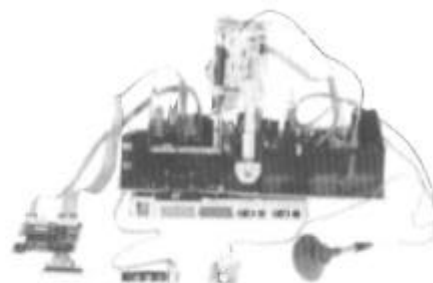


Colour television

CHASSIS D16-II

CHASSIS D16-III

Service
Service
Service



Service Manual

For sets with AG production number AG2., AG3. and onwards

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Tuning and control D16-II/D16-III

In sets fitted out with chassis D16-II/D16-III (AG2. and AG3.), most of the control functions and all tuning functions are incorporated in two menus.

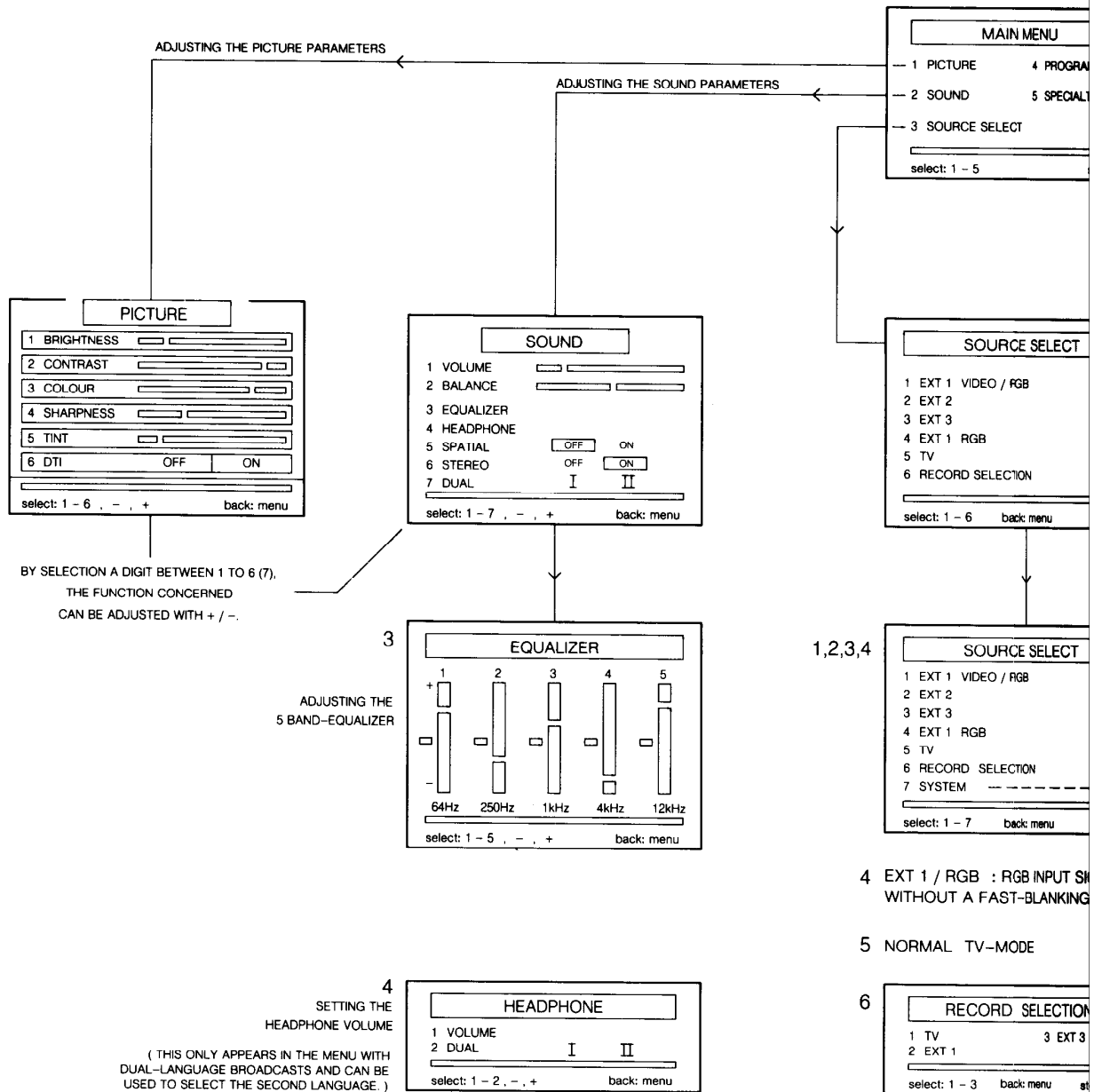
In the diagrams below the various situations of the menus are shown. There are two different menus:

- 1) the installation menu (accessible with the "menu" key on the local keyboard)
- 2) the control menu (accessible with the "menu" key (◁) on the remote control (RC5910 or RC5915).

For a more detailed description of the menus, adjustments, tuning, etc., reference is made to the circuit description of chassis D16.

MAIN MENU

PRESS "MENU" ON THE REMOTE CONTROL



BY SELECTION A DIGIT BETWEEN 1 TO 6 (7), THE FUNCTION CONCERNED CAN BE ADJUSTED WITH + / -.

ADJUSTING THE 5 BAND-EQUALIZER

4 SETTING THE HEADPHONE VOLUME
(THIS ONLY APPEARS IN THE MENU WITH DUAL-LANGUAGE BROADCASTS AND CAN BE USED TO SELECT THE SECOND LANGUAGE.)

1,2,3,4

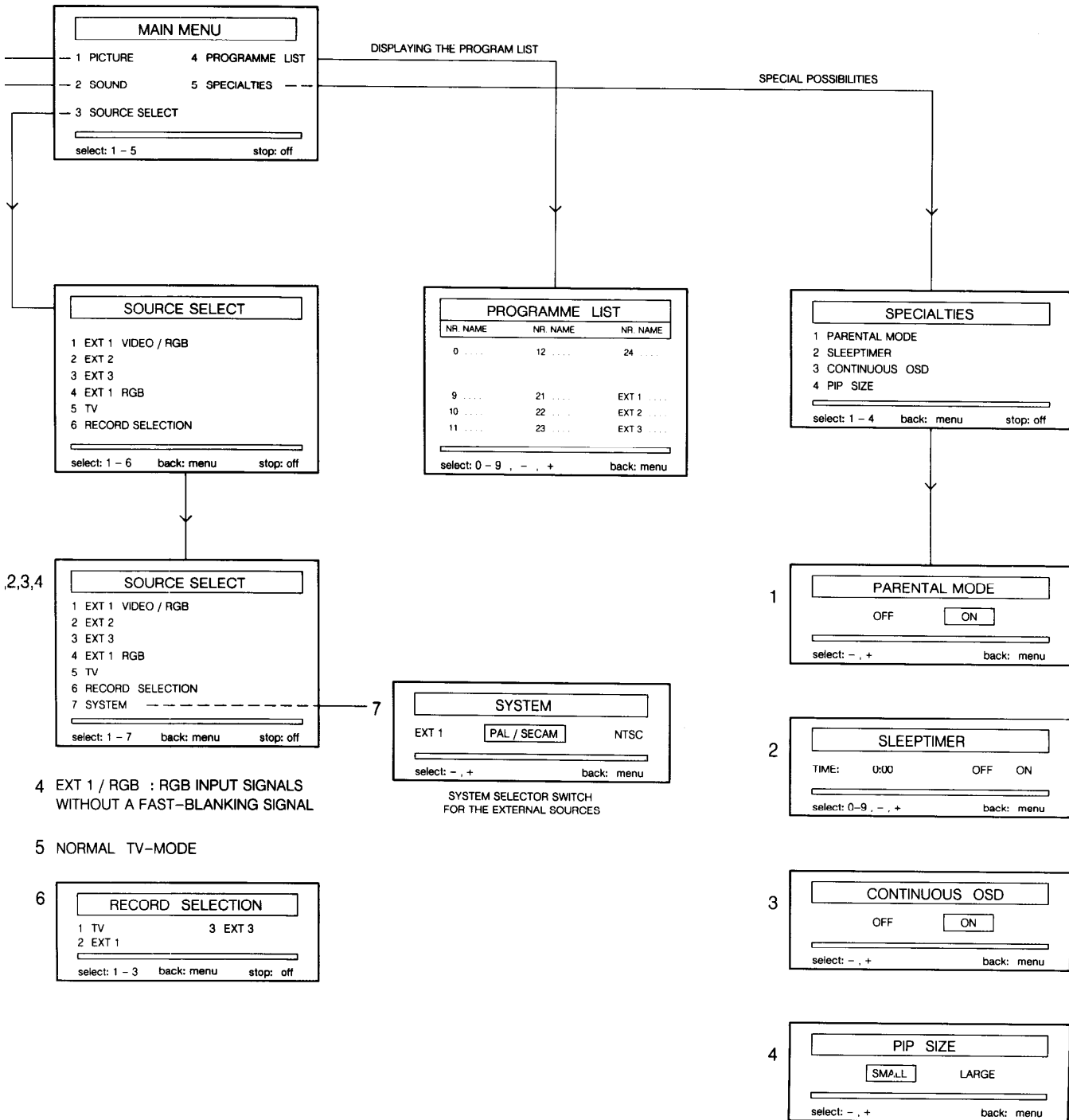
4 EXT 1 / RGB : RGB INPUT SIGNAL WITHOUT A FAST-BLANKING

5 NORMAL TV-MODE


6 RECORD SELECTION
1 TV 3 EXT 3
2 EXT 1
select: 1 - 3 back: menu

MAIN MENU

PRESS 'MENU' ON THE REMOTE CONTROLE



INSTALLATION

PRESS 
ON LOCAL KEYBOARD
|
SELECT DESIRED LANGUAGE

LANGUAGE SELECTION

1 ENGLISH
2 DEUTSCH
3 FRANCAIS
4 ITALIANO
5 NEDERLANDS

select: 1 - 5 stop: off

INSTALLATION

1 PROGRAMMES
2 A / V CONNECTIONS
3 TXT PAGE NUMBERS
4 STORE PERSONAL PREFERENCE
5 D2B A/V CONNECTIONS

select: 1 - 5 back: menu stop: off

PR 1 BBC 1
241 MHz
PAL / SECAM BG
MONO

PROGRAMMES

1 AUTOMATIC
2 FREQUENCY
3 MANUAL
4 AUTOMATIC D2B PROGRAMMING

select: 1 - 4 back: menu stop: off

FREQUENCY

FREQUENCY ---.--- MH z

select: 0 - 9 stop: off next: menu

PROGRAMME NUMBER

NUMBER: 1

select: - , + next: menu

PROGRAMME NAME

NAME: ° ° ° ° °

1 2 3 4 5

select: 1 - 5 , - , + next: menu

AUTOMATIC D2B PROGRAMMING

1 TV2 3 . . .

2 . . .

select + confirm: 1 - 3 back: menu

SEARCH

FREQUENCY: 655 MH z

STATION FOUND

STORE ? NO YES

select: - , + stop: off

PROGRAMME NUMBER

NUMBER: 1

select: - , + next: menu

PROGRAMME NAME

NAME: ° ° ° ° °

1 2 3 4 5

select: 1 - 5 , - , + next: menu

TV STARTS
AUTOMATIC
SEARCH TUNING

GOOD
STATION ?

ENTER
PROGRAM
NUMBER

ENTER
PROGRAM
NAME

FREQUENCIES
ARE KNOWN

ENTER
PROGRAM
NUMBER

ENTER
PROGRAM
NAME

PROGRAMMING THE STATIONS

ADJUSTING THE TV MANUALLY

NOW A NEW FUNCTION CAN BE
SELECTED IRRESPECTIVE
OF THE PRECEDING FUNCTION

- 1 AUTOMATIC SEARCH TUNING
- 2 ENTER A PROGRAM NUMBER
- 3 ENTER A PROGRAM NAME
- 4 STORING IN THE MEMORY
- 5 ENTERING THE FREQUENCY
- 6 SYSTEM SELECTION
- 7 FINE TUNING IN 62.5 KHz STE
- 8 DISPLAYING THE LIST OF STA

INSTALLATION

LANGUAGE SELECTION

ENGLISH
 NTSC
 PAL
 JAPAN
 SCANDINAVIA

1 - 5 stop: off

INSTALLATION

PROGRAMMES
 TV CONNECTIONS
 PAGE NUMBERS
 PERSONAL PREFERENCE
 A/V CONNECTIONS

1 - 5 back: menu stop: off

ASSIGNING SYSTEM AND NAMES TO EXT SOURCES

ASSIGNING PREPROGRAMMED TXT PAGE NUMBERS TO PROGRAM NUMBERS

A / V CONNECTIONS

1 EXT 1
 2 EXT 2
 3 EXT 3
 4 STORE

select: 1 - 4 back: menu stop: off

TXT PAGE NUMBERS

1 SELECT
 2 STORE

select: 1 - 2 back: menu stop: off

REGULATING THE TV MANUALLY

MANUAL

1 SEARCH 5 FREQUENCY
 2 PROGRAM NUMBER 6 SYSTEM
 3 PROGRAM NAME 7 FINE TUNING
 4 STORE 8 PROGRAM LIST

select: 1 - 8 back: menu stop: off

NEW FUNCTION CAN BE
 ENTERED IRRESPECTIVE
 OF PRECEDING FUNCTION

- 1 AUTOMATIC SEARCH TUNING
- 2 ENTER A PROGRAM NUMBER
- 3 ENTER A PROGRAM NAME
- 4 STORING IN THE MEMORY
- 5 ENTERING THE FREQUENCY DIRECT
- 6 SYSTEM SELECTION
- 7 FINE TUNING IN 62.5 KHz STEPS
- 8 DISPLAYING THE LIST OF STATION NAMES

ENTER NAME
 SELECT SYSTEM

EXT 1

NAME: * * * * *

1 2 3 4 5

6 PAL / SECAM
 7 NTSC

select: 1 - 7 , - , + back: menu

ENTER NAME
 SELECT SYSTEM

EXT 2

NAME: * * * * *

1 2 3 4 5

6 PAL / SECAM
 7 NTSC

select: 1 - 7 , - , + back: menu

ENTER NAME
 SELECT SYSTEM

EXT 3

NAME: * * * * *

1 2 3 4 5

6 PAL / SECAM
 7 NTSC

select: 1 - 7 , - , + back: menu

PROGRAMME PAGE

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

select: 0 - 9 , - , + back: menu

4: STORING THE NAMES AND SYSTEMS OF EXTERNAL SOURCES IN THE MEMORY.

SURVEY SUPPLY VOLTAGES

TABLEAU TENSION D'ALIMENTATION

OVERZICHT VOEDINGSSPANNINGEN

TAVOLA VOLTAGGIO DI ALIMENTAZIONE

TABLA TENSIÓN DE ALIMENTACIÓN

UEBERSICHT VERSORGUNGSSPANNUNGEN

	+5	+5 ⏻	-8	-20	+20	+141	+11R	+13R	-13R	+200
SOPS TS7315 SOPS 3-IC7327 SOPS D6359 SOPS D6355 SOPS D6350 SOPS L5331 LINE C2512 LINE C2527 LINE C2507 LINE D6492	X	X	X	X	X	X	X	X	X	X
DIGIBOARD U1510 - 3-4M19 - 9M20 - 10M18	X	X						X		
PIP PANEL U1530 - 5M17 - 8M17	X								X	
NICAM PANEL U1535 - 4N25 - 1N25 - 6N25 - 5N25 - 1N22	X	X	X						X X	
QPSK U1612 - 6-1612 - 9-1612	X							X		
TUNER U1600 - L5602 - R6305		X						X		
IF UNIT U1611 - R3612								X		
FM DEMODULATOR - R3240								X		
SOURCE SELECT U1001 - 2S10 - 6-7A08 - 1S05 - 3S10 - 1A08 - 1S10	X X	X	X					X X		
CONT. PANEL U1520 - 1C07 - 4C06	X	X								
PICT. TUBE PAN. U1003 - 3T35 - 2T28								X		X

ELECTRICAL INSTRUCTIONS

1. Unless stated otherwise, the supply voltage used is:
220 – 240 V ± 10%
50 – 60 Hz ± 5%
- Warming-up time ≈ 20 minutes
- Voltages, oscillograms measured relative to tuner mass. **Never** use the heat sinks as mass.
- Adjustment sequence: 1) modules and units
2) VG2/Focus
3) geometry

A. Electrical adjustments on the chassis (see figure 14)

1. +141 V supply voltage

- Apply the mains voltage via an isolating transformer.
- Connect a voltmeter across C2332.
- Adjust R3344 for a supply voltage of +141V ± 0.5 V.

2. +5.25 V supply voltage

- Apply the mains voltage via an isolating transformer.
- Connect a voltmeter across C2315.
- Adjust R3316 for a voltage of 5.25V ± 0.05V.

Check: $U_{C2351} = 20V \pm 0.5 V$
 $U_{C2352} = -20V \pm 0.5V$
 $U_{C2330} = 5V \pm 0.25V$

3. FM demodulators

- a. 5.5 MHz; 6.0 MHz (PAL I) reference circuit
 - Connect a generator signal with a 2 carrier stereo signal (position "stereo").
 - Choose 1 kHz for the right-hand channel and 3 kHz for the left-hand channel.
 - Connect an oscilloscope to pin 1 of euroconnector EXT1.
 - Adjust L5229 for maximum amplitude at a frequency of 1 kHz.
 - b. 5.74 MHz reference circuit
 - Connect a generator signal with a 2 carrier stereo signal (position "stereo").
 - Choose 1 kHz for the right-hand channel and 3 kHz for the left-hand channel.
 - Connect an oscilloscope to pin 3 of euroconnector EXT1.
 - Adjust L5224 for maximum amplitude at a frequency of 3 kHz.
 - c. Channel separation
 - Connect a generator signal with a 2 carrier stereo signal (position "stereo").
 - Choose 1 kHz for the right-hand channel and 3 kHz for the left-hand channel.
 - Connect an oscilloscope to pin 3 of euroconnector EXT1.
 - Adjust R3442 for optimal channel separation.
- 4. Station identification**
- Connect pin 5-IC7600 to ground.
 - Connect a frequency counter to pin 15-IC7600.
 - Adjust R3641 for a frequency of 15625 Hz.

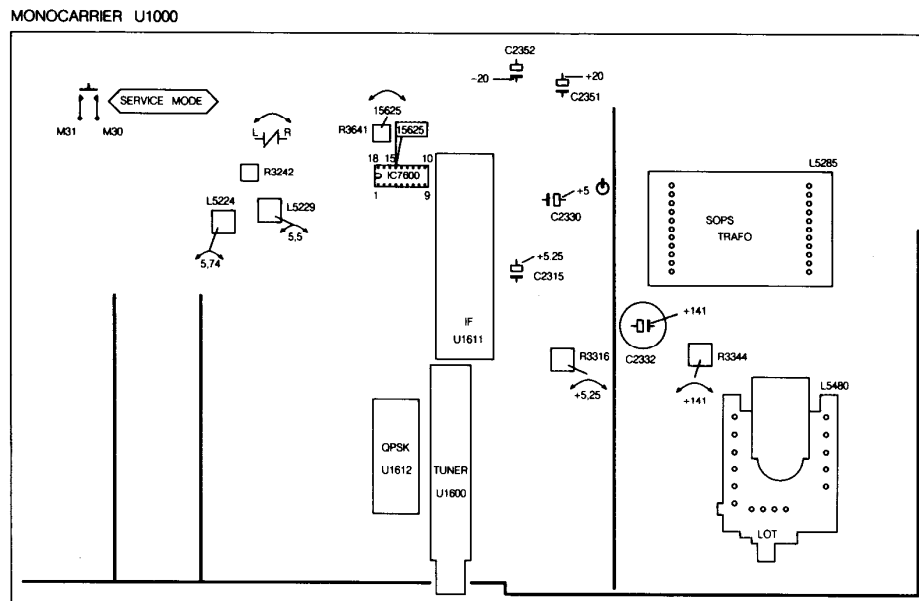


Fig. 14

PRS 05870
T02/938

CHASSIS D16-III

B. Electrical adjustments on the source select panel (see fig.15)**1. Pilot tone (54.6 Hz identification)**

- Connect a generator signal with a 2 carrier stereo signal (position "stereo").
- Choose 1 kHz for the right-hand channel and 3 kHz for the left-hand channel.
- Connect an oscilloscope to pin 8-IC7430.
- Adjust L5384 for maximum amplitude.

2. SVHS status

- Connect a SVHS-Y signal to pin 3 of connector PL09 (SVHS in).
One can also use a CVBS signal (grey scale) for this. In that case the colour subcarrier should be disabled.
- Connect a frequency counter to the junction of L5272, C2272, D6272.
- Adjust L5272 for a frequency of $15625 \text{ Hz} \pm 40 \text{ Hz}$.

SOURCE SELECT PANEL U1001

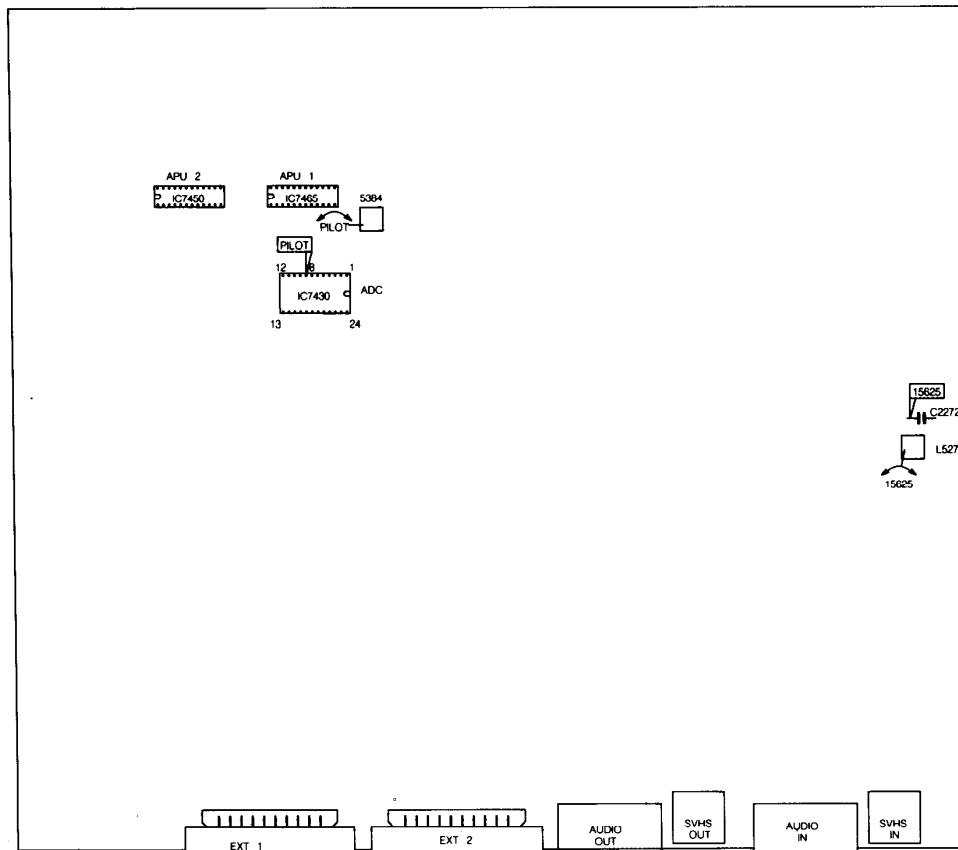
PRS 05869
T07-932

Fig. 15

CHASSIS D16-III

C. Adjustments of geometry parameters and options

The system software is situated in a MASK-ROM or in an EPROM. The version determines the table of corresponding electrical adjustments and option codes. The type and change data of the (EP)ROM can also be determined in the service mode. If the service mode is switched on, the version and change data appear at the top of the screen.



Type	Date	Table:
Mask-ROM V1 REC	890707	1
Mask-ROM V1 HIFI	890705	1
EPROM red 3	890705	1
EPROM bleu 3	890705	1
EPROM bleu 4	890926	2
EPROM bleu 5	891017	2
EPROM bleu 6	891025	3
Mask-ROM V2 Base	891025	3
Mask-ROM V2 D2B	891025	3
EPROM bleu 7	891129	3
EPROM bleu 8	891219	3
EPROM red 8 (D2B)	891219	3
EPROM red 11	900608	3

Service-codenummer software:
Until EPROM red 11 4822 209 63597

Memories with software of an earlier change date may always be replaced by software of a later change date.

