLITUDE DELAYED VIDEO	VIDEO TEST DISC PICT NR 10800	A=103 B=111	3131		A CHANNEL B CHANNEL	ADJUSTMENT THE AMPLITUDE TO BE EQUAL FOR A AND B

MEASUREMENTS & ADJUSTMENTS VIDEO

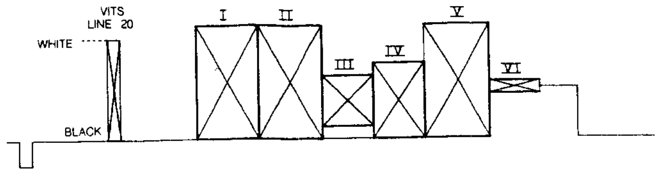
STEP	SIGNAL	MODE	◇	↗	⊡	▣	REMARKS
1	DC-LEVEL	VIDEO TEST DISC PICT NBR 6000 STILL PICTURE	104	3210		2.2V	
2	VIDEO AMPLITUDE	VIDEO TEST DISC PICT NBR 6000 STILL PICTURE	106	3152		U=1.2Vpp	
3	VIDEO AMPLITUDE	VIDEO TEST DISC PICT NBR 6000 STILL PICTURE	107			U=1.85Vpp-2Vpp	
4	VIDEO AMPLITUDE	VIDEO TEST DISC PICT NBR 6000 STILL PICTURE	108			U=2.7Vpp-3Vpp	

MEASURUMENTS & ADJUSTMENTS TIME-BASE CONTROL

STEP	SIGNAL	MODE	◇	↗	⊡	▣	REMARKS
1	FREQUENCY	STOP	112	2313	FREQUENCY COUNTER		AFTER 2 MINUTES WARMING UP 15 625,024- 15 624,975Hz
2	VCO	STOP 9-7006 GROUNDED TO EARTH	103 104	3234		A- CHANNEL B- CHANNEL	DELAY TIME BETWEEM A AND B ±70μ s
3	SPECIAL BURST SUPPRESSION	VIDEO TEST DISC PICR NBR 750	114 116	5113		TRIGGER SIGNAL 116	MIN. AMPLITUDE OF THE SPECIAL BURST
4	SPECIAL BURST AMPLITUDE	VIDEO TEST DISC PLAY	117	5401			MAX AMPLITUDE OP SPECIAL BURST
5	BURST ERROR	VIDEO TEST DISC PICR NBR 170 STILL PICTURE		2369			MIN STRIPES IN RED PICTURE ON TV SREEN
	BURSTKEY	PLAY	118			8.5V ±1V	
	C SYNC	PLAY	116			5V±1V	
	H MANCH	PLAY	119			5V+250mV -500mV	15625Hz ± 1kHz
	V MANCH	PLAY	121			5V+250mV -500mV	50Hz ± 5Hz
	MCO	PLAY	122			10V±1.5V	DUTY CYCLE 32μ s ± 8μs

MDA 01555
T02-837

MULTI BURST



1/4 FRAME CVBS PICT. NBR. 515 FRAME FREQ.

MDA.1556
T02/837

PARTSLIST VIDEO I-4

1001	4822 242 70361	X-TAL 4.5 MHZ

	4822 122 33325	CHIP 470N 16V
	4822 122 10166	TUBULAR 22N 16V
	4822 122 33142	POLYESTER 6P8
	4822 122 33141	POLYESTER 3P3
	4822 122 32148	POLYESTER 5P6
	4822 125 50062	TRIMMING CAPACITOR 10PF
	5322 122 32933	1NF 5%NP0 50V
	4822 122 32891	POLYESTER 68N 50V

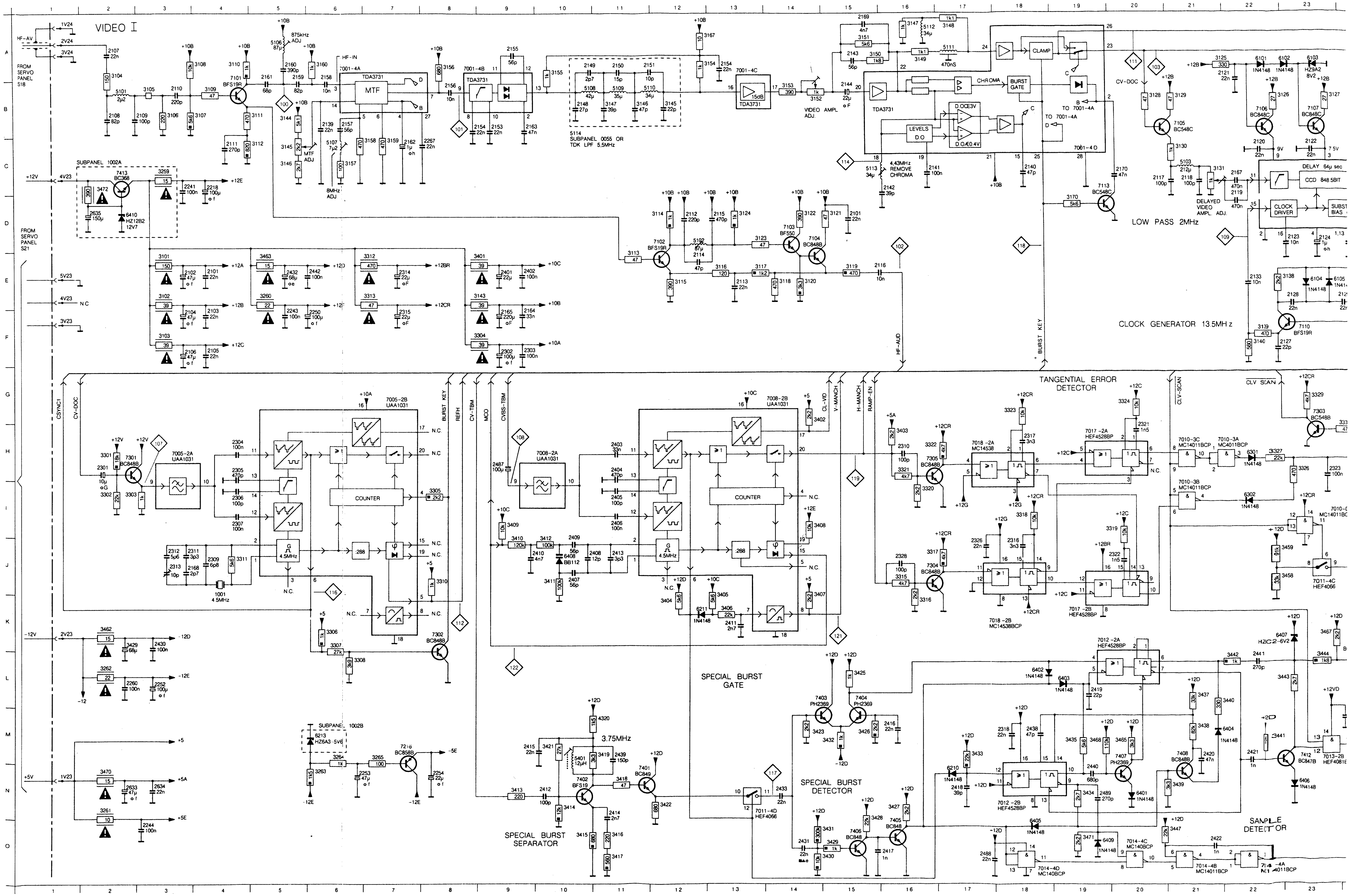
	4822 111 30517	SAFETY RESISTOR 22E
	4822 111 30508	SAFETY RESISTOR 10E
	4822 111 30526	SAFETY RESISTOR 47E
	4822 111 30513	SAFETY RESISTOR 15E
	4822 111 30524	SAFETY RESISTOR 39E
3131	4822 100 11214	TRIMMING POTENTIOMETER 1K
3145	5322 101 14008	TRIMMING POTENTIOMETER 2K2
3152	4822 100 10254	TRIMMING POTENTIOMETER 1K
3210	4822 100 11214	TRIMMING POTENTIOMETER 1K
3234	4822 101 10859	TRIMMING POTENTIOMETER 10K
3269	4822 100 11214	TRIMMING POTENTIOMETER 1K

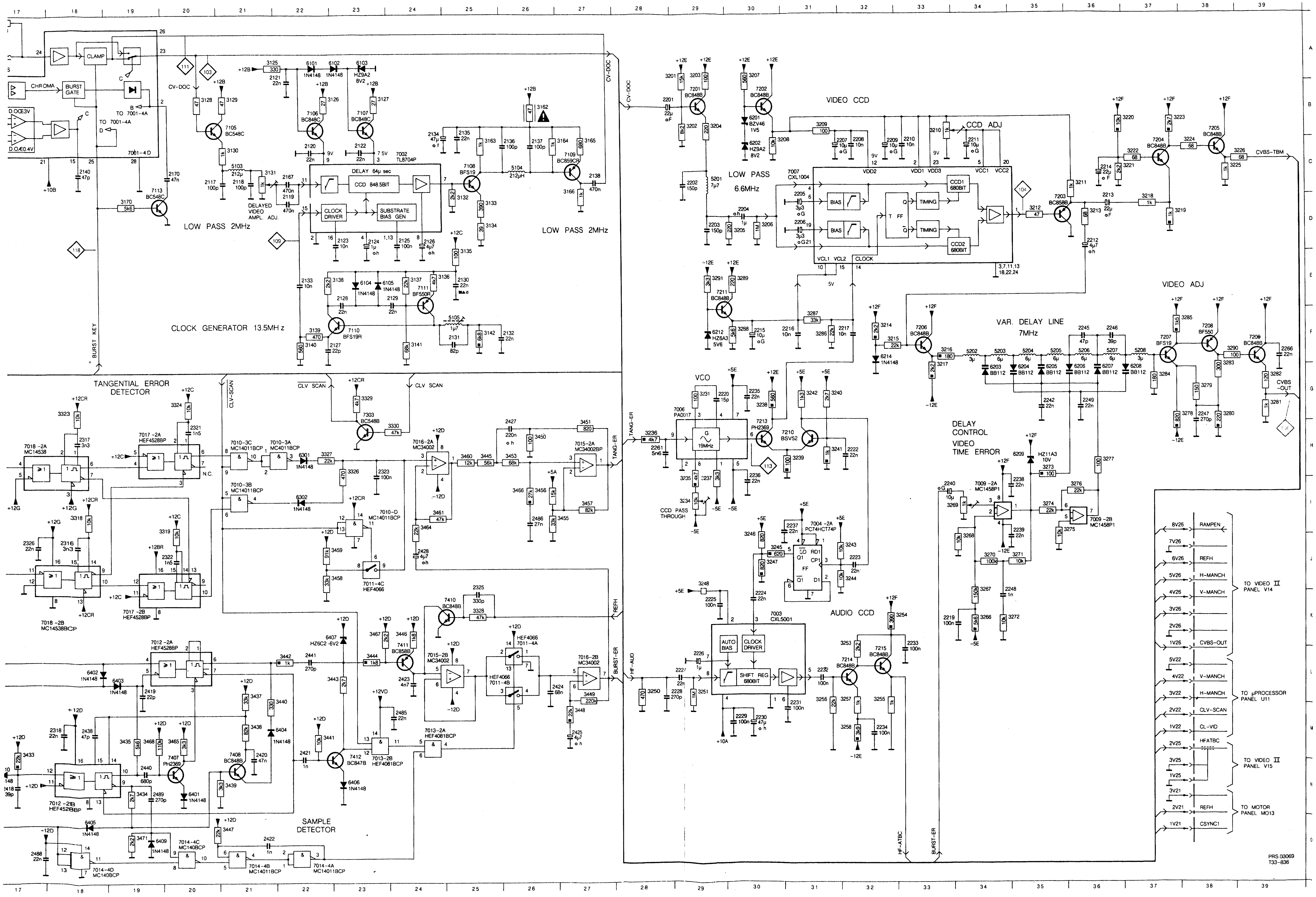
5101	4822 157 53266	COIL 3μH
5102	4822 156 10994	COIL 87μH
5103	4822 156 11007	COIL 212μH
5104	4822 156 11007	COIL 212μH
5105	4822 156 10997	COIL 1.7μH
5106	4822 156 21054	COIL 87μH
5107	4822 156 21147	COIL 7.2μH
5112	4822 156 21026	COIL 34 μH
5113	4822 156 21026	COIL 34 μH
5201	4822 156 11002	COIL 7.7μH
5202	4822 156 10998	COIL 3 μH
5203	4822 156 11001	COIL 6 μH
5204	4822 156 11001	COIL 6 μH
5205	4822 156 11001	COIL 6 μH
5206	4822 156 11001	COIL 6 μH
5207	4822 156 11001	COIL 6 μH
5208	4822 156 10998	COIL 3 μH
5401	4822 156 11003	COIL 12μH
5111	4822 320 40081	DELAY LINE 470 NSEC
5114	4822 157 53267	LOWPASSFILTER 5.5MH

	4822 130 30621	1N4148
	4822 130 32227	BB112

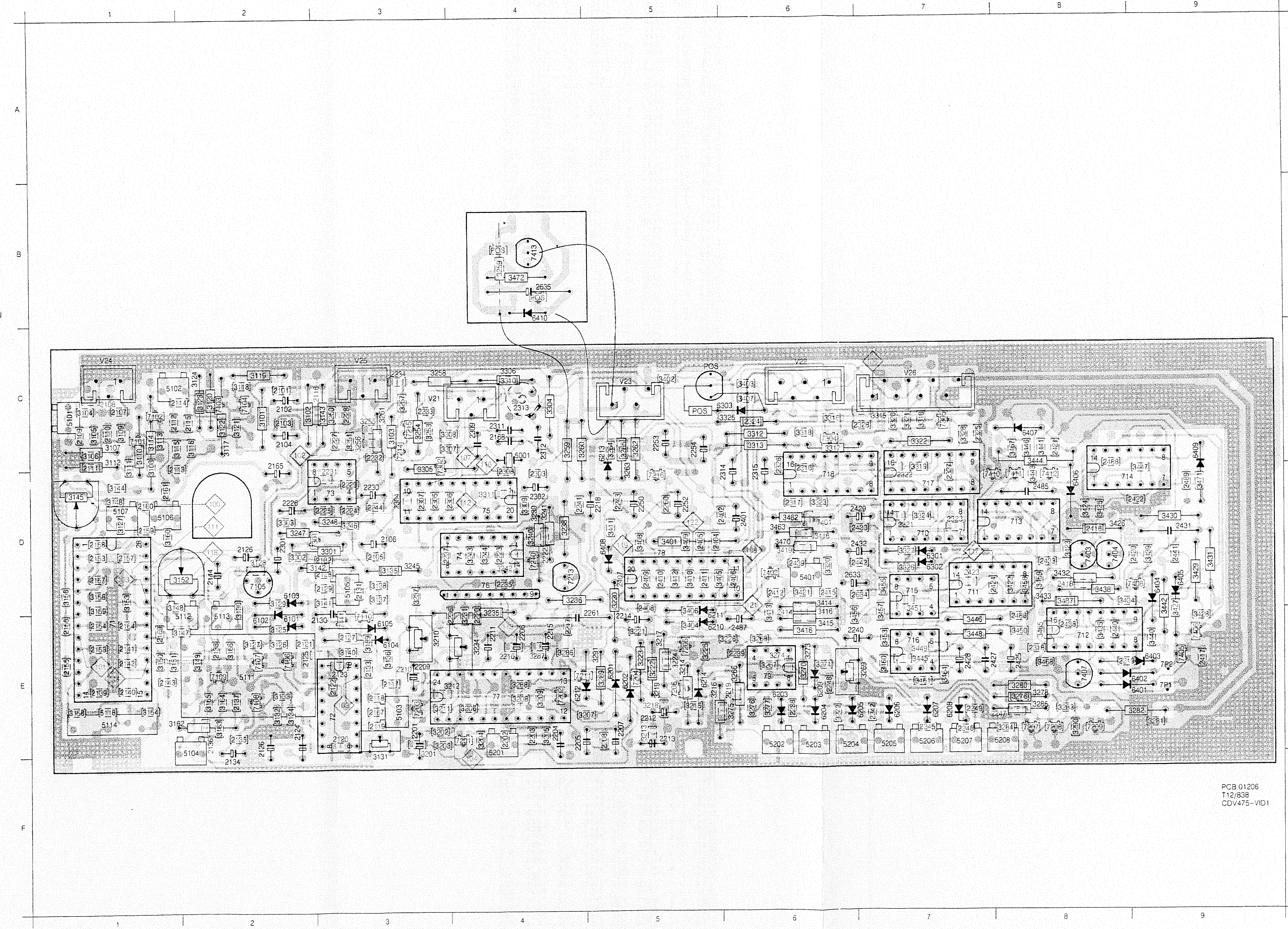
6101	4822 130 33294	HZ9A2 8V2
6201	5322 130 34865	BZV46 1V5
6202	4822 130 33294	HZ9A2 8V2
6209	4822 130 32566	HZ11A3 10V0
6212	4822 130 32697	HZ6A3 5V6
6213	4822 130 32697	HZ6A3 5V6
6407	4822 130 32698	HZ6C2 6V2
6410	5322 130 32026	HZ12B2
7001	4822 209 72757	IC TDA3731/N1
7002	4822 209 11412	TL8704P
7003	4822 209 71275	CXL5001
7004	5322 209 82575	PC74HC74P
7005	4822 209 71316	UAA1031
7006	4822 209 71825	PA0017
7007	4822 209 71276	CXL1004
7008	4822 209 71316	UAA1031
7009	4822 209 81349	MC1458P1 (MTLA)
7010	4822 209 10247	MC14011BCP
7011	5322 209 10357	HEF4066BP
7012	4822 209 10866	HEF4428BP
7013	4822 209 10053	MC14081BCP
7014	4822 209 10247	MC14011BCP
7015	4822 209 71382	MC34002BP
7016	4822 209 71382	MC34002BP
7017	4822 209 10866	HEF4428BP
7018	4822 209 81091	MC14538BCP

	4822 130 42353	BFS19
	4822 130 42131	BF550
	5322 130 41982	BC848B
	4822 130 44196	BC548C
	4822 130 60516	BC859C
	4822 130 42513	BC858C
	5322 130 44336	BSV52
	5322 130 41983	BC858B
	4822 130 40938	BC548
	4822 130 42711	BC849B
	4822 130 41594	PH2369
	4822 130 60511	BC847B
	5322 130 44647	BC368


VIDEO I
HF-AV
FROM SERVO PANEL S18
FROM SERVO PANEL S21
SUBPANEL 1002A
SUBPANEL 1002B
HF-IN
7001-4A TDA3731 MTF
7001-4B TDA3731
7001-4C TDA3731
5114 SUBPANEL 0055 OR TDK LPF 5.5MHz
VIDEO AMPL. ADJ.
875kHz ADJ
MTF ADJ
8MHz ADJ
CHROMA
BURST GATE
CLAMP
LEVELS D.O
D.OCE3V
D.OÆ0.4V
TO 7001-4A
4,43MHz REMOVE CHROMA
CV-DOC
DELAYED VIDEO AMPL. ADJ.
DELAY 64μ sec
CCD 848.5BIT
CLOCK DRIVER
LOW PASS 2MHz
CLOCK GENERATOR 13.5MHz
HF-AUD
BURST KEY
TANGENTIAL ERROR DETECTOR
CLV SCAN
CLV-SCAN
CSYNC1
CV-DOC
REFH
CV-TBM
MCO
CVBS-TBM
CL-VID
V-MANCH
H-MANCH
RAMP-EN
7005-2B UAA1031
7005-2A UAA1031
7008-2B UAA1031
7008-2A UAA1031
COUNTER
4.5MHz
:288
1001 4.5MHz
SPECIAL BURST GATE
SPECIAL BURST SEPARATOR
3.75MHz
SPECIAL BURST DETECTOR
7018-2A MC14538
7018-2B MC14538BCP
7017-2A HEF4528BP
7017-2B HEF4528BP
7010-3C MC14011BCP
7010-3A MC4011BCP
7010-3B MC14011BCP
7011-4C HEF4066
7011-4D HEF4066
7012-2A HEF4528BP
7012-2B HEF4528BP
7013-2B HEF4081B
7014-4C MC140BCP
7014-4D MC140BCP
7014-4B MC14011BCP
SAMPLE DETECTOR
+12V
-12V
+5V
+10B
+12A
+12B
+12BR
+12CR
+10C
+10A
+12C
-12D
-12E
+5A
+5E
-5E


CLAMP
CHROMA
BURST GATE
TO 7001-4A
7001-4D
CV-DOC
LOW PASS 2MHz
DELAYED VIDEO AMPL. ADJ.
DELAY 64μ sec
CCD 848 5BIT
CLOCK DRIVER
SUBSTRATE BIAS GEN
7002 TL8704P
CLOCK GENERATOR 13.5MHz
BURST KEY
VIDEO CCD
CCD ADJ
LOW PASS 6.6MHz
7007 CXL1004
BIAS
TIMING
CCD1 680BIT
CCD2 680BIT
VDD2 VDD1 VDD3 VCC1 VCC2
VCL1 VCL2 CLOCK
CVBS-TBM
VIDEO ADJ
VAR. DELAY LINE 7MHz
CVBS-OUT
TANGENTIAL ERROR DETECTOR
7018-2A MC14538
7017-2A HEF4528BP
7010-3C MC14011BCP
7010-3A MC4011BCP
7010-3B MC14011BCP
7010-D MC14011BCP
7011-4C HEF4066
7018-2B MC14538BCP
7017-2B HEF4528BP
CLV SCAN
CLV-SCAN
7016-2A MC34002
7015-2A MC34002BP
TANG-ER
REFH
VCO
7006 PA0017
19MHz
CCD PASS THROUGH
DELAY CONTROL
VIDEO TIME ERROR
7009-2A MC1458P1
7009-2B MC1458P1
7012-2A HEF4528BP
7012-2B HEF4528BP
7015-2B MC34002
HEF4066 7011-4A
HEF4066 7011-4B
7016-2B MC34002
7013-2A HEF4081BCP
7013-2B HEF4081BCP
SAMPLE DETECTOR
7014-4C MC140BCP
7014-4D MC140BCP
7014-4B MC14011BCP
7014-4A MC14011BCP
BURST-ER
HF-AUD
HF-ATBC
7004-2A PC74HCT74P
AUDIO CCD
7003 CXL5001
AUTO BIAS
CLOCK DRIVER
SHIFT REG 680BIT
8V26 RAMPEN
7V26
6V26 REFH
5V26 H-MANCH
4V26 V-MANCH
3V26
2V26
1V26 CVBS-OUT
TO VIDEO II PANEL V14
5V22
4V22 V-MANCH
3V22 H-MANCH
2V22 CLV-SCAN
1V22 CL-VID
2V25 HFATBC
3V25
1V25
TO μPROCESSOR PANEL U11
TO VIDEO II PANEL V15
3V21
2V21 REFH
1V21 CSYNC1
TO MOTOR PANEL MO13
PRS 03069
T33-836

PRINT LAY-OUT COMP-SIDE VIDEO I-4



2101	C 2	2244	D 3	3126	E 2	3272	E 6	3459	D 8	7301	D 2
2102	C 2	2245	E 7	3127	D 1	3273	E 6	3460	E 7	7302	C 3
2103	C 2	2246	E 7	3127	E 2	3274	E 6	3461	E 7	7304	C 6
2104	C 2	2247	E 7	3128	D 2	3275	E 5	3462	D 6	7305	C 7
2105	D 3	2248	E 6	3129	D 2	3276	E 6	3463	D 6	74	D 3
2106	D 3	2249	E 7	3130	D 2	3276	E 8	3464	E 7	7401	D 6
2107	C 1	2250	D 5	3131	E 3	3277	E 6	3465	E 8	7402	D 6
2108	C 1	2252	D 5	3132	E 2	3278	E 8	3467	C 8	7403	D 8
2109	C 1	2253	C 5	3133	E 2	3280	E 8	3468	E 8	7404	D 8
2110	C 1	2254	C 5	3134	E 2	3281	E 9	3470	D 6	7405	E 9
2111	C 1	2260	D 5	3135	D 3	3282	E 8	3471	D 9	7406	E 9
2112	C 1	2261	D 4	3136	E 3	3283	E 8	3472	B 4	7407	E 8
2113	C 1	2301	D 2	3137	D 3	3284	E 8	5001	C 4	7408	D 8
2114	C 1	2302	D 4	3138	D 3	3285	E 8	5101	C 1	7410	D 7
2115	C 1	2303	D 4	3139	E 3	3286	E 4	5102	C 1	7411	D 8
2116	C 2	2304	D 3	3140	E 3	3287	E 4	5103	E 3	7412	D 8
2117	E 3	2305	D 3	3141	D 3	3288	E 4	5104	E 2	7413	B 4
2118	E 3	2306	D 3	3142	D 2	3289	E 5	5105	D 3	75	D 4
2119	E 3	2307	D 3	3143	C 2	3290	E 8	5106	D 1	76	D 4
2120	E 3	2308	C 4	3144	D 1	3291	E 4	5107	D 1	77	E 4
2121	E 2	2309	C 4	3145	D 1	3301	D 3	5111	E 2	78	D 5
2122	E 3	2311	C 4	3147	E 1	3302	D 2	5112	D 1	79	E 6
2123	E 3	2312	C 4	3148	D 1	3303	D 2	5113	D 2	7P1	E 9
2124	E 2	2313	C 4	3148	D 1	3304	C 4	5114	E 1	7P2	E 9
2125	E 2	2314	C 5	3149	E 2	3305	C 3	5118	E 1	POS	C 5
2126	D 2	2315	C 6	3150	E 1	3306	C 4	5201	E 4	POS	C 5
2126	E 2	2316	C 6	3151	E 1	3307	C 3	5202	E 6	POS	B 4
2127	E 3	2317	D 6	3152	D 1	3308	C 3	5203	E 6	POS	B 4
2128	D 3	2318	E 8	3153	D 1	3309	D 4	5204	E 6	V21	C 3
2129	D 3	2321	D 7	3154	E 1	3310	C 4	5205	E 7	V22	C 6
2130	E 2	2322	D 7	3156	D 1	3310	C 7	5206	E 7	V23	C 5
2131	D 3	2323	D 7	3158	D 1	3311	D 4	5207	E 7	V24	C 1
2132	D 3	2324	C 6	3158	E 1	3312	C 6	5208	E 8	V25	C 3
2133	E 3	2325	C 7	3159	D 1	3313	C 6	5401	D 6	V26	C 7
2134	F 2	2326	C 6	3160	D 1	3315	C 7	6101	E 2		
2135	E 2	2327	D 7	3162	E 1	3316	C 6	6102	E 2		
2136	E 2	2328	C 6	3163	E 2	3317	C 6	6103	D 2		
2137	E 2	2401	D 6	3164	E 2	3318	C 6	6104	E 3		
2138	E 2	2402	D 5	3165	E 2	3319	C 7	6105	E 3		
2139	E 1	2404	D 5	3166	E 2	3320	C 7	6201	E 5		
2140	E 1	2405	D 5	3201	E 3	3320	D 6	6202	E 5		
2141	E 1	2406	D 6	3202	E 3	3321	C 7	6203	E 6		
2142	E 1	2407	D 5	3203	E 3	3322	C 7	6204	E 6		
2143	E 1	2408	D 5	3204	E 4	3323	D 6	6205	E 6		
2144	D 2	2409	D 5	3205	E 4	3324	D 7	6206	E 7		
2153	D 1	2410	D 5	3206	E 4	3325	C 5	6207	E 7		
2153	E 1	2411	D 5	3207	E 4	3326	D 7	6208	E 7		
2154	E 1	2412	D 6	3208	E 4	3327	D 7	6209	E 6		
2155	E 1	2414	E 6	3209	E 4	3328	C 7	6210	E 5		
2156	E 1	2415	D 6	3210	E 3	3401	D 5	6211	E 5		
2157	D 1	2416	D 8	3211	E 3	3402	C 5	6212	E 4		
2157	D 1	2417	E 9	3212	E 3	3403	C 6	6213	C 5		
2158	D 1	2418	D 8	3213	E 5	3404	E 5	6214	E 5		
2159	D 1	2420	D 8	3214	E 5	3405	D 5	6301	D 7		
2160	D 1	2421	C 8	3215	E 5	3406	D 5	6302	D 7		
2161	D 1	2422	D 8	3216	E 5	3407	C 6	6303	C 5		
2164	E 1	2423	D 7	3217	E 5	3408	D 5	6401	E 9		
2165	C 2	2424	D 7	3218	E 5	3409	D 5	6402	E 9		
2167	E 3	2425	E 8	3219	E 5	3410	D 5	6403	E 9		
2168	C 4	2427	E 7	3220	D 5	3411	D 5	6404	D 9		
2169	E 1	2428	E 7	3221	E 5	3412	D 5	6405	D 9		
2201	E 3	2429	D 6	3222	E 5	3413	D 6	6406	D 8		
2202	E 4	2430	D 6	3223	E 5	3414	D 6	6407	C 8		
2203	E 4	2431	D 9	3224	E 5	3415	E 6	6408	D 5		
2204	E 4	2432	D 6	3225	E 5	3416	E 6	6409	C 9		
2205	E 4	2433	D 8	3226	E 5	3416	E 6	6410	B 4		
2206	E 4	2438	E 8	3231	D 4	3418	D 6	71	D 1		
2207	E 5	2439	D 6	3234	E 4	3419	D 6	710	D 7		
2208	E 5	2440	E 8	3235	D 4	3421	D 6	7101	C 1		
2209	E 3	2441	D 9	3236	D 4	3422	D 8	7102	C 1		
2210	E 3	2442	D 6	3237	D 3	3423	D 8	7103	C 2		
2211	E 4	2485	D 8	3238	D 4	3424	D 8	7104	C 2		
2212	E 5	2486	E 8	3239	D 4	3425	D 8	7105	D 2		
2213	E 5	2487	E 6	3240	D 4	3426	D 8	7106	E 2		
2214	E 5	2488	C 8	3241	D 4	3427	D 9	7107	E 2		
2215	E 4	2489	D 9	3242	D 4	3428	E 9	7108	E 2		
2216	E 4	2633	D 6	3243	D 4	3429	D 9	7109	E 2		
2217	E 4	2634	D 6	3244	D 4	3430	D 9	711	D 7		
2218	D 5	2635	B 4	3245	D 3	3431	D 9	7110	D 3		
2219	E 5	3101	C 2	3246	D 3	3432	D 8	7111	E 3		
2219	E 8	3102	C 2	3247	D 2	3433	D 8	712	E 8		
2220	D 4	3103	C 3	3248	D 3	3434	D 8	713	D 8		
2222	D 4	3104	C 1	3250	C 3	3435	E 8	714	D 8		
2223	D 4	3105	C 1	3251	C 3	3437	D 8	715	D 7		
2224	D 3	3106	C 1	3253	C 3	3438	D 8	716	E 7		
2225	D 3	3107	C 1	3254	C 3	3439	D 9	717	D 7		
2226	D 2	3108	C 1	3255	C 3	3440	E 9	718	D 6		
2227	C 3	3109	C 1	3256	C 3	3441	C 8	72	E 3		
2228	C 3	3110	C 1	3257	C 3	3442	D 9	7201	E 4		
2229	D 3	3111	C 1	3258	C 3	3443	D 8	7202	E 4		
2230	D 3	3112	C 1	3259	C 4	3444	C 8	7203	E 3		
2231	C 3	3113	C 1	3259	B 4	3445	E 7	7204	E 5		
2232	C 3	3114	C 1	3260	C 4	3446	E 7	7205	E 5		
2233	C 3	3115	C 1	3261	C 3	3446	C 8	7206	E 5		
2234	C 3	3116	C 2	3262	C 5	3447	D 9	7207	E 8		
2235	D 4	3117	C 2	3263	C 5	3448	E 7	7208	E 8		
2236	D 3	3118	C 2	3264	C 5	3449	E 7	7209	E 8		
2237	D 3	3119	C 2	3265	C 5	3450	E 8	7210	D 4		
2238	E 6	3120	C 2	3266	E 6	3451	D 7	7211	E 4		
2239	E 6	3121	C 2	3267	E 6	3453	E 7	7213	D 4		
2240	E 6	3122	C 2	3268	E 6	3455	D 7	7214	C 3		
2241	D 4	3123	C 2	3269	E 6	3456	D 6	7215	C 3		
2242	E 7	3124	C 2	3270	E 6	3457	D 7	7216	D 5		
2243	D 5	3125	E 2	3271	E 6	3458	D 8	73	D 3		

MAPPING FOR CIRCUIT DIAGRAM VIDEO I-4

1001	J 4	2401	E 9	3239	H31	5104	C26
2101	E 4	2402	E 9	3240	G31	5105	F25
2101	D15	2403	H11	3241	H31	5106	A 5
2102	E 3	2404	H11	3242	G31	5107	C 6
2103	F 4	2405	I11	3243	J32	5108	B10
2104	F 3	2406	I11	3244	J32	5109	B11
2105	F 4	2407	J10	3245	J30	5110	B11
2106	F 3	2408	J11	3246	I30	5111	A17
2107	A 2	2409	J10	3247	J30	5112	A16
2108	B 2	2410	J10	3250	L28	5113	C15
2109	B 3	2411	K13	3251	L29	5114	B10
2110	B 3	2412	N10	3253	K32	5201	C29
2111	C 4	2413	J11	3254	K33	5202	F34
2112	D12	2414	N11	3255	L32	5203	F34
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2117	C20	2419	L19	3260	E 5	5208	F37
2118	C21	2420	M21	3261	N 2	5401	M10
2119	C22	2421	M22	3262	L 2	6101	A22
2120	C22	2422	O21	3263	N 6	6102	A23
2121	A22	2423	L24	3264	M 6	6103	A23
2122	C23	2424	L27	3265	M 7	6104	E23
2123	D23	2425	M27	3266	K34	6105	E24
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2220	G29	3143	E 9	3411	J10	7017	H19
2222	H32	3144	B 5	3412	J10	7018	K18
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2238	I35	3157	C 6	3430	O15	7203	D35
2239	I35	3158	C 7	3431	O15	7204	C37
2240	I33	3159	C 7	3432	M15	7205	B38
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2244	O 3	3164	C27	3437	L21	7209	F39
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2248	J35	3170	D19	3441	M22	7214	L32
2249	G36	3201	A29	3442	L22	7215	L32
2250	F 6	3202	B29	3443	L23	7216	M 7
2252	L 3	3203	A29	3444	L23	7301	H 2
2253	N 7	3204	B29	3445	H25	7302	K 8
2254	N 8	3205	D30	3446	K24	7303	G23
2260	L 2	3206	D30	3447	O21	7304	J16
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2266	F39	3208	C31	3449	L27	7401	N11
2267	C 8	3209	B31	3450	H26	7402	N10
2301	H 2	3210	B33	3451	G27	7403	L14
2302	F 9	3211	C36	3453	H26	7404	L15
2303	F 9	3212	D35	3455	I27	7405	O16
2304	H 4	3213	D36	3456	I26	7406	O15
2305	H 4	3214	F32	3457	I27	7407	M20
2306	I 4	3215	F32	3458	J23	7408	M21
2307	I 4	3216	F33	3459	J23	7410	K25
2309	J 4	3217	F33	3460	H25	7411	K24
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2311	J 4	3219	D38	3462	K 2	7413	C 2
2312	J 3	3220	B37	3463	E 5		
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2322	J20	3234	I29	3472	C 2		
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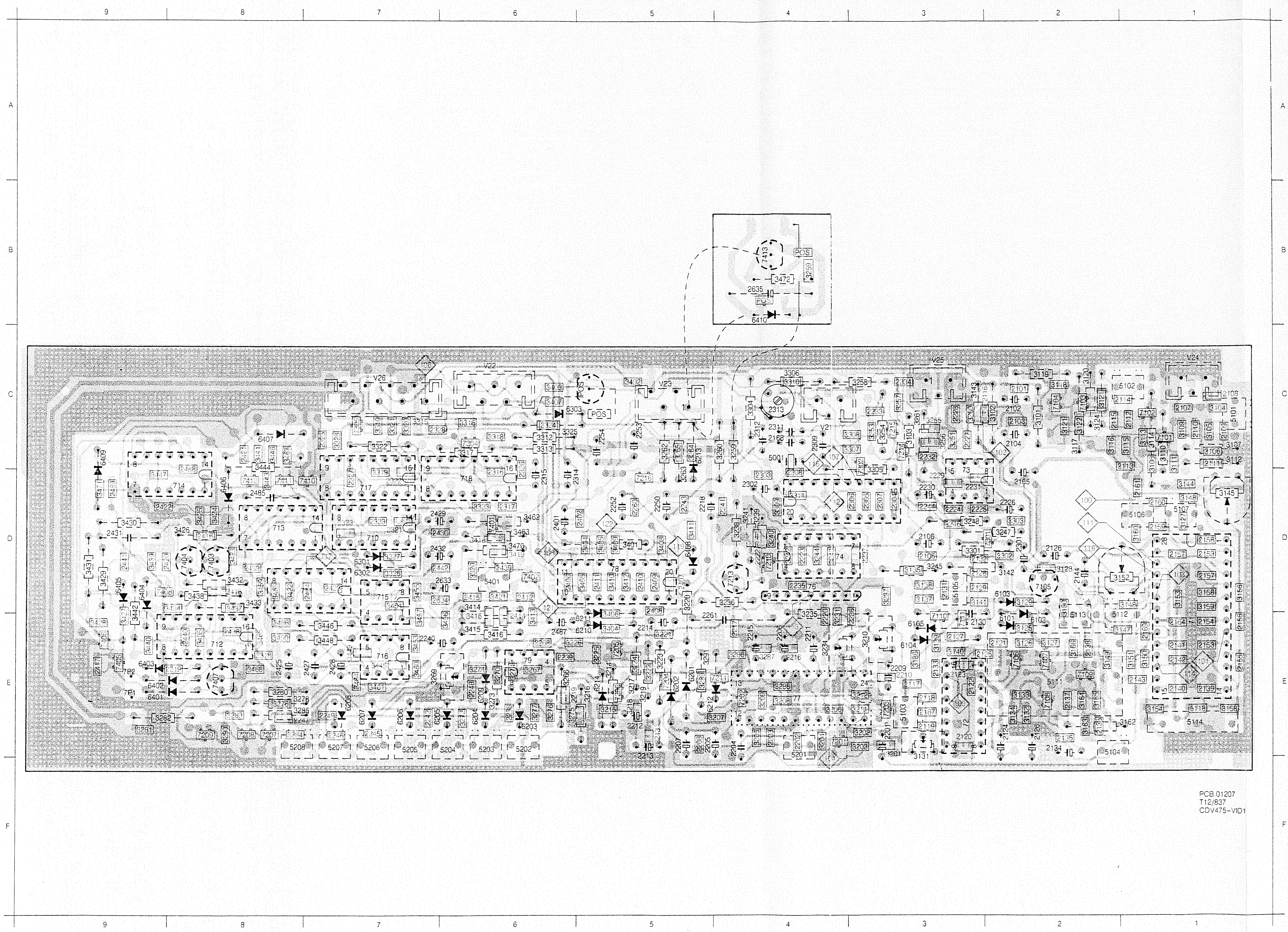
PRINT LAY-OUT CHIP-SIDE VIDEO I-4



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2105	D 3	2248	E 6	3129	D 2	3276	E 6	3463	D 6	74	D 3
2106	D 3	2249	E 7	3130	D 2	3276	E 8	3464	E 7	7401	D 6
2107	C 1	2250	D 5	3131	E 3	3277	E 6	3465	E 8	7402	D 6
2108	C 1	2252	D 5	3132	E 2	3278	E 8	3467	C 8	7403	D 8
2109	C 1	2253	C 5	3133	E 2	3280	E 8	3468	E 8	7404	D 8
2110	C 1	2254	C 5	3134	E 2	3281	E 9	3470	D 6	7405	E 9
2111	C 1	2260	D 5	3135	D 3	3282	E 8	3471	D 9	7406	E 9
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2113	C 1	2301	D 2	3137	D 3	3284	E 8	5001	C 4	7408	D 8
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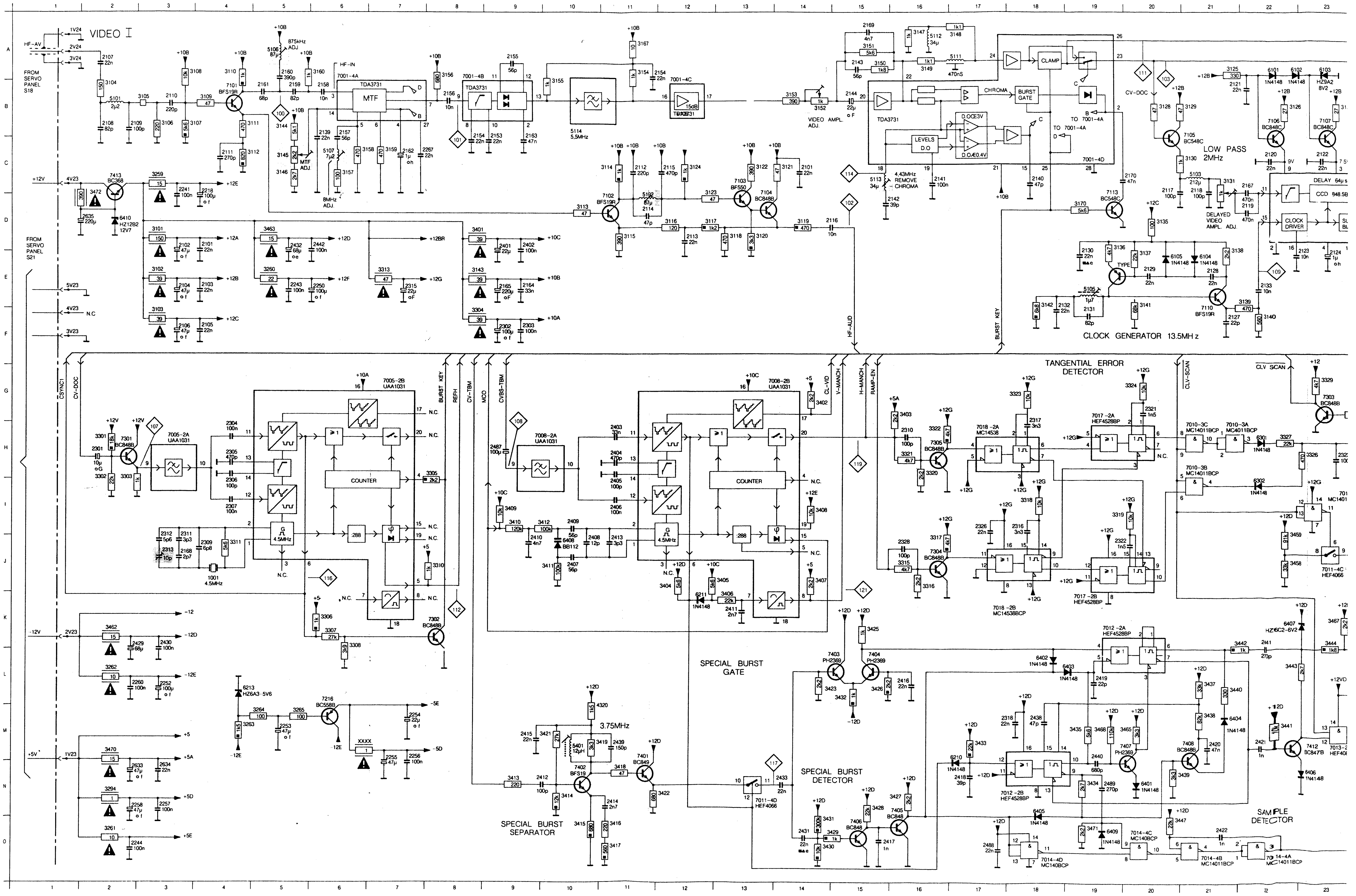
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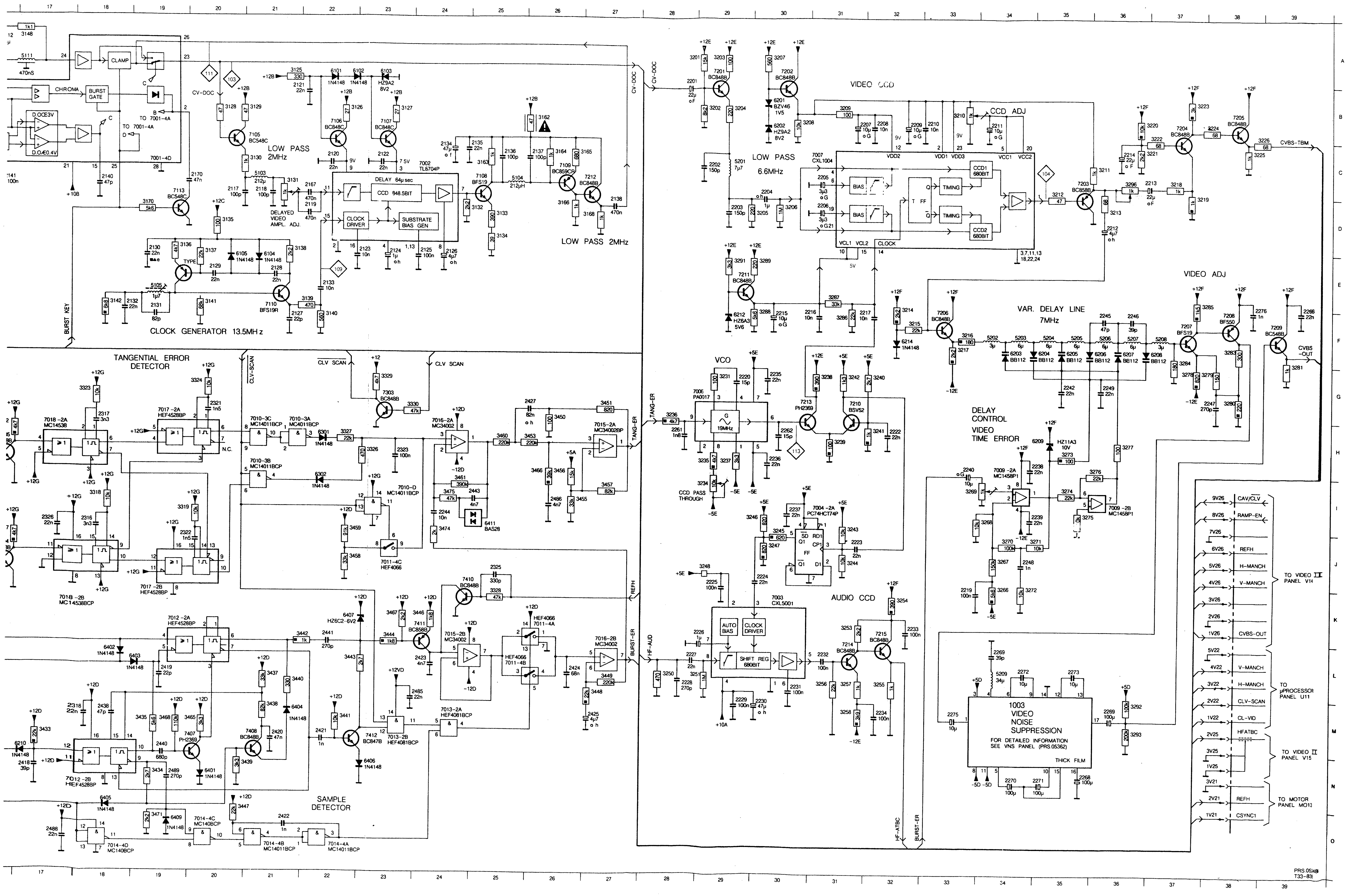
HF-AV
FROM SERVO PANEL S18
FROM SERVO PANEL S21
1V24
2V24
3V24
4V23
5V23
3V23
2V23
1V23
+12V
-12V
+5V
N.C.
7101 BFS19R
875kHz ADJ
HF-IN
7001-4A TDA3731
MTF
MTF ADJ.
8MHz ADJ.
7001-4B TDA3731
5114 5,5MHz
7001-4C
15dB
TDA3731
7102 BFS19R
7103 BF550
7104 BC848B
7413 BC368
6410 HZ12B2 12V7
+12E
+12A
+12D
+12BR
+12B
+12F
+12G
+10C
+10B
+10A
VIDEO AMPL. ADJ.
TDA3731
CLAMP
CHROMA
BURST GATE
LEVELS D.O
D.OCE3V
D.OÆ0.4V
TO 7001-4A
7001-4D
4,43MHz REMOVE CHROMA
CV-DOC
7105 BC548C
LOW PASS 2MHz
7106 BC848C
7107 BC848C
HZ9A2 8V2
1N4148
DELAYED VIDEO AMPL. ADJ.
DELAY 64μs
CCD
CLOCK DRIVER
7113 BC548C
7110 BFS19R
TYPE
CLOCK GENERATOR 13.5MHz
BURST KEY
HF-AUD
CSYNC1
CV-DOC
REFH
CV-TBM
MCO
CVBS-TBM
7301 BC848B
7005-2A UAA1031
7005-2B UAA1031
COUNTER
4.5MHz
288
1001 4.5MHz
7302 BC848B
7008-2A UAA1031
7008-2B UAA1031
6408 BB112
6211 1N4148
CL-VID
V-MANCH
H-MANCH
RAMP-EN
TANGENTIAL ERROR DETECTOR
7305 BC848B
7304 BC848B
7018-2A MC14538
7018-2B MC14538BCP
7017-2A HEF4528BP
7017-2B HEF4528BP
CLV-SCAN
CLV SCAN
7010-3C MC14011BCP
7010-3A MC4011BCP
7010-3B MC14011BCP
6301 1N4148
6302 1N4148
7303 BC848B
7011-4C HEF4066
-12
-12D
-12E
+5
+5A
+5D
+5E
-5E
-5D
6213 HZ6A3-5V6
7216 BC558B
XXXX
SPECIAL BURST GATE
7403 PH2369
7404 PH2369
3.75MHz
5401 12μH
7402 BFS19
7401 BC849
SPECIAL BURST SEPARATOR
7011-4D HEF4066
SPECIAL BURST DETECTOR
7406 BC848
7405 BC848
7012-2A HEF4528BP
7012-2B HEF4528BP
6402 1N4148
6403 1N4148
6405 1N4148
6409 1N4148
6401 1N4148
6210 1N4148
7407 PH2369
7408 BC848B
6404 1N4148
6407 HZ6C2-6V2
7412 BC847B
6406 1N4148
SAMPLE DETECTOR
7014-4C MC140BCP
7014-4D MC140BCP
7014-4B MC14011BCP
7014-4A MC14011BCP
7013


CLAMP
CHROMA
BURST GATE
D.OC3V
D.O.C0.4V
7001-4D
TO 7001-4A
CV-DOC
LOW PASS 2MHz
DELAY 64µ sec
CCD 848.5BIT
CLOCK DRIVER
SUBSTRATE BIAS GEN
7002 TL5704P
DELAYED VIDEO AMPL. ADJ.
LOW PASS 2MHz
CLOCK GENERATOR 13.5MHz
BURST KEY
TANGENTIAL ERROR DETECTOR
CLV-SCAN
CLV SCAN
7018-2A MC14538
7017-2A HEF4528BP
7010-3C MC14011BCP
7010-3A MC4011BCP
7016-2A MC34002
7015-2A MC34002BP
7010-3B MC14011BCP
7010-D MC14011BCP
7011-4C HEF4066
6411 BAS28
7018-2B MC14538BCP
7017-2B HEF4528BP
7012-2A HEF4528BP
7012-2B HEF4528BP
7015-2B MC34002
HEF4066 7011-4A
HEF4066 7011-4B
7016-2B MC34002
7013-2A HEF4081BCP
7013-2B HEF4081BCP
7014-4C MC140BCP
7014-4D MC140BCP
7014-4B MC14011BCP
7014-4A MC14011BCP
SAMPLE DETECTOR
TANG-ER
REFH
BURST-ER
HF-AUD
HF-ATBC
VIDEO CCD
LOW PASS 6.6MHz
7007 CXL1004
BIAS
TIMING
CCD1 680BIT
CCD2 680BIT
T FF
VCL1 VCL2 CLOCK
CCD ADJ
CVBS-TBM
VIDEO ADJ
VAR. DELAY LINE 7MHz
CVBS -OUT
VCO
7006 PA0017
19MHz
CCD PASS THROUGH
7004-2A PC74HCT74P
AUDIO CCD
7003 CXL5001
AUTO BIAS
CLOCK DRIVER
SHIFT REG 680BIT
DELAY CONTROL
VIDEO TIME ERROR
7009-2A MC1458P1
7009-2B MC1458P1
1003 VIDEO NOISE SUPPRESSION
FOR DETAILED INFORMATION SEE VNS PANEL (PRS.05362)
THICK FILM
CAV/CLV
RAMP-EN
REFH
H-MANCH
V-MANCH
CVBS-OUT
V-MANCH
H-MANCH
CLV-SCAN
CL-VID
HFATBC
REFH
CSYNC1
TO VIDEO II PANEL V14
TO µPROCESSOR PANEL U11
TO VIDEO II PANEL V15
TO MOTOR PANEL MO13
PRS.05(48) T33-83)

PRINT LAY-OUT COMP.-SIDE VIDEO I-5

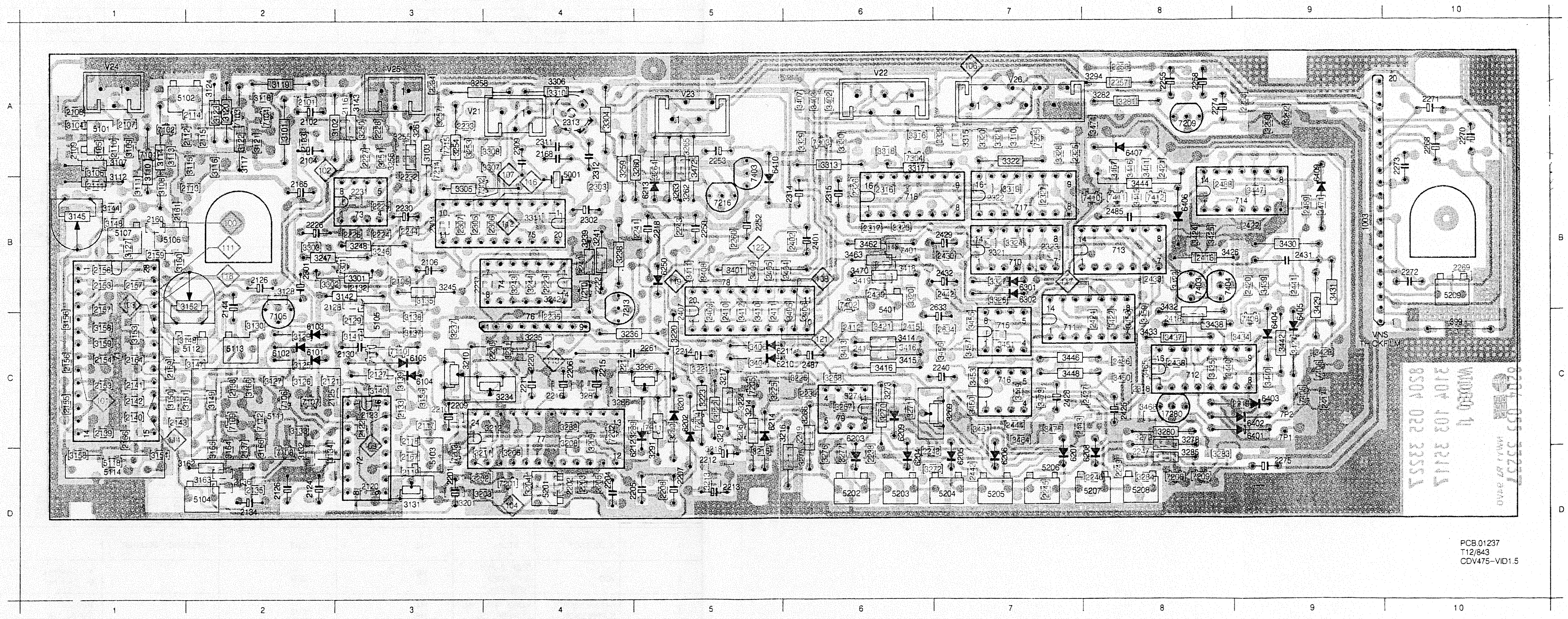
1003	B10	2123	C 3	2153	C 1	2208	D 5	2231	B 3
2101	A 2	2124	D 2	2154	C 1	2209	C 3	2232	A 3
2102	A 2	2125	C 2	2155	C 1	2210	C 3	2233	A 3
2103	A 2	2126	B 2	2156	C 1	2211	C 4	2234	A 3
2104	A 2	2126	D 2	2157	B 1	2212	D 5	2235	C 4
2105	B 3	2127	C 3	2157	B 1	2213	D 5	2236	C 4
2106	B 3	2128	B 2	2158	B 1	2214	C 5	2237	B 3
2107	A 1	2129	C 3	2159	B 1	2215	C 4	2238	D 6
2108	A 1	2130	C 3	2160	B 1	2216	C 4	2239	C 6
2109	A 1	2132	B 3	2161	B 1	2217	C 4	2240	C 7
2110	A 1	2133	C 3	2164	C 1	2218	B 5	2241	B 5
2111	B 1	2134	D 2	2165	B 2	2219	C 6	2243	B 5
2112	A 1	2135	D 2	2166	C 1	2219	C 9	2244	B 3
2113	B 2	2136	D 2	2167	D 3	2220	C 4	2245	D 7
2114	A 2	2137	C 2	2168	A 4	2222	B 4	2246	D 8
2115	A 2	2138	C 2	2169	C 1	2223	B 4	2247	D 8
2116	A 3	2139	C 1	2201	D 3	2224	B 3	2248	D 6
2117	C 3	2140	C 1	2202	D 4	2225	B 3	2249	D 8
2118	C 3	2141	C 1	2203	D 4	2226	B 2	2250	B 5
2119	D 3	2142	C 1	2204	D 4	2227	A 3	2252	B 5
2120	D 3	2143	C 1	2205	D 4	2228	A 3	2253	A 5
2121	C 2	2144	B 2	2206	C 4	2229	B 3	2255	A 8
2122	C 3	2153	B 1	2207	D 5	2230	B 3	2256	A 8

2257	A 8	2313	A 4	2414	C 6	2443	C 7	3115	A 2
2258	A 8	2314	B 6	2415	C 6	2444	C 7	3116	A 2
2260	B 5	2315	B 6	2416	B 8	2485	B 8	3117	A 2
2261	C 5	2316	B 6	2417	C 9	2486	C 8	3118	A 2
2266	A 9	2317	B 6	2418	C 8	2487	C 6	3119	A 2
2268	A10	2318	C 8	2420	B 9	2488	B 8	3120	A 2
2269	B10	2321	B 7	2421	A 8	2489	B 9	3121	A 2
2270	A10	2322	B 7	2422	B 9	2633	B 7	3122	A 2
2271	A10	2323	B 7	2424	C 8	2634	C 7	3123	A 2
2272	B10	2325	A 7	2425	C 8	3101	A 2	3124	A 2
2273	A10	2326	B 6	2427	C 8	3102	A 2	3125	C 2
2274	A 8	2327	B 7	2428	C 7	3103	A 3	3126	C 2
2275	D 9	2329	A 7	2429	B 7	3104	A 1	3127	B 1
2301	B 2	2401	B 6	2430	B 7	3105	A 1	3127	C 2
2302	B 4	2402	B 6	2431	B 9	3106	A 1	3128	B 2
2303	B 4	2404	B 6	2432	B 7	3107	A 1	3129	C 2
2304	B 3	2405	B 5	2433	B 8	3108	B 1	3131	D 3
2305	B 3	2406	B 6	2438	C 8	3109	A 1	3132	C 2
2306	B 4	2407	B 5	2439	B 6	3110	A 1	3133	C 2
2307	B 3	2409	B 5	2440	C 8	3111	B 1	3134	D 2
2309	A 4	2410	B 5	2441	B 9	3112	A 1	3135	B 3
2311	A 4	2411	B 5	2442	B 7	3113	A 1	3136	C 3
2312	A 4	2412	C 6	2442	D 7	3114	A 1	3137	C 3

3138	C 3	3163	D 2	3220	C 5	3250	A 3	3274	C 6
3139	C 3	3164	C 2	3221	C 5	3251	A 3	3275	D 6
3140	C 3	3165	C 2	3222	C 5	3253	A 3	3276	D 6
3141	C 3	3166	C 2	3223	C 5	3254	A 3	3277	D 6
3142	B 3	3166	C 2	3224	C 5	3255	A 3	3278	C 8
3143	A 3	3201	D 3	3225	C 5	3256	A 3	3279	C 8
3144	B 1	3202	D 3	3226	C 6	3257	A 3	3280	C 8
3145	B 1	3203	D 4	3231	C 4	3258	A 3	3281	A 8
3147	C 2	3204	D 4	3234	C 4	3259	A 4	3282	A 8
3148	B 1	3205	D 4	3235	C 4	3260	A 5	3283	D 8
3148	C 2	3206	D 4	3236	C 4	3261	A 3	3284	D 8
3149	C 2	3208	C 4	3237	C 3	3262	B 5	3285	D 8
3150	C 1	3209	C 4	3238	B 4	3263	B 5	3286	C 4
3151	C 1	3210	C 3	3239	B 4	3264	A 5	3287	C 4
3152	B 2	3211	D 4	3240	B 4	3265	A 5	3288	C 4
3153	C 1	3212	C 4	3241	B 4	3266	C 6	3289	C 5
3154	D 1	3213	D 5	3242	B 4	3267	C 6	3289	C 4
3156	C 1	3214	C 5	3243	B 4	3268	C 6	3291	C 5
3158	C 1	3215	D 5	3244	B 4	3269	C 7	3292	A 9
3158	D 1	3216	C 5	3245	B 3	3270	C 6	3293	A 9
3159	C 1	3217	C 5	3246	B 3	3271	C 6	3294	A 8
3160	B 1	3218	D 5	3247	B 2	3272	D 7	3296	C 5
3162	D 2	3219	C 5	3248	B 3	3273	C 6	3301	B 3

3302	B 2	3326	B 7	3419	B 6	3444	B 8	3471	B 9
3303	B 2	3327	B 7	3421	C 6	3446	C 7	3472	A 5
3304	A 4	3328	A 7	3422	C 8	3446	A 8	3473	C 7
3305	B 3	3329	A 6	3423	B 8	3447	B 9	3474	A 8
3306	A 4	3330	A 6	3424	B 8	3448	C 7	3475	C 7
3307	A 4	3401	B 5	3425	B 8	3449	C 7	399	C10
3308	A 4	3402	A 6	3426	B 8	3450	C 8	5001	A 4
3309	B 4	3403	A 6	3427	C 9	3451	C 7	5101	A 1
3310	A 4	3404	C 5	3428	C 9	3453	C 7	5102	A 2
3310	A 7	3405	B 6	3429	B 9	3455	C 7	5103	D 3
3311	B 4	3406	C 5	3430	B 9	3456	C 7	5104	D 2
3313	A 6	3407	A 6	3431	B 9	3457	C 7	5105	C 3
3315	A 7	3408	B 5	3432	B 8	3458	C 8	5106	B 1
3316	A 6	3409	B 5	3433	C 8	3459	C 8	5107	B 1
3317	A 6	3410	B 5	3434	C 9	3460	C 7	5111	C 2
3318	A 6	3411	B 5	3435	C 8	3461	C 7	5112	C 2
3319	B 7	3412	B 5	3437	C 8	3462	B 6	5113	C 2
3320	A 7	3413	C 6	3438	C 8	3463	B 6	5114	D 1
3320	B 6	3414	C 6	3439	B 9	3464	C 7	5118	D 1
3321	A 7	3415	C 6	3440	C 9	3465	C 8	5201	D 4
3322	A 7	3416	C 6	3441	A 8	3467	A 8	5202	D 6
3323	B 6	3416	C 6	3442	C 9	3468	C 8	5203	D 6
3324	B 7	3418	B 6	3443	B 8	3470	B 6	5204	D 7

5205	D 7	6213	B 5	7108	D 2	7210	B 4	7411	B 8
5206	D 7	6214	C 5	7109	C 2	7211	C 5	7412	B 8
5207	D 8	6250	B 5	711	C 7	7213	B 4	75	B 4
5208	D 8	6301	B 7	7110	C 3	7214	A 3	76	C 4
5209	B10	6302	B 7	7111	C 3	7215	A 3	77	C 4
5401	B 6	6401	C 9	7112	C 2	7216	B 5	78	B 5
6101	C 2	6402	C 9	712	C 8	7280	C 8	79	C 6
6102	C 2	6403	C 9	713	B 8	73	B 3	7P1	C 9
6103	C 2	6404	C 9	714	B 9	7301	B 3	7P2	C 9
6104	C 3	6405	B 9	715	C 7	7302	B 3	V21	A 3
6105	C 3	6406	B 8	716	C 7	7303	A 6	V22	A 6
6201	C 5	6407	A 8	717	B 7	7304	A 6	V23	A 5
6202	C 5	6409	A 9	718	B 6	7305	A 7	V24	A 1
6203	C 6	6410	A 5	72	D 3	74	B 4	V25	A 3
6204	D 6	71	C 1	7201	D 4	7401	B 6	V26	A 7
6205	D 7	710	B 7	7202	C 4	7402	B 6		
6206	D 7	7101	A 1	7203	D 3	7403	B 8		
6207	D 7	7102	A 1	7204	C 5	7403	A 5		
6208	D 8	7103	A 2	7205	C 5	7404	B 8		
6209	C 6	7104	A 2	7206	C 5	7405	C 9		
6210	C 6	7105	C 2	7208	D 8	7406	C 9		
6211	C 6	7106	C 2	7209	D 8	7408	C 9		
6212	C 4	7107	C 2	7209	A 8	7410	B 8		



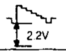
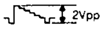
MEASUREMENTS & ADJUSTMENTS VIDEO & MTF

STEP	SIGNAL	MODE	◇				REMARKS
1	HF.IN	STOP	100	5106		MIN. AMPLITUDE	DISCONNECTED V24 INJECT 875 kHz ≊80m Vpp IN 2V24
2	MTF 8MHz ADJ.	STOP	101	5107		MAX. AMPLITUDE	DISCONNECTED V24 INJECT 8 kHz ≊40m Vpp IN 2V24
3	AUDIO 2.8MHz SUPPRESSION	STOP	102	5102		MIN. AMPLITUDE	DISCONNECTED V24 INJECT 2.8 kHz ≊40mVpp
4	MTF GAIN	VIDEO TEST DISC PICT.NR. 515 STILL PICTURE	103	3145		SEE DRAWING MDA.01556	ADJUST FOR MULTI BURST I MULTI BURST VI

MEASUREMENTS & ADJUSTMENTS DROP-OUT CIRCUIT

STEP	SIGNAL	MODE	◇				REMARKS
1	FREQUENCY	STOP	109	5105	FREQUENCY COUNTER 13.3MHz		COARSE
2	DELAY-TIME	VIDEO TEST DISC. PICT.NBR 10800	A-103 B-111	5105		A CHANNEL B CHANNEL	FINE ADJUST DELAY TIME BETWEEN EA AND B FOR 64μ s
3	AMPLITUDE DELAYED VIDEO	VIDEO TEST DISC. PICT.NR. 10800	A-103 B-111	3131		A CHANNEL B CHANNEL	ADJUSTMENT THE AMPLITUDE TO BE EQUAL FOR A AND B

