

Service
Service
Service

condensatoren in
voeding zwak punt
680µ/16V en 159µ/40V
25V



42 671 A

ARCHIVE

Red.	Cod.	Techn.	Aut. Chef
------	------	--------	-----------

Service Manual

VR6870/00/01 is a stereo video cassette recorder with TV reception section and electronic time circuit, suited for recording and playback of TV signals which meet the CCIR-PAL B/G standard. The signals are registered on tape according to the VHS-HQ standard. The video cassette recorder has been provided with a Hi-Fi stereo audio system for which use is made of frequency modulation and has also been provided with perfect still.

VR6870/02/06 is identical with the VR6870/00. Moreover, this recorder is suited for recording and playback of TV signals which meet the CCIR PAL SECAM-OST standard. The electronic time circuit can be programmed by means of the Video Program System (VPS).

VR6870/05 is identical with the VR6870/00. But this recorder is only suited for recording and playback of TV signals which meet the CCIR PAL-I standard. Stereo recording is only possible via an external source.

CONTENTS

Table of contents per page

Chapter

- 1 Front/rear view of the video recorder
Description of the controls and connections
Technical data
VHS system data
Input/output data
Connection possibilities
- 2 Disassembly of the set
Cassette repair tools
Extension PCBs and connectors
Cabinet exploded view
- 3 Adjustments
Mechanism exploded view with parts list
Replacement of components in the mechanism
Mechanical adjustments
Survey of test points
- 4 Survey of symbols used
Survey of abbreviations used
Survey PCB location
Survey supply points
Block diagram
Wiring diagram
- 5 PCB parts list
PCB layout
Circuit diagrams
Test data
Electrical adjustment instructions
- 6 Error diagnosis system
- 7 Supplementary service information

VHS

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

Installation Technique Service Department / Documentazione di Servizio / Multi-Unit Manuals / Service Manual / Serv

Subject to modification
4822 726 14358

Printed in The Netherlands
Copyright reserved

Published by
Service Consumer Electron

CS 11 754 G

TABLE OF CONTENTS

CHAPTER 1

1-1	Front/rear view of the set Description of controls and terminal sockets	
1-2a	Technical specifications	VR87-85
1-3	Signal IN/OUT data	
1-4a	VHS system data	VR87-85
1-5	Survey connecting cables	
1-6	Elucidation on the use of the Service Manual	

CHAPTER 2

2-1	Disassembly of the set
2-2	Servicing position of the PCBs
2-3	Servicing position of the PCBs
2-4	Parts list of the cabinet parts
2-5	Exploded view of cabinet
2-6	Cassette repair tools and auxiliary materials mechanical adjustment tools

CHAPTER 3

3-1	Replacement of components in the mechanism	
3-2	Replacement of components in the mechanism	
3-3	Replacement of components in the mechanism	
3-4	Replacement of components in the mechanism	
3-5	Replacement of components in the mechanism	
3-6	Replacement of components in the mechanism	
3-7	Replacement of components in the mechanism	
3-8	Replacement of components in the mechanism	
3-9	Mechanical adjustments	
3-10	Mechanical adjustments	
3-11	Mechanical adjustments	
3-12	Mechanical adjustments	
3-13	Exploded view of the mechanism	
3-14	Survey of test points	
3-15a	Electrical adjustments	VR87-85
3-16a	Electrical adjustments	VR87-85
3-17	Mechanical adjustment and auxiliary tools	
3-18a	Parts list of mechanism parts	VR87-85
3-19	Exploded view of the mechanism	
3-20	Lubrication and cleaning of the mechanism	

CHAPTER 4

4-1	Survey of symbols used
4-2	Survey of symbols used
4-3	Survey of abbreviations used Location drawing of the PCBs
4-4	Supply points survey
4-5	Block diagram PAL B/G
4-6	Block diagram PAL-I
4-7	Block diagram PAL SECAM-OST
4-8	Wiring diagram