To select the service mode, the contacts M30 and M31 on the monocarrier should be short-circuited for a moment. The service adjustments can be carried out by means of a remote control (RC5910 or RC5915).

Control functions:

- /-- (one-/two-digit entry): next adjustment
-  (mute): previous adjustment (not always possible)
- vol + (volume +/-): increasing/decreasing value
- PP (personal preference): storing in the memory
-  (TV mode): exiting the service mode
- menu on/off : contrast adjustment -/+
- menu -/+ : brightness adjustment -/+

Before carrying out the adjustments, allow the set to warm up for 20 minutes.

During the adjustments, a correct (PAL) test signal from a pattern generator (PM5515/PM5518) should be supplied.

Remarks:

- Apply for all adjustments a maximum contrast and a nominal brightness unless otherwise stated.
- The adjustment SVHS luminance delay is only possible if a SVHS source has been selected, on which a SVHS signal is present. Therefore it is necessary to leave the service mode and to select a SVHS source, again entering the service mode and proceed to the adjustment SVHS luminance delay. The indication "SVHS del xx" will automatically appear on the screen.
- The adjustment "PIP adr. xxx" is only possible when the option code "Siemens PIP" is active.
- The vertical adjustments can only be stored if the S correction has been adjusted.
- The horizontal adjustments can only be stored if the trapezium adjustment has been set.
- All adjustments have to be made for one system only (e.g. for PAL or SECAM), with the exception of:
 - 1) the variable Y delay (separate adjustment for PAL/SECAM and NTSC).
 - 2) the picture tube cut-off points must be adjusted once with a CVBS input signal (PAL, SECAM or NTSC) and once with an RGB input signal.

ADJUSTMENTS

- option 1
- option 2
- VG2 adjustment
- vertical shift
- vertical amplitude
- S correction
- variable Y delay
- horizontal centring
- horizontal amplitude
- parabola 1
- parabola 2
- trapezium
- voltage-controlled oscillator
- cut-off points RGB
- white D RGB
- SVHS luminance
- PIP adr 096-PIP
- PIP adr 097-PIP
- PIP adr 098-PIP
- PIP adr 099-PIP
- PIP adr 100-PIP
- PIP adr 101-PIP
- PIP adr 102-PIP

1. Options

The options are:
option 1 and
The options are:
255.
Options 1 and
A combination
* European m
* with PIP
* with system

* no teletext
* no NICAM

2. Adjustments

Some adjustments
result, it may
adjustments.

TABLE 1

ADJUSTMENTS	OPTION 1 (NON ECO)	OPTION 1 (ECO)
option 1	0 multi Europe (BGLM)	0 multi Europe (BGLM)
option 2	1 only UHF	1 only UHF
VG2 adjustment	2 French multi (BGLL'I)	2 French multi (BGLL'I)
vertical shift	4 PIP	4 PIP
vertical amplitude	8 MAC	8 res.
S correction	16 SAT	16 res.
variable Y delay	32 BG alone	32 BG alone
horizontal centring	64 System DK	64 System DK
horizontal amplitude	128 EXT3	128 No SVHS
parabola 1		
parabola 2	OPTION 2 (NON ECO)	OPTION 2 (ECO)
trapezium		
voltage-controlled oscillator	0 TXT,NICAM,FLOF	0 TXT,NICAM,FLOF
cut-off points RGB	1 Siemens PIP	1 No TXT
white D RGB	2 TPU 2732	2 TPU 2732
SVHS luminance delay	4 No NICAM	4 No NICAM
	8 diagnostics	8 diagnostics
	16 33"	16 33"
	32 No TOP	32 No TOP
	64 extended TXT	64 extended TXT
	128 SPAIN	128 res.

TABLE 2

ADJUSTMENTS	OPTION 1
option 1	0 multi Europe (BGML)
option 2	1 only UHF
VG2 adjustment	2 French multi (BGLL'I)
vertical shift	4 PIP
vertical amplitude	8 MAC
S correction	16 SAT
variable Y delay	32 BG alone
horizontal centring	64 system DK
horizontal amplitude	128 EXT3
parabola 1	
parabola 2	
trapezium	
voltage-controlled oscillator	
cut-off points RGB	OPTION 2
white D RGB	0 TXT, NICAM, FLOF
SVHS luminance delay	1 Siemens PIP
PIP addr 096-PIP val=002	2 TPU 2732
PIP addr 097-PIP val=008	4 No NICAM
PIP addr 098-PIP val=089	8 diagnostics
PIP addr 099-PIP val=217	16 33"
PIP addr 100-PIP val=169	32 No TOP
PIP addr 101-PIP val=032	64 extended TXT
PIP addr 102-PIP val=001	128 Spain

only valid for Siemens PIP (without thick-film unit).
For a PIP module with thick-film unit the value 000 should be filled in.

TABLE 3

ADJUSTMENTS	OPTION 1
option 1	0 multi Europe (BGML)
option 2	1 only UHF
VG2 adjustment	2 French multi (BGLL'I)
vertical shift	4 PIP
vertical amplitude	8 MAC
S correction	16 SAT
variable Y delay	32 BG alone
horizontal centring	64 system DK
horizontal amplitude	128 EXT3
parabola 1	
parabola 2	
trapezium	
voltage-controlled oscillator	
cut-off points RGB	OPTION 2
white D RGB	0 TXT, NICAM, FLOF
SVHS luminance delay	1 Siemens PIP
SYNC	2 TPU 2732
PIP addr 096-PIP val=002	4 No NICAM
PIP addr 097-PIP val=008	8 diagnostics
PIP addr 098-PIP val=089	16 33"
PIP addr 099-PIP val=217	32 No TOP
PIP addr 100-PIP val=169	64 extended TXT
PIP addr 101-PIP val=032	128 Spain
PIP addr 102-PIP val=001	128 Spain

only valid for Siemens PIP (without thick-film unit).
For a PIP module with thick-film unit the value 000 should be filled in.

1. Options

The options are accommodated under 2 addresses: option 1 and option 2.
The options are represented by a number between 0 and 255.
Options 1 and 2 are subdivided as follows:
A combination is also possible, for example:

- * European multi-receiver
- * with PIP
- * with system D.K. } OPTION 1
- * no teletext
- * no NICAM } OPTION 2

2. Adjustments (see fig.16)

Some adjustments can influence one another. As a result, it may sometimes be necessary to repeat a few adjustments.

Means: OPTION 1 = 0 + 4 + 64 + 68
OPTION 2 = 1 + 4 + 5

However, these are software adaptations in the set. So if the set has to be fitted out for these features, the necessary hardware adaptations should be introduced as well.

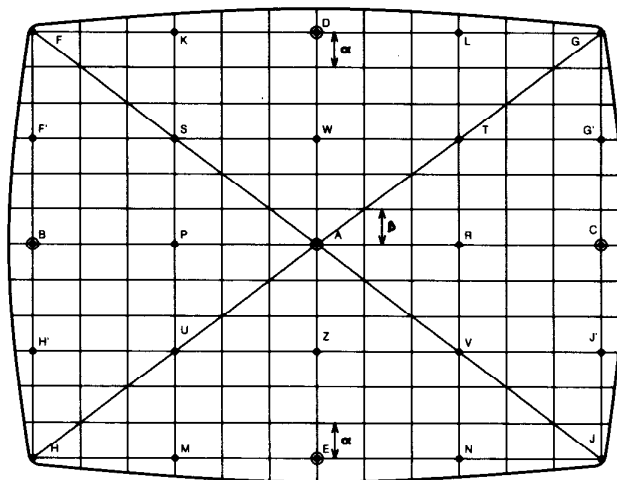










Fig. 16

- Vertical shift
 - indication on the screen: V SH
 - test signal: 
 - adjust until the position of the top line (F,G) is right (test lines must not be visible)
- Vertical amplitude
 - indication on the screen: V AMP
 - test signal: 
 - Adjust until the vertical amplitude is correct. The distance between the top line (F,G) and the top of the screen should be equal to the distance between the bottom line (H,J) and the bottom of the screen.
- S correction
 - indication on the screen: S-cor
 - test signal: 
 - Adjust until the squares at the top/bottom of the screen (α) are just as big in vertical direction as the ones in the middle of the screen (β).
- Variable Y delay
 - indication on the screen: Y del
 - test signal: colour bar
 - Adjust until the luminance signal covers the colour signal exactly.
Attention: If no colour appears on the screen, it is possible that the VCO adjustment should be done first. After the VCO adjustment, return to the variable Y delay.
- Horizontal shift
 - indication on the screen: h sh
 - test signal: 
 - adjust the vertical centre line (D,E) in the middle of the picture.
- Horizontal amplitude
 - indication on the screen: h amp
 - test signal: 
 - adjust until the horizontal amplitude is good (i.e. the circle is round)
- Parabola 1
 - indication on the screen: par 1
 - test signal: 
 - adjust until FF' and HH' are in line
- Parabola 2
 - indication on the screen: par 2
 - test signal: 
 - adjust until F,H are in line
- Trapezium
 - indication on the screen: trap
 - test signal: 
 - adjust until the FH line is vertical
- VCO
 - indication on the screen: VCO
 - test signal: colour bar
 - adjust until the colours on the screen are as still as possible
- VG2 setting
 - indication on the screen: G2
 - test signal: black picture
 - adjust the VG2 potentiometer, which is mounted on the rear of the line transformer, until the indication "OK" appears on the screen
- Cut-off R, G, B
 - indication on the screen: CO ref R
CO ref G
CO ref B
 - test signal: white picture
 - adjust CO ref B to the value 28.
Adjust brightness and contrast until blue is just visible. Adjust CO ref R and CO ref G until red and green are also just visible.
- white adjustment R, G, B.
 - indication on the screen: wd r
wd g
wd b
 - test signal: white picture
 - Adjust the required white level by means of "volume +/-".
- SVHS luminance delay
 - indication on the screen: SVHS del xxx
(this adjustment is only possible if a SVHS signal has been selected.)
 - test signal: SVHS colour bar
 - Adjust until the luminance signal covers the colour signal exactly.
Steps 1 until 128 result in a positiv delay and the steps 129 until 255 result in a negativ delay.
- SYNC
 - For sets with poduction code AG20 and AG30: this parameter should be set on 40.
 - For sets with production code AG21 and AG31 and higher: this parameter should be set on 30.
- PIP-Adr.xxx
 - The right values can be adjusted on PIP addresses 096 to 102 as follows:

indication on the screen	action to be taken
wd r,g,b	press -/--
PIP addr.096	press -/--
PIP val xxx	adjust - volume + for value 002
PIP val 002	press PP (to store this value)
PIP val 002 "stored"	press (mute)
PIP addr.096	adjust volume + for PIP addr.097
PIP addr.097	press -/--
PIP val xxx	adjust - volume + for value 008
PIP val 008	press PP (to store this value)

Repeat this adjustment procedure until all PIP addresses have been provided with the right value.

D. Adjustments on the P.I.P. panel (see Diagram H)

Before performing every adjustment care should be taken that a P.I.P. picture is visible on the screen and the set should have reached its operating temperature.

1. Horizontal frequency drift compensation

Apply an aerial or generator signal.
Short pin 28-IC7125 with pin 13-IC7125.
Short pin 5-IC7755 to ground.
Measure the frequency at pin 17-IC7755 and adjust it with R3239 for $15.625 \text{ Hz} \pm 25 \text{ Hz}$.
Remove the short-circuits.

2. SECAM bandpass

Connect a pattern generator and apply a SECAM colour bar signal.
Short pin 27-IC7125 with pin 13-IC7125.
Trigger the oscilloscope with the sandcastle signal (pin 17-IC7755).
Adjust S5118 for a minimum AM modulation (pin 15-IC7125).
Remove the short-circuit.

3. 8,87 MHz oscillator

Connect a pattern generator and apply a PAL colour bar signal.
Short pin 28-IC7125 with pin 13-IC7125.
Short pin 17-IC7125 to ground.
Connect the X-input of the oscilloscope to pin 1-IC7125.
Connect the Y-input of the oscilloscope to pin 3-IC7125.
Set the oscilloscope to the X-Y mode.
Adjust C2202 until the oscilloscope picture is as still as possible.
Remove the short-circuits.

4. 7,16 MHz oscillator

Connect a pattern generator and apply an NTSC M colour bar signal.
Short pin 26-IC7125 with pin 13-IC7125.
Short pin 17-IC7125 to ground.
Connect the X-input of the oscilloscope to pin 1-IC7125.
Connect the Y-input of the oscilloscope to pin 3-IC7125.
Set the oscilloscope to the X-Y mode.
Adjust C2212 until the oscilloscope picture is as still as possible.
Remove the short-circuits.

5. PAL delay line

Connect a pattern generator and apply a PAL colour bar signal.
Short pin 28-IC7125 with pin 13-IC7125.
Connect the X-input of the oscilloscope to pin 1-IC7125.
Connect the Y-input of the oscilloscope to pin 3-IC7125.
Set the oscilloscope to the X-Y mode.
Adjust coils S5155 and S5157 until the vectors are in line (points lying furthest from the origin).
Set the pattern generator to the "DEM" mode.
Adjust R3157 until the vectors lie on each other in the origin.
Remove the short-circuit.

6. SECAM identification

- apply a SECAM colour bar
- connect pin 27-IC7125 with pin 13-IC7125
- connect an oscilloscope with pin 21 of IC7125
- adjust S5190 for minimum DC level

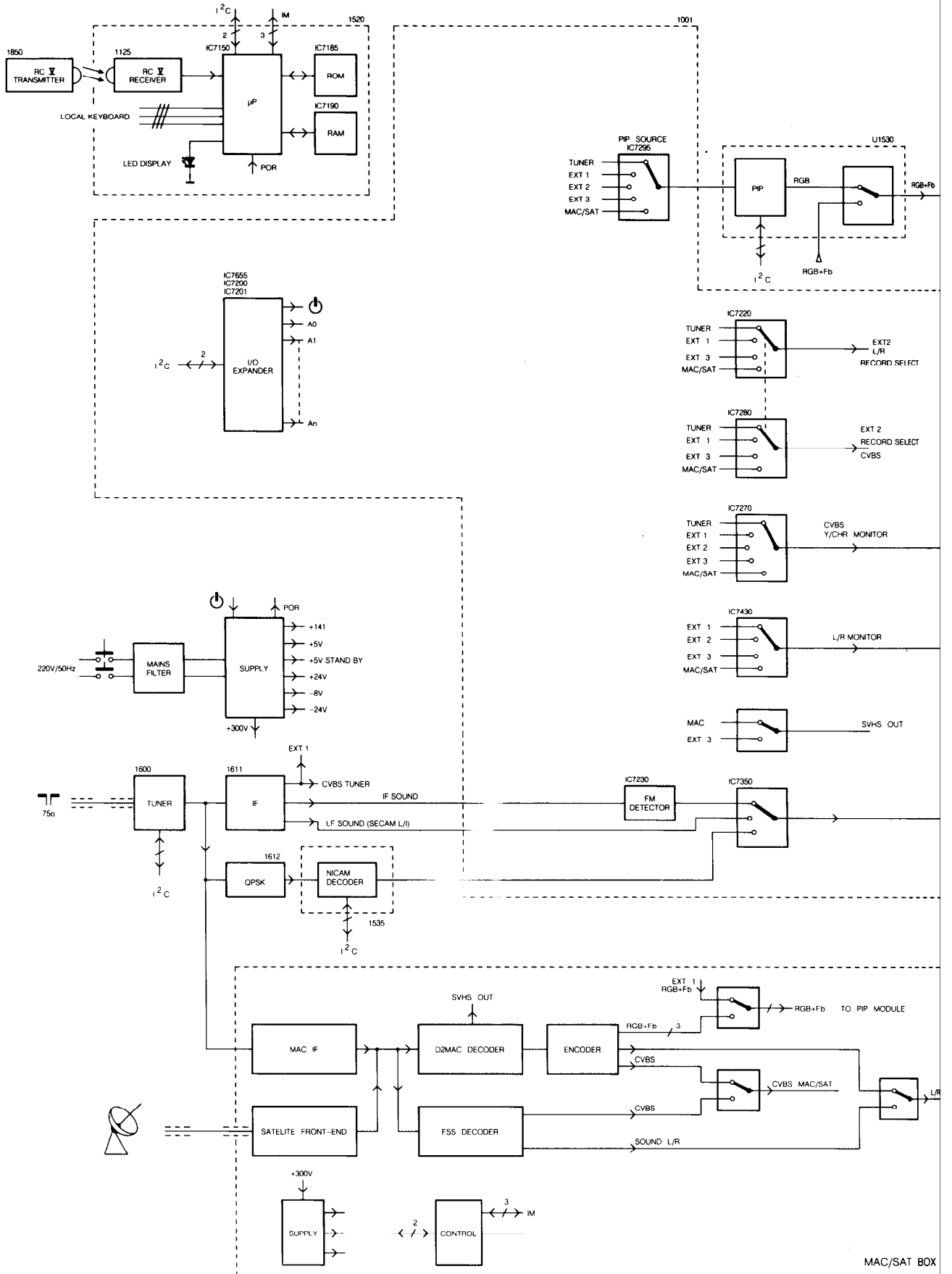
7. R-Y / B-Y SECAM demodulators

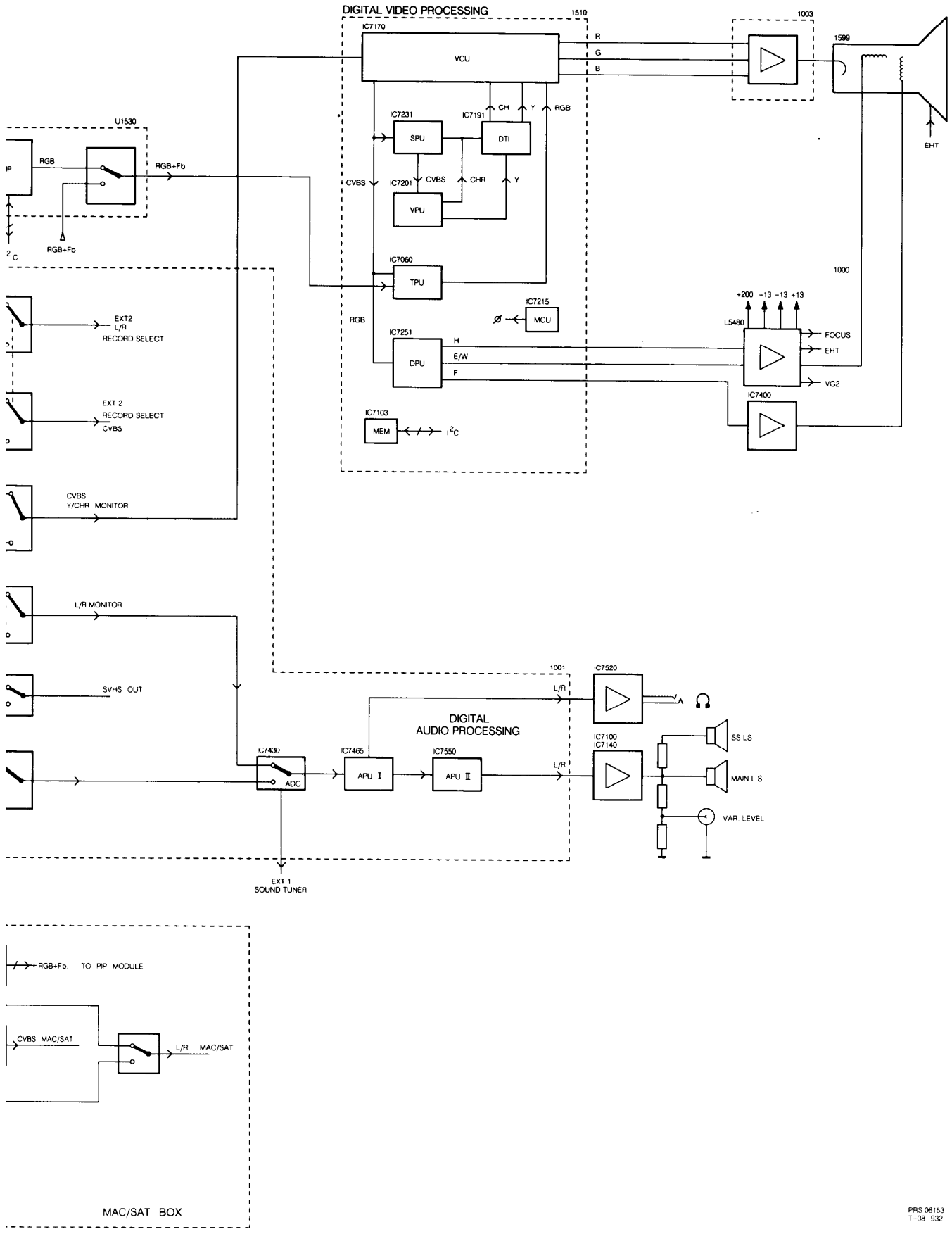
- apply a SECAM signal without contents (black)
- connect pin 27-IC7125 with pin 13-IC7125
- connect an oscilloscope with the emitter of TS7279
- adjust S5175 until the DC level during scan is equal to the DC level during flyback
- adjust S5170 in the same way, but now measure the emitter of TS7278

E. Electrical adjustments on the NICAM decoderboard (see Diagram I)**1. The Sample clock oscillator**

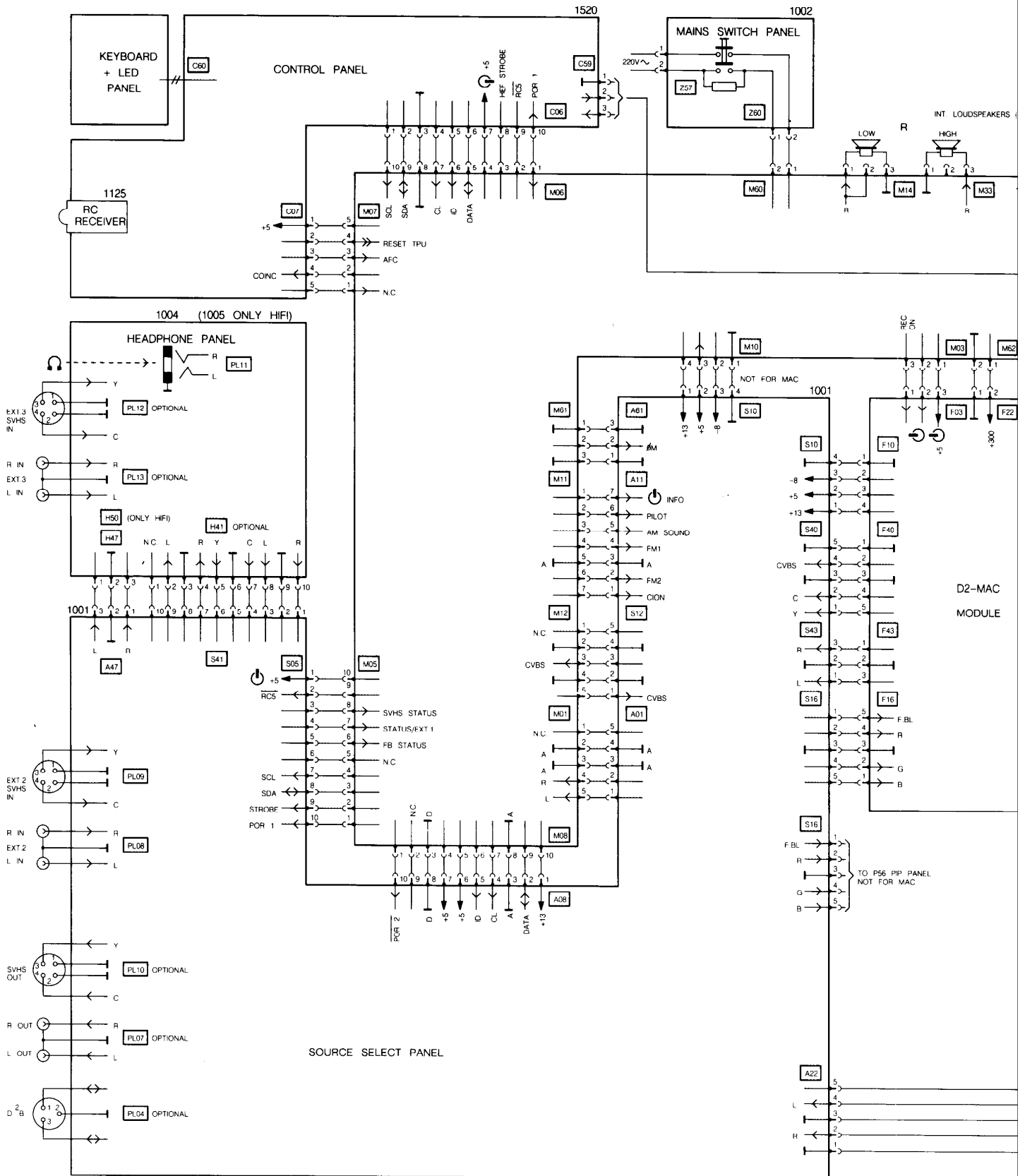
Apply an antenna or generator signal which is provided with a NICAM soundsignal. Connect an oscilloscope to pin 9 of IC7201.
Set the sensitivity of the oscilloscope at 1V/div and the time base at $2 \mu\text{S}/\text{div}$. Adjust C2202 until a symmetrical square wave is visible.