MEASUREMENTS & ADJUSTMENTS VIDEO

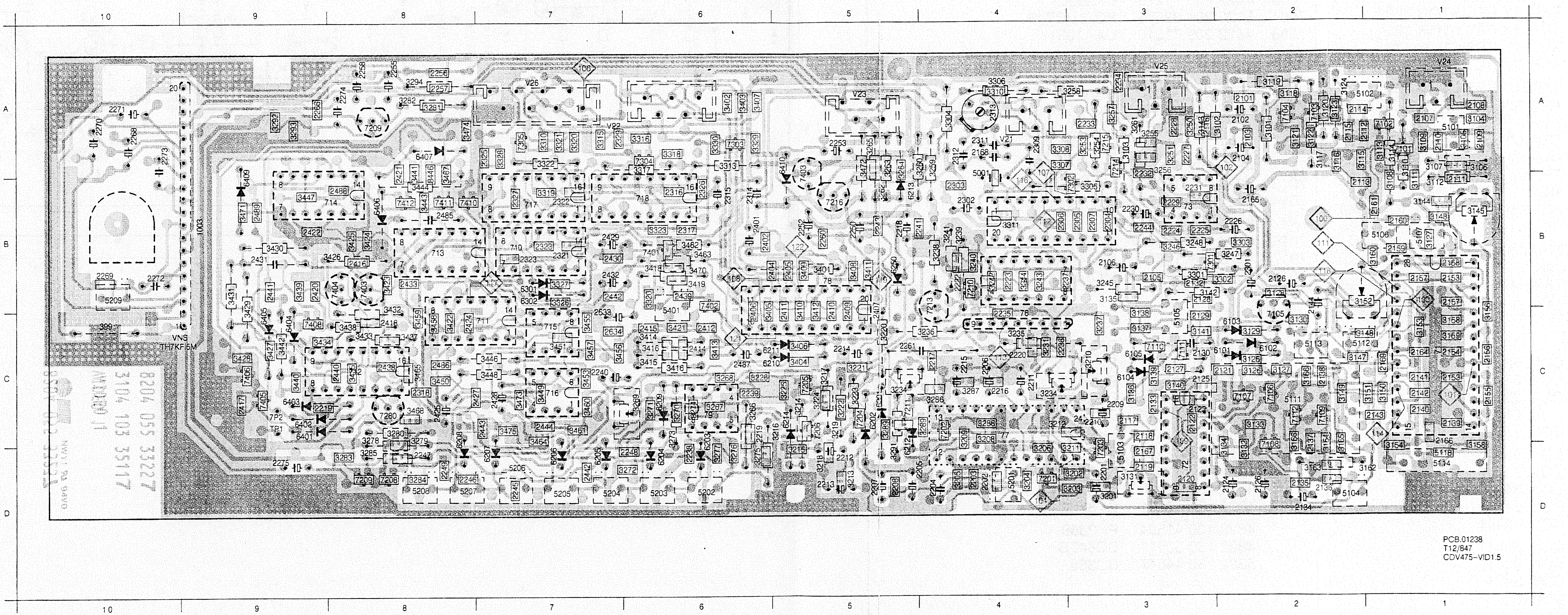
STEP	SIGNAL	MODE	◇				REMARKS
1	DC-LEVEL	VIDEO TEST DISC COLOURBAR STILL PICTURE	104	3210		2.2V	
2	VIDEO AMPLITUDE	VIDEO TEST DISC COLOURBAR STILL PICTURE	103	3152			
3	VIDEO AMPLITUDE	VIDEO TEST DISC COLOURBAR STILL PICTURE	106	3296			
4	DROP OUT	VIDEO TEST DISC COLOURBAR STILL PICTURE	103	3131			
5	VIDEO AMPLITUDE	VIDEO TEST DISC COLOURBAR STILL PICTURE	107			U-1.85Vpp-2Vpp	
6	VIDEO AMPLITUDE	VIDEO TEST DISC COLOURBAR STILL PICTURE	108			U-2.7Vpp-3Vpp	

MEASURUMENTS & ADJUSTMENTS TIME-BASE CONTROL

STEP	SIGNAL	MODE	◇				REMARKS
1	FREQUENCY	STOP	112	2313	FREQUENCY COUNTER		AFTER 2 MINUTES WARMING UP 15.625.024- 15.624.975Hz
2	VCO	STOP 9-7006 GROUNDED TO EARTH	103 104	3234		A- CHANNEL B- CHANNEL	DELAY TIME BETWEEM A AND B ±70μ s
3	SPECIAL BURST SUPPRESSION	VIDEO TEST DISC PICR.NBR. 750	114 116	5113		TRIGGER SIGNAL 116	MIN AMPLITUDE OF THE SPECIAL BURST
4	SPECIAL BURST AMPLITUDE	VIDEO TEST DISC. PLAY	117	5401			MAX. AMPLITUDE OP SPECIAL BURST
5	BURST ERROR	VIDEO TEST DISC PICR.NBR. 170 STILL PICTURE		2369			MIN. STRIPES IN RED PICTURE ON TV SREEN
	BURSTKEY	PLAY	118			8.5V ±1V	
	C. SYNC	PLAY	116			5V±1V	
	H. MANCH.	PLAY	119			5V+250mV -500 mV	15625Hz ±1kHz
	V. MANCH.	PLAY	121			5V+250mV -500 mV	50Hz ±5Hz
	MCO	PLAY	122			10V±1.5V	DUTY CYCLE 32μ s ± 8μs

PRINT LAY-OUT CHIP-SIDE VIDEO I-5

1003	B10	2123	C 3	2153	C 1	2208	D 5	2231	B 3	2257	A 8	2313	A 4	2414	C 6	2443	C 7	3115	A 2	3138	C 3	3163	D 2	3220	C 5	3250	A 3	3274	C 6	3302	B 2	3326	B 7	3419	B 6	3444	B 8	3471	B 9	5205	D 7	6213	B 5	7108	D 2	7210	B 4	7411	B 8
2101	A 2	2124	D 2	2154	C 1	2209	C 3	2232	A 3	2258	A 8	2314	B 6	2415	C 6	2444	C 7	3116	A 2	3139	C 3	3164	C 2	3221	C 5	3251	A 3	3275	D 6	3303	B 2	3327	B 7	3421	C 6	3446	C 7	3472	A 5	5206	D 7	6214	C 5	7109	C 2	7211	C 5	7412	B 8
2102	A 2	2125	C 2	2155	C 1	2210	C 3	2233	A 3	2260	B 5	2315	B 6	2416	B 8	2485	B 8	3117	A 2	3140	C 3	3165	C 2	3222	C 5	3253	A 3	3276	D 6	3304	A 4	3328	A 7	3422	C 8	3446	A 8	3473	C 7	5207	D 8	6250	B 5	711	C 7	7213	B 4	75	B 4
2103	A 2	2126	B 2	2156	C 1	2211	C 4	2234	A 3	2261	C 5	2316	B 6	2417	C 9	2486	C 8	3118	A 2	3141	C 3	3166	C 2	3223	C 5	3254	A 3	3277	D 6	3305	B 3	3329	A 6	3423	B 8	3447	B 9	3474	A 8	5208	D 8	6301	B 7	7110	C 3	7214	A 3	76	C 4
2104	A 2	2126	D 2	2157	B 1	2212	D 5	2235	C 4	2266	A 9	2317	B 6	2418	C 8	2487	C 6	3119	A 2	3142	B 3	3166	C 2	3224	C 5	3255	A 3	3278	C 8	3306	A 4	3330	A 6	3424	B 8	3448	C 7	3475	C 7	5209	B10	6302	B 7	7111	C 3	7215	A 3	77	C 4
2105	B 3	2127	C 3	2157	B 1	2213	D 5	2236	C 4	2268	A10	2318	C 8	2420	B 9	2488	B 8	3120	A 2	3143	A 3	3201	D 3	3225	C 5	3256	A 3	3279	C 8	3307	A 4	3401	B 5	3425	B 8	3449	C 7	399	C10	5401	B 6	6401	C 9	7112	C 2	7216	B 5	78	B 5
2106	B 3	2128	B 2	2158	B 1	2214	C 5	2237	B 3	2269	B10	2321	B 7	2421	A 8	2489	B 9	3121	A 2	3144	B 1	3202	D 3	3226	C 6	3257	A 3	3280	C 8	3308	A 4	3402	A 6	3426	B 8	3450	C 8	5001	A 4	6101	C 2	6402	C 9	712	C 8	7280	C 8	79	C 6
2107	A 1	2129	C 3	2159	B 1	2215	C 4	2238	D 6	2270	A10	2322	B 7	2422	B 9	2633	B 7	3122	A 2	3145	B 1	3203	D 4	3231	C 4	3258	A 3	3281	A 8	3309	B 4	3403	A 6	3427	C 9	3451	C 7	5101	A 1	6102	C 2	6403	C 9	713	B 8	73	B 3	7P1	C 9
2108	A 1	2130	C 3	2160	B 1	2216	C 4	2239	C 6	2271	A10	2323	B 7	2424	C 8	2634	C 7	3123	A 2	3147	C 2	3204	D 4	3234	C 4	3259	A 4	3282	A 8	3310	A 4	3404	C 5	3428	C 9	3453	C 7	5102	A 2	6103	C 2	6404	C 9	714	B 9	7301	B 3	7P2	C 9
2109	A 1	2132	B 3	2161	B 1	2217	C 4	2240	C 7	2272	B10	2325	A 7	2425	C 8	3101	A 2	3124	A 2	3148	B 1	3205	D 4	3235	C 4	3260	A 5	3283	D 8	3310	A 7	3405	B 6	3429	B 9	3455	C 7	5103	D 3	6104	C 3	6405	B 9	715	C 7	7302	B 3	V21	A 3
2110	A 1	2133	C 3	2164	C 1	2218	B 5	2241	B 5	2273	A10	2326	B 6	2427	C 8	3102	A 2	3125	C 2	3148	C 2	3206	D 4	3236	C 4	3261	A 3	3284	D 8	3311	B 4	3406	C 5	3430	B 9	3456	C 7	5104	D 2	6105	C 3	6406	B 8	716	C 7	7303	A 6	V22	A 6
2111	B 1	2134	D 2	2165	B 2	2219	C 6	2243	B 5	2274	A 8	2327	B 7	2428	C 7	3103	A 3	3126	C 2	3149	C 2	3208	C 4	3237	C 3	3262	B 5	3285	D 8	3313	A 6	3407	A 6	3431	B 9	3457	C 7	5105	C 3	6201	C 5	6407	A 8	717	B 7	7304	A 6	V23	A 5
2112	A 1	2135	D 2	2166	C 1	2219	C 9	2244	B 3	2275	D 9	2329	A 7	2429	B 7	3104	A 1	3127	B 1	3150	C 1	3209	C 4	3238	B 4	3263	B 5	3286	C 4	3315	A 7	3408	B 5	3432	B 8	3458	C 8	5106	B 1	6202	C 5	6409	A 9	718	B 6	7305	A 7	V24	A 1
2113	B 2	2136	D 2	2167	D 3	2220	C 4	2245	D 7	2301	B 2	2401	B 6	2430	B 7	3105	A 1	3127	C 2	3151	C 1	3210	C 3	3239	B 4	3264	A 5	3287	C 4	3316	A 6	3409	B 5	3433	C 8	3459	C 8	5107	B 1	6203	C 6	6410	A 5	72	D 3	74	B 4	V25	A 3
2114	A 2	2137	C 2	2168	A 4	2222	B 4	2246	D 8	2302	B 4	2402	B 6	2431	B 9	3106	A 1	3128	B 2	3152	B 2	3211	D 4	3240	B 4	3265	A 5	3288	C 4	3317	A 6	3410	B 5	3434	C 9	3460	C 7	5111	C 2	6204	D 6	71	C 1	7201	D 4	7401	B 6	V26	A 7
2115	A 2	2138	C 2	2169	C 1	2223	B 4	2247	D 8	2303	B 4	2404	B 6	2432	B 7	3107	A 1	3129	C 2	3153	C 1	3212	C 4	3241	B 4	3266	C 6	3289	C 5	3318	A 6	3411	B 5	3435	C 8	3461	C 7	5112	C 2	6205	D 7	710	B 7	7202	C 4	7402	B 6		
2116	A 3	2139	C 1	2201	D 3	2224	B 3	2248	D 6	2304	B 3	2405	B 5	2433	B 8	3108	B 1	3131	D 3	3154	D 1	3213	D 5	3242	B 4	3267	C 6	3289	C 4	3319	B 7	3412	B 5	3437	C 8	3462	B 6	5113	C 2	6206	D 7	7101	A 1	7203	D 3	7403	B 8		
2117	C 3	2140	C 1	2202	D 4	2225	B 3	2249	D 8	2305	B 3	2406	B 6	2438	C 8	3109	A 1	3132	C 2	3156	C 1	3214	C 5	3243	B 4	3268	C 6	3291	C 5	3320	A 7	3413	C 6	3438	C 8	3463	B 6	5114	D 1	6207	D 7	7102	A 1	7204	C 5	7403	A 5		
2118	C 3	2141	C 1	2203	D 4	2226	B 2	2250	B 5	2306	B 4	2407	B 5	2439	B 6	3110	A 1	3133	C 2	3158	C 1	3215	D 5	3244	B 4	3269	C 7	3292	A 9	3320	B 6	3414	C 6	3439	B 9	3464	C 7	5118	D 1	6208	D 8	7103	A 2	7205	C 5	7404	B 8		
2119	D 3	2142	C 1	2204	D 4	2227	A 3	2252	B 5	2307	B 3	2409	B 5	2440	C 8	3111	B 1	3134	D 2	3158	D 1	3216	C 5	3245	B 3	3270	C 6	3293	A 9	3321	A 7	3415	C 6	3440	C 9	3465	C 8	5201	D 4	6209	C 6	7104	A 2	7206	C 5	7405	C 9		
2120	D 3	2143	C 1	2205	D 4	2228	A 3	2253	A 5	2309	A 4	2410	B 5	2441	B 9	3112	A 1	3135	B 3	3159	C 1	3217	C 5	3246	B 3	3271	C 6	3294	A 8	3322	A 7	3416	C 6	3441	A 8	3467	A 8	5202	D 6	6210	C 6	7105	C 2	7208	D 8	7406	C 9		
2121	C 2	2144	B 2	2206	C 4	2229	B 3	2255	A 8	2311	A 4	2411	B 5	2442	B 7	3113	A 1	3136	C 3	3160	B 1	3218	D 5	3247	B 2	3272	D 7	3296	C 5	3323	B 6	3416	C 6	3442	C 9	3468	C 8	5203	D 6	6211	C 6	7106	C 2	7209	D 8	7408	C 9		
2122	C 3	2153	B 1	2207	D 5	2230	B 3	2256	A 8	2312	A 4	2412	C 6	2442	D 7	3114	A 1	3137	C 3	3162	D 2	3219	C 5	3248	B 3	3273	C 6	3301	B 3	3324	B 7	3418	B 6	3443	B 8	3470	B 6	5204	D 7	6212	C 4	7107	C 2	7209	A 8	7410	B 8		



PCB.01238
T12/847
CDV475-VID1.5

PARTSLIST VIDEO I-5

Various

1001	4822 242 70361	X-TAL 4.5 MHZ
1003	4822 214 51769	V.N.S THICK FILM
	4822 124 41558	ELCAP 10μ BIP 25V
	4822 122 33325	CHIP 470N 16V
	4822 122 10166	TUBULAR 22N 16V
	4822 122 33142	POLYESTER 6P8
	4822 122 33141	POLYESTER 3P3
	4822 122 32148	POLYESTER 5P6
	4822 125 50062	TRIMMING CAPACITOR 10PF
	5322 122 32933	1NF 5%NP0 50V
	4822 122 32891	POLYESTER 68 N 50V

	4822 116 52415	RESISTOR 3K
	4822 111 30517	SAFETY RESISTOR 22E
	4822 111 30508	SAFETY RESISTOR 10E
	4822 111 30526	SAFETY RESISTOR 47E
	4822 111 30513	SAFETY RESISTOR 15E
	4822 111 30524	SAFETY RESISTOR 39E
3131	4822 100 11214	TRIMMING POTENTIOMETER 1K
3145	5322 101 14008	TRIMMING POTENTIOMETER 2K2
3152	4822 100 10254	TRIMMING POTENTIOMETER 1K
3210	4822 100 11214	TRIMMING POTENTIOMETER 1K
3234	4822 101 10859	TRIMMING POTENTIOMETER 10K
3269	4822 100 11214	TRIMMING POTENTIOMETER 1K

5101	4822 157 53266	COIL 3μH
5102	4822 156 10994	COIL 87μH
5103	4822 156 11007	COIL 212μH
5104	4822 156 11007	COIL 212μH
5105	4822 156 10997	COIL 1.7μH
5106	4822 156 21054	COIL 87UH
5107	4822 156 21147	COIL 7.2μH
5112	4822 156 21026	COIL 34 μH
5113	4822 156 21026	COIL 34 μH
5201	4822 156 11002	COIL 7.7μH
5202	4822 156 10998	COIL 3 μH
5203	4822 156 11001	COIL 6 μH
5204	4822 156 11001	COIL 6 μH
5205	4822 156 11001	COIL 6 μH
5206	4822 156 11001	COIL 6 μH
5207	4822 156 11001	COIL 6 μH
5208	4822 156 10998	COIL 3 μH
5401	4822 156 11003	COIL 12μH
5111	4822 320 40081	470 NSEC
5114	4822 157 53267	LOW-PASSFILTER 5.5MHZ

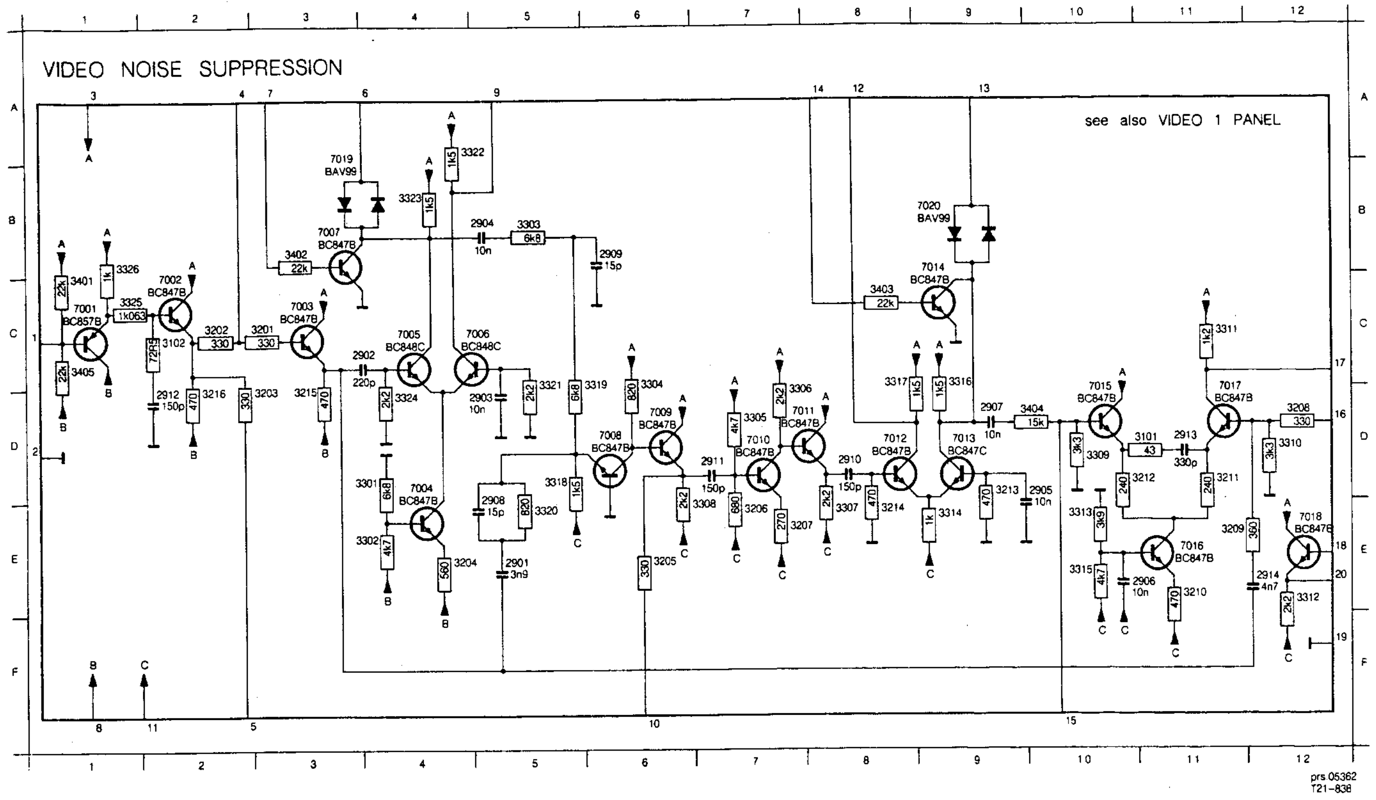
	4822 130 30621	1N4148
	4822 130 32227	BB112
6103	4822 130 33294	HZ9A2 8V2
6201	5322 130 34865	BZV46 1V5
6202	4822 130 33294	HZ9A2 8V2
6209	4822 130 32566	HZ11A3 10V0
6212	4822 130 32697	HZ6A3 5V6
6213	4822 130 32697	HZ6A3 5V6
6407	4822 130 32698	HZ6C2 6V2
6410	5322 130 32026	HZ12B2

7001	4822 209 72757	IC TDA3731/N1
7002	4822 209 11412	TL8704P
7003	4822 209 71275	CXL5001
7004	5322 209 82575	PC74HC74P
7005	4822 209 71316	UAA1031
7006	4822 209 71825	PA0017
7007	4822 209 71276	CXL1004
7008	4822 209 71316	UAA1031
7009	4822 209 81349	MC1458P1 (MTLA)
7010	4822 209 10247	MC14011BCP
7011	5322 209 10357	HEF4066BP
7012	4822 209 10866	HEF4428BP
7013	4822 209 10053	MC14081BCP
7014	4822 209 10247	MC14011BCP
7015	4822 209 71382	MC34002BP
7016	4822 209 71382	MC34002BP
7017	4822 209 10866	HEF4428BP
7018	4822 209 81091	MC14538BCP

4822 130 42353	BFS19
4822 130 42131	BF550
5322 130 41982	BC848B
4822 130 44196	BC548C
4822 130 60516	BC859C
4822 130 42513	BC858C
5322 130 44336	BSV52
5322 130 41983	BC858B
4822 130 40938	BC548
4822 130 42711	BC849B
4822 130 41594	PH2369
4822 130 60511	BC847B
5322 130 44647	BC368

VIDEO NOISE SUPPRESSION THICK FILM

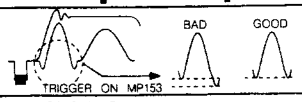
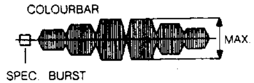
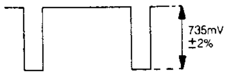
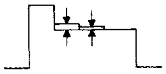
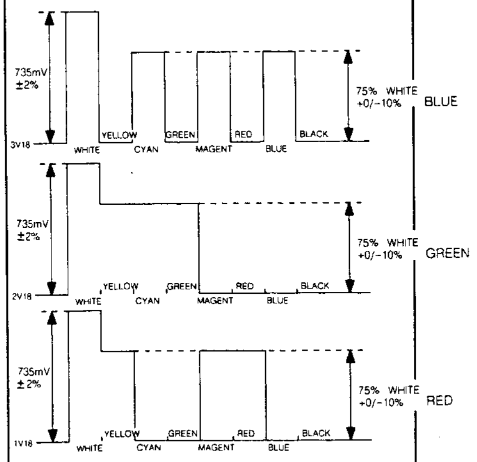
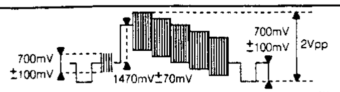
2901	E 5	2907	D 9	2913	D11	3203	D 3	3209	E11	3215	D 3	3305	D 7	3311	C11	3317	C 8	3323	B 4	3403	C 8	7004	D 4	7010	D 7	7016	E11
2902	C 4	2908	D 5	2914	E12	3204	E 4	3210	E11	3216	D 2	3306	D 8	3312	E12	3318	D 5	3324	D 4	3404	D10	7005	C 4	7011	D 8	7017	D11
2903	D 5	2909	B 6	3101	D11	3205	E 6	3211	D11	3301	D 4	3307	E 8	3313	E10	3319	C 6	3325	C 1	3405	C 1	7006	C 5	7012	D 8	7018	E12
2904	B 5	2910	D 8	3102	C 2	3206	E 7	3212	D11	3302	E 4	3308	E 7	3314	E 9	3320	E 5	3326	B 1	7001	C 1	7007	B 3	7013	D 9	7019	A 3
2905	D10	2911	D 7	3201	C 3	3207	E 8	3213	D 9	3303	B 5	3309	D10	3315	E10	3321	C 5	3401	C 1	7002	C 2	7008	D 6	7014	B 9	7020	B 9
2906	E11	2912	D 2	3202	C 2	3208	D12	3214	E 8	3304	C 6	3310	D12	3316	C 9	3322	A 5	3402	B 3	7003	C 3	7009	D 6	7015	D10		



MEASUREMENTS AND ADJUSTMENTS SYNC. GENERATOR

STEP	SIGNAL	MODE	◇	↗			REMARKS
1	FREQUENCY	STOP	150	5101	FREQ COUNTER		5MHz ±10kHz COARSE
2	DC-LEVEL	STOP	151	5101		3.5V ±50mV	FINE

MEASUREMENTS AND ADJUSTMENTS LUM/CHROM./R.G.B.

STEP	SIGNAL	MODE	◇	↗			REMARKS
1	LUMINANCE	VIDEO TEST DISC COLOURBAR STILL PICTURE	152	5203			ADJUST FOR A MINIMUM COLOUR SIGNAL
2	LUMINANCE	VIDEO TEST DISC PICT. NO 10427	152 153	5204			
3	CHROMINANCE	VIDEO TEST DISC COLOURBAR STILL PICTURE	154	5202			ADJUST FOR MAXIMUM CHROMINANCE
4	R.G.B.	VIDEO TEST DISC WHITE PICTURE STILL PICTURE	156	3265			
5	VENETIAN BLINDS	VIDEO TEST DISC COLOURBAR STILL PICTURE	TV SCREEN	3237			ADJUST FOR MINIMUM "BLINDS" IN THE MAGENTA COLOUR
6	R.G.B.	VIDEO TEST DISC COLOURBAR STILL PICTURE	156	5205 OR 5206			ADJUST FOR MINIMAL JITTER
7	SUB CARRIER	VIDEO TEST DISC COLOURBAR	157	2221	FREQ. COUNTER 8.86MHz		
8	R G B	VIDEO TEST DISC COLOURBAR	156 158 159				
9	C.V.B.S	VIDEO TEST DISC COLOURBAR	161				
10	SUB CARRIER CVBS MOD	VIDEO TEST DISC COLOURBAR	162	2250	FREQ COUNTER 4.433619MHz ±30Hz		
11	AUDIO L+R	VIDEO TEST DISC PICT NO 4615-5399 A-B REP	163 164	3006 3026	R M S CINCH 625mV SCART 310mV		PM6309 DISTORTION METER
12	AUDIO DISTORTION	VIDEO TEST DISC PICT NO 4615-5399 A-B REP	163 164	5001 5002	≳0.6%		PM6309 DISTORTION METER

PARTSLIST VIDEO I-4

⊣⊢

	4822 122 10177	10NF 20% 25V
	4822 121 51053	2NF 1% 250V
	4822 122 10166	TUBULAR 22N 16V
	4822 122 33156	100NF 63V
2221	4822 125 50045	TRIMMING CAPACITOR 1.8-22PF 250V
2250	4822 125 50207	TRIMMING CAPACITOR 2-33PF 250V

▭

3006	4822 100 11215	TRIMMING POTENTIOMETER 20K
3026	4822 100 11215	TRIMMING POTENTIOMETER 20K
3237	4822 100 11214	TRIMMING POTENTIOMETER 1K
	4822 111 30508	10E 5% 0.33W
	4822 111 30508	10E 5% 0.33W
	4822 111 30499	4E7 5% 0.33W
	4822 116 53027	5K6 1% 0.6W
	4822 111 30483	SAFETY RESISTOR 1E PM5

⌇

5001	4822 156 11004	COIL 26.5 µH
5001	4822 157 53135	C3TV-FN 205.0 µH
5002	4822 157 53136	C3TV-FN 136.0 µH
5002	4822 156 11004	COIL 26.5 µH
5003	4822 157 53516	COIL 8.2 µH
5003	4822 156 11004	COIL 26.5 µH
5004	4822 157 53516	COIL 8.2 µH
5005	4822 157 53137	COIL 81.0 µH
5006	4822 156 11004	COIL 26.5 µH
5007	4822 156 11004	COIL 26.5 µH
5011	4822 242 71658	BAND PASS FILTER 684 KHZ
5012	4822 242 71659	BAND PASS FILTER 1066 KHZ
5101	4822 157 53257	COIL 37.0 µH
5201	4822 157 51247	COIL 150 µH
5202	4822 157 52874	COIL 12.5 µH L2
5203	4822 157 52873	COIL 5.5 µH L1
5204	4822 157 52875	COIL 66 µH L3
5205	4822 157 53131	COIL 10.9 µH
5206	4822 157 53258	COIL 11.0 µH
5207	4822 157 53259	COIL 166 NNF 10264
5208	4822 157 53217	COIL 7.04 µH
5209	4822 158 10604	COIL 6.8 µH
5210	4822 157 50963	COIL 2.2 µH
5301	4822 320 40051	DELAY LINE 771
5302	4822 320 40131	DELAY LINE 390
5303	4822 320 40131	DELAY LINE 270
5401	4822 242 70626	8.867238 MHZ
5402	4822 242 72045	4.433619 MHZ

⊗

	5322 130 31684	BB809
	4822 130 30621	1N4148
	5322 130 41982	BC848B
	4822 130 44197	BC558B
	4822 130 60887	BF 840
	4822 130 40937	BC548B
	5322 130 41983	BC858B

▤

7501	4822 209 72422	HA12083NT
7601	5322 209 11316	IC PC74HCT03P
7602	4822 209 72042	MC78L05ACP
7603	4822 209 81091	MC 14538BCP
7604	5322 209 81468	SAA1043P
7605	4822 209 72424	MC14049UBCP
7701	4822 209 71518	TDA3561
7702	4822 209 72419	MC1377

Video 2 Version 4/05

⊣⊢

	4822 122 10177	10NF 20% 25V
	4822 121 51053	2NF 1% 250V
	4822 122 10166	22N 16V
	4822 122 33156	100NF 63V
	4822 125 50207	TRIMMING CAPACITOR 2-33PF 250V
	4822 125 50045	TRIMMING CAPACITOR 1.8-22PF 250V

▭

	4822 111 30508	10E 5% 0.33W
	4822 111 30499	4E7 5% 0.33W
	4822 116 53027	5K6 1% 0.6W
	4822 111 30483	1E
3006	4822 100 11215	TRIMMING POTENTIOMETER 20K
3026	4822 100 11215	TRIMMING POTENTIOMETER 20K
3237	4822 100 11214	TRIMMING POTENTIOMETER 1K

⌇

	4822 156 11004	COIL 26.5 µH
	4822 157 53516	COIL 8.2 µH
	4822 157 53137	COIL 81.0 µH
	4822 157 53135	COIL 205.0 µH
	4822 157 53136	COIL 136.0 µH
	4822 242 71658	BAND PASS 684 KHZ
	4822 242 71659	BAND PASS 1066 KHZ
	4822 157 53257	COIL 37.0 µH
	4822 157 51247	COIL 150 µH
	4822 157 52874	COIL 12.5 µH L2
	4822 157 52873	COIL 5.5 µH L1
	4822 157 52875	COIL 66 µH L3
	4822 157 53131	COIL 10.9 µH
	4822 157 53258	COIL 11.0 µH
	4822 157 53259	COIL 166 NNF 10264
	4822 157 53217	COIL 7.04 µH
	4822 158 10604	COIL 0.8 µH
	4822 157 50963	COIL 6.8 µH
5301	4822 320 40051	DELAY LINE 711
5302	4822 320 40131	DELAY LINE 390
5303	4822 320 40131	DELAY LINE 270
5401	4822 242 70626	X-TAL 8.867238 MHZ
5402	4822 242 72045	X-TAL 4.433619 MHZ

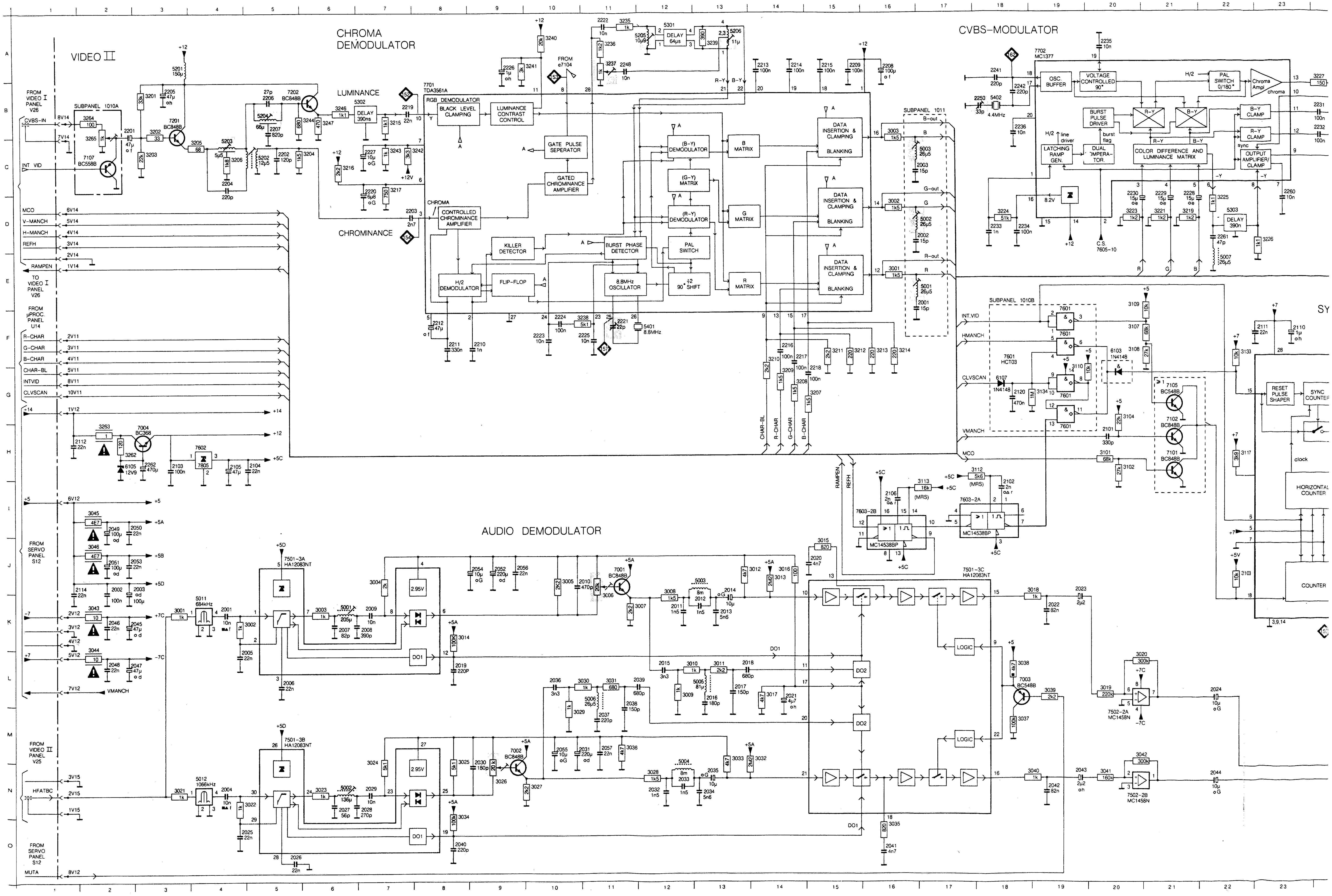
⊗

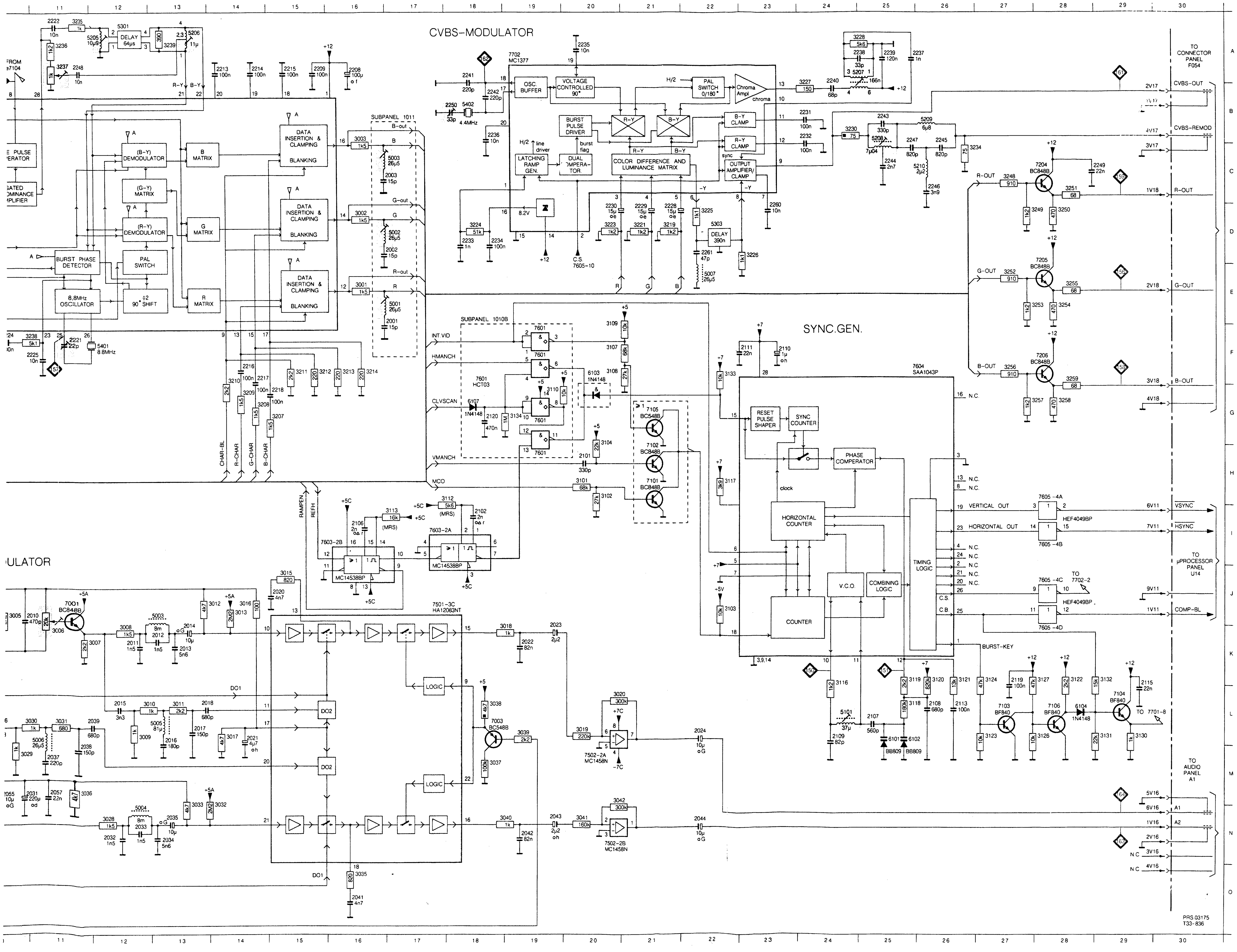
	5322 130 31684	BB809
	4822 130 30621	1N4148

▤

	5322 130 41982	BC848B
	4822 130 44197	BC558B
	5322 130 41982	BC848B
	4822 130 60887	BF840
	4822 130 40937	BC548B
7601	4822 209 72422	HA12083NT
7602	4822 209 72042	MC78L05ACP
7603	4822 209 81091	MC 14538BCP
7604	5322 209 81468	SAA1043P
7605	4822 209 72424	MC14049BCP
7701	4822 209 71518	TDA3561
7702	4822 209 72419	MC1377

CIRCUIT DIAGRAM VIDEO II-4





2001	K 3
2002	M 3
2003	M 3
2004	N 3
2005	L 3
2006	L 4
2007	K 5
2008	K 5
2009	K 5
2010	J11
2011	K12
2012	K13
2013	K13
2014	J13
2015	L12
2016	L13
2017	L13
2018	L13
2019	L11
2020	J15
2021	L14
2022	K19
2023	J19
2024	L22
2025	O 3
2026	O 4
2027	N 5
2028	N 5
2029	N 5
2030	N 7
2031	M 9
2032	N10
2033	N11
2034	N11
2035	N11
2036	L 9
2037	M 9
2038	L10
2039	L10
2040	O 7
2041	O16
2042	N19
2043	N19
2044	N22
2045	L22
2046	L21
2047	M22
2048	M21
2049	I 5
2050	I 5
2051	I 5
2052	J 8
2053	I 5
2054	J 7
2055	M 9
2056	J 8
2057	M10
2101	G19
2102	I 18
2103	I 12
2104	I 14
2105	I 14
2106	I 16
2107	L25
2108	L26
2109	L24
2110	F22
2111	F23
2112	H 3
2113	L26
2114	I 3
2115	K29
2119	K27
2201	C 2
2202	C 5
2203	D 7
2204	C 4
2205	B 2
2206	B 4
2207	B 5
2208	A16
2209	A16
2210	F 9
2211	E 8
2212	F 8
2213	A14
2214	A14
2215	A15
2216	F14
2217	F14
2218	G15
2219	B 7
2220	C 7
2221	F11
2222	A11
2223	F10
2224	F10
2225	F11
2226	A 9
2227	C 7
2228	D21
2229	D21
2230	D20
2231	B24
2232	B24
2233	D18
2234	D18
2235	A20
2236	B18
2237	A26
2238	A25
2239	A25
2240	A24
2241	A18
2242	B18
2243	B25
2244	C25
2245	B26
2246	C26
2247	B25
2248	A11
2249	C29
2250	B17
2260	D23
2260	A21
3001	K 2
3002	K 3
3003	K 4
3004	J 5
3005	J10
3006	J11
3007	L12
3008	J12
3009	L12
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3011	L13
3012	J14
3013	J14
3014	K11
3015	J15
3016	J14
3017	L14
3018	J19
3019	L20
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3022	N 3
3023	N 4
3024	N 5
3025	N 7
3026	N 8
3027	L 8
3028	N10
3029	M 9
3030	L 9
3031	L10
3032	M12
3033	M12
3034	O 7
3035	O16
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3037	M18
3038	L18
3039	L19
3040	N19
3041	N20
3042	M20
3043	K21
3044	M21
3045	H 4
3046	I 4
3101	H19
3102	H20
3103	J22
3104	G20
3106	G20
3107	F20
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3113	I 17
3116	K24
3117	H22
3118	L26
3119	K26
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3122	K28
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3131	L29
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3133	G22
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3203	C 2
3204	C 5
3205	C 3
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3222	D20
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3224	D18
3225	D22
3226	D23
3227	A24
3228	A25
3229	A27
3230	B24
3232	B28
3233	B28
3234	C27
3235	A11
3236	A11
3237	A11
3238	F11
3239	A13
3240	A10
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3243	C 7
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3246	B 6
3247	B 6
3248	C27
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3253	E28
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3257	G28
3258	G28
3259	F28
3261	A28
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5005	L13
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5210	C26
5301	A12
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5402	B18
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6102	L25
6103	E20
6104	L28
7001	L11
7002	L 8
7003	L18
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7103	L27
7104	L29
7105	G21
7106	L28
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7601	G19
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7602	I 13
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7603	I 17
7604	F26
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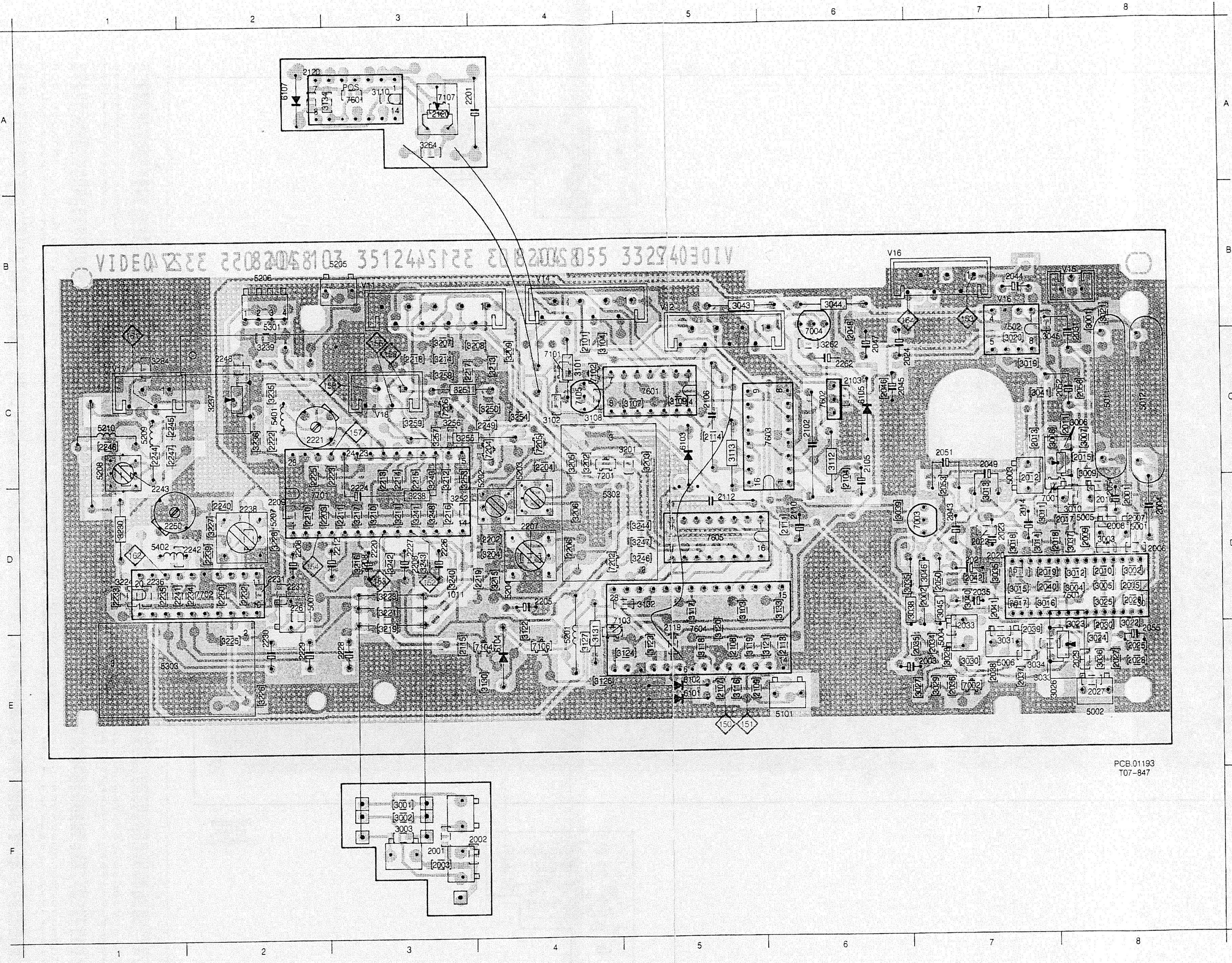
7701	B 8
7702	A19

PRINT LAY-OUT COMP. SIDE VIDEO II-4



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2007	D 8	2224	D 3	3121	E 5	6103	C 5
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2009	D 8	2226	D 3	3123	E 5	6105	C 6
2010	D 8	2227	D 3	3124	E 5	6107	A 2
2011	C 8	2228	E 3	3126	E 4	7001	D 7
2012	D 7	2229	E 2	3127	E 4	7002	E 7
2013	C 7	2230	E 2	3130	E 4	7003	D 7
2014	D 7	2231	D 2	3131	E 4	7004	B 6
2015	C 8	2232	D 2	3132	D 5	7101	C 4
2016	D 8	2233	D 1	3133	D 6	7102	C 4
2017	D 8	2234	D 2	3134	A 3	7103	D 5
2018	D 7	2235	D 1	3201	C 4	7104	E 4
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2020	D 7	2237	D 2	3203	C 5	7106	E 4
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2035	D 7	2261	D 2	3219	D 3	7701	D 2
2035	E 7	2262	C 6	3221	D 3	7702	D 2
2036	E 7	3001	B 8	3223	D 3	POS	A 3
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2105	C 6	3023	D 8	3254	C 4		
2106	C 5	3024	E 8	3255	C 3		
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2111	D 6	3029	E 7	3262	C 6		
2112	D 5	3030	E 7	3264	A 3		
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2208	D 3	3046	D 7	5202	C 4		
2209	D 2	3101	C 4	5203	C 4		
2210	D 2	3102	C 4	5204	D 4		
2211	D 3	3103	D 5	5205	B 3		
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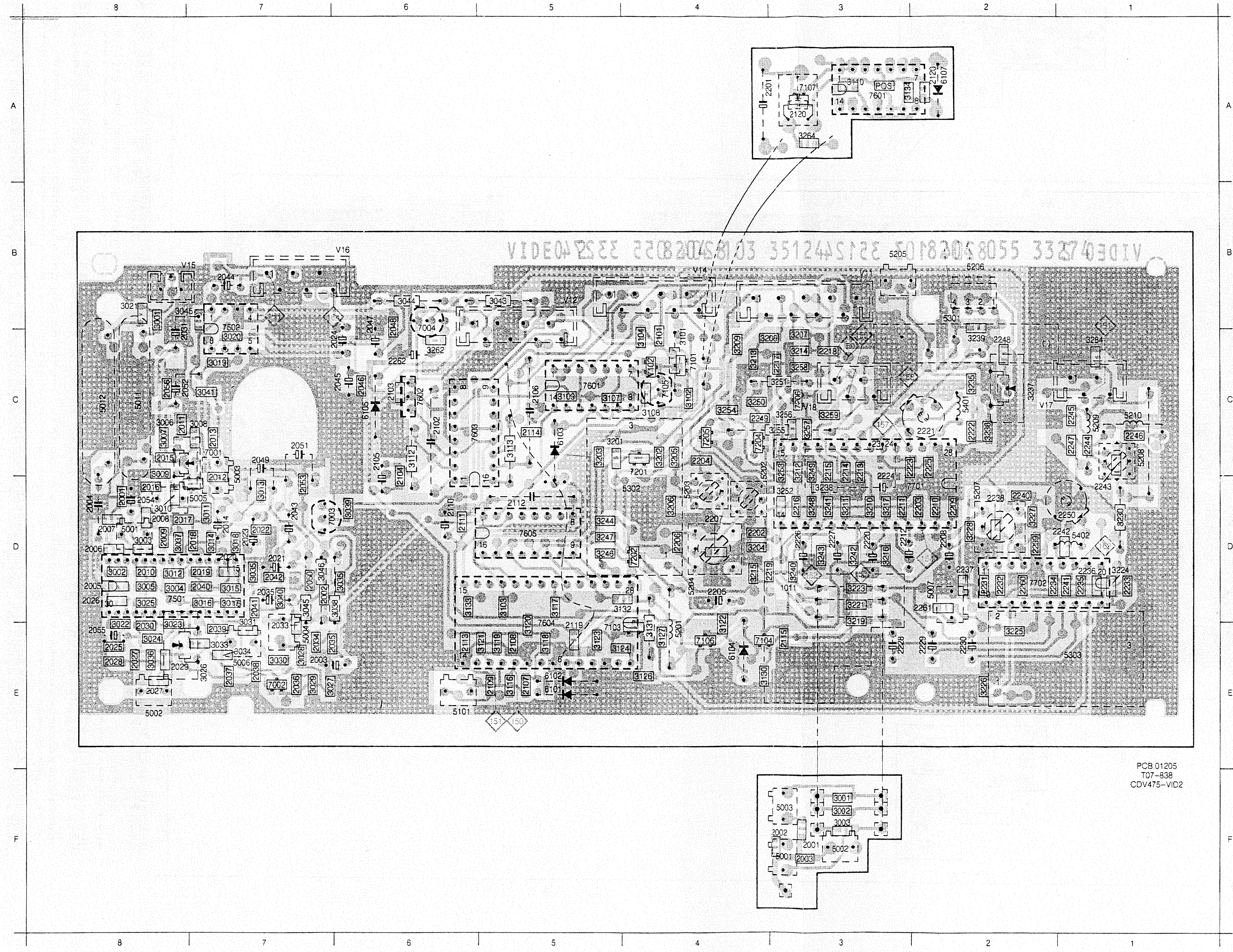
PRINT LAY-OUT CHIP SIDE VIDEO II-4



PCB 01205
T07-838
CDV475-VID2

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2002	D 7	2217	C 3	3112	C 6	5301	B 2
2002	F 3	2218	C 3	3113	C 5	5302	D 4
2003	E 7	2219	D 4	3116	E 5	5303	E 1
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2004	D 8	2221	C 2	3118	E 5	5402	D 1
2005	D 8	2222	C 2	3119	E 5	6101	E 5
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2007	D 8	2224	D 3	3121	E 5	6103	C 5
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2011	C 8	2228	E 3	3126	E 4	7001	D 7
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2020	D 7	2237	D 2	3203	C 5	7106	E 4
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2110	D 6	3028	E 7	3259	C 3		
2111	D 6	3029	E 7	3262	C 6		
2112	D 5	3030	E 7	3264	A 3		
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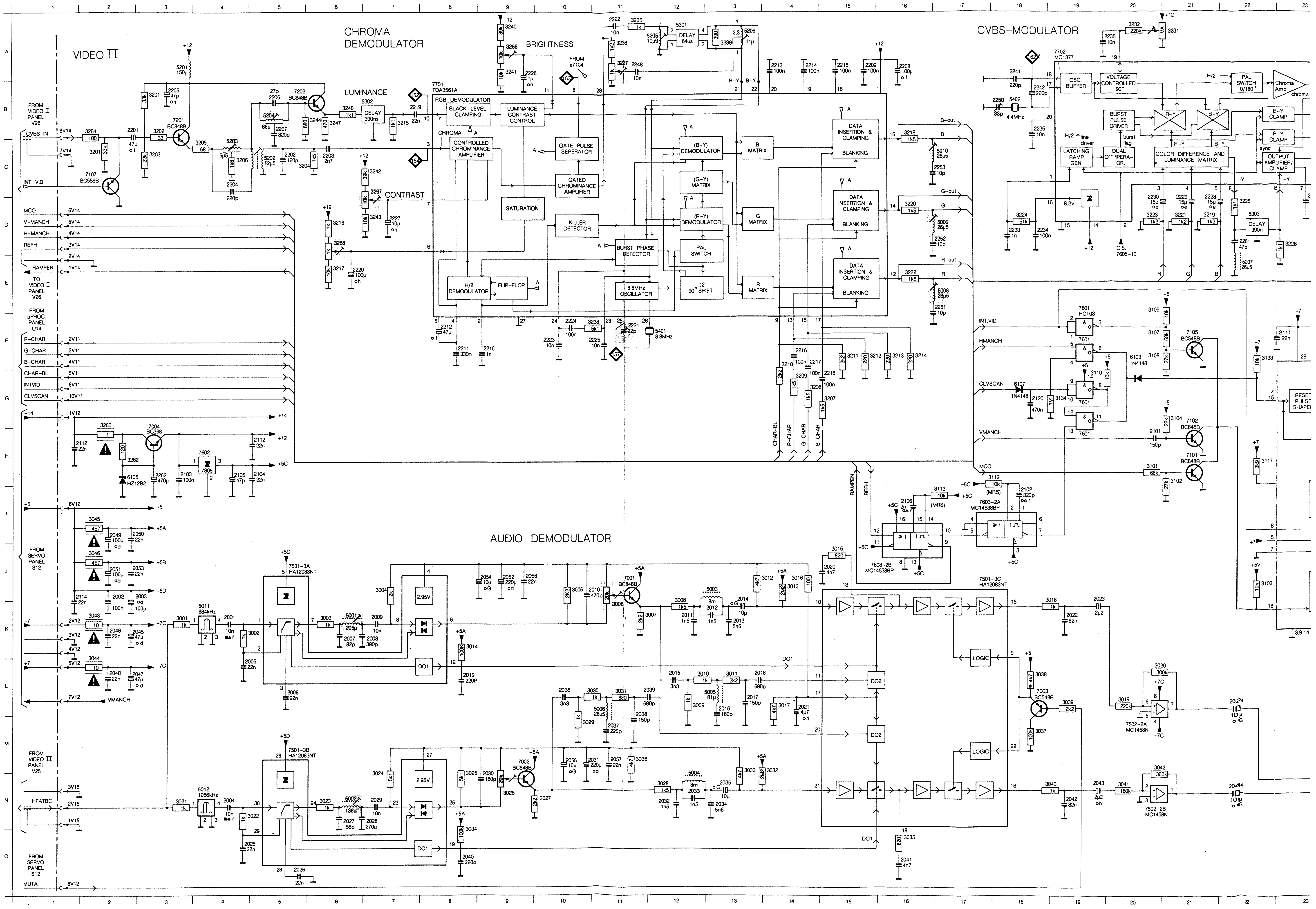
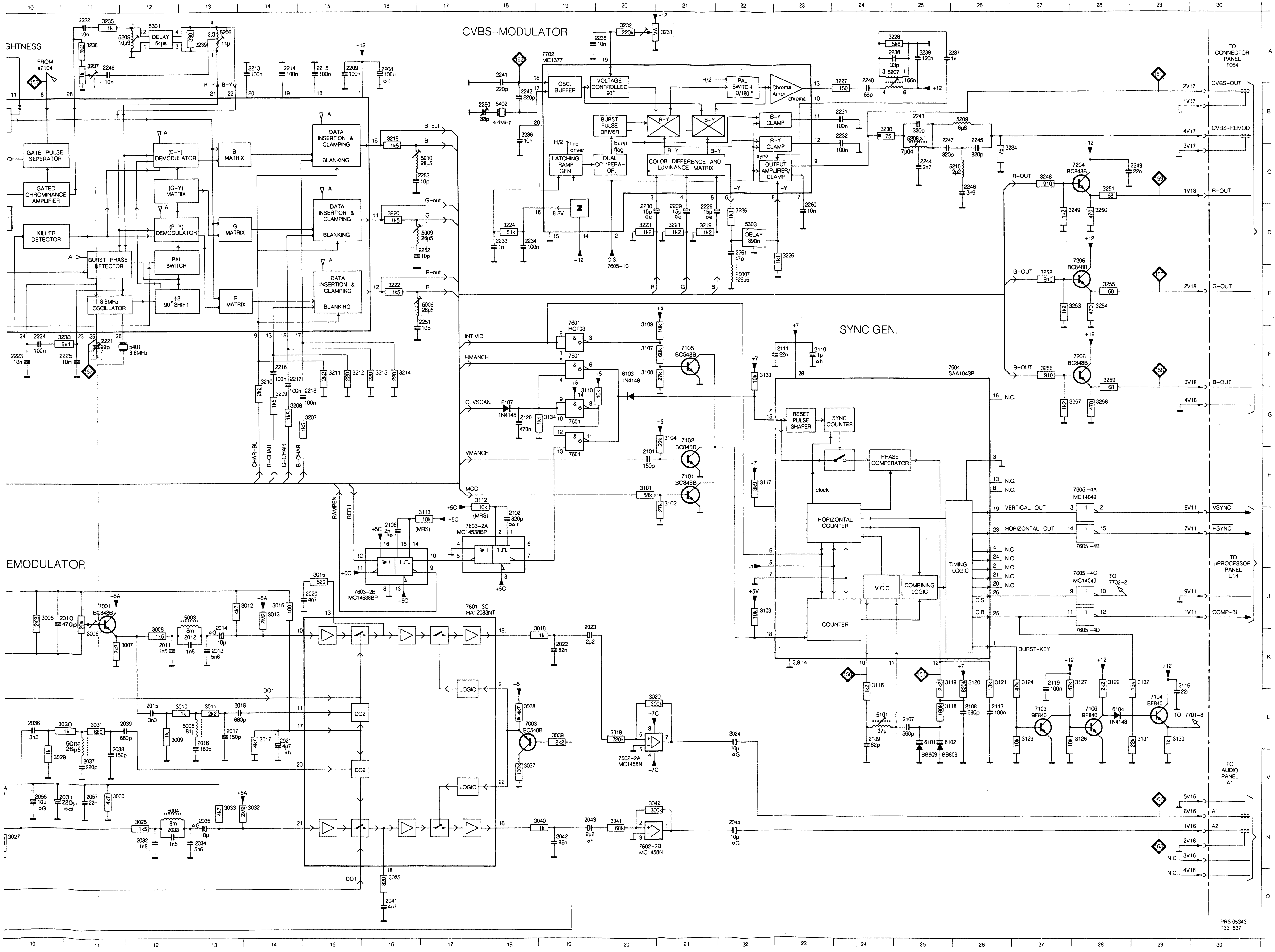
CIRCUIT DIAGRAM VIDEO II-5





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2007	K 6	3024	N 7	7003	L18
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2012	K13	3029	M10	7104	L29
2013	K13	3030	L11	7105	F21
2014	J13	3031	L11	7106	L28
2015	L12	3032	M14	7107	C 2
2016	L13	3033	M13	7201	B 3
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2020	J15	3037	M18	7206	F28
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2023	J19	3040	N19	7501	J17
2024	L22	3041	N20	7601	E19
2025	O 5	3042	M20	7601	F19
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2049	I 2	3126	L28		
2050	I 3	3127	K28		
2051	J 2	3130	L29		
2052	J 9	3131	L29		
2053	J 3	3132	K29		
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2101	H20	3202	B 3		
2102	I 18	3203	C 3		
2103	H 3	3204	C 6		
2104	H 5	3205	C 4		
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2217	F14	3238	F11		
2218	G15	3239	A13		
2219	B 7	3240	A 9		
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2221	F11	3242	C 7		
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2224	F10	3246	B 6		
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2237	A26	3259	F28		
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2239	A25	3263	G 2		
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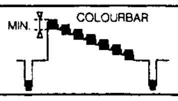
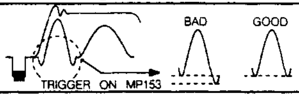
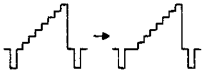
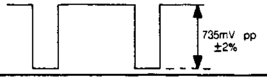
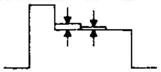
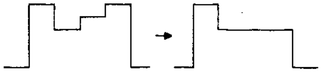
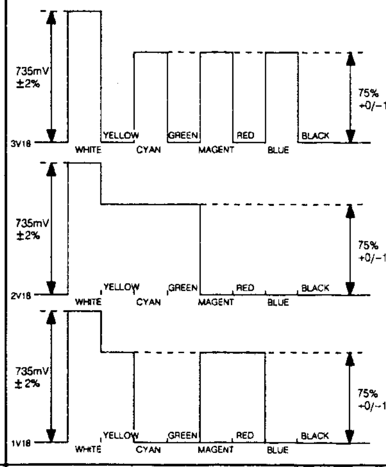
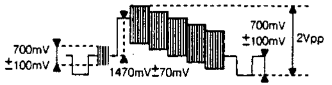
3015	J15	5402	B18		
3016	J14	6101	L25		
3017	L14	6102	L25		

VIDEO II
MEASUREMENTS AND ADJUSTMENTS SYNC. GENERATOR

STEP	SIGNAL	MODE	◇	↗	▭	▣	REMARKS
1	FREQUENCY	STOP	150	5101	FREQ. COUNTER		5MHz ± 10kHz COARSE
2	DC-LEVEL	STOP	151	5101		3,5V ±50mV	FINE

MEASUREMENTS AND ADJUSTMENTS LUM./CHROM./R.G.B.