CHAPTER 5

5-1	P018, parts list
5-2	P018, PCB drawing
5-3	P018, circuit diagram
5-5	P021, P227, parts list
5-6	P021, P227, PCB drawing
5-7	P021, P227, circuit diagram
5-9	P112, parts list
5-10	P112, PCB drawing
5-11	P112, circuit diagram
5-12	P112, adjustments
5-13	P115, parts list
5-14	P115, PCB drawing
5-15	P115, circuit diagram
5-16	P115, adjustments
5-17	P228, parts list
5-18	P228, PCB drawing
5-19	P228, circuit diagram
5-20	P228, adjustments
5-21	P315-2A, P316-2A, parts list

CHAPTER 5

5-22	P315-2A, P316-2A, PCB drawing	
5-23a	P315-2A, P316-2A, circuit diagram	VR87-8
5-24	P315-2A, P316-2A, adjustments	
5-25	P315-2B, parts list	
5-26	P315-2B, PCB drawing	
5-27	P315-2B, circuit diagram	
5-28	P315-2B, adjustments	
5-29	P316-2B, parts list	
5-30	P316-2B, PCB drawing	
5-31	P316-2B, circuit diagram	
5-32	P316-2B, adjustments	
5-33	P452, parts list	
5-34	P452, PCB drawing	
5-35	P452, circuit diagram	
5-36	P452, adjustments	
5-37	P522, P523, parts list	
5-38	P522, P523, PCB drawing	
5-39	P522, P523, circuit diagram	
5-40	P522, P523, adjustments	
5-41a	P616, parts list	VR87-8
5-41a-1	P616, parts list	VR88-0
5-42	P616, PCB drawing	
5-42-1	P616, PCB drawing	VR88-0
5-43	P616-2A, parts list	
5-44	P616, PCB drawing	
5-45a	P616-2B, circuit diagram	VR87-8
5-45a-1	P616-2B circuit diagram	VR88-0
5-46a	P616, adjustments	VR87-8
	P677, P681, P683+P686, P696 PCB drawings	
5-46a-1	P616, adjustments	VR88-0
	P677, P681+P683, P697 PCB drawings	
5-47	P809, parts list	
5-48	P809, PCB drawing	
5-49	P809, circuit diagram	

CHAPTER 6

6-1	Error diagnosis system
6-2	Error diagnosis system
6-3	Error diagnosis system
6-4	Error diagnosis system

CHAPTER 7

7-1	Description of the system of publication of changes and input data	
7-2	Change survey	
7-21b	Modifications on P315	VR89-0
7-23b	Modifications on P316	VR89-0
7-29	Modifications on P616	VR88-0

Service Informations

- * VR87-85
- * VR88-09
- * VR88-33
- * VR89-05
- * Information included in the documentation

PCB/function survey

PCB	Function
P018	Supply
P021	Input/output
P112	Front end PAL B/G
P115	Front end PAL-I
P227	Cinch connectors
P228	Operation
P315	Signal (lin. audio and video) PAL B/G, PAL-I
P316	Signal (lin. audio and video) PAL SECAM-OST
P452	Head amplifier
P523	FM audio
P616	Servo
P809	Video program system

TABLE OF CONTENTS

CHAPTER 1

1-1	Front/rear view of the set	
	Description of controls and terminal sockets	
1-2a	Technical specifications	VR87-85
1-3	Signal IN/OUT data	
1-4a	VHS system data	VR87-85
1-5	Survey connecting cables	
1-6	Elucidation on the use of the Service Manual	

CHAPTER 2

2-1	Disassembly of the set
2-2	Servicing position of the PCBs
2-3	Servicing position of the PCBs
2-4	Parts list of the cabinet parts
2-5	Exploded view of cabinet
2-6	Cassette repair tools and auxiliary materials mechanical adjustment tools