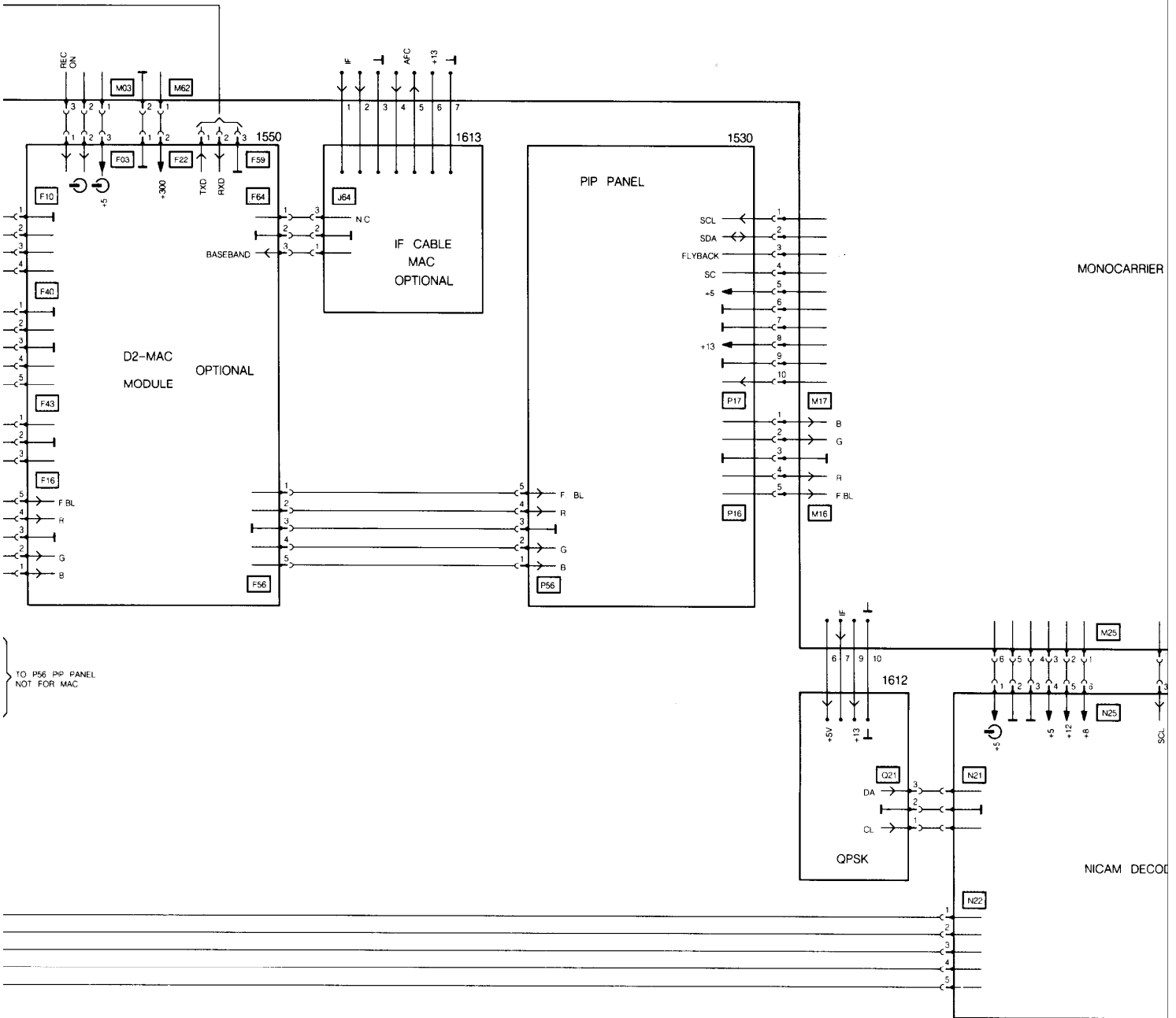
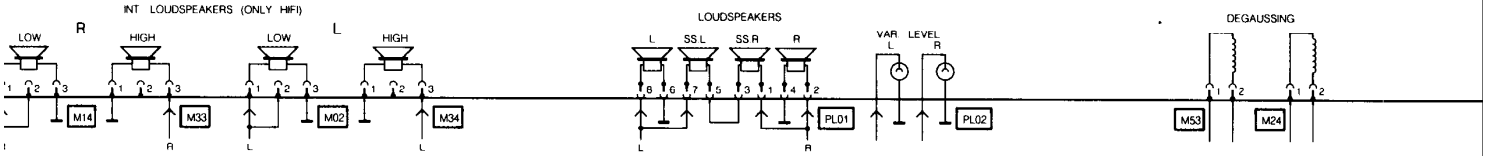
BLOCKDIAGRAM CHASSIS D16

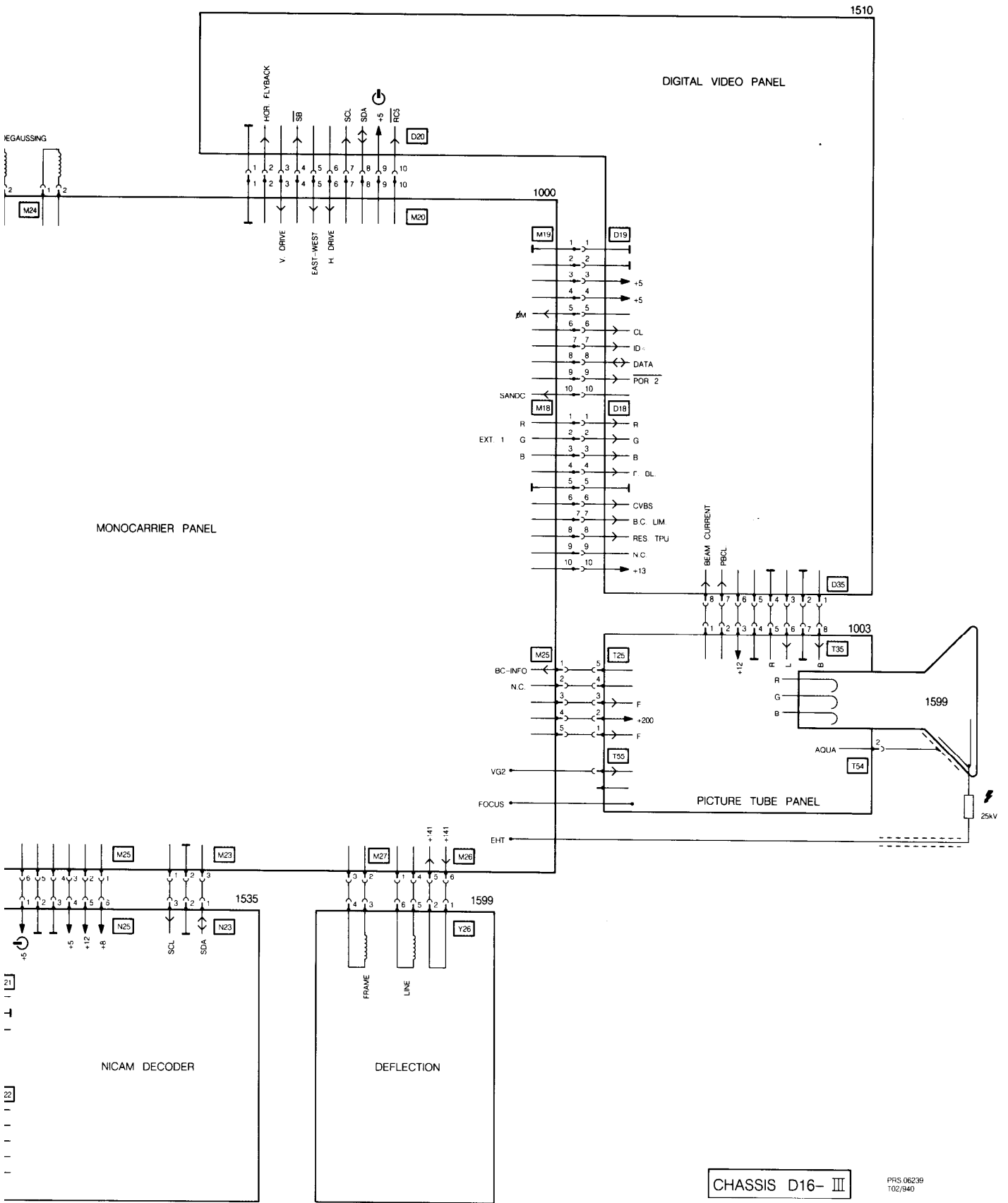


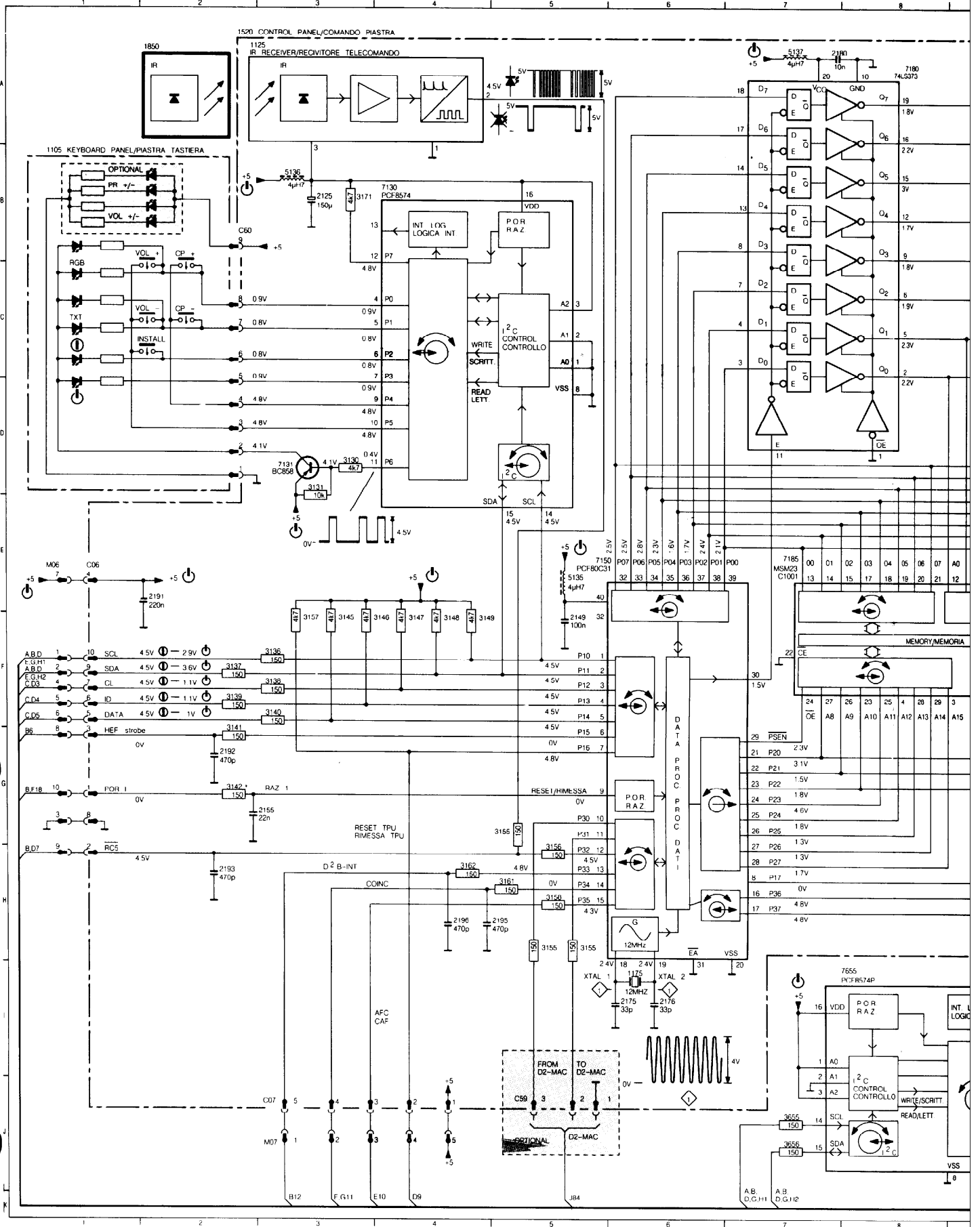


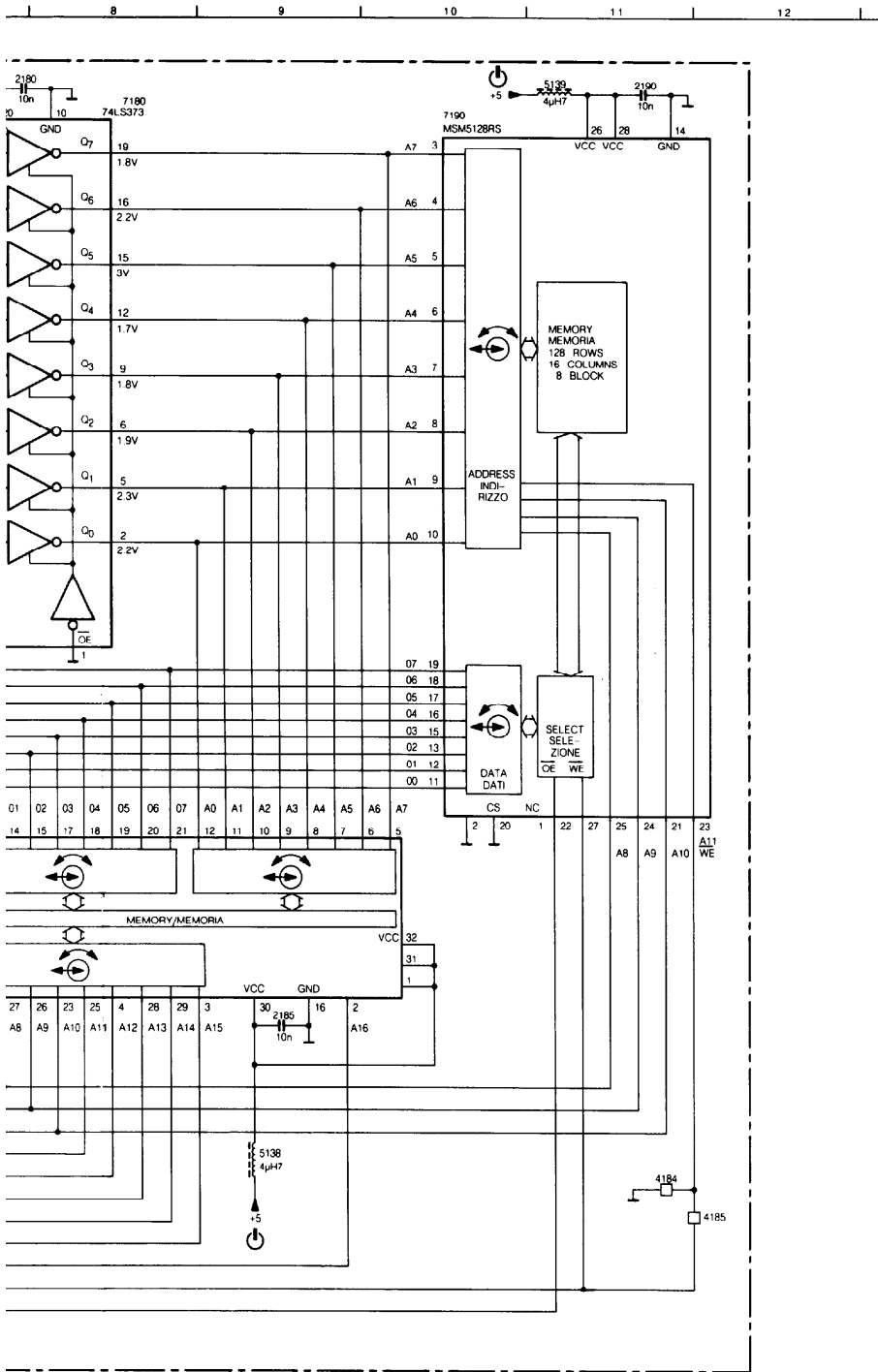
WIRING DIAGRAM D16- III





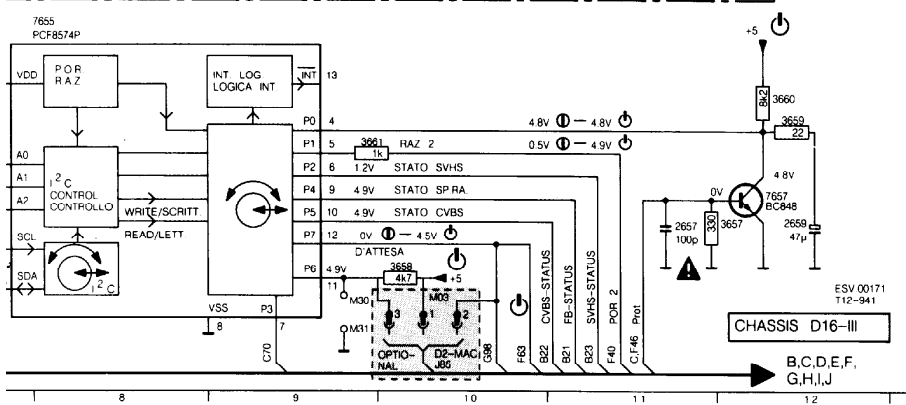
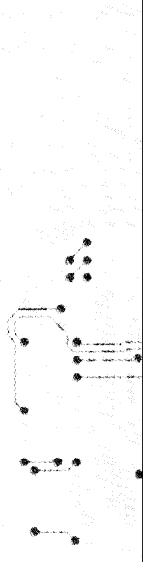






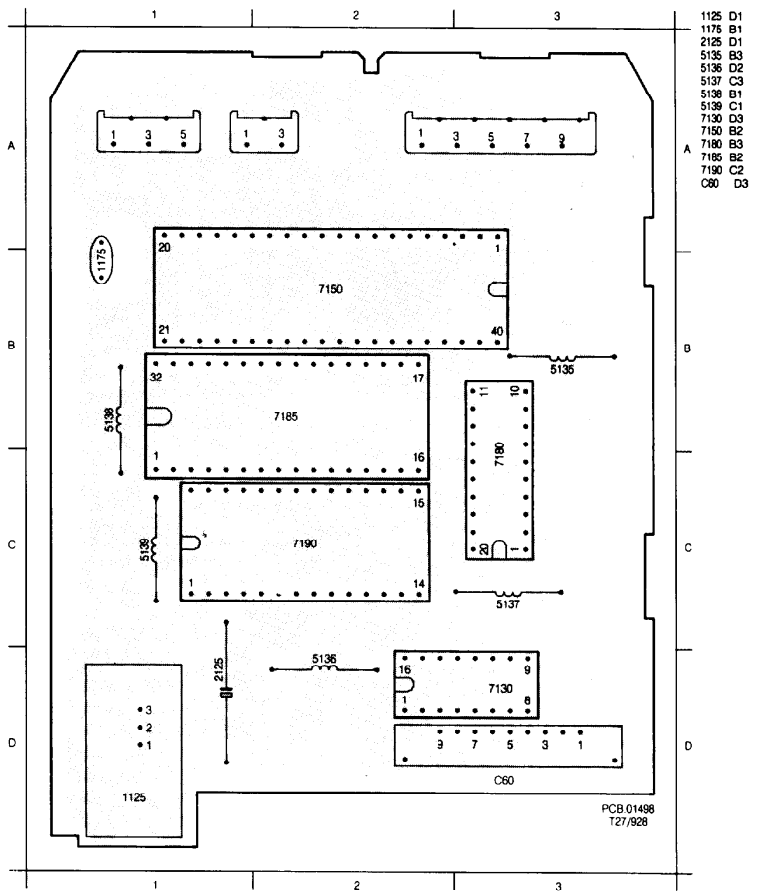
- 1105-B1
- 1105-C2
- 1105-D1
- 1125-A2
- 1175-I 6
- 2125-B3
- 2149-F5
- 2155-G2
- 2175-I 6
- 2176-I 6
- 2180-A7
- 2185-F9
- 2190-A11
- 2191-F2
- 2192-G2
- 2193-H2
- 2195-H4
- 2196-H4
- 2197-A7
- 2659-J12
- 3130-D3
- 3131-E3
- 3136-F3
- 3137-F2
- 3138-F3
- 3139-F2
- 3140-F3
- 3141-G2
- 3142-G2
- 3145-F3
- 3146-F3
- 3147-F4
- 3148-F4
- 3149-F4
- 3155-H5
- 3156-H5
- 3157-F3
- 3158-H5
- 3161-H5
- 3162-H4
- 3171-B3
- 3655-J7
- 3655-J7
- 3657-J11
- 3658-J10
- 3659-I 12
- 3660-I 12
- 3661-I 9
- 4184-G11
- 4185-G12
- 5135-E5
- 5136-B3
- 5137-A7
- 5138-G9
- 5139-A11
- 7130-D4
- 7131-D3
- 7150-H7
- 7180-D8
- 7185-F10
- 7190-E12
- 7655-J9
- 7657-J12
- C06 -E1
- C07 -J3
- C60 -B2
- M06 -E1
- M07 -J3
- M30 -J9
- M31 -J9

CONTROL PANEL



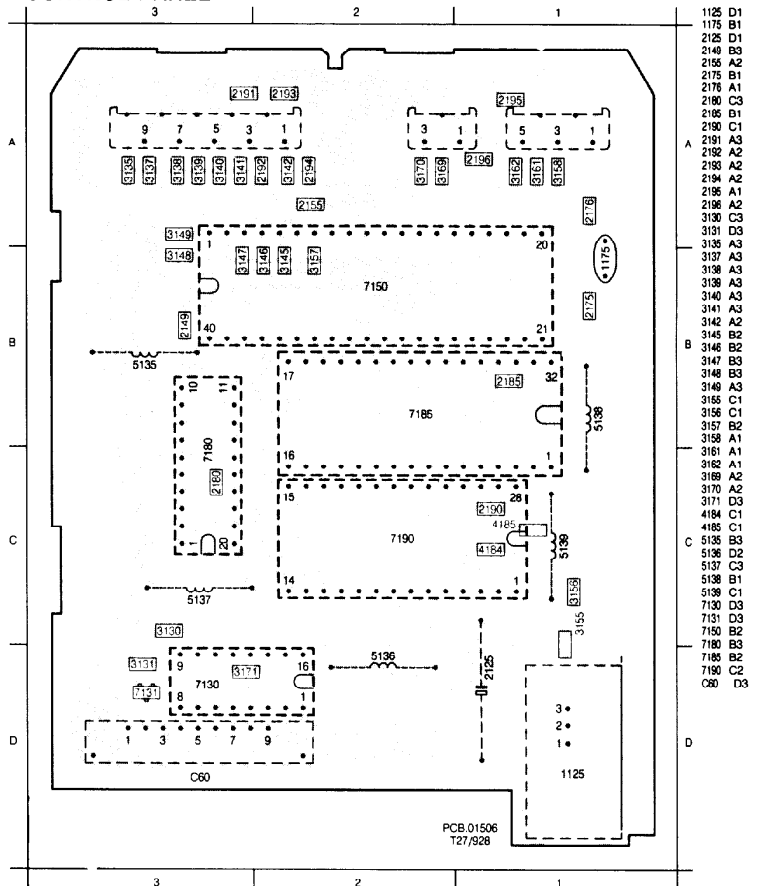
ESV 00171
T12-941

CONTROL PANEL



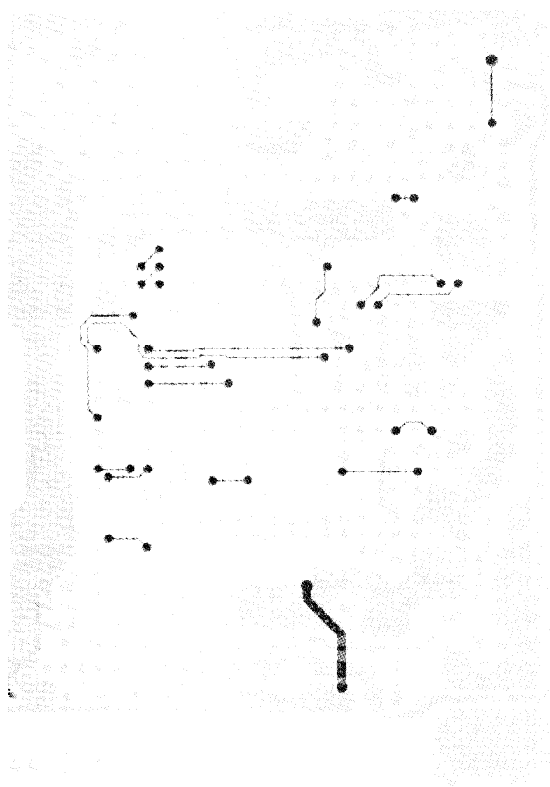
- 1125 D1
- 1176 B1
- 2125 D1
- 5135 B3
- 5136 D2
- 5137 C3
- 5138 B1
- 5139 C1
- 7130 D3
- 7150 B2
- 7180 B3
- 7185 B2
- 7190 C2
- C80 D3