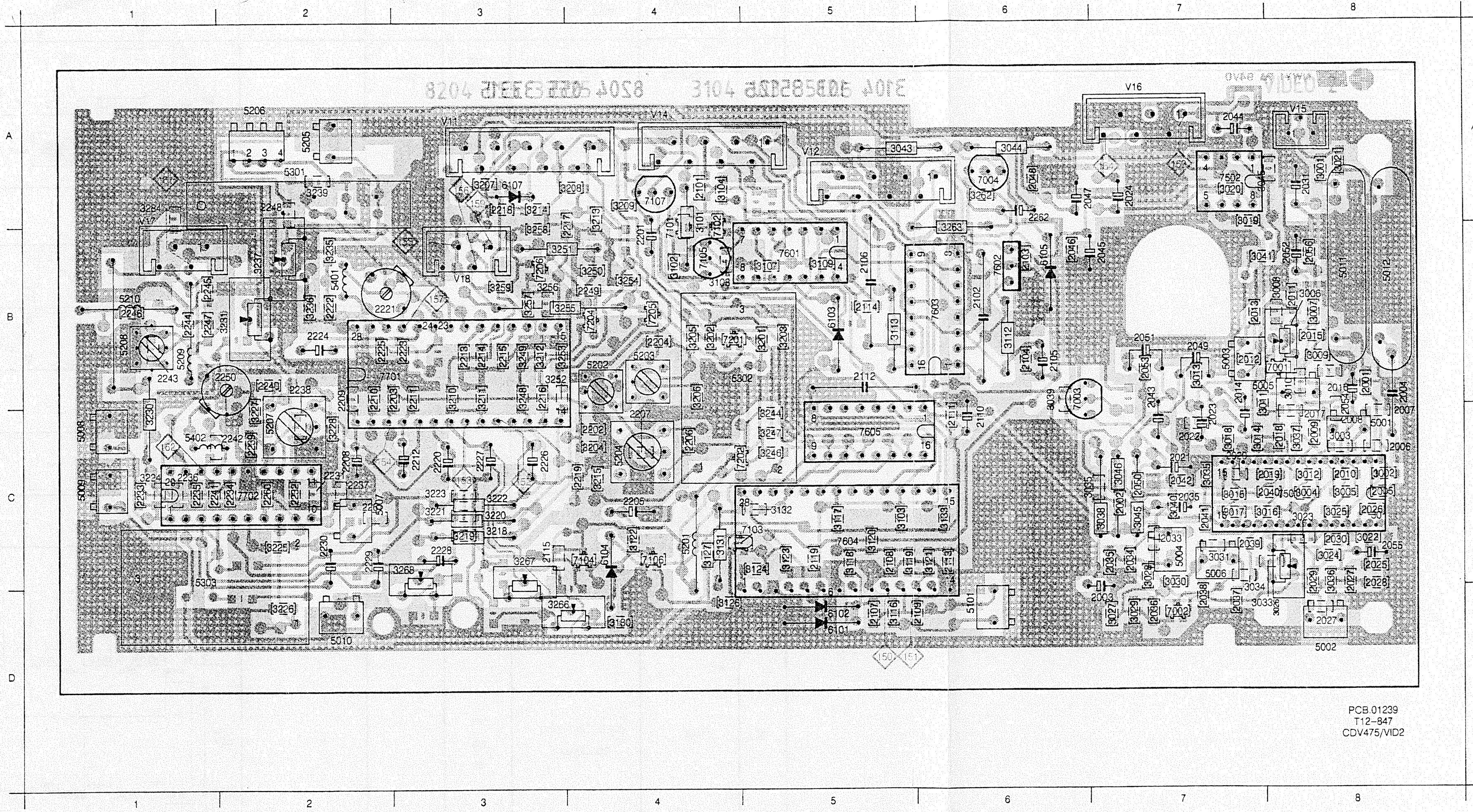
STEP	SIGNAL	MODE	◇	↗	▭	▣	REMARKS
1	LUMINANCE	VIDEO TEST DISC COLOURBAR STILL PICTURE	152	5203			ADJUST FOR A MINIMUM COLOUR SIGNAL
2	LUMINANCE	VIDEO TEST DISC PICT. NO 10427	152 153	5204			
3	CHROMINANCE	VIDEO TEST DISC COLOURBAR STILL PICTURE	154	5202			ADJUST FOR MAXIMUM CHROMINANCE
4	VENETIAN BLINDS	VIDEO TEST DISC COLOURBAR STILL PICTURE	TV SCREEN	3237			ADJUST FOR MINIMUM "BLINDS" IN THE MAGENTA COLOUR
5	BRIGHTNESS	VIDEO TEST DISC GREY-SCALE STILL PICTURE	156	3266			BLANKING LEVEL = BLACK LEVEL
6	CONTRAST	VIDEO TEST DISC WHITE PICTURE STILL PICTURE	156	3267			
7	R.G.B.	VIDEO TEST DISC COLOURBAR STILL PICTURE	156	5205 OR 5206			ADJUST FOR MINIMAL JITTER
8	SATURATION	VIDEO TEST DISC COLOURBAR STILL PICTURE	156	3268			
9	SUB. CARRIER	VIDEO TEST DISC COLOURBAR	157	2221	FREQ. COUNTER 8.86MHz		
10	R.G.B.	VIDEO TEST DISC COLOURBAR	156 158 159				BLUE GREEN RED
11	C.V.B.S.	VIDEO TEST DISC COLOURBAR	161				
12	SUB. CARRIER CVBS.MOD	VIDEO TEST DISC COLOURBAR	162	2250	FREQ. COUNTER 4,433619MHz ±30Hz		

MEASUREMENTS AND ADJUSTMENTS AUDIO

STEP	SIGNAL	MODE	◇	↗	▭	▣	REMARKS
1	AUDIO L+R	VIDEO TEST DISC PICT.NO 4615-5399 A-B REP.	163 164	3006 3026	R.M.S. CINCH 625mV SCART 310mV		PM6309 DISTORTION METER
2	AUDIO DISTORTION	VIDEO TEST DISC PICT.NO 4615-5399 A-B REP.	163 164	5001 5002	≥0.6%		PM6309 DISTORTION METER

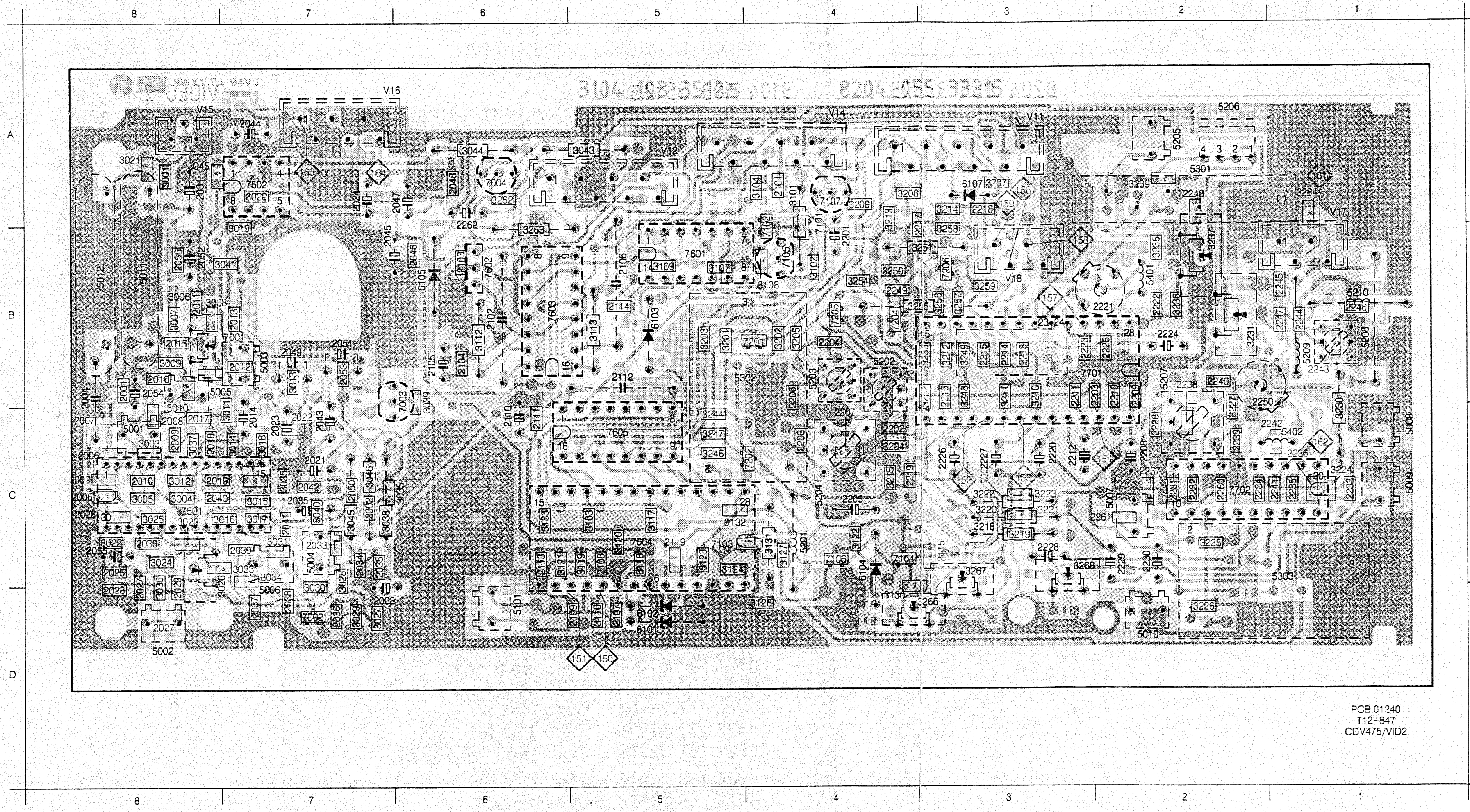
MDA 01593
T32-840

PRINT LAY-OUT COMP. SIDE VIDEO II-5



2001	B 8	2109	D 5	3005	C 8	3133	C 6	5010	D 2
2002	C 7	2110	C 6	3006	B 8	3201	B 5	5011	B 8
2003	D 7	2111	C 6	3007	B 8	3202	B 4	5012	B 8
2004	B 8	2112	B 5	3008	B 8	3203	B 5	5101	D 6
2005	C 8	2113	C 6	3009	B 8	3204	C 4	5201	C 4
2006	C 8	2114	B 5	3010	B 8	3205	B 4	5202	B 4
2007	C 8	2115	C 3	3011	B 7	3206	B 4	5203	B 4
2008	C 8	2119	C 5	3012	C 8	3207	A 3	5204	C 4
2009	C 8	2201	B 4	3013	B 7	3208	A 4	5205	A 2
2010	C 8	2202	C 4	3014	C 7	3209	A 4	5206	A 2
2011	B 8	2203	B 2	3015	C 7	3210	B 3	5207	C 2
2012	B 7	2204	B 4	3016	C 8	3211	B 3	5208	B 1
2013	B 7	2205	C 4	3017	C 7	3212	B 3	5209	B 1
2014	B 7	2206	C 4	3018	C 7	3213	A 4	5210	B 1
2015	B 8	2207	C 4	3019	A 7	3214	A 3	5301	A 2
2016	B 8	2208	C 2	3020	A 7	3215	C 4	5302	B 5
2017	C 8	2209	C 2	3021	A 8	3217	B 3	5303	C 1
2018	C 8	2210	B 2	3022	C 8	3218	C 3	5401	B 2
2019	C 8	2211	B 3	3023	C 8	3219	C 3	5402	C 1
2020	C 7	2212	C 3	3024	C 8	3220	C 3	6101	D 5
2021	C 7	2213	B 3	3025	C 8	3221	C 3	6102	D 5
2022	C 7	2214	B 3	3026	D 8	3222	C 3	6103	B 5
2023	C 7	2215	B 3	3027	D 7	3223	C 3	6104	C 4
2024	A 7	2216	B 3	3028	C 7	3224	C 1	6105	B 6
2025	C 8	2217	A 4	3029	D 7	3225	C 2	6107	A 3
2026	C 8	2218	A 3	3030	C 7	3226	D 2	7001	B 8
2027	D 8	2219	C 4	3031	C 7	3227	B 2	7002	D 7
2027	C 8	2220	C 3	3033	D 7	3228	C 2	7003	C 7
2028	D 8	2221	B 2	3034	D 7	3230	C 1	7004	A 6
2029	C 8	2222	B 2	3035	C 6	3231	B 2	7101	B 4
2030	C 8	2223	B 3	3035	C 7	3235	B 2	7102	A 4
2031	A 8	2224	B 2	3036	C 8	3236	B 2	7103	C 5
2033	C 7	2225	B 2	3037	C 8	3237	B 2	7104	C 4
2034	C 7	2226	C 3	3038	C 7	3239	A 2	7105	B 4
2035	C 7	2227	C 3	3039	B 6	3241	B 3	7106	C 4
2035	C 7	2228	C 3	3040	C 7	3244	C 5	7107	A 4
2036	D 7	2229	C 2	3041	B 7	3246	C 5	7201	B 4
2037	D 7	2230	C 2	3043	A 5	3247	C 5	7202	C 4
2038	D 7	2231	C 2	3044	A 6	3248	B 3	7204	B 4
2039	C 7	2232	C 2	3045	C 7	3249	B 3	7205	B 4
2040	C 8	2233	C 1	3045	A 7	3250	B 4	7206	B 3
2041	C 7	2234	C 2	3046	C 7	3251	B 4	7501	C 8
2042	C 7	2235	C 1	3101	A 4	3252	B 3	7502	A 7
2043	B 7	2236	C 1	3102	B 4	3253	B 3	7601	B 5
2044	A 7	2237	C 2	3103	C 5	3254	B 4	7602	B 6
2045	B 7	2238	B 2	3104	A 4	3255	B 4	7603	B 6
2046	B 6	2239	C 2	3107	B 5	3256	B 3	7604	C 5
2047	A 6	2240	B 2	3108	B 4	3257	B 3	7605	C 5
2048	A 6	2241	C 1	3109	B 5	3258	B 3	7701	B 3
2049	B 7	2242	C 2	3112	B 6	3259	B 3	7702	C 2
2050	C 7	2243	B 1	3113	B 5	3262	A 6	V15	A 8
2051	B 7	2244	B 1	3116	D 5	3263	B 6	V16	A 7
2052	B 8	2245	B 1	3117	C 5	3266	D 3	V17	A 1
2053	B 7	2246	B 1	3118	C 5	3267	C 3	V18	B 3
2054	B 8	2247	B 1	3119	C 5	3268	C 3		
2055	C 8	2248	A 2	3120	C 5	3284	A 1		
2056	B 8	2249	B 4	3121	C 6	5001	C 8		
2101	A 4	2250	B 2	3122	C 4	5002	D 8		
2102	B 6	2260	C 2	3123	C 5	5003	B 7		
2103	B 6	2261	C 2	3124	C 5	5004	C 7		
2104	B 6	2262	A 6	3126	D 4	5005	C 8		
2105	B 6	3001	A 8	3127	C 4	5006	C 7		
2106	B 5	3002	C 8	3130	D 4	5007	C 2		
2107	D 5	3003	C 8	3131	C 4	5008	C 1		
2108	C 5	3004	C 8	3132	C 5	5009	C 1		

PRINT LAY-OUT COMP-SIDE VIDEO II-5



2001	B 8	2109	D 5	3005	C 8	3133	C 6	5010	D 2
2002	C 7	2110	C 6	3006	B 8	3201	B 5	5011	B 8
2003	D 7	2111	C 6	3007	B 8	3202	B 4	5012	B 8
2004	B 8	2112	B 5	3008	B 8	3203	B 5	5101	D 6
2005	C 8	2113	C 6	3009	B 8	3204	C 4	5201	C 4
2006	C 8	2114	B 5	3010	B 8	3205	B 4	5202	B 4
2007	C 8	2115	C 3	3011	B 7	3206	B 4	5203	B 4
2008	C 8	2119	C 5	3012	C 8	3207	A 3	5204	C 4
2009	C 8	2201	B 4	3013	B 7	3208	A 4	5205	A 2
2010	C 8	2202	C 4	3014	C 7	3209	A 4	5206	A 2
2011	B 8	2203	B 2	3015	C 7	3210	B 3	5207	C 2
2012	B 7	2204	B 4	3016	C 8	3211	B 3	5208	B 1
2013	B 7	2205	C 4	3017	C 7	3212	B 3	5209	B 1
2014	B 7	2206	C 4	3018	C 7	3213	A 4	5210	B 1
2015	B 8	2207	C 4	3019	A 7	3214	A 3	5301	A 2
2016	B 8	2208	C 2	3020	A 7	3215	C 4	5302	B 5
2017	C 8	2209	C 2	3021	A 8	3217	B 3	5303	C 1
2018	C 8	2210	B 2	3022	C 8	3218	C 3	5401	B 2
2019	C 8	2211	B 3	3023	C 8	3219	C 3	5402	C 1
2020	C 7	2212	C 3	3024	C 8	3220	C 3	6101	D 5
2021	C 7	2213	B 3	3025	C 8	3221	C 3	6102	D 5
2022	C 7	2214	B 3	3026	D 8	3222	C 3	6103	B 5
2023	C 7	2215	B 3	3027	D 7	3223	C 3	6104	C 4
2024	A 7	2216	B 3	3028	C 7	3224	C 1	6105	B 6
2025	C 8	2217	A 4	3029	D 7	3225	C 2	6107	A 3
2026	C 8	2218	A 3	3030	C 7	3226	D 2	7001	B 8
2027	D 8	2219	C 4	3031	C 7	3227	B 2	7002	D 7
2027	C 8	2220	C 3	3033	D 7	3228	C 2	7003	C 7
2028	D 8	2221	B 2	3034	D 7	3230	C 1	7004	A 6
2029	C 8	2222	B 2	3035	C 6	3231	B 2	7101	B 4
2030	C 8	2223	B 3	3035	C 7	3235	B 2	7102	A 4
2031	A 8	2224	B 2	3036	C 8	3236	B 2	7103	C 5
2033	C 7	2225	B 2	3037	C 8	3237	B 2	7104	C 4
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2035	C 7	2227	C 3	3039	B 6	3241	B 3	7106	C 4
2035	C 7	2228	C 3	3040	C 7	3244	C 5	7107	A 4
2036	D 7	2229	C 2	3041	B 7	3246	C 5	7201	B 4
2037	D 7	2230	C 2	3043	A 5	3247	C 5	7202	C 4
2038	D 7	2231	C 2	3044	A 6	3248	B 3	7204	B 4
2039	C 7	2232	C 2	3045	C 7	3249	B 3	7205	B 4
2040	C 8	2233	C 1	3045	A 7	3250	B 4	7206	B 3
2041	C 7	2234	C 2	3046	C 7	3251	B 4	7501	C 8
2042	C 7	2235	C 1	3101	A 4	3252	B 3	7502	A 7
2043	B 7	2236	C 1	3102	B 4	3253	B 3	7601	B 5
2044	A 7	2237	C 2	3103	C 5	3254	B 4	7602	B 6
2045	B 7	2238	B 2	3104	A 4	3255	B 4	7603	B 6
2046	B 6	2239	C 2	3107	B 5	3256	B 3	7604	C 5
2047	A 6	2240	B 2	3108	B 4	3257	B 3	7605	C 5
2048	A 6	2241	C 1	3109	B 5	3258	B 3	7701	B 3
2049	B 7	2242	C 2	3112	B 6	3259	B 3	7702	C 2
2050	C 7	2243	B 1	3113	B 5	3262	A 6	V15	A 8
2051	B 7	2244	B 1	3116	D 5	3263	B 6	V16	A 7
2052	B 8	2245	B 1	3117	C 5	3266	D 3	V17	A 1
2053	B 7	2246	B 1	3118	C 5	3267	C 3	V18	B 3
2054	B 8	2247	B 1	3119	C 5	3268	C 3		
2055	C 8	2248	A 2	3120	C 5	3284	A 1		
2056	B 8	2249	B 4	3121	C 6	5001	C 8		
2101	A 4	2250	B 2	3122	C 4	5002	D 8		
2102	B 6	2260	C 2	3123	C 5	5003	B 7		
2103	B 6	2261	C 2	3124	C 5	5004	C 7		
2104	B 6	2262	A 6	3126	D 4	5005	C 8		
2105	B 6	3001	A 8	3127	C 4	5006	C 7		
2106	B 5	3002	C 8	3130	D 4	5007	C 2		
2107	D 5	3003	C 8	3131	C 4	5008	C 1		
2108	C 5	3004	C 8	3132	C 5	5009	C 1		

PARTSLIST VIDEO II-5

	4822 122 10177	10NF 20% 25V
	4822 121 51053	2NF 1% 250V
	4822 122 10166	TUBULAR 22N 16V
	4822 122 33156	100NF 63V
2221	4822 125 50045	TRIMMING CAPACITOR 1.8-22PF 250V
2250	4822 125 50207	TRIMMING CAPACITOR 2-33PF 250V

3269	4822 100 11214	TRIMMING POTENTIOMETER 1K
3006	4822 100 11215	TRIMMING POTENTIOMETER 20K
3026	4822 100 11215	TRIMMING POTENTIOMETER 20K
3237	4822 100 11214	TRIMMING POTENTIOMETER 1K
3266	5322 101 14066	TRIMMING POTENTIOMETER 10K PM10
3267	5322 101 14066	TRIMMING POTENTIOMETER 10K PM10
3268	5322 101 10294	TRIMMING POTENTIOMETER 1K PM 20
	4822 111 30508	10E 5% 0.33W
	4822 111 30508	10E 5% 0.33W
	4822 111 30499	4E7 5% 0.33W
	4822 116 53027	5K6 1% 06W
	4822 111 30483	SAFETY.RES 1E PM5

5001	4822 156 11004	COIL 26.5 µH
5001	4822 157 53135	C3TV-FN 205.0 µH
5002	4822 157 53136	C3TV-FN 136.0 µH
5002	4822 156 11004	COIL 26.5 µH
5003	4822 157 53516	COIL 8.2 µH
5003	4822 156 11004	COIL 26.5 µH
5004	4822 157 53516	COIL 8.2 µH
5005	4822 157 53137	COIL 81.0 µH
5006	4822 156 11004	COIL 26.5 µH
5007	4822 156 11004	COIL 26.5 µH
5011	4822 242 71658	BAND PASS FILTER 684 KHZ
5012	4822 242 71659	BAND PASS FILTER 1066 KHZ
5101	4822 157 53257	COIL 37.0 µH
5201	4822 157 51247	COIL 150 µH
5202	4822 157 52874	COIL 12.5 µH L2
5203	4822 157 52873	COIL 5.5 µH L1
5204	4822 157 52875	COIL 66 µH L3
5205	4822 157 53131	COIL 10.9 µH
5206	4822 157 53258	COIL 11.0 µH
5207	4822 157 53259	COIL 166 NNF 10264
5208	4822 157 53217	COIL 7.04 µH
5209	4822 158 10604	COIL 6.8 µH
5210	4822 157 50963	COIL 2.2 µH
5301	4822 320 40051	DELAY LINE 771
5302	4822 320 40131	DELAY LINE 390
5303	4822 320 40131	DELAY LINE 270
5401	4822 242 70626	8.867238 MHZ
5402	4822 242 72045	4.433619 MHZ

	5322 130 31684	BB809
	4822 130 30621	1N4148

	5322 130 41982	BC848B
	4822 130 44197	BC558B
	4822 130 40937	BC548B
	4822 130 60887	BF840
	5322 130 41983	BC858B
	5322 130 41982	BC848B

7501	4822 209 72422	HA12083NT
7601	5322 209 11316	IC PC74HCT03P
7602	4822 209 72042	MC78L05ACP
7603	4822 209 81091	MC 14538BCP
7604	5322 209 81468	SAA1043P
7605	4822 209 72424	MC14049UBCP
7701	4822 209 71518	TDA3561
7702	4822 209 72419	MC1377

PARTSLIST VIDEO II-5/05

Various

	4822 122 10177	10NF 20% 25V
	4822 121 51053	2NF 1% 250V
	4822 122 10166	22N 16V
	4822 122 33156	100NF 63V
	4822 125 50207	CAP TRIMMER 2-33PF 250V
	4822 125 50045	CAP TRIMMER 1.8-22PF 250V

	4822 111 30508	10E 5% 0.33W
	4822 111 30499	4E7 5% 0.33W
	4822 116 53027	5K6 1% 0.6W
	4822 111 30483	1E
3006	4822 100 11215	TRIMMING POTENTIOMETER 20K
3026	4822 100 11215	TRIMMING POTENTIOMETER 20K
3237	4822 100 11214	TRIMMING POTENTIOMETER 1K
3266	5322 101 14066	TRIMMING POTENTIOMETER 10K PM10
3267	5322 101 14066	TRIMMING POTENTIOMETER 10K PM10
3268	5322 101 10294	TRIMMING POTENTIOMETER 1K PM10

	4822 156 11004	COIL 26.5 µH
	4822 157 53516	COIL 8.2 µH
	4822 157 53137	COIL 81.0 µH
	4822 157 53135	COIL 205.0 µH
	4822 157 53136	COIL 136.0 µH
	4822 242 71658	BAND PASS 684 KHZ
	4822 242 71659	BAND PASS 1066 KHZ
	4822 157 53257	COIL 37.0 µH
	4822 157 51247	COIL 150 µH
	4822 157 52874	COIL 12.5 µH L2
	4822 157 52873	COIL 5.5 µH L1
	4822 157 52875	COIL 66 µH L3
	4822 157 53131	COIL 10.9 µH
	4822 157 53258	COIL 11.0 µH
	4822 157 53259	COIL 166 NNF 10264
	4822 157 53217	COIL 7.04 µH
	4822 158 10604	COIL 0.8 µH
	4822 157 50963	COIL 6.8 µH
5301	4822 320 40051	DELAY LINE 711
5302	4822 320 40131	DELAY LINE 390
5303	4822 320 40131	DELAY LINE 270
5401	4822 242 70626	X–TAL 8.867238 MHZ
5402	4822 242 72045	X–TAL 4.433619 MHZ

6101	5322 130 31684	BB809
6102	5322 130 31684	BB809
6103	4822 130 30621	1N4148
6104	4822 130 30621	1N4148

7001	5322 130 41982	BC848B
7002	5322 130 41982	BC848B
7003	4822 130 44197	BC558B
7101	5322 130 41982	BC848B
7102	5322 130 41982	BC848B
7103	4822 130 60887	BF 840
7104	4822 130 60887	BF840
7105	4822 130 40937	BC548B
7106	4822 130 60887	BF840
7201	5322 130 41982	BC848B
7202	5322 130 41982	BC848B
7204	5322 130 41982	BC848B
7205	5322 130 41982	BC848B
7206	5322 130 41982	BC848B

7501	4822 209 72422	HA12083NT
7602	4822 209 72042	MC78L05ACP
7603	4822 209 81091	MC 14538BCP
7604	5322 209 81468	SAA1043P
7605	4822 209 72424	MC14049BCP
7701	4822 209 71518	TDA3561
7702	4822 209 72419	MC1377

2001	E 2
2002	F 3
2003	F 4
2004	F 4
2005	E 5
2006	F 9
2007	E 7
2008	E 8
2009	E 9
2010	F 9
2011	G10
2012	E12
2013	F12
2014	E14
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2016	F16
2017	E17
2018	D18
2020	E19
2021	G20
2022	F20
2023	D21
2024	D22
2025	F21
2026	E20
2026	E21
2028	F15
2029	F 3
3101	F 2
3102	E 2
3103	E 3
3104	E 3
3105	E 3
3106	E 4
3107	E 4
3108	F 5
3109	G 4
3110	F 6
3111	F 6
3112	F 7
3113	G 7
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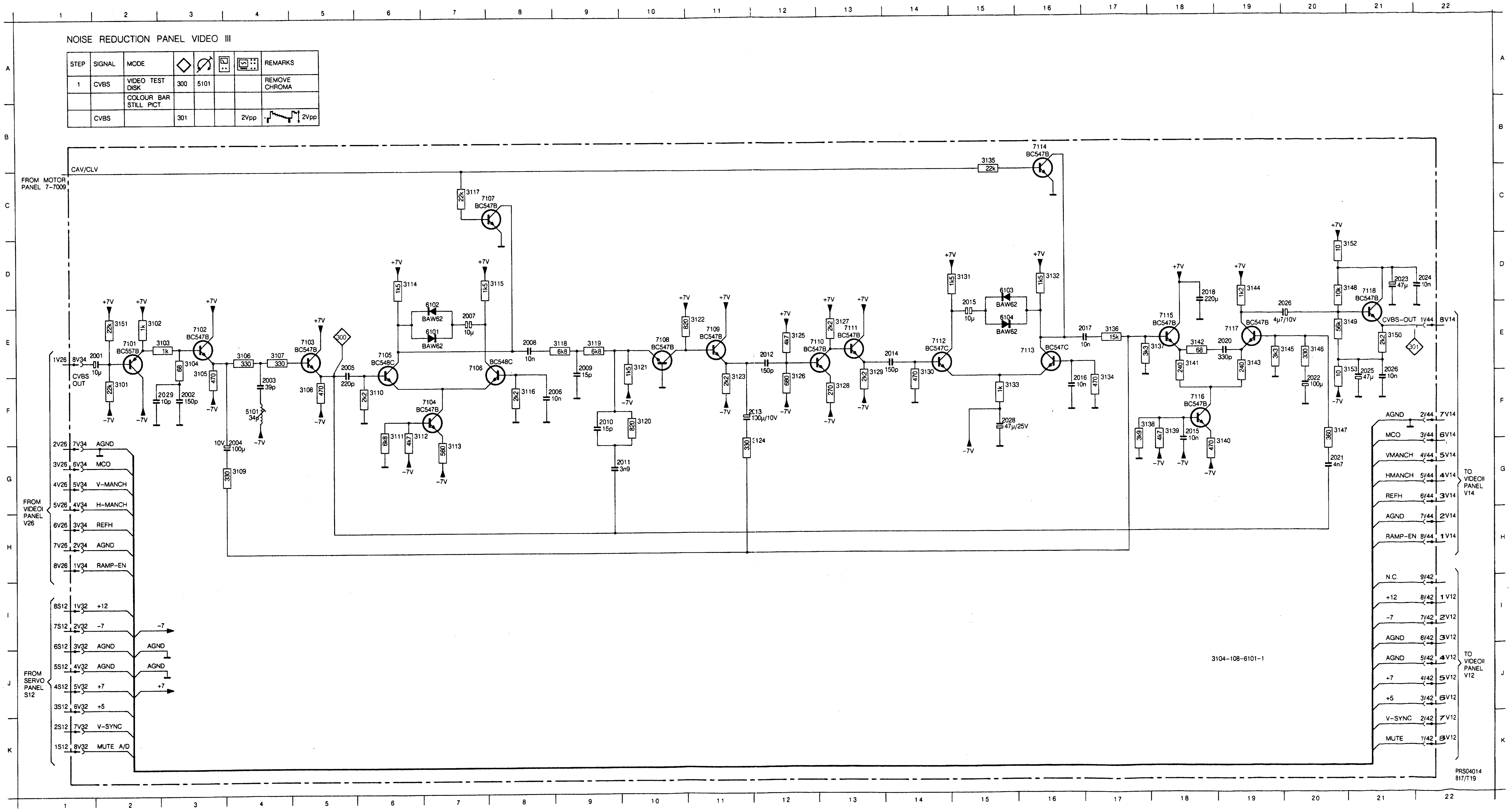
3116	F 8
3117	C 7
3118	E 9
3119	E 9
3120	F10
3121	E10
3122	E11
3123	F11
3124	F12
3125	E12
3126	F12
3127	E13
3128	F13
3129	E13
3130	E14
3131	D15
3132	D16
3133	F15
3134	F17
3135	B15
3136	E17
3137	E18
3138	F18
3139	F18
3140	G19
3141	E18
3142	E18
3143	E19
3144	D19
3145	E20
3146	E20
3147	F20
3148	D21
3149	E21
3150	E21
3151	E 2
3152	D21
3153	E21
5101	F 4
6101	E 7
6102	D 7
6103	D15
6104	E15
7101	E 2
7102	E 3
7103	E 5
7104	F 7
7105	E 6
7106	E 7
7107	C 8
7108	E10
7109	E11
7110	E12
7111	E13
7112	E14
7113	E16
7114	B16
7115	E18
7116	F18
7117	E19
7118	D21

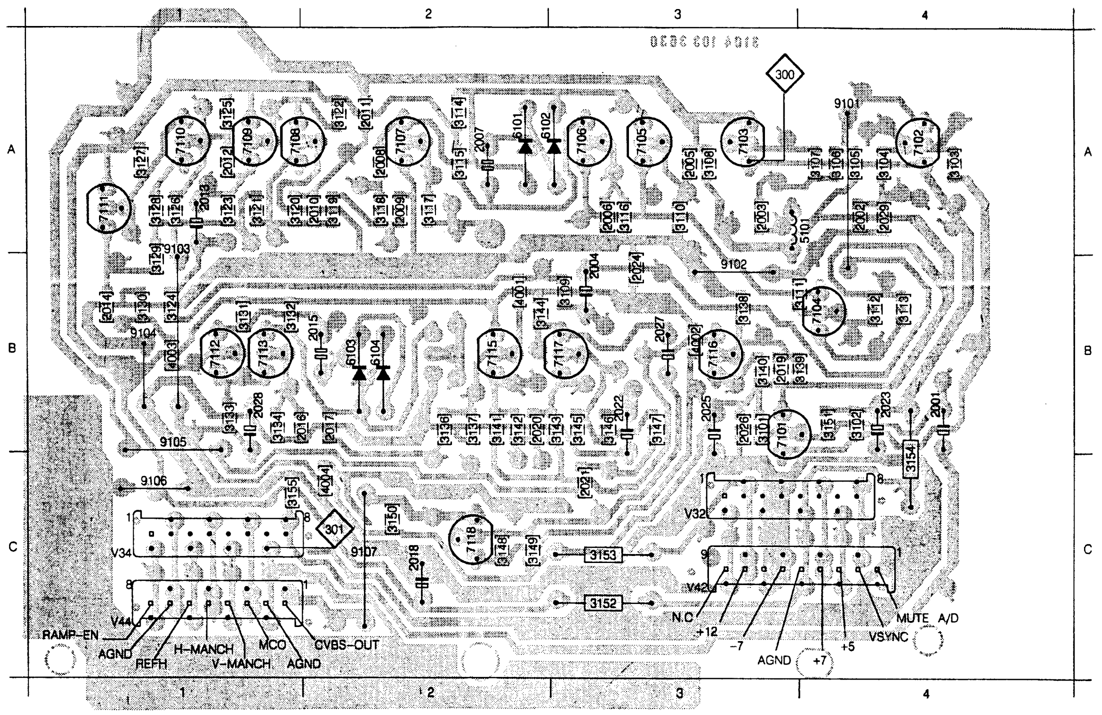
NOISE REDUCTION PANEL VIDEO III

STEP	SIGNAL	MODE	◇	⌀	▢	▢	REMARKS
1	CVBS	VIDEO TEST DISK	300	5101			REMOVE CHROMA
		COLOUR BAR STILL PICT.					
	CVBS		301			2Vpp	2Vpp

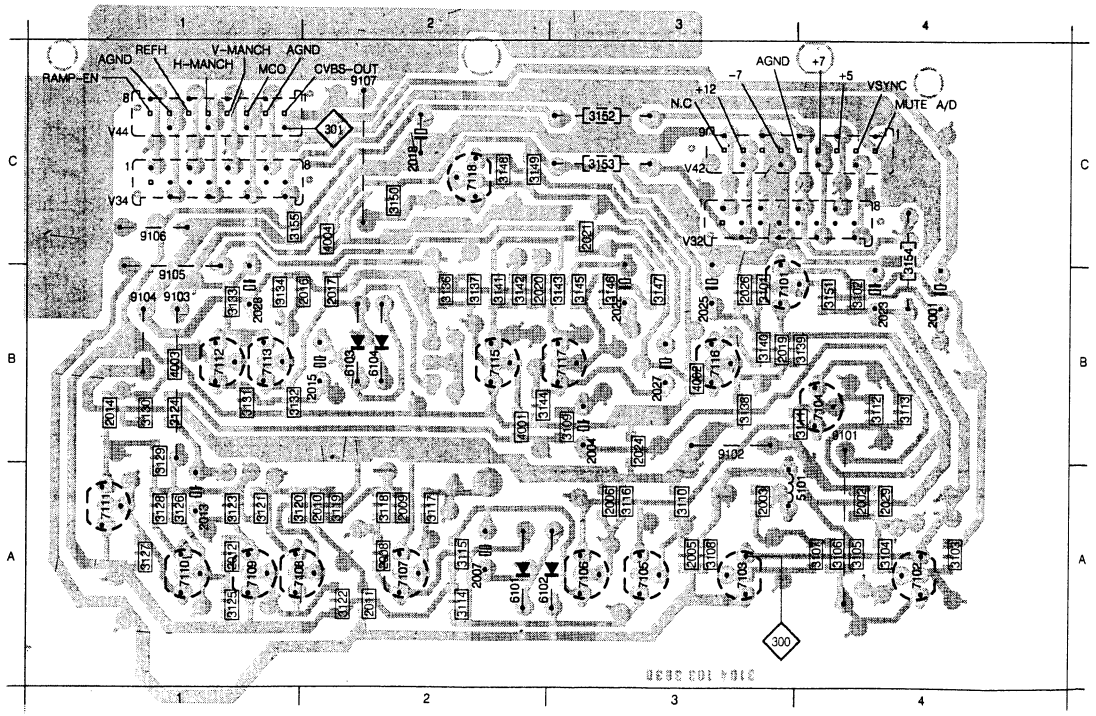


PRINT LAY-OUT VIDEO III

2001	B 4	2012	A 1	2023	B 4	3105	A 4	3116	A 3	3127	A 1	3139	B 3	3150	C 2	6101	A 2	7108	A 1	9102	B 3
2002	A 4	2013	A 1	2024	B 3	3106	A 4	3117	A 2	3128	A 1	3140	B 3	3151	B 4	6102	A 2	7109	A 1	9103	A 1
2003	A 3	2014	B 1	2025	B 3	3107	A 4	3118	A 2	3129	A 1	3141	B 2	3152	C 3	6103	B 2	7110	A 1	9104	B 1
2004	B 3	2015	B 2	2026	B 3	3108	A 3	3119	A 2	3130	B 1	3142	B 2	3153	C 3	6104	B 2	7111	A 1	9105	B 1
2005	A 3	2016	B 1	2027	B 3	3109	B 3	3120	A 1	3131	B 1	3143	B 3	3154	C 4	7101	B 3	7112	B 1	9106	C 1
2006	A 3	2017	B 2	2028	B 1	3110	A 3	3121	A 1	3132	B 1	3144	B 2	3155	C 1	7102	A 4	7113	B 1	9107	C 2
2007	A 2	2018	C 2	2029	A 4	3111	B 3	3122	A 2	3133	B 1	3145	B 3	4001	B 2	7103	A 3	7115	B 2		
2008	A 2	2019	B 3	3101	B 3	3112	B 4	3123	A 1	3134	B 1	3146	B 3	4002	B 3	7104	B 4	7116	B 3		
2009	A 2	2020	B 2	3102	B 4	3113	B 4	3124	B 1	3136	B 2	3147	B 3	4003	B 1	7105	A 3	7117	B 3		
2010	A 2	2021	C 3	3103	A 4	3114	A 2	3125	A 1	3137	B 2	3148	C 2	4004	C 2	7106	A 3	7118	C 2		
2011	A 2	2022	B 3	3104	A 4	3115	A 2	3126	A 1	3138	B 3	3149	C 2	5101	A 4	7107	A 2	9101	A 4		



2001	B 4	2012	A 1	2023	B 4	3105	A 4	3116	A 3	3127	A 1	3139	B 3	3150	C 2	6101	A 2	7108	A 1	9102	B 3
2002	A 4	2013	A 1	2024	B 3	3106	A 4	3117	A 2	3128	A 1	3140	B 3	3151	B 4	6102	A 2	7109	A 1	9103	A 1
2003	A 3	2014	B 1	2025	B 3	3107	A 4	3118	A 2	3129	A 1	3141	B 2	3152	C 3	6103	B 2	7110	A 1	9104	B 1
2004	B 3	2015	B 2	2026	B 3	3108	A 3	3119	A 2	3130	B 1	3142	B 2	3153	C 3	6104	B 2	7111	A 1	9105	B 1
2005	A 3	2016	B 1	2027	B 3	3109	B 3	3120	A 1	3131	B 1	3143	B 3	3154	C 4	7101	B 3	7112	B 1	9106	C 1
2006	A 3	2017	B 2	2028	B 1	3110	A 3	3121	A 1	3132	B 1	3144	B 2	3155	C 1	7102	A 4	7113	B 1	9107	C 2
2007	A 2	2018	C 2	2029	A 4	3111	B 3	3122	A 2	3133	B 1	3145	B 3	4001	B 2	7103	A 3	7115	B 2		
2008	A 2	2019	B 3	3101	B 3	3112	B 4	3123	A 1	3134	B 1	3146	B 3	4002	B 3	7104	B 4	7116	B 3		
2009	A 2	2020	B 2	3102	B 4	3113	B 4	3124	B 1	3136	B 2	3147	B 3	4003	B 1	7105	A 3	7117	B 3		
2010	A 2	2021	C 3	3103	A 4	3114	A 2	3125	A 1	3137	B 2	3148	C 2	4004	C 2	7106	A 3	7118	C 2		
2011	A 2	2022	B 3	3104	A 4	3115	A 2	3126	A 1	3138	B 3	3149	C 2	5101	A 4	7107	A 2	9101	A 4		



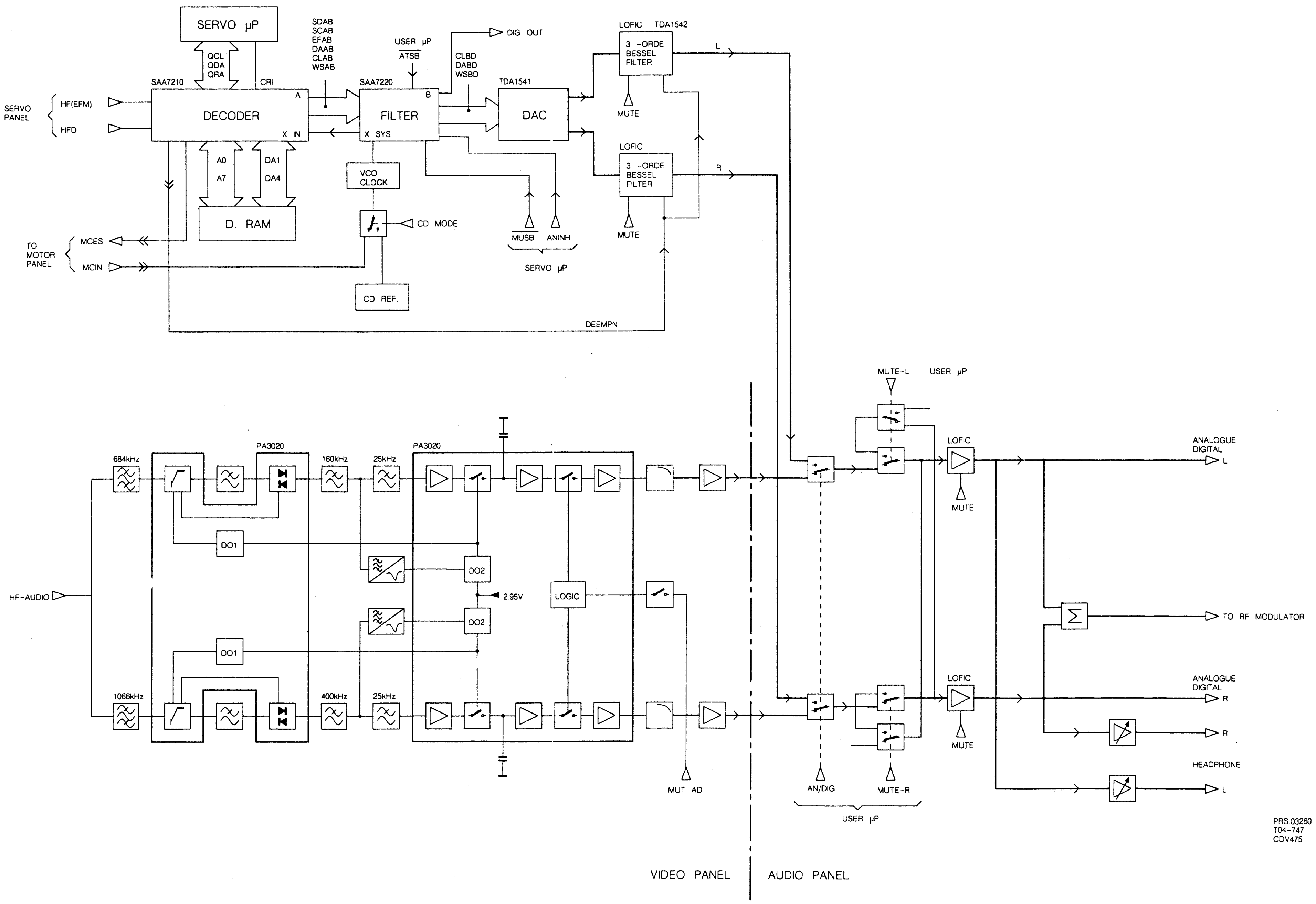
PCB 01230
T07-838

PARTSLIST VIDEO III

Video 3 Panel

⊣⊢		
	4822 124 41558	CAP. BIP 10µF 25V
	4822 130 40959	BC 546B
	4822 130 44196	BC 548C

AUDIO BLOCKDIAGRAM



PARTSLIST

AUDIO PANEL

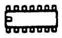
	4822 121 50879	2.2NF 160V

	4822 111 30499	4E7 5% 0.33W
	4822 111 30483	1R 5% 0.33W
	4822 111 30522	33E 5% 0.33W
	4822 111 30508	10E 5% 0.33W
	4822 111 30535	100E 5% 0.33W
	4822 116 52398	150E 5%
	4822 116 52407	220E 5%
3092	4822 100 10872	TRIMMING POTENTIOMETER 47K

5099	4822 158 10101	COIL
5101	4822 157 51193	470 μH PM10
5102	4822 157 51193	470 μH PM10
5160	4822 242 71644	X-TAL 11.289600 MHZ
5061	4822 148 80281	DIGITAL-OUT TRANSFORMER

	4822 130 42696	BC818-25
	4822 130 42131	BF550
	5322 130 41982	BC848B

	4822 130 31129	BB212
	5322 130 31928	BAS16
6068	4822 130 33004	BZX84-B5V6
6089	4822 130 33996	BZX84-C9V1
6091	4822 130 33523	HZ7A3 6V8
6092	4822 130 33523	HZ7A3 6V8



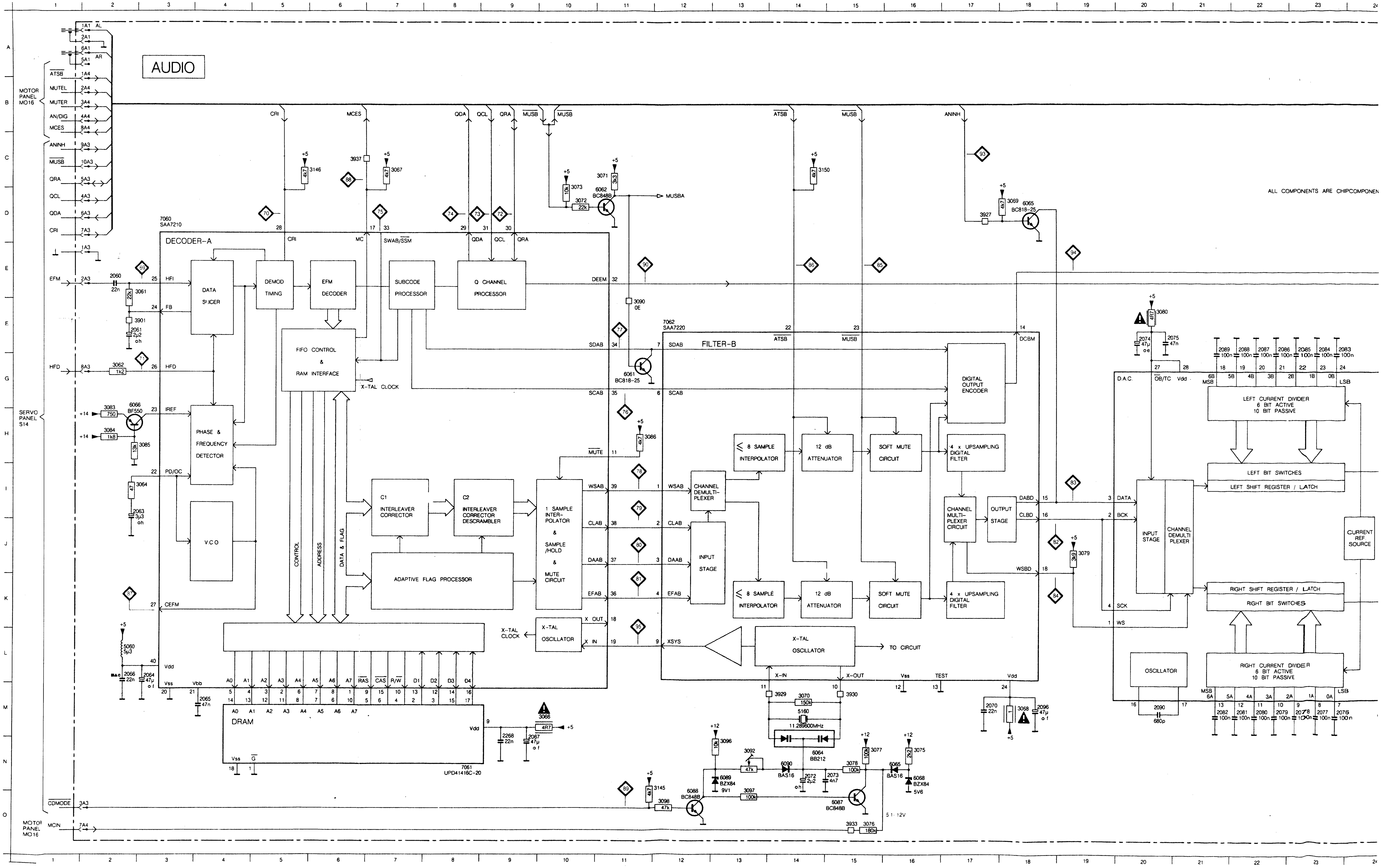
7060	4822 209 71001	SAA7210P/04
7061	4822 209 70422	IC UPP41416C-20
7062	4822 209 11157	SAA7220
7063	4822 209 72544	TDA 1541A/N2
7100	4822 209 71768	TDA 1542/N2
7101	4822 209 81349	MC 1458 P1 MTLA
7103	5322 209 10576	MC14053BCP
7104	5322 209 10576	MC14053BCP
7106	4822 209 72042	IC VOLTREG 78L05ALP
7106	4822 209 72042	VOLT.REG MC78L05 ALP

10-2 CIRCUIT DIAGRAM WITH SMALL SUB. PANEL

2001	D31	2064	L 3	2072	N14	2077	M23	2082	M21	2087	F22	2092	I 25	2097	B35	2103	I 26	2108	M28
2002	D31	2065	M 4	2073	N15	2078	M23	2083	F23	2088	F22	2093	J25	2098	C35	2104	N26	2109	H29
2060	E 2	2066	L 2	2074	F20	2079	M22	2084	F23	2089	F21	2094	J25	2099	B37	2105	J26	2110	M29
2061	F 2	2067	N 9	2075	F21	2080	M22	2085	F23	2090	M20	2096	M18	2101	I 26	2106	L35	2111	H36
2063	I 3	2070	M17	2076	M23	2081	M22	2086	F22	2091	I 25	2097	A38	2102	N26	2107	H28	2112	M36

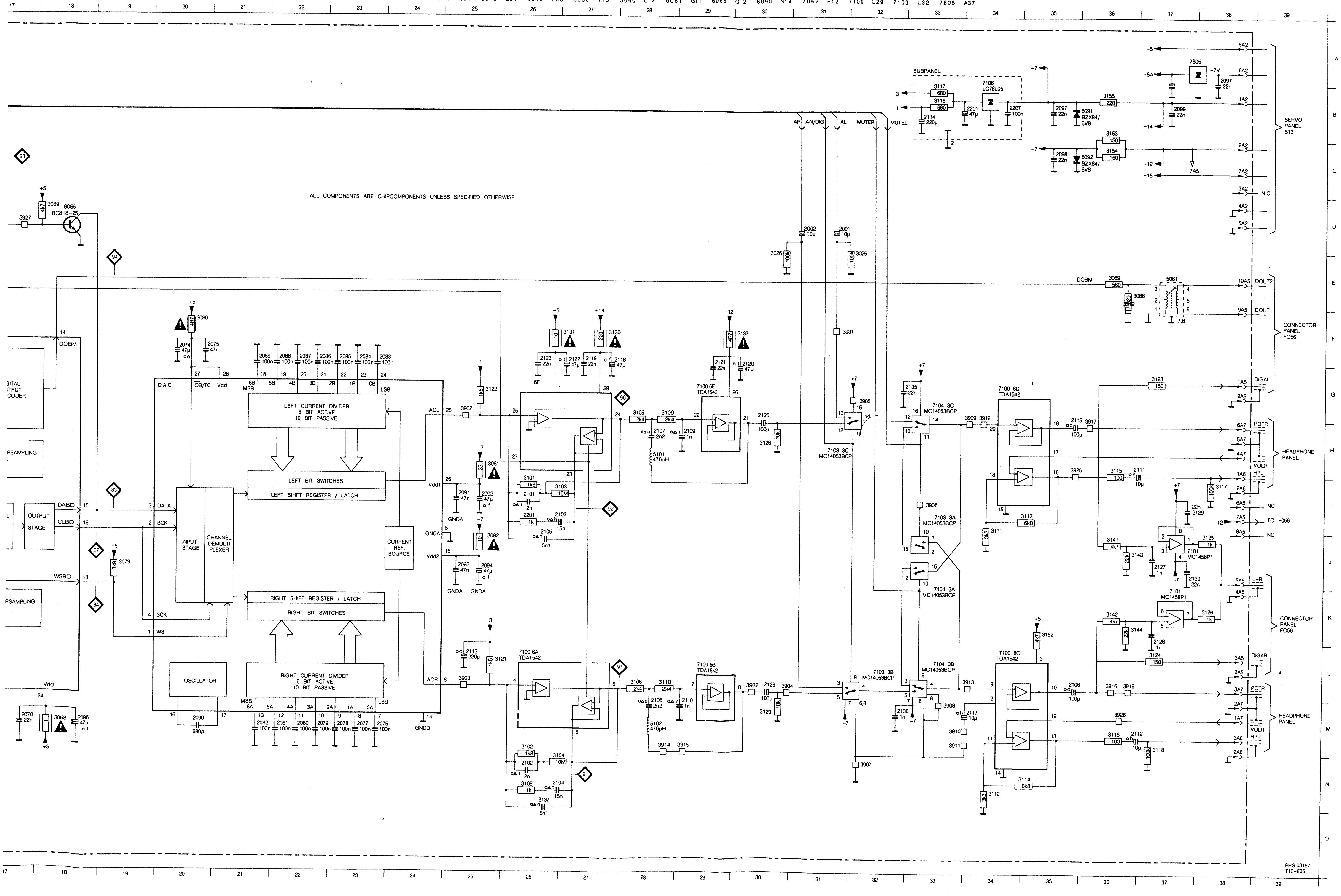
2113	L25	2119	F27	2125	G30	2130	J37	2201	B34	3061	E 3	3068	M18	3073	C10	3079	J19	3084	H 2
2114	B33	2120	F30	2126	L30	2135	G33	2207	B34	3062	G 2	3069	D18	3075	N16	3080	F20	3085	H 3
2115	G35	2121	F29	2127	J37	2136	M32	2268	M 9	3064	I 3	3070	M14	3076	O15	3081	H25	3086	H11
2117	M34	2122	F27	2128	K37	2137	N26	3025	E32	3066	M10	3071	C11	3077	N15	3082	J25	3088	E37
2118	F28	2123	F26	2129	I 38	2201	I 26	3026	E30	3067	C 7	3072	D10	3078	N15	3083	G 2	3089	E36

3090	F11	3101	I 26	3106	L28	3112	N34	3117	I 38	3122	G25	3128	H30	3141	J36	3146	C 6	3155	B
3092	N13	3102	M26	3108	N26	3113	I 35	3117	B33	3123	G37	3129	M30	3142	K36	3150	C14	3901	F
3096	N13	3103	I 26	3109	G28	3114	N35	3118	M37	3124	L37	3130	F27	3143	J37	3152	K35	3902	G
3097	N13	3104	N26	3110	L28	3115	H36	3118	B33	3125	J38	3131	F27	3144	K37	3153	B36	3903	L
3098	O12	3105	G28	3111	I 34	3116	M36	3121	L26	3126	K38	3132	F30	3145	N12	3154	C36	3904	L



CS 18 981

1	3101	I26	3106	L28	3112	N34	3117	I38	3122	G25	3128	H30	3141	J36	3146	C 6	3155	B36	3905	G32	3910	M33	3914	M28	3925	H35	3931	F31	5061	E37	6062	D11	6068	N16	6091	B36	7063	G20	7100	L26	7104	G33
3	3102	M26	3108	N26	3113	I35	3117	B33	3123	G37	3129	M30	3142	K36	3150	C14	3901	F 3	3906	I33	3911	M33	3915	M29	3926	M36	3932	L30	5101	H28	6064	N14	6087	O15	6092	C35	7100	G26	7100	L34	7104	K33
3	3103	I26	3109	G28	3114	N35	3118	M37	3124	L37	3130	F27	3143	J37	3152	K35	3902	G25	3907	N32	3912	G34	3916	L36	3927	D17	3933	O15	5102	M28	6065	D18	6088	O12	7060	D 3	7100	G34	7103	H31	7104	L33
3	3104	N26	3110	L28	3115	H36	3118	B33	3125	J38	3131	F27	3144	K37	3153	B36	3903	L25	3908	M33	3912	E36	3917	G36	3929	M14	3937	C 6	5160	M14	6065	N16	6089	N13	7061	N 8	7100	G29	7103	I33	7106	A34
2	3105	G28	3111	I34	3116	M36	3121	L26	3126	K38	3132	F30	3145	N12	3154	C36	3904	L30	3909	G34	3913	L34	3919	L36	3930	M15	5060	L 2	6061	G11	6066	G 2	6090	N14	7062	F12	7100	L29	7103	L32	7805	A37



ALL COMPONENTS ARE CHIPCOMPONENTS UNLESS SPECIFIED OTHERWISE

PRS 03157
T10-836

PRINT LAY-OUT COMP-SIDE WITH SMALL SUB. PANEL

1001	D 2
1002	B 6
1002	D 8
1003	D 4
1003	C 5
1004	D 5
1004	D 4
1005	E 5
1005	C 8
1006	E 5
1006	C10
1007	D 6
1008	D 6
1009	E 6
1010	D 6
1011	D 6
1012	D 7
1013	D 7
1014	D 7
1015	D 8
1016	C 8
1017	C 8
1019	C 8
1020	D 9
1021	D11
1023	C 9
1024	D 9
1025	D 8
1026	D 8
1027	C 3
1029	D 2
1030	D 2
1031	E 5
1032	D 7
1033	C 1
1034	E10
1035	E11
1037	C 1
1038	E 6
1060	D 1
1061	C 4
1061	B 3
1062	E 1
1063	D 1
1065	D 1
1067	D 3
1068	D 2
1087	D 1
1088	D 2
1090	C 4
2006	D10
2008	D10
2009	D 9
2010	D 9
2013	E 9
2016	D 9
2020	D11
2021	D10
2022	D11
2023	D10
2060	D 2
2061	C 1
2063	C 2
2064	D 4
2065	D 2
2066	D 4
2067	C 3
2068	C 3
2070	E 3
2072	D 1
2073	D 1
2074	C 4
2075	D 5
2076	C 6
2077	C 6
2078	C 6
2079	C 6
2080	C 6
2081	C 6
2082	C 6
2083	C 5
2084	C 5
2085	C 5
2086	C 5
2087	C 5
2088	C 5
2089	C 5
2090	C 5
2091	C 5
2092	C 4
2093	B 5
2094	B 5
2096	E 3
2097	C 8
2098	B 8
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2101	C 7
2102	E 7
2103	C 7
2104	E 7
2105	C 7
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2107	C 8
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2109	C 8
2110	D 8
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2114	A 7
2115	C 8
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2139	C 9
2140	C 9
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3012	D11
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3019	E10
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3025	D 8
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3062	D 2
3064	D 2
3066	C 4
3067	D 2
3068	E 3
3069	D 3
3070	D 2
3071	E 4
3072	D 4
3073	E 3
3075	D 1
3076	D 1
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3078	D 1
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3089	B 2
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3096	E 2
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3105	C 7
3106	D 7
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3108	D 7
3109	C 7
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3113	D 8
3114	D 8
3115	D 8
3116	D 8
3117	B 8
3118	B 8
3119	D 6
3119	A 7
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3136	B 9
3137	D 9
3138	D 9
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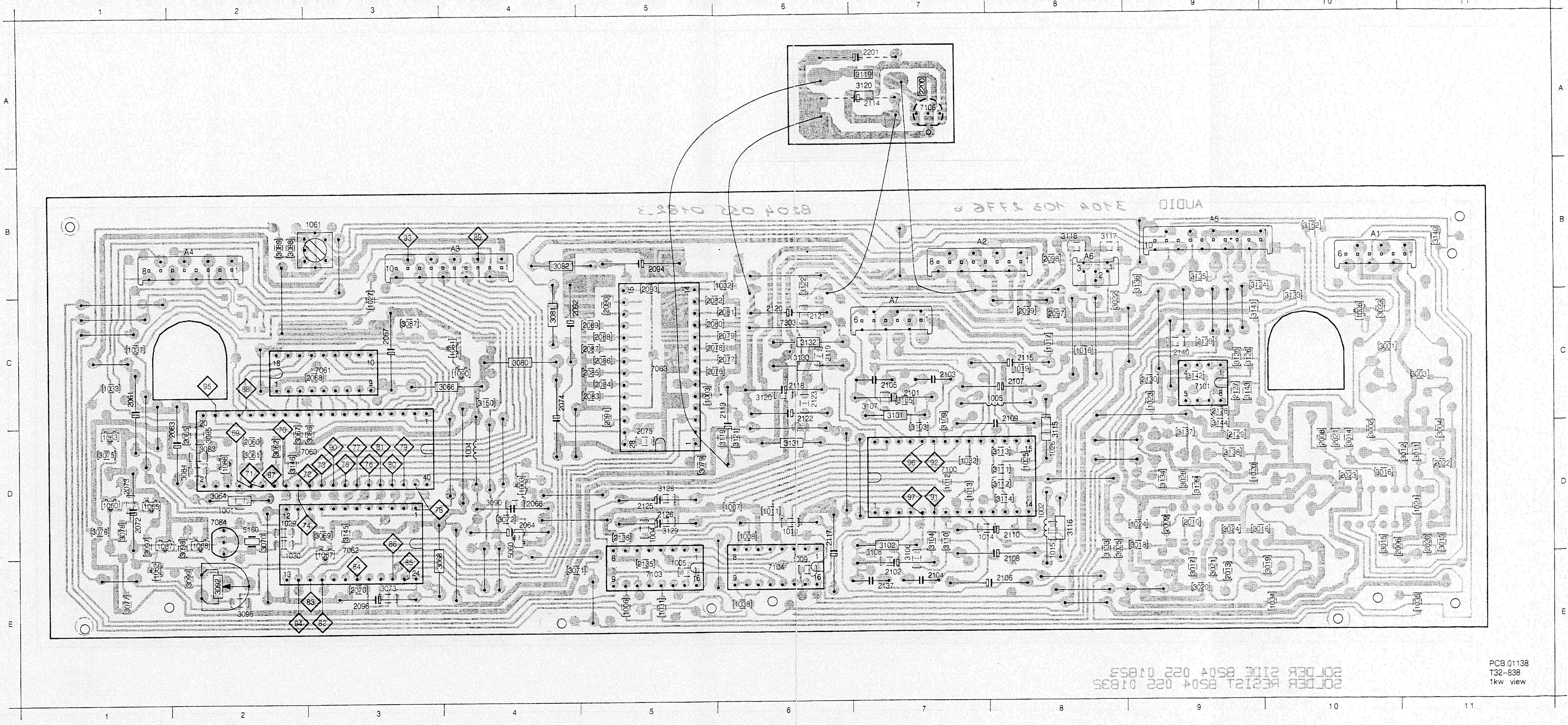
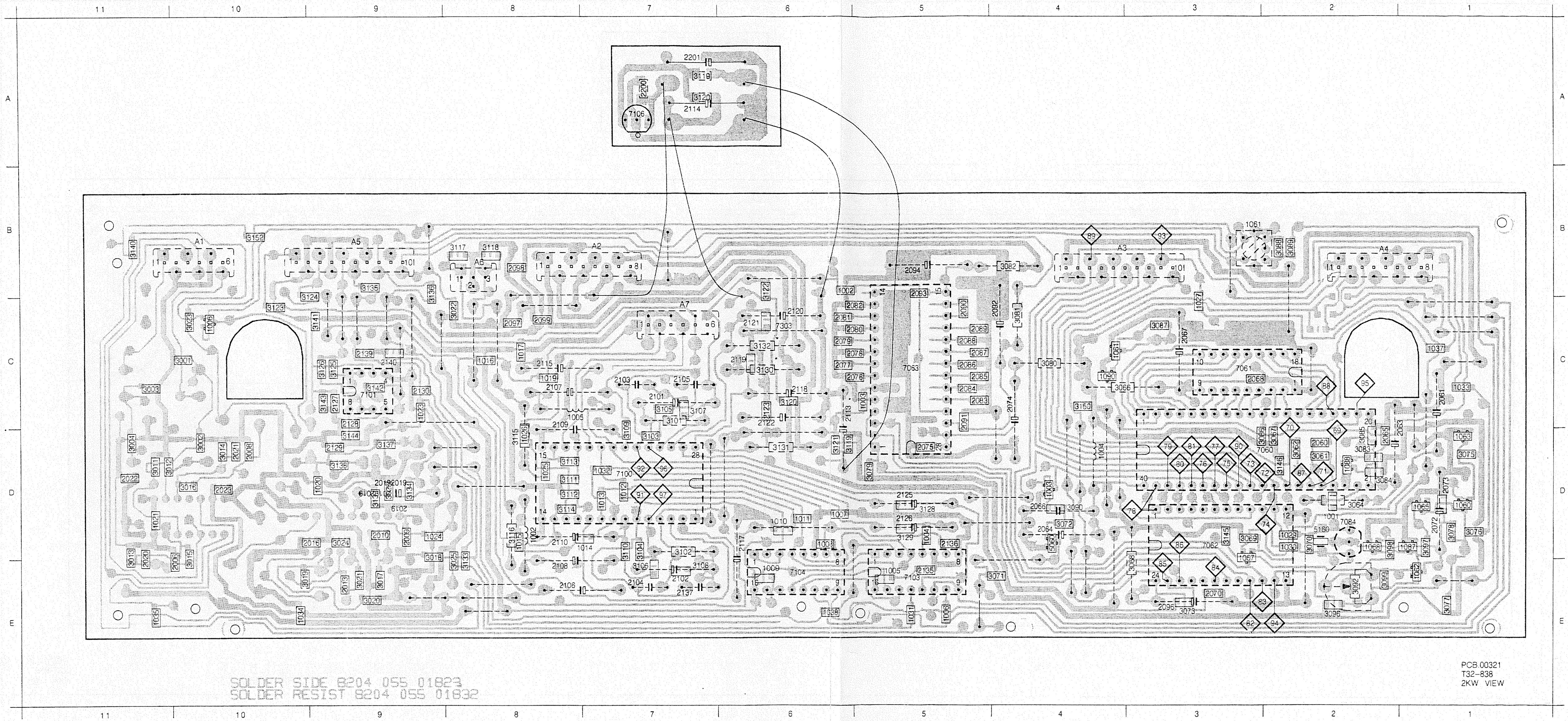
3140	B11
3141	C 9
3142	C 9
3143	C 9
3144	D 9
3145	D 3
3146	D 2
3150	C 4
3152	B10
5060	D 4
5160	D 2
7060	D 3
7061	C 3
7062	D 3
7063	C 5
7084	D 2
7100	D 7
7101	C 9
7103	E 5
7104	E 6
7106	A 7
7303	C 6



PCB 01138
T32-838
1kw view

PRINT LAY-OUT CHIP-SIDE SMALL SUB. PANEL

1001 D 2	1006 E 5	1014 D 8	1025 D 8	1035 E11	1067 D 3	2013 E 9	2064 D 4	2075 D 5	2084 C 5	2093 B 5	2104 E 7	2115 C 8	2126 D 5	2140 C 9	3013 D11	3022 C 8	3067 D 2	3077 E 1	3086 D 2	3099 E 2	3109 C 7	3118 B 8	3125 C 9	3135 B 9	3144 D 9	7062 D 3
1002 B 6	1006 C10	1015 D 8	1026 D 8	1037 C 1	1068 D 2	2016 D10	2065 D 2	2076 C 6	2085 C 5	2094 B 5	2105 C 7	2117 D 6	2127 C 9	2200 A 7	3014 D10	3023 C10	3068 E 3	3078 D 1	3087 C 3	3101 C 7	3110 D 7	3119 D 5	3126 C 9	3136 B 9	3145 D 3	7063 C 5
1002 D 8	1007 D 6	1016 C 8	1027 C 3	1038 E 6	1087 D 2	2020 D11	2066 D 4	2077 C 6	2086 C 5	2096 E 3	2106 E 8	2118 C 6	2128 C 9	2201 A 7	3015 D10	3024 D 9	3069 D 3	3079 D 5	3088 B 2	3102 D 7	3111 D 8	3119 A 7	3128 D 5	3137 D 9	3146 D 2	7084 D 2
1003 D 4	1008 D 6	1017 C 8	1029 D 2	1060 D 1	1088 D 2	2021 D10	2067 C 3	2078 C 6	2087 C 5	2097 C 8	2107 C 8	2119 C 6	2129 D 9	3001 C11	3016 D11	3025 D 8	3070 D 2	3080 C 4	3089 B 2	3103 D 7	3112 D 8	3120 C 6	3129 D 5	3138 D 9	3150 C 4	7100 D 7
1003 C 5	1009 E 6	1019 C 8	1030 D 2	1061 C 4	1090 C 4	2022 D11	2068 C 3	2079 C 6	2088 C 5	2098 B 8	2108 E 8	2120 C 6	2130 C 9	3002 D10	3017 E 9	3026 D 9	3071 E 5	3081 C 4	3090 D 4	3104 D 7	3113 D 8	3120 A 7	3130 C 6	3139 D 9	3152 B10	7101 C 9
1004 D 5	1010 D 6	1020 D 9	1031 E 5	1061 B 3	2006 D10	2023 D10	2070 E 3	2080 C 6	2089 C 5	2099 C 8	2109 C 8	2121 C 6	2135 E 5	3003 C11	3018 D 9	3061 D 2	3072 D 4	3082 B 5	3092 E 2	3105 C 7	3114 D 8	3121 D 6	3131 D 6	3140 B11	5060 D 4	7103 E 5
1004 D 4	1011 D 6	1021 D11	1032 D 7	1062 E 1	2008 D10	2060 D 2	2072 D 1	2081 C 6	2090 C 5	2101 C 7	2110 D 8	2122 C 6	2136 D 5	3004 D11	3019 E 9	3062 D 2	3073 E 3	3083 D 2	3096 E 2	3106 E 7	3115 D 8	3122 B 6	3132 C 6	3141 C 9	5160 D 2	7104 E 6
1005 E 5	1012 D 7	1023 C 9	1033 C 1	1063 D 1	2009 D 9	2061 C 1	2073 D 1	2082 C 6	2091 C 5	2102 E 7	2113 C 6	2123 C 6	2137 E 7	3011 D11	3020 E 9	3064 D 2	3075 D 1	3084 D 2	3097 D 1	3107 C 7	3116 D 8	3123 C10	3133 D 8	3142 C 9	7060 D 3	7106 A 7
1005 C 8	1013 D 7	1024 D 9	1034 E10	1065 D 1	2010 D 9	2063 C 1	2074 C 4	2083 C 5	2092 C 4	2103 C 7	2114 A 7	2125 D 5	2139 C 9	3012 D10	3021 E 9	3066 C 4	3076 D 1	3085 D 2	3098 D 2	3108 E 7	3117 B 9	3124 B10	3134 D 9	3143 C 9	7061 C 3	7303 C 6



OVERL. BEH. BIJ PCB.00321   OVERL. BEH. BIJ PCB.00321

MEASUREMENTS & ADJUSTMENTS

AUDIO ELECTRICAL MEASUREMENTS AND ADJUSTMENTS

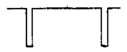
SIGNAL	MODE	◇			REMARKS
HF	TESTDISC 5 PLAY	69		EYE PATTERN	SEE DRAWING 37017B8
CRI	TESTDISC 5A SCAN REV,FWD	70			SEE DRAWING MDA.01552
HFD	TESTDISC 5A TRACK 15,PLAY	71		PULSES LOW	SEE DRAWING MDA.00240
QRA	TESTDISC 5A PLAY	72			SEE DRAWING MDA.00453
QCL	TESTDISC 5A PLAY	73			
QDA	TESTDISC 5A PLAY	74			
SWAB	TESTDISC 5A PLAY	75			SEE DRAWING MDA.00239
SCAB	TESTDISC 5A PLAY	76			
SDAB	TESTDISC 5A PLAY	77			
WSAB	DISC PLAY	78			SEE DRAWING 38847c12
CLAB	DISC PLAY	79			
DAAB	DISC PLAY	80			
EFAB	TESTDISC 5A	81			WHEN THE DISC IS SLOWLY BRAKED BY HAND
CLBD	DISC PLAY	82			SEE DRAWING 38848C12
DABD	DISC PLAY	83			
WSBD	DISC PLAY	84			
$\overline{\text{MUSB}}$	DISC PAUZE OR NEXT OR PREVIOUS	85		LOW	
$\overline{\text{ATSB}}$	DISC SCAN	86		LOW	
CEFM	TESTDISC 5A PLAY	87		4.32MHz	
MC	CD PLAY	88			SEE DRAWING 38849A12
MC IN	CDV VIDEO TRACK PLAY	89			DC LEVEL VARYING ROUND 0 VOLT
DEEM	TESTDISC 5A. TRACK 14: PLAY TRACK 15: PLAY	90		LOW HIGH	
TEST POINT 91	TESTDISC 5A TRACK 14	91		NO SIGNAL	
TEST POINT 91	TESTDISC 5A TRACK 15	91		LF SIGNAL	
TEST POINT 92	TESTDISC 5A TRACK 14	92		NO SIGNAL	
TEST POINT 92	TESTDISC 5A TRACK 15	92		LF SIGNAL	
ANINH	CD ROM DISC PLAY	93	0.6 VOLT DC		
DOBM	TESTDISC 5A PLAY	94			SEE DRAWING MDA.00238
X-TAL	TESTDISC 5A PLAY CDVDISC VIDEO TRACK	95		11.28MHz VARYING	
OUTPUT OF OPAMP.	DISC PLAY	96		LF SIGNAL	LEFT CHANNEL
OUTPUT OF OPAMP.	DISC PLAY	97		LF SIGNAL	RIGHT CHANNEL

MDA.01544
T02/837

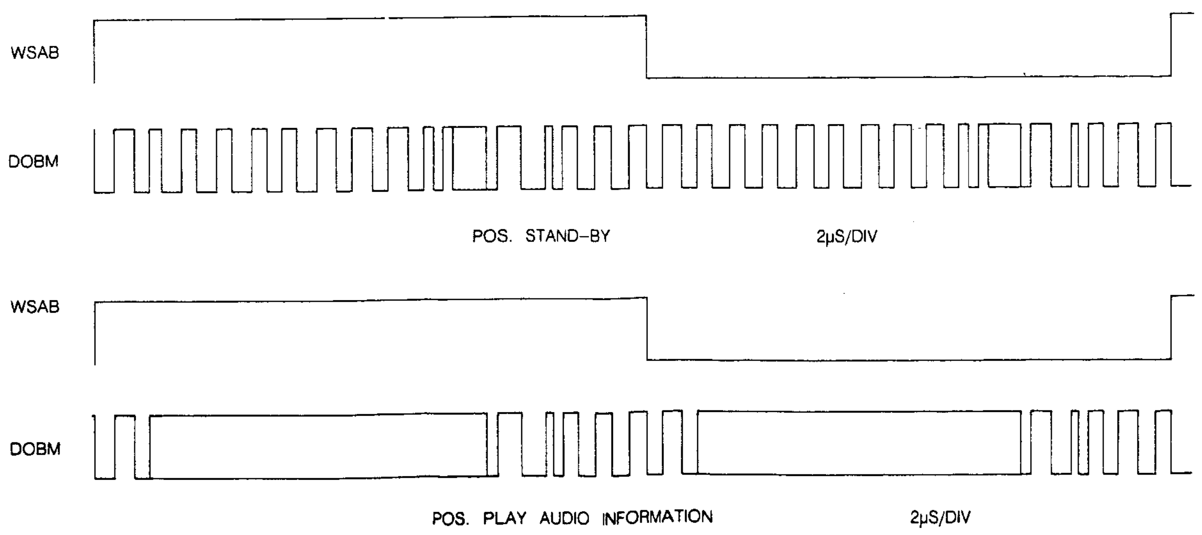
ADJUSTMENTS SYSTEMCLOCK

STEP	SIGNAL	MODE	◇			REMARKS
1	XSYS	POWER ON	95	R3092	11.289600 ±300Hz	

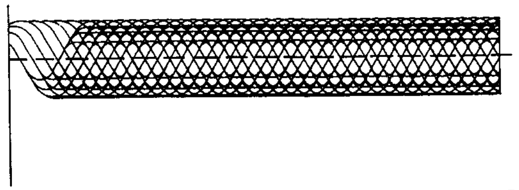
MDA.01551
T02/836

POSITION PLAYER	POWER ON	PLAY	SCAN REV FWD
CRI	"LOW"	"HIGH"	

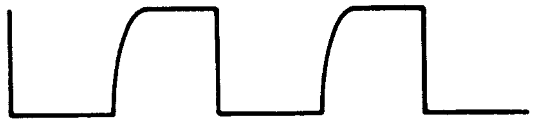
MDA.01562
T02/836



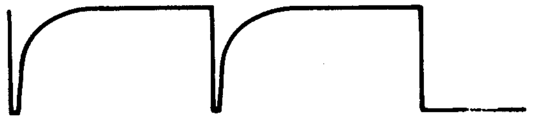
MDA.002[illegible]
T07/733



37 017 B8



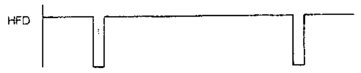
POSITION: STAND BY.