CHAPTER 3

3-1	Replacement of components in the mechanism	
3-2	Replacement of components in the mechanism	
3-3	Replacement of components in the mechanism	
3-4	Replacement of components in the mechanism	
3-5	Replacement of components in the mechanism	
3-6	Replacement of components in the mechanism	
3-7	Replacement of components in the mechanism	
3-8	Replacement of components in the mechanism	
3-9	Mechanical adjustments	
3-10	Mechanical adjustments	
3-11	Mechanical adjustments	
3-12	Mechanical adjustments	
3-13	Exploded view of the mechanism	
3-14	Survey of test points	
3-15a	Electrical adjustments	VR87-85
3-16a	Electrical adjustments	VR87-85
3-17	Mechanical adjustment and auxiliary tools	
3-18a	Parts list of mechanism parts	VR87-85
3-19	Exploded view of the mechanism	
3-20	Lubrication and cleaning of the mechanism	

CHAPTER 4

4-1	Survey of symbols used
4-2	Survey of symbols used
4-3	Survey of abbreviations used
	Location drawing of the PCBs
4-4	Supply points survey
4-5	Block diagram PAL B/G
4-6	Block diagram PAL-I
4-7	Block diagram PAL SECAM-OST
4-8	Wiring diagram

CHAPTER 5

5-1	P018, parts list
5-2	P018, PCB drawing
5-3	P018, circuit diagram
5-5	P021, P227, parts list
5-6	P021, P227, PCB drawing
5-7	P021, P227, circuit diagram
5-9	P112, parts list
5-10	P112, PCB drawing
5-11	P112, circuit diagram
5-12	P112, adjustments
5-13	P115, parts list
5-14	P115, PCB drawing
5-15	P115, circuit diagram
5-16	P115, adjustments
5-17	P228, parts list
5-18	P228, PCB drawing
5-19	P228, circuit diagram
5-20	P228, adjustments
5-21	P315-2A, P316-2A, parts list

CHAPTER 5

5-22	P315-2A, P316-2A, PCB drawing	
5-23a	P315-2A, P316-2A, circuit diagram	VR87-85
5-24	P315-2A, P316-2A, adjustments	
5-25	P315-2B, parts list	
5-26	P315-2B, PCB drawing	
5-27	P315-2B, circuit diagram	
5-28	P315-2B, adjustments	
5-29	P316-2B, parts list	
5-30	P316-2B, PCB drawing	
5-31	P316-2B, circuit diagram	
5-32	P316-2B, adjustments	
5-33	P452, parts list	
5-34	P452, PCB drawing	
5-35	P452, circuit diagram	
5-36	P452, adjustments	
5-37	P522, P523, parts list	
5-38	P522, P523, PCB drawing	
5-39	P522, P523, circuit diagram	
5-40	P522, P523, adjustments	
5-41a	P616, parts list	VR87-85
5-41a-1	P616, parts list	VR88-09
5-42	P616, PCB drawing	
5-42-1	P618, PCB drawing	VR88-09
5-43	P616-2A, parts list	
5-44	P616, PCB drawing	
5-45a	P616-2B, circuit diagram	VR87-85
5-45a-1	P616-2B circuit diagram	VR88-09
5-46a	P616, adjustments	VR87-85
	P677, P681, P683+P686, P696 PCB drawings	
5-46a-1	P616, adjustments	VR88-09
	P677, P681+P683, P697 PCB drawings	
5-47	P809, parts list	
5-48	P809, PCB drawing	
5-49	P809, circuit diagram	

CHAPTER 6

6-1	Error diagnosis system
6-2	Error diagnosis system
6-3	Error diagnosis system
6-4	Error diagnosis system