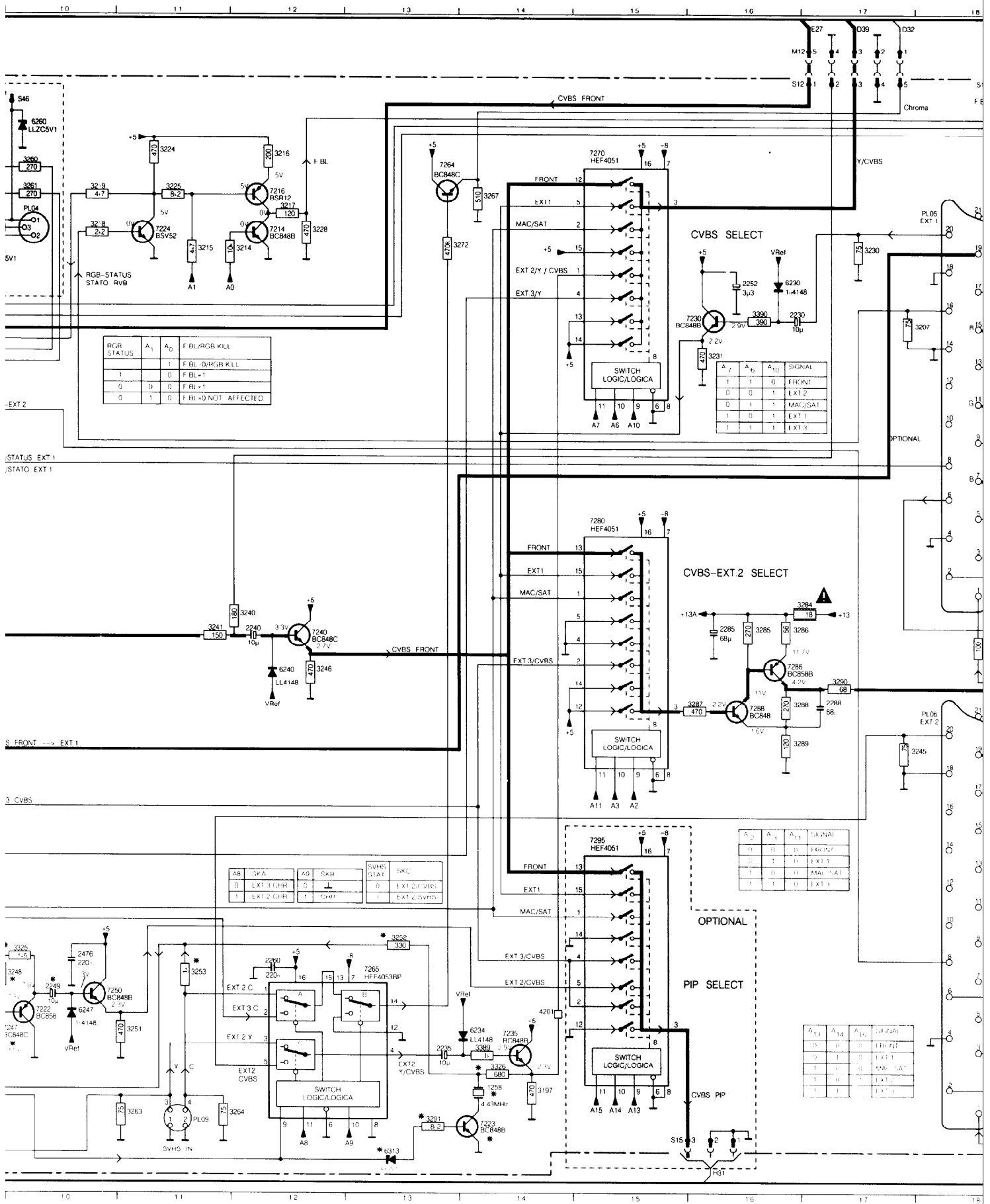
CONTROL PANEL



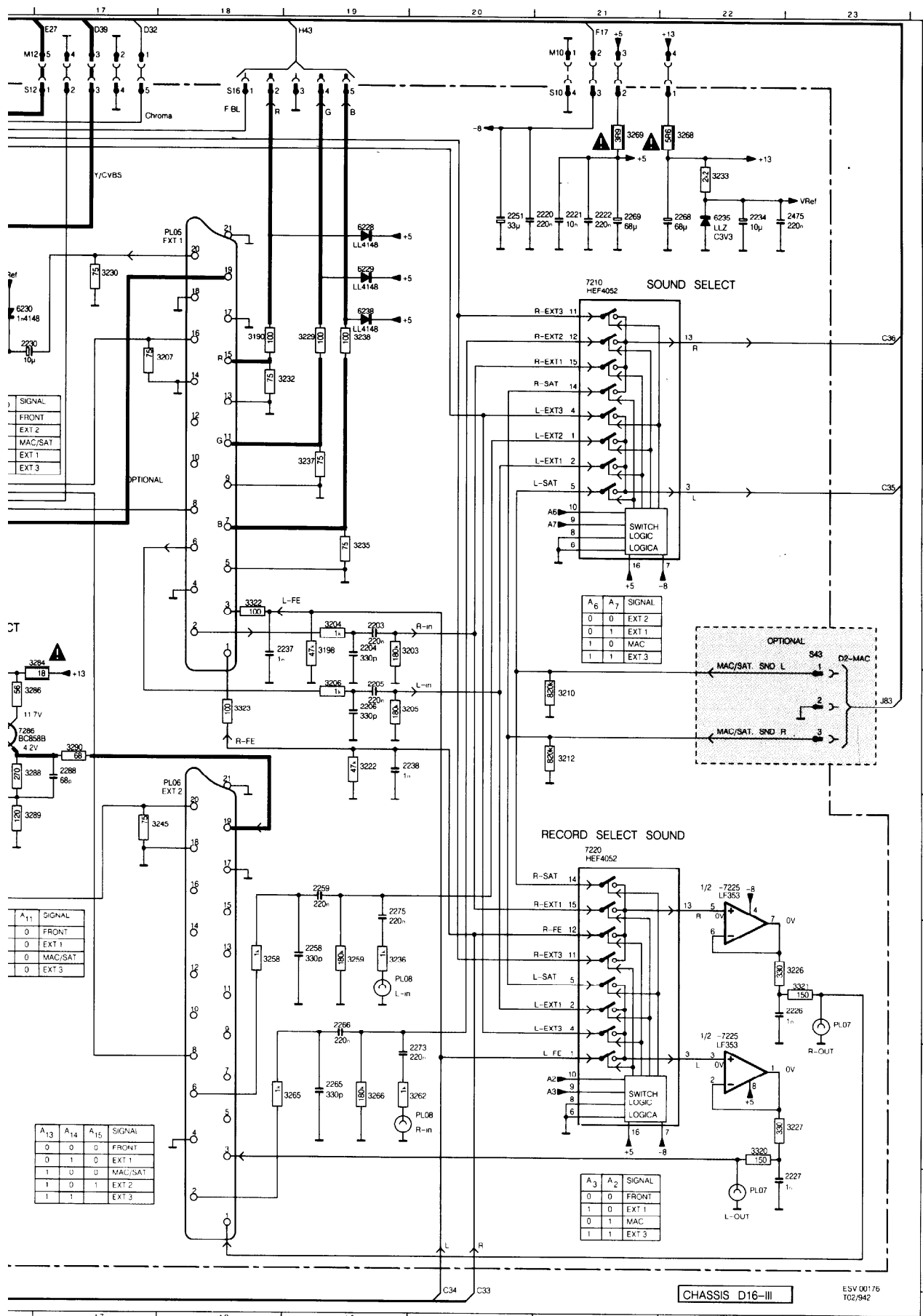
- 1125 D1
- 1176 B1
- 2125 D1
- 2140 B3
- 2155 A2
- 2175 B1
- 2176 A1
- 2180 C3
- 2185 B1
- 2190 C1
- 2191 A3
- 2192 A2
- 2193 A2
- 2194 A2
- 2195 A1
- 2196 A2
- 3130 C3
- 3131 D3
- 3135 A3
- 3137 A3
- 3138 A3
- 3139 A3
- 3140 A3
- 3141 A3
- 3142 A2
- 3145 B2
- 3146 B2
- 3147 B3
- 3148 B3
- 3149 A3
- 3155 C1
- 3156 C1
- 3157 B2
- 3158 A1
- 3161 A1
- 3162 A1
- 3169 A2
- 3170 A2
- 3171 D3
- 4194 C1
- 4195 C1
- 5135 B3
- 5136 D2
- 5137 C3
- 5138 B1
- 5139 C1
- 7130 D3
- 7150 B2
- 7180 B3
- 7185 B2
- 7190 C2
- C80 D3

CONTROL PANEL





15 CHASSIS D16-III 15 CHASSIS D16-III



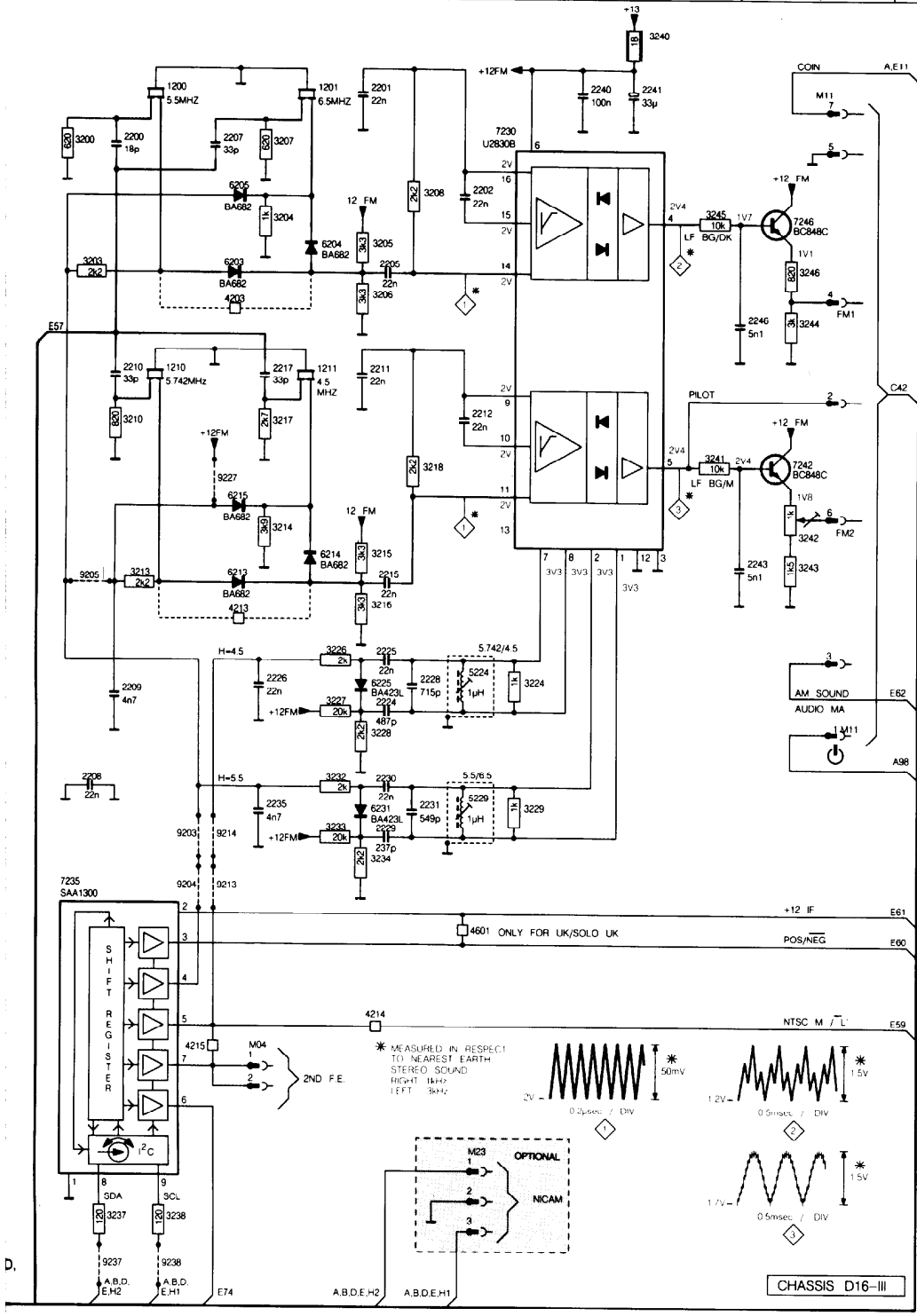
- 722-I 22
- 1257-C8
- 1258-J14
- 1259-F4
- 2202-C3
- 2203-E19
- 2204-F19
- 2205-F19
- 2206-F19
- 2211-G2
- 2213-G2
- 2220-B20
- 2221-B21
- 2222-B21
- 2226-H22
- 2227-I22
- 2230-C17
- 2234-B22
- 2235-I13
- 2237-F18
- 2238-F19
- 2240-F12
- 2247-J9
- 2248-I8
- 2249-I10
- 2250-G9
- 2251-B20
- 2252-C16
- 2256-A8
- 2258-H19
- 2259-G19
- 2260-I12
- 2262-J3
- 2265-I19
- 2266-H19
- 2267-E2
- 2268-B22
- 2269-B21
- 2270-I7
- 2272-I8
- 2273-I19
- 2274-I8
- 2275-H19
- 2276-D6
- 2277-J9
- 2279-I3
- 2280-J3
- 2285-F16
- 2288-G17
- 2291-H4
- 2292-I4
- 2293-G5
- 2294-F6
- 2296-F5
- 2304-J3
- 2309-F8
- 2310-F9
- 2312-E3
- 2475-B22
- 2476-I10
- 3190-C18
- 3197-J14
- 3198-F19
- 3200-B3
- 3201-C3
- 3202-B2
- 3203-F19
- 3204-F19
- 3205-F19
- 3206-F19
- 3207-C17
- 3208-D9
- 3209-D7
- 3210-F21
- 3211-H3
- 3212-F21
- 3213-C3
- 3214-C12
- 3215-C11
- 3216-B12
- 3217-B12
- 3218-B10
- 3219-B10
- 3221-C6
- 3222-F19
- 3224-B11
- 3225-B11
- 3226-H22
- 3227-I22
- 3228-B12
- 3229-C19
- 3230-C17
- 3231-C16
- 3232-C18
- 3233-B22
- 3234-E7
- 3235-E19
- 3236-H19
- 3237-D19
- 3238-C19
- 3239-I8
- 3240-F12
- 3241-F11
- 3242-G7
- 3243-G8
- 3244-G8
- 3245-G17
- 3246-F12
- 3247-I19
- 3248-I9
- 3249-I8
- 3250-D5
- 3251-I11
- 3252-I13
- 3253-I11
- 3255-B7
- 3256-B6
- 3257-A9
- 3258-H18
- 3259-H19
- 3260-B10
- 3261-B10
- 3262-I19
- 3263-J11
- 3264-J11
- 3265-I18
- 3266-I19
- 3267-B14
- 3268-A22
- 3269-A21
- 3270-I7
- 3271-J7
- 3272-C13
- 3273-J7
- 3274-I8
- 3275-I8
- 3276-J9
- 3277-J4
- 3278-J4
- 3279-I5
- 3280-J5
- 3281-F4
- 3282-I9
- 3283-I4
- 3284-F16
- 3285-F16
- 3286-F16
- 3287-F16
- 3288-G16
- 3289-G16
- 3290-F17
- 3291-J13
- 3292-H4
- 3293-G5
- 3294-G3
- 3295-F5
- 3296-F5
- 3297-I7
- 3298-D9
- 3299-D8
- 3300-H5
- 3301-G4
- 3302-D9
- 3303-D8
- 3305-E9
- 3306-J4
- 3307-I4
- 3308-E8
- 3310-F9
- 3311-H5
- 3312-F3
- 3313-F4
- 3316-H7
- 3320-I22
- 3321-H23
- 3322-E18
- 3323-F18
- 3324-F5
- 3325-I10
- 3326-J14
- 3381-J6
- 3382-I7
- 3389-I14
- 3390-C16
- 4201-I14
- 4214-H6
- 4215-I6
- 5267-E2
- 6234-F5
- 6237-F8
- 6238-B19
- 6239-B19
- 6240-E2
- 6241-H6
- 6242-F8
- 6243-F3
- 6244-F8
- 6247-I10
- 6248-B9
- 6249-F8
- 6250-F12
- 6251-D6
- 6256-B8
- 6257-B8
- 6258-B13
- 6259-J12
- 6260-F12
- 6261-G8
- 6262-B3
- 6263-F12
- 6264-B13
- 6265-F12
- 6266-F12
- 6267-F12
- 6268-G15
- 6269-F16
- 6270-B5
- 6271-B7
- 6272-D8
- 6273-E2
- 6274-B12
- 6275-B12
- 6276-B12
- 6277-F16
- 6278-F16
- 6279-J5
- 6280-D8
- 6281-E4
- 6282-B1
- 6283-B1
- 6284-B10
- 6285-E18
- 6286-J18
- 6287-H23
- 6288-H19
- 6289-H19
- 6290-D8
- 6291-J6
- 6292-B2
- 6293-A21
- 6294-G8
- 6295-J16
- 6296-F16
- 6297-F16
- 6298-G16
- 6299-G16

CHASSIS D16-III

ESV 00176
102/842

TBILD-SCHEMA G CHASSIS D16-III **17** **17** **CHASSIS D16-III**

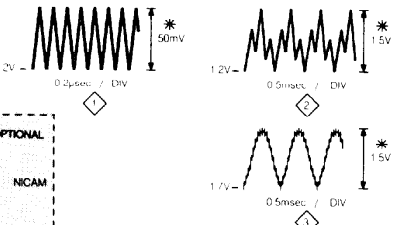
2201-A3	2209-E1	2217-C2	2229-F3	2241-A5	3204-B2	3210-C1	3217-C2	3228-E3	3237-H1	3243-D6	4213-D2	5229-F4	6214-D3	7235-H2	9205-D1
2202-B4	2210-C1	2224-E3	2230-E3	2243-D6	3205-B3	3213-D1	3218-D3	3229-F4	3238-H2	3244-C6	4214-G3	6203-B2	6215-D2	7242-C6	9213-F2
2205-B3	2211-C3	2225-E3	2231-F3	2246-C6	3206-B3	3214-D2	3224-E4	3232-E3	3240-A5	3245-B5	4215-G2	6204-B3	6225-E3	7246-B6	9214-F2
2207-A2	2212-C4	2226-E2	2235-F2	2240-A4	3207-A2	3215-D3	3226-E3	3233-F3	3241-C5	3246-B6	4601-F4	6205-B2	6231-F3	9203-F2	9217-D2
2208-E1	2215-D3	2228-E3	2240-A4	3203-B1	3208-B5	3216-D3	3227-E3	3234-F3	3242-D6	4203-B2	5224-F4	6213-D2	7230-D5	9204-F2	9237-I1



SYSTEM 1:PAL BG,NTSC M,SECAM BG,SECAM L/L,SECAM DK (OPTIONAL)
 SYSTEM 2:PAL BG,PAL 1,SECAM BG,SECAM L/L
 SYSTEM 3:PAL BG,SECAM BG,SECAM L/L
 SYSTEM 4:PAL BG,SECAM DK (OPTIONAL)
 SYSTEM 5:PAL BG
 SYSTEM 6:PAL 1

POS NR	SYSTEM NR 1	SYSTEM NR 2	SYSTEM NR 3	SYSTEM NR 4
1200	5.5MHz	5.5MHz	5.5MHz	5.5MHz
1201	* 6.0MHz	6.0MHz	-	* 6.5MHz
1210	5.74MHz	5.74MHz	-	5.74MHz
1211	4.5MHz	-	-	-
2200	18p	18p	18p	18p
2207	33p	12p	-	33p
2209	22n	22n	-	22n
2210	33p	33p	33p	33p
2211	22n	22n	22n	22n
2212	22n	22n	22n	22n
2215	22n	22n	22n	22n
2217	33p	-	-	22n
2224	487p	-	-	-
2225	22n	-	-	-
2228	A715p	b715p	B715p	b715p
2229	237p	133p	-	237p
2230	22n	22n	-	22n
2231	A549p	A549p	B787p	A549p
2235	22n	22n	-	22n
2243	5n1	5n1	5n1	5n1
2246	b5n1	b5n1	-	b5n1
2249	620	620	-	620
3203	2k2	2k2	-	2k2
3204	1k	1k	-	1k
3205	3k3	3k3	-	3k3
3206	3k3	3k3	-	3k3
3207	620	470	-	620
3208	2k2	7k2	910	2k2
3210	820	820	-	820
3213	2k2	-	-	-
3214	3k9	-	-	-
3215	3k3	-	-	-
3216	3k3	-	-	-
3217	2k7	-	-	-
3218	2k2	910	910	910
3224	1k	1k	1k	1k
3226	2k	-	-	-
3233	20k	20k	-	2k
3234	2k2	2k2	-	2k2
3237	120	120	-	120
3238	120	120	-	120
3241	10k	10k	10k	10k
3242	1k	1k	1k	1k
3243	2k4	2k4	2k4	2k4
4203	-	-	SMD JMP	-
4213	-	smd jmp	SMD JMP	smd jmp
5224	1µ	-	-	1µ
6203	BA682	BA682	-	BA682
6205	BA682	BA682	-	BA682
6206	BA682	BA682	-	BA682
6213	BA682	-	-	-
6214	BA682	-	-	-
6215	BA682	-	-	-
6225	BA423L	-	-	BA423L
6231	BA423L	BA423L	-	BA423L
7235	SAA1300	SAA1300	-	* SAA1300
7242	BC548C	BC548C	-	BC548C
9203	WRE JMP	WRE JMP	-	* WRE JMP
9204	WRE JMP	WRE JMP	-	* WRE JMP
9205	WRE JMP	WRE JMP	-	* WRE JMP
9213	WRE JMP	WRE JMP	-	* WRE JMP
9214	WRE JMP	WRE JMP	-	* WRE JMP
9227	WRE JMP	WRE JMP	-	* WRE JMP
9237	WRE JMP	WRE JMP	-	* WRE JMP
9238	WRE JMP	WRE JMP	-	* WRE JMP