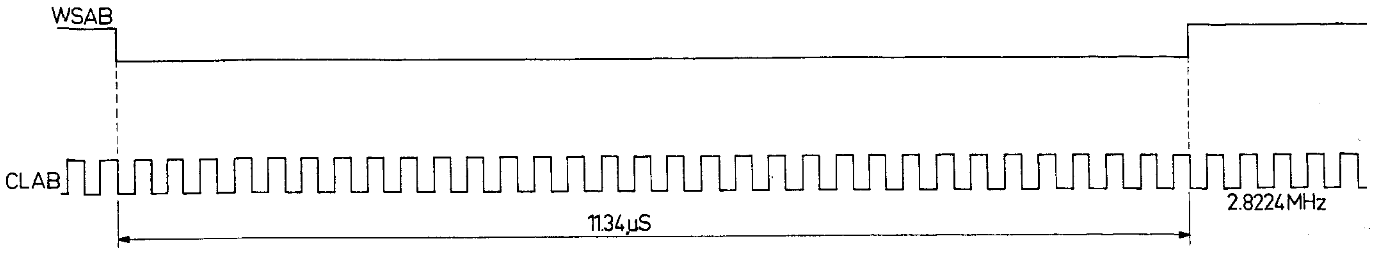
POSITION: PLAY (BEGINNING)

POSITION: PLAY (NORMAL)

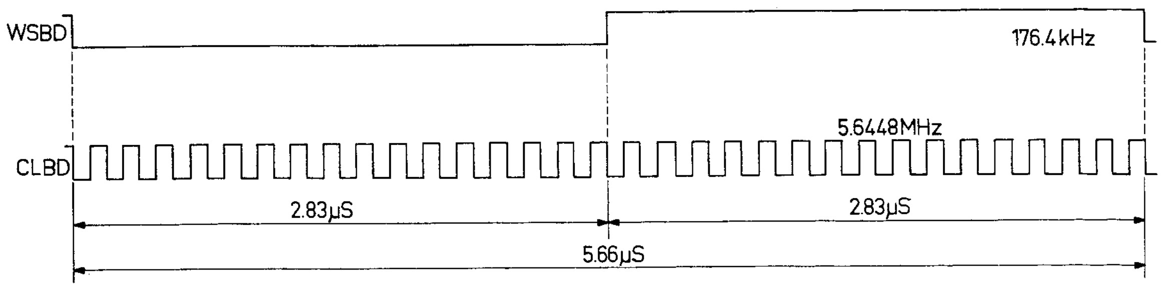
38 849 A12



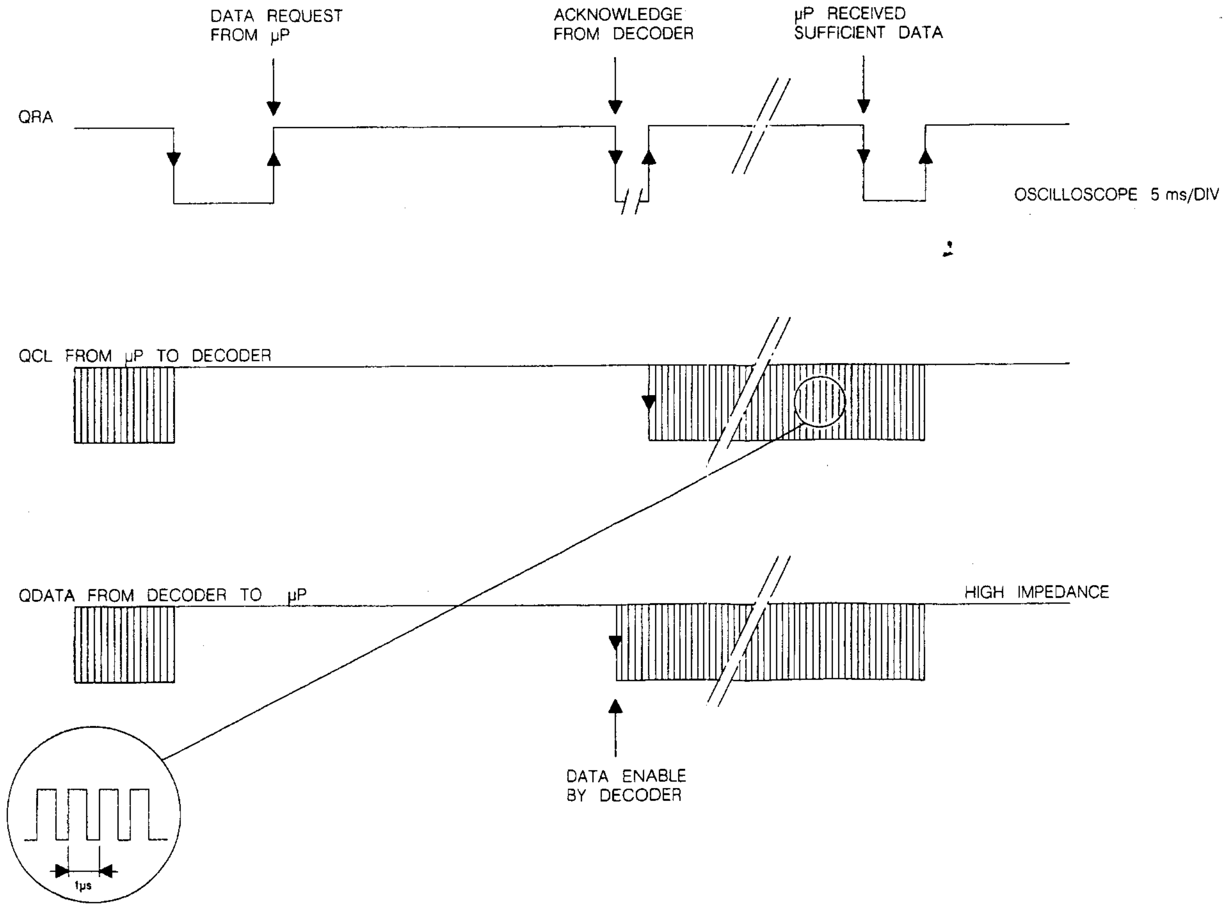
MDA 00240
T07-804



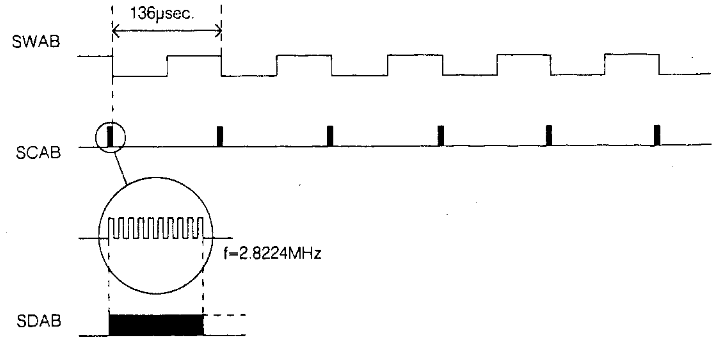
38 847 C12



38 848 C12



MDA.00453
T27/649



MDA.00239
T12/638

CD450

PRINT LAY-OUT COMP-SIDE WITH LARGE SUB. PANEL

1001	E 2
1002	D 6
1002	E 8
1003	E 4
1003	D 5
1004	E 5
1004	E 4
1005	F 5
1005	D 8
1006	F 5
1006	D10
1007	E 6
1008	E 6
1009	F 6
1010	E 6
1011	E 6
1012	E 7
1013	E 7
1014	E 8
1015	F 8
1016	D 8
1017	D 8
1019	D 8
1020	E 9
1021	E11
1023	D 9
1024	E 9
1025	E 8
1026	E 8
1027	D 3
1029	E 2
1030	F 2
1031	F 5
1032	E 7
1033	D 1
1034	F10
1035	F11
1037	D 1
1038	F 6
1060	E 1
1061	D 4
1061	C 3
1062	F 1
1063	E 1
1065	E 1
1067	F 3
1068	E 2
1087	E 2
1088	E 2
1090	D 4
2006	E11
2008	E10
2009	E 9
2010	E 9
2013	F 9
2016	E10
2020	E11
2021	E10
2022	E11
2023	E10
2060	E 2
2061	D 1
2063	E 2
2064	E 4
2065	E 2
2066	E 4
2067	D 3
2068	D 3
2070	F 3
2072	E 1
2073	E 1
2074	D 4
2075	E 5
2076	D 6
2077	D 6
2078	D 6
2079	D 6
2080	D 6
2081	D 6
2082	D 6
2083	D 5
2084	D 5
2085	D 5
2086	D 5
2087	D 5
2088	D 5
2089	D 5
2090	D 5
2091	E 5
2092	D 5
2093	D 5
2094	D 5
2096	F 3
2097	D 8
2098	D 8
2099	D 8
2101	D 7
2102	F 7
2103	D 7
2104	F 7
2105	D 7
2106	F 8
2107	D 8
2108	F 8
2109	E 8
2110	E 8
2113	E 6
2113	B 5
2114	B 6
2115	D 8
2117	E 6
2118	D 6
2119	D 6
2120	D 6
2121	D 6
2122	E 6
2123	D 6
2125	E 5
2126	E 5
2127	D 9
2128	E 9
2129	E 9
2130	D 9
2135	F 5
2136	E 5
2137	F 7
2139	D 9
2140	D 9
2201	C 6
2500	C 6
3001	D10
3002	E10
3003	D11
3004	E11
3011	E11
3012	E11
3013	E11
3014	E10
3015	E10
3016	E10
3017	F 9
3018	E 9
3019	F10
3020	F 9
3021	F 9
3022	D 8
3023	D10
3024	E 9
3025	E 8
3026	E 9
3061	E 2
3062	E 2
3064	E 2
3066	D 4
3067	E 2
3068	F 4
3069	E 3
3070	E 2
3071	F 5
3072	E 4
3073	F 3
3075	E 1
3076	E 1
3077	F 1
3078	E 1
3079	E 5
3080	D 4
3081	D 4
3082	D 4
3083	E 2
3084	E 2
3085	E 2
3086	E 3
3087	D 3
3088	C 2
3089	C 2
3090	E 4
3092	F 2
3096	F 2
3097	E 1
3098	E 2
3099	F 2
3101	E 7
3102	E 7
3103	E 7
3104	E 7
3105	D 7
3106	F 7
3107	E 7
3108	F 7
3109	E 7
3110	E 7
3111	E 8
3112	E 8
3113	E 8
3114	E 8
3115	E 8
3116	E 8
3117	C 8
3118	C 8
3119	E 6
3119	C 6
3120	D 6
3120	C 6
3121	E 6
3122	D 6
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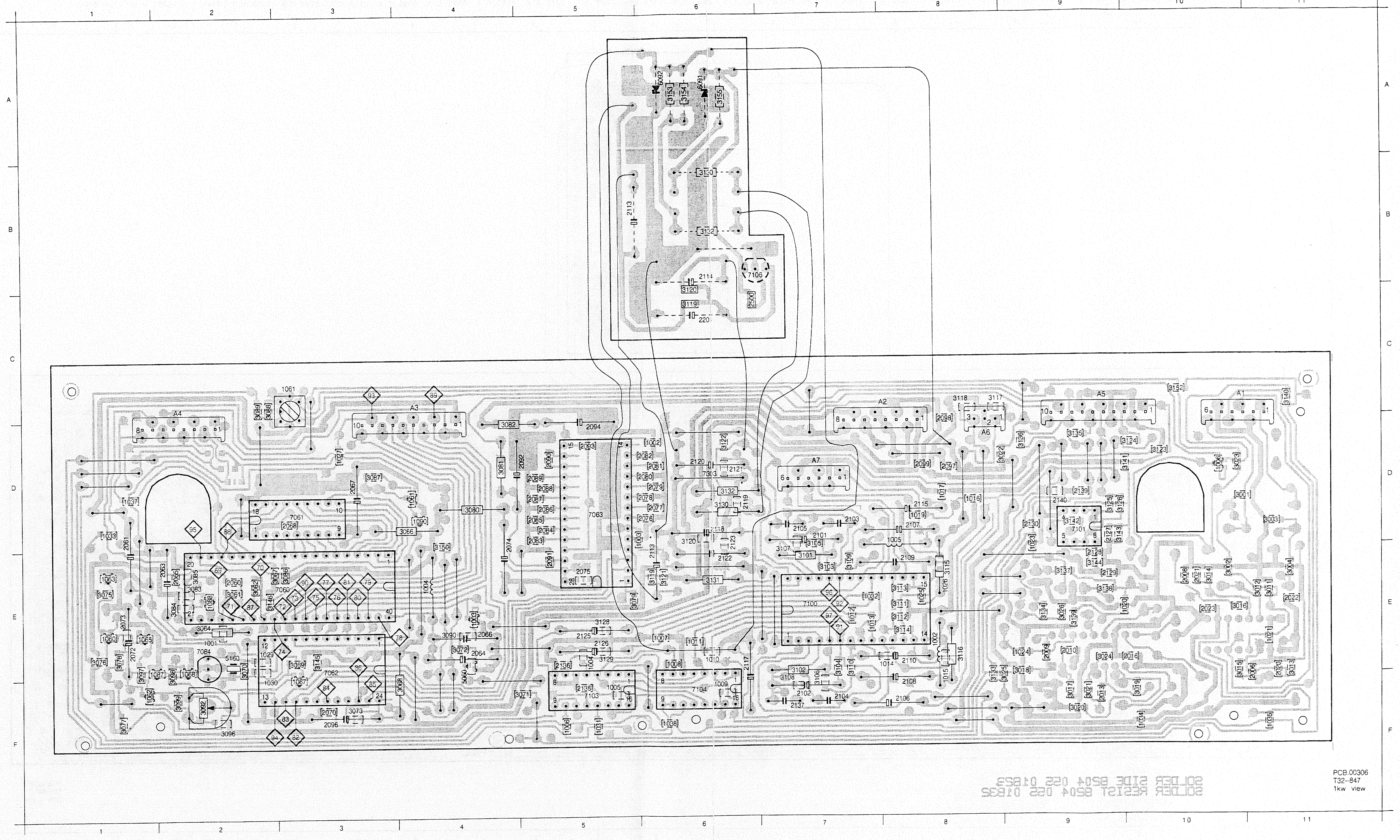
3132	B 6
3133	E 8
3134	E 9
3135	D 9
3136	D 9
3137	E 9
3138	E 9
3139	E 9
3140	C11
3141	D10
3142	D 9
3143	D 9
3144	E 9
3145	E 3
3146	E 2
3150	D 4
3152	C10
3153	A 6
3154	A 6
3155	A 6
5060	E 4
5160	E 2
6091	A 6
6092	A 6
7060	E 3
7061	D 3
7062	E 3
7063	D 5
7084	E 2
7100	E 7
7101	D 9
7103	F 5
7104	F 6
7106	B 7
7303	D 6



CS 18 986

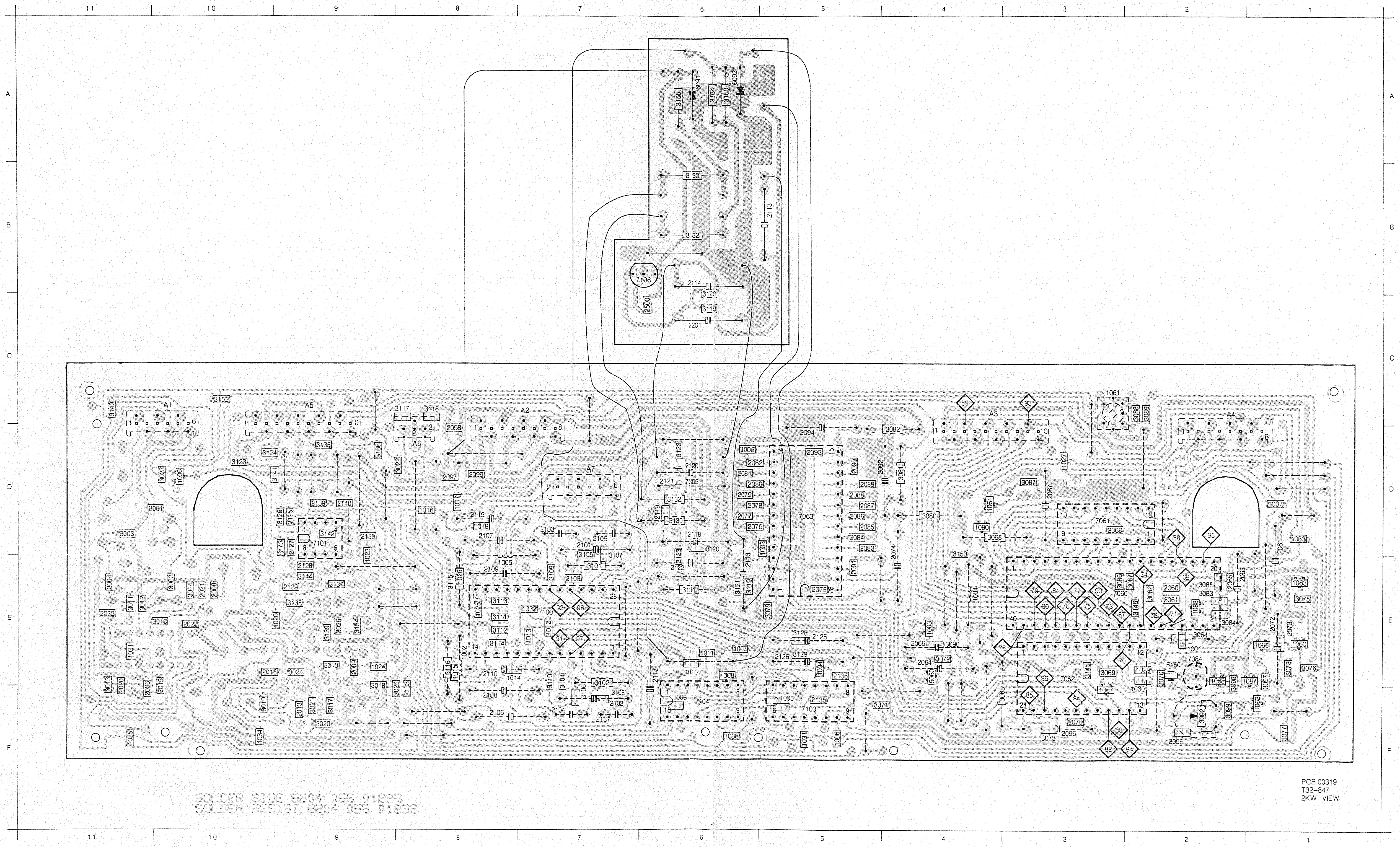
PRINT LAY-OUT CHIP-SIDE WITH LARGE SUB. PANEL

1001	E 2	1006	D10	1016	D 8	1029	E 2	1061	D 4	2006	F11	2060	E 2
1002	D 6	1007	E 6	1017	D 8	1030	F 3	1061	C 3	2008	E10	2061	D 1
1002	E 8	1008	E 6	1019	D 8	1031	F 5	1062	F 1	2009	E 9	2063	E 1
1003	E 4	1009	F 6	1020	E 9	1032	E 8	1063	E 1	2010	E 9	2064	E 4
1003	D 5	1010	E 6	1021	E11	1033	D 1	1065	E 2	2013	F 9	2065	E 2
1004	E 5	1011	E 6	1023	D 9	1034	F10	1067	F 3	2016	E10	2066	E 4
1004	E 4	1012	E 7	1024	E 9	1035	F11	1068	E 2	2020	E11	2067	D 3
1005	F 5	1013	E 7	1025	E 8	1037	D 1	1087	E 2	2021	E10	2068	D 3
1005	E 8	1014	E 8	1026	E 8	1038	F 6	1088	E 2	2022	E11	2070	F 3
1006	F 5	1015	E 8	1027	D 3	1060	E 1	1090	D 4	2023	E10	2072	E 1

2073	E 1	2083	D 5	2093	D 5	2105	D 7	2117	E 6	2128	E 9
2074	D 4	2084	D 5	2094	D 5	2106	F 8	2118	D 6	2129	E10
2075	E 5	2085	D 5	2096	F 3	2107	D 8	2119	D 6	2130	D 9
2076	D 6	2086	D 5	2097	D 8	2108	F 8	2120	D 6	2135	F 5
2077	D 6	2087	D 5	2098	D 8	2109	E 8	2121	D 6	2136	E 5
2078	D 6	2088	D 5	2099	D 8	2110	E 8	2122	E 6	2137	F 7
2079	D 6	2089	D 5	2101	D 7	2113	E 6	2123	D 6	2139	D 9
2080	D 6	2090	D 5	2102	F 7	2113	B 5	2125	E 5	2140	D 9
2081	D 6	2091	E 5	2103	D 7	2114	B 6	2126	E 5	2201	C 6
2082	D 6	2092	D 4	2104	F 7	2115	D 8	2127	D 9	2500	C 6

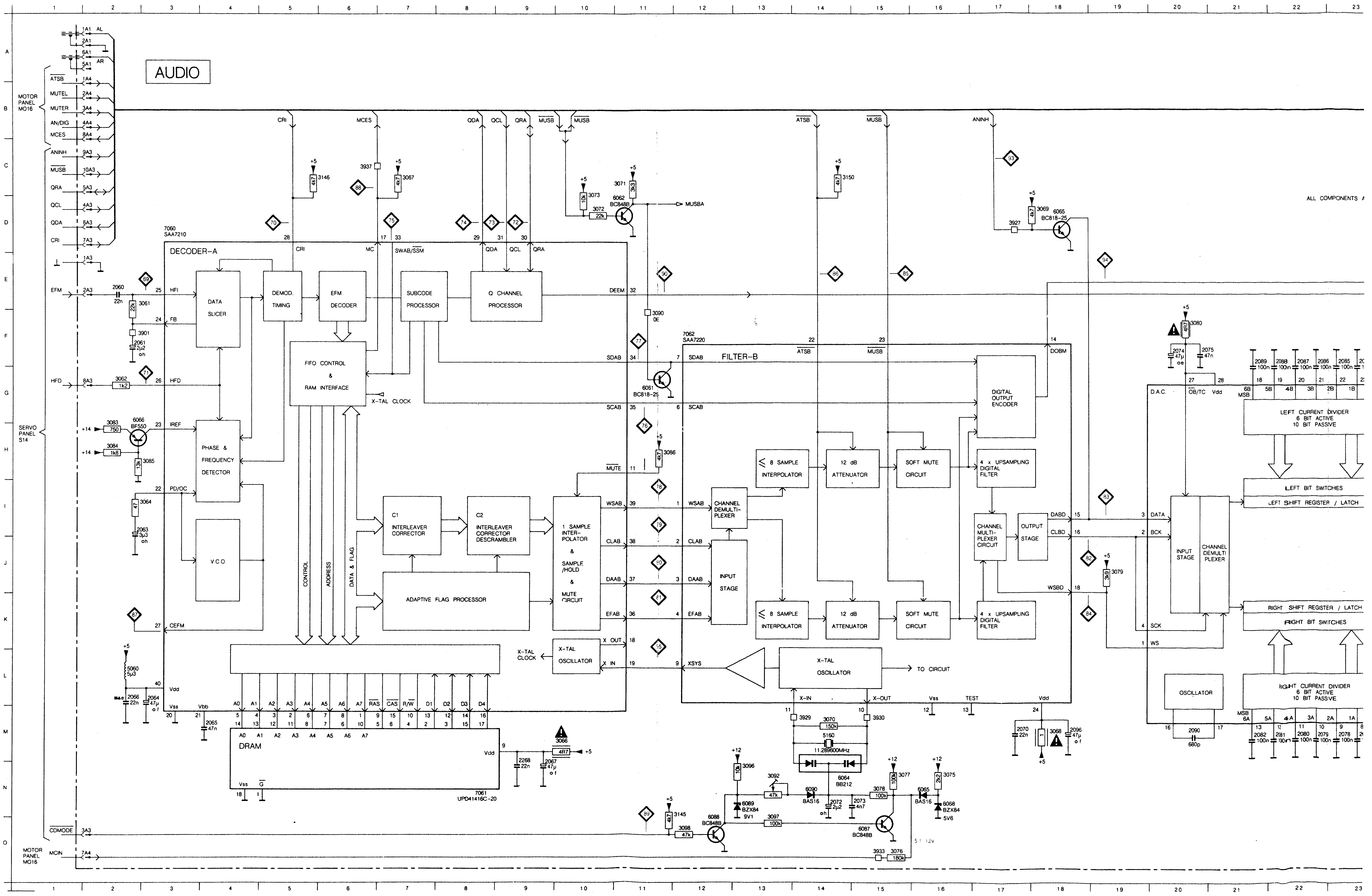
3001	D11	3017	F 9	3061	E 2	3073	F 3	3084	E 2	3098	E 2
3002	E10	3018	F 9	3062	E 2	3075	E 1	3085	E 2	3099	F 2
3003	D11	3019	F10	3064	E 2	3076	E 1	3086	E 3	3101	E 7
3004	E11	3020	F 9	3066	D 4	3077	F 1	3087	D 3	3102	E 7
3011	E11	3021	F 9	3067	E 2	3078	E 1	3088	C 2	3103	E 7
3012	E11	3022	D 8	3068	F 3	3079	E 5	3089	C 2	3104	E 7
3013	E11	3023	D10	3069	E 3	3080	D 4	3090	E 4	3105	D 7
3014	E10	3024	E 9	3070	E 2	3081	D 4	3092	F 2	3106	F 7
3015	E10	3025	F 8	3071	F 5	3082	D 5	3096	F 2	3107	E 7
3016	E11	3026	E 9	3072	E 4	3083	E 2	3097	E 1	3108	F 7

3109	E 7	3119	E 6	3128	E 5	3136	D 9	3146	E 2	7060	E 3	7303	D 6
3110	E 7	3119	C 6	3129	E 5	3137	E 9	3150	D 4	7061	D 3		
3111	E 8	3120	D 6	3130	D 6	3138	E 9	3152	C10	7062	E 3		
3112	E 8	3120	C 6	3130	B 6	3139	E 9	3153	A 6	7063	D 5		
3113	E 8	3121	E 6	3131	E 6	3140	C11	3154	A 6	7084	E 2		
3114	E 8	3122	D 6	3132	D 6	3141	D 9	3155	A 6	7100	E 7		
3115	E 8	3123	D10	3132	B 6	3142	D 9	5060	E 4	7101	D 9		
3116	E 8	3124	D10	3133	F 8	3143	D 9	5160	E 2	7103	F 5		
3117	C 9	3125	D 9	3134	E 9	3144	E 9	6091	A 6	7104	F 6		
3118	C 8	3126	D 9	3135	D 9	3145	E 3	6092	A 6	7106	B 7		

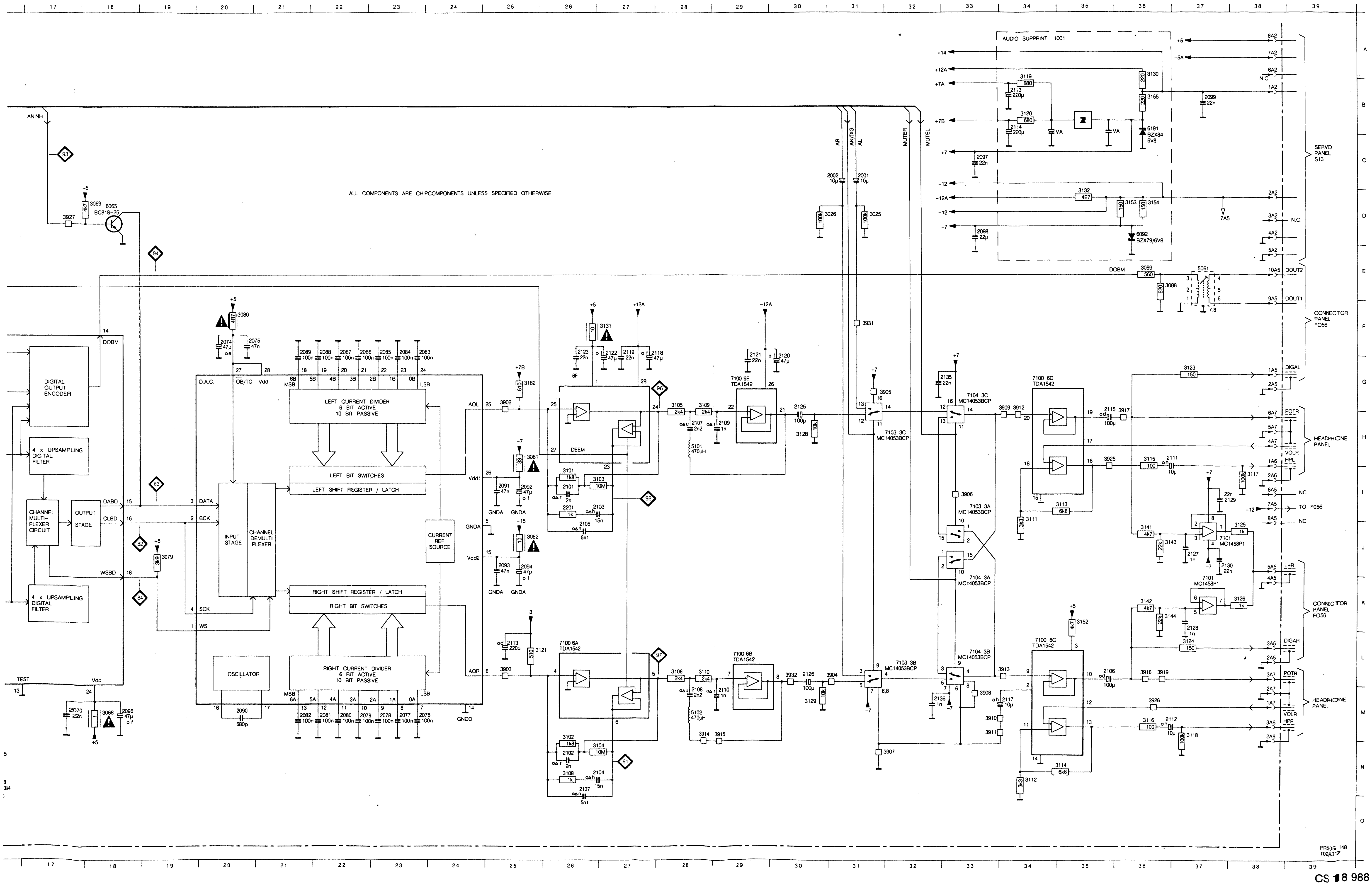


CIRCUIT DIAGRAM WITH LARGE SUB. PANEL

1001	A35	2061	F 2	2066	L 2	2073	N15	2077	M23	2081	M22	2085	F23	2089	F21	2093	J25	2098	D33	2103	I 26	2107	H28	2111	H36	2114	B34	2119	F27	2123	F26	2128	K37	2136	M32	3025	D31	3064	I 3	3069	D18	3073	C10	3078	N15	3082	J25	3086	H11	3092	N13	3101	I 26	3105	G28	3110	L28	3114	N35	3118	M37	3123	G37	3
2001	C31	2063	I 3	2067	N 9	2074	F20	2078	M23	2082	M21	2086	F22	2090	M20	2094	J25	2099	B37	2104	N26	2108	M28	2112	M36	2115	G35	2120	F30	2125	G30	2129	I 38	2137	N26	3026	D31	3066	M10	3070	M14	3075	N16	3079	J19	3083	G 2	3088	E37	3096	N13	3102	M26	3106	L28	3111	I 34	3115	H36	3119	A34	3124	L37	3
2002	C31	2064	L 3	2070	M17	2075	F21	2079	M22	2083	F23	2087	F22	2091	I 25	2096	M18	2101	I 26	2105	J26	2109	H29	2113	L25	2117	M34	2121	F29	2126	L30	2130	J37	2201	I 26	3061	E 3	3067	C 7	3071	C11	3076	O15	3080	F20	3084	H 2	3089	E36	3097	N13	3103	I 26	3108	N26	3112	N34	3116	M36	3120	B34	3125	J38	3
2060	E 2	2065	M 4	2072	N14	2076	M23	2080	M22	2084	F23	2088	F22	2092	I 25	2097	C33	2102	N26	2106	L35	2110	M29	2113	B34	2118	F28	2122	F27	2127	J37	2135	G33	2268	M 9	3062	G 2	3068	M18	3072	D10	3077	N15	3081	H25	3085	H 3	3090	F11	3098	O12	3104	N26	3109	G28	3113	I 35	3117	I 38	3121	L26	3126	K38	3



N15 3082	J25 3086	H11 3092	N13 3101	I26 3105	G28 3110	L28 3114	N35 3118	M37 3123	G37 3128	H30 3132	D35 3144	K37 3152	K35 3182	G25 3904	L31 3908	M33 3912	G34 3916	L36 3926	M36 3931	F31 5060	L 2 5160	M14 6065	D18 6087	O15 6092	D36 7062	F12 7100	L26 7103	L32
J19 3083	G 2 3088	E37 3096	N13 3102	M26 3106	L28 3111	I34 3115	H36 3119	A34 3124	L37 3129	M30 3141	J36 3145	N12 3153	D36 3901	F 3 3905	G31 3909	G34 3913	L34 3917	G36 3927	D17 3932	L30 5061	E37 6061	G11 6065	N16 6088	O12 6191	B36 7100	G34 7100	L34 7104	G33
F20 3084	H 2 3089	E36 3097	N13 3103	I26 3108	N26 3112	N34 3116	M36 3120	B34 3125	J38 3130	A36 3142	K36 3146	C 6 3154	D36 3902	G25 3906	I33 3910	M33 3914	M28 3919	L36 3929	M14 3933	O15 5101	H28 6062	D11 6066	G 2 6089	N13 7060	D 3 7100	G29 7103	H32 7104	K33
H25 3085	H 3 3090	F11 3098	O12 3104	N26 3109	G28 3113	I35 3117	I38 3121	L26 3126	K38 3131	F27 3143	J37 3150	C14 3155	B36 3903	L25 3907	N32 3911	M33 3915	M29 3925	H35 3930	M15 3937	C 6 5102	M28 6064	N14 6068	N16 6090	N14 7061	N 8 7100	L29 7103	I33 7104	L33

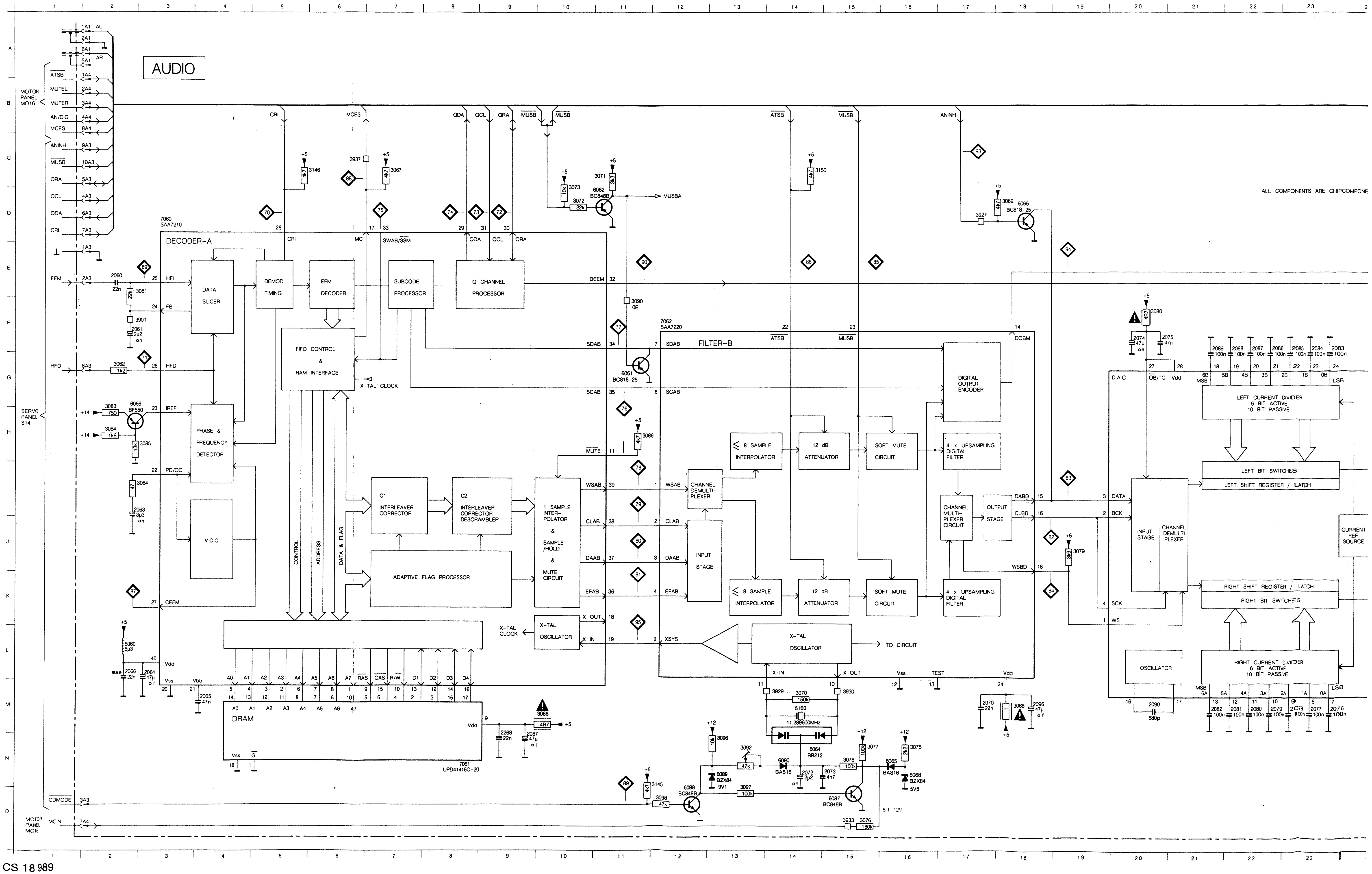


10-10 CIRCUIT DIAGRAM CDV988

1001	A35	2061	F 2	2066	L 2	2073	N15	2077	M23	2081	M22	2085	F23	2089	F21	2093	J25	2098	D33	2103	I 26
2001	C31	2063	I 3	2067	N 9	2074	F20	2078	M23	2082	M21	2086	F22	2090	M20	2094	J25	2099	B37	2104	N26
2002	C31	2064	L 3	2070	M17	2075	F21	2079	M22	2083	F23	2087	F22	2091	I 25	2096	M18	2101	I 26	2105	J26
2060	E 2	2065	M 4	2072	N14	2076	M23	2080	M22	2084	F23	2088	F22	2092	I 25	2097	C33	2102	N26	2106	L35

2107	H28	2111	H36	2114	B34	2119	F27	2123	F26	2128	K37	2136	M32	3025	D31	3064	I 3	3069	D18	3073	C10
2108	M28	2112	M36	2115	G35	2120	F30	2125	G30	2129	I 38	2137	N26	3026	D31	3066	M10	3070	M14	3075	N16
2109	H29	2113	L25	2117	M34	2121	F29	2126	L30	2130	J37	2201	I 26	3061	E 3	3067	C 7	3071	C11	3076	O15
2110	M29	2113	B34	2118	F28	2122	F27	2127	J37	2135	G33	2268	M 9	3062	G 2	3068	M18	3072	D10	3077	N15

3078	N15	3082	J25	3086	H11	3092	N13	3101	I 26	3105	G28	3110	L28	3114	N35	3118	M37	3123	G37	3128	H30	313
3079	J19	3083	G 2	3088	E37	3096	N13	3102	M26	3106	L28	3111	I 34	3115	H36	3119	A34	3124	L37	3129	M30	314
3080	F20	3084	H 2	3089	E36	3097	N13	3103	I 26	3108	N26	3112	N34	3116	M36	3120	B34	3125	J38	3130	A36	314
3081	H25	3085	H 3	3090	F11	3098	O12	3104	N26	3109	G28	3113	I 35	3117	I 38	3121	L26	3126	K38	3131	F27	314



CS 18 989

2	J25	3086	H11	3092	N13	3101	I26	3105	G28	3110	L28	3114	N35	3118	M37	3123	G37	3128	H30	3132	D35	3144	K37	3152	K35	3182	G25	3904	L31	3908	M33	3912	G34	3916	L36	3926	M36	3931	F31	5060	L 2	5160	M14	6065
3	G 2	3088	E37	3096	N13	3102	M26	3106	L28	3111	I34	3115	H36	3119	A34	3124	L37	3129	M30	3141	J36	3145	N12	3153	D36	3901	F 3	3905	G31	3909	G34	3913	L34	3917	G36	3927	D17	3932	L30	5061	E37	6061	G11	6065
4	H 2	3089	E36	3097	N13	3103	I26	3108	N26	3112	N34	3116	M36	3120	B34	3125	J38	3130	A36	3142	K36	3146	C 6	3154	D36	3902	G25	3906	I33	3910	M33	3914	M28	3919	L36	3929	M14	3933	O15	5101	H28	6062	D11	6066
5	H 3	3090	F11	3098	O12	3104	N26	3109	G28	3113	I35	3117	I38	3121	L26	3126	K38	3131	F27	3143	J37	3150	C14	3155	B36	3903	L25	3907	N32	3911	M33	3915	M29	3925	H35	3930	M15	3937	C 6	5102	M28	6064	N14	6068

D18	6087	O15	6092	D36	7062	F12	7100	L26	7103	L32
N16	6088	O12	6191	B36	7100	G34	7100	L34	7104	G33
G 2	6089	N13	7060	D 3	7100	G29	7103	H32	7104	K33
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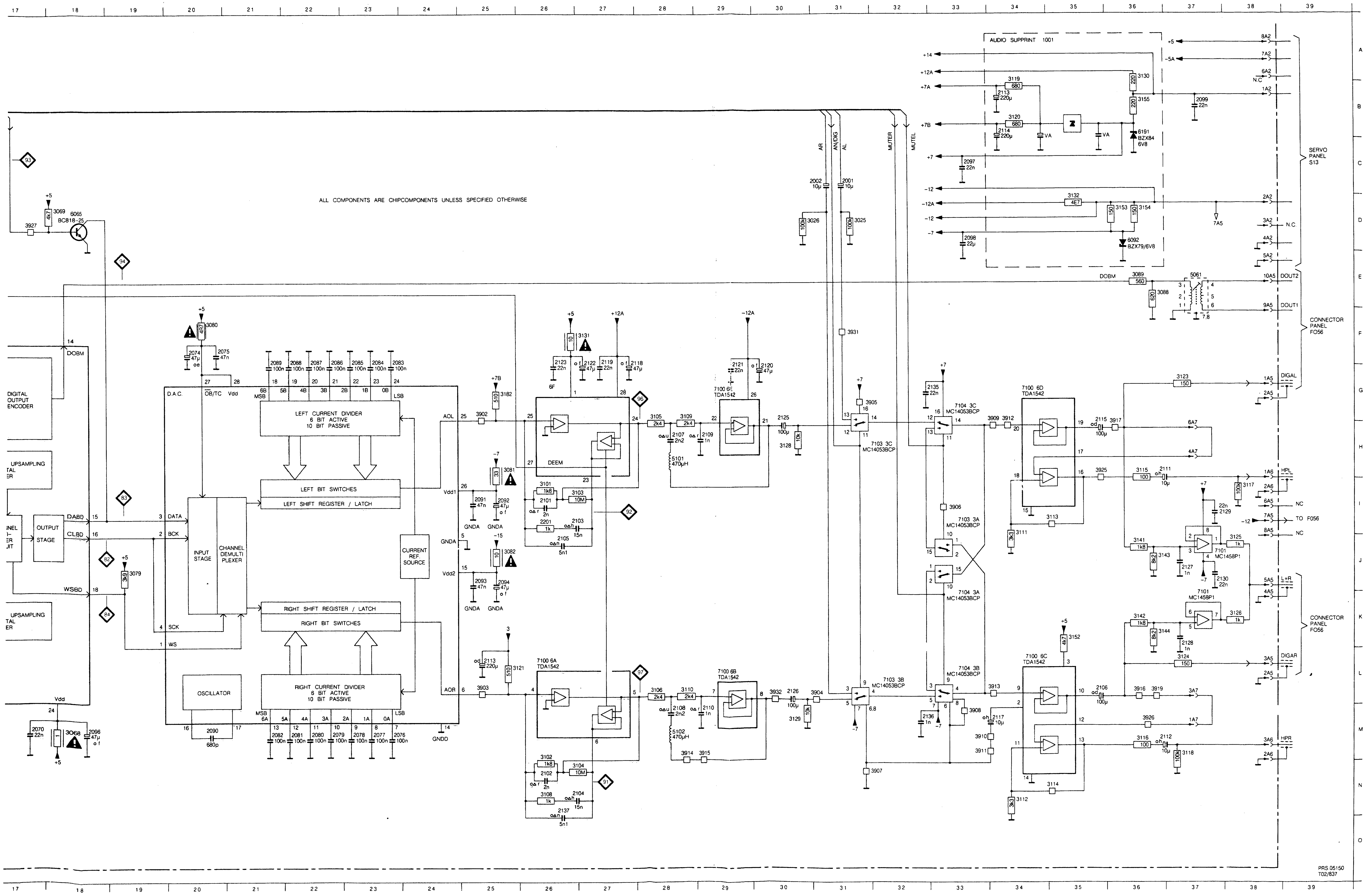

ALL COMPONENTS ARE CHIPCOMPONENTS UNLESS SPECIFIED OTHERWISE

PRS 05150
T02/837

PRINT LAY-OUT COMP-SIDE CDV988

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1006	D10
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1012	E 7
1013	E 7
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1030	F 2
1031	F 5
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1035	F11
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1038	F 6
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1065	E 1
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1090	D 4
2006	E11
2008	E10
2009	E 9
2010	E 9
2013	F 9
2016	E10
2020	E11
2021	E10
2022	E11
2023	E10
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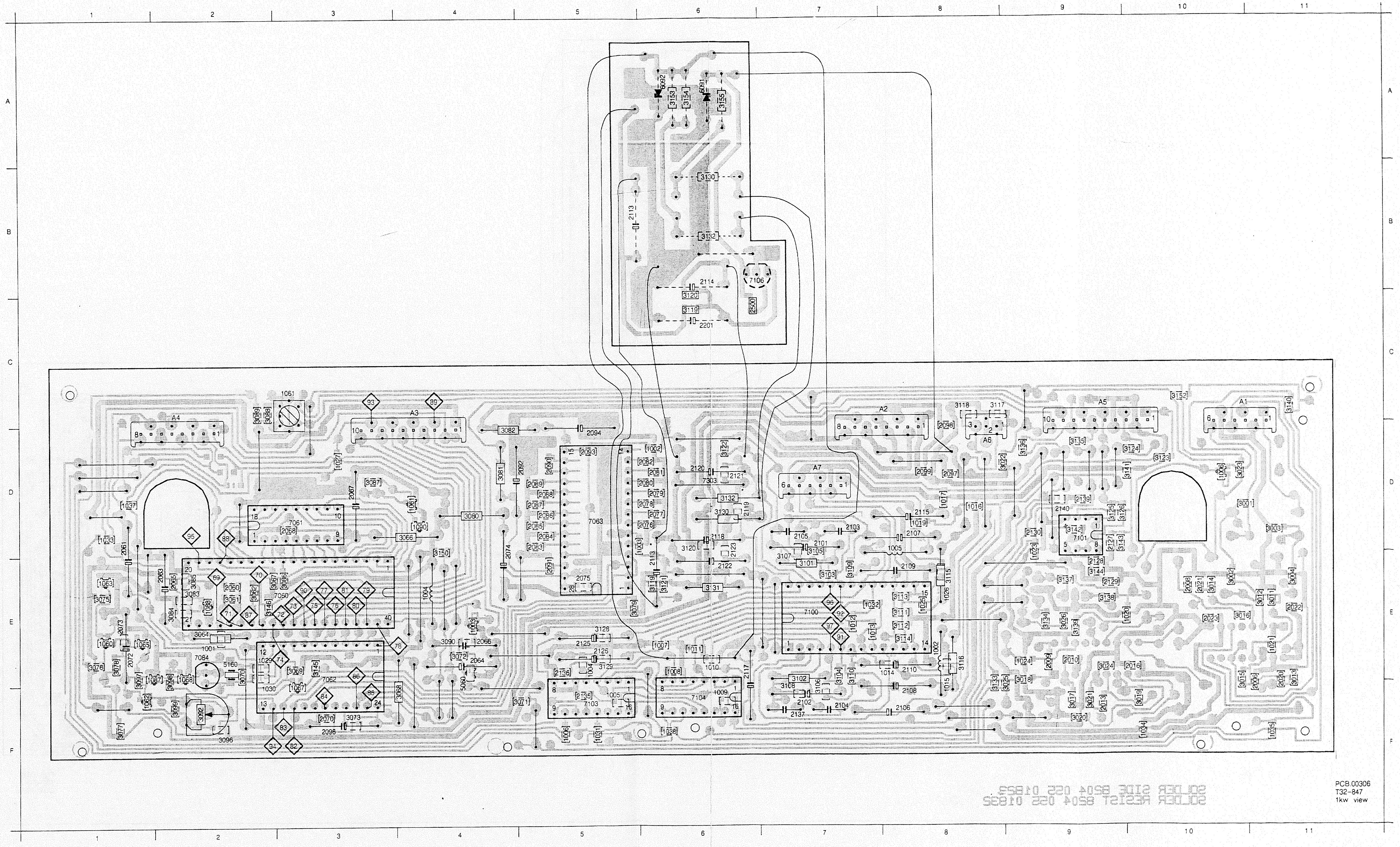

PCB.00306
T32-847
1kw view

CS 18 990

PRINT LAY-OUT CHIP-SIDE CDV988

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1003	D 5
1004	E 5
1004	E 4
1005	F 5
1005	E 8
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1006	D10
1007	E 6
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3119	C 6
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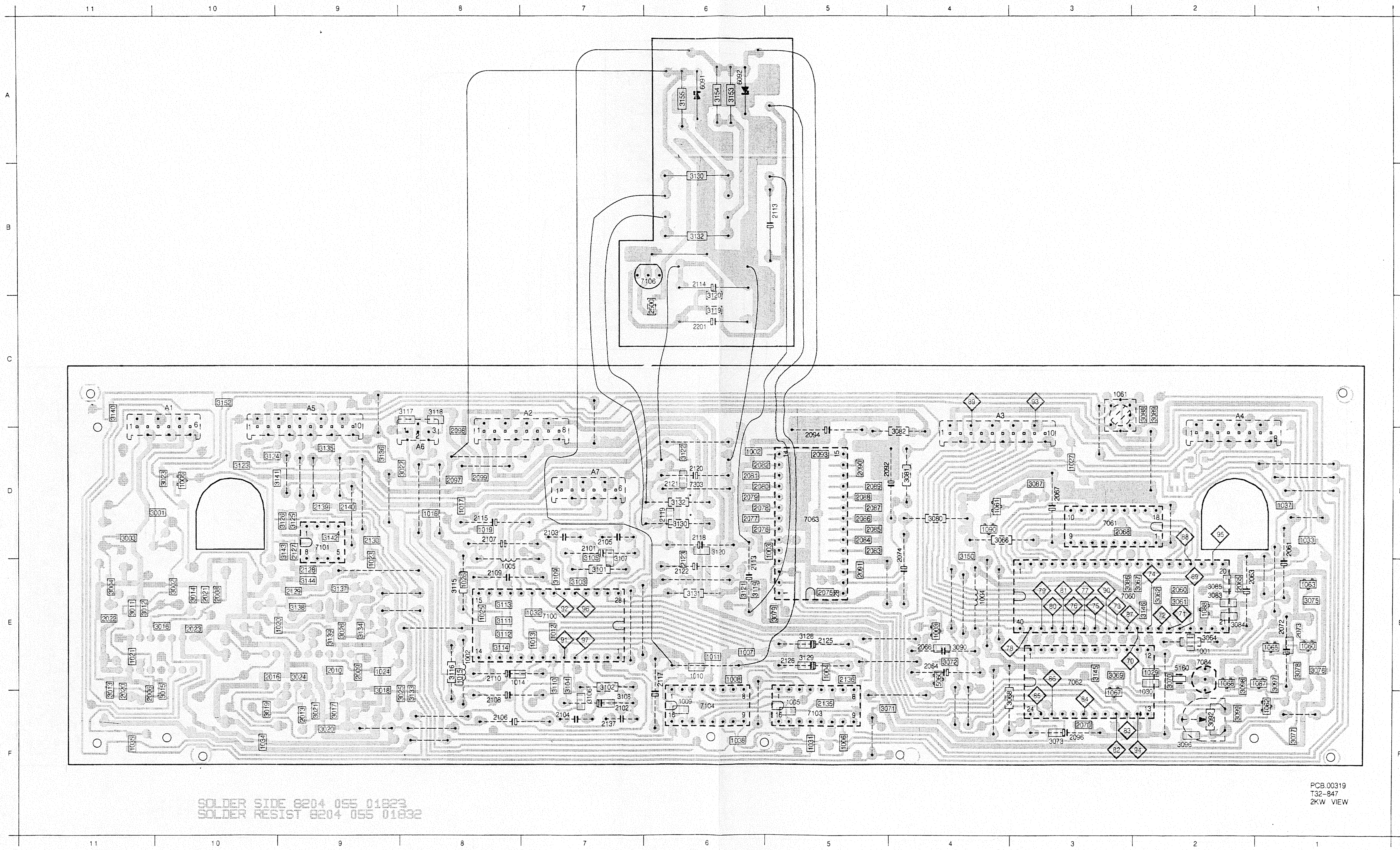
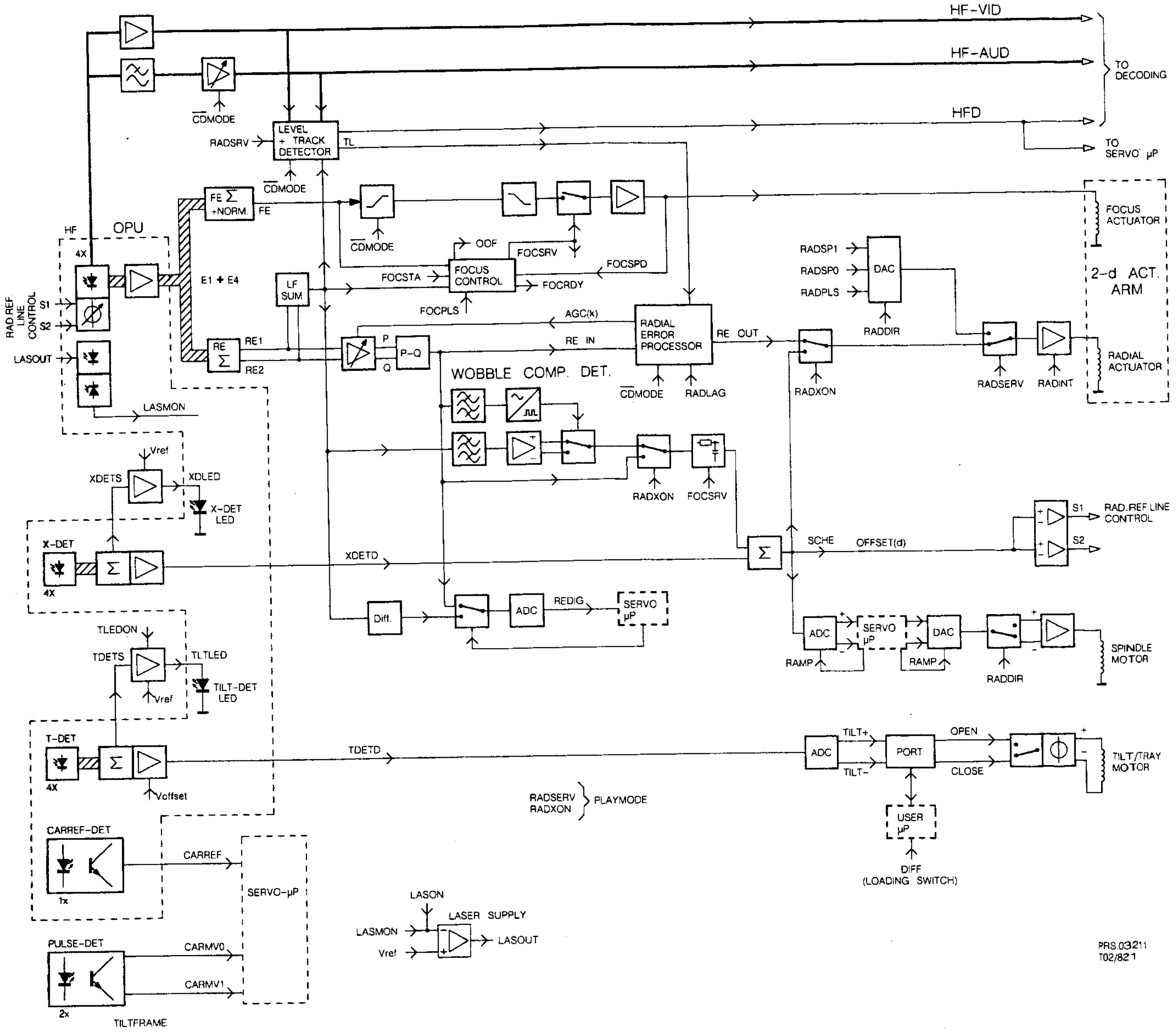


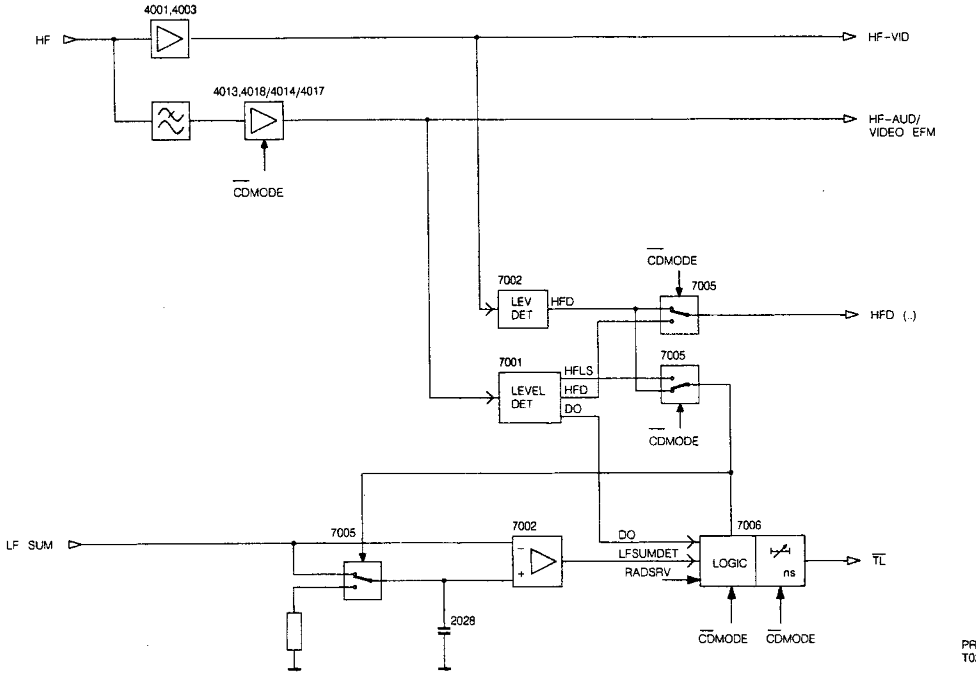
OVERL. BEH. BIJ PCB 00319 OVERL. BEH. BIJ PCB 00319