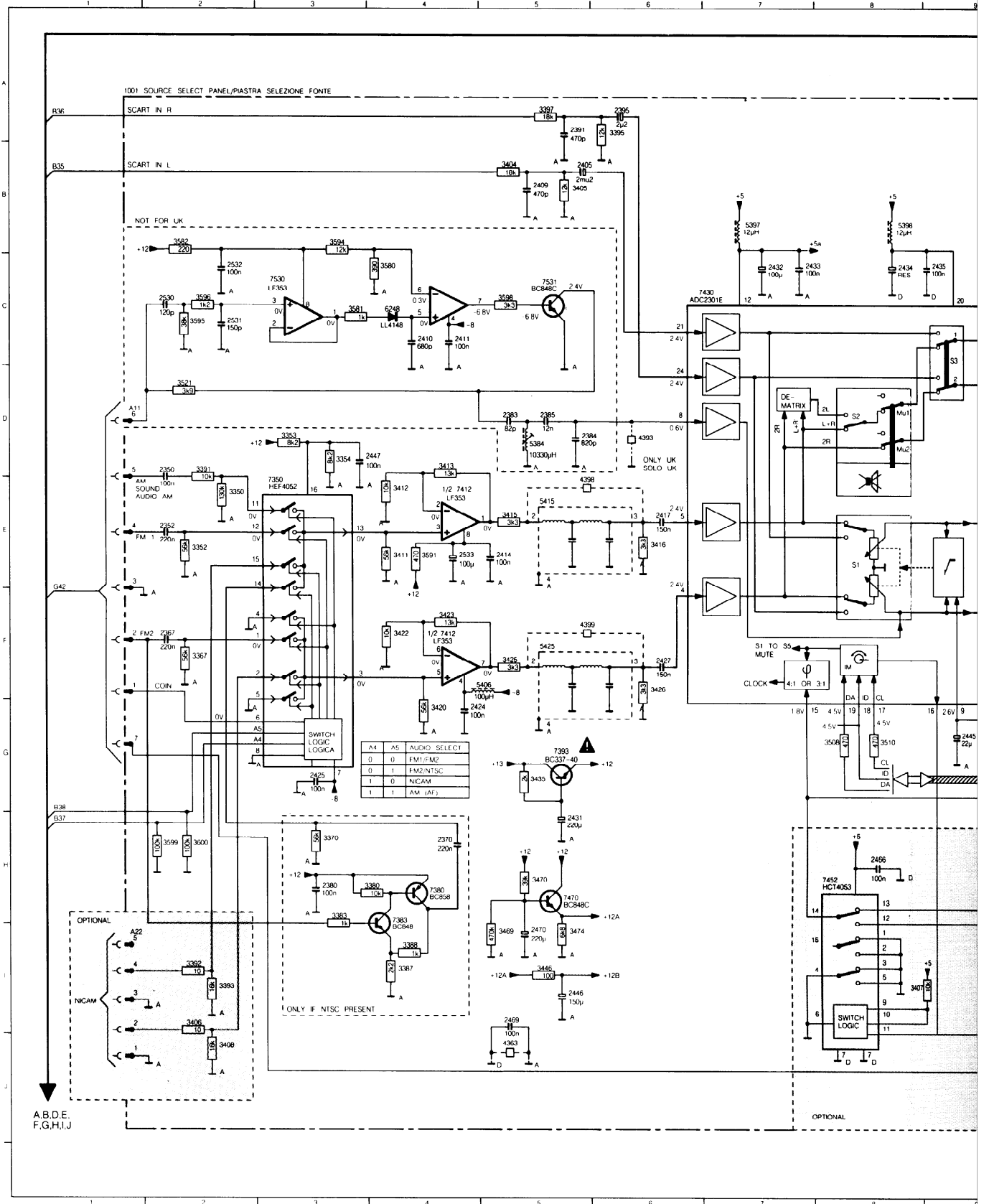
REMARKS: * -OPTIONAL (ADDED BY SERVICE)
 µ-OMITTED IF OPTION IS BUILT IN
 A=1% VERSION
 B=2% VERSION
 C=5% VERSION



CHASSIS D16-III

DIAGRAM-SCHALTBILD-SCHEMA C

1350-A15	2107-B22	2140-E21	2150-E22	2192-I22	2365-A15	2391-B5	2417-E6	2434-C8	2445-G9	2453-B14	2460-E13	2468-D15	2477-B18	2491-F16	2516-H18	2525-
2100-A20	2108-B22	2141-E21	2153-E24	2195-I20	2367-F2	2395-A6	2424-G4	2435-C9	2446-I5	2454-B14	2461-E14	2469-I5	2478-I15	2505-G15	2517-H14	2526-
2101-A21	2110-A23	2142-F20	2154-E26	2196-I20	2370-H4	2405-B5	2425-G3	2436-C10	2447-E3	2455-B14	2462-E14	2470-I5	2480-I10	2510-I15	2518-J15	2527-
2102-A21	2112-A23	2143-F21	2160-C20	2197-I24	2380-H3	2409-B5	2427-F6	2437-B11	2449-D14	2456-B15	2463-E15	2471-C17	2481-E17	2511-H15	2519-J16	2528-
2103-B20	2113-A26	2144-F21	2162-D20	2198-I24	2383-D5	2409-B5	2427-F6	2438-B11	2450-D12	2457-B15	2464-E15	2472-C18	2482-E17	2512-I16	2520-I17	2530-
2104-B21	2137-D23	2146-F22	2165-C20	2350-E2	2384-D5	2411-C4	2432-C7	2439-F10	2451-B13	2458-E12	2465-F16	2473-I15	2484-D19	2513-H18	2522-H18	2531-
2105-B21	2139-E20	2147-F22	2191-I23	2352-E2	2385-D5	2414-E5	2433-C7	2440-E10	2452-B13	2459-E13	2466-H8	2474-B19	2490-E17	2515-G11	2524-H18	2532-

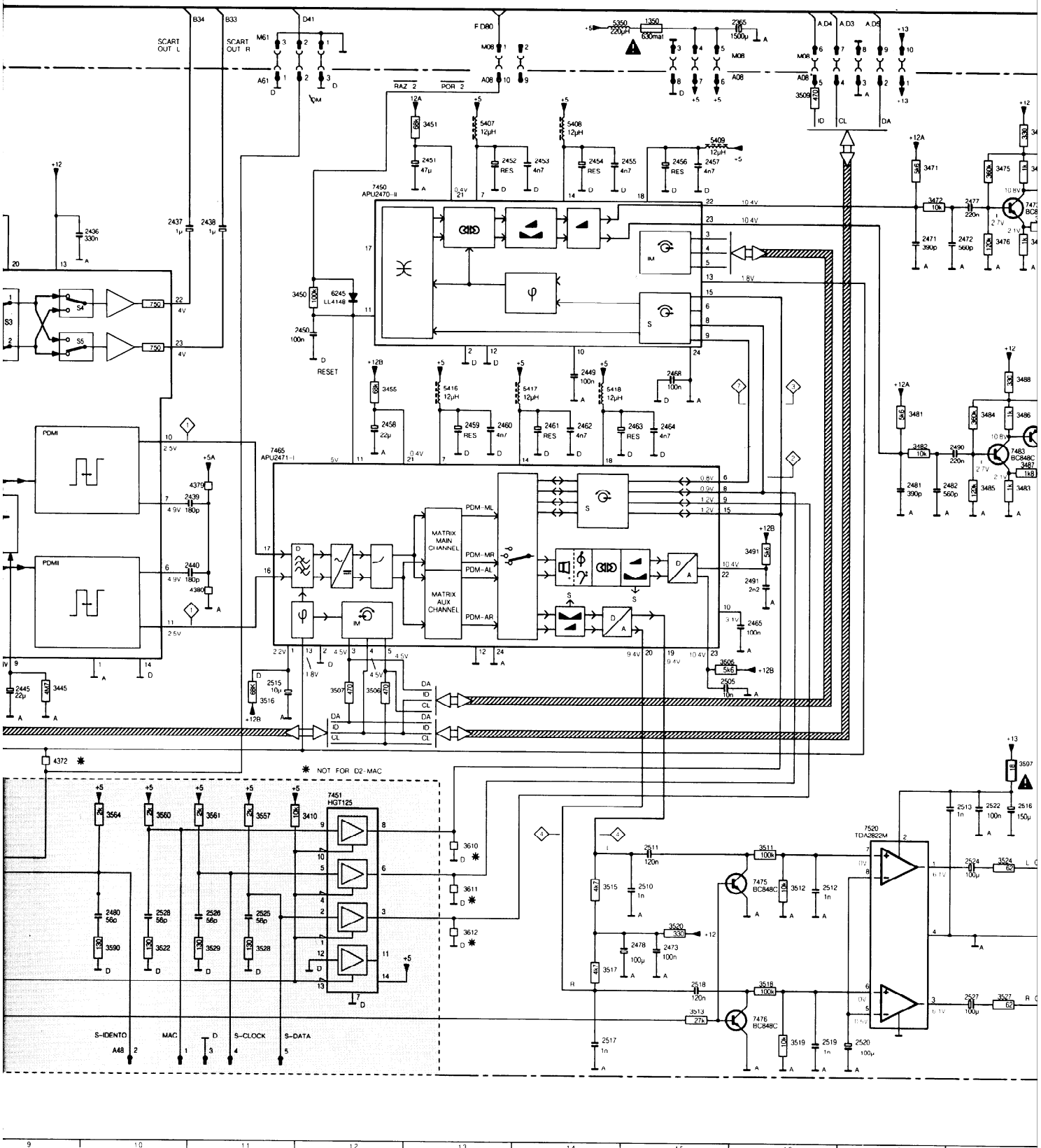


AB,D,E,
F,G,H,I,J

OPTIONAL

ASSIS D16-III

2525-I11	2533-E4	3112-B23	3121-C22	3134-D24	3148-F22	3163-B22	3195-I20	3370-H3	3393-I2	3408-J2	3420-G4	3446-I5	3472-B17	3481-D17	3488-D18	3510-G8	3518-J16
2526-I11	3100-A20	3114-A25	3122-C22	3135-C22	3149-F22	3184-D24	3196-I20	3380-I4	3395-A6	3410-H12	3422-F4	3450-C12	3473-C18	3482-E17	3481-F16	3511-H16	3519-J16
2527-J18	3101-A21	3115-B25	3123-C23	3136-C22	3153-F24	3185-B24	3350-E2	3383-I3	3397-A5	3411-E4	3423-F4	3451-B13	3474-I5	3483-E18	3505-G15	3512-I16	3520-I15
2528-I10	3104-B21	3116-A24	3124-D23	3138-E20	3154-E24	3185-I25	3352-E2	3387-I4	3404-B5	3412-E4	3425-F5	3455-D12	3475-B18	3484-D18	3506-G12	3513-J15	3521-D2
2530-C2	3106-B21	3118-C21	3131-D21	3140-E21	3155-E24	3186-I25	3353-D3	3388-I4	3405-B5	3413-D4	3426-G6	3459-I5	3476-C18	3485-F18	3507-G12	3515-I14	3522-I10
2531-C2	3108-B22	3119-C22	3132-D21	3143-F21	3156-F24	3191-I23	3354-D3	3391-E2	3406-I2	3415-E5	3435-G5	3470-H5	3477-B18	3486-D18	3508-G8	3516-G11	3524-H18
2532-C2	3109-B22	3120-C23	3133-D22	3145-F21	3157-F24	3192-I23	3367-F2	3392-I2	3407-I9	3416-E6	3445-G9	3471-B17	3478-B18	3487-E18	3509-A16	3517-I14	3527-I18
9	10	11	12	13	14	15	16	17	18								



3528-111	3580-C4	3596-C2	3612-113	4393-D6	5406-F4	5418-D14	6150-E25	7130-D21	7350-G3	7465-F12	7484-D18	9709-F26	A22-11	MO2-C26	PL02-A25
3529-111	3581-C4	3597-H1R	4100-R26	4398-E5	5407-B13	5425-F5	6245-C12	7133-D21	7380-H4	7470-H5	7520-J17	9715-A23	A47-H19	MO8-A13	PL11-121
3557-H11	3582-B2	3598-C5	4102-C26	4399-F5	5408-B14	5425-G6	6248-C4	7137-D22	7383-I3	7473-B18	7530-C4	9714-C25	A61-A11	MI4-F26	PL12-122
3560-H10	3590-I10	3599-H2	4383-115	5350-A14	5409-B15	6120-C23	7100-A22	7140-C22	7393-G5	7474-B18	7531-C5	9715-C26	H41-J21	MO3-E26	PL13-123
3561-H11	3591-E4	3600-H2	4372-G9	5384-D5	5415-E5	6136-D22	7122-C22	7141-C20	7412-E4	7475-115	9110-B26	A01-C13	H47-H20	MO4-C26	PL15-126
3564-H10	3594-B3	3610-H13	4370-E11	5397-B7	5416-D13	6137-D22	7123-C22	7142-C24	7430-G7	7476-J15	9700-F25	A08-A13	H50-H24	MO1-A11	SW1-C25
3573-C18	3595-C2	3611-113	4380-F11	5398-B8	5417-D14	6140-A23	7124-C23	7143-C24	7450-D12	7483-E18	9708-F24	A11-D1	MO1-A20	PL01-A26	

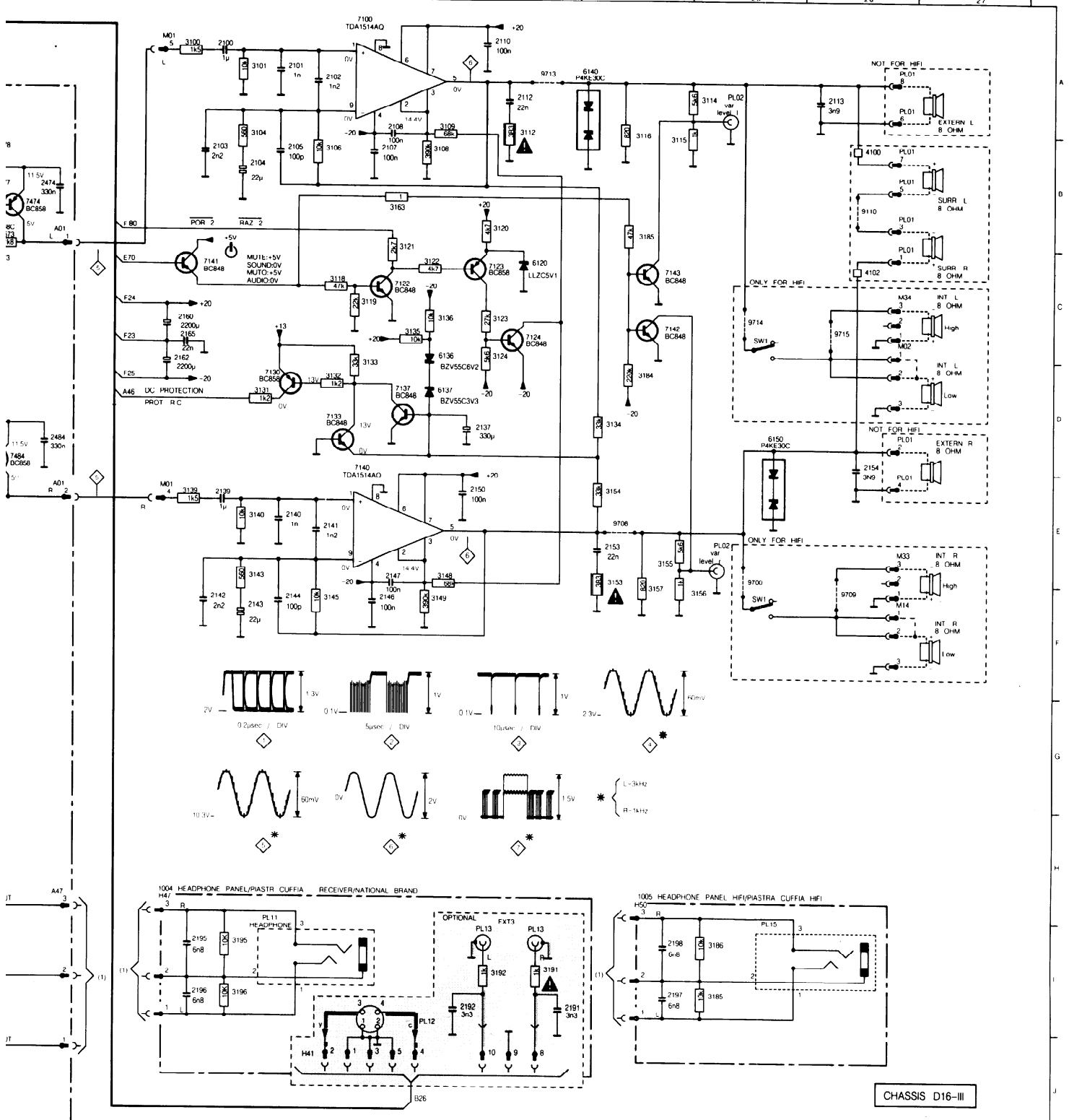
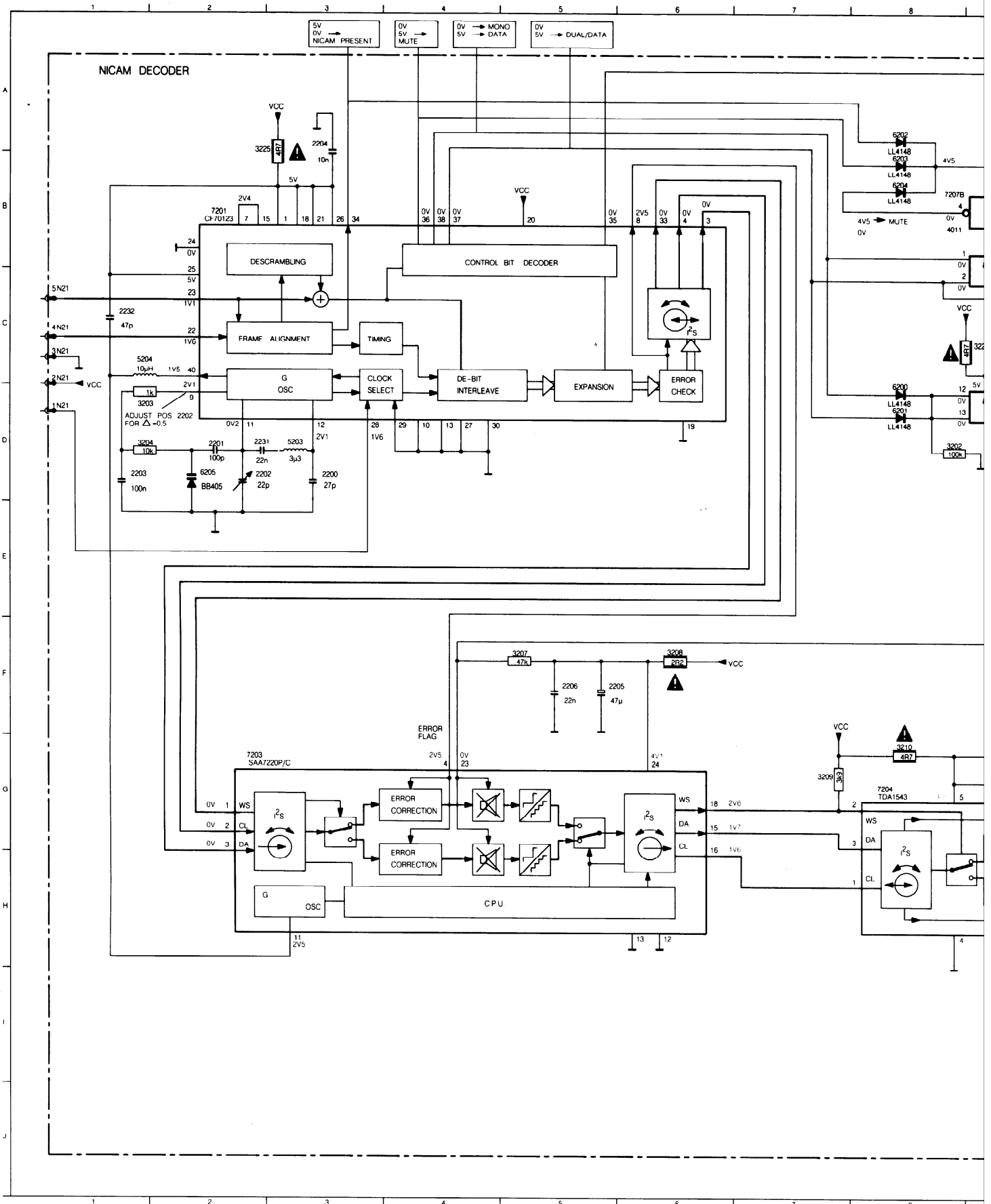
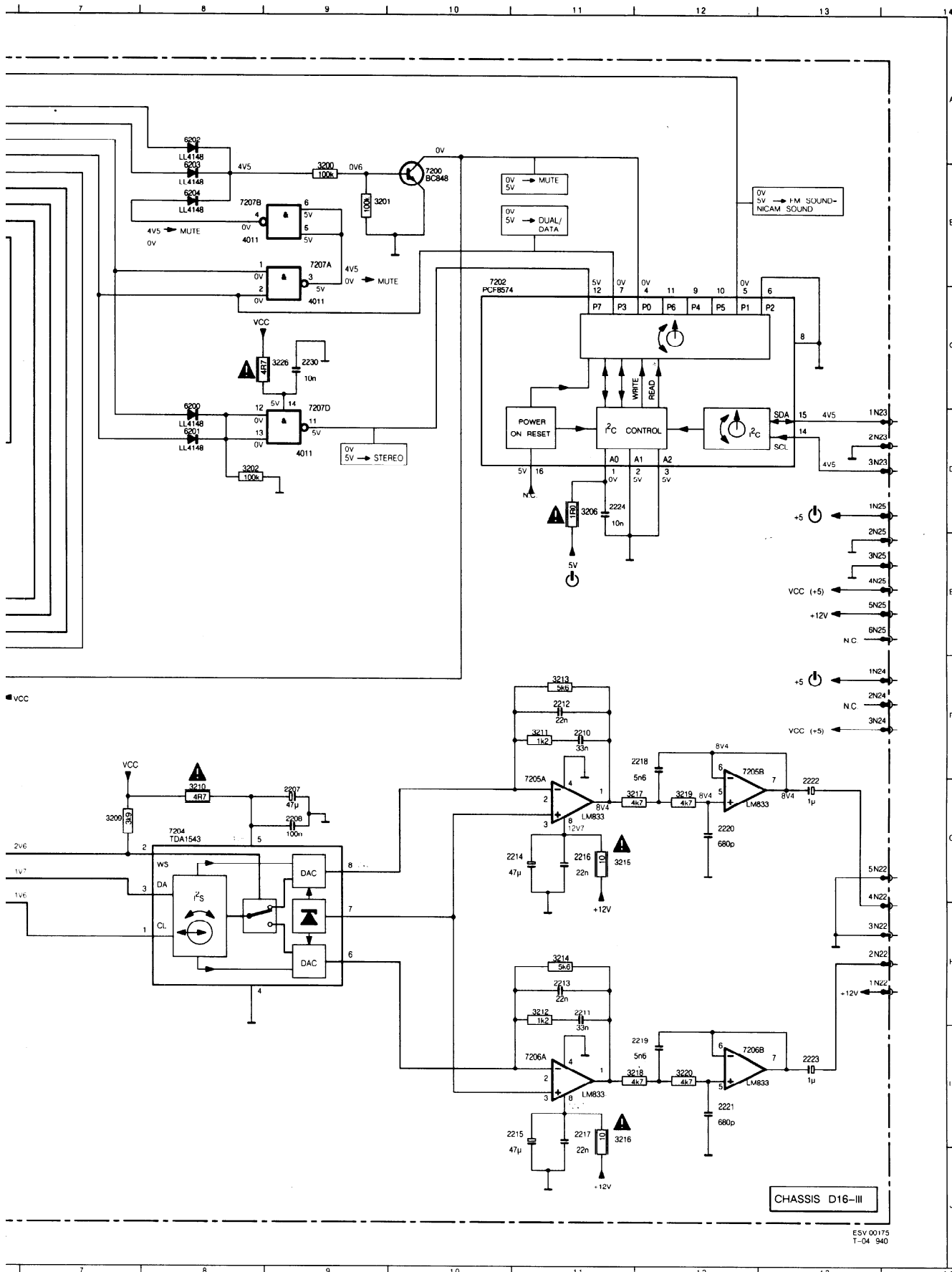