11. SERVO SECTION

SERVO MAIN BLOCK DIAGRAM

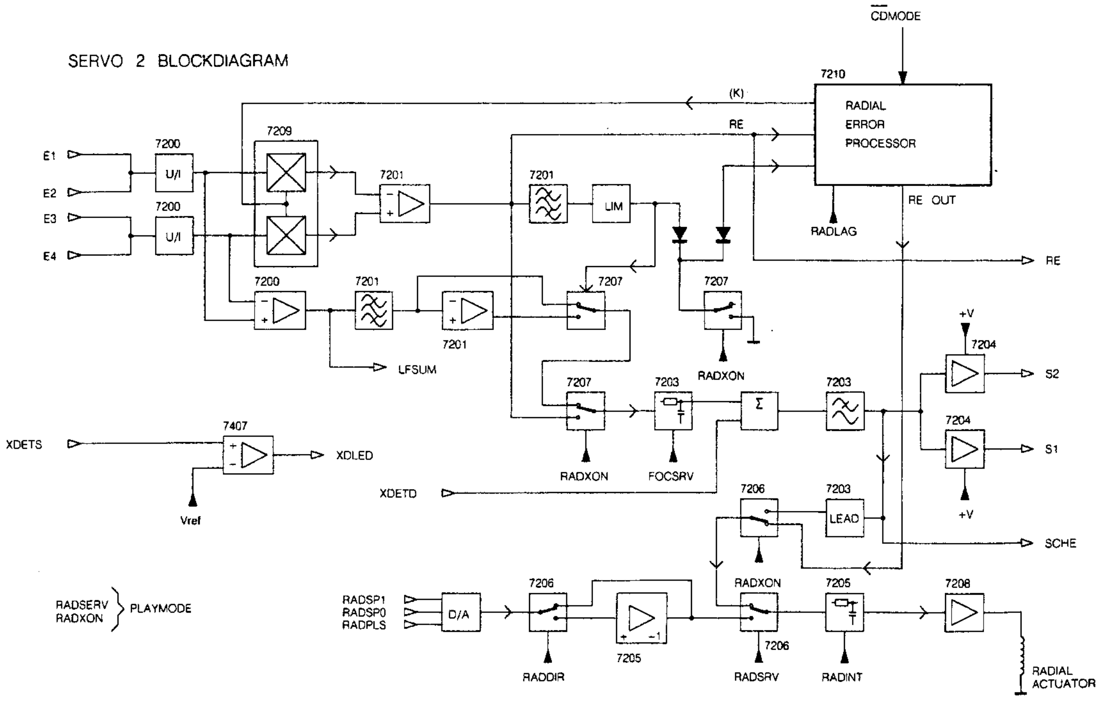


SERVO 1 BLOCKDIAGRAM



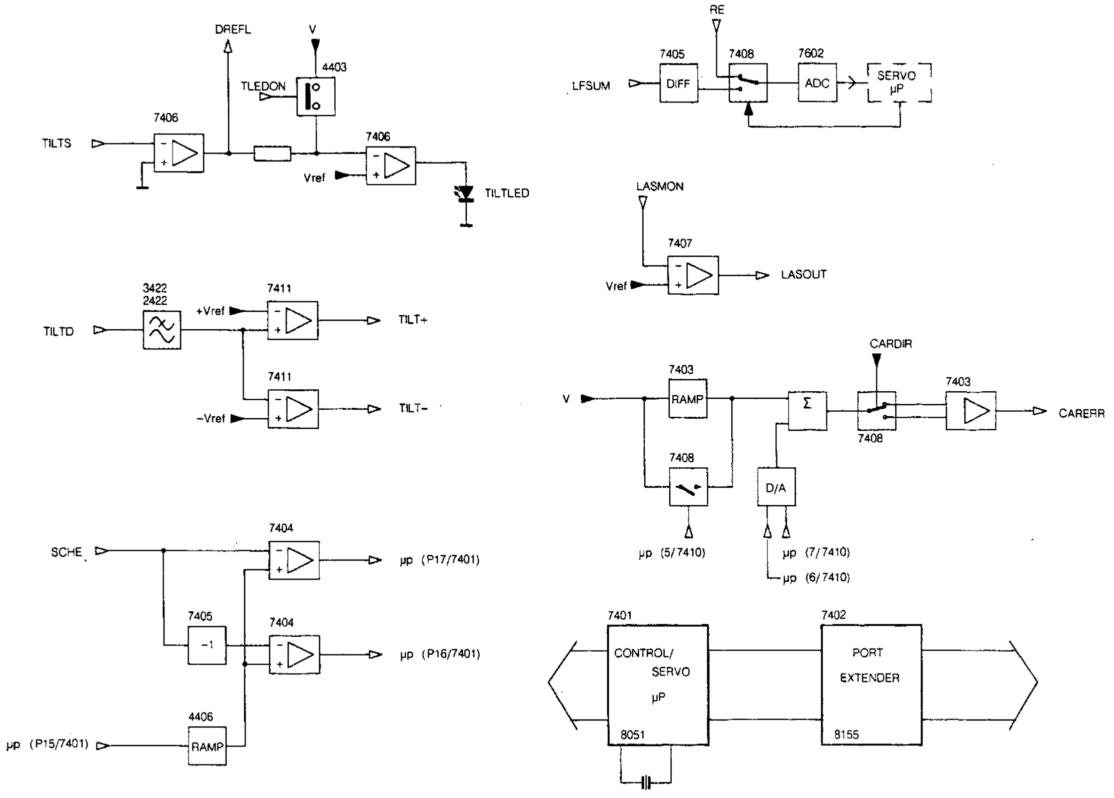
PRS 03227
T02/811

SERVO 2 BLOCKDIAGRAM



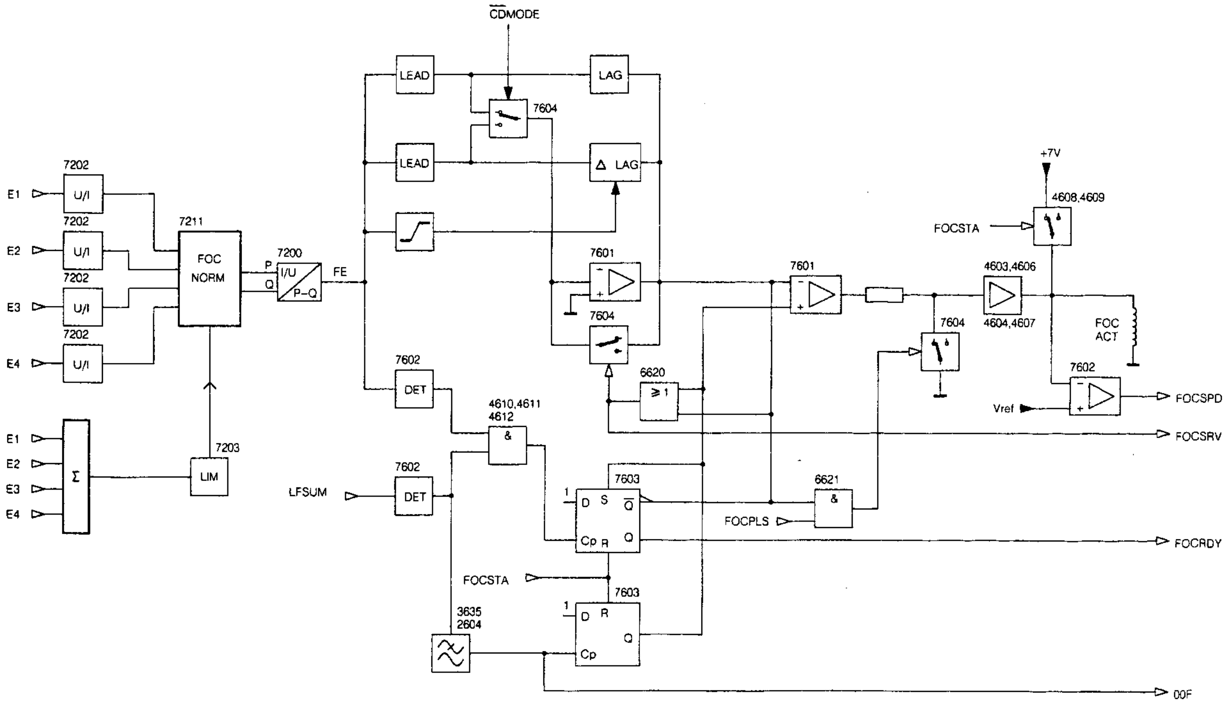
PRS 03234
T02/811

SERVO 3 BLOCKDIAGRAM



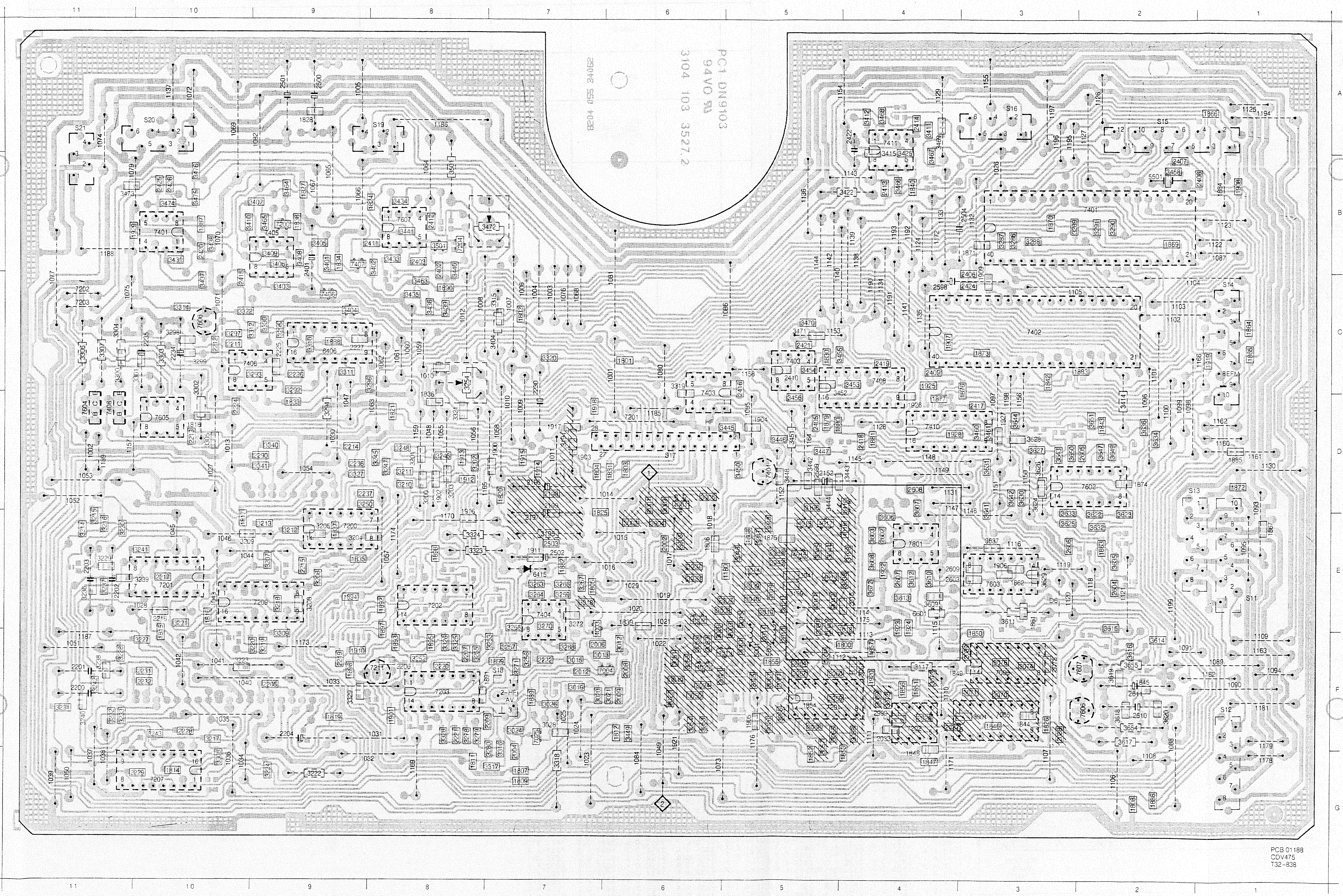
PRS 03233
T02/810

SERVO 4 BLOCKDIAGRAM



PRS 03235
T02/811

PRINT LAY-OUT SERVO I



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1004	C 7	1135	C 4	1879	D 5	2410	C 5
1005	A 9	1136	B 5	1880	D 5	2411	B 9
1006	C 7	1137	A10	1881	D 4	2412	B 8
1007	C 7	1138	B 4	1882	E 7	2413	B 4
1008	C 8	1139	B 4	1883	C 3	2414	A 4
1009	D 7	1140	B 5	1884	B 1	2415	C10
1010	C 8	1141	C 4	1885	D 1	2416	C 5
1010	D 7	1142	B 5	1886	G 2	2417	D 3
1011	D 7	1143	B 4	1887	B10	2418	D 4
1012	C 8	1144	B 5	1888	C 9	2419	C 4
1013	D10	1145	D 4	1889	F 7	2420	B10
1014	D 7	1146	D 3	1890	C 8	2421	C 5
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1020	E 6	1152	D 5	1896	F 9	2501	A 9
1021	E 6	1153	C 5	1897	E 8	2502	E 7
1022	F 6	1154	A 5	1898	E 8	2503	E 7
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1034	G10	1166	C 1	1910	F 9	2610	F 2
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1037	G11	1171	G 4	1913	D 8	3001	F 3
1038	G11	1172	B 4	1914	D 7	3002	D 6
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1041	F10	1175	E 4	1917	D 7	3005	D 6
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1119	E 3	1862	E 3	2230	C 7	3211	D 8
1120	E 3	1863	E 2	2231	F10	3212	E 9
1121	E 2	1864	C 1	2232	F10	3213	E 9
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1123	B 1	1866	A 1	2235	C10	3215	E11
1124	B 4	1867	E 1	2236	D 9	3216	E11
1125	A 1	1868	E 5	2237	D 9	3217	F10
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1128	D 4	1871	B 3	2402	B 8	3220	F 9
1129	A 4	1872	D 1	2403	B 8	3221	E10
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1131	D 4	1874	D 2	2406	C 3	3223	F10

3224	G 9	3294	D 9
3227	F10	3295	C 9
3228	F11	3296	C 9
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3230	E11	3298	C10
3231	F11	3299	C10
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3242	F11	3308	G10
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3246	D 8	3311	C 9
3247	D 8	3312	C10
3248	D 8	3314	C10
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3253	F 7	3317	G 7
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3255	F 8	3319	C 6
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3257	F 7	3321	D 8
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3272	E 7	3340	D 9
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3279	F 8	3401	B 9
3280	F 7	3402	B 8
3286	B 3	3403	C 9
3287	B 3	3404	C 9
3288	B 3	3404	C 7
3289	B 3	3405	B 9
3290	B 2	3406	B 9
3291	B 2	3407	B10
3292	C 9	3408	B 9
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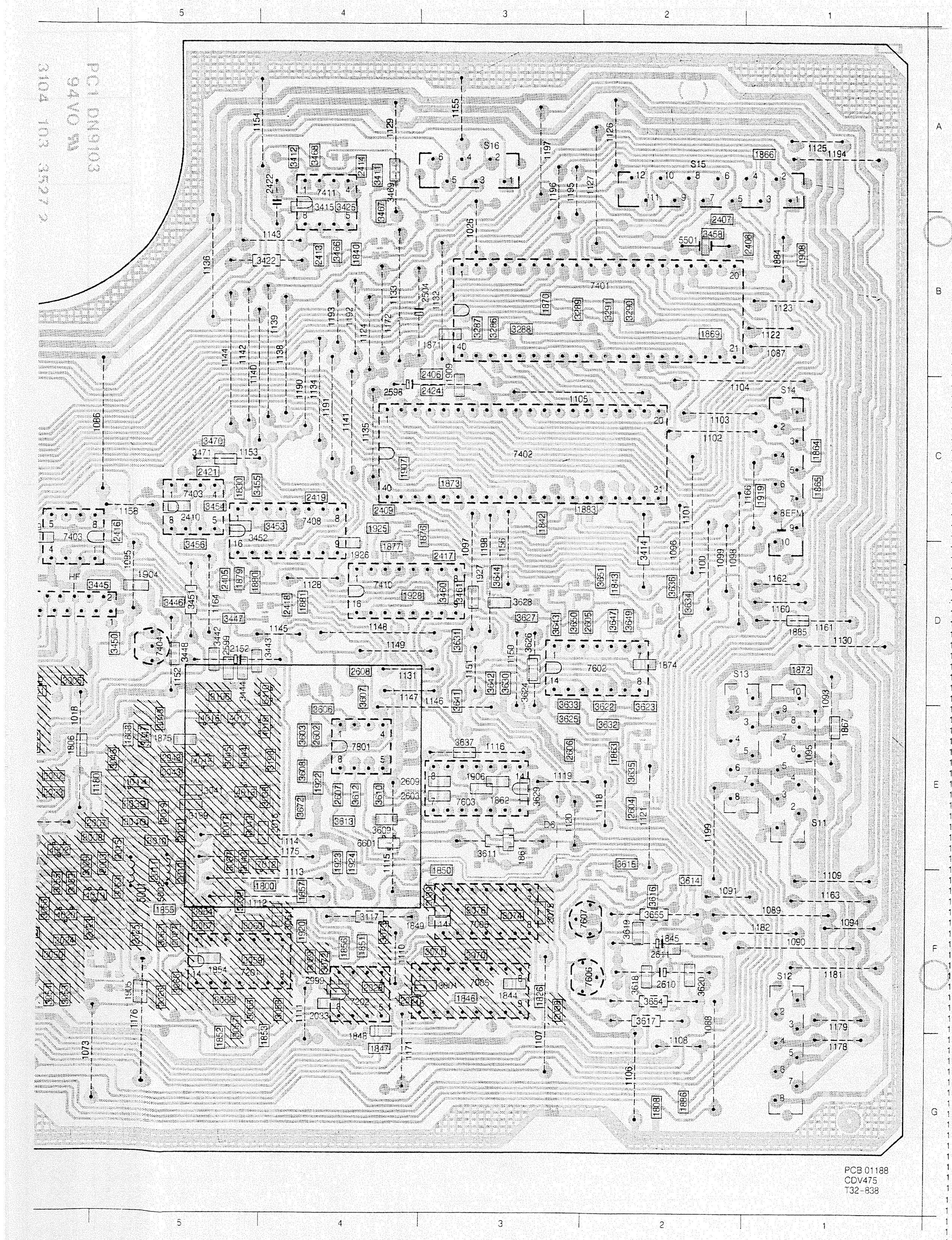
RE ADJUSTMENT

STEP	SIGNAL
1	—
2	—
3	RE
4	
5	CARERR



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1004	C 7	1135	C 4	1879	D 5	2410	C 5
1005	A 9	1136	B 5	1880	D 5	2411	B 9
1006	C 7	1137	A10	1881	D 4	2412	B 8
1007	C 7	1138	B 4	1882	E 7	2413	B 4
1008	C 8	1139	B 4	1883	C 3	2414	A 4
1009	D 7	1140	B 5	1884	B 1	2415	C10
1010	C 8	1141	C 4	1885	D 1	2416	C 5
1010	D 7	1142	B 5	1886	G 2	2417	D 3
1011	D 7	1143	B 4	1887	B10	2418	D 4
1012	C 8	1144	B 5	1888	C 9	2419	C 4
1013	D10	1145	D 4	1889	F 7	2420	B10
1014	D 7	1146	D 3	1890	C 8	2421	C 5
1015	E 6	1147	D 4	1891	F 7	2422	A 4
1016	E 6	1148	D 4	1892	E 8	2424	C 3
1017	E 6	1149	D 4	1893	F 8	2425	B10
1018	E 6	1150	D 3	1894	E 9	2426	B10
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1020	E 6	1152	D 5	1896	F 9	2501	A 9
1021	E 6	1153	C 5	1897	E 8	2502	E 7
1022	F 6	1154	A 5	1898	E 8	2503	E 7
1023	G 7	1155	A 3	1899	F 7	2504	B 3
1024	F 7	1156	D 3	1900	D 7	2598	C 4
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1028	E10	1160	D 1	1904	D 5	2604	E 2
1029	E 6	1161	D 1	1905	F 5	2605	D 2
1030	D 9	1162	D 1	1906	E 3	2606	E 3
1031	F 8	1163	F 1	1907	C 4	2607	E 4
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1035	F10	1169	G 8	1911	E 7	2611	F 2
1036	G10	1170	E 8	1912	D 8	2999	F 4
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1038	G11	1172	B 4	1914	D 7	3002	D 6
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1040	F10	1174	E 8	1916	D 8	3004	E 6
1041	F10	1175	E 4	1917	D 7	3005	D 6
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1067	B 9	1804	D 7	2017	E 5	3046	E 5
1068	C 7	1805	E 7	2019	E 5	3047	E 5
1069	A10	1806	E 6	2021	E 5	3048	E 5
1070	B10	1807	G 7	2022	F 6	3049	F 6
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1080	C 6	1818	D10	2037	F 4	3058	F 4
1081	C 6	1819	F 9	2038	F 3	3059	F 5
1082	A 9	1820	D 7	2039	F 3	3060	F 5
1084	G 6	1821	D 8	2042	E 4	3061	F 4
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1086	C 6	1825	E 7	2152	D 5	3063	F 5
1087	B 1	1826	F 3	2196	D 7	3064	F 5
1088	F 2	1827	B 9	2197	E 7	3065	F 5
1089	F 1	1828	A 9	2198	D 7	3066	F 5
1090	F 1	1830	C 5	2199	D 7	3067	F 5
1091	F 2	1831	D 6	2200	F11	3068	F 5
1093	D 1	1833	D 9	2201	F11	3069	F 4
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1096	D 2	1836	D 8	2204	F 9	3072	F 4
1097	D 3	1837	E 9	2205	F 9	3073	F 4
1098	D 2	1838	B 9	2206	F 8	3074	F 3
1099	D 2	1839	E 6	2207	F 8	3075	F 3
1100	D 2	1840	B 4	2209	F 7	3076	F 3
1101	C 2	1842	C 3	2211	C10	3117	F 4
1102	C 2	1843	D 2	2212	C10	3194	D 7
1103	C 2	1844	F 3	2213	D10	3195	E 7
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1105	C 3	1846	F 3	2215	E 9	3198	E 4
1106	G 2	1847	G 4	2216	E10	3199	E 5
1107	G 3	1848	F 4	2217	E10	3200	D 8
1108	G 2	1849	F 4	2219	F 9	3201	D 8
1109	F 1	1850	F 3	2220	F 8	3202	D 8
1110	F 4	1851	F 4	2221	F 8	3203	D 8
1111	F 4	1852	G 5	2222	F 7	3204	E 9
1112	F 5	1853	G 4	2224	D10	3205	E 9
1113	F 4	1854	F 5	2225	C 9	3206	E 9
1114	E 4	1855	F 5	2226	C 9	3207	E 9
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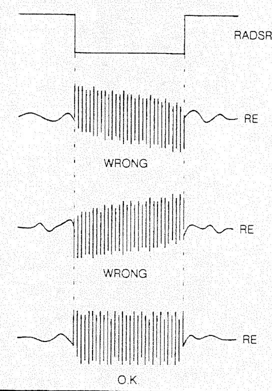
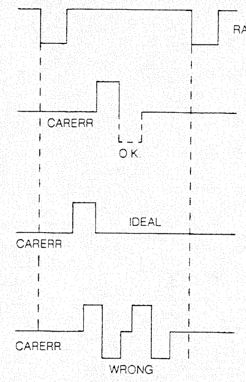
1126	A 2	1869	B 2	2290	D 9	3218	E 9
1127	A 2	1870	B 3	2401	B 9	3219	F 9
1128	D 4	1871	B 3	2402	B 8	3220	F 9
1129	A 4	1872	D 1	2403	B 8	3221	E10
1130	D 1	1873	C 3	2405	D 5	3222	G 9
1131	D 4	1874	D 2	2406	C 3	3223	F10

RE ADJUSTMENT

STEP	SIGNAL	MODE	◇				REMARKS
1	—	STANDBY		R3254			PUT R3254 IN THE MID-POSITION
2	—	STANDBY		R3472			
3	RE	STILL PIC. VIDEO TESTDISC CHAPTER 25	PIN 1 OF IC7201 ON SERVO 2			TRIGGER ON ◇26 RADSRV	
4		PRESS FWD SCAN		R3254			SIGNALS DURING FWD SCAN (STILL PIC.)
5	CARERR	PRESS FWD SCAN	◇33 ON SERVO 3	R3272			SIGNALS DURING FWD SCAN (STILL PIC.)

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3228	F11	3296	C 9	3412	A 4	3501	B 8	4013	E 5	7602	D 2
3229	E11	3297	C10	3414	D 2	3603	E 4	4014	E 5	7603	E 3
3230	E11	3298	C10	3415	A 4	3606	E 4	4015	E 5	7604	D11
3231	F11	3299	C10	3422	B 4	3607	D 4	4016	E 5	7605	D10
3232	F11	3300	C11	3425	A 4	3608	E 4	4017	E 5	7606	F 2
3233	F11	3301	C11	3431	B10	3609	E 4	4018	E 4	7606	C10
3236	E11	3302	C10	3433	B 8	3610	E 4	4019	F 6	7607	B 8
3237	E11	3303	C10	3434	B 8	3611	E 3	4020	F 6	7607	F 2
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3239	E10	3305	D10	3436	C 8	3613	E 4	5002	F 5		
3240	F11	3306	C11	3437	C10	3614	F 2	5501	B 2		
3241	E10	3307	C11	3438	B10	3615	E 2	6406	C 9		
3242	F11	3308	G10	3439	C 8	3616	F 2	6410	D 4		
3243	F10	3309	F 9	3440	B 8	3617	F 2	6415	E 7		
3245	D 8	3310	C 9	3441	B 8	3618	F 2	6601	E 4		
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3247	D 8	3312	C10	3443	D 4	3620	F 2	7006	F 3		
3248	D 8	3314	C10	3444	D 5	3622	E 2	7012	E 4		
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3252	F 8	3316	F 7	3446	D 5	3624	D 3	7200	B 9		
3253	F 7	3317	G 7	3447	D 5	3625	E 3	7200	E 9		
3254	C 8	3318	G 7	3448	D 5	3626	D 3	7201	F 5		
3255	F 8	3319	C 6	3449	F 6	3627	D 3	7201	D 6		
3256	F 7	3320	C 7	3450	D 5	3628	D 3	7201	E10		
3257	F 7	3321	D 8	3451	D 5	3629	E 3	7202	F 4		
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3263	E 7	3323	E 8	3453	C 4	3631	D 3	7202	E 8		
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3272	E 7	3340	D 9	3464	B 9	3642	D 3	7401	B 2		
3278	F 8	3341	D 9	3465	B 9	3643	D 3	7402	C 3		
3279	F 8	3401	B 9	3466	B 4	3644	D 3	7403	D 6		
3280	F 7	3402	B 8	3467	A 4	3647	D 2	7403	C 5		
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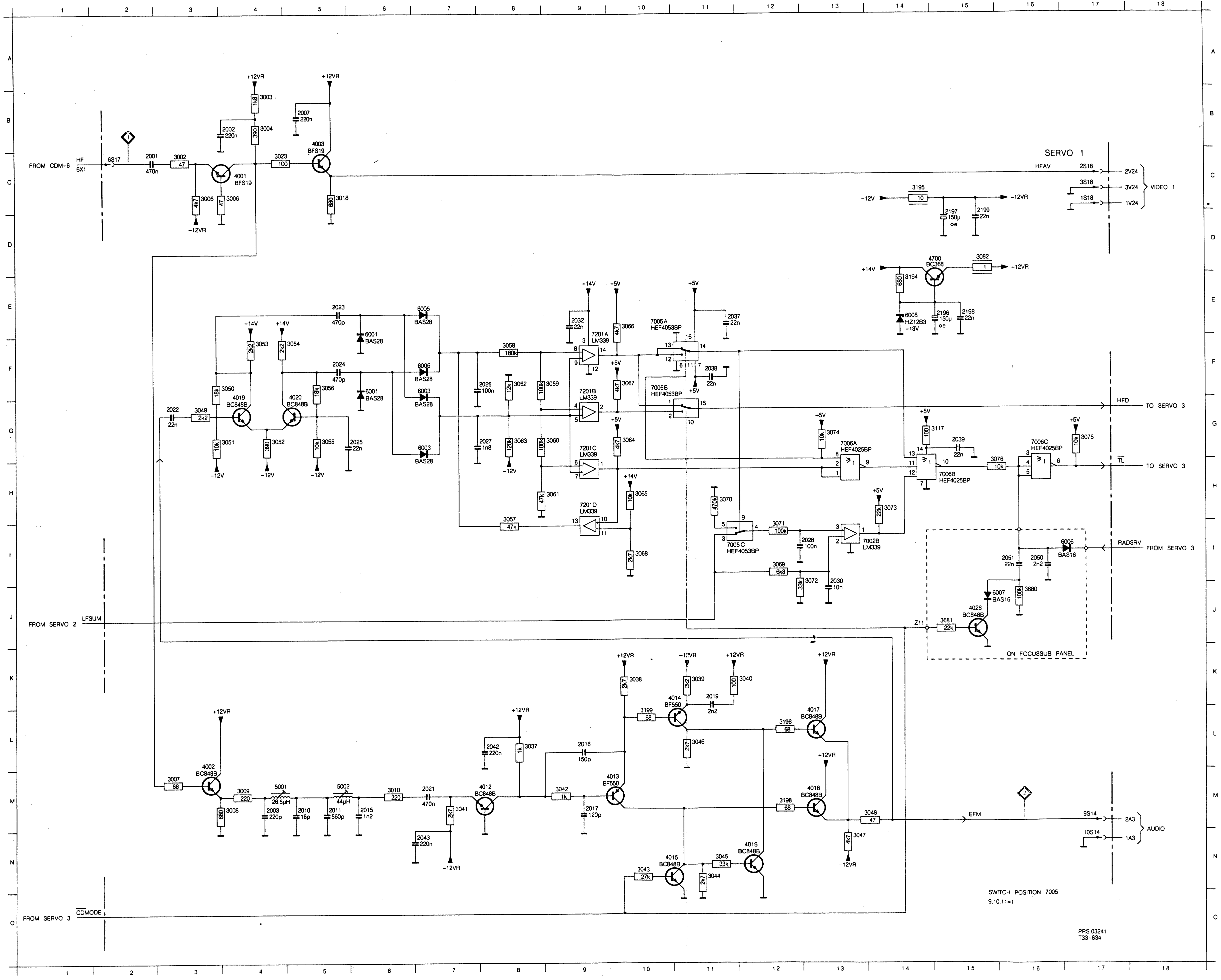
CIRCUIT DIAGRAM SERVO I



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2003	M 4
2007	B 5
2010	M 5
2011	M 5
2015	M 6
2016	L 9
2017	M 9
2019	K11
2021	M 7
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2026	F 8
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2028	I 13
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2032	E 9
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2038	F11
2039	G15
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2050	I 16
2051	I 16
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2198	E15
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3005	C 3
3006	C 4
3007	M 3
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3010	M 6
3018	C 5
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3037	L 8
3038	K10
3039	K11
3040	K12
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3048	M14
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3056	F 5
3057	H 8
3058	F 8
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3064	G10
3065	H10
3066	E10
3067	F10
3068	I 10
3069	I 12
3070	H11
3071	I 12
3072	I 13
3073	H14
3074	G13
3075	G17
3076	H15
3082	D15
3117	G15
3194	E14
3195	C14
3196	L12
3198	M12
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4001	C 4
4002	L 3
4003	B 5
4012	M 8
4013	M10
4014	K11
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4017	L13
4018	M13
4019	F 4
4020	F 5
4026	J15
4700	D15
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5002	M 5
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6001	F 6
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CIRCUIT DIAGRAM SERVO II

2200	E 7
2201	E 7
2202	C11
2203	D11
2204	B15
2205	C15
2206	G15
2207	G16
2209	H 8
2211	K16
2212	L16
2213	L20
2214	E 4
2215	F 4
2216	C 9
2217	D 9
2220	H17
2221	I 17
2222	H19
2224	L14
2225	M14
2226	L15
2227	L12
2228	F11
2229	F12
2230	M 4
2231	E15
2232	E15
2234	L19
2235	N19
2290	C20
2311	E 3
2800	E10
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3201	B 2
3202	C 2
3203	C 2
3204	A 3
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3207	D 4
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3227	D10
3228	D11
3229	D11
3230	D11
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3255	G16
3256	I 18
3257	J17
3259	I 18
3263	H18
3264	G19
3265	H17
3266	I 18
3267	H20
3268	J18
3270	I 19
3271	J18
3272	J20
3278	H 8
3279	H 8
3280	G 9
3286	L10
3287	L11
3288	L11
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3297	K16
3298	L17
3299	L17
3300	L17
3301	K18
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3303	L18
3304	L19
3305	L20
3306	M18
3307	M19
3308	E12
3309	D 8
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3311	M12
3312	M16
3314	K17
3315	J18
3316	H 9
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3319	M 3
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3330	G12
3332	L 3
3340	B19
3341	C19
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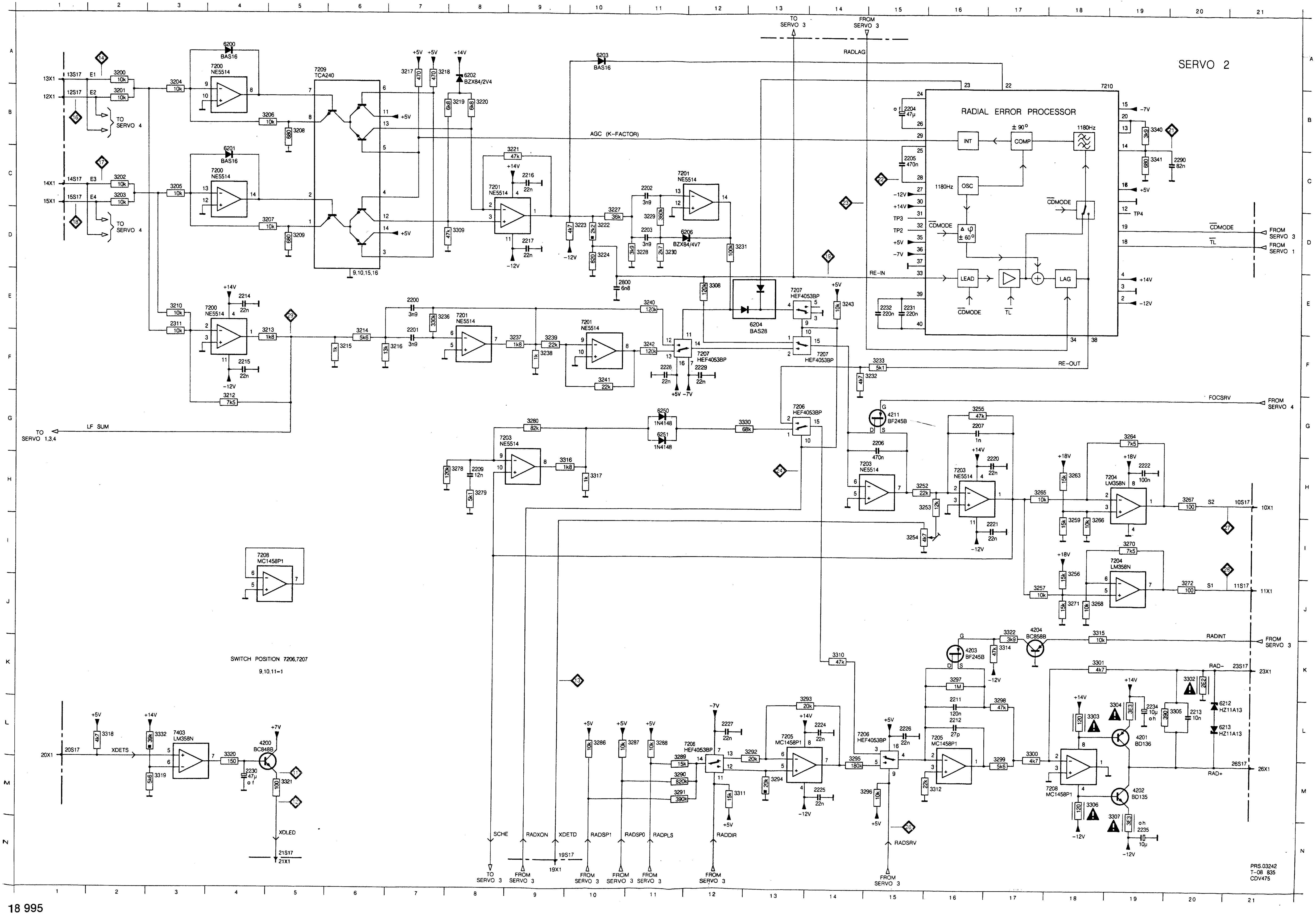

CS 18 995

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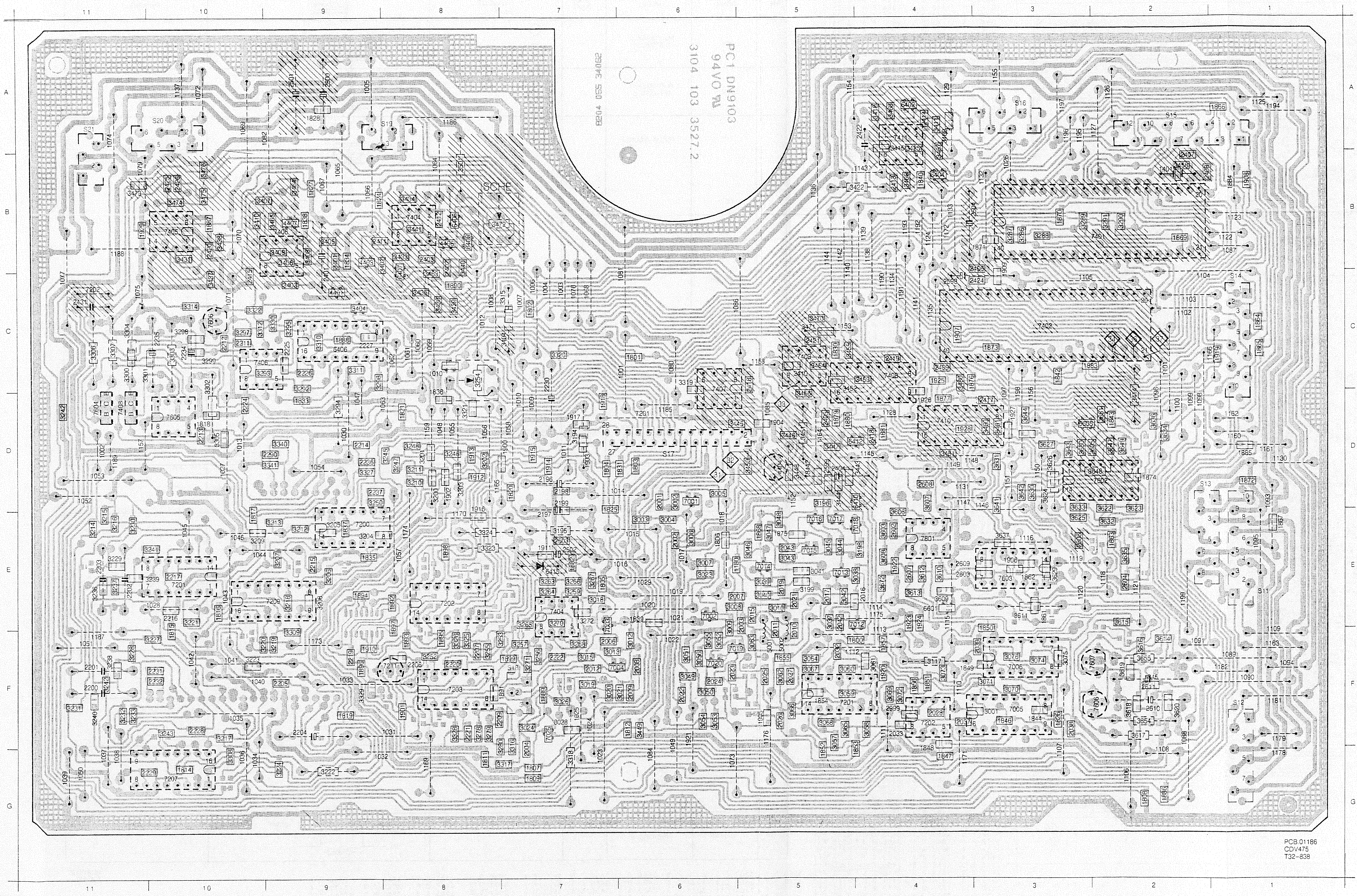
PRINT LAY-OUT SERVO III



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OVERL BEH BIJ PCB.01186

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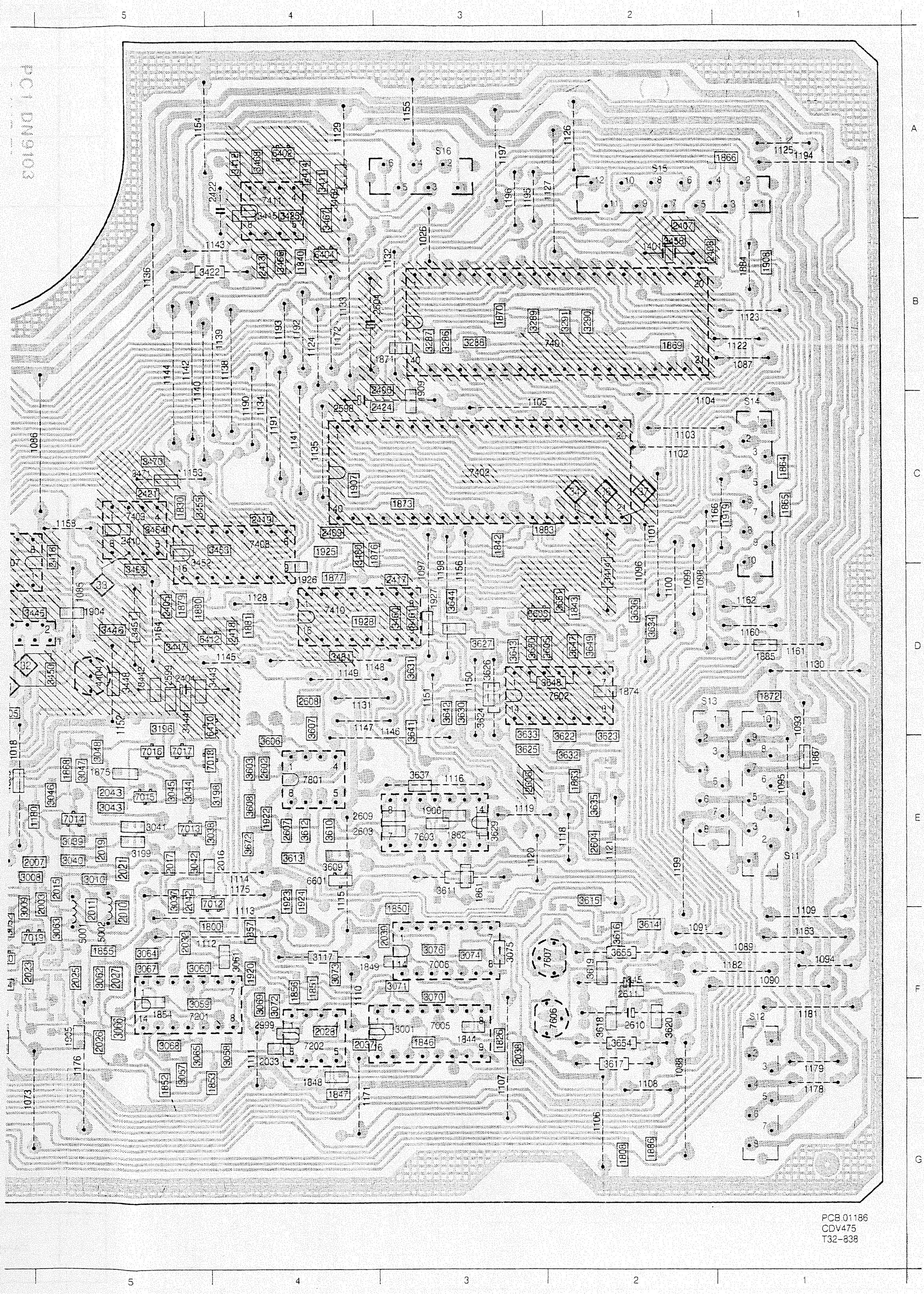
1005	A 9	1145	D 5	1897	E 8	2605	D 2
1006	C 7	1146	D 4	1898	E 8	2606	E 3
1007	C 7	1147	D 4	1899	F 8	2607	E 4
1008	C 8	1148	D 4	1900	D 7	2608	D 4
1009	D 7	1149	D 4	1901	F 8	2609	E 4
1010	C 8	1150	D 3	1902	D 8	2610	F 2
1010	D 7	1151	D 3	1903	D 7	2611	F 2
1011	D 7	1152	D 5	1904	D 5	2999	F 4
1012	C 8	1153	C 5	1905	F 5	3001	F 3
1013	D10	1154	A 5	1906	E 3	3002	D 6
1014	D 7	1155	A 3	1907	C 4	3003	E 6
1015	E 7	1156	D 3	1908	B 1	3004	E 6
1016	E 7	1157	D11	1909	B 3	3005	D 6
1017	E 6	1158	C 5	1910	F 9	3006	E 6
1018	E 6	1159	D 8	1911	E 7	3007	E 6
1019	E 6	1160	D 1	1912	D 8	3008	E 6
1020	E 6	1161	D 1	1913	D 8	3009	E 6
1021	E 6	1162	D 1	1914	D 7	3010	E 5
1022	F 6	1163	F 1	1915	D 7	3012	F 6
1023	G 7	1164	D 5	1916	D 8	3013	F 7
1024	F 7	1165	D 7	1917	D 7	3015	F 7
1025	F 7	1166	C 1	1918	D 7	3018	E 7
1026	B 3	1169	G 8	1919	C 1	3019	F 7
1027	D10	1170	E 8	1920	F 4	3020	F 7
1028	E11	1171	G 4	1921	F 6	3021	F 6
1029	E 6	1172	B 4	1922	E 4	3023	E 6
1030	D 9	1173	F 9	1923	E 4	3024	F 7
1031	F 9	1174	E 8	1924	E 4	3026	F 7
1032	G 9	1175	E 4	1925	C 4	3028	F 7
1033	F 9	1176	F 5	1926	D 4	3037	E 5
1034	G10	1178	G 1	1927	D 3	3038	E 4
1035	F10	1179	F 1	1928	D 4	3039	E 5
1036	G10	1180	E 5	1929	B10	3040	E 5
1037	G11	1181	F 1	2001	D 6	3041	E 5
1038	G11	1182	F 2	2002	E 6	3042	E 5
1039	G11	1185	D 6	2003	E 5	3043	E 5
1040	F10	1186	A 8	2004	F 7	3044	E 5
1041	F10	1187	F11	2006	F 7	3045	E 5
1042	F10	1188	B11	2007	E 6	3046	E 5
1043	E10	1189	D11	2008	F 6	3047	E 5
1044	E10	1190	C 4	2009	F 6	3048	E 5
1045	E10	1191	C 4	2010	E 5	3049	F 6
1046	E10	1192	B 4	2011	E 5	3050	F 6
1047	D 9	1193	B 4	2012	F 7	3051	F 6
1048	D 8	1194	A 1	2015	E 5	3052	F 6
1049	F 6	1195	A 3	2016	E 4	3053	F 6
1050	G11	1196	A 3	2017	E 5	3054	F 6
1051	F11	1197	A 3	2019	E 5	3055	F 6
1052	D11	1198	D 3	2021	E 5	3056	F 6
1053	D11	1199	E 2	2022	F 6	3057	F 5
1054	D 9	1401	B 2	2023	F 6	3058	F 4
1055	D 8	1800	F 5	2024	F 6	3059	F 5
1056	D 8	1801	C 7	2025	F 5	3060	F 5
1057	E 8	1802	C 7	2026	F 5	3061	F 4
1058	D 7	1803	D 6	2027	F 5	3062	F 5
1059	C 8	1804	D 7	2028	F 4	3063	F 5
1060	C 8	1805	E 7	2032	F 5	3064	F 5
1061	C 8	1806	E 6	2033	F 4	3065	F 5
1062	C 8	1807	G 7	2037	F 4	3066	F 5
1063	D 8	1808	G 2	2038	F 3	3067	F 5
1064	B 8	1809	G 7	2039	F 3	3068	F 5
1065	B 9	1811	G 8	2042	E 5	3069	F 4
1066	B 9	1812	F 6	2043	E 5	3070	F 3
1067	B 9	1814	G10	2196	D 7	3071	F 4
1068	C 7	1815	E10	2197	E 7	3072	F 4
1069	A10	1816	E10	2198	D 7	3073	F 4
1070	B10	1817	E10	2199	D 7	3074	F 3
1071	C10	1818	D10	2200	F11	3075	F 3
1072	A10	1819	F 9	2201	F11	3076	F 3
1073	G 6	1820	D 7	2202	E11	3117	F 4
1074	A11	1821	D 8	2203	E11	3194	D 7
1075	C11	1824	B 8	2204	F 9	3195	E 7
1076	C 7	1825	D 7	2205	F10	3196	D 5
1077	C11	1826	F 3	2206	F 8	3198	E 4
1079	B11	1827	B 9	2207	F 8	3199	E 5
1080	C 6	1828	A 9	2209	F 7	3200	D 8
1081	C 6	1830	C 5	2211	C10	3201	D 8
1082	A 9	1831	D 6	2212	C10	3202	D 8
1084	G 6	1833	D 9	2213	D10	3203	D 8
1085	D 5	1834	B 9	2214	D 9	3204	E 9
1086	C 5	1835	E 9	2215	E 9	3205	E 9
1087	B 1	1836	C 8	2216	E10	3206	E 9
1088	F 2	1837	E 9	2217	E10	3207	E 9
1089	F 1	1838	B 9	2219	F 9	3208	E 9
1090	F 1	1839	E 6	2220	F 8	3209	E10
1091	F 2	1840	B 4	2221	F 8	3210	D 8
1093	D 1	1842	C 3	2222	F 7	3211	D 8
1094	F 1	1843	D 2	2224	D10	3212	E 9
1095	E 1	1844	F 3	2225	C 9	3213	E10
1096	D 2	1845	F 2	2226	C 9	3214	E11
1097	D 3	1846	F 3	2227	C 9	3215	E11
1098	D 2	1847	G 4	2228	F10	3216	E11
1099	D 2	1848	F 4	2229	G11	3217	F10
1100	D 2	1849	F 4	2230	C 7	3218	E 9
1101	C 2	1850	F 4	2231	F11	3219	F 9
1102	C 2	1851	F 4	2232	F11	3220	F 9
1103	C 2	1852	G 5	2234	C10	3221	E10
1104	C 2	1853	F 4	2235	C10	3222	G 9
1105	C 3	1854	F 5	2236	D 9	3223	F10
1106	G 2	1855	F 5	2237	D 9	3224	G 9
1107	G 3	1856	F 4	2290	D10	3227	F11
1108	G 2	1857	F 4	2401	B 9	3228	F11
1109	F 1	1861	E 3	2402	B 8	3229	E11
1110	F 4	1862	E 3	2403	B 8	3230	E11
1111	F 4	1863	E 2	2404	D 5	3231	F11
1112	F 5	1864	C 1	2405	D 5	3232	F11
1113	F 4	1865	C 1	2406	B 4	3233	F11
1114	E 4	1866	A 2	2407	B 2	3236	E11
1115	E 4	1867	E 1	2408	B 1	3237	E11
1116	E 3	1868	E 5	2409	C 4	3238	F11
1118	E 2	1869	B 2	2410	C 5	3239	E11
1119	E 3	1870	B 3	2411	B 9	3240	F11
1120	E 3	1871	B 4	2412	B 8	3241	E11
1121	E 2	1872	D 1	2413	B 4	3242	F11
1122	B 2	1873	C 3	2414	A 4	3242	D11
1123	B 1	1874	D 2	2415	B10	3243	F10
1124	B 4	1875	E 5	2416	C 5	3245	D 8
1125	A 1	1876	C 3	2417	D 4	3246	D 8
1126	A 2	1877	D 4	2418	D 4	3247	D 8
1127	A 2	1879	D 5	2419	C 4	3248	D 8
1128	D 4	1880	D 5	2420	B10	3250	D 9
1129	A 4	1881	D 4	2421	C 5	3252	F 8
1130	D 1	1882	E 7	2422	A 4	3253	F 7
1131	D 4	1883	C 3	2424	C 4	3254	C 8
1132	B 3	1884	B 1	2425	B10	3255	F 8
1133	B 4	1885	D 1	2426	B10	3256	F 7
1134	C 4	1886	G 2	2431	C11	3257	F 7
1135	C 4	1887	B10	2500	A 9	3259	E 7
1136	B 5	1888	C 9	2501	A 9	3263	E 7
1137	A10	1889	F 7	2502	E 7	3264	E 7
1138	B 4	1890	C 8	2503	E 7	3265	E 7
1139	B 4	1891	F 7	2504	B 3	3266	E 7
1140	B 5	1892	E 8	2598	C 4	3267	E 7

3268	F 7	3302	C10
3270	E 7	3303	C10
3271	F 7	3304	C11
3272	E 7	3305	D10
3278	F 8	3306	C11
3279	F 8	3307	C11
3280	F 7	3308	G10
3286	B 3	3309	F 9
3287	B 3	3310	C 9
3288	B 3	3311	C 9
3289	B 3	3312	C 9
3290	B 2	3314	C10
3291	B 2	3315	C 7
3292	C 9	3316	F 7
3293	C10	3317	G 8
3294	D 9	3318	G 7
3295	C 9	3319	C 6
3296	C 8	3320	C 7
3297	C10	3321	D 8
3298	C10	3322	C10
3299	C10	3323	E 8
3300	C11	3324	E 8
3301	C10	3325	F 8

SERVO
MEASUREMENTS

STEP	SIGNAL
1	HFin
2	EFM
3	FE FOC RD FOC SR PIN3 OF 76
4	X DETD
5	E1,E2,E3,E
6	REIN
7	AGC CONTROL
8	RADLAG RADXON RADSRV
9	
10	LFSUM
11	LASER CU LASER SU
12	CARER



OVERL. BEH. BIJ PCB.01186

OVERL. BEH. BIJ PCB.01186

1001	C 6	1141	C 4	1893	F 8	2599	D 5
1002	D11	1142	B 5	1894	E 9	2602	E 4
1003	C 7	1143	B 5	1895	F 8	2603	E 4
1004	C 7	1144	B 5	1896	F 9	2604	E 2
1005	A 9	1145	D 5	1897	E 8	2605	D 2
1006	C 7	1146	D 4	1898	E 8	2606	E 3
1007	C 7	1147	D 4	1899	F 8	2607	E 4
1008	C 8	1148	D 4	1900	D 7	2608	D 4
1009	D 7	1149	D 4	1901	F 8	2609	E 4
1010	C 8	1150	D 3	1902	D 8	2610	F 2
1010	D 7	1151	D 3	1903	D 7	2611	F 2
1011	D 7	1152	D 5	1904	D 5	2999	F 4
1012	C 8	1153	C 5	1905	F 5	3001	F 3
1013	D10	1154	A 5	1906	E 3	3002	D 6
1014	D 7	1155	A 3	1907	C 4	3003	E 6
1015	E 7	1156	D 3	1908	B 1	3004	E 6
1016	E 7	1157	D11	1909	B 3	3005	D 6
1017	E 6	1158	C 5	1910	F 9	3006	E 6
1018	E 6	1159	D 8	1911	E 7	3007	E 6
1019	E 6	1160	D 1	1912	D 8	3008	E 6
1020	E 6	1161	D 1	1913	D 8	3009	E 6
1021	E 6	1162	D 1	1914	D 7	3010	E 5
1022	F 6	1163	F 1	1915	D 7	3012	F 6
1023	G 7	1164	D 5	1916	D 8	3013	F 7
1024	F 7	1165	D 7	1917	D 7	3015	F 7
1025	F 7	1166	C 1	1918	D 7	3018	E 7
1026	B 3	1169	G 8	1919	C 1	3019	F 7
1027	D10	1170	E 8	1920	F 4	3020	F 7
1028	E11	1171	G 4	1921	F 6	3021	F 6
1029	E 6	1172	B 4	1922	E 4	3023	E 6
1030	D 9	1173	F 9	1923	E 4	3024	F 7
1031	F 9	1174	E 8	1924	E 4	3026	F 7
1032	G 9	1175	E 4	1925	C 4	3028	F 7
1033	F 9	1176	F 5	1926	D 4	3037	E 5
1034	G10	1178	G 1	1927	D 3	3038	E 4
1035	F10	1179	F 1	1928	D 4	3039	E 5
1036	G10	1180	E 5	1929	B10	3040	E 5
1037	G11	1181	F 1	2001	D 6	3041	E 5
1038	G11	1182	F 2	2002	E 6	3042	E 5
1039	G11	1185	D 6	2003	E 5	3043	E 5
1040	F10	1186	A 8	2004	F 7	3044	E 5
1041	F10	1187	F11	2006	F 7	3045	E 5
1042	F10	1188	B11	2007	E 6	3046	E 5
1043	E10	1189	D11	2008	F 6	3047	E 5
1044	E10	1190	C 4	2009	F 6	3048	E 5
1045	E10	1191	C 4	2010	E 5	3049	F 6
1046	E10	1192	B 4	2011	E 5	3050	F 6
1047	D 9	1193	B 4	2012	F 7	3051	F 6
1048	D 8	1194	A 1	2015	E 5	3052	F 6
1049	F 6	1195	A 3	2016	E 4	3053	F 6
1050	G11	1196	A 3	2017	E 5	3054	F 6
1051	F11	1197	A 3	2019	E 5	3055	F 6
1052	D11	1198	D 3	2021	E 5	3056	F 6
1053	D11	1199	E 2	2022	F 6	3057	F 5
1054	D 9	1401	B 2	2023	F 6	3058	F 4
1055	D 8	1800	F 5	2024	F 6	3059	F 5
1056	D 8	1801	C 7	2025	F 5	3060	F 5
1057	E 8	1802	C 7	2026	F 5	3061	F 4
1058	D 7	1803	D 6	2027	F 5	3062	F 5
1059	C 8	1804	D 7	2028	F 4	3063	F 5
1060	C 8	1805	E 7	2032	F 5	3064	F 5
1061	C 8	1806	E 6	2033	F 4	3065	F 5
1062	C 8	1807	G 7	2037	F 4	3066	F 5
1063	D 8	1808	G 2	2038	F 3	3067	F 5
1064	B 8	1809	G 7	2039	F 3	3068	F 5
1065	B 9	1811	G 8	2042	E 5	3069	F 4
1066	B 9	1812	F 6	2043	E 5	3070	F 3
1067	B 9	1814	G10	2196	D 7	3071	F 4
1068	C 7	1815	E10	2197	E 7	3072	F 4
1069	A10	1816	E10	2198	D 7	3073	F 4
1070	B10	1817	E10	2199	D 7	3074	F 3
1071	C10	1818	D10	2200	F11	3075	F 3
1072	A10	1819	F 9	2201	F11	3076	F 3
1073	G 6	1820	D 7	2202	E11	3117	F 4
1074	A11	1821	D 8	2203	E11	3194	D 7
1075	C11	1824	B 8	2204	F 9	3195	E 7
1076	C 7	1825	D 7	2205	F10	3196	D 5
1077	C11	1826	F 3	2206	F 8	3198	E 4
1079	B11	1827	B 9	2207	F 8	3199	E 5
1080	C 6	1828	A 9	2209	F 7	3200	D 8
1081	C 6	1830	C 5	2211	C10	3201	D 8
1082	A 9	1831	D 6	2212	C10	3202	D 8
1084	G 6	1833	D 9	2213	D10	3203	D 8
1085	D 5	1834	B 9	2214	D 9	3204	E 9
1086	C 5	1835	E 9	2215	E 9	3205	E 9
1087	B 1	1836	C 8	2216	E10	3206	E 9
1088	F 2	1837	E 9	2217	E10	3207	E 9
1089	F 1	1838	B 9	2219	F 9	3208	E 9
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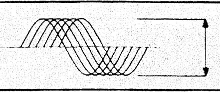
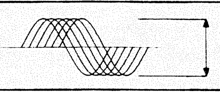
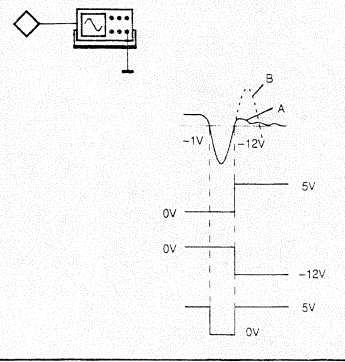
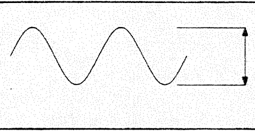
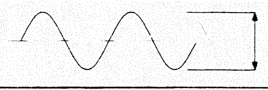
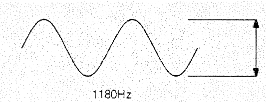
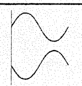
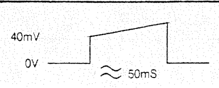
1091	F 2	1840	B 4	2221	F 8	3210	D 8
1093	D 1	1842	C 3	2222	F 7	3211	D 8
1094	F 1	1843	D 2	2224	D10	3212	E 9
1095	E 1	1844	F 3	2225	C 9	3213	E10
1096	D 2	1845	F 2	2226	C 9	3214	E11
1097	D 3	1846	F 3	2227	C 9	3215	E11
1098	D 2	1847	G 4	2228	F10	3216	E11
1099	D 2	1848	F 4	2229	G11	3217	F10
1100	D 2	1849	F 4	2230	C 7	3218	E 9
1101	C 2	1850	F 4	2231	F11	3219	F 9
1102	C 2	1851	F 4	2232	F11	3220	F 9
1103	C 2	1852	G 5	2234	C10	3221	E10
1104	C 2	1853	F 4	2235	C10	3222	G 9
1105	C 3	1854	F 5	2236	D 9	3223	F10
1106	G 2	1855	F 5	2237	D 9	3224	G 9
1107	G 3	1856	F 4	2290	D10	3227	F11
1108	G 2	1857	F 4	2401	B 9	3228	F11
1109	F 1	1861	E 3	2402	B 8	3229	E11
1110	F 4	1862	E 3	2403	B 8	3230	E11
1111	F 4	1863	E 2	2404	D 5	3231	F11
1112	F 5	1864	C 1	2405	D 5	3232	F11
1113	F 4	1865	C 1	2406	B 4	3233	F11
1114	E 4	1866	A 2	2407	B 2	3236	E11
1115	E 4	1867	E 1	2408	B 1	3237	E11
1116	E 3	1868	E 5	2409	C 4	3238	F11
1118	E 2	1869	B 2	2410	C 5	3239	E11
1119	E 3	1870	B 3	2411	B 9	3240	F11
1120	E 3	1871	B 4	2412	B 8	3241	E11
1121	E 2	1872	D 1	2413	B 4	3242	F11
1122	B 2	1873	C 3	2414	A 4	3242	D11
1123	B 1	1874	D 2	2415	B10	3243	F10
1124	B 4	1875	E 5	2416	C 5	3245	D 8
1125	A 1	1876	C 3	2417	D 4	3246	D 8
1126	A 2	1877	D 4	2418	D 4	3247	D 8
1127	A 2	1879	D 5	2419	C 4	3248	D 8
1128	D 4	1880	D 5	2420	B10	3250	D 9
1129	A 4	1881	D 4	2421	C 5	3252	F 8
1130	D 1	1882	E 7	2422	A 4	3253	F 7
1131	D 4	1883	C 3	2424	C 4	3254	C 8
1132	B 3	1884	B 1	2425	B10	3255	F 8
1133	B 4	1885	D 1	2426	B10	3256	F 7
1134	C 4	1886	G 2	2431	C11	3257	F 7
1135	C 4	1887	B10	2500	A 9	3259	E 7
1136	B 5	1888	C 9	2501	A 9	3263	E 7
1137	A10	1889	F 7	2502	E 7	3264	E 7
1138	B 4	1890	C 8	2503	E 7	3265	E 7
1139	B 4	1891	F 7	2504	B 3	3266	E 7
1140	B 5	1892	E 8	2598	C 4	3267	E 7

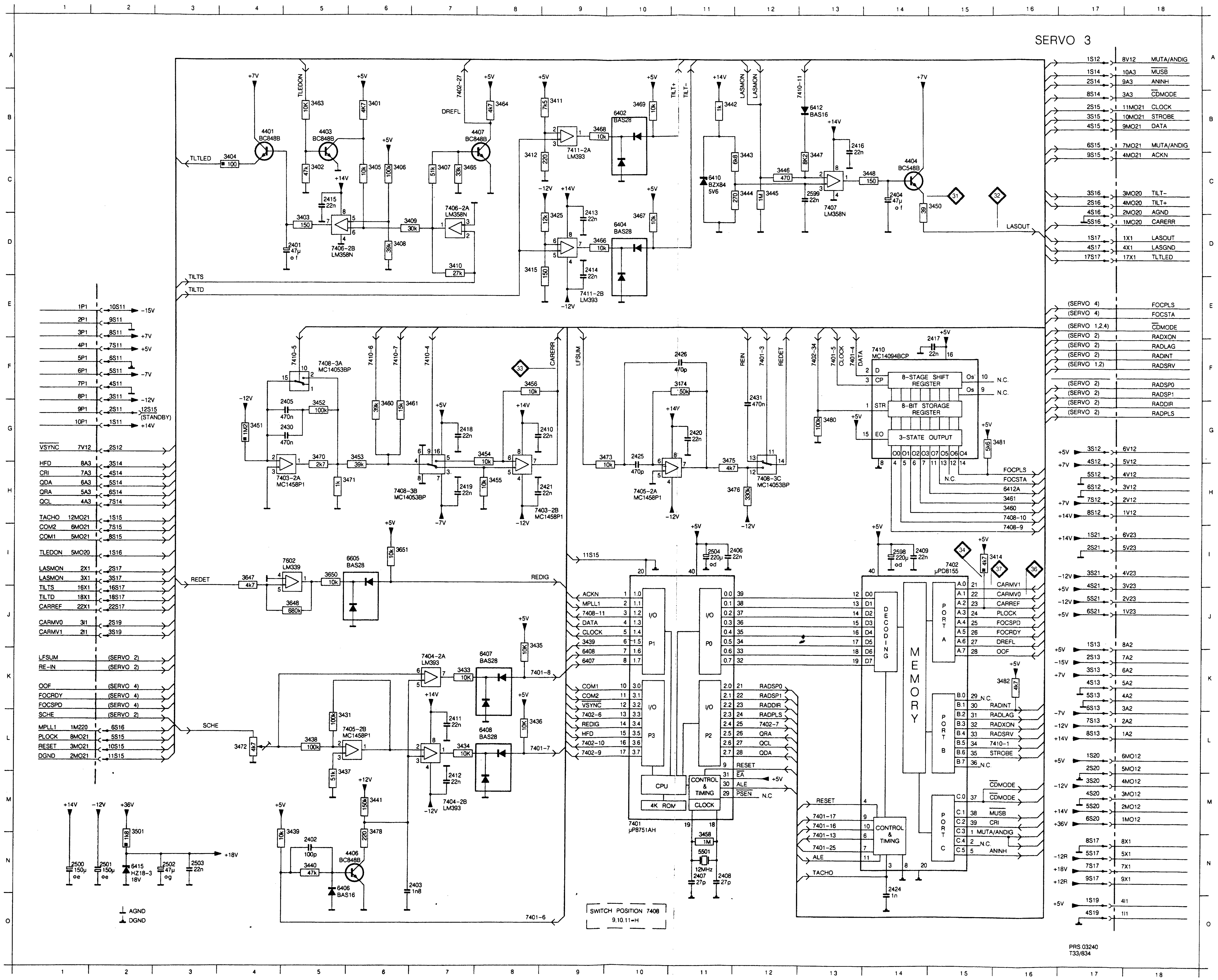
SERVO
MEASUREMENTS AND ADJUSTMENTS

STEP	SIGNAL	MODE	◇			REMARKS
1	HFin	PLAYTRACK 1 TESTDISC 5	1	◇1 DC -6V DC	 100-150mV AC	
2	EFM	PLAYTRACK 1 TESTDISC 5	2	◇2 DC +2,5V DC	 1.5-2.5V AC	EYE-PATTERN HF SEE DRAWING 37 017 B8
3		FOCUS STARTUP				A=FOCUS FOUND B=FOCUS NOT FOUND
	FE		3			
	FOC RDV		4			ONLY IF LFSUM IS PRESENT: ◇ LFSUMŒ2V
	FOC SRV		6			
	PIN3 OF 7603		7			
4			11,12	◇11 V ◇12 3-5V DC		
	X DETD	NO DISC	13	◇13 V -7Œ0VÆ+7V		MOVE ACTUATOR MANUALLY
5	E1,E2,E3,E4	RADIAL CONTROL PLAYTESTDISC 5	14,16,17,18	◇13 V -3ÆE..Æ-2V DC	 A A=1180Hz E1≡E2≡E3≡E4	
6	REIN	PLAY TESTDISC 5	19		 0V A A=400mV	
7	AGC CONTROL	PLAY	21		 2V pp 1180Hz	
			22	◇ V -0ÆVÆ-4V DC		
8	RADLAG	PLAY	23	0V DC		
	RADXON	PLAY	24	0V DC		
	RADSRV	PLAY	26	5V DC		
9		PLAY	27	9V DC	 AC	
		PLAY	28	9V DC		
10	LFSUM	PLAY	29	3VÆVÆ5.5V		
		PAUSE	29	Æ11V		
11	LASER CURR.	PLAY	31,32	◇31 V ◇32 |2.5V| DC		
	LASER SUPPLY	PLAY	32	◇32 V 2V DC		
12	CARERR	PLAY TESTDISC 5	32		 40mV 0V ≈ 50mS -330mV	

3268	F 7	3302	C10	3326	F 8	3425	A 4	3454	C 5	3603	E 4	3630	D 3	4406	B 8	7020	F 6	7408	C 4
3270	E 7	3303	C10	3327	D 9	3431	B10	3455	C 5	3606	E 4	3631	D 3	4407	B 9	7025	F 7	7410	D 4
3271	F 7	3304	C11	3328	F 8	3433	B 8	3456	D 5	3607	D 4	3632	E 3	5001	F 5	7200	E 9	7411	A 4
3272	E 7	3305	D10	3329	F 9	3434	B 8	3458	B 2	3608	E 4	3633	D 3	5002	F 5	7201	F 5	7602	D 3
3278	F 8	3306	C11	3330	C 9	3435	C 8	3460	D 3	3609	E 4	3634	D 2	6406	C 9	7201	D 6	7603	E 3
3279	F 8	3307	C11	3340	D10	3436	C 8	3461	D 3	3610	E 4	3635	E 2	6410	D 4	7201	E10	7604	D11
3280	F 7	3308	G10	3341	D10	3437	C10	3463	C 8	3611	E 3	3636	D 2	6412	D 5	7202	F 4	7605	D10
3286	B 3	3309	F 9	3401	B 9	3438	B10	3464	B 9	3612	E 4	3637	E 3	6415	E 7	7202	C11	7606	C10
3287	B 3	3310	C 9	3402	B 8	3439	C 8	3465	B 9	3613	E 4	3641	D 3	6601	E 4	7202	E 8	7606	F 2
3288	B 3	3311	C 9	3403	C 9	3440	B 8	3466	B 4	3614	F 2	3642	D 3	7001	D 6	7203	F 8	7607	F 2
3289	B 3	3312	C 9	3404	C 9	3441	B 8	3467	A 4	3615	E 2	3643	D 3	7002	E 6	7207	G10	7801	E 4
3290	B 2	3314	C10	3404	C 7	3442	D 5	3468	A 4	3616	F 2	3644	D 3	7003	E 7	7209	E10		
3291	B 2	3315	C 7	3405	B 9	3443	D 4	3469	A 4	3617	F 2	3647	D 2	7004	F 7	7211	F 9		
3292	C 9	3316	F 7	3406	B 9	3444	D 5	3470	C 5	3618	F 2	3648	D 3	7005	F 3	7401	B 3		
3293	C10	3317	G 8	3407	B10	3445	D 6	3471	C 5	3619	F 2	3649	D 2	7006	F 3	7402	C 3		
3294	D 9	3318	G 7	3408	B 9	3446	D 5	3472	B 8	3620	F 2	3650	D 3	7012	E 5	7403	C 5		
3295	C 9	3319	C 6	3409	B10	3447	D 5	3473	B11	3622	D 3	3651	D 2	7013	E 5	7404	E 7		
3296	C 8	3320	C 7	3410	B10	3448	D 5	3474	B10	3623	D 2	3654	F 2	7014	E 5	7404	B 8		
3297	C10	3321	D 8	3411	A 4	3449	F 6	3475	B10	3624	D 3	3655	F 2	7015	E 5	7405	B10		
3298	C10	3322	C10	3412	A 4	3450	D 5	3476	B10	3625	E 3	3672	E 4	7016	E 5	7406	C10		
3299	C10	3323	E 8	3414	D 2	3451	D 5	3480	C 4	3626	D 3	4401	C 9	7017	E 5	7406	B10		
3300	C11	3324	E 8	3415	A 4	3452	C 5	3481	D 4	3627	D 3	4403	B 9	7018	E 4	7407	C 6		
3301	C10	3325	F 8	3422	B 5	3453	C 5	3501	B 8	3629	E 3	4404	D 5	7019	F 6	7408	D11		

MDA.01595
T05-840

CIRCUIT DIAGRAM SERVO III



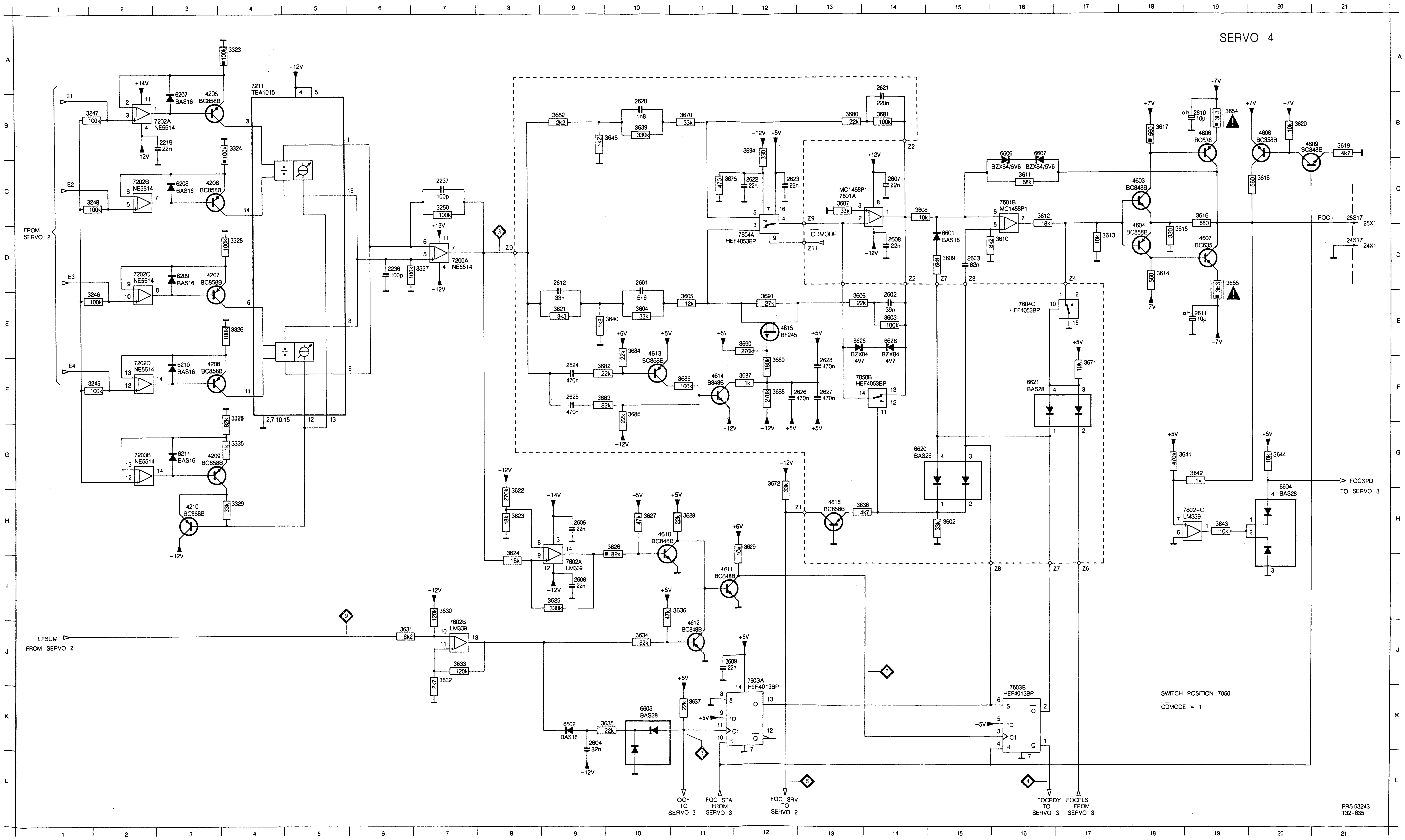
2401	D 5
2402	N 5
2403	N 7
2404	C14
2405	G 5
2406	I 12
2407	N11
2408	N11
2409	I 14
2410	G 9
2411	L 7
2412	M 7
2413	C 9
2414	D 9
2415	C 5
2416	B13
2417	E15
2418	G 7
2419	H 7
2420	G11
2421	H 9
2424	N14
2425	G10
2426	F11
2430	G 5
2431	F12
2500	N 1
2501	N 2
2502	N 3
2503	N 3
2504	I 11
2598	I 14
2599	C13
3401	B 6
3402	C 5
3403	D 5
3404	C 4
3405	C 6
3406	C 6
3407	C 7
3408	D 6
3409	D 6
3410	D 7
3411	B 9
3412	C 8
3414	I 16
3415	D 8
3425	D 9
3431	L 6
3433	K 7
3434	L 7
3435	J 8
3436	L 8
3437	M 6
3438	L 5
3439	M 5
3440	N 5
3441	M 6
3442	B11
3443	C12
3444	C12
3445	C12
3446	C12
3447	C13
3448	C14
3450	C15
3451	G 4
3452	G 5
3453	G 6
3454	G 8
3455	H 8
3456	F 8
3458	N11
3460	G 6
3461	G 7
3463	B 5
3464	B 8
3465	C 7
3466	D 9
3467	D10
3468	B 9
3469	B10
3470	G 5
3471	H 6
3472	L 4
3473	G 9
3474	F11
3475	G11
3476	H12
3478	M 6
3480	G13
3481	G16
3482	K16
3501	M 2
3647	I 4
3648	J 5
3650	I 5
3651	I 6
4401	B 4
4403	B 5
4404	C14
4406	N 6
4407	B 8
5501	N11
6402	B10
6404	D10
6406	N 6
6407	K 8
6408	L 8
6410	C11
6412	B13
6415	N 2
6605	I 6
7401	M10
7402	I 15
7403	H 9
7403	H 5
7404	K 7
7404	M 7
7405	H10
7405	L 6
7406	C 7
7406	D 5
7407	C13
7408	H 6
7408	H12
7408	F 5
7410	F14
7411	E 9
7411	B 9
7602	I 5

CIRCUIT DIAGRAM SERVO IV

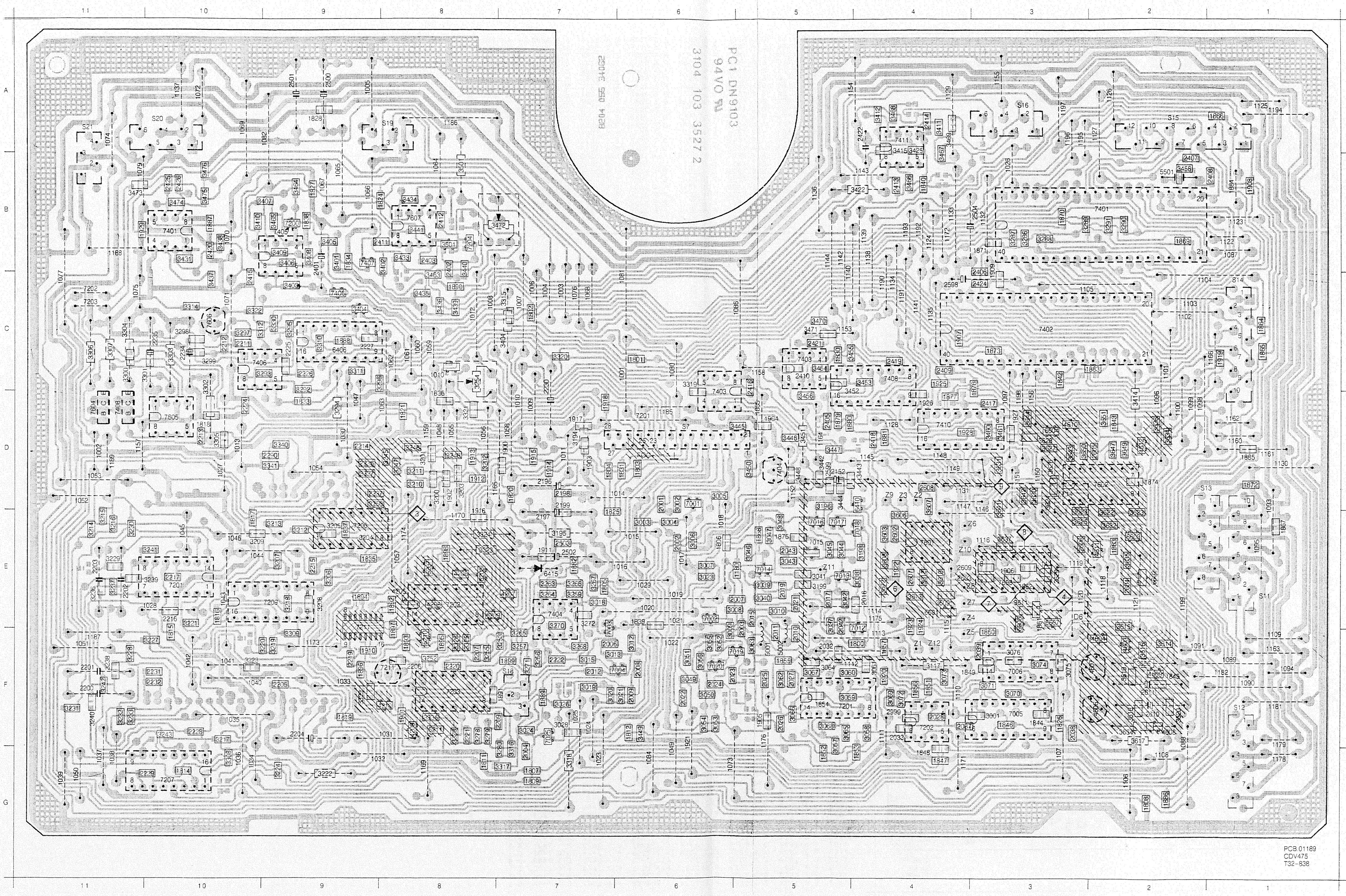
2219	B 3	2604	K 9	2610	B19	2623	C12	3245	F 2	3324	B 4	3335	G 4	3607	C13	3613	D17
2236	D 6	2605	H 9	2611	E19	2624	F 9	3246	E 2	3325	D 4	3602	H15	3608	C14	3614	D18
2237	C 7	2606	I 9	2612	D 9	2625	F 9	3247	B 2	3326	E 4	3603	E14	3609	D15	3615	D18
2601	D10	2607	C14	2620	B10	2626	F13	3248	C 2	3327	D 7	3604	E10	3610	D16	3616	C19
2602	E14	2608	D14	2621	A14	2627	F13	3250	C 7	3328	F 4	3605	E11	3611	C16	3617	B18
2603	D15	2609	J11	2622	C12	2628	F13	3323	A 4	3329	H 4	3606	E13	3612	C16	3618	C20

3619	B21	3625	I 9	3631	J 6	3637	K11	3643	H19	3670	B11	3682	F 9	3688	F12	4206	C 3
3620	B20	3626	H10	3632	J 7	3638	H13	3644	G20	3671	F17	3683	F 9	3689	F12	4207	D 3
3621	E 9	3627	H10	3633	J 7	3639	B10	3645	B10	3672	G12	3684	E10	3690	E12	4208	F 3
3622	H 8	3628	H11	3634	J10	3640	E10	3652	B 9	3675	C11	3685	F11	3691	E12	4209	G 3
3623	H 8	3629	H12	3635	K10	3641	G19	3654	B19	3680	B13	3686	F10	3694	B12	4210	H 3
3624	H 8	3630	I 7	3636	I 11	3642	G19	3655	D19	3681	B14	3687	F12	4205	A 3	4603	C18

4604	D18	4611	I 11	6207	B 3	6602	K 9	6621	F16	7202B	C 2	7601B	C16	7604A	D12
4606	B19	4612	J11	6208	C 3	6603	K10	6625	E13	7202C	D 2	7602	H19	7604C	E16
4607	D19	4613	E10	6209	D 3	6604	G20	6626	E14	7202D	F 2	7602A	I 9		
4608	B20	4614	F11	6210	F 3	6606	B16	7050B	F14	7203B	G 2	7602B	J 7		
4609	B20	4615	E12	6211	G 3	6607	B16	7200A	D 7	7211	A 4	7603A	J12		
4610	H10	4616	H13	6601	D15	6620	G14	7202A	B 3	7601A	C13	7603B	K16		



PRINT LAY-OUT SERVO IV



1001	C 6	1113	F 4	1835	E 9	2026	F 5	30	
1002	D11	1114	E 4	1836	D 8	2027	F 5	30	
1003	C 7	1115	E 4	1837	E 9	2028	F 4	30	
1004	C 7	1116	E 4	1838	B 9	2032	F 5	30	
1005	A 9	1118	E 2	1839	E 6	2033	F 4	30	
1006	C 7	1119	E 3	1840	B 4	2037	F 4	30	
1007	C 7	1120	E 3	1842	C 3	2038	F 3	30	
1008	C 8	1121	E 2	1843	D 2	2039	F 3	30	
1009	D 7	1122	B 1	1844	F 3	2042	E 5	30	
1010	C 8	1123	B 1	1845	F 2	2043	E 5	30	
1010	D 7	1124	B 4	1846	F 3	2152	D 5	30	
1011	D 7	1125	A 1	1847	G 4	2196	D 7	30	
1012	C 8	1126	A 2	1848	F 4	2197	E 7	30	
1013	D10	1127	A 2	1849	F 4	2198	D 7	30	
1014	D 7	1128	D 4	1850	F 4	2199	D 7	30	
1015	E 7	1129	A 4	1851	F 4	2200	F11	30	
1016	E 7	1130	D 1	1852	G 5	2201	F11	30	
1017	E 6	1131	D 4	1853	G 4	2202	E11	30	
1018	E 6	1132	B 3	1854	F 5	2203	E11	30	
1019	E 6	1133	B 4	1855	F 5	2204	F 9	30	
1020	E 6	1134	C 4	1856	F 4	2205	F10	30	
1021	E 6	1135	C 4	1857	F 4	2206	F 8	30	
1022	F 6	1136	B 5	1861	E 3	2207	F 8	30	
1023	G 7	1137	A10	1862	E 3	2209	F 7	30	
1024	F 7	1138	B 4	1863	E 2	2211	C10	30	
1025	F 7	1139	B 4	1864	C 1	2212	C10	30	
1026	B 3	1140	B 5	1865	C 1	2213	D10	30	
1027	D10	1141	C 4	1866	A 2	2214	D 9	30	
1028	E11	1142	B 5	1867	E 1	2215	E 9	30	
1029	E 6	1143	B 5	1868	E 5	2216	E10	30	
1030	D 9	1144	B 5	1869	B 2	2217	E10	30	
1031	F 9	1145	D 5	1870	B 3	2219	F 9	30	
1032	G 9	1146	D 4	1871	B 4	2220	F 8	30	
1033	F 9	1147	D 4	1872	D 1	2221	F 8	30	
1034	G10	1148	D 4	1873	C 3	2222	F 7	30	
1035	F10	1149	D 4	1874	D 2	2224	D10	30	
1036	G10	1150	D 3	1875	E 5	2225	C 9	30	
1037	G11	1151	D 3	1876	C 3	2226	C 9	30	
1038	G11	1152	D 5	1877	D 4	2227	C 9	30	
1039	G11	1153	C 5	1879	D 5	2228	F10	30	
1040	F10	1154	A 4	1880	D 5	2229	G11	30	
1041	F10	1155	A 3	1881	D 4	2230	C 7	30	
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1045	E10	1159	D 8	1885	D 1	2235	C10	31	
1046	E10	1160	D 1	1886	G 2	2236	D 9	31	
1047	D 9	1161	D 1	1887	B10	2237	D 9	31	
1048	D 8	1162	D 1	1888	C 9	2290	D10	32	
1049	G 6	1163	F 1	1889	F 7	2401	B 9	32	
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1058	D 7	1174	E 8	1898	E 8	2411	B 9	32	
1059	C 8	1175	E 4	1899	F 8	2412	B 8	32	
1060	C 8	1176	F 5	1900	D 7	2413	B 4	32	
1061	C 8	1178	G 1	1901	F 8	2414	A 4	32	
1062	C 8	1179	F 1	1902	D 8	2415	C10	32	
1063	D 8	1180	E 5	1903	D 7	2416	C 5	32	
1064	B 8	1181	F 1	1904	D 6	2417	D 4	32	
1065	B 9	1182	F 2	1905	F 5	2418	D 4	32	
1066	B 9	1185	D 6	1906	E 3	2419	C 4	32	
1067	B 9	1186	A 8	1907	C 4	2420	B10	32	
1068	C 7	1187	F11	1908	B 1	2421	C 5	32	
1069	A10	1188	B11	1909	B 3	2422	A 4	32	
1070	B10	1189	D11	1910	F 9	2424	C 4	32	
1071	C10	1190	C 4	1911	E 7	2425	B10	32	
1072	A10	1191	C 4	1912	D 8	2426	B10	32	
1073	G 5	1192	B 4	1913	D 8	2500	A 9	32	
1074	A11	1193	B 4	1914	D 7	2501	A 9	32	
1075	C11	1194	A 1	1915	D 7	2502	E 7	32	
1076	C 7	1195	A 3	1916	E 8	2503	E 7	32	
1077	C11	1196	A 3	1917	D 7	2504	B 3	32	
1079	B11	1197	A 3	1918	D 7	2598	C 4	32	
1080	C 6	1198	D 3	1919	C 1	2599	D 5	32	
1081	C 6	1199	E 2	1920	F 4	2602	E 4	32	
1082	A 9	1800	F 5	1921	F 6	2603	E 4	32	
1084	G 6	1801	C 6	1922	E 4	2604	E 2	32	
1085	D 5	1802	C 7	1923	E 4	2605	D 2	32	
1086	C 5	1803	D 6	1924	E 4	2606	E 3	32	
1087	B 1	1804	D 7	1925	C 4	2607	E 4	32	
1088	F 2	1805	E 7	1926	D 4	2608	D 4	32	
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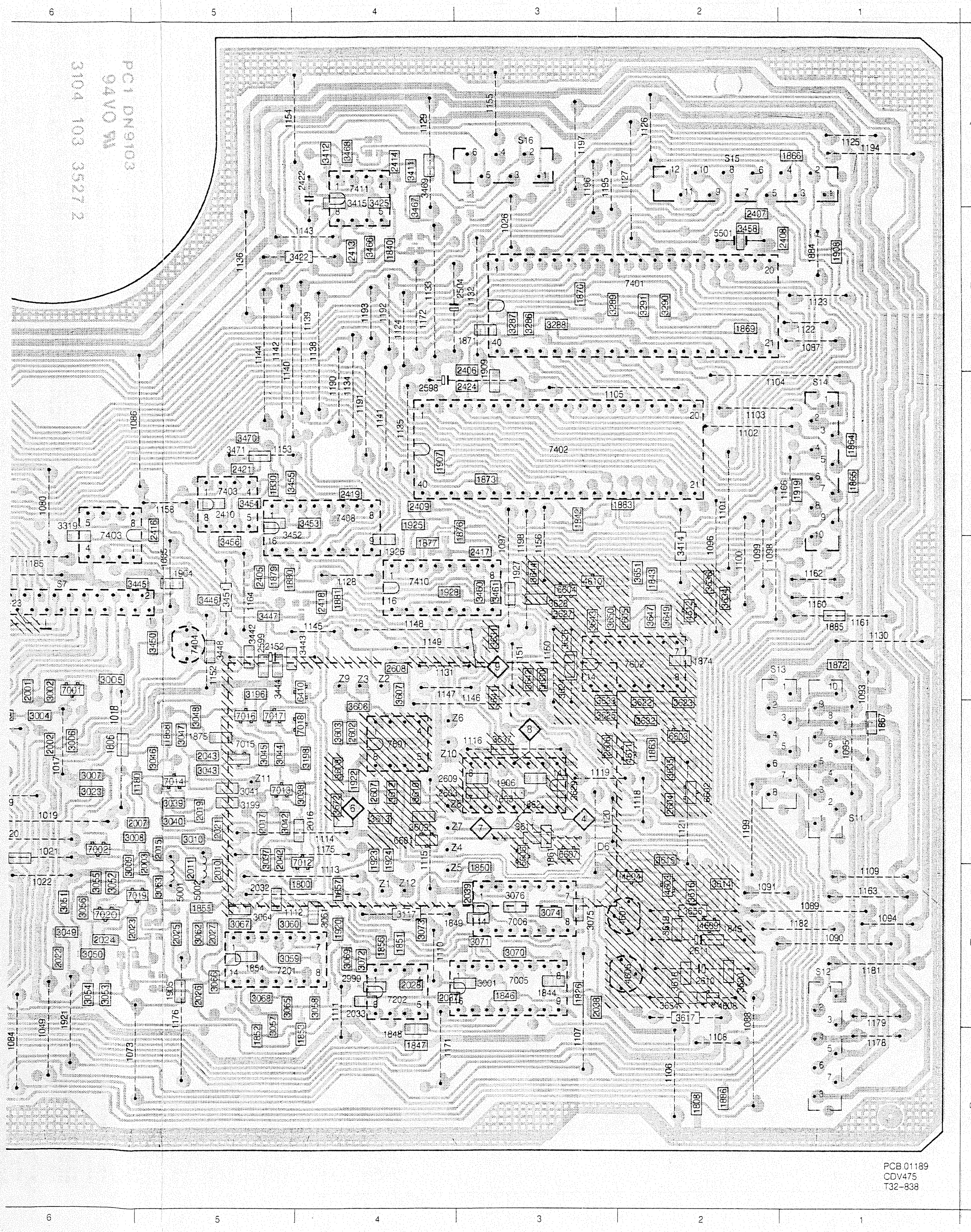
1090	F 1	1807	G 7	1928	D 4	2610	F 2	32	
1091	F 2	1808	G 2	1929	B10	2611	F 2	32	
1093	D 1	1809	G 7	2001	D 6	2999	F 4	32	
1094	F 1	1811	G 8	2002	E 6	3001	F 3	32	
1095	E 1	1812	F 6	2003	E 5	3002	D 6	32	
1096	D 2	1814	G10	2004	G 7	3003	E 6	32	
1097	D 3	1815	F10	2006	F 7	3004	E 6	32	
1098	D 2	1816	E10	2007	E 6	3005	D 6	32	
1099	D 2	1817	E10	2008	F 6	3006	E 6	32	
1100	D 2	1818	D10	2009	F 6	3007	E 6	32	
1101	C 2	1819	F 9	2010	F 5	3008	E 6	32	
1102	C 2	1820	D 7	2011	F 5	3009	E 6	32	
1103	C 2	1821	D 8	2012	F 7	3010	E 5	32	
1104	C 2	1824	B 8	2015	E 5	3012	F 6	32	
1105	C 3	1825	E 7	2016	E 4	3013	F 7	32	
1106	G 2	1826	F 3	2017	E 5	3015	F 7	32	
1107	G 3	1827	B 9	2019	E 5	3018	E 7	32	
1108	G 2	1828	A 9	2021	E 5	3019	F 7	32	
1109	F 1	1830	C 5	2022	F 6	3020	F 7	32	
1110	F 4	1831	D 6	2023	F 5	3021	F 6	32	
1111	F 4	1833	D 9	2024	F 6	3023	E 6	32	
1112	F 5	1834	B 9	2025	F 5	3024	F 7	32	

OVERL. BEH. BIJ PCB.01189

OVERL. BEH. BIJ PCB.01189

OVERL. BEH. BIJ PCB.01189



OVERL. BEH. BIJ PCB 01189

OVERL. BEH. BIJ PCB 01189

OVERL. BEH. BIJ PCB 01189

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1002	D11	1114	E 4	1836	D 8	2027	F 5	3028	F 7	3280	F 7	3606	E 4	7406	C 9
1003	C 7	1115	E 4	1837	E 9	2028	F 4	3037	E 5	3286	B 3	3607	D 4	7406	C10
1004	C 7	1116	E 4	1838	B 9	2032	F 5	3038	E 4	3287	B 3	3608	E 4	7407	B 9
1005	A 9	1118	E 2	1839	E 6	2033	F 4	3039	E 5	3288	B 3	3609	E 4	7408	D11
1006	C 7	1119	E 3	1840	B 4	2037	F 4	3040	E 5	3289	B 2	3610	E 4	7408	C 4
1007	C 7	1120	E 3	1842	C 3	2038	F 3	3041	E 5	3290	B 2	3611	E 3	7410	D 4
1008	C 8	1121	E 2	1843	D 2	2039	F 3	3042	E 5	3291	B 2	3612	E 4	7411	A 4
1009	D 7	1122	B 1	1844	F 3	2042	E 5	3043	E 5	3292	C 9	3613	E 4	7601	E 4
1010	C 8	1123	B 1	1845	F 2	2043	E 5	3044	E 5	3293	C10	3614	F 2	7602	D 3
1010	D 7	1124	B 4	1846	F 3	2152	D 5	3045	E 5	3294	D 9	3615	E 2	7603	E 3
1011	D 7	1125	A 1	1847	G 4	2196	D 7	3046	E 5	3295	C 9	3616	F 2	7604	D11
1012	C 8	1126	A 2	1848	F 4	2197	E 7	3047	E 5	3296	C 8	3617	F 2	7605	D10
1013	D10	1127	A 2	1849	F 4	2198	D 7	3048	E 5	3297	C10	3618	F 2	7606	C10
1014	D 7	1128	D 4	1850	F 4	2199	D 7	3049	F 6	3298	C10	3619	F 2	7607	B 8
1015	E 7	1129	A 4	1851	F 4	2200	F11	3050	F 6	3299	C10	3620	F 2		
1016	E 7	1130	D 1	1852	G 5	2201	F11	3051	F 6	3300	C11	3622	E 3		
1017	E 6	1131	D 4	1853	G 4	2202	E11	3052	F 6	3301	C10	3623	E 2		
1018	E 6	1132	B 3	1854	F 5	2203	E11	3053	F 6	3302	C10	3624	D 3		
1019	E 6	1133	B 4	1855	F 5	2204	F 9	3054	F 6	3303	C10	3625	E 3		
1020	E 6	1134	C 4	1856	F 4	2205	F10	3055	F 6	3304	C11	3626	D 3		
1021	E 6	1135	C 4	1857	F 4	2206	F 8	3056	F 6	3305	D10	3627	D 3		
1022	F 6	1136	B 5	1861	E 3	2207	F 8	3057	F 5	3306	C11	3628	D 3		
1023	G 7	1137	A10	1862	E 3	2209	F 7	3058	F 4	3307	C11	3629	E 3		
1024	F 7	1138	B 4	1863	E 2	2211	C10	3059	F 5	3308	G10	3630	D 3		
1025	F 7	1139	B 4	1864	C 1	2212	C10	3060	F 5	3309	F 9	3631	D 3		
1026	B 3	1140	B 5	1865	C 1	2213	D10	3061	F 4	3310	C 9	3632	E 2		
1027	D10	1141	C 4	1866	A 2	2214	D 9	3062	F 5	3311	C 9	3633	E 3		
1028	E11	1142	B 5	1867	E 1	2215	E 9	3063	F 5	3312	C 9	3634	D 2		
1029	E 6	1143	B 5	1868	E 5	2216	E10	3064	F 5	3314	C10	3635	E 2		
1030	D 9	1144	B 5	1869	B 2	2217	E10	3065	F 5	3315	C 7	3636	D 2		
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1032	G 9	1146	D 4	1871	B 4	2220	F 8	3067	F 5	3317	G 8	3641	D 3		
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1034	G10	1148	D 4	1873	C 3	2222	F 7	3069	F 4	3319	C 6	3643	D 3		
1035	F10	1149	D 4	1874	D 2	2224	D10	3070	F 3	3320	C 7	3644	D 3		
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1042	F10	1156	D 3	1882	E 7	2231	F11	3117	F 4	3327	D 9	3672	E 4		
1043	E10	1157	D11	1883	C 3	2232	F11	3194	D 7	3328	F 8	4205	E 8		
1044	E10	1158	C 5	1884	B 1	2234	C10	3195	E 7	3329	F 9	4206	E 8		
1045	E10	1159	D 8	1885	D 1	2235	C10	3196	D 5	3330	C 9	4207	E 8		
1046	E10	1160	D 1	1886	G 2	2236	D 9	3198	E 4	3335	F 8	4208	E 8		
1047	D 9	1161	D 1	1887	B10	2237	D 9	3199	E 5	3340	D10	4209	F 8		
1048	D 8	1162	D 1	1888	C 9	2290	D10	3200	D 8	3341	D10	4210	F 9		
1049	G 6	1163	F 1	1889	F 7	2401	B 9	3201	D 8	3401	B 9	4603	F 2		
1050	G11	1164	D 5	1890	C 8	2402	B 8	3202	D 8	3402	B 8	4604	F 3		
1051	F11	1165	D 7	1891	F 7	2403	B 8	3203	D 8	3403	C 9	4606	F 2		
1052	D11	1166	C 1	1892	E 8	2405	D 5	3204	E 9	3404	C 9	4607	F 2		
1053	D11	1169	G 8	1893	F 8	2406	B 4	3205	E 9	3404	C 7	4608	F 2		
1054	D 9	1170	E 8	1894	E 9	2407	B 2	3206	E 9	3405	B 9	4609	F 2		
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1058	D 7	1174	E 8	1898	E 8	2411	B 9	3210	D 8	3409	B10	5001	F 5		
1059	C 8	1175	E 4	1899	F 8	2412	B 8	3211	D 8	3410	B10	5002	F 5		
1060	C 8	1176	F 5	1900	D 7	2413	B 4	3212	E 9	3411	A 4	5501	B 2		
1061	C 8	1178	G 1	1901	F 8	2414	A 4	3213	E10	3412	A 4	6207	E 8		
1062	C 8	1179	F 1	1902	D 8	2415	C10	3214	E11	3414	D 2	6208	E 8		
1063	D 8	1180	E 5	1903	D 7	2416	C 5	3215	E11	3415	A 4	6209	E 8		
1064	B 8	1181	F 1	1904	D 6	2417	D 4	3216	E11	3422	B 5	6210	F 8		
1065	B 9	1182	F 2	1905	F 5	2418	D 4	3217	F10	3425	A 4	6211	F 8		
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1067	B 9	1186	A 8	1907	C 4	2420	B10	3219	F 9	3433	B 8	6410	D 4		
1068	C 7	1187	F11	1908	B 1	2421	C 5	3220	F 9	3434	B 8	6415	E 7		
1069	A10	1188	B11	1909	B 3	2422	A 4	3221	E10	3435	C 8	6601	E 4		
1070	B10	1189	D11	1910	F 9	2424	C 4	3222	G 9	3436	C 8	6602	E 2		
1071	C10	1190	C 4	1911	E 7	2425	B10	3223	F10	3437	C10	6606	E 3		
1072	A10	1191	C 4	1912	D 8	2426	B10	3224	G 9	3438	B10	7001	D 6		
1073	G 5	1192	B 4	1913	D 8	2500	A 9	3227	F11	3439	C 8	7002	E 6		
1074	A11	1193	B 4	1914	D 7	2501	A 9	3228	F11	3440	B 8	7003	E 7		
1075	C11	1194	A 1	1915	D 7	2502	E 7	3229	E11	3441	B 8	7004	F 7		
1076	C 7	1195	A 3	1916	E 8	2503	E 7	3230	E11	3442	D 5	7005	F 3		
1077	C11	1196	A 3	1917	D 7	2504	B 3	3231	F11	3443	D 4	7006	F 3		
1079	B11	1197	A 3	1918	D 7	2598	C 4	3232	F11	3444	D 5	7012	E 5		
1080	C 6	1198	D 3	1919	C 1	2599	D 5	3233	F11	3445	D 6	7013	E 5		
1081	C 6	1199	E 2	1920	F 4	2602	E 4	3236	E11	3446	D 5	7014	E 5		
1082	A 9	1800	F 5	1921	F 6	2603	E 4	3237	E11	3447	D 5	7015	E 5		
1084	G 6	1801	C 6	1922	E 4	2604	E 2	3238	F11	3448	D 5	7016	E 5		
1085	D 5.	1802	C 7	1923	E 4	2605	D 2	3239	E11	3449	F 6	7017	E 5		
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1087	B 1	1804	D 7	1925	C 4	2607	E 4	3241	E11	3451	D 5	7019	F 6		
1088	F 2	1805	E 7	1926	D 4	2608	D 4	3242	F11	3452	C 5	7020	F 6		
1089	F 1	1806	E 6	1927	D 3	2609	E 4	3243	F10	3453	C 5	7025	F 7		
1090	F 1	1807	G 7	1928	D 4	2610	F 2	3245	D 8	3454	C 5	7200	B 9		
1091	F 2	1808	G 2	1929	B10	2611	F 2	3246	D 8	3455	C 4	7200	E 9		
1093	D 1	1809	G 7	2001	D 6	2999	F 4	3247	D 8	3456	D 5	7201	F 5		
1094	F 1	1811	G 8	2002	E 6	3001	F 3	3248	D 8	3458	B 2	7201	D 6		
1095	E 1	1812	F 6	2003	E 5	3002	D 6	3250	D 9	3460	D 3	7201	E10		
1096	D 2	1814	G10	2004	G 7	3003	E 6	3252	F 8	3461	D 3	7202	F 4		
1097	D 3	1815	F10	2006	F 7	3004	E 6	3253	F 7	3463	C 8	7202	C11		
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1100	D 2	1818	D10	2009	F 6	3007	E 6	3256	F 7	3466	B 4	7203	F 8		
1101	C 2	1819	F 9	2010	F 5	3008	E 6	3257	F 7	3467	A 4	7204	B 8		
1102	C 2	1820	D 7	2011	F 5	3009	E 6	3259	E 7	3468	A 4	7207	G10		
1103	C 2	1821	D 8	2012	F 7	3010	E 5	3263	E 7	3469	A 4	7209	E10		
1104	C 2	1824	B 8	2015	E 5	3012	F 6	3264	E 7	3470	C 5	7211	F 9		
1105	C 3	1825	E 7	2016	E 4	3013	F 7	3265	E 7	3471	C 5	7211	E 9		
1106	G 2	1826	F 3	2017	E 5	3015	F 7	3266	E 7	3472	B 8	7401	B10		
1107	G 3	1827	B 9	2019	E 5	3018	E 7	3267	E 7	3473	B11	7401	B 3		
1108	G 2	1828	A 9	2021	E 5	3019	F 7	3268	F 7	3474	B10	7402	C 3		
1109	F 1	1830	C 5	2022	F 6	3020	F 7	3270	E 7	3475	B10	7403	D 6		
1110	F 4	1831	D 6	2023	F 5	3021	F 6	3271	F 7	3476	B10	7403	C 5		
1111	F 4	1833	D 9	2024	F 6	3023	E 6	3272	E 7	3501	B 8	7404	E 7		
1112	F 5	1834	B 9	2025	F 5	3024	F 7	3278	F 8	3501	B 8	7404	D 5		

SERVOPANEL PARTSLIST

4822 122 31797	22NF 10% 63V
4822 121 51154	3N9 1% 160V

4822 111 30483	1R0
4822 111 30508	10R
4822 111 30492	2R2
4822 111 30537	120R
4822 111 30593	3R3
4822 101 10685	TRIMMING POTENTIOMETER 4K7

4822 130 42353	BFS19
4822 130 41982	BC848B
5322 130 44339	BFS19R
4822 130 42131	BF550
5322 130 41983	BC858B
4822 130 41024	BF245B
5322 130 44647	BC368
4822 130 40824	BD136
4822 130 40823	BD135
4822 130 40937	BC548B
4822 130 44283	BC636
5322 130 44349	BC635

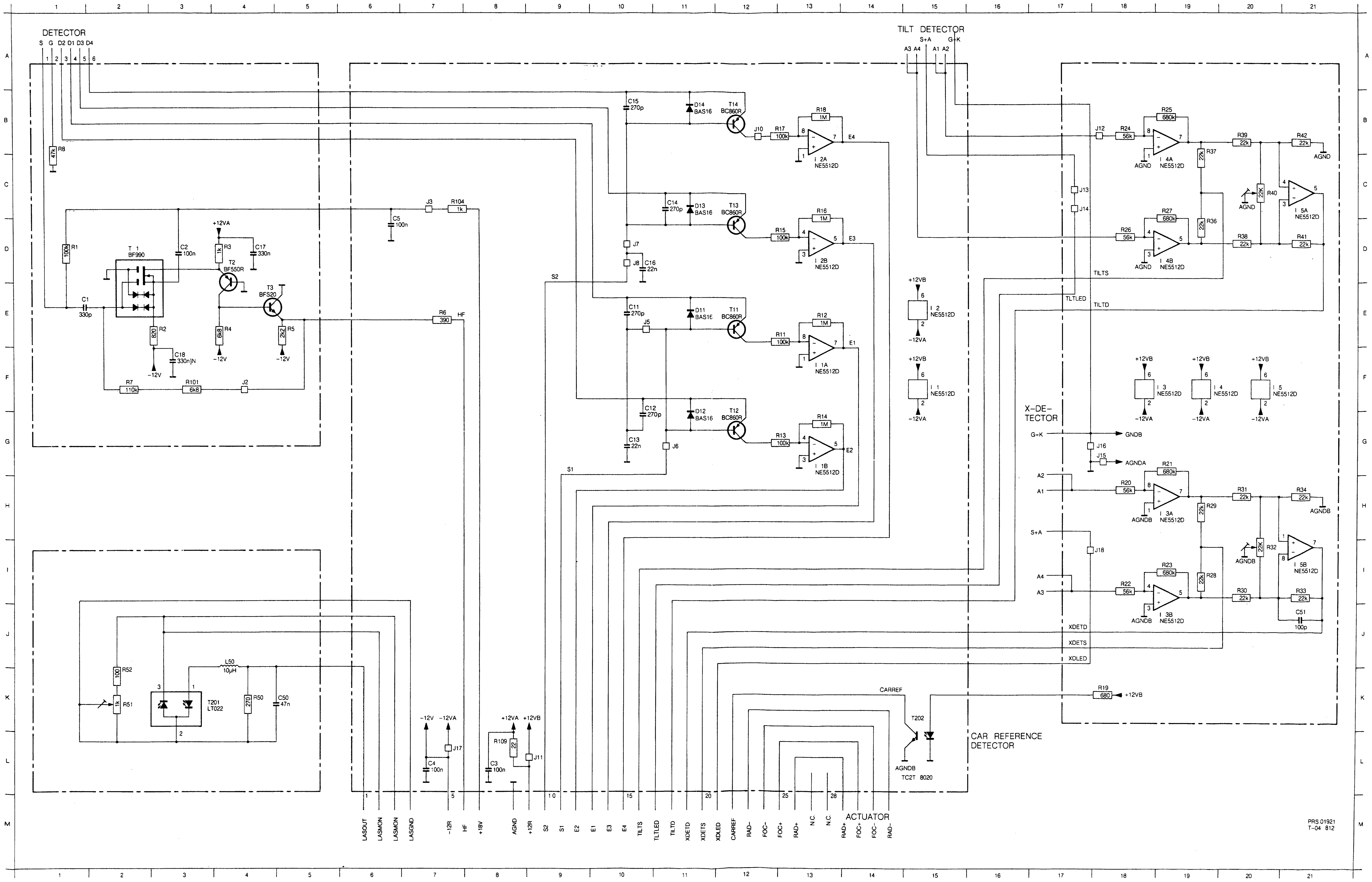
5001	4822 157 53651	COIL 26.5µH
5002	4822 157 53469	COIL 44.0µH
5501	4822 242 71845	X-TAL 12 MHZ

4822 130 32861	HZ2C2 (2V4)
5322 130 80214	BAS28
5322 130 31928	BAS16
4822 130 32699	HZ12B3 (13V0)
4822 130 33703	BZX84-C2V
5322 130 31937	BZX84-C4V
4822 130 32566	HZ11A3 (10V0)
4822 130 80125	BZX84-C5V6
4822 130 80422	HZ18-3 (18V0)

4822 209 80631	LM339N
4822 209 80797	LM393N
5322 209 10576	MC14053BCP
4822 209 11563	MC14025BCP
4822 209 81451	NE5514N
4822 209 70672	LM358N
4822 209 81349	MC1458P1
4822 209 80629	TCA240
4822 214 51664	THICK FILM SERVO
4822 209 11564	TEA1015T/C1
4822 209 11747	MAB8051AHP/P126
4822 209 72028	PD 8155
4822 209 81349	MC1458P1 (MTLA)
4822 209 70672	LM358N (NSC)
5322 209 10421	MC14094BCP
4822 209 10248	HEF4013BP

CIRCUIT DIAGRAM FLEXPRINT

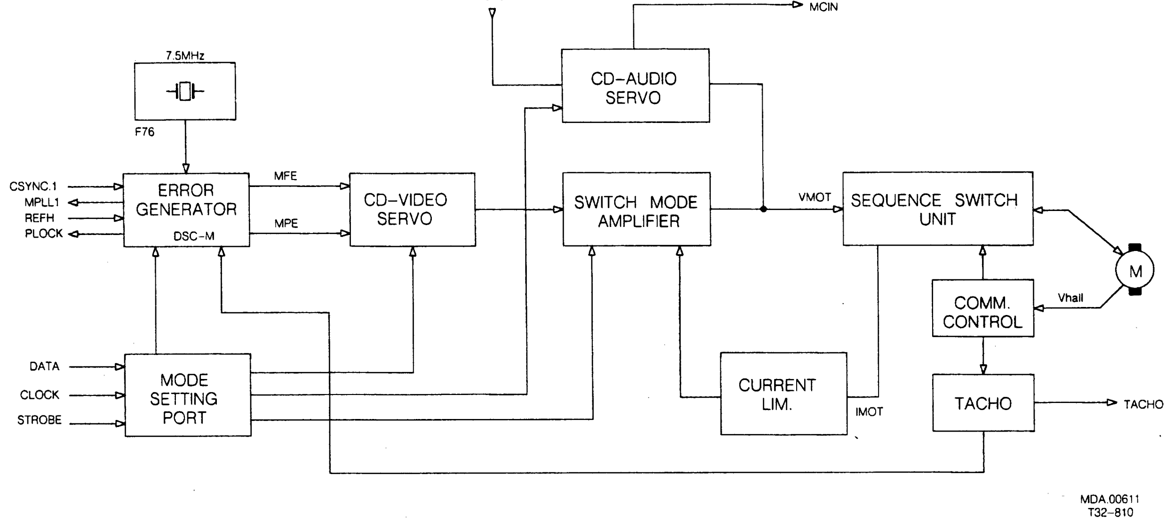
C1	E 1
C11	E10
C12	F10
C13	G10
C14	C11
C15	B10
C16	D10
C17	D 4
C18	F 3
C2	D 3
C3	L 8
C4	L 7
C5	C 7
C50	K 5
C51	J21
D11	E11
D12	G11
D13	C11
D14	B11
I 1	F15
I 1A	F13
I 1B	G13
I 2	E15
I 2A	C13
I 2B	D13
I 3	F19
I 3A	H19
I 3B	J19
I 4	F20
I 4A	C19
I 4B	D19
I 5	F20
I 5A	C21
I 5B	I 21
J10	B12
J11	L 9
J12	B18
J13	C17
J14	C17
J15	G18
J16	G18
J17	L 7
J18	I 18
J2	F 4
J3	C 7
J5	E10
J6	G11
J7	D10
J8	D10
L50	J 4
R1	D 1
R101	F 3
R104	C 7
R109	L 8
R11	E13
R12	E13
R13	G13
R14	G13
R15	D13
R16	C13
R17	B13
R18	B13
R19	K18
R2	E 3
R20	H18
R21	G19
R22	I 18
R23	I 19
R24	B18
R25	B19
R26	D18
R27	C19
R28	I 19
R29	H19
R3	D 4
R30	I 20
R31	H20
R32	I 20
R33	I 21
R34	H21
R36	D19
R37	B19
R38	D20
R39	B20
R4	E 4
R40	C20
R41	D21
R42	B21
R5	E 5
R50	K 4
R51	K 2
R52	K 2
R6	E 7
R7	F 2
R8	B 1
T 1	D 2
T11	E12
T12	F12
T13	C12
T14	B12
T2	D 4
T201	K 4
T202	K15
T3	E 4



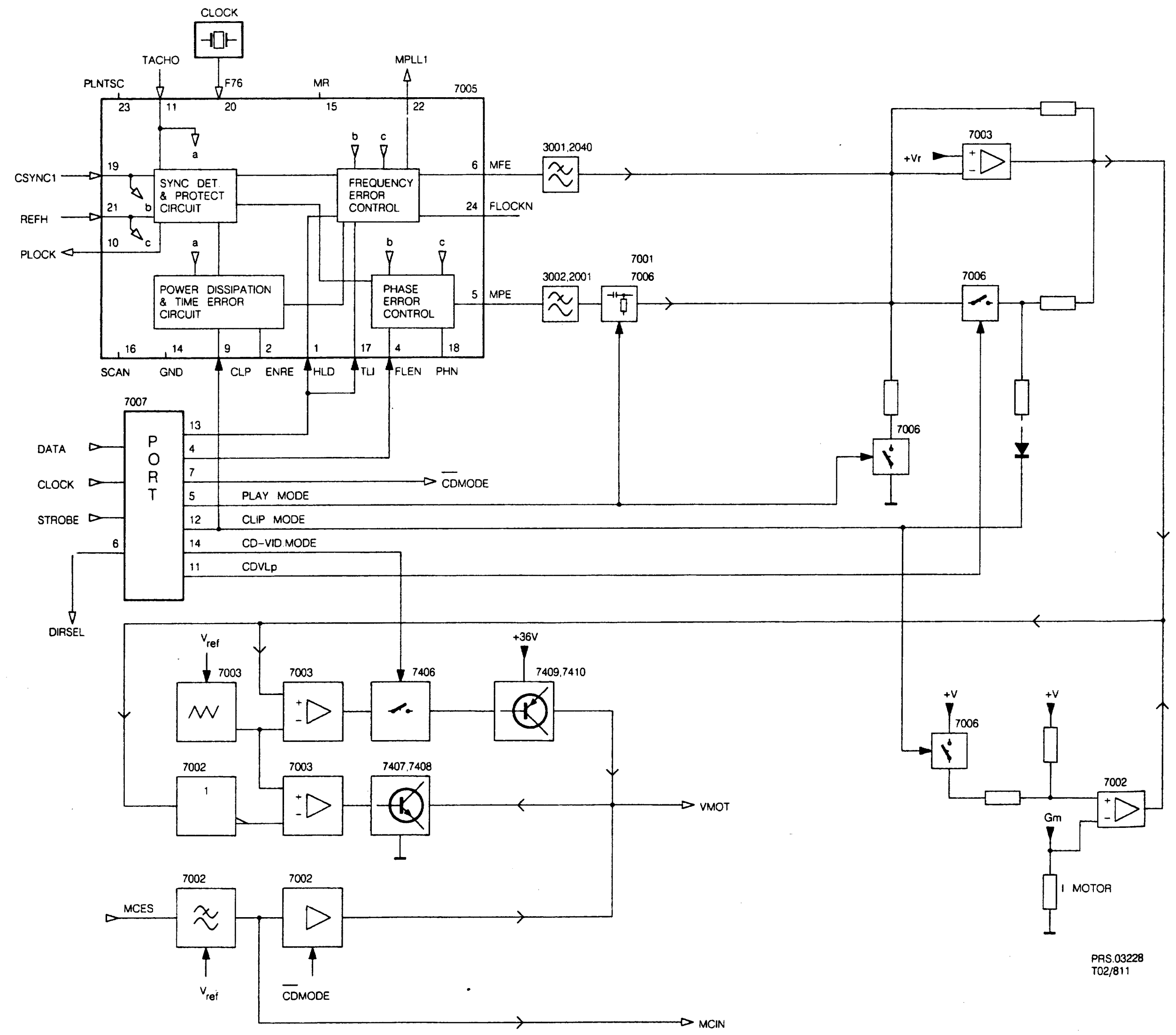
12 MOTOR CONTROL SECTION

MOTOR CONTROL

BLOCK DIAGRAM

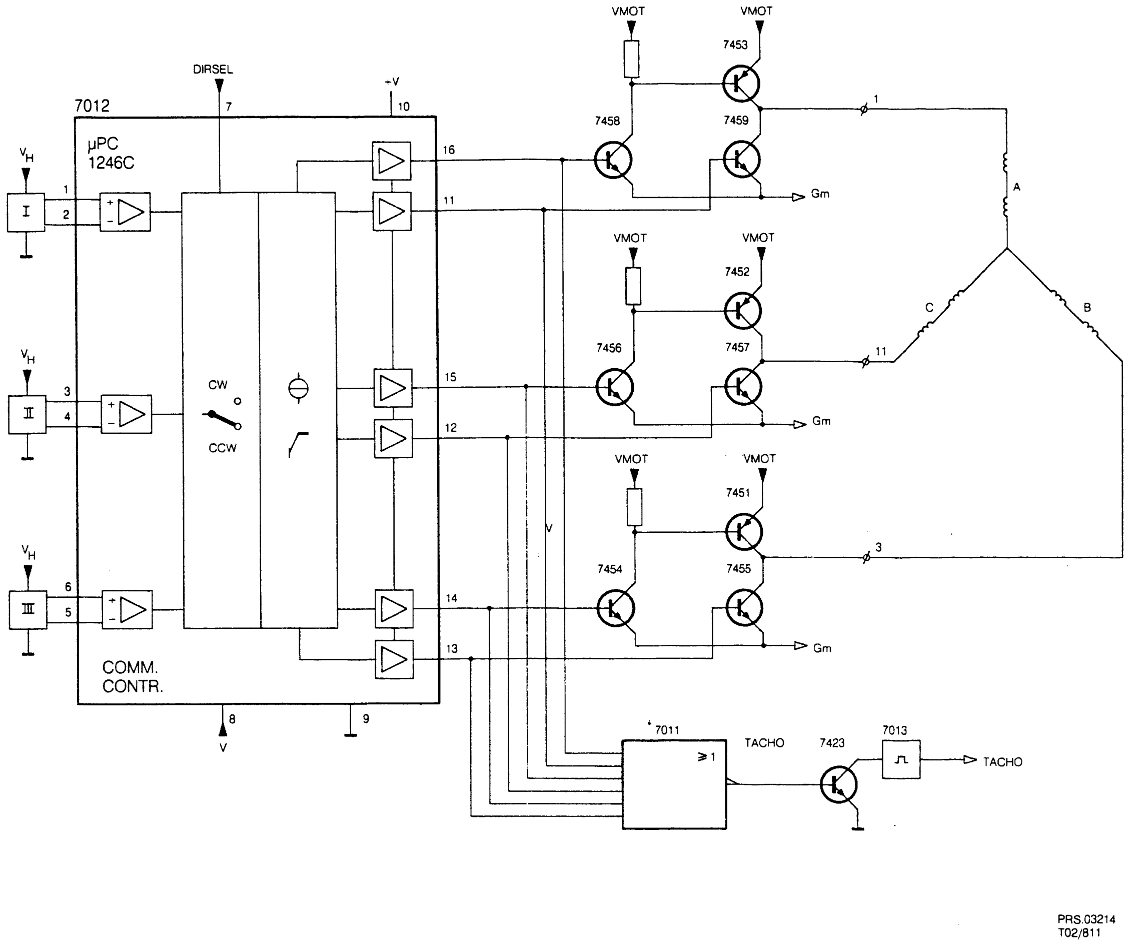


MOTOR I BLOCK DIAGRAM

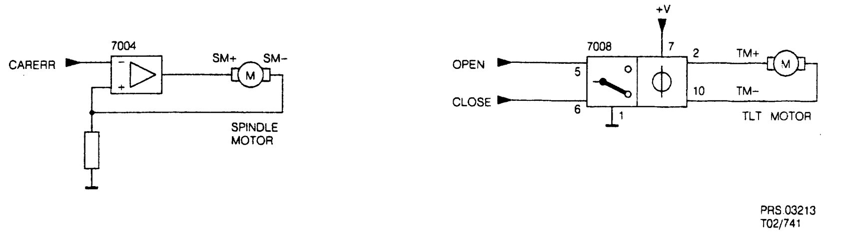


MOTOR II BLOCK DIAGRAM

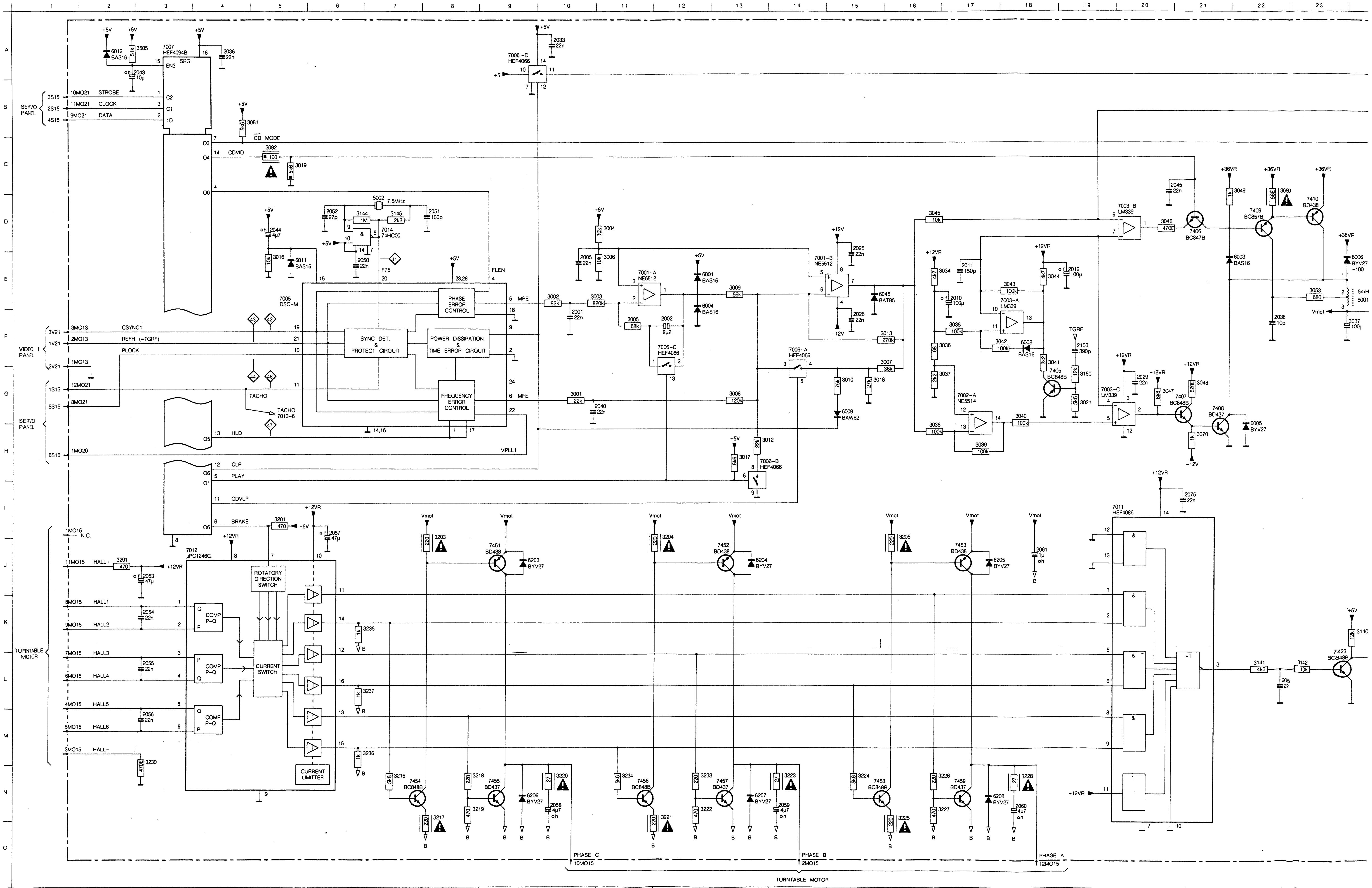
MOTOR 2 BLOCKDIAGRAM

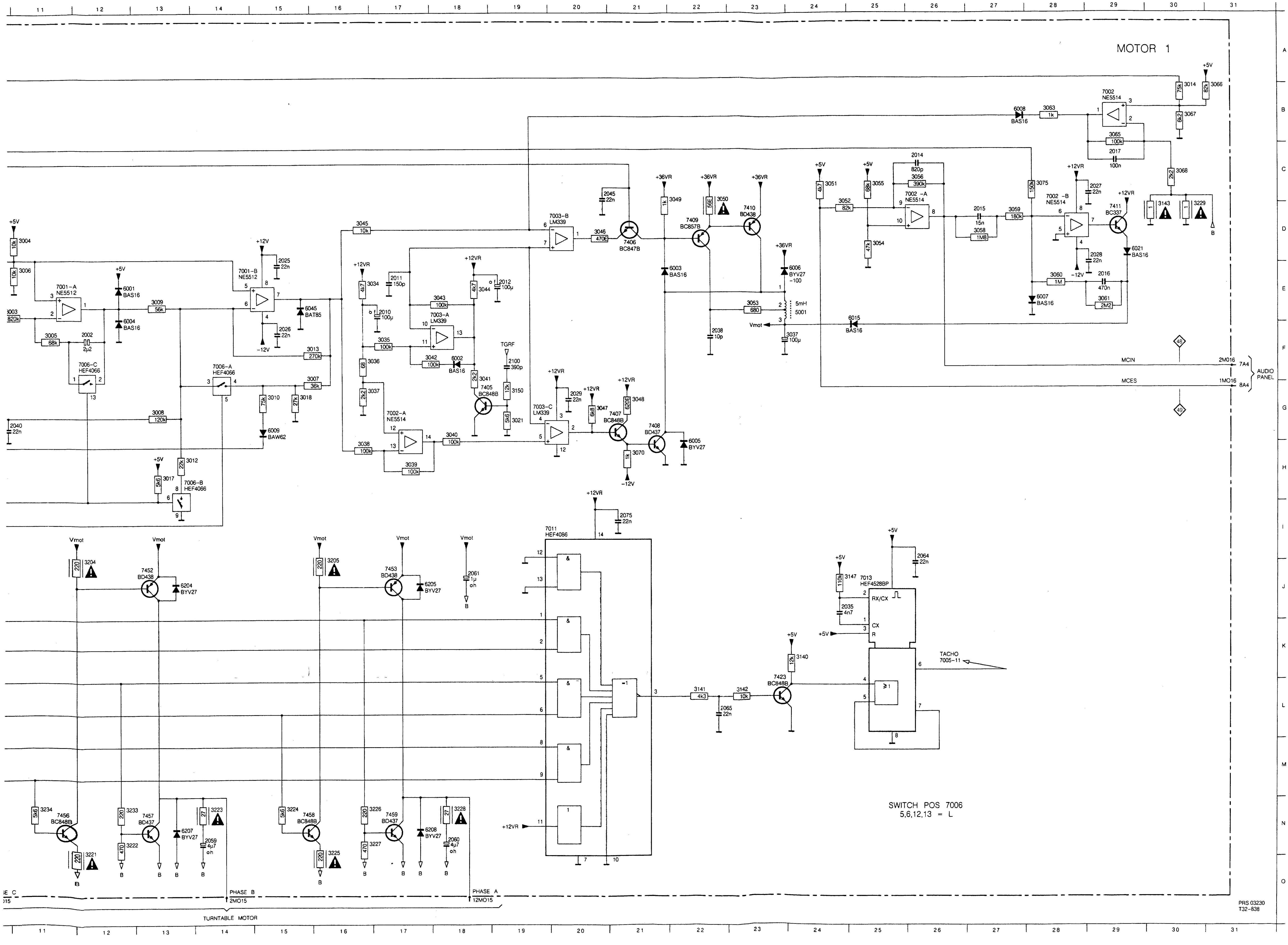


MOTOR 3 BLOCKDIAGRAM



CIRCUIT DIAGRAM MOTOR I





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2002	F12	6206	N 9
2005	E10	6207	N13
2010	E17	6208	N18
2011	E17	7001	E11
2012	E19	7001	E14
2014	C26	7002	G17
2015	D27	7002	C28
2016	E29	7002	C26
2017	C29	7002	B29
2025	D15	7003	D20
2026	F15	7003	E18
2027	C29	7003	G19
2028	D29	7005	E 5
2029	G20	7006	F12
2033	A10	7006	F14
2035	J25	7006	H13
2036	A 4	7006	A 9
2038	F22	7007	A 3
2040	G11	7011	I 20
2043	A 3	7012	J 4
2044	D 5	7013	J25
2045	C21	7014	D 7
2050	E 6	7405	G18
2051	D 8	7406	D21
2052	D 6	7407	G21
2053	J 3	7408	G21
2054	K 3	7409	D22
2055	L 3	7410	D23
2056	M 3	7411	D29
2057	I 6	7423	K23
2058	N10	7451	J 9
2059	N14	7452	J13
2060	N18	7453	J17
2061	J18	7454	N 7
2064	I 26	7455	N 9
2065	L22	7456	N11
2075	I 21	7457	N13
2100	F19	7458	N15
3001	G10	7459	N17
3002	E10		
3003	E10		
3004	D11		
3005	F11		
3006	E11		
3007	F16		
3008	G13		
3009	E13		
3010	G15		
3012	H14		
3013	F16		
3014	B30		
3016	E 5		
3017	H13		
3018	G15		
3019	C 5		
3021	G19		
3034	E17		
3035	F17		
3036	F17		
3037	G17		
3037	F24		
3038	H16		
3039	H17		
3040	G18		
3041	F18		
3042	F17		
3043	E18		
3044	E18		
3045	D16		
3046	D20		
3047	G20		
3048	G21		
3049	C22		
3050	C22		
3051	C24		
3052	C24		
3053	E23		
3054	D25		
3055	C25		
3056	C26		
3058	D27		
3059	D27		
3060	E28		
3061	E29		
3063	B28		
3065	B29		
3066	B31		
3067	B30		
3068	C30		
3070	H21		
3075	C28		
3081	B 5		
3092	C 5		
3140	K24		
3141	L22		
3142	L23		
3143	D30		
3144	D 6		
3145	D 7		
3147	J25		
3150	G19		
3201	J 2		
3201	I 5		
3203	I 8		
3204	I 12		
3205	I 16		
3216	N 7		
3217	N 8		
3218	N 9		
3219	N 9		
3220	N10		
3221	N12		
3222	N12		
3223	N14		
3224	N15		
3225	N16		
3226	N17		
3227	N17		
3228	N18		
3229	D30		
3230	M 3		
3233	N12		
3234	N11		
3235	K 7		
3236	M 7		
3237	L 7		
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5001	E24		
5002	D 7		
6001	E12		
6002	F18		
6003	E22		
6004	E12		
6005	G22		
6006	E24		
6007	E28		
6008	B27		
6009	G15		
6011	E 5		
6012	A 2		
6015	E25		
6021	D29		
6045	E16		
6203	J 9		
6204	J13		

PRINT LAY-OUT MOTOR I

1002	D10	1022	C 7	1045	C 9	1065	B 5	1105	B 3	1316	D 4	1366	C 1
1005	D 9	1023	A 5	1046	B 9	1089	B11	1106	B 4	1318	D 4	1368	D 1
1006	D 8	1027	C 4	1047	B 9	1090	B 9	1107	C 4	1319	B 3	1381	A 9
1006	C 9	1028	D 3	1048	C 9	1091	B 9	1108	B 4	1320	C 3	1391	D 4
1008	C 9	1029	D 3	1049	B 8	1092	B10	1109	B 3	1321	D 4	1393	A 4
1009	A 7	1032	C11	1050	B 8	1093	B 9	1110	D10	1328	B 5	1394	B 5
1011	D 7	1032	C10	1051	C 8	1093	C 6	1120	B 6	1330	A 4	1395	B 5
1012	D 6	1034	C10	1054	D 7	1096	A 6	1124	D 5	1331	B 2	1396	B 5
1016	D 7	1035	C10	1055	B 7	1097	B 6	1301	B 2	1332	B 2	1401	D 6
1018	D 9	1037	B10	1057	B 7	1098	D 7	1303	B 2	1351	D 8	1402	D 7
1019	C 6	1040	C 9	1058	B 7	1099	B 7	1310	C 3	1353	C 3	1404	D10
1020	D11	1041	C 9	1059	B 7	1100	C 4	1313	C 3	1354	D 1	1601	D 2
1021	C11	1043	C 9	1063	B 5	1101	C 7	1314	B 2	1357	C 1	1835	C 2
1021	C11	1044	C 9	1064	B 5	1102	B 1	1315	C 3	1365	D 1	2001	C 7

2002	C 6	2021	B 4	2041	A10	2057	C 9	3005	C 7	3019	A 8	3037	D10
2005	C 6	2025	C 6	2042	A10	2058	A 8	3006	C 6	3021	B10	3038	C10
2006	B 4	2026	C 6	2043	A 5	2059	A 7	3007	C 8	3022	C 3	3039	C10
2007	C 4	2027	D10	2044	C 6	2060	A 6	3008	D 7	3023	B 3	3040	C11
2008	B 5	2028	D10	2045	B10	2061	A 6	3009	C 7	3024	C 3	3041	B10
2009	B 4	2029	C11	2046	C 6	2062	C 1	3010	C 8	3025	C 2	3042	B11
2010	B11	2030	C 4	2049	D10	2063	C 2	3011	D 8	3026	C 2	3043	B11
2011	C11	2031	C 4	2050	C 1	2064	A 3	3012	C 8	3029	C 4	3044	B11
2012	B11	2033	C 8	2051	B 2	2065	C 8	3013	C 6	3030	C 4	3045	C10
2013	A 3	2035	A 4	2052	B 2	2066	D 2	3014	D 8	3031	B 4	3046	B10
2014	C10	2036	A 5	2053	C 9	3001	C 7	3015	A 5	3032	B 3	3047	B11
2015	C10	2037	A 9	2054	C 8	3002	C 7	3016	C 6	3034	B11	3048	B10
2016	C11	2038	A10	2055	C 8	3003	C 7	3017	A 5	3035	B11	3049	B10
2017	C11	2040	D 8	2056	C 8	3004	C 6	3018	C 8	3036	C11	3050	A10