DIAGRAM-SCHALTBILD-SCHEMA I





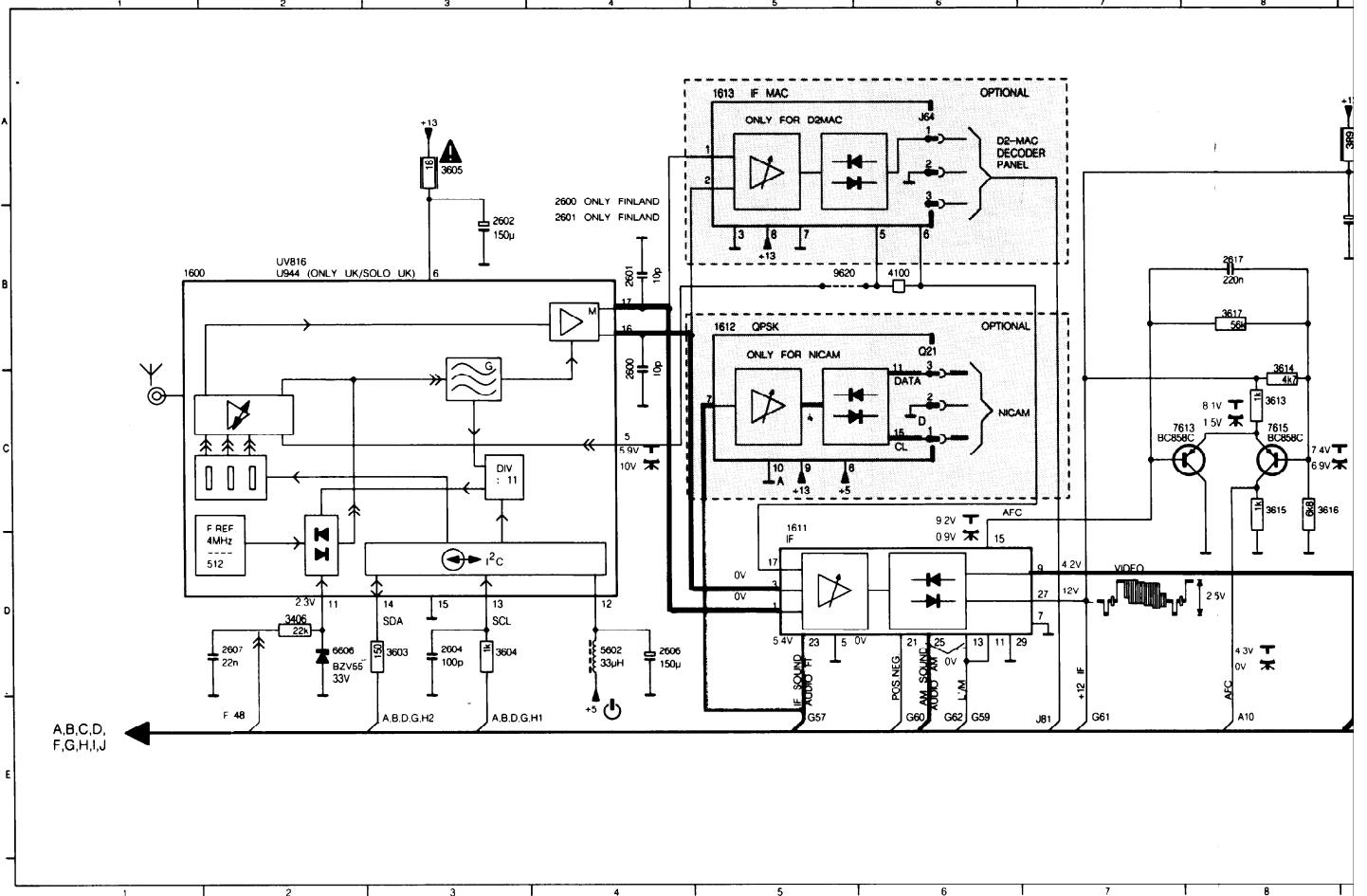
- 2200-D3
- 2201-D2
- 2202-D2
- 2203-D2
- 2204-B3
- 2205-F5
- 2206-F5
- 2207-G9
- 2208-G9
- 2210-F11
- 2211-H11
- 2212-F11
- 2213-H11
- 2214-G11
- 2215-J11
- 2216-G11
- 2217-J11
- 2218-G12
- 2219-I12
- 2220-G12
- 2221-I12
- 2222-G13
- 2223-I13
- 2224-D11
- 2230-C9
- 2231-D9
- 2232-B2
- 3200-B9
- 3201-B9
- 3202-D9
- 3203-D2
- 3204-D2
- 3206-E11
- 3207-F5
- 3208-F6
- 3209-G7
- 3210-G8
- 3211-F11
- 3212-H11
- 3213-F11
- 3214-H11
- 3215-G11
- 3216-J11
- 3217-G11
- 3218-I11
- 3219-G12
- 3220-I12
- 3225-B3
- 3226-C9
- 5203-D2
- 5204-G1
- 6200-D8
- 6201-D8
- 6202-A8
- 6203-B8
- 6204-B8
- 6205-D2
- 7200-B10
- 7201-D2
- 7202-D10
- 7203-H2
- 7204-H8
- 7205-G11
- 7206-J11
- 7207-B9
- N21-D1
- N22-I14
- N23-D14
- N25-E14

CHASSIS D16-III

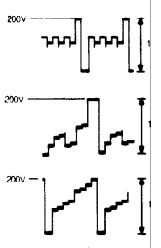
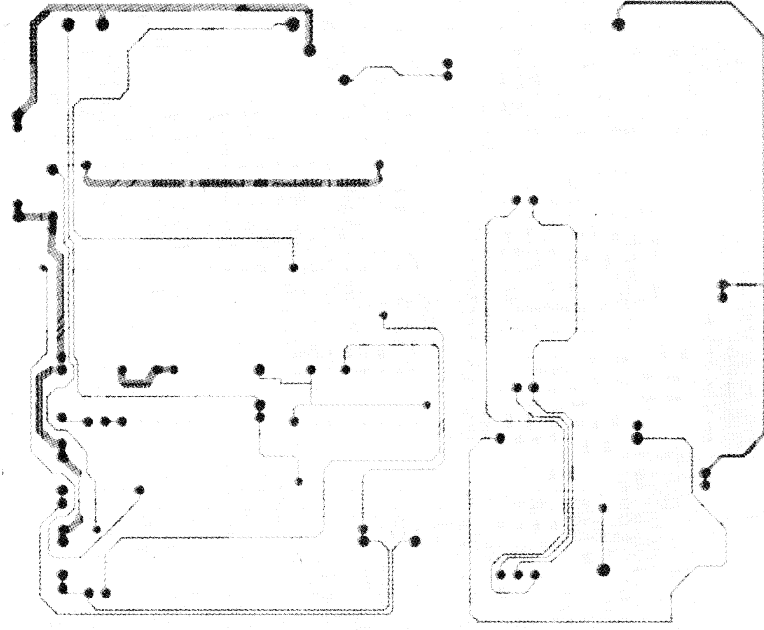
DIAGRAM-SCHALTBILD-SCHEMA E

20 CHASSIS D16-III 20 CHASSIS D16-

1599-A24	1613-A5	2602-B3	2612-B9	2626-C9	2640-B11	2912-D17	2930-D20	2943-C17	3604-D3	3614-C8	3624-A10	3634-C9	3642-C12	3900-D18	3910-B1
1600-D1	1930-D20	2604-D3	2617-B8	2628-C9	2641-C12	2914-B16	2935-D22	2946-C18	3605-A3	3615-D8	3625-A10	3635-C12	3670-D11	3901-D18	3911-C1
1611-D5	2600-B4	2606-D4	2624-B9	2635-C12	2642-C12	2924-A16	2937-D22	3406-D2	3612-A9	3616-D8	3627-B9	3639-A11	3671-D11	3908-C13	3912-D1
1612-C5	2601-B4	2607-D2	2625-B10	2639-B11	2670-D10	2929-A17	2938-D23	3603-D3	3613-C8	3617-B8	3628-B9	3641-B12	3672-D10	3909-B13	3913-C1

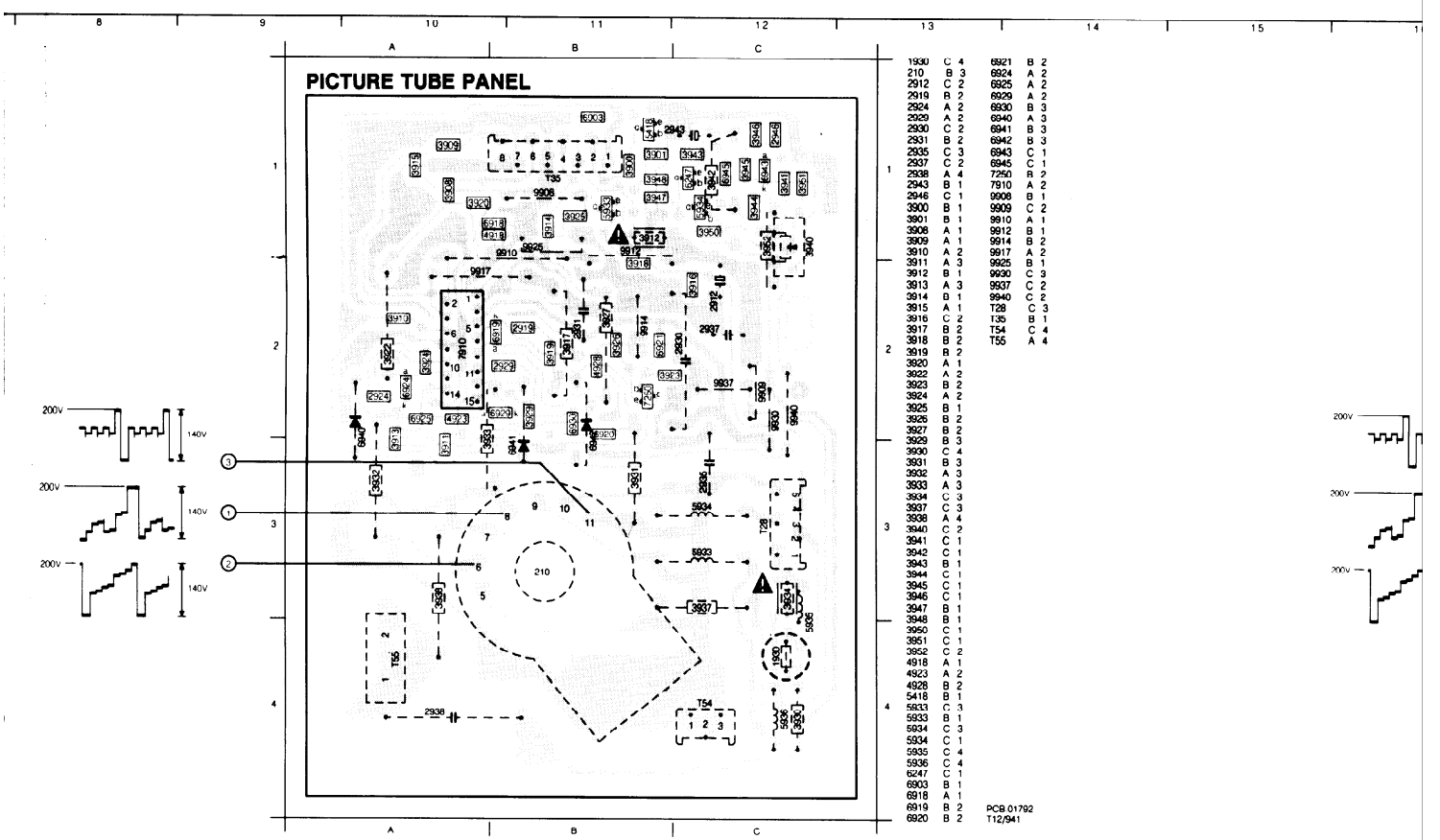
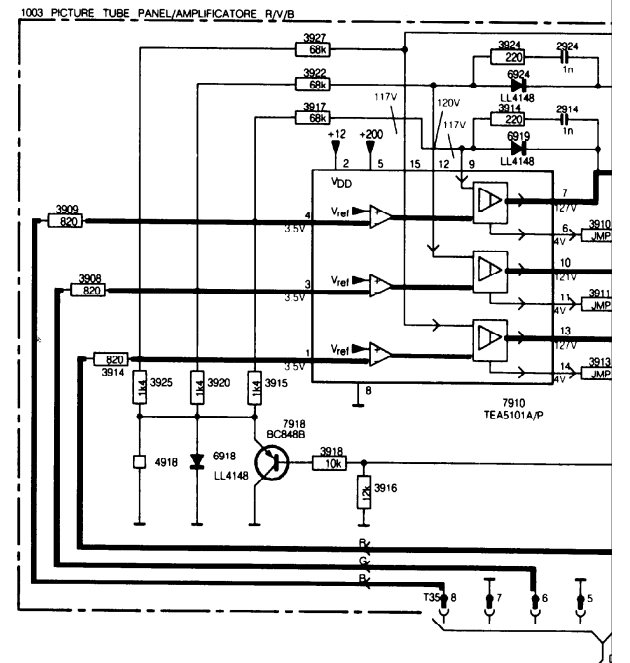
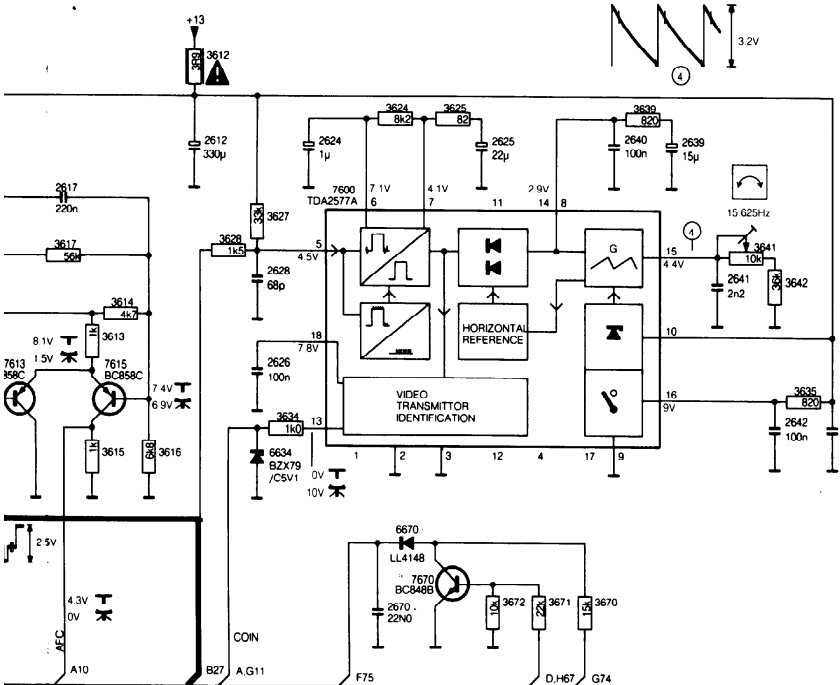


NICAM DECODER



20
CHASSIS D16-III

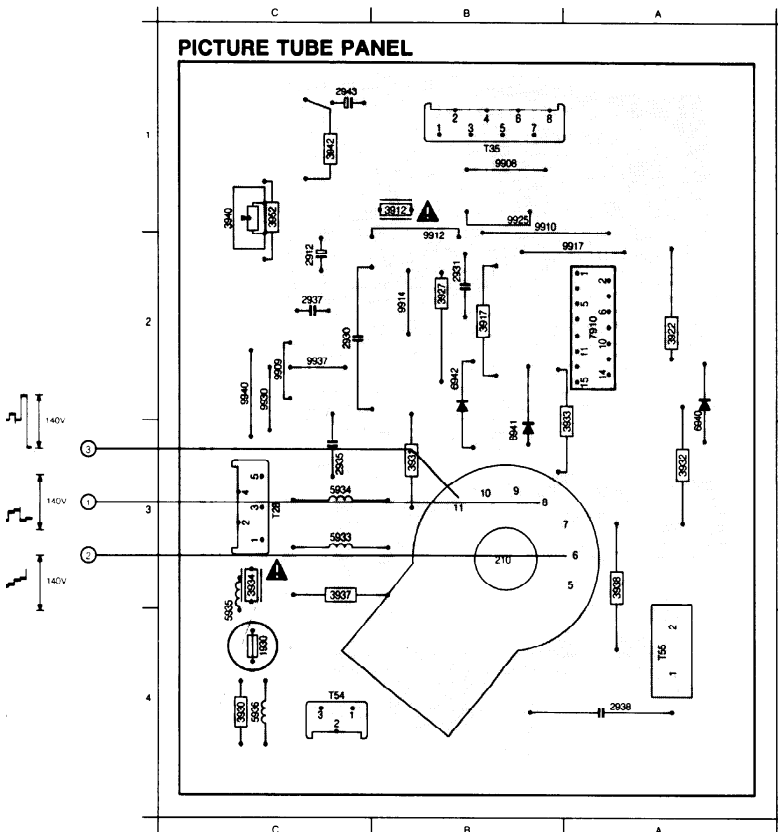
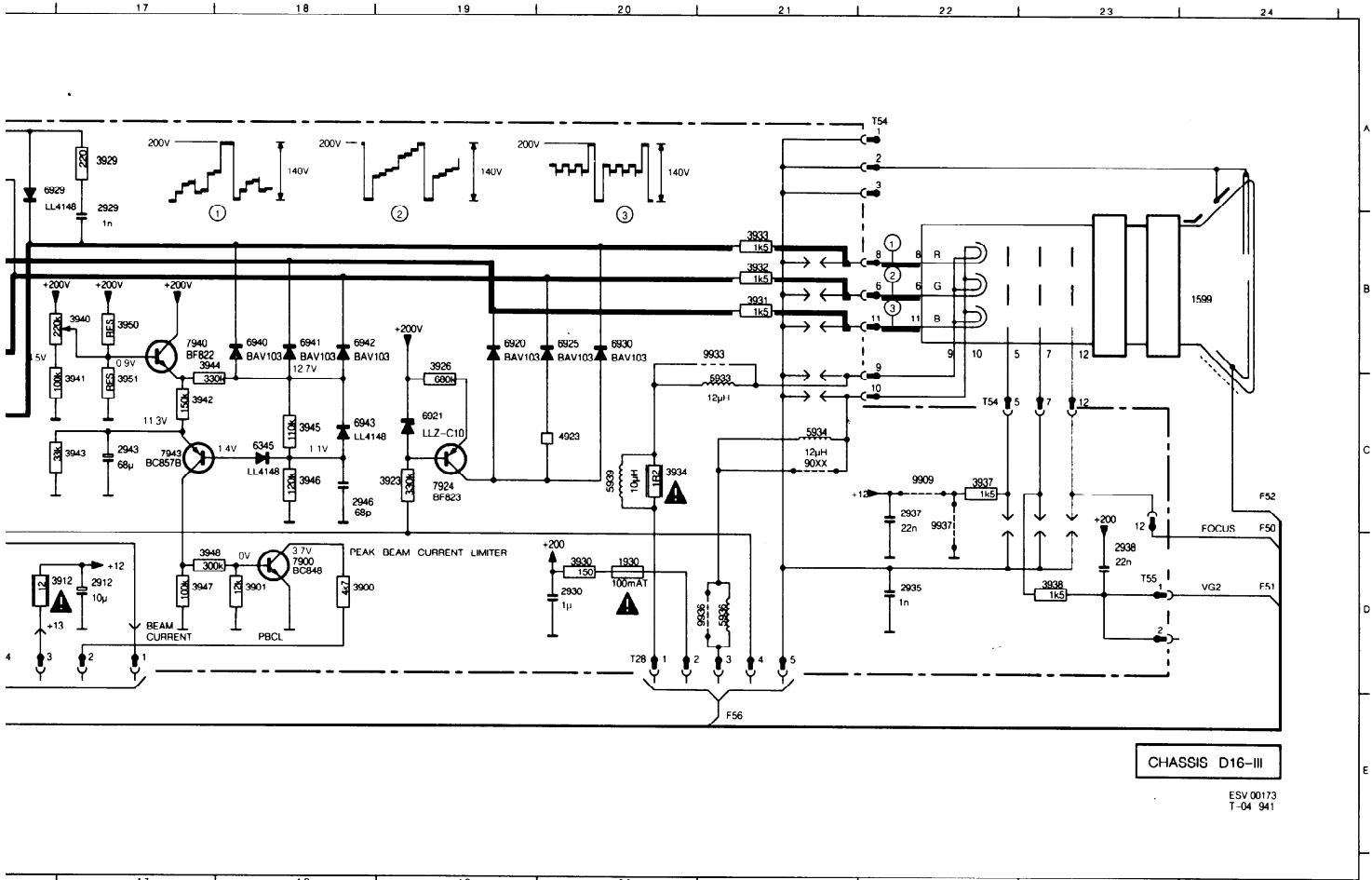
C12	3900-D18	3910-B16	3914-B15	3917-B14	3923-C19	3927-A14	3932-B21	3938-D23	3943-C17	3947-D17	4100-B6	5933-C21	6345-C18	6918-D14	6924-A16	6940-B1
D11	3901-D18	3911-C16	3914-C13	3918-D14	3924-A15	3929-A17	3933-B21	3940-B17	3944-C17	3948-D18	4918-D13	5934-C21	6606-D2	6919-B16	6925-B20	6941-B1
D10	3909-B13	3913-C16	3916-D15	3922-A14	3926-C19	3931-B21	3937-C22	3942-C17	3946-C18	3951-C17	5602-D4	5939-C20	6670-D10	6920-B19	6929-B16	6942-B1



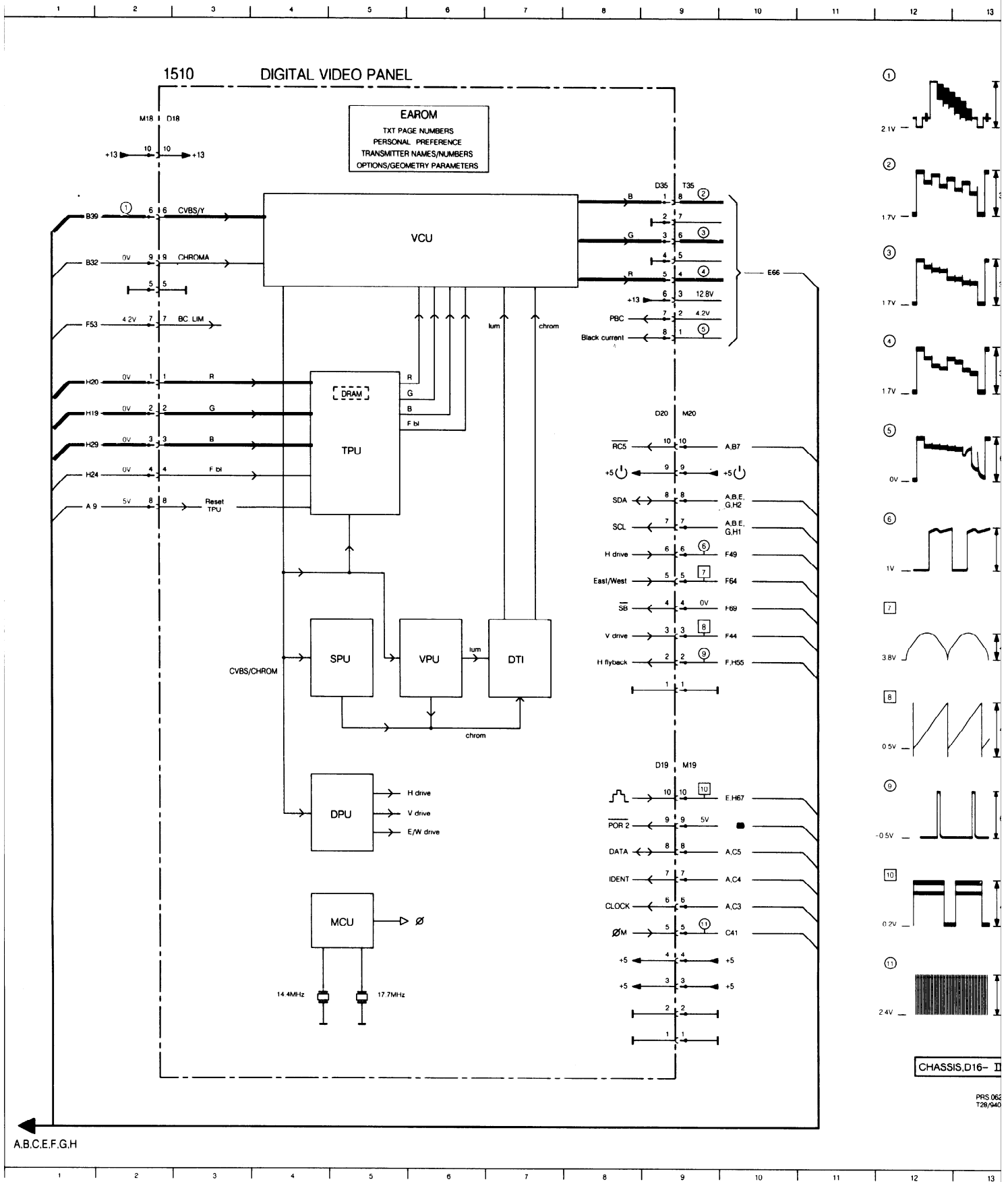
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210	B 3	6924	A 2
2912	C 2	6925	A 2
2919	R 2	6929	A 2
2924	A 2	6930	B 3
2929	A 2	6940	A 3
2930	C 2	6941	B 3
2931	C 2	6942	B 3
2935	C 1	6943	C 1
2937	C 2	6945	C 1
2938	A 4	7250	R 2
2943	B 1	7910	A 2
2946	C 1	6908	B 1
3000	B 1	9909	C 2
3901	B 1	9910	A 1
3906	A 1	9912	B 1
3909	A 1	9914	B 2
3910	A 2	9917	A 2
3911	A 3	9925	B 1
3912	B 1	9930	C 3
3913	A 3	9937	C 2
3914	B 1	9940	C 2
3915	A 1	125	C 3
3916	C 2	135	B 1
3917	B 2	T54	C 4
3918	B 2	T55	A 4
3920	A 1		
3922	A 2		
3923	A 2		
3924	A 2		
3925	B 1		
3926	B 2		
3927	B 2		
3929	B 3		
3930	C 4		
3931	A 3		
3932	A 3		
3933	A 3		
3934	C 3		
3937	C 3		
3938	A 4		
3940	C 1		
3941	C 1		
3942	C 1		
3943	B 1		
3944	C 1		
3945	C 1		
3946	C 1		
3947	B 1		
3948	B 1		
3950	B 1		
3951	C 1		
3952	C 2		
4918	A 1		
4923	A 2		
4928	B 2		
5418	B 1		
6903	B 1		
5933	B 3		
5934	C 3		
5935	C 1		
5936	C 4		
6247	C 1		
6903	B 1		
6918	A 1		
6919	B 2		
6920	B 2		