3051	B10	3068	B 9	3140	B 7	3218	B 9	3234	B 8	3309	B 7	3323	B 9
3052	B 9	3070	D 9	3141	B 8	3219	B 9	3235	B 9	3310	C 8	3324	C 9
3053	A10	3071	C 4	3142	B 8	3220	B 8	3236	A 8	3311	B 7	3325	B 6
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3058	C10	3081	B10	3146	D 3	3224	B 7	3301	C11	3315	A 9	3329	D11
3059	C10	3092	A 7	3147	A 4	3225	A 7	3302	D10	3316	A 9	3331	B 7
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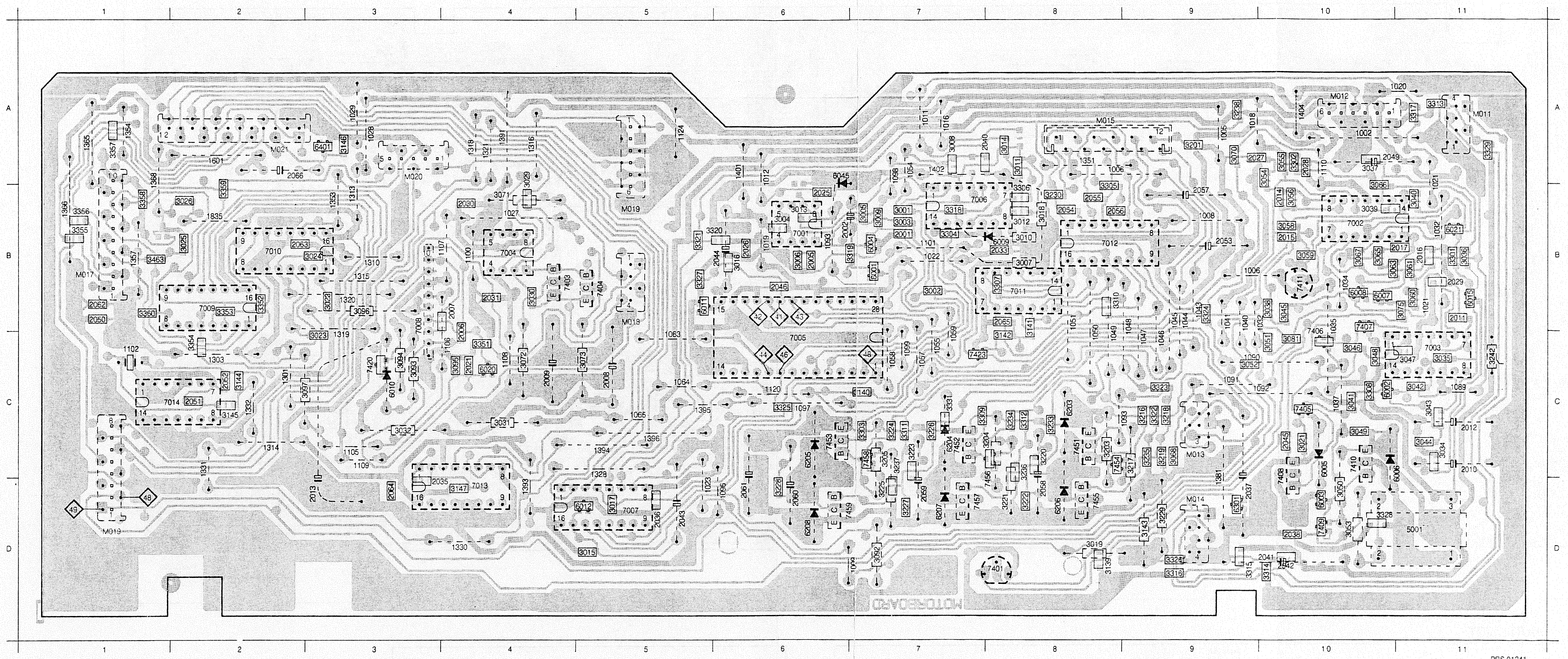
3063	C10	3095	B 4	3204	B 8	3228	A 6	3305	C 8	3319	C 7	3353	C 2
3065	C10	3096	C 3	3205	B 7	3229	A 9	3306	C 8	3320	C 6	3354	B 2
3066	C10	3097	B 2	3216	B 9	3230	C 8	3307	C 8	3321	C 5	3355	C 1
3067	C10	3139	A 8	3217	B 9	3233	B 8	3308	B10	3322	B 9	3356	C 1

3357	D 1	6009	C 8	6301	A 9	7013	A 4	7451	B 8	M017	C 1
3358	C 1	6010	B 3	6401	D 3	7014	B 2	7452	B 7	M018	C 5
3359	C 2	6011	C 5	7001	C 6	7401	A 8	7453	B 6	M019	A 1
3360	C 1	6012	A 5	7002	C10	7403	C 4	7454	B 8	M019	C 5
3463	C 1	6015	C11	7003	B11	7404	C 5	7455	A 8	M020	D 3
5001	A11	6020	B 4	7004	C 4	7405	B10	7456	A 8	M021	D 2
6001	C 7	6021	C11	7005	B 6	7406	B10	7457	A 7		
6002	B10	6045	D 6	7006	C 7	7407	C10	7458	B 7		
6003	A10	6203	B 8	7007	A 5	7408	A10	7459	A 6		
6004	C 7	6204	B 7	7008	C 3	7409	A10	M011	D11		
6005	B10	6205	B 6	7009	C 2	7410	B10	M012	D10		
6006	A11	6206	A 8	7010	C 2	7411	C10	M013	B 9		
6007	C10	6207	A 7	7011	C 8	7420	B 3	M014	A 9		
6008	C10	6208	A 6	7012	C 8	7423	B 7	M015	D 8		



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CDV475

PRINT LAY-OUT MOTOR II

1002 D10	1022 C 7	1045 C 9	1065 B 5	1105 B 3	1316 D 4	1366 C 1	2002 C 6	2021 B 4	2041 A10	2057 C 9	3005 C 7	3019 A 8	3037 D10	3051 B10	3068 B 9	3140 B 7	3218 B 9	3234 B 8	3309 B 7	3323 B 9	3357 D 1	6009 C 8	6301 A 9	7013 A 4	7451 B 8	M017 C 1
1005 D 9	1023 A 5	1046 B 9	1089 B11	1106 B 4	1318 D 4	1368 D 1	2005 C 6	2025 C 6	2042 A10	2058 A 8	3006 C 6	3021 B10	3038 C10	3052 B 9	3070 D 9	3141 B 8	3219 B 9	3235 B 9	3310 C 8	3324 C 9	3358 C 1	6010 B 3	6401 D 3	7014 B 2	7452 B 7	M018 C 5
1006 D 8	1027 C 4	1047 B 9	1090 B 9	1107 C 4	1319 B 3	1381 A 9	2006 B 4	2026 C 6	2043 A 5	2059 A 7	3007 C 8	3022 C 3	3039 C10	3053 A10	3071 C 4	3142 B 8	3220 B 8	3236 A 8	3311 B 7	3325 B 6	3359 C 2	6011 C 5	7001 C 6	7401 A 8	7453 B 6	M019 A 1
1006 C 9	1028 D 3	1048 C 9	1091 B 9	1108 B 4	1320 C 3	1391 D 4	2007 C 4	2027 D10	2044 C 6	2060 A 6	3008 D 7	3023 B 3	3040 C11	3054 C10	3072 B 4	3143 A 9	3221 A 8	3237 B 7	3312 B 8	3326 A 9	3360 C 1	6012 A 5	7002 C10	7403 C 4	7454 B 8	M019 C 5
1008 C 9	1029 D 3	1049 B 8	1092 B10	1109 B 3	1321 D 4	1393 A 4	2008 B 5	2028 D10	2045 B10	2061 A 6	3009 C 7	3024 C 3	3041 B10	3055 D10	3073 B 5	3144 B 2	3222 A 8	3238 D 9	3313 D11	3327 C 5	3463 C 1	6015 C11	7003 B11	7404 C 5	7455 A 8	M020 D 3
1009 A 7	1032 C11	1050 B 8	1093 B 9	1110 D10	1328 B 5	1394 B 5	2009 B 4	2029 C11	2046 C 6	2062 C 1	3010 C 8	3025 C 2	3042 B11	3056 C10	3075 C11	3145 B 2	3223 B 7	3242 B11	3314 A10	3328 A10	5001 A11	6020 B 4	7004 C 4	7405 B10	7456 A 8	M021 D 2
1011 D 7	1032 C10	1051 C 8	1093 C 6	1120 B 6	1330 A 4	1395 B 5	2010 B11	2030 C 4	2049 D10	2063 C 2	3011 D 8	3026 C 2	3043 B11	3058 C10	3081 B10	3146 D 3	3224 B 7	3301 C11	3315 A 9	3329 D11	6001 C 7	6021 C11	7005 B 6	7406 B10	7457 A 7	
1012 D 6	1034 C10	1054 D 7	1096 A 6	1124 D 5	1331 B 2	1396 B 5	2011 C11	2031 C 4	2050 C 1	2064 A 3	3012 C 8	3029 C 4	3044 B11	3059 C10	3092 A 7	3147 A 4	3225 A 7	3302 D10	3316 A 9	3331 B 7	6002 B10	6045 D 6	7006 C 7	7407 C10	7458 B 7	
1016 D 7	1035 C10	1055 B 7	1097 B 6	1301 B 2	1332 B 2	1401 D 6	2012 B11	2033 C 8	2051 B 2	2065 C 8	3013 C 6	3030 C 4	3045 C10	3060 C11	3093 B 3	3201 D 9	3226 B 7	3303 B 7	3317 D11	3351 B 4	6003 A10	6203 B 8	7007 A 5	7408 A10	7459 A 6	
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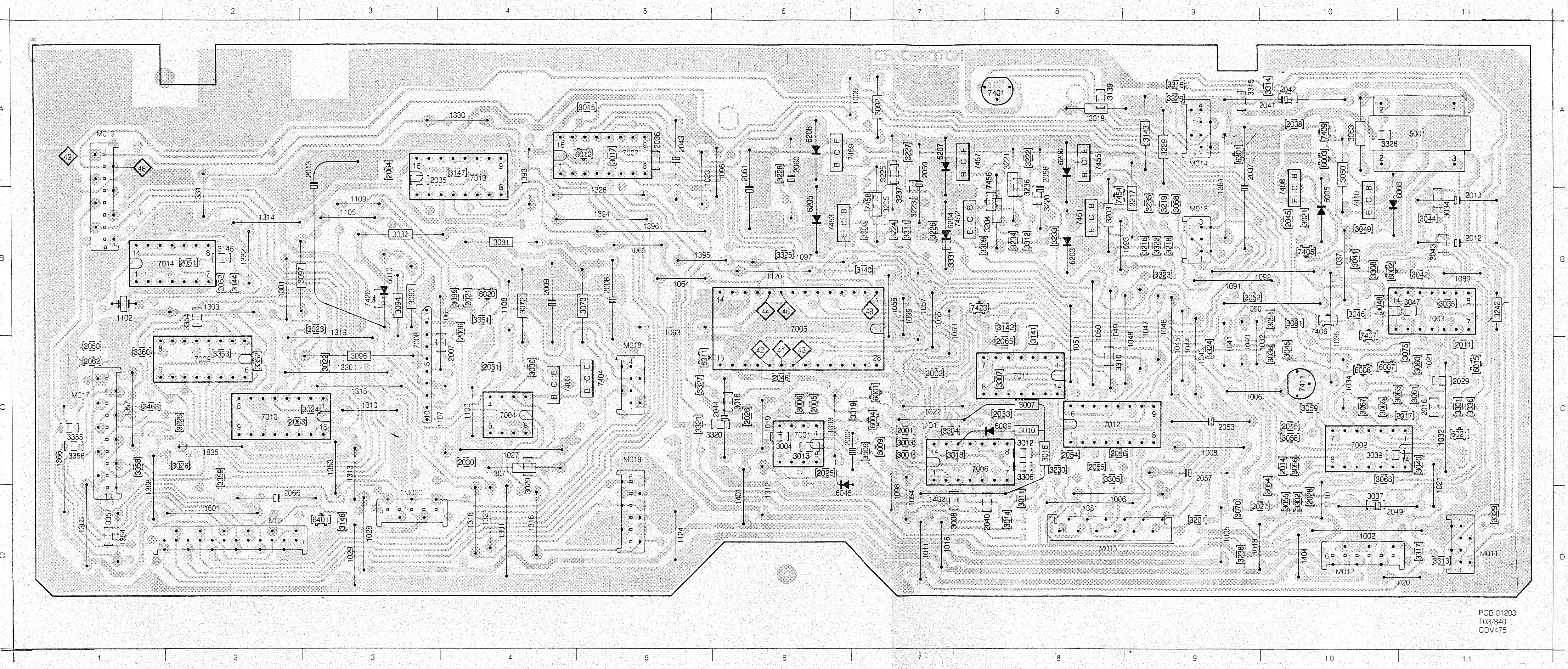
1019 C 6	1040 C 9	1058 B 7	1099 B 7	1310 C 3	1353 C 3	1404 D10	2014 C10	2036 A 5	2053 C 9	3001 C 7	3015 A 5	3032 B 3	3047 B11	3063 C10	3095 B 4	3204 B 8	3228 A 6	3305 C 8	3319 C 7	3353 C 2	6005 B10	6205 B 6	7009 C 2	7410 B10	M012 D10	
1020 D11	1041 C 9	1059 B 7	1100 C 4	1313 C 3	1354 D 1	1601 D 2	2015 C10	2037 A 9	2054 C 8	3002 C 7	3016 C 6	3034 B11	3048 B10	3065 C10	3096 C 3	3205 B 7	3229 A 9	3306 C 8	3320 C 6	3354 B 2	6006 A11	6206 A 8	7010 C 2	7411 C10	M013 B 9	
1021 C11	1043 C 9	1063 B 5	1101 C 7	1314 B 2	1357 C 1	1835 C 2	2016 C11	2038 A10	2055 C 8	3003 C 7	3017 A 5	3035 B11	3049 B10	3066 C10	3097 B 2	3216 B 9	3230 C 8	3307 C 8	3321 C 5	3355 C 1	6007 C10	6207 A 7	7011 C 8	7420 B 3	M014 A 9	
1021 C11	1044 C 9	1064 B 5	1102 B 1	1315 C 3	1365 D 1	2001 C 7	2017 C11	2040 D 8	2056 C 8	3004 C 6	3018 C 8	3036 C11	3050 A10	3067 C10	3139 A 8	3217 B 9	3233 B 8	3308 B10	3322 B 9	3356 C 1	6008 C10	6208 A 6	7012 C 8	7423 B 7	M015 D 8	



PCB 01203
T03/840
CDV475

MOTOR PANEL PARTSLIST

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4822 124 41557	ELCAP.BIP.2U2
4822 122 32442	10NF 50V
4822 122 31974	820PF 10% 50V
5322 122 31849	39NF 10% 63V
4822 122 33011	470 NF
4822 122 33156	100NF 63V
5322 122 32933	1NF 5% 50V
4822 124 22221	100UF 20% 63V

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4822 111 30517	22E 5% 0.33W
4822 111 30528	56E 5% 0.33W
4822 111 90182	390K 2% 0.125W
4822 111 30513	15E 5% 0.33W
4822 111 30492	2E2 5% 0.33W
4822 111 30508	10E 5%
4822 111 30544	220E 5% 0.33W
4822 111 30519	27E 5%
4822 111 30483	1 5% 0.33W

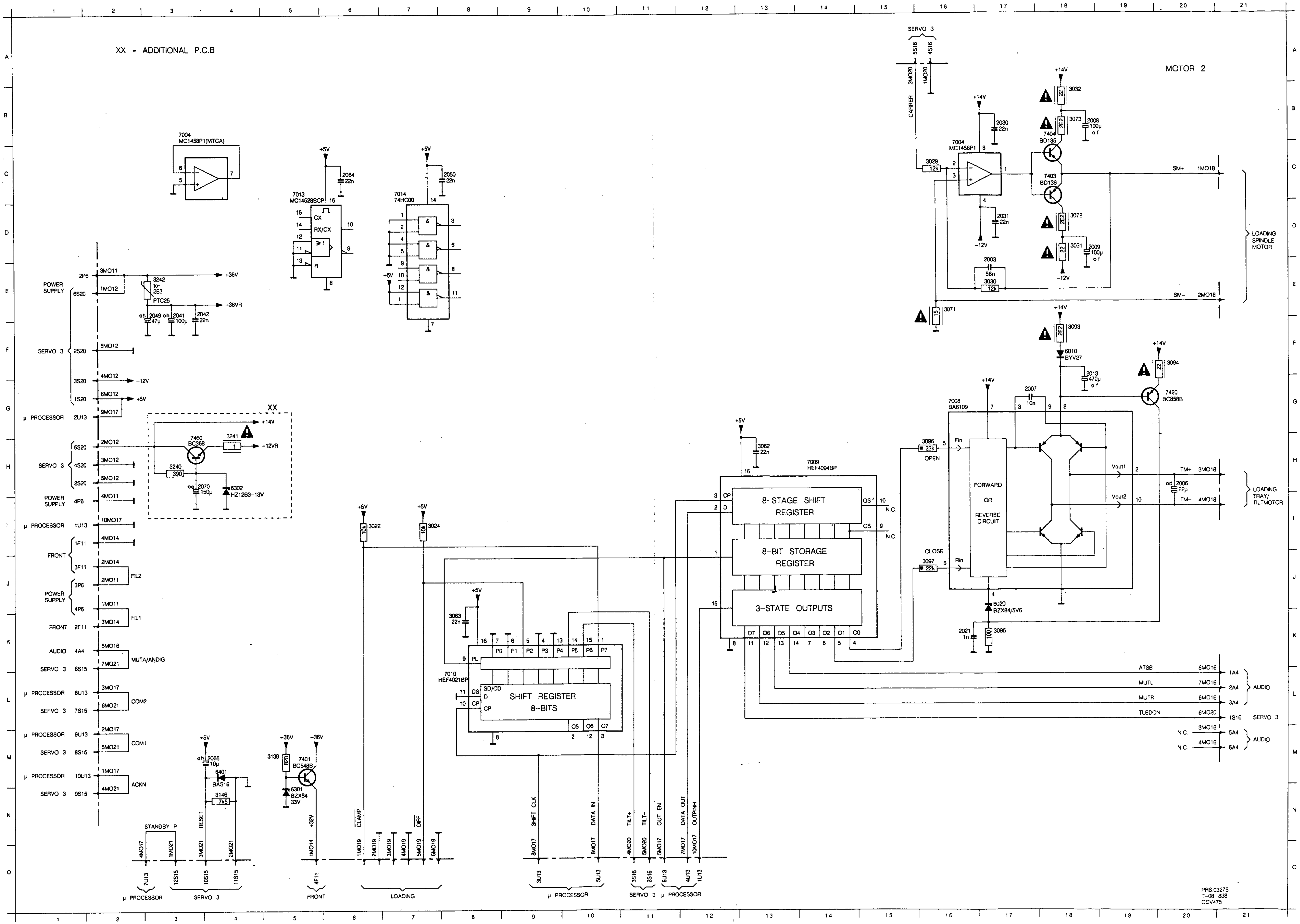
	5322 130 31928	BAS16
	4822 130 31982	BYV27-100
	4822 130 30621	1N4148
	4822 130 33004	BZX84-B5V6
	4822 130 31983	BAT85
	4822 130 80542	BZX84-C33
	4822 130 32699	HZ12B3 (13V)
	5322 130 32026	HZ12B2
7001	4822 209 72123	NE5512N
7002	4822 209 81451	NE5514N
7003	4822 209 80631	LM339N (MTLA)
7004	4822 209 81349	MC1458P1 (MTLA)
7005	4822 209 72121	DSC-M/GS38FC307PA02
7006	5322 209 10357	HEF4066BP
7007	5322 209 10421	MC14094BCP
7008	4822 209 82059	BA6109
7009	5322 209 10421	MC14094BCP
7010	4822 209 72423	MC14021BCP
7011	4822 209 10311	HEF4086BP
7012	4822 209 72126	UPC1246C
7013	4822 209 10866	MC14528BCP
7014	5322 209 11105	PC74HCT00P

5001	4822 157 53196	
5002	4822 242 72046	X-TAL 7.5 MHZ

4822 130 40937	BC548B
4822 130 40824	BD136
4822 130 40823	BD135
5322 130 41982	BC848B
4822 130 60511	BC847B
4822 130 40982	BD437
5322 130 60508	BC857B
4822 130 40995	BD438
4822 130 40855	BC337
5322 130 41983	BC858B
5322 130 44647	BC368

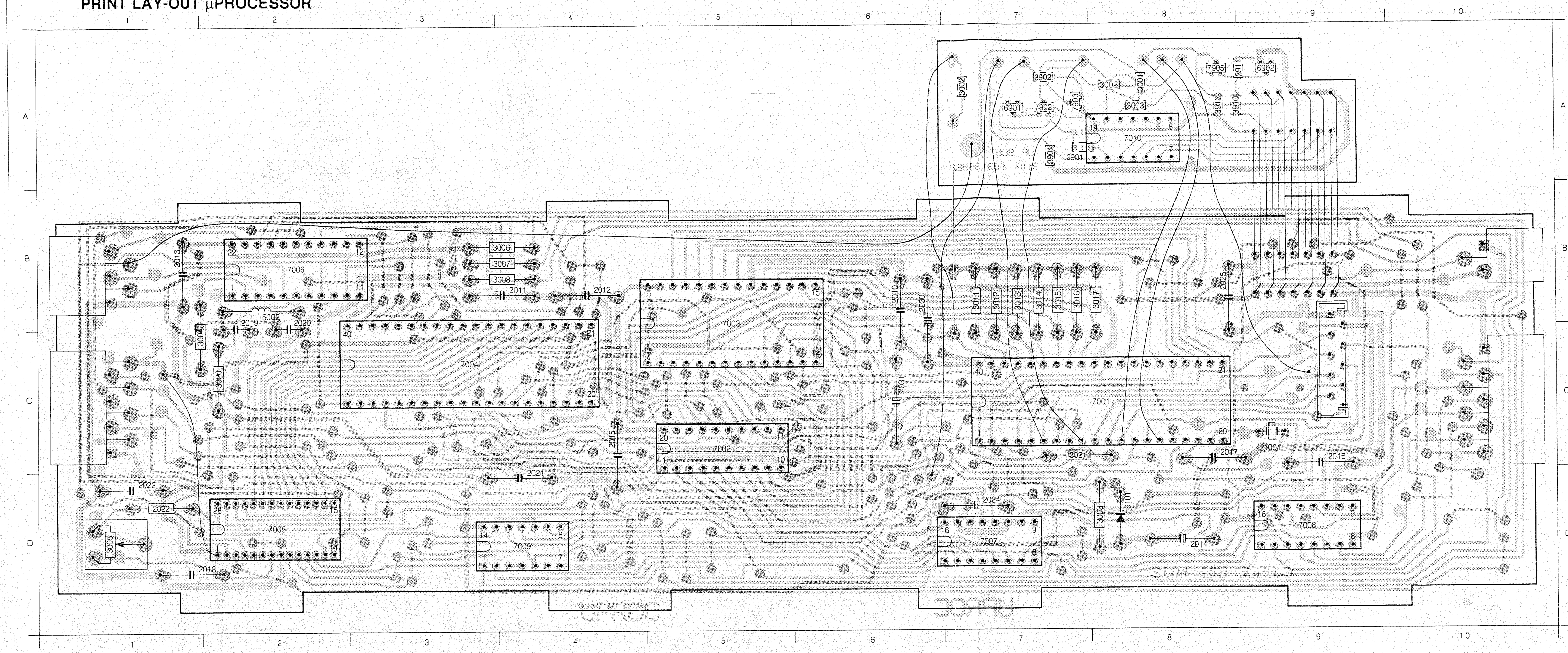
CIRCUIT DIAGRAM MOTOR II

2003	E17
2006	H20
2007	G17
2008	B18
2009	D18
2013	F18
2021	K16
2030	B17
2031	D17
2041	E 3
2042	E 4
2049	E 3
2050	C 8
2064	C 6
2066	M 4
2070	H 4
3022	I 6
3024	I 7
3029	C16
3030	E17
3031	D18
3032	B18
3062	H13
3063	K 8
3071	E16
3072	D18
3073	B18
3093	F18
3094	F20
3095	K17
3096	H16
3097	J16
3139	M 5
3146	N 4
3240	H 3
3241	G 4
3242	E 3
6010	F18
6020	J17
6301	N 5
6302	H 4
6401	M 4
7004	C16
7004	B 3
7008	G16
7009	H14
7010	L 8
7013	C 5
7014	C 7
7401	M 5
7403	C18
7404	B18
7420	G20
7460	G 3

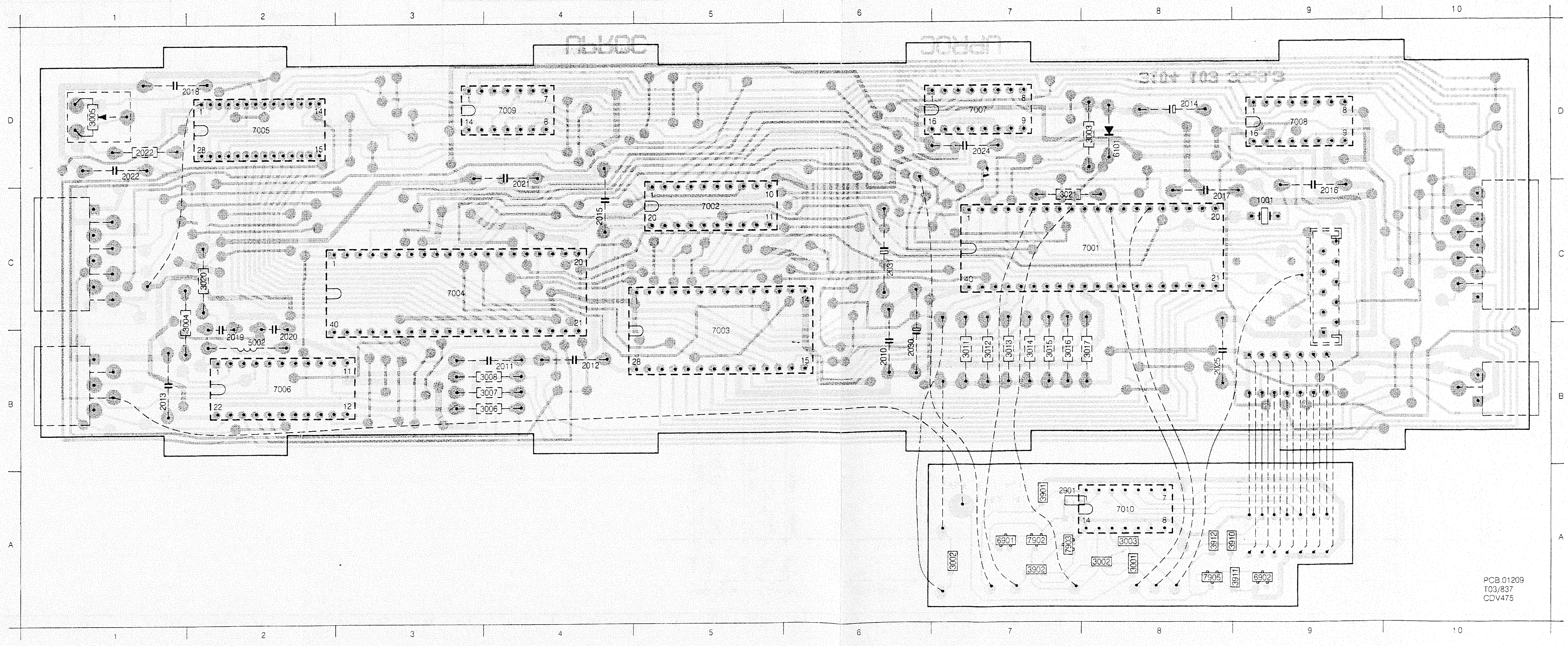


13. CONTROL AND DISPLAY AND CONNECTION SECTION

PRINT LAY-OUT μPROCESSOR

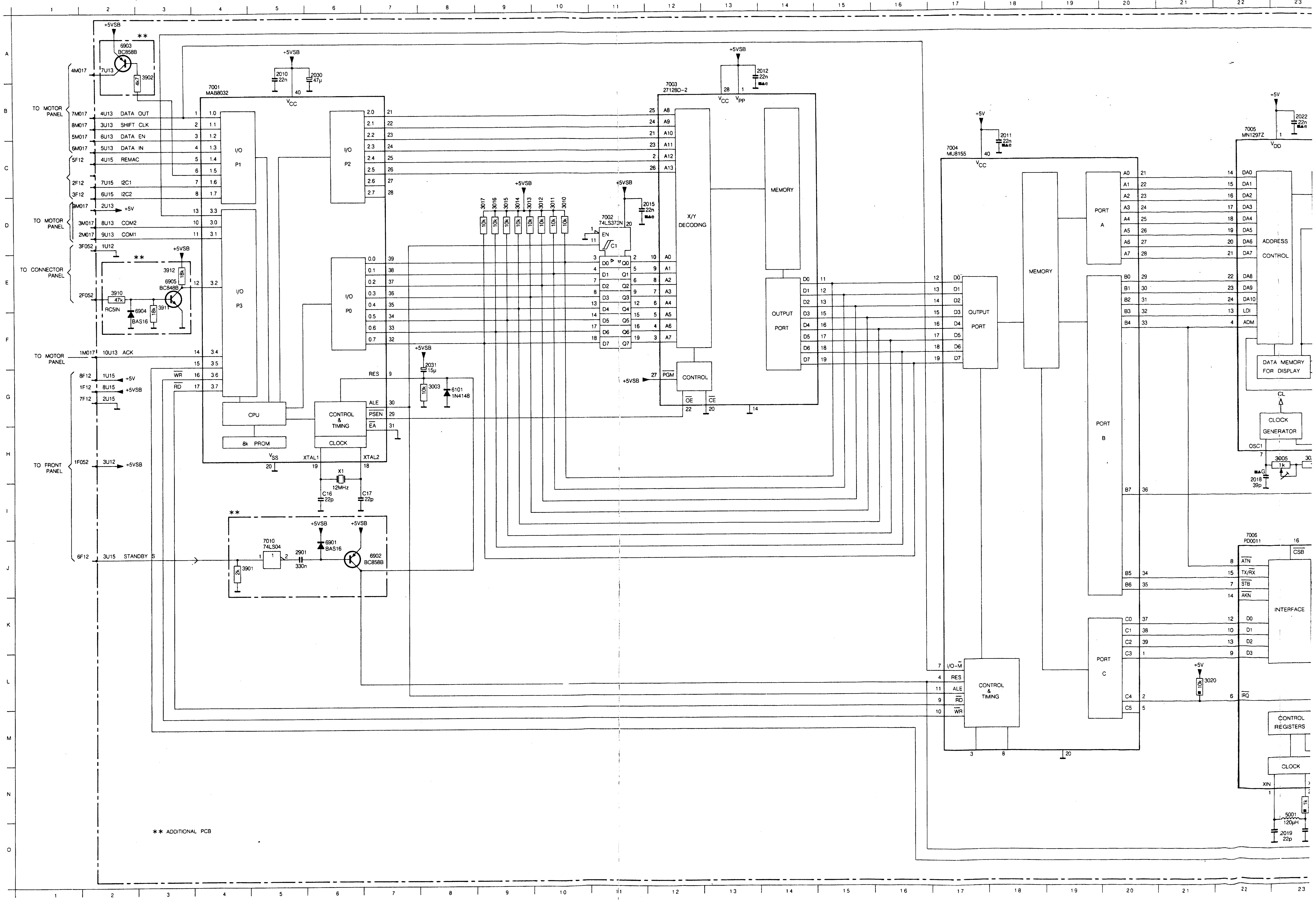


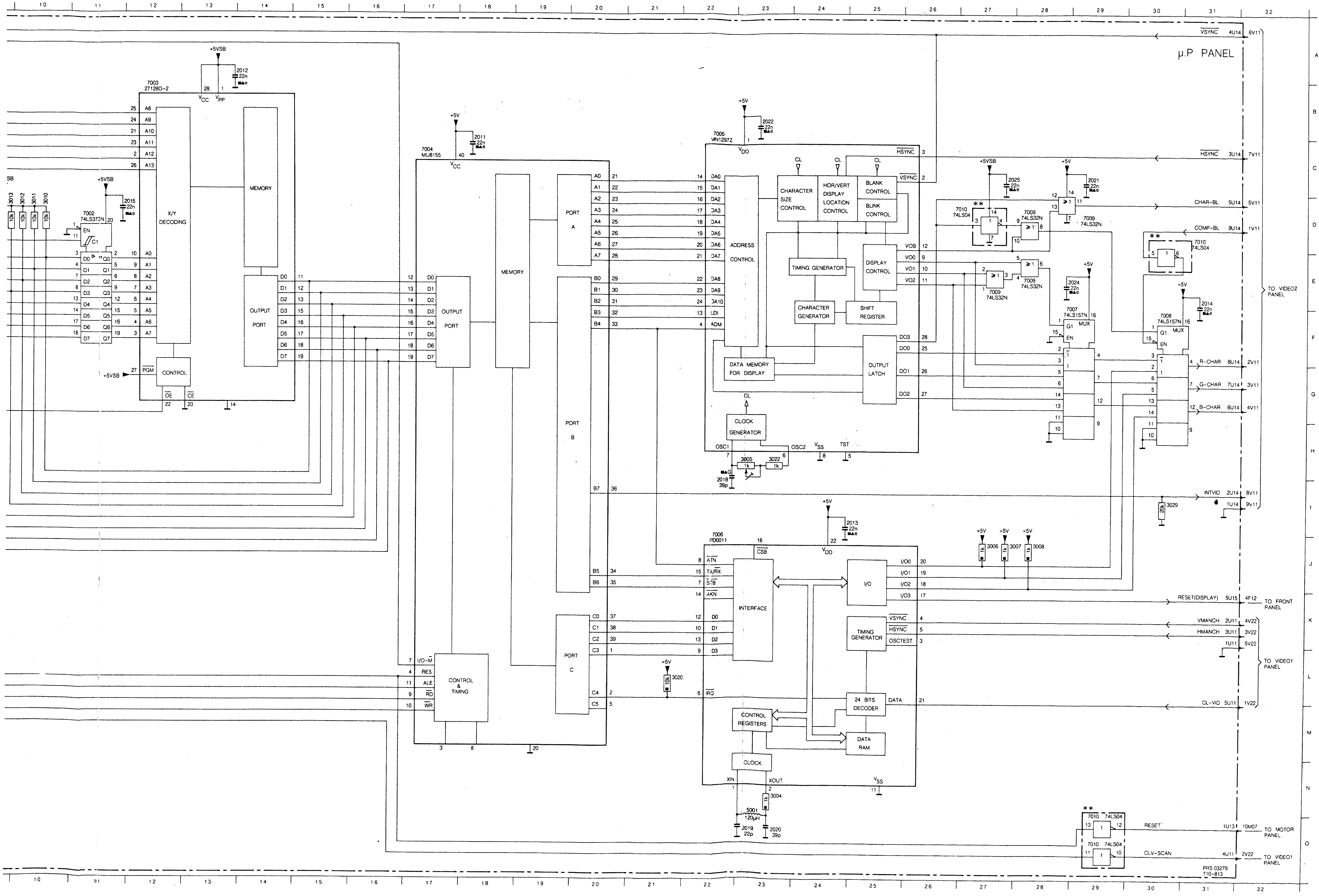
1001	C9
2010	B6
2011	B4
2012	B4
2013	B1
2014	D8
2015	C4
2016	C9
2017	C8
2018	D2
2019	B2
2020	B2
2021	D4
2022	D1
2022	D1
2024	D7
2025	B8
2030	B6
2031	C6
2901	A7
3001	A8
3002	A7
3002	A8
3003	D8
3003	A8
3004	C1
3005	D1
3006	B4
3007	B4
3008	B4
3011	B7
3012	B7
3013	B7
3014	B7
3015	B7
3016	B7
3017	B8
3020	C2
3021	C7
3901	A7
3902	A7
3910	A8
3911	A9
3912	A8
5002	B2
6101	D8
6901	A7
6902	A9
7001	C8
7002	C5
7003	B5
7004	C3
7005	D2
7006	B2
7007	D7
7008	D9
7009	D4
7010	A8
7902	A7
7903	A7
7905	A8



1001	C9
2010	B6
2011	B4
2012	B4
2013	B1
2014	D8
2015	C4
2016	C9
2017	C8
2018	D2
2019	B2
2020	B2
2021	D4
2022	D1
2022	D1
2024	D7
2025	B8
2030	B6
2031	C6
2901	A7
3001	A8
3002	A7
3002	A8
3003	D8
3003	A8
3004	C1
3005	D1
3006	B4
3007	B4
3008	B4
3011	B7
3012	B7
3013	B7
3014	B7
3015	B7
3016	B7
3017	B8
3020	C2
3021	C7
3901	A7
3902	A7
3910	A8
3911	A9
3912	A8
5002	B2
6101	D8
6901	A7
6902	A9
7001	C8
7002	C5
7003	B5
7004	C3
7005	D2
7006	B2
7007	D7
7008	D9
7009	D4
7010	A8
7902	A7
7903	A7
7905	A8

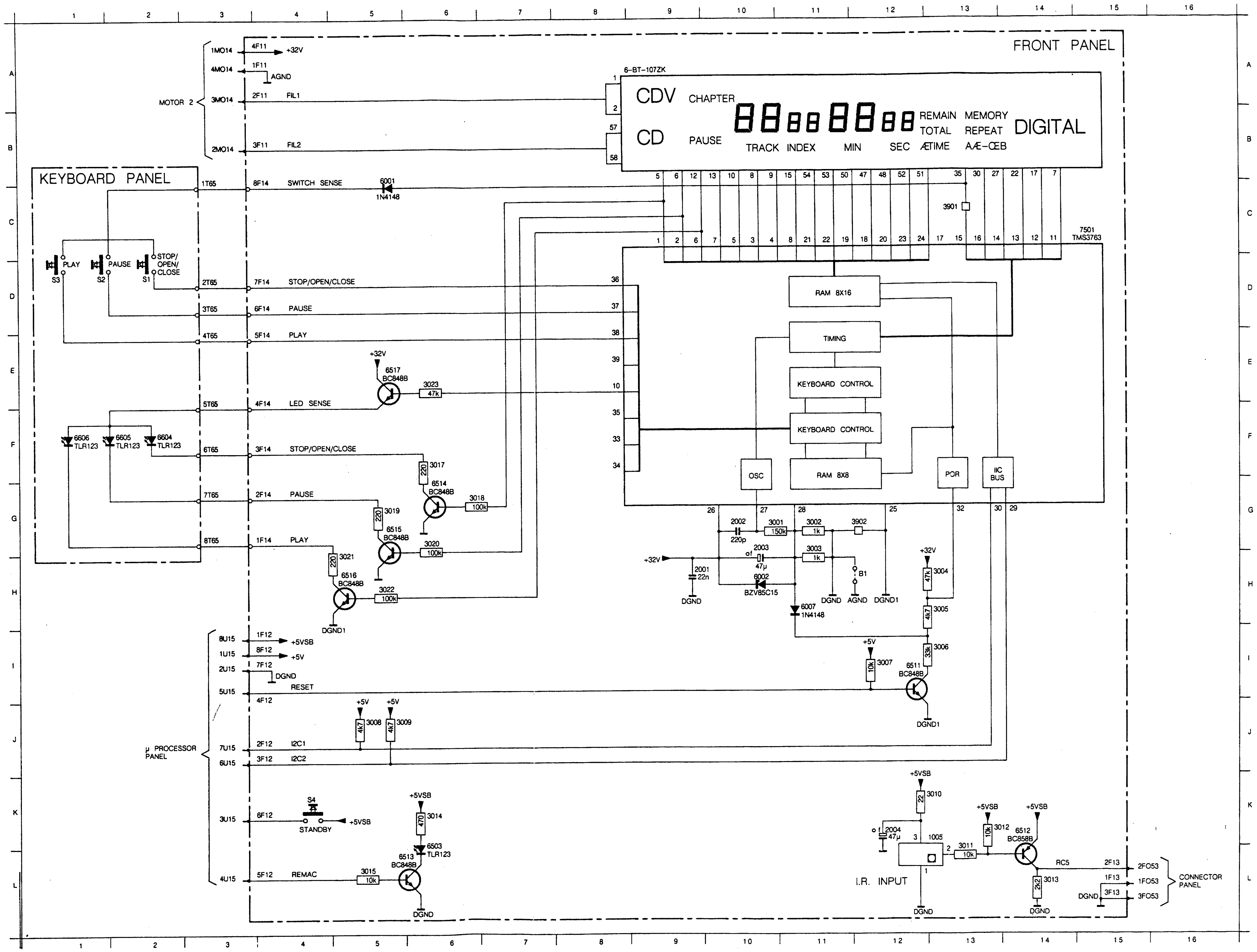
CIRCUIT DIAGRAM µPROCESSOR





	2010	A 5
	2011	C18
	2012	A14
	2013	I 25
	2014	E31
	2015	D12
A	2018	I 22
	2019	O23
	2020	O23
	2021	C29
	2022	B23
	2024	E29
	2025	C27
	2030	A 6
	2031	F 8
B	2901	J 5
	3003	G 8
	3004	N23
	3005	H23
	3006	J27
	3007	J28
	3008	J28
	3010	D10
	3011	D10
	3012	D10
C	3013	D 9
	3014	D 9
	3015	D 9
	3016	D 9
	3017	D 9
	3020	L21
	3022	H23
	3029	I 30
	3901	J 4
D	3902	A 3
	3910	E 2
	3911	E 3
	3912	E 3
	5001	N23
	6101	G 8
	6901	J 6
	6902	J 7
	6903	A 2
E	6904	E 3
	6905	E 3
	7001	B 4
	7002	D11
	7003	B12
	7004	C17
	7005	B22
	7006	J22
	7007	E29
	7008	F30
F	7009	D28
	7009	D29
	7009	E28
	7009	E27
	7010	J 5
	7010	O29
	7010	D27
	7010	D31
	7010	O29
G	C16	I 6
	C17	I 7
	X1	H 6

CIRCUIT DIAGRAM FRONT AND KEYBOARD



1005	K13
2001	H10
2002	G10
2003	G10
2004	K12
3001	G10
3002	G11
3003	G11
3004	H13
3005	H13
3006	I 13
3007	I 12
3008	J 5
3009	J 6
3010	K13
3011	L13
3012	K14
3013	L14
3014	K 6
3015	L 5
3017	F 6
3018	G 6
3019	G 5
3020	G 6
3021	H 5
3022	H 5
3023	E 6
3901	C13
3902	G12
6001	B 5
6002	H10
6007	H11
6503	K 6
6511	I 12
6512	K14
6513	L 5
6514	G 6
6515	G 5
6516	H 5
6517	E 5
6604	F 2
6605	F 2
6606	F 1
7501	C15

PRS 03162
T-10 745
CDV475

PARTSLIST

µp panel

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	5322 122 32143	22PF 100V
	4822 122 31069	39PF 2% 100V

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3005	4822 100 10874	TRIMMING POTMETER 1K LIN 20%

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5001	4822 157 51316	LAL04T121K
	4822 242 71845	X-TAL 12 MHZ

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	4822 130 30621	1N4148

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7001	4822 209 72411	MAB8032AH-12P
7002	5322 209 81648	SN74LS373N (MTLA)
7003	4822 209 73715	UPD27128D CDV475
7003	4822 209 73714	UPD27128D CDV475/95
7003	4822 209 73717	UPD27128D CV55
7003	4822 209 73716	UPD27128D CDV988
7004	4822 209 72028	8155
7005	4822 209 72409	MN1297Z
7006	4822 209 71277	PD0011
7007	5322 209 81521	N74LS157N
7008	5322 209 81521	N74LS157N
7009	5322 209 85311	SN74LS32N (MTLA)
7010	5322 209 81625	N74LS04N
7011	4822 130 44197	TRANS BC558B

FRONT PANEL

▶|

	4822 130 30621	1N4148
	4822 130 33732	BZV85-C15
	5322 130 34957	TLR123

⊗

	5322 130 41982	BC848B
	5322 130 41983	BC858B

▤

7501	4822 209 73149	IC TMS3763CNL
217	4822 130 90495	DISPLAY 6-BT-1072K

KEY BOARD PANEL 3104 108 59280

Various

S1	4822 276 11276	SWITCH PLAY
S2	4822 276 11276	SWITCH PAUSE
S3	4822 276 11276	SWITCH STOP

▶|

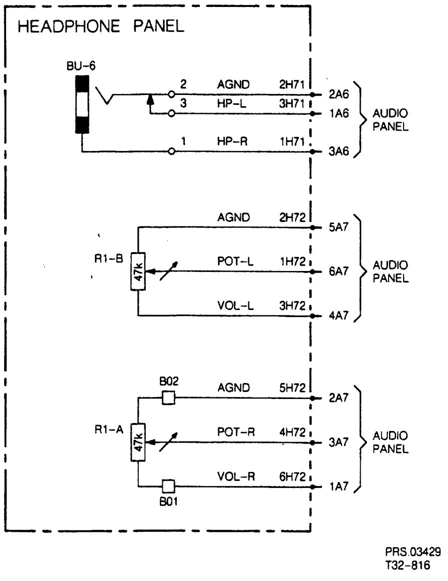
6604	5322 130 34957	TLR123
6605	5322 130 34957	TLR123
6606	5322 130 34957	TLR123

HEADPHONE PANEL 3104 10859280

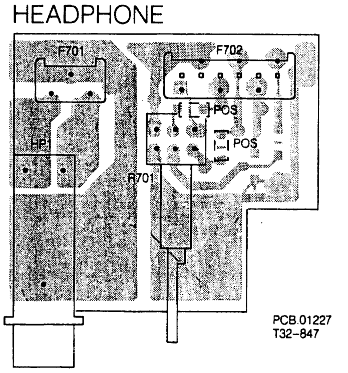
Various

3701	4822 102 10388	POTENTIOMETER
B-6	4822 267 40661	HEADPHONE CONNECTOR

HEADPHONE PANEL

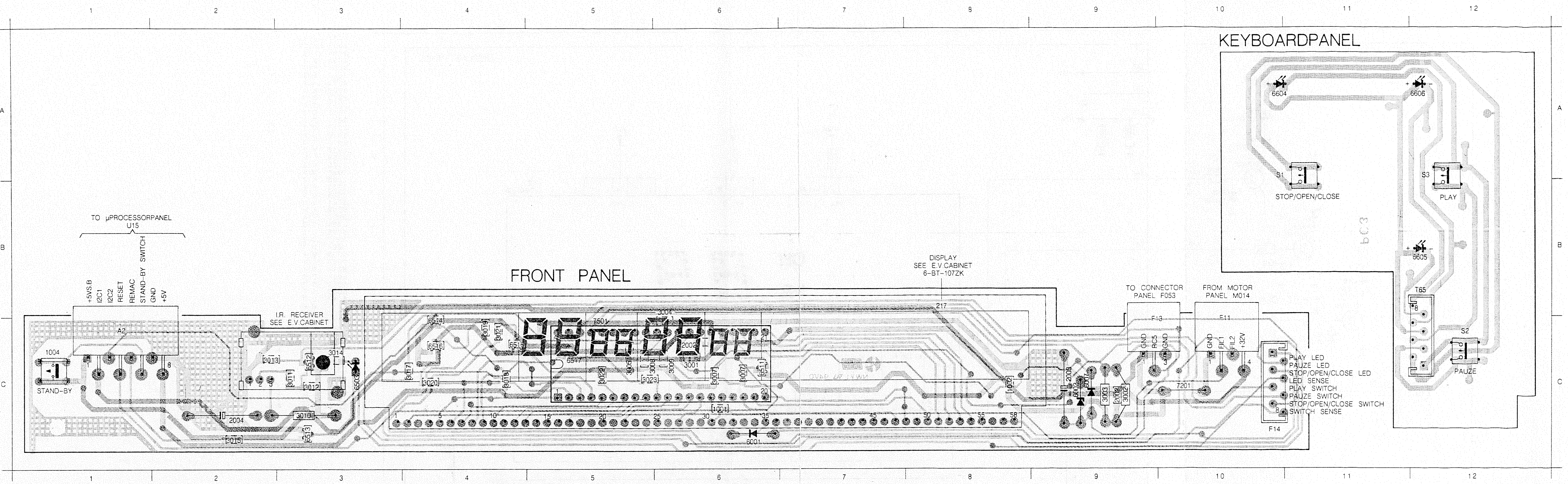


PRS.03429
T32-816

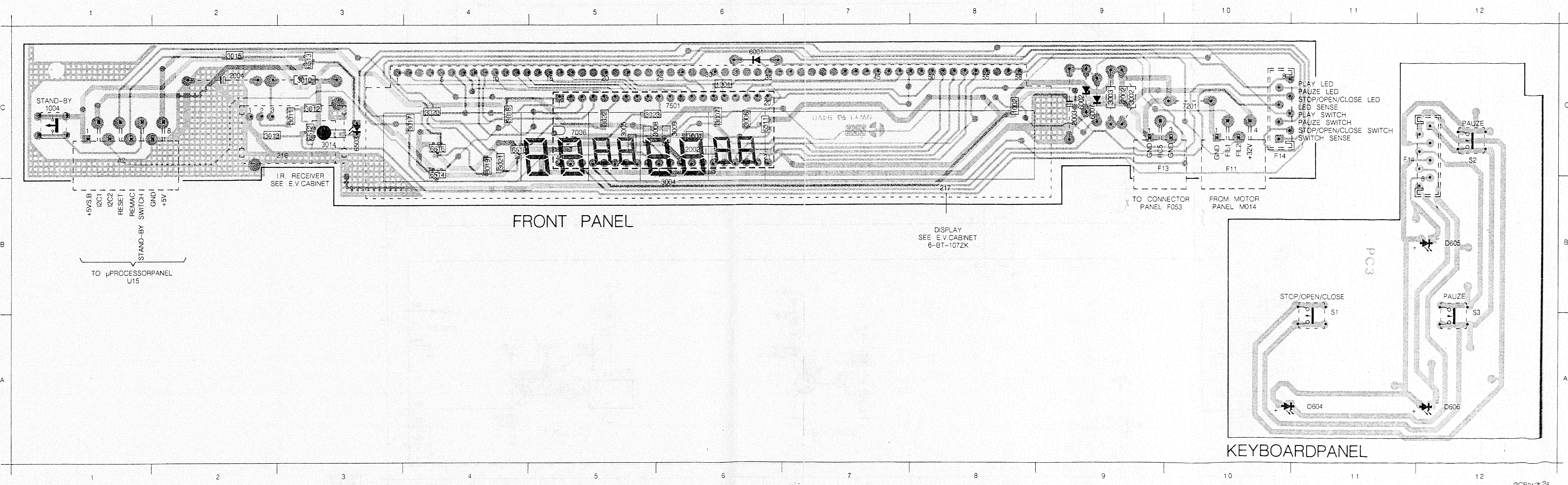


PRINT LAY-OUT FRONT AND KEYBOARD

1001 C 6	1004 C 1	2002 C 9	2004 C 2	217 B 8	3002 C 9	3004 B 6	3007 C 6	3008 C 5	3010 C 3	3012 C 3	3014 C 3	3017 C 4	3019 C 4	3021 C 4	3023 C 5	6002 C 9	6503 C 3	6512 C 3	6514 C 4	6516 C 4	6604 A10	6606 A12	7501 C 5	F11 C10	F14 C10	S2 C12	T65 B12
1002 C 8	2002 C 6	2003 C 9	216 C 3	3001 C 6	3003 C 9	3005 C 5	3007 C 6	3009 C 6	3011 C 3	3013 C 2	3015 C 2	3018 C 4	3020 C 4	3022 C 5	6001 C 6	6007 C 9	6511 C 6	6513 C 3	6516 C 4	6517 C 5	6605 B12	7201 C10	A2 C 1	F13 C10	S1 A11	S3 A12	

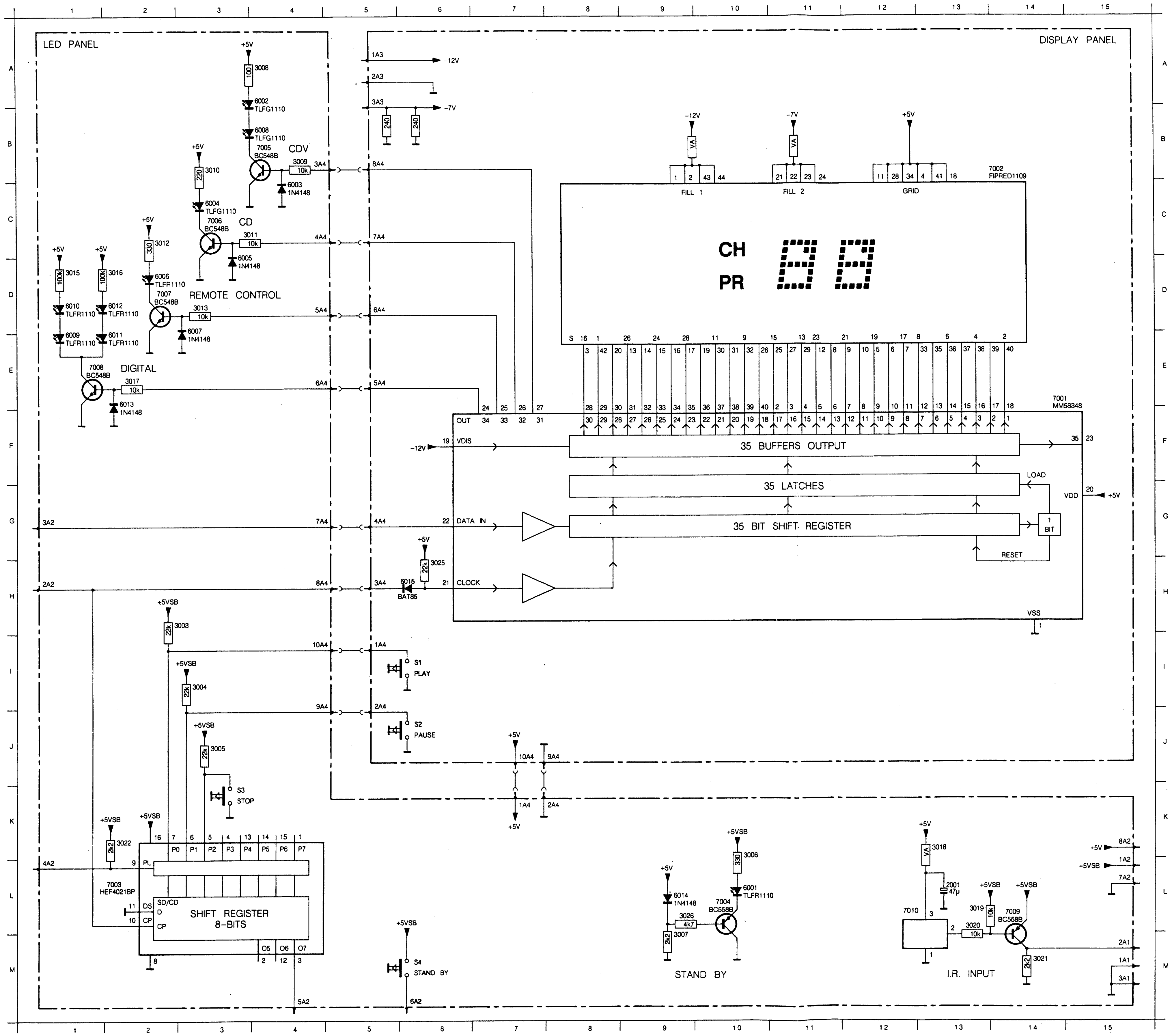


1001 C 6	1004 C 1	2002 C 9	2004 C 2	217 B 8	3002 C 9	3004 B 6	3007 C 6	3008 C 5	3010 C 3	3012 C 3	3014 C 3	3017 C 4	3019 C 4	3021 C 4	3023 C 5	6002 C 9	6503 C 3	6512 C 3	6514 C 4	6516 C 4	6604 A10	6606 A12	7501 C 5	F11 C10	F14 C10	S2 C12	T65 B12
1002 C 8	2002 C 6	2003 C 9	216 C 3	3001 C 6	3003 C 9	3005 C 5	3007 C 6	3009 C 6	3011 C 3	3013 C 2	3015 C 2	3018 C 4	3020 C 4	3022 C 5	6001 C 6	6007 C 9	6511 C 6	6513 C 3	6516 C 4	6517 C 5	6605 B12	7201 C10	A2 C 1	F13 C10	S1 A11	S3 A12	



PCB01Z 24
T27-837

CIRCUIT DIAGRAM FRONT AND KEYBOARD CDV988

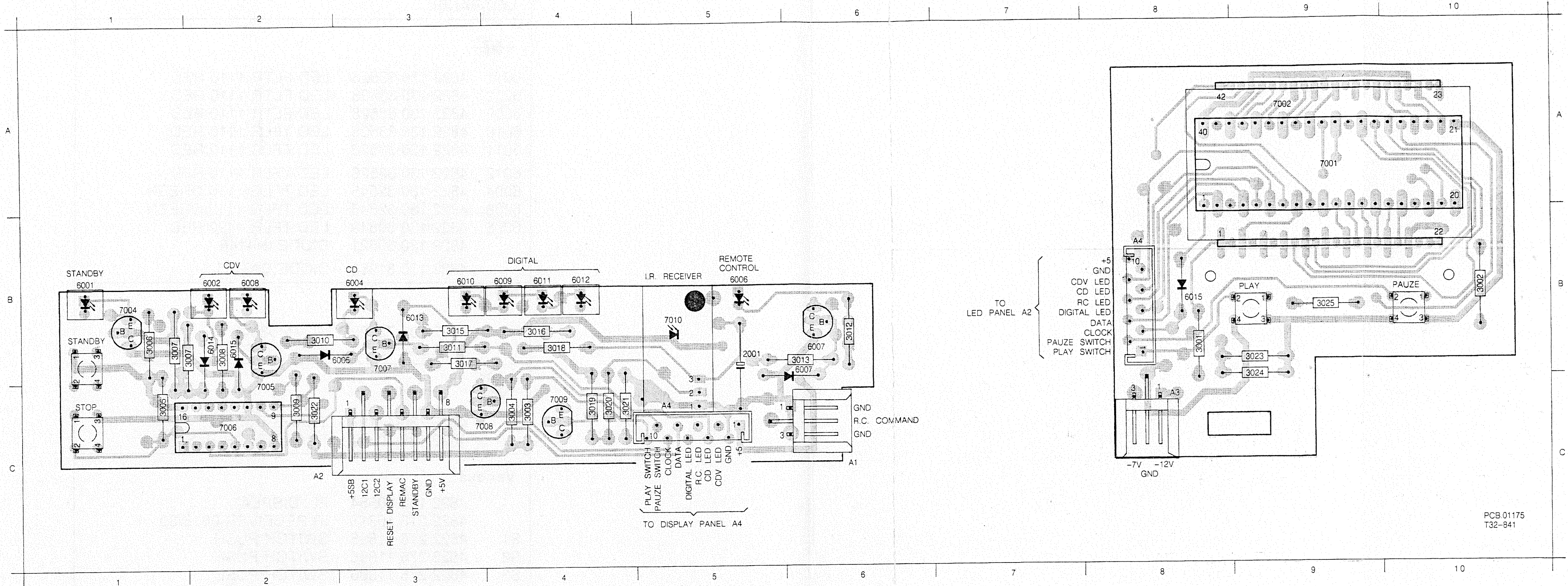


2001	L13
3003	H 3
3004	I 3
3005	J 3
3006	K10
3007	M 9
3008	A 4
3009	B 4
3010	B 3
3011	C 4
3012	C 2
3013	D 3
3015	D 1
3016	D 2
3017	E 2
3018	K13
3019	L13
3020	L13
3021	M14
3022	K 2
3025	H 6
3026	L 9
6001	L10
6002	A 4
6003	C 4
6004	C 3
6005	C 3
6006	D 2
6007	D 3
6008	B 4
6009	E 1
6010	D 1
6011	E 2
6012	D 2
6013	E 2
6014	L 9
6015	H 6
7001	E14
7002	B14
7003	L 2
7004	L10
7005	B 4
7006	C 3
7007	D 2
7008	E 1
7009	L14
7010	L12
S1	I 6
S2	J 6
S3	K 3
S4	M 6

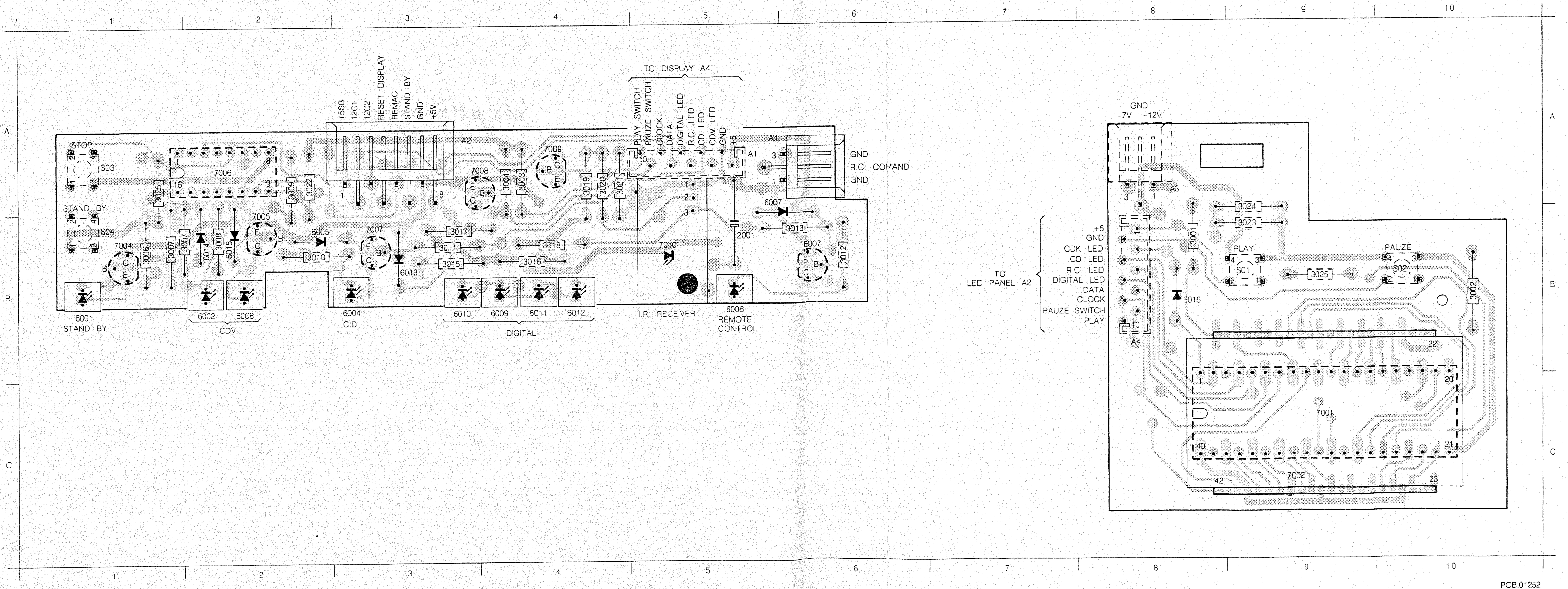
PRS.05093
T-08 819

PRINT LAY-OUT FRONT AND KEYBOARD CDV988

2001 B 5	3003 C 4	3006 B 1	3008 B 2	3011 B 3	3015 B 3	3018 B 4	3021 C 4	3024 C 9	6002 B 2	6006 B 5	6008 B 2	6011 B 4	6014 B 2	7001 A 9	7005 C 2	7008 C 3	A1 C 6	A4 C 5
3001 B 8	3004 C 4	3007 B 2	3009 C 2	3012 B 6	3016 B 4	3019 C 4	3022 C 2	3025 B 9	6004 B 3	6007 B 6	6009 B 4	6012 B 4	6015 B 2	7002 A 9	7006 C 2	7009 C 4	A2 C 2	A4 B 8
3002 B10	3005 C 1	3007 B 1	3010 B 2	3013 B 6	3017 B 3	3020 C 4	3023 B 9	6001 B 1	6005 B 3	6007 B 6	6010 B 3	6013 B 3	6015 B 8	7004 B 1	7007 B 3	7010 B 5	A3 C 8	



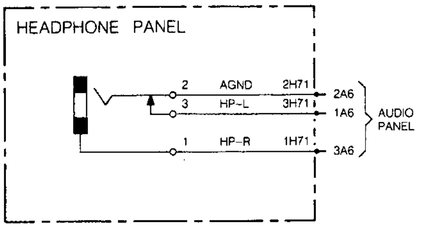
2001 B 5	3003 C 4	3006 B 1	3008 B 2	3011 B 3	3015 B 3	3018 B 4	3021 C 4	3024 B 9	6002 B 2	6006 B 5	6008 B 2	6011 B 4	6014 B 2	7001 A 9	7005 B 2	7008 C 3	A1 C 6	A4 B 8	S02 B10
3001 B 8	3004 C 4	3007 B 2	3009 C 2	3012 B 6	3016 B 4	3019 C 4	3022 C 2	3025 B 9	6004 B 3	6007 C 5	6009 B 4	6012 B 4	6015 B 8	7002 A 9	7006 C 2	7009 C 4	A2 C 3	A4 C 5	S03 C 1
3002 B10	3005 C 1	3007 B 1	3010 B 2	3013 B 6	3017 B 3	3020 C 4	3023 B 9	6001 B 1	6005 B 2	6007 B 6	6010 B 3	6013 B 3	6015 B 2	7004 B 1	7007 B 3	7010 B 5	A3 C 8	S01 B 9	S04 B 1



PARTSLIST

LED PANEL		
6001	4822 130 33528	LED FLTR 1110 RED
6002	4822 130 33528	LED FLTR 1110 RED
6009	4822 130 33528	LED FLTR 1110 RED
6010	4822 130 33528	LED TFLR 1110 RED
6011	4822 130 33528	LED TFLR 1110 RED
6012	4822 130 33528	LED TFLR 1110 RED
6004	4822 130 32545	LED TFLG 1110 GREEN
6008	4822 130 32545	LED TFLG 1110 GREEN
6006	4822 130 80849	LED TFLR 4499 RED
	4822 130 30621	DIODE IN4148
	4822 130 31983	DIODE BAT 85
	4822 209 72122	IC MM58348
	4822 209 72423	IC MC14021BCP
	4822 130 44197	TRANS BC558B
	4822 130 40937	TRANSISTOR BC548B
Various		
	4822 130 90554	FL. DISPLAY
	4822 218 10213	IR.RECEIVER 0816/30
S1	4822 276 11896	SWITCH PUSH
S2	4822 276 11896	SWITCH PUSH
S3	4822 276 11896	SWITCH PUSH
S4	4822 276 11896	SWITCH PUSH