PCB 01792
T12/941

7600-C9	7900-D18	7940-B17	9909-C22	J64 -A6	T54 -A21
7613-C7	7910-C15	7943-C18	9933-B21	Q21 -A6	T54 -C22
7615-C8	7918-D14	90XX-C21	9936-D21	T28 -D20	T55 -C23
7670-D10	7924-C19	9620-B6	9937-C22	T35 -D15	T55 -D24



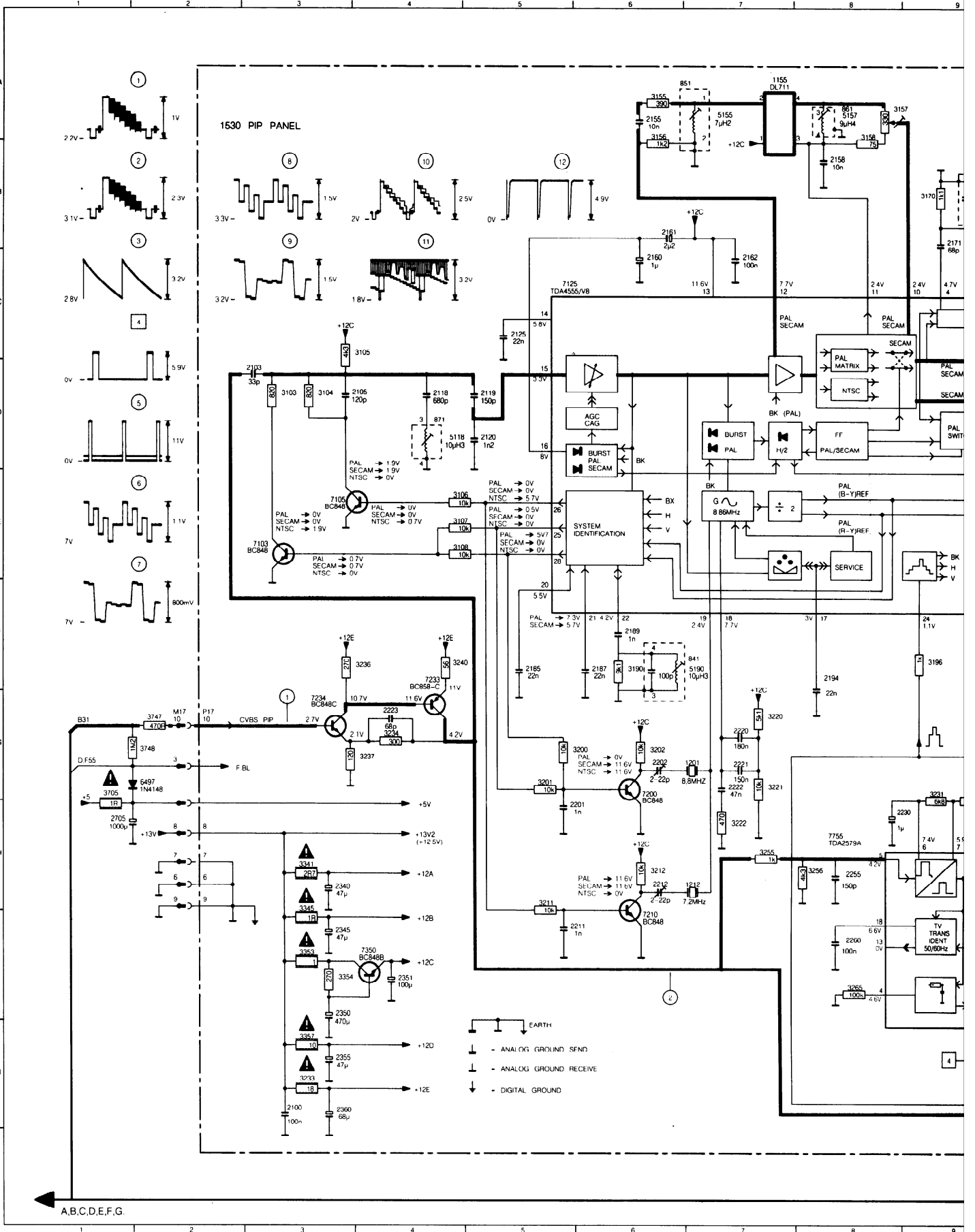
1930	C 4
210	B 3
2912	C 2
2930	C 2
2931	B 2
2935	C 3
2937	C 2
2938	A 4
2943	C 1
3812	B 1
3817	B 2
3822	A 2
3827	B 2
3830	C 4
3831	B 3
3832	A 3
3833	A 3
3834	C 3
3837	C 3
3838	A 4
3840	C 2
3842	C 1
3852	C 2
5833	C 3
5834	C 3
5835	C 4
5836	C 4
6940	A 3
6941	B 3
6942	B 2
7910	A 2
9908	B 2
9909	C 2
9910	B 1
9912	B 2
9914	B 2
9917	A 2
9925	B 1
9926	C 3
9937	C 2
9940	C 2
T28	C 3
T35	B 1
T54	C 4
T55	A 4

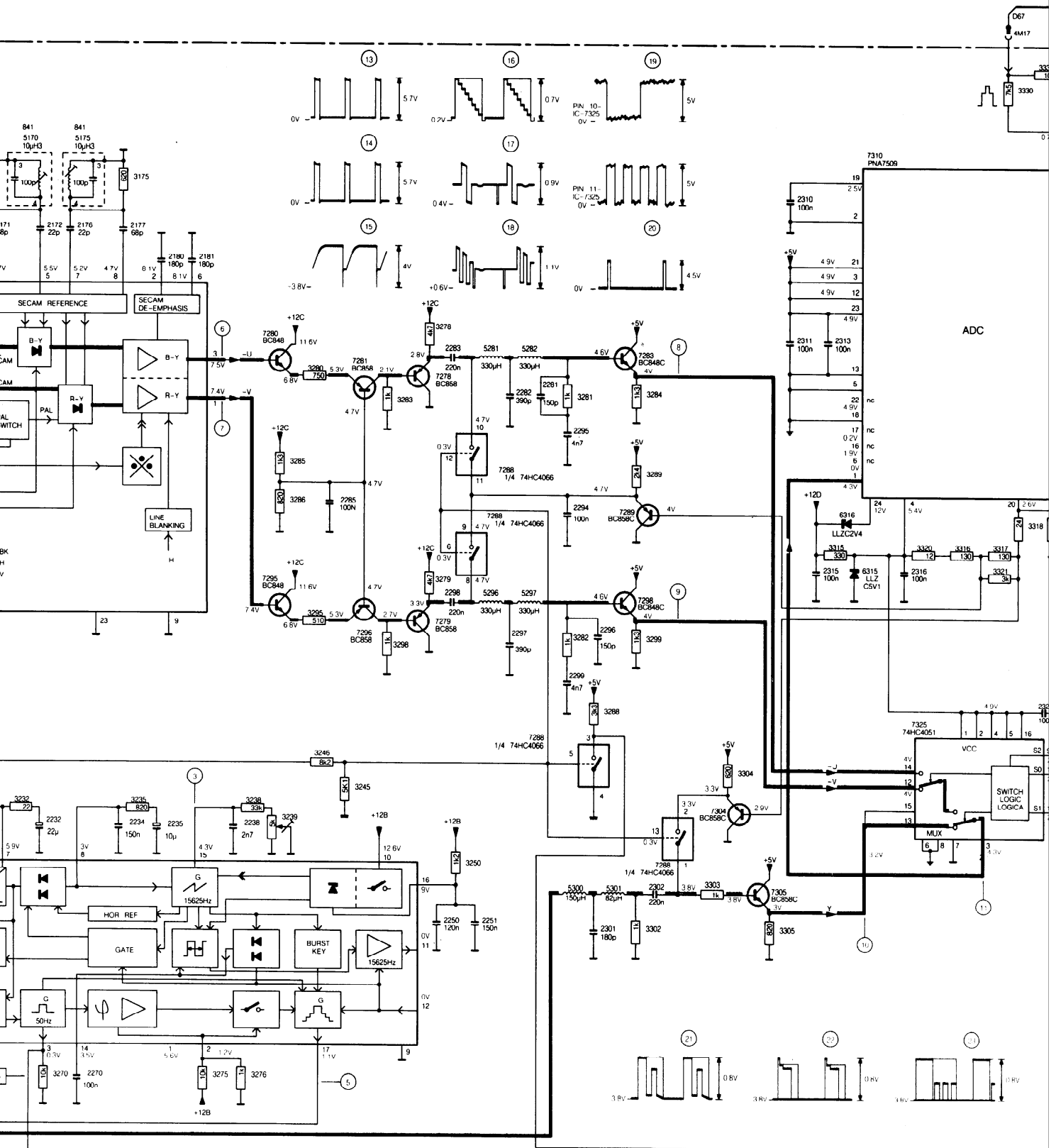


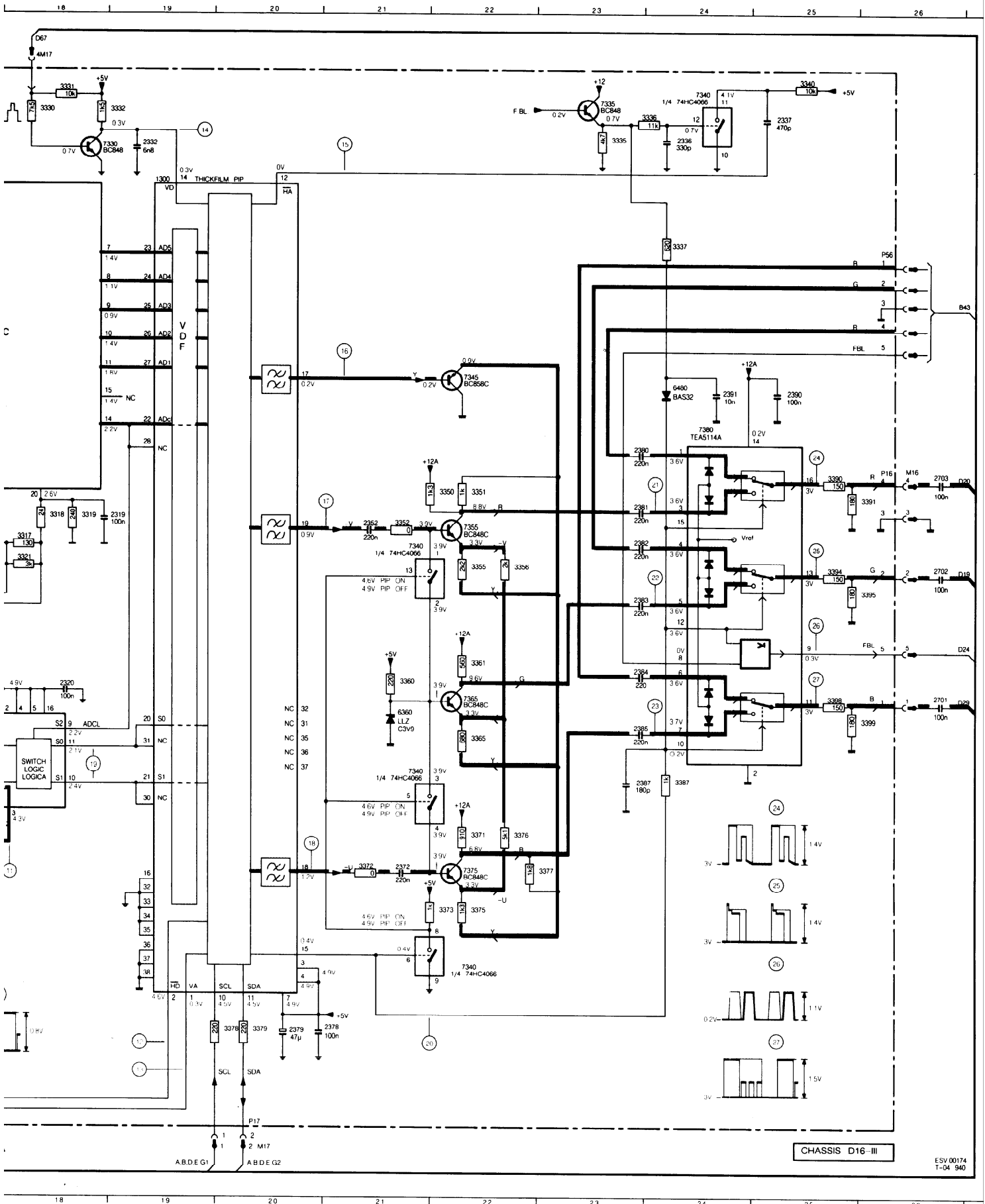
AB.C.E.F.G.H

CHASSIS D16- III

PRS 062
728/940

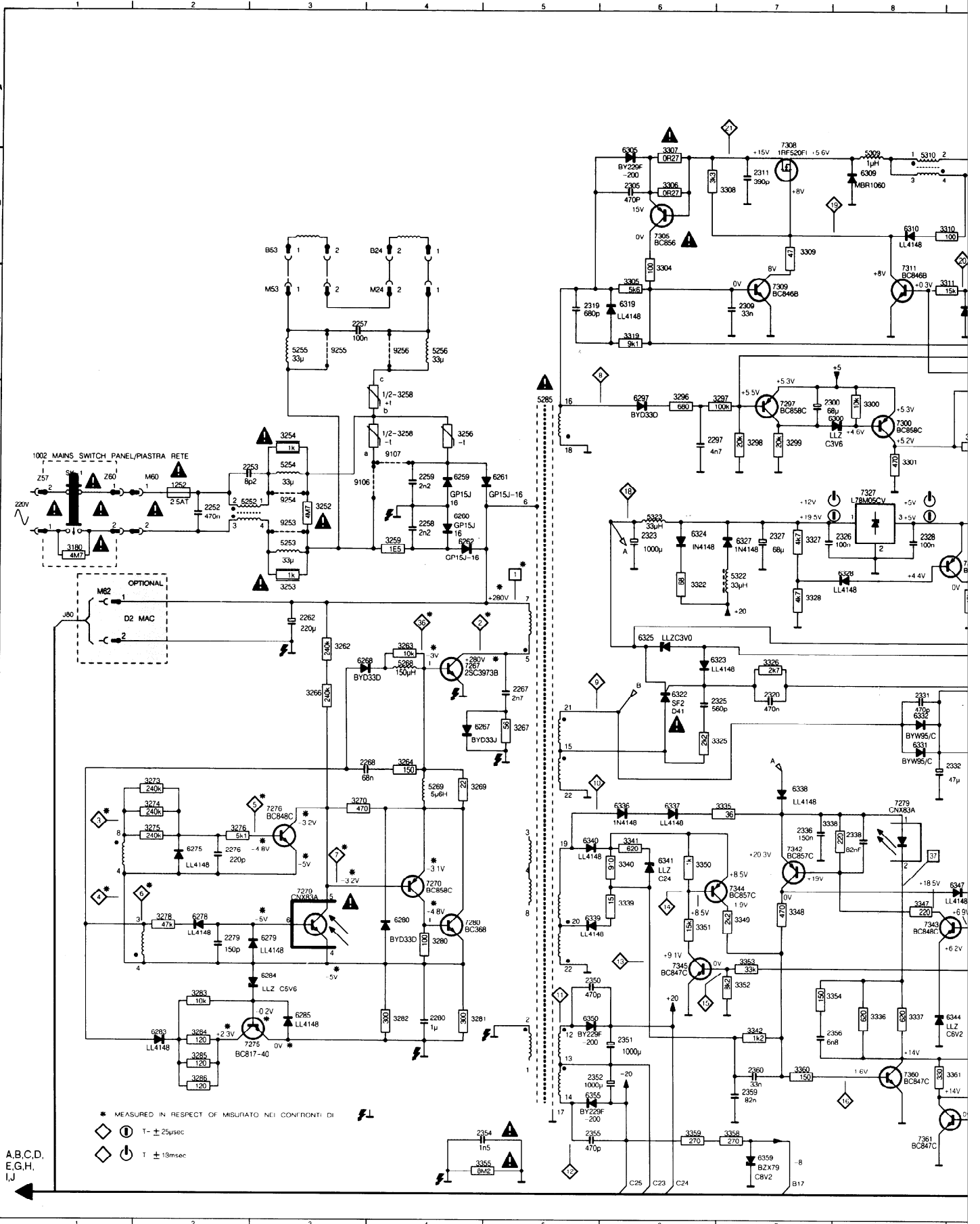






CHASSIS D16-III

ESV 00174
T-04 940

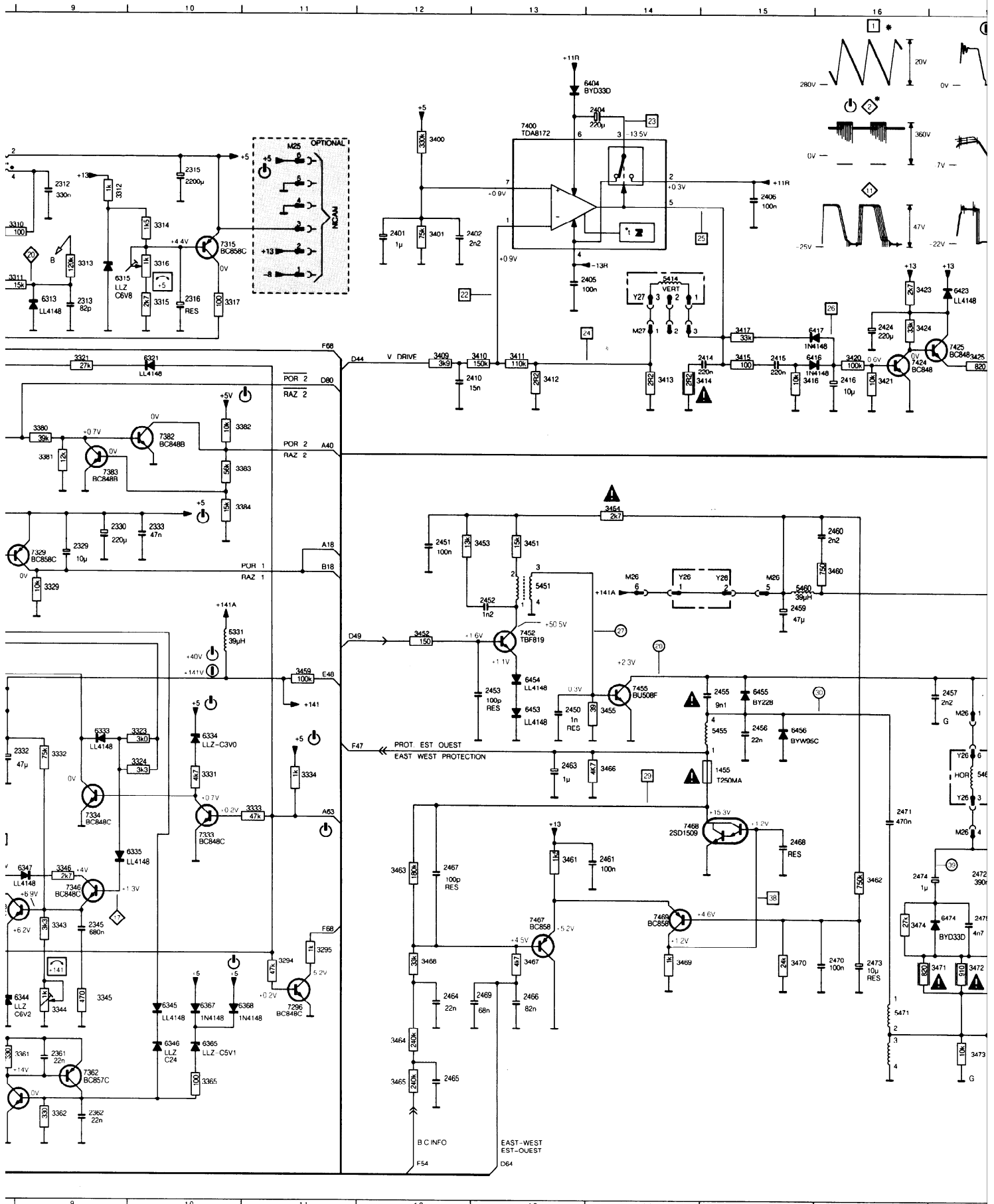


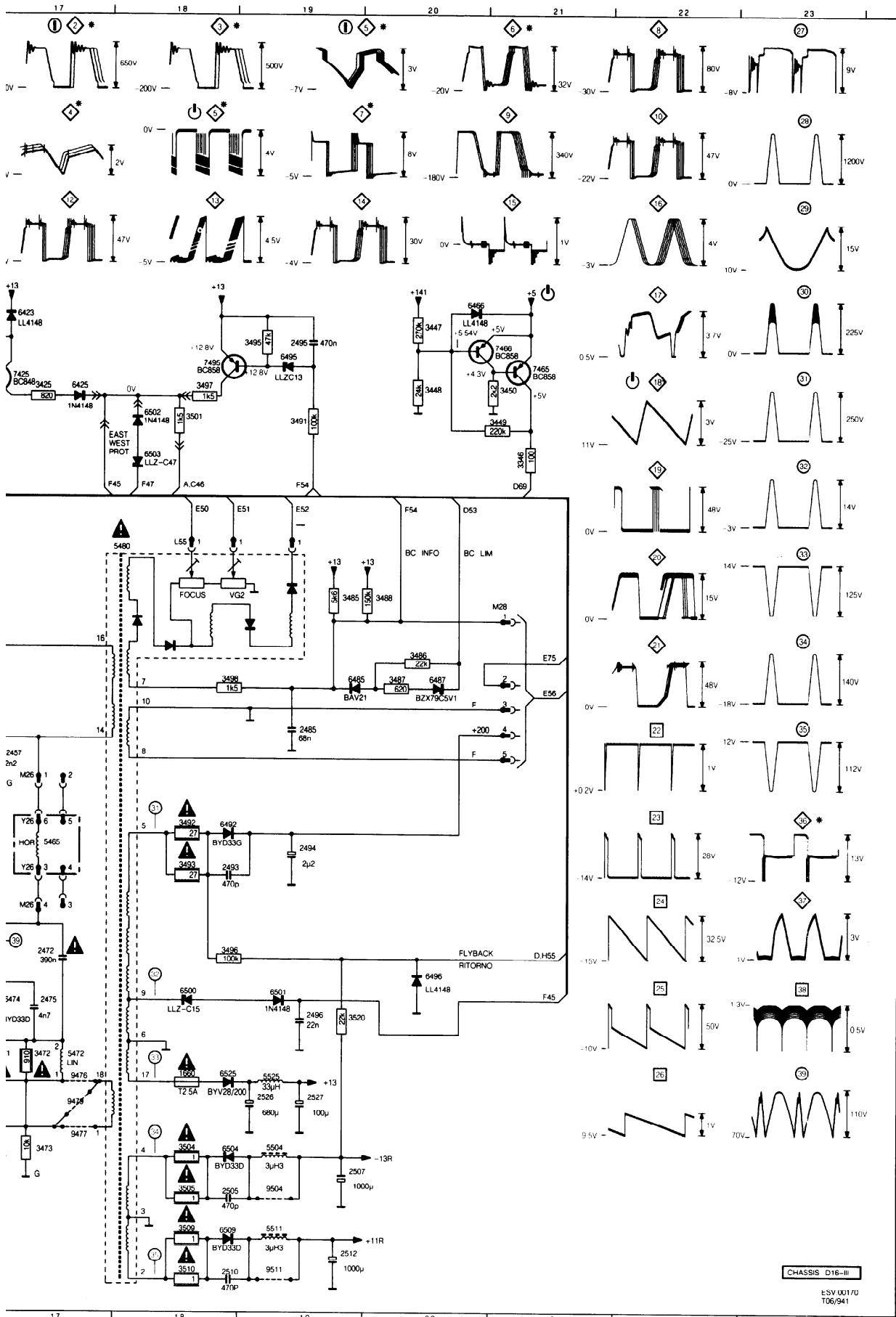
* MEASURED IN RESPECT OF MISURATO NEI CONFRONTI DI f_L

◇ T ± 25µsec

◇ T ± 18msec

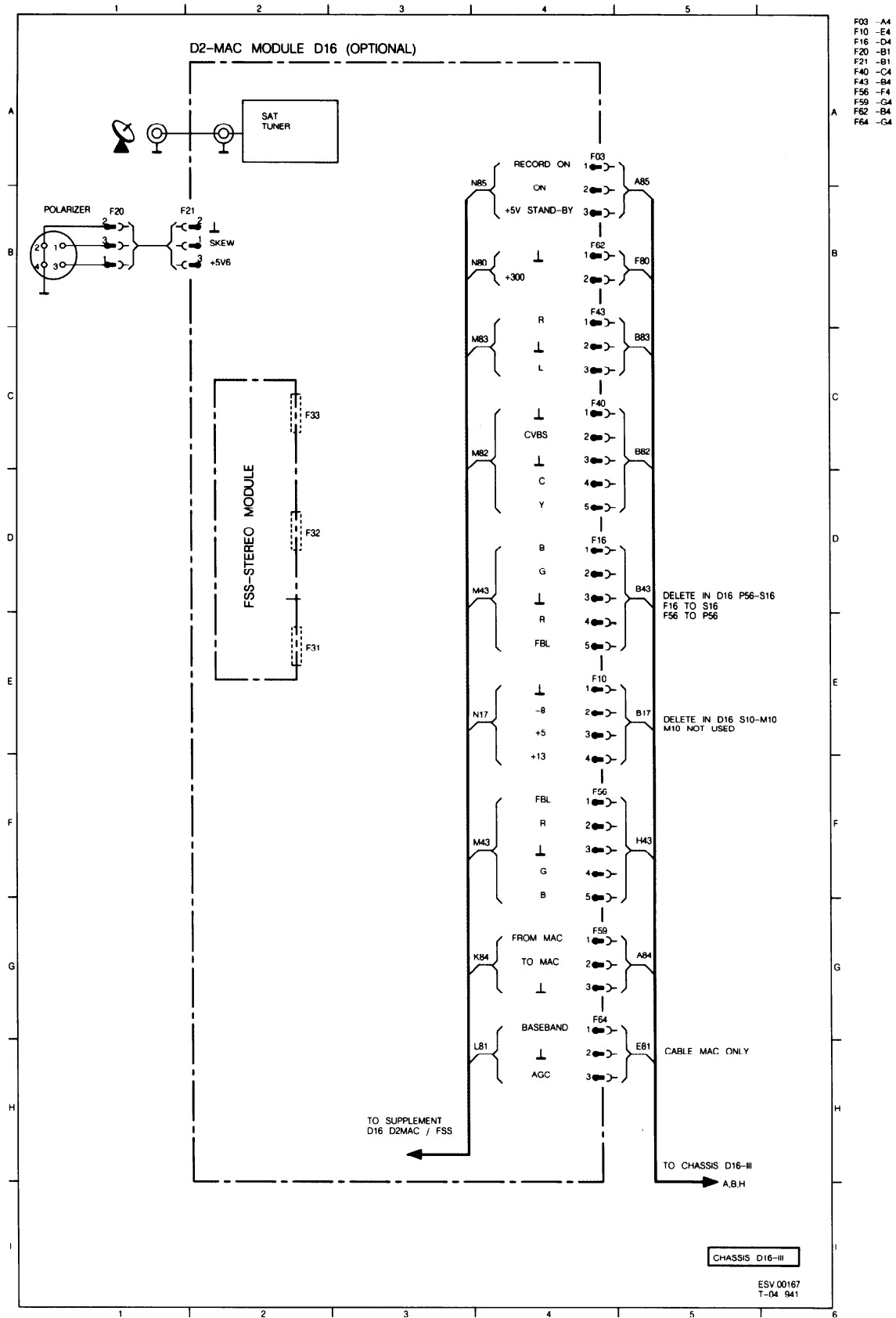
A,B,C,D,
E,G,H,
I,J





1252-D2	3323-G9	6315
1455-G15	3324-G8	6319
1660-I18	3325-G6	6321
2252-E2	3326-F7	6322
2253-D2	3327-E7	6323
2257-C3	3328-F7	6324
2258-E4	3329-F9	6325
2259-E4	3330-H8	6327
2262-F3	3331-G10	6328
2267-F5	3332-W9	6331
2268-G3	3333-G10	6332
2276-H2	3334-G11	6333
2279-H2	3335-G7	6334
2280-I4	3336-I8	6335
2300-D7	3338-H8	6337
2305-B6	3339-H8	6338
2309-C7	3340-H8	6339
2310-B7	3341-H6	6340
2311-B7	3342-I7	6341
2312-B9	3343-H9	6344
2313-C9	3344-I9	6345
2315-B10	3346-D21	6347
2319-C5	3346-H9	6350
2320-F7	3347-H8	6355
2321-F8	3348-H7	6359
2324-F9	3349-H7	6365
2325-F6	3350-H6	6367
2326-E7	3351-H6	6368
2327-E7	3352-I7	6404
2328-E9	3353-I7	6416
2329-E9	3354-I7	6417
2330-E9	3355-J4	6423
2331-F8	3356-I9	6425
2332-G8	3359-J6	6453
2333-E10	3360-I7	6454
2336-H7	3361-J8	6455
2337-H8	3362-I9	6456
2345-H9	3365-J10	6466
2350-I5	3380-D9	6474
2351-I6	3381-D9	6485
2352-J6	3382-D10	6487
2353-I5	3383-D10	6492
2354-J4	3384-E10	6495
2355-J5	3400-B12	6496
2356-I7	3401-B12	6500
2359-J7	3409-C12	6501
2360-I7	3410-C12	6502
2361-J9	3411-C13	6503
2362-J8	3412-B13	6504
2401-B12	3413-D14	6509
2402-B12	3414-D14	6524
2404-A14	3415-C15	6525
2405-C13	3416-D15	6527
2406-B15	3417-C16	6528
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2414-C14	3421-D16	6530
2415-C15	3422-C16	6531
2416-D16	3424-C16	6532
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2452-F13	3450-C21	6537
2453-F12	3451-E13	6538
2454-F13	3452-F13	6539
2455-F15	3453-E12	6540
2456-G15	3454-E14	6541
2457-F17	3455-G14	6542
2458-F19	3456-F19	6543
2460-E16	3460-E16	6544
2461-H14	3461-H14	6545
2463-G13	3462-H16	6546
2464-H12	3463-H15	6547
2465-J12	3464-I12	6548
2466-I13	3465-I12	6549
2467-H12	3466-G14	6550
2468-H15	3467-I13	6551
2469-I13	3468-I12	6552
2470-I16	3469-I14	6553
2471-H16	3470-I15	6554
2472-H17	3471-I17	6555
2473-I16	3472-I17	6556
2474-H17	3473-I17	6557
2475-H17	3474-H16	6558
2476-F19	3475-E19	6559
2493-G18	3486-F20	6560
2494-G19	3487-F20	6561
2495-C19	3488-E20	6562
2496-I19	3489-D19	6563
2505-J18	3492-G18	6564
2507-J19	3493-G18	6565
2510-J18	3495-C19	6566
2512-J19	3496-H18	6567
2525-I18	3497-C18	6568
2526-I19	3498-I18	6569
2527-I19	3501-D18	6570
3180-E1	3504-I18	6571
3252-E3	3505-I18	6572
3253-E3	3509-J18	6573
3254-D3	3510-J18	6574
3256-D4	3520-I19	6575
3258-D4	4323-F6	6576
3259-E4	5252-E2	6577
3262-F3	5253-E3	6578
3263-F4	5254-D3	6579
3264-G4	5255-C3	6580
3266-F3	5256-C4	6581
3267-C5	5268-F4	6582
3269-G4	5269-B8	6583
3270-G3	5285-D5	6584
3273-G2	5285-H2	6585
3274-G2	5285-I5	6586
3275-G2	5309-B8	6587
3276-G2	5310-B8	6588
3278-H2	5322-E7	6589
3280-H4	5323-E6	6590
3281-I4	5331-I10	6591
3282-I4	5414-C14	6592
3283-I2	5451-E13	6593
3284-I2	5455-G15	6594
3285-G1	5480-E15	6595
3285-I2	5465-G17	6596
3286-J2	5471-I16	6597
3294-I11	5472-I17	6598
3295-I11	5480-E19	6599
3296-D6	5480-F18	6600
3297-D6	5504-I19	6601
3298-D7	5511-J19	6602
3299-D7	5525-I19	6603
3300-D8	6259-D4	6604
3301-D8	6260-E4	6605
3304-C6	6261-E5	6606
3305-C6	6262-E5	6607
3306-B6	6267-G4	6608
3307-B6	6268-F4	6609
3308-B6	6275-G2	6610
3309-C7	6278-H2	6611
3310-B8	6279-H3	6612
3311-C8	6280-H4	6613
3312-B9	6281-I2	6614
3313-C9	6284-I3	6615
3314-B10	6285-I3	6616
3315-C10	6297-D6	6617
3316-C10	6300-D8	6618
3317-C10	6305-B6	6619
3319-C6	6309-B8	6620
3321-C9	6310-B8	6621
3322-E6	6313-C9	6622

CHASSIS D16-III
ESV 00170
T06/941



LIST OF ERROR MESSAGES

Description of error	Error message				
	Screen	Blinking LED indication			
		std-by	on	txt	rgb
IC7130, PCF8574	ERROR 1				X
IC7655, PCF8574 (Several switching signals)	ERROR 2			X	
IC7103, EAROM, X2404	ERROR 3			X	X
Not used	ERROR 4		X		
IC7160, TPU	ERROR 5		X		X
IC7150, 80C31 μ proc. internal RAM	ERROR 6		X	X	
IC7190, MSM5128RS external RAM	ERROR 7		X	X	X
+5V digiboard, $\overline{\text{POR2}}$	ERROR 8	X			
IM-bus	ERROR 9	X			X
I ² C-bus	ERROR 10	X		X	
UV816, Tuner	ERROR 11	X		X	X
RC-input IC7150	ERROR 12	X	X		
IC7235, SAA1300	ERROR 13	X	X		X
PIP thick film U1300	ERROR 14	X	X	X	
PROTECTION	ERROR 15	X	X	X	X
Nicam I/O expander	ERROR 16				
IC7200/IC7201 strobe error	ERROR 17				X
D ² B-bus, IC7260	ERROR 18			X	
Uart	ERROR 19			X	X

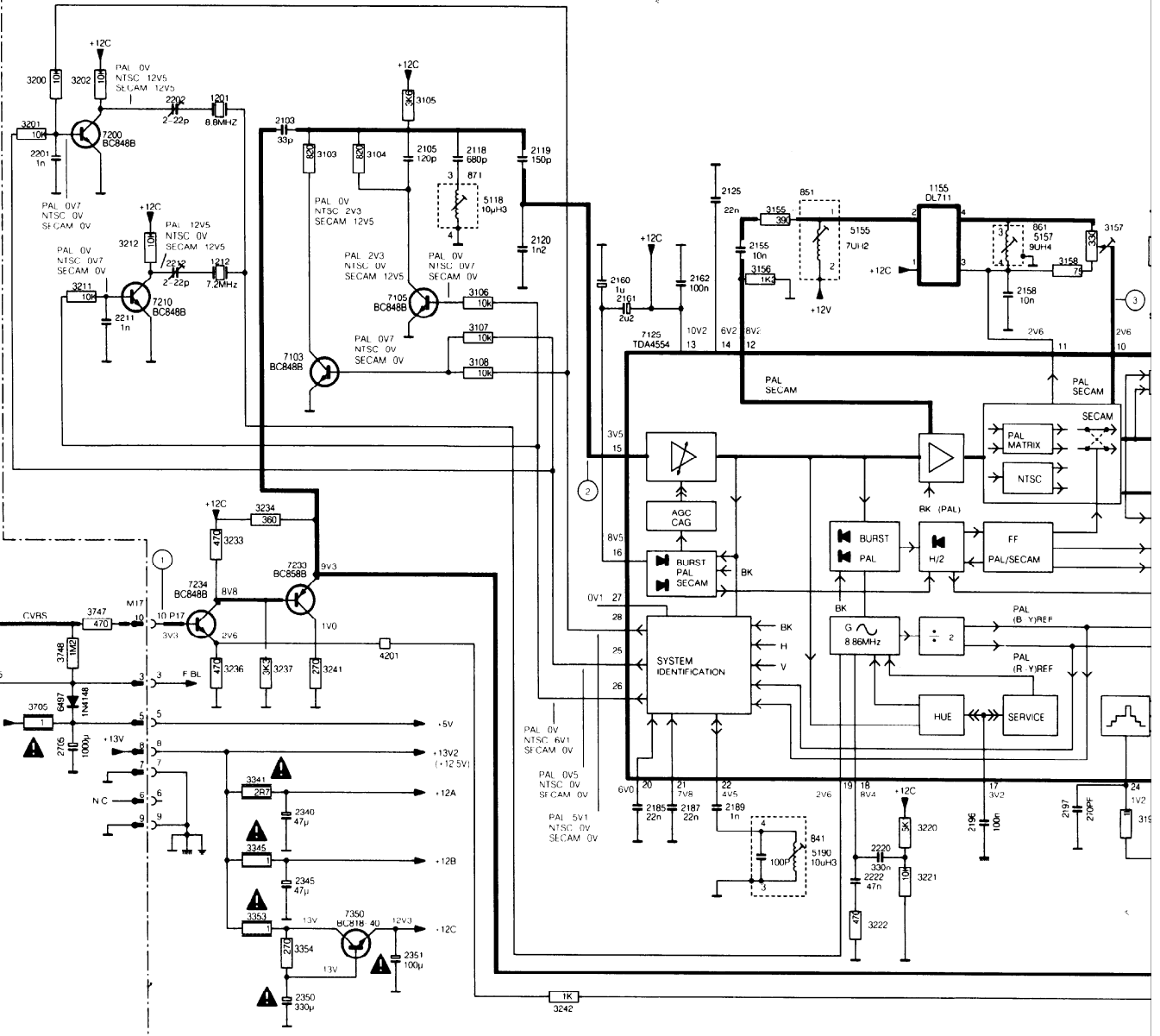
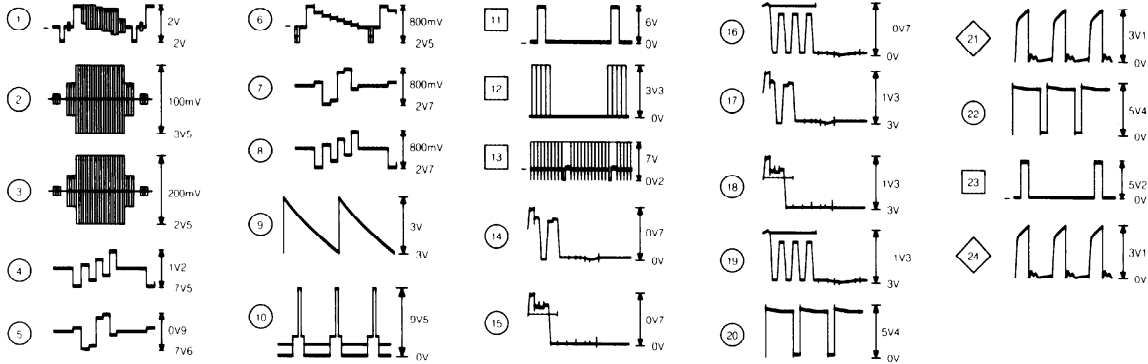
If "ERROR 15 or 8" appears on the LED's, the set is switched into stand-by. This status is written into the memory. After repair, an operating command has to be given after switching on the set. If the operating command is not given, the power supply remains in stand-by.

DIAGRAM-SCHALTBILD-SCHEMA H

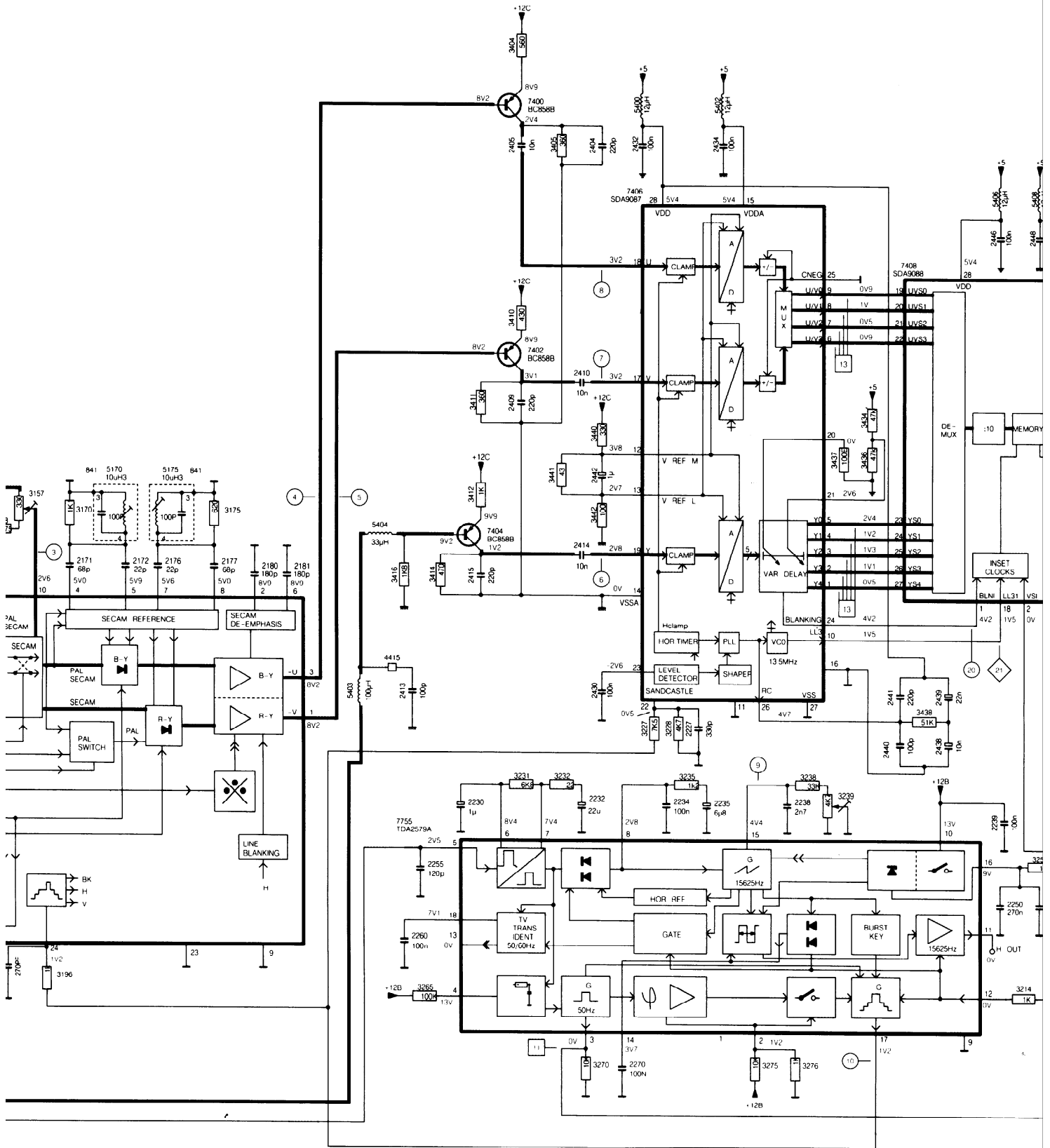
Suplement
CHASSIS D16-II

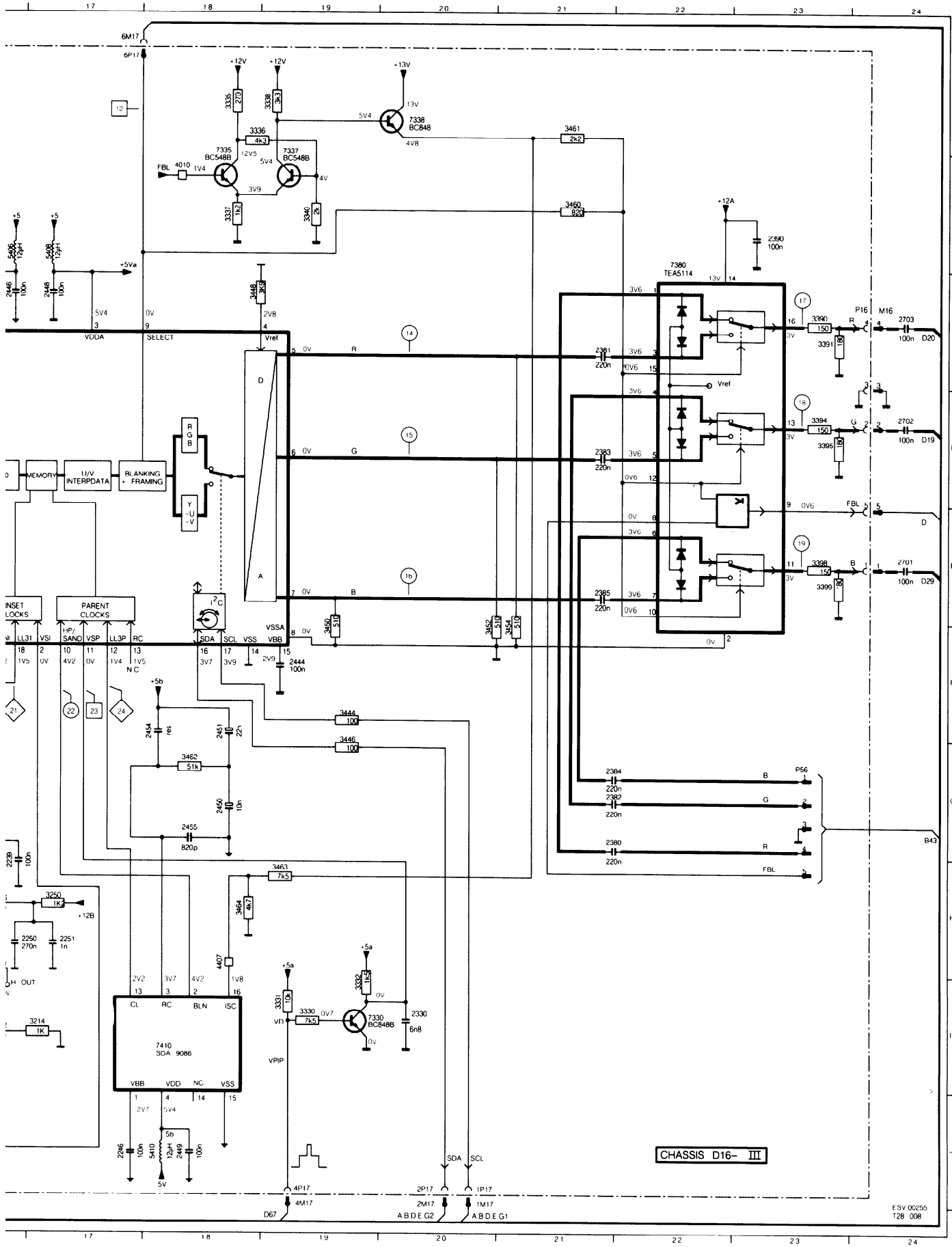
Suplement
CHASSIS D16-II

1530 PIP PANEL



A.B.C.D.
E.F.G.





- 1155-E7
- 1201-D2
- 1212-E2
- 2103-D3
- 2105-E4
- 2118-E4
- 2119-E4
- 2120-E4
- 2125-E6
- 2155-E6
- 2158-E8
- 2160-E5
- 2161-E5
- 2162-F6
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- 2238-H15
- 2239-G16
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- 2255-H12
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- 2383-D22
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- 3416-F11
- 3434-D15
- 3436-D15