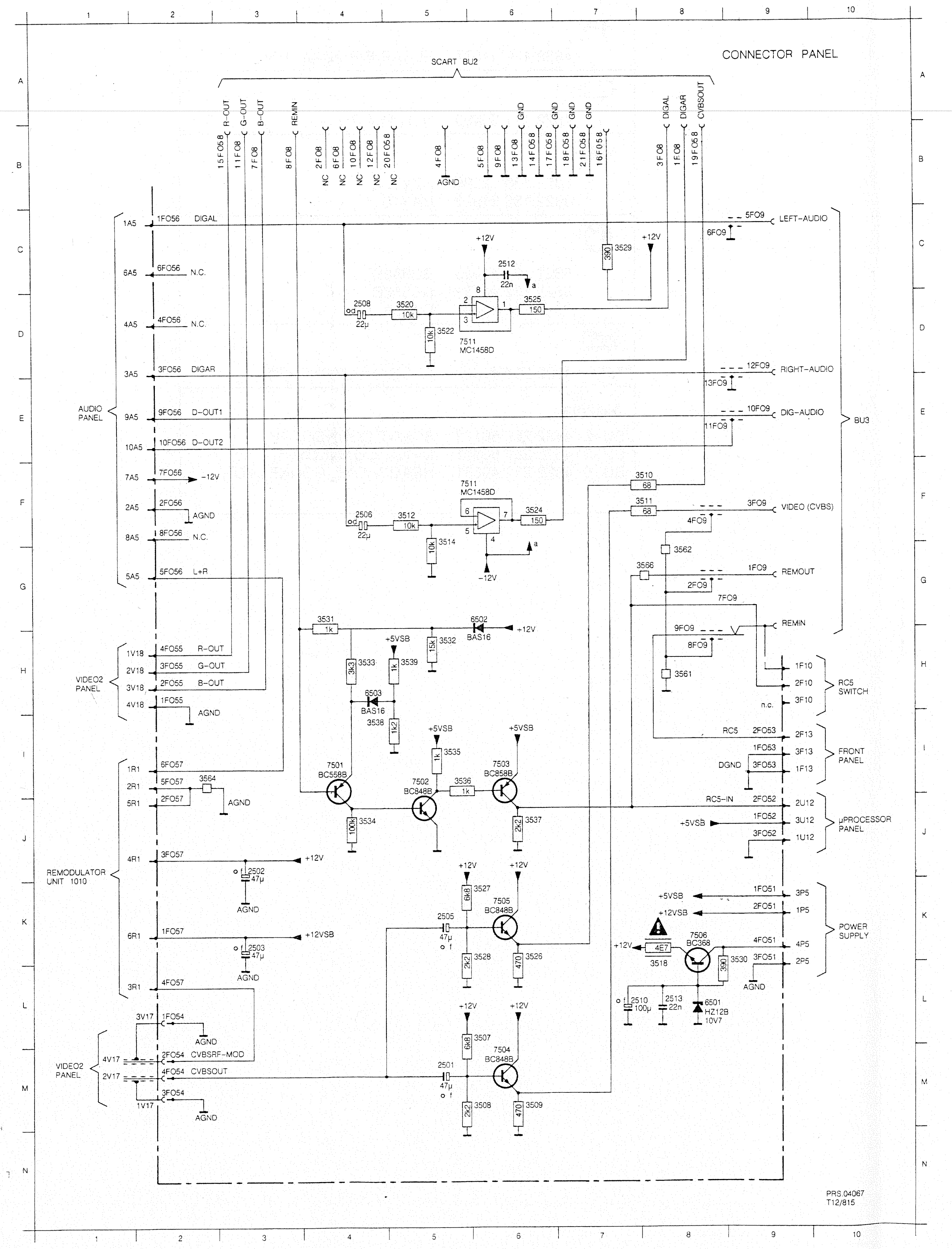
HEADPHONE PANEL



PRS 04066
T12-816

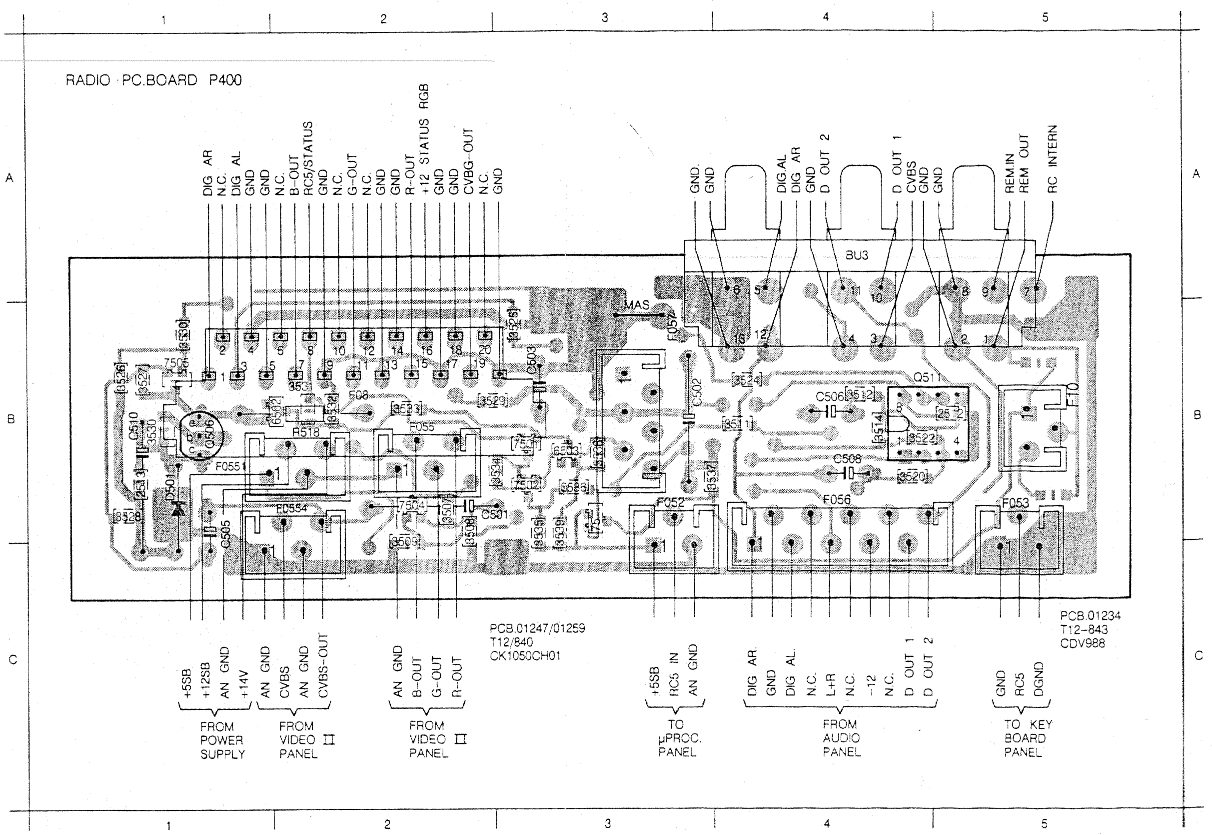
CIRCUIT DIAGRAM CONNECTOR PANEL CDV988

2501	M 5	2508	D 4	3508	M 6	3514	F 5	3525	D 6	3530	K 9	3535	I 5	3561	H 8	6502	G 6	7504	M 6
2502	J 3	2510	L 8	3509	M 6	3518	L 8	3526	K 6	3531	G 4	3536	I 5	3562	G 8	6503	H 4	7505	K 6
2503	K 3	2512	C 6	3510	F 8	3520	D 5	3527	K 6	3532	H 5	3537	J 6	3564	I 2	7501	I 4	7506	K 8
2505	K 5	2513	L 8	3511	F 8	3522	D 5	3528	K 6	3533	H 4	3538	I 4	3566	G 8	7502	I 5	7511	F 6
2506	F 4	3507	L 6	3512	F 5	3524	F 6	3529	C 7	3534	J 4	3539	H 5	6501	L 8	7503	I 6	7511	D 6

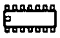


PRINT LAY-OUT

2512	B 5	3512	B 4	3526	B 1	3531	B 2	3537	B 3	7501	B 3	C502	B 3	D501	B 1	F056	B 4	Q511	B 4
2513	B 1	3514	B 4	3527	B 1	3532	B 2	3538	B 3	7502	B 3	C503	B 3	F052	B 3	F057	B 3	R518	B 2
3507	B 2	3520	B 4	3528	B 1	3533	B 2	3539	B 3	7504	B 2	C505	B 1	F053	B 5	F08	B 2		
3508	B 2	3522	B 4	3529	B 3	3534	B 3	6502	B 2	7505	B 1	C506	B 4	F055	B 2	F10	B 5		
3509	B 2	3524	B 4	3530	B 1	3535	B 3	6503	B 3	BU3	A 4	C508	B 4	F0551	B 1	MAS	B 3		
3511	B 4	3525	B 3	3530	B 1	3536	B 3	75	B 3	C501	B 3	C510	B 1	F0554	B 2	Q506	B 1		

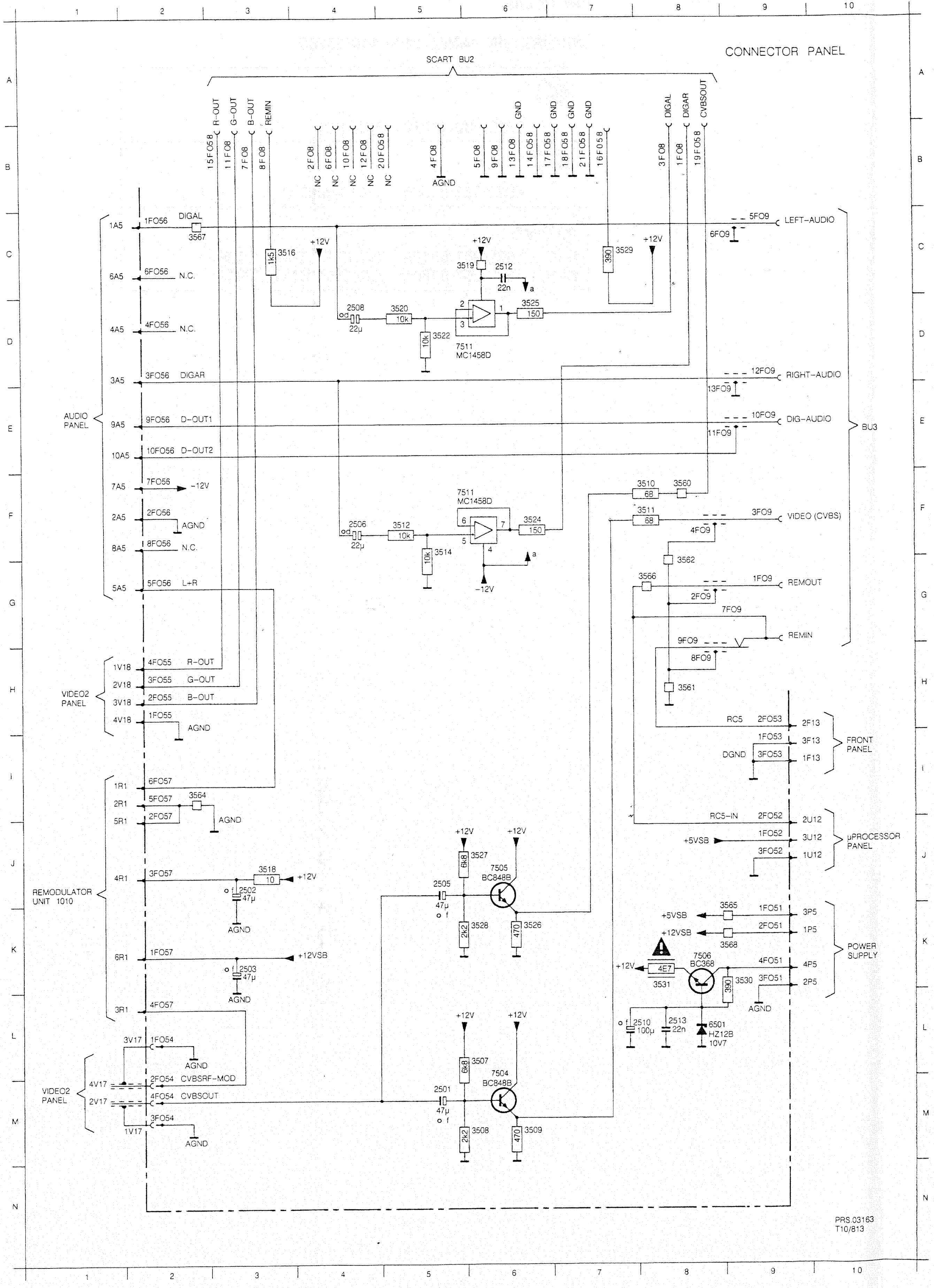


PARTSLIST
CONNECTOR PANEL 3104 108 61220

		
	4822 124 41557	ELCAP BIP.220µF 10V
		
	4822 111 30499	NFR 4E7 5%
		
	5322 130 32026	HZ12B2
	5322 130 31928	BAS16
		
	5322 130 41983	BC858B
	5322 130 41982	BC848B
	5322 130 44647	BC368
		
7511	4822 209 81349	IC OPAMP MC1458P1
Various		
BU-2	4822 267 60172	SCART CONNECTOR
BU-3	4822 267 50801	CINCH CONNECTOR
BU-6	4822 267 40661	HEADPHONE CONNECTOR

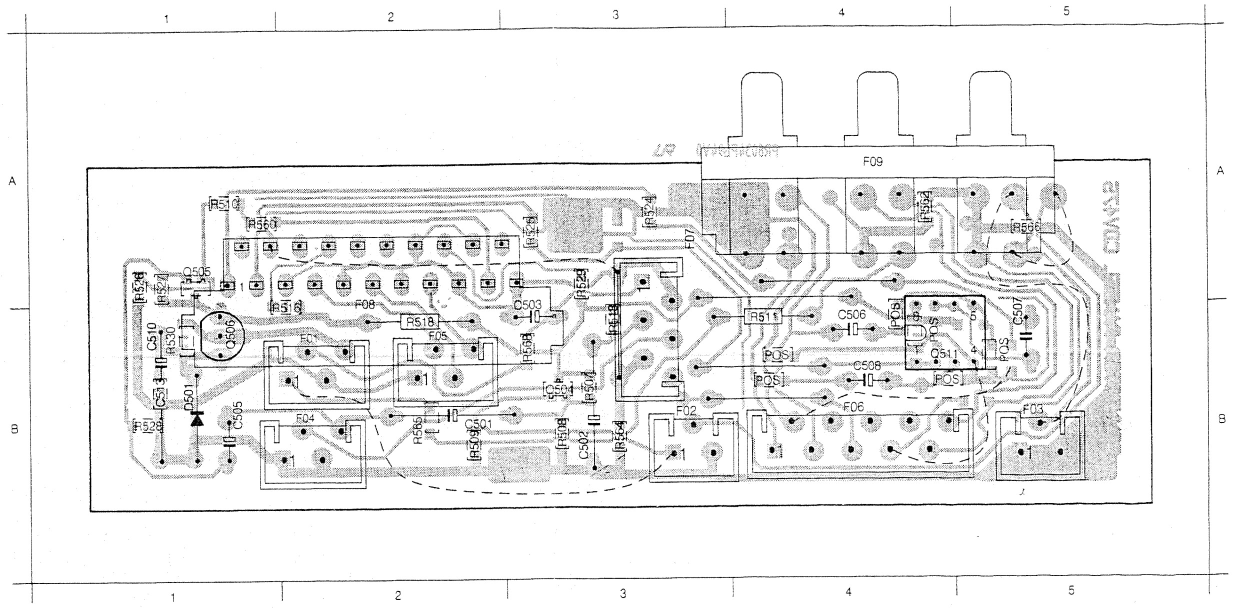
CIRCUIT DIAGRAM CONNECTOR PANEL

2501	M 5	2506	F 4	2513	L 8	3510	F 8	3516	C 3	3522	D 5	3527	J 6	3531	K 8	3564	I 2	3568	K 9	7506	K 8
2502	J 3	2508	D 4	3507	L 6	3511	F 8	3518	J 3	3524	F 6	3528	K 6	3560	F 8	3565	K 9	6501	L 8	7511	F 6
2503	K 3	2510	L 8	3508	M 6	3512	F 5	3519	C 6	3525	D 6	3529	C 7	3561	H 8	3566	G 8	7504	L 6	7511	D 6
2505	J 5	2512	C 6	3509	M 6	3514	F 5	3520	D 5	3526	K 6	3530	K 9	3562	G 8	3567	C 2	7505	J 6		

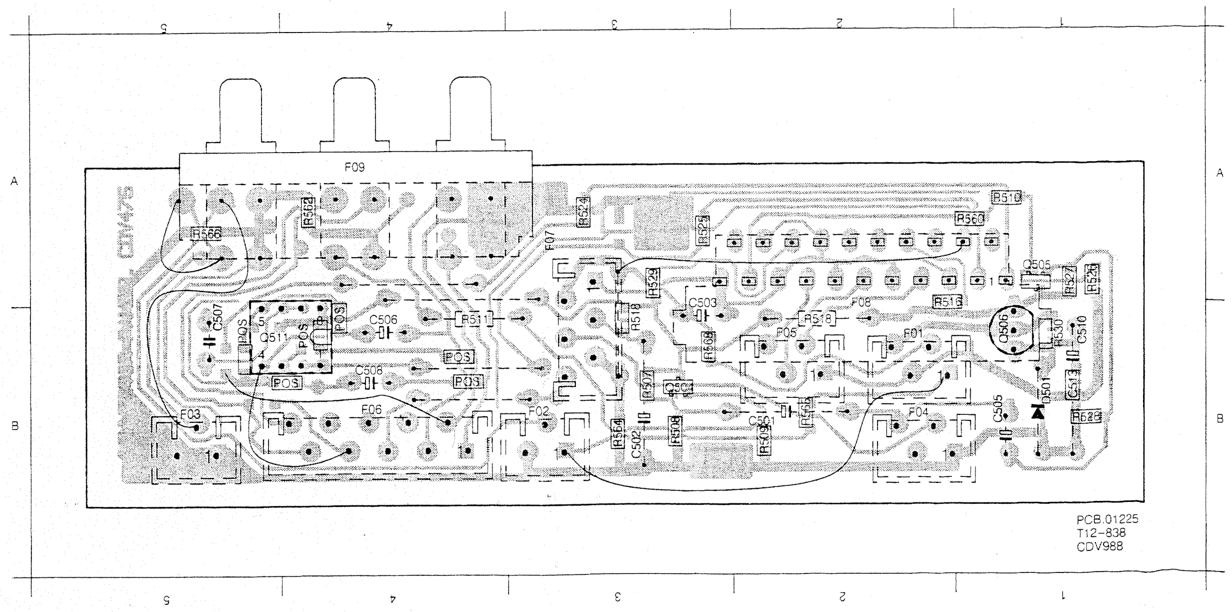


PRINT LAY-OUT

C501	B 2	C507	B 5	F01	B 2	F06	B 4	POS	B 4	Q504	B 3	R508	B 3	R518	B 2	R527	A 1	R562	A 4
C502	B 3	C508	B 4	F02	B 3	F07	A 3	POS	B 5	Q505	A 1	R509	B 2	R518	B 3	R528	B 1	R564	B 3
C503	B 3	C510	B 1	F03	B 5	F08	A 2	POS	B 4	Q506	B 1	R510	A 1	R524	A 3	R529	A 3	R565	B 2
C505	B 1	C513	B 1	F04	B 2	F09	A 4	POS	B 4	Q511	B 4	R511	B 4	R525	A 3	R530	B 1	R566	A 5
C506	B 4	D501	B 1	F05	B 2	POS	B 4	POS	B 4	R507	B 3	R516	B 2	R526	A 1	R560	A 1	R568	B 3



C501	B 2	C507	B 5	F01	B 2	F06	B 4	POS	B 4	Q504	B 3	R508	B 3	R518	B 2	R527	A 1	R562	A 4
C502	B 3	C508	B 4	F02	B 3	F07	A 3	POS	B 5	Q505	A 1	R509	B 2	R518	B 3	R528	B 1	R564	B 3
C503	B 3	C510	B 1	F03	B 5	F08	A 2	POS	B 4	Q506	B 1	R510	A 1	R524	A 3	R529	A 3	R565	B 2
C505	B 1	C513	B 1	F04	B 2	F09	A 4	POS	B 4	Q511	B 4	R511	B 4	R525	A 3	R530	B 1	R566	A 5
C506	B 4	D501	B 1	F05	B 2	POS	B 4	POS	B 4	R507	B 3	R516	B 2	R526	A 1	R560	A 1	R568	B 3

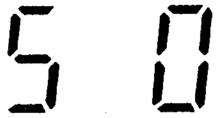


PARTS LIST

CONNECTOR PANEL 3104 108 59280

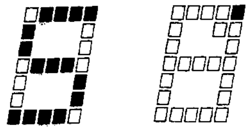
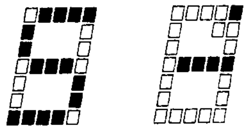
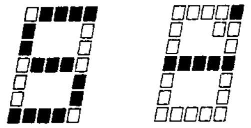
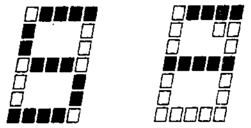
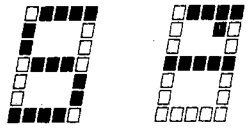
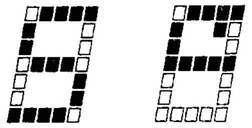
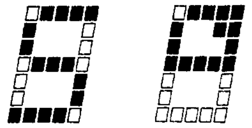
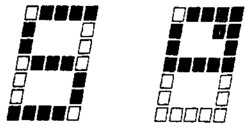
	5322 130 41982	BC848B
	4822 209 81349	MC 1458D
Various		
B-2	4822 267 60172	SCART CONNECTOR
B-3	4822 267 50801	CINCH CONNECTOR

SERVICE ROUTINES

STEP	ON DISPLAY	REMARKS
1	STAND-BY LED ON	PUSH THE BUTTONS STOP/OPEN/CLOSE AND PAUSE TOGETHER AND KEEP THEM PRESSED UNTIL STEP 3
2	STAND-BY LED OUT 5 FROM "SERVICE" APPEARS	PUSH THE BUTTON POWER ON/STAND-BY
3		LOAD A DISC
4		PUSH THE PLAY BUTTON
5		LEAD IN AREA REACHED
6		FOCUS POINT FOUND
7		RADIAL TRACKING ACTIVE
8		TURNTABLE MOTOR IN PHASE LOCK
9		O.P.U. STEP CONTROL ACTIVE
10		O.P.U. CONTROL ACTIVE
11		SUBCODE READING ACTIVE (CD,CDV-SINGLE) MANCHESTER CODE READING ACTIVE (L.V.-DISC)

MDA.01574
T07-838

SERVICE ROUTINES **CDV988**

STEP	ON DISPLAY	REMARKS
1	STANDBY LED ON	PUSH THE BUTTONS STOP AND PAUSE TOGETHER AND KEEP THEM PRESSED UNTIL STEP 3
2	STANDBY LED OUT 	PUSH THE BUTTON STAND-BY 2X
3		LOAD A DISC
4		PUSH THE PLAY BUTTON
5		LEAD IN AREA REACHED
6		FOCUS POINT FOUND
7		RADIAL TRACKING ACTIVE
8		TURNTABLE MOTOR IN PHASE LOCK (L.V.)
9		O.P.U. STEP CONTROL ACTIVE
10		O.P.U. CONTROL ACTIVE
11		SUBCODE READING ACTIVE (CD,CDV-SINGLE) MANCHESTER CODE READING ACTIVE (L.V.-DISC)

MDA.01577
T34-840

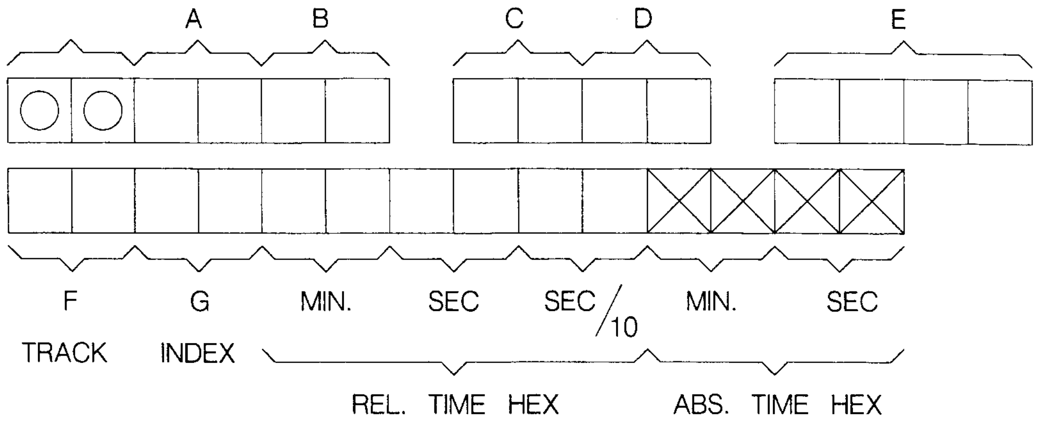
SERVICE ROUTINES

ON T.V. SCREEN

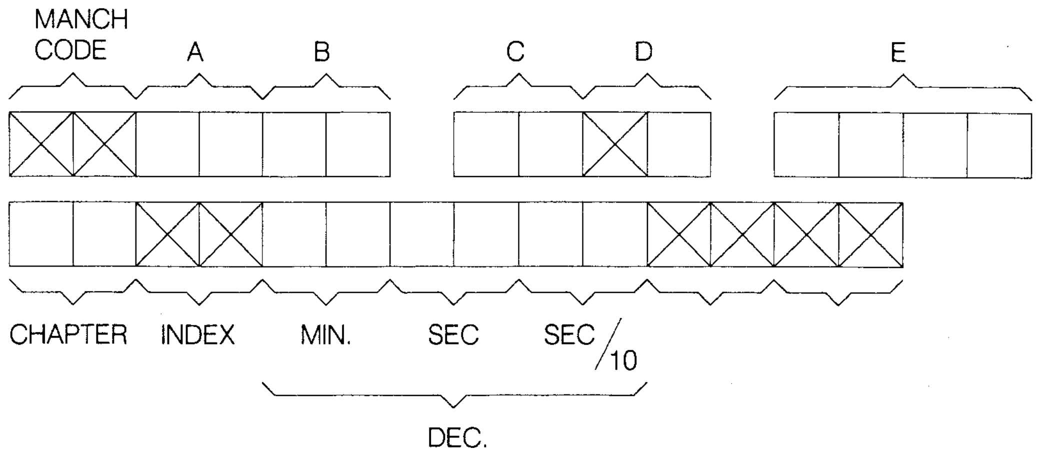
PLAY

FOR A,B,C,D AND E SEE MDA.01575

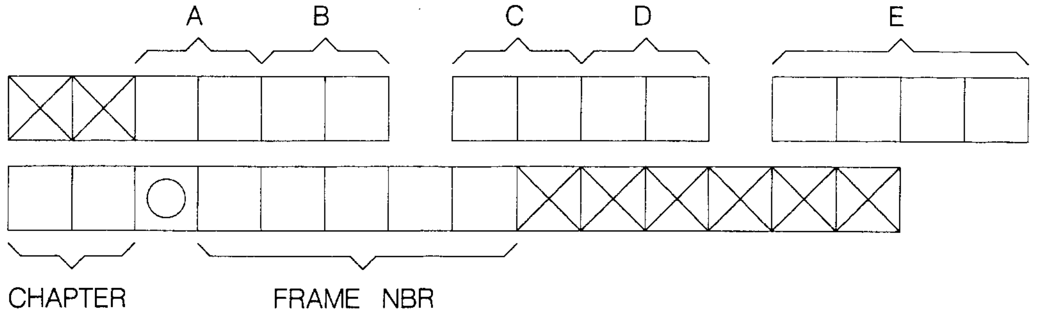
CD&
CDV
SINGLE



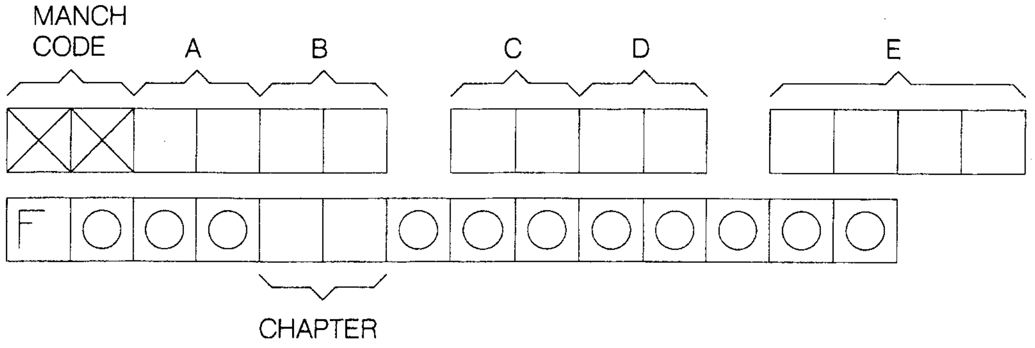
CDV
8" AND
12"



L.V.
CAV

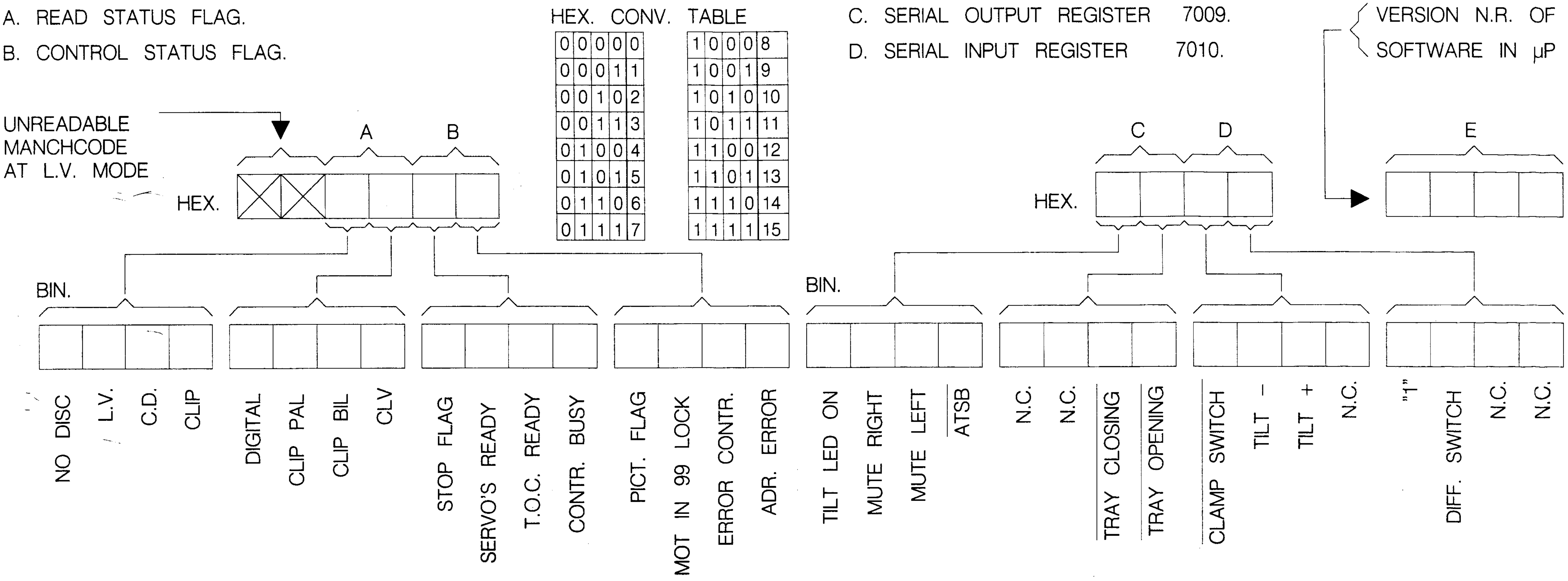


L.V.
CLV



☒ =UNREADABLE INFORMATION

MDA.01573
T07–838



A. READ STATUS FLAG.

B. CONTROL STATUS FLAG.

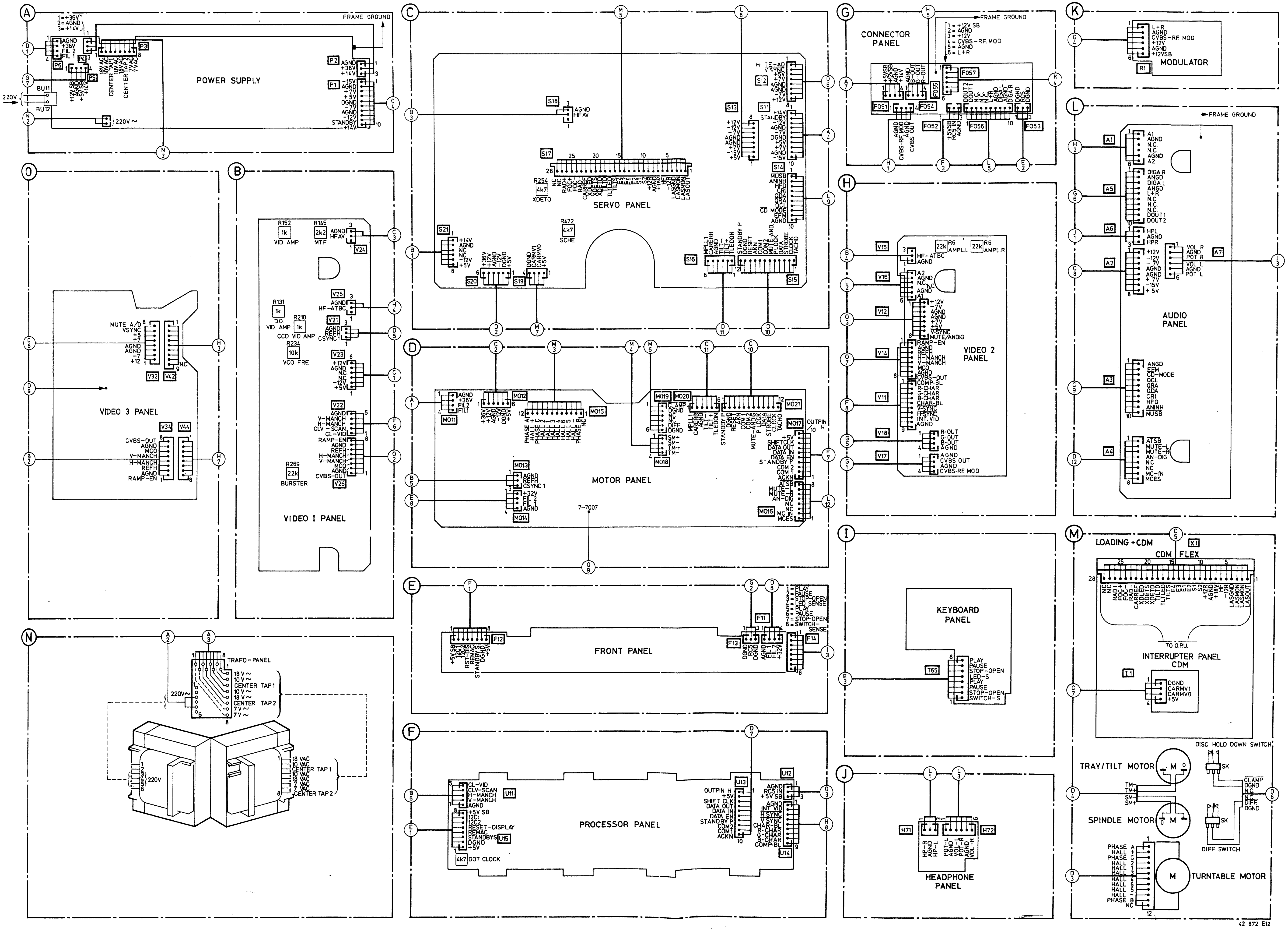
C. SERIAL OUTPUT REGISTER 7009.

D. SERIAL INPUT REGISTER 7010.

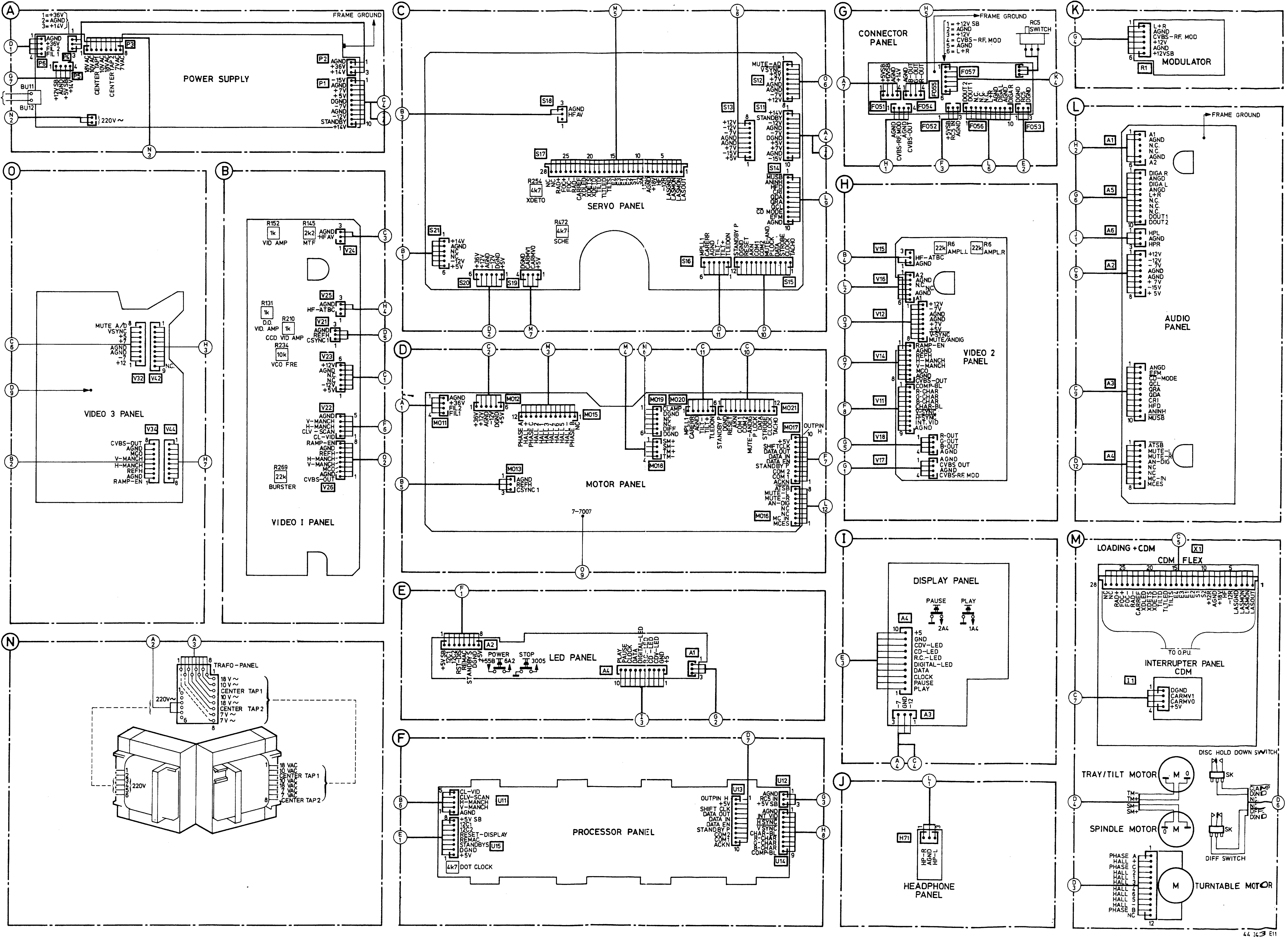
HEX. CONV. TABLE

0	0	0	0	0	1	0	0	0	8
0	0	0	1	1	1	0	0	1	9
0	0	1	0	2	1	0	1	0	10
0	0	1	1	3	1	0	1	1	11
0	1	0	0	4	1	1	0	0	12
0	1	0	1	5	1	1	0	1	13
0	1	1	0	6	1	1	1	0	14
0	1	1	1	7	1	1	1	1	15

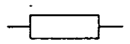
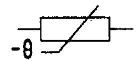
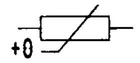
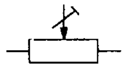
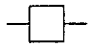
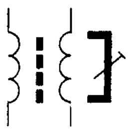
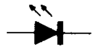
WIRING DIAGRAM

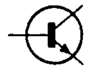
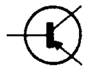
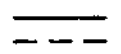
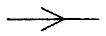
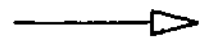
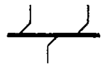
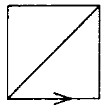
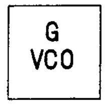
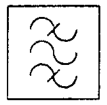
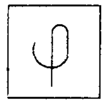
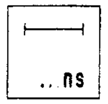
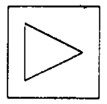


WIRING DIAGRAM CDV988



16. SYMBOLS/CHIPCOMPONENTS

SYMBOL	DESCRIPTION
	Capacitor, general
	Electrolytic capacitor (+ and - may be omitted)
	Bipolar electrolytic capacitor (+ may be omitted)
	Resistor, general
	N.T.C. resistor
	P.T.C. resistor
	Voltage divider with preset adjustment
	Chip jumper
	Pin contact
	Bus contact
	Coil, self-induction
	Transformer with electrically poor conducting core and adjustable pre-magnetization
	Diode
	Zener diode
	Stabistor
	Double variable capacity diode (in one envelope)
	Photo conductive diode
	L.E.D.

SYMBOL	DESCRIPTION
	Transistor (N.P.N.)
	Transistor (P.N.P.)
	Direct current (DC)
	Alternating current (AC)
	Earth (functional)
	Frame or chassis connection
	Direction in which AC voltages are passed on (optional present)
	Interrupted line
	Not-connected crossing lines
	Connected lines
	Cable tree with lead-outs
	Changer, general (arrow is optional)
 G VCO	Voltage Controlled Oscillator
	Band-pass filter
	Phase changing network
 ..ns	Delay element
	Amplifier, general

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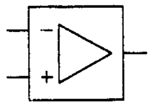
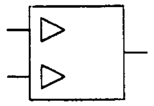
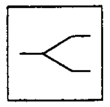
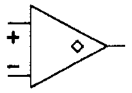
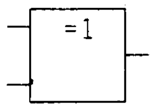
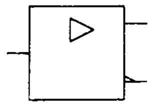
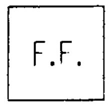
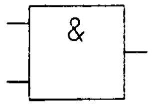
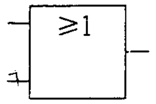
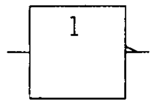
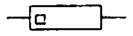
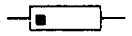
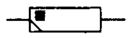
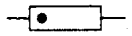
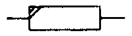
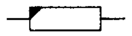
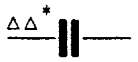
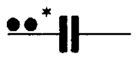
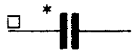
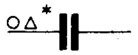
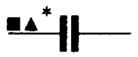
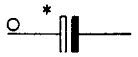
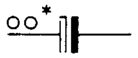
SYMBOL	DESCRIPTION
	Operational amplifier
	Differential amplifier
	Splitter
	Operational amplifier with open output
 =1	Exclusive OR gate
	True/complement amplifier with high input
 F.F.	Flip Flop
 &	AND gate
 ≥1	OR gate
 1	Inverter with high input

	0.2W (CR 16)	≤ 220kΩ > 270kΩ	5% 10%
	0.33W (CR 25)	≤ 1 MΩ > 1 MΩ	5% 10%
	0.33W (SFR25)		5%
	0.25W (VR 25)	≤ 10MΩ > 10MΩ	5% 10%
	0.5W (CR 37)	≤ 1 MΩ > 1 MΩ	5% 10%
	0.67W (CR 52)		5%
	1.15W (CR 68)		5%

	Ceramic plate
	Polyester flat foil
	Polyester mepolesco
	Mylar (Polyester flat foil small sized)
	Micropoco
	Tubular ceramic (body colour pink or yellow/green)
	Miniature single elco
	Subminiature tantalum

*
a = 2.5 V
b = 4 V
c = 6.3 V
d = 10 V
e = 16 V
f = 25 V
g = 40 V
h = 63 V
i = 100 V
j = 125 V
l = 125 V
m = 150 V
n = 160 V
q = 200 V
r = 250 V
s = 300 V
t = 350 V
u = 400 V
v = 500 V
w = 630 V
x = 1000 V
A = 1.6 V
B = 6 V
C = 12 V
D = 15 V
E = 20 V
F = 35 V
G = 50 V
H = 75 V
I = 80 V

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1 pF	5%	4822 122 32479
1,2 pF	5%	4822 122 33013
1,5 pF	5%	4822 122 31792
1,8 pF	5%	4822 122 32087
2,2 pF	5%	4822 122 32425
3,3 pF	5%	4822 122 32079
3,9 pF	5%	4822 122 32081
4,7 pF	5%	4822 122 32082
5,6 pF	5%	4822 122 32506
6,8 pF	5%	4822 122 32507
8,2 pF	5%	4822 122 32083
10 pF	5%	4822 122 31971
12 pF	5%	4822 122 32139
15 pF	5%	4822 122 32504
18 pF	5%	4822 122 31769
22 pF	10%	4822 122 31837
27 pF	5%	4822 122 31966
33 pF	5%	4822 122 31756
39 pF	5%	4822 122 31972
47 pF	5%	4822 122 31772
56 pF	5%	4822 122 31774
68 pF	5%	4822 122 31961
82 pF	10%	4822 122 31839
100 pF	5%	4822 122 31765
120 pF	5%	4822 122 31766
150 pF	5%	4822 122 31767
180 pF	2%	4822 122 31794
220 pF	5%	4822 122 31965
270 pF	5%	4822 122 32142
330 pF	10%	4822 122 31642
390 pF	5%	4822 122 31771
470 pF	5%	4822 122 31727
560 pF	5%	4822 122 31773
680 pF	5%	4822 122 31775
820 pF	5%	4822 122 31974
1 nF	10%	5322 122 31647
1,2 nF	5%	4822 122 31807
1,5 nF	10%	4822 122 31781
1,8 nF	10%	4822 122 32153
2,2 nF	10%	4822 122 31644
2,7 nF	10%	4822 122 31783
3,3 nF	10%	4822 122 31969
3,9 nF	10%	4822 122 32566
4,7 nF	10%	4822 122 31784
5,6 nF	10%	4822 122 31916
6,8 nF	10%	4822 122 31976
10 nF	10%	4822 122 31728
12 nF	10%	5322 122 31648
15 nF	10%	4822 122 31782
18 nF	10%	4822 122 31759
22 nF	10%	4822 122 31797
27 nF	10%	4822 122 32541
33 nF	10%	4822 122 31981
47 nF	10%	4822 122 32542
56 nF	10%	4822 122 32183
100 nF	10%	4822 122 31947
180 nF	10%	4822 122 32915
220 nF	20%	4822 122 32715

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0 E	jumper	4822 111 90163
1 E	5%	4822 111 90184
1,1 E	5%	4822 111 90377
1,2 E	5%	4822 111 90378
1,3 E	5%	4822 111 90379
1,5 E	5%	4822 111 90381
1,6 E	5%	4822 111 90382
1,8 E	5%	4822 111 90383
2 E	5%	4822 111 90384
2,2 E	5%	5322 111 90104
2,4 E	5%	4822 111 90385
2,7 E	5%	4822 111 90386
3 E	5%	4822 111 90387
3,3 E	5%	4822 111 90388
3,6 E	5%	4822 111 90389
3,9 E	5%	4822 111 90391
4,3 E	5%	4822 111 90392

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4,7 E	5%	5322 111 90376
5,1 E	5%	4822 111 90393
5,6 E	5%	4822 111 90394
6,2 E	5%	4822 111 90395
6,8 E	5%	4822 111 90254
7,5 E	5%	4822 111 90396
8,2 E	5%	4822 111 90397
9,1 E	5%	4822 111 90398
10 E	2%	5322 111 90095
11 E	2%	4822 111 90338
12 E	2%	4822 111 90341
13 E	2%	4822 111 90343
15 E	2%	4822 111 90344
16 E	2%	4822 111 90347
18 E	2%	5322 111 90139
20 E	2%	4822 111 90352
22 E	2%	4822 111 90186
24 E	2%	4822 111 90355
27 E	2%	5322 111 90105
30 E	2%	4822 111 90356
33 E	2%	4822 111 90357
36 E	2%	4822 111 90359
39 E	2%	4822 111 90361
43 E	2%	5322 116 90125
47 E	2%	4822 111 90217
51 E	2%	4822 111 90365
56 E	2%	4822 111 90239
62 E	2%	4822 111 90367
68 E	2%	4822 111 90203
75 E	2%	4822 111 90371
82 E	2%	4822 111 90124
91 E	2%	4822 111 90375
100 E	2%	5322 111 90091
110 E	2%	4822 111 90335
120 E	2%	4822 111 90339
130 E	2%	4822 111 90164
150 E	2%	5322 111 90098
160 E	2%	4822 111 90345
180 E	2%	5322 111 90242
200 E	2%	4822 111 90348
220 E	2%	4822 111 90178
240 E	2%	4822 111 90353
270 E	2%	4822 111 90154
300 E	2%	4822 111 90156
330 E	2%	5322 111 90106
360 E	1%	4822 111 90288
360 E	2%	4822 111 90358
390 E	2%	5322 111 90138
430 E	2%	4822 111 90362
470 E	2%	5322 111 90109
510 E	2%	4822 111 90245
560 E	2%	5322 111 90113
620 E	2%	4822 111 90366
680 E	2%	4822 111 90162
750 E	2%	5322 111 90306
820 E	2%	4822 111 90171
910 E	2%	4822 111 90372
1 k	2%	5322 111 90092
1,1 k	2%	4822 111 90336
1,2 k	2%	5322 111 90096
1,3 k	2%	4822 111 90244
1,5 k	2%	4822 111 90151
1,6 k	2%	5322 111 90265
1,8 k	2%	5322 111 90101
2 k	2%	4822 111 90165
2,2 k	2%	4822 111 90248
2,4 k	2%	4822 111 90289
2,7 k	2%	4822 111 90569
3 k	2%	4822 111 90198
3,3 k	2%	4822 111 90157
3,6 k	2%	5322 111 90107
3,9 k	2%	4822 111 90571
4,3 k	2%	4822 111 90167
4,7 k	2%	5322 111 90111
5,1 k	2%	5322 111 90268
5,6 k	2%	4822 111 90572
6,2 k	2%	4822 111 90545

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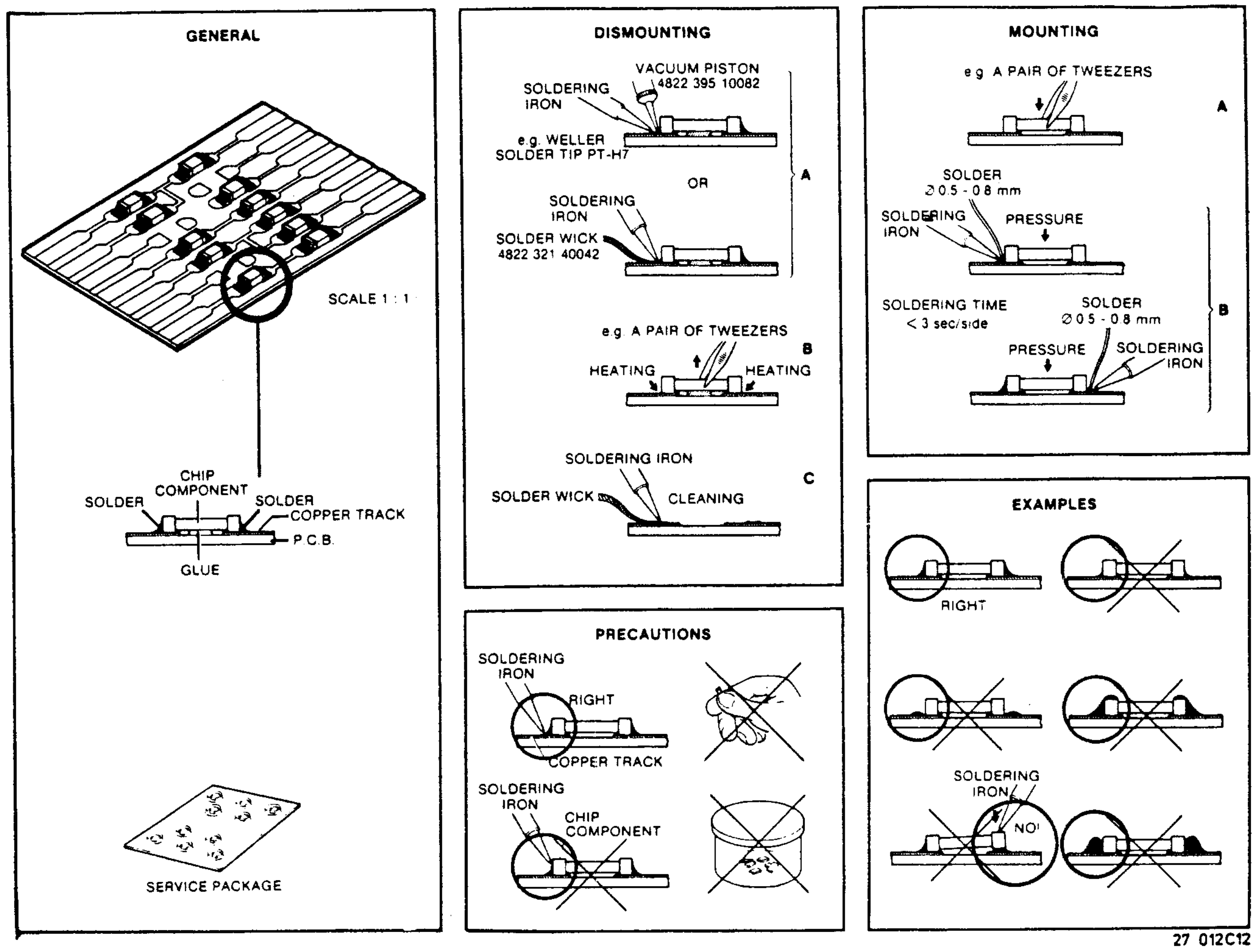
6,8 k	2%	4822 111 90544
7,5 k	2%	4822 111 90276
8,2 k	2%	5322 111 90118
9,1 k	2%	4822 111 90373
10 k	2%	4822 111 90249
11 k	2%	4822 111 90337
12 k	2%	4822 111 90253
13 k	2%	4822 111 90509
15 k	2%	4822 111 90196
16 k	2%	4822 111 90346
18 k	2%	4822 111 90238
20 k	2%	4822 111 90349
22 k	2%	4822 111 90251
24 k	2%	4822 111 90512
27 k	2%	4822 111 90542
30 k	2%	4822 111 90216
33 k	2%	5322 111 90267
36 k	2%	4822 111 90514
39 k	2%	5322 111 90108
43 k	2%	4822 111 90363
47 k	2%	4822 111 90543
51 k	2%	5322 111 90274
56 k	2%	4822 111 90573
62 k	2%	5322 111 90275
68 k	2%	4822 111 90202
75 k	2%	4822 111 90574
82 k	2%	4822 111 90575
91 k	2%	5322 111 90277
100 k	2%	4822 111 90214
110 k	2%	5322 111 90269
120 k	2%	4822 111 90568
130 k	2%	4822 111 90511
150 k	2%	5322 111 90099
160 k	2%	5322 111 90264
180 k	2%	4822 111 90565
200 k	2%	4822 111 90351
220 k	2%	4822 111 90197
240 k	2%	4822 111 90215
270 k	2%	4822 111 90302
300 k	2%	5322 111 90266
330 k	2%	4822 111 90513
360 k	2%	4822 111 90515
390 k	2%	4822 111 90182
430 k	2%	4822 111 90168
470 k	2%	4822 111 90161
510 k	2%	4822 111 90364
560 k	2%	4822 111 90169
620 k	2%	4822 111 90213
680 k	2%	4822 111 90368
750 k	2%	4822 111 90369
820 k	2%	4822 111 90205
910 k	2%	4822 111 90374
1 M	2%	4822 111 90252
1,1 M	5%	4822 111 90408
1,2 M	5%	4822 111 90409
1,3 M	5%	4822 111 90411
1,5 M	5%	4822 111 90412
1,6 M	5%	4822 111 90413
1,8 M	5%	4822 111 90414
2 M	5%	4822 111 90415
2,2 M	5%	4822 111 90185
2,4 M	5%	4822 111 90416
2,7 M	5%	4822 111 90417
3 M	5%	4822 111 90418
3,3 M	5%	4822 111 90191
3,6 M	5%	4822 111 90419
3,9 M	5%	4822 111 90421
4,3 M	5%	4822 111 90422
4,7 M	5%	4822 111 90423
5,1 M	5%	4822 111 90424
5,6 M	5%	4822 111 90425
6,2 M	5%	4822 111 90426
6,8 M	5%	4822 111 90235
7,5 M	5%	4822 111 90427
8,2 M	5%	4822 111 90237
9,1 M	5%	4822 111 90428
10M	5%	5322 111 91141

CHANGES/ADDITIONS

17. SMD MOUNTING/DEMOUNTING



ABBREVIATION

Signal	Abbreviation
SB	Available in stanbly position
ACK	Acknowldge
ACKN	
AKN	
ADC	Analogue to Digital Convertor
AGC(K)	Automatic gain control (k-factor)
AGND	Ground for the analogue ciruit
AGNDB	
ANGD	
ALE	Address Latch Enable
AMPL.L	Amplifier for the left channel
AMPL.R	Amplifier for the right channel
ANINH	Analogue output inhibited
AN-DIG	Control signal to switch between analogue digital audio
AOL	Analogue output left channel
AOR	Analogue ouput left channel
ATSB	Attenuation of the digital audio-signal in the B-chip controlled by the muP
AUDIO L&R	Audio signal left channel and right channel for the TV-set
BCK	Bit clock signal for the DAC
BRAKE	Brakepulse for the turntable-motor
BURSTER	Burst error signal
BUTDT-ER	
B-CHAR	Blue information from character generator
B-OUT	Blue information output
CARDIR	Direction control for the optical pick-up unit
CARERR	Control signal for the optical pick-up unit
CARRE	
CARMVO	Control signal pulse detector 0 (optical pick-up unit movement/direction)
CARMV1	Control signal pulse detector 1 (optical pick-up unit movement/direction)
CARREF	Start-up position indication of the optical pick-up unit
CCD	Charge couple device
CCD VID	Video charge coupled device
CD MODE	Control switch audio/video 0=audio 0=video
CDMODE	
CDVID	Compact disc video mode
CDVID MO	
CEFM	Clock signal for eight to fourteen modulation
CGC-VER	Frame sync signal from synchronization generator
CHAR-BL	Character blanking
CLAB	Clock signal from A-chip to B-chip
CLAMP	Clamp signal for loading mechanism
CLBD	Clock-signal from B-chip to DAC-IC
CLIP MODE	CDV-signal mode
CLP	
CKL	Clock-signal
CLOCK	
CLOSE	Close signal (tray mode)
CL-CID	Clipped video for manchester decoding
COM	Communication line
COM1	Communication line 1 servo muP-user muP (DATA)
COM2	Communication line 2 servo nuP-user muP (CLOCK)
CVBS DOC	Colour video blanking drop-out corrected
COMP-BL	
CRI	Counter reset inhibited signal (A-chip)
CSYNC 1	Composite synchroniztion
CSYNC1	
CSYNC.1	
CVBS	Colour video blanking synchronization
CVBS 0	
CVBS OUT	
CVBS-OUT	
CVBS-RFMO	CVBS radio frequency modulator
CV-DOC	Composite video drop-out corrected
CD-TBM	Composite video time base measured
C.V.-TBM	
C.S.	Composite sync
D1	Diode 1 connection
D2	Diode 2 connection
D3	Diode 3 connection
D4	Diode 4 connection
DAAB	Data from A-chip to B-chip
DABD	Data from B-chip to DAC-IC
DAC	Digital to analogue convertor
DATA	Shift register data
DATA EN	Date enable
DATA IN	Data input
DATA OUT	Data output
DEEM	De-emphasis
DEEMPN	
DET	Detector of the low frequency sum signal
DGND	Ground for the digital ciruit
DIFF	Tray stop/ tilt enable
DIGA L	Digital audio signal left channel
DIGAL	
DIGA R	Digital audio signal right channel
DIGAR	
DIR SEL	Selection of the rotation of the turntable-motor
DO	Drop-out signal
D.O.	
DOBM	Digital output signal from B-chip to output plug
DOUT1	Digital output 1
DOUT2	Digital output 2
DREFL	Disc reflection (from tilt detector)
DSC-M	Error generator IC (motor control)
E1	Diode voltage of D1
E2	Diode voltage of D2
E3	Diode voltage of D3
E4	Diode voltage of D4
EA	Enable
EFAB	Error flag from A-chip to B-chip
EFM	Disc signal CD audio/CD video (eight to fourteen modulation)
EN	Port enable system signal
ENRE	Not connected
F76	Oscillator frequency 7.5 MHz
FB	Feed back
FE	Focus error signal
FIL	Filament
FIL 1	Filament conn. 1
FIL 1	
FIL 2	Filament conn. 2
FIL 2	
FLEN	Frequency lock enable
FLOCKN	Frequency lock signal for external switch
FOC	Focus actuator
FOC NORM	Focus nomalizing signal/system
FOC PULSE	Focus Actuator move pulse
FOCPLS	Focus actuator move pulse
FOC RDY	Focus system is ready (focus has been found)
FOCRDY	
FOC SERV	Focus servo loop indication
FOC SRV	
FOCSRV	
FOC SPD	Focus actuator speed indication
FOCSPD	
FOC STA	Focus start-up pulse
FOCSTA	
FOC+	Focus actuator + connection
FOC–	Focus actuator – connection
G	Guard
GM	Motor ground
GND	Ground
G-CHAR	Green information from character generator

Signal	Abbreviation
G-OUT	Green information output
HALL1	Hall-element A connection 1
HALL2	Hall-element A connection 2
HALL3	Hall-element B connection 3
HALL4	Hall-element B connection 4
HALL5	Hall-element C connection 5
HALL6	Hall-element C connection 6
HALL+	+ connection for Hall-elements
HALL–	– connection for Hall-elements
HF	high frequency signal
RF	
HFATBC	High frequency signal time base corrected
HFATBC	
HF-ATBC	
HF AV	High frequency signal audio+video
HFAV	
HF-AV	
HFD	High frequency detector signal
HFI	High frequency signal input (Decoder/A-chip)
HF(ANT-IN)	High frequency signal antenna (loop-through signal)
HF (TV OUT)	High frequency signal TV output (loop-through signal)
HF-OUT	High frequency audio
HLD	Hold signal (MFE duty cycle control)
HMANCH	Line pulde for decoding the manchesta code
H-MANCH	
HPL	Headphone left channel
HP-L	
HPR	Headphone right channel
HP.R	
HSYNC	Horizontal synchronization signal
H/2	Half line frequency
I MOTOR	Motor current (turntable motor)
J MOTOR	
I2CI	Inter IC-signal
INTVID	Internal generated video graphics
INT.VID	
IREF	Refence current
LASGND	Laserdiode ground connection
LASMON	Laser monitor diode signal
LASOUT	Laser monitor output signal
LED-S	LED supply
LEV DET	Detector of the HF level signal
LF	Low frequency sum signal
LF SUM	
LFSUM	
LFD	Low frequency signal for decoding part (116% level)
LIM	Limiter circuit
LOFIC	Low pass filter IC
LPF	Low pass filter
LSB	Least significant bit
L+R	Left and right channel output signal
MC ES	
MCES	Motor control signal from A-chip to servo control
MC IN	Motor control signal output (for audio system synchronisation)
MCIN	
MCO	Motor control output (used for sync. generation wire in video II panel)
MFE	Frequency error signal for motor control
MOT	Motor
MPE	Phase error for motor control
MPLL1	Frequency lock indication signal for motor control
MR	Master reset
MTF	Modular transfer function
MUSB	Mute signal analogue audio
MUT A	
MUTA	
MUTE-A	

Signal	Abbreviation
MUTA/ ANDIG	Mute signal analogue audio (switch Analogue/Digital audio)
MUTE-AND	
MUTA/ANDIG	
MUTEL	Mute of the left audio channel
MUTE-L	
MUTL	
MUTER	Mute of the right audio channel
MUTE-R	
MUTr	
OOF	Out of focus
OPEN	Tray open signal
OB/TC	Offset binary/two's complement
OP4	Optical pick-up unit
OUT EN	Output enable signal
PD/OC	Phase detector output current
PHASEA	Coil A of turntable motor
PHASE B	Coil B of turntable motor
PHASEB	
PHASE C	Coil C of turntable motor
PHASEC	
PLNTSC	Selection port Pall/NTSC
PLOCK	Phase lock indicator output for servo processor
POTR	Potentiometer right channel
POT-R	
POTL	Potentiometer left channel
POT-L	
QCL	Clock signal of Q channel (subcode signal)
QDA	Data of Q chanel (subcode signal)
QRA	Request/acknowledge of Q-data (A-chip-µP)
RAD	Radial actuator
RAD LAG	Radial lag control
RADLAG	
RAD PLS	Control signal to move the radial actuator (high speed)
RADPLS	
RAD SPD	Control signal to move the radial actuator (slow speed)
RADSPD	
RAD SP1	Control signal to move the radial actuator (medium speed)
RADSP1	
RADDIR	Signal to control the direction of the movement of the radial actuator
RADINT	Intergrator control (on/off) RAD OUTPUT STAGE
RAD SRV	Control mode switch (X-detection control /RE-control or DAC-control)
RADSERV	
RADSRV	
RADXON	Control mode swithc (X-detection cotrol/RE-control)
RAD+	Radial actuator + connection
RAD–	Radial actuator – connection
RAMP	Timing signal
RAMP-EN	Start of timing signal (enable)
RE	Radial error signal
RE-DIG	Digitalized radial error signal
REDIG	
RE IN	Input of the radial error signal
RE IN	
REIN	
RE OUT	Output of the radial error signal
RE1	Part 1 of the radial error signal
RE2	Part 2 of the radial error signal
REDET	Detector of the radial error signal
REF	Reference signal
REFH	Line frequency reference
REMAC	Remote acknowledge
REMIN	Remote control input
RESET	Reset pulse
RGB	Red-green blue information
R-CHAR	Red information from character generator
R-OUT	Red information output
S	Substrate
SI	Radial reference line control signal 1

Signal	Abbreviation
S2	Radial reference line control signal 2
SCAB	Subcode clock-signal from A-chip to B-chip
SCHE	Signal derived from the difference signal coming from the X-detector
SCK	Serial clock-input
SDAB	Subcode data from A-chip to B-chip
SHIFT CLK	Clock pulse for shift register
SHIFTCLK	
SM+	Spindle motor + connection (turntable motor)
SM–	Spindle motor – connection (turntable motor)
SSM	Start/stop signal for turntable motor
STANBY P	Control of the standby LED in the power control circuit
STROBE	Parallel load signal
SWITCH-S	Switch sense line
TANG-ER	Tangential error signal
TBC-ON	Time base control on
TDETD	Difference signal coming from the X-detector
TILT D	
TILTD	
TDETS	Sum signal coming from the tilt-detector
TILT S	
TILTS	
TLEDON	Tilt LED on/off control
TILTLED	LED for tiltcontrol
TLTLED	
TILT+	Tilt control signal (clockwise rotation of the tiltframe)
TILT–	Tilt control signal (counter-clockwise rotation of the tiltframe)

Signal	Abbreviation
TL	Track loss signal
TLT MOTOR	Tray/tilt motor
TLI	Time error control signal
TM+	Tray/tilt motor + connection
TM–	Tray/tilt motor – connection
VBC-DOC	Video blanking synchronisation drop-out corrected
V MDT	Motor voltage
V MOT	
VMOT	
VCO FRE	Voltage controlled oscillator frequency
VH	Hall-element voltage
VHALL	
VID AMP	Video amplifier
VMANCH	Frame pulse to decode the manchester code
V-MANCH	
VOLL	Volume control for the left channel
VOL-L	
VOL-R	Volume control for the right channel
VREF	Reference voltage
VSYNC	Vertical synchronisation
WS	Word select signal
WSAB	Word select signal from A-chip to B-chip
WSBD	Word select signal from B-chip to DAC-IC
X DETS	Sum signal coming from the X-detector
XDETS	
XDET D	Difference signal coming from the X-detector
XDETO	
XDETD	
XCLED	LED for X-direction control
X-LED	
X-DET	Detector of the X-direction movement
XSYS	System clock frequency coming from the X-tal