CHAPTER 7

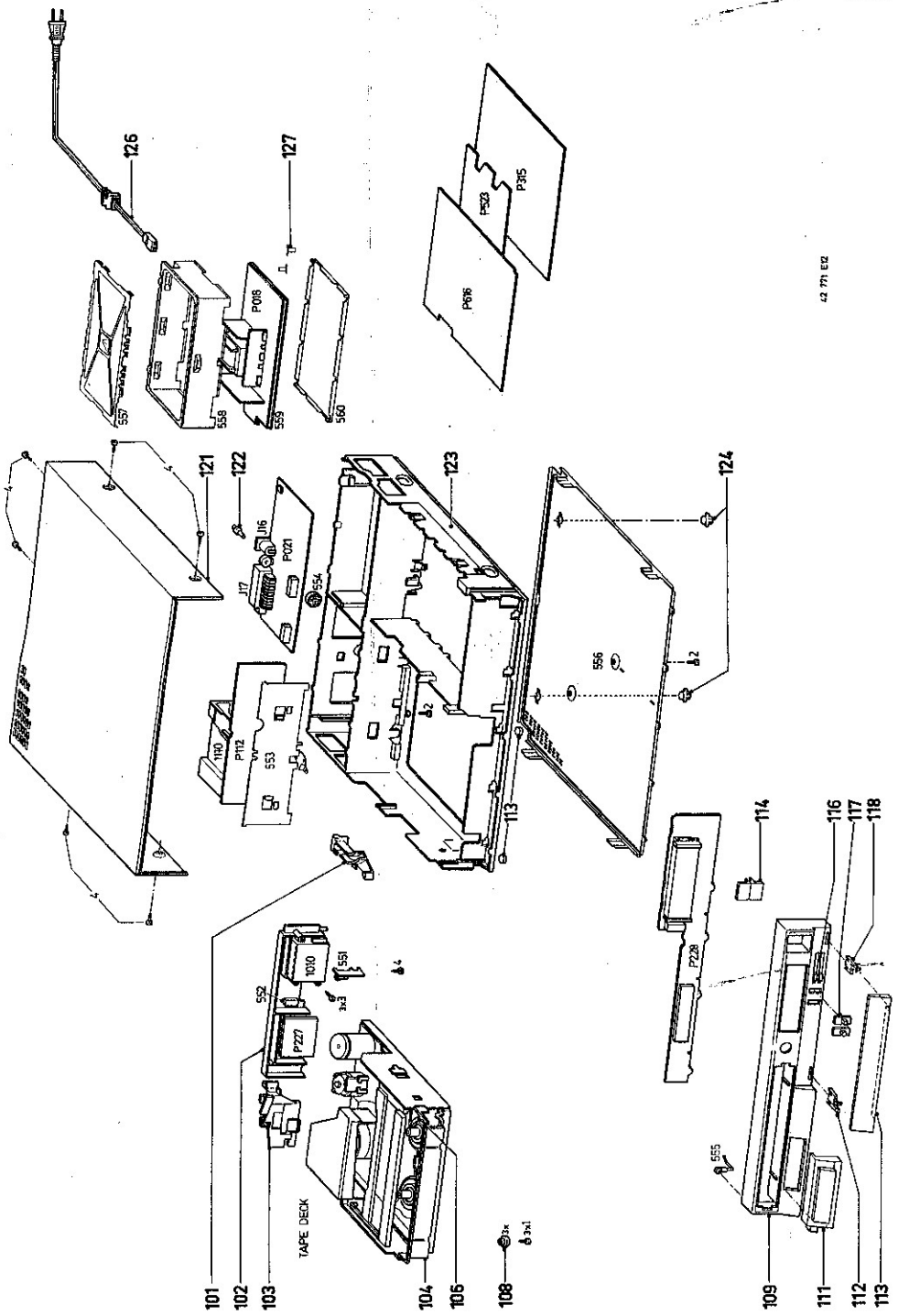
7-1	Description of the system of publication of changes and input data	
7-2	Change survey	
7-21	Modifications on P315	VR88-09
7-23	Modifications on P316	VR88-09
7-29	Modifications on P616	VR88-09

Service Informations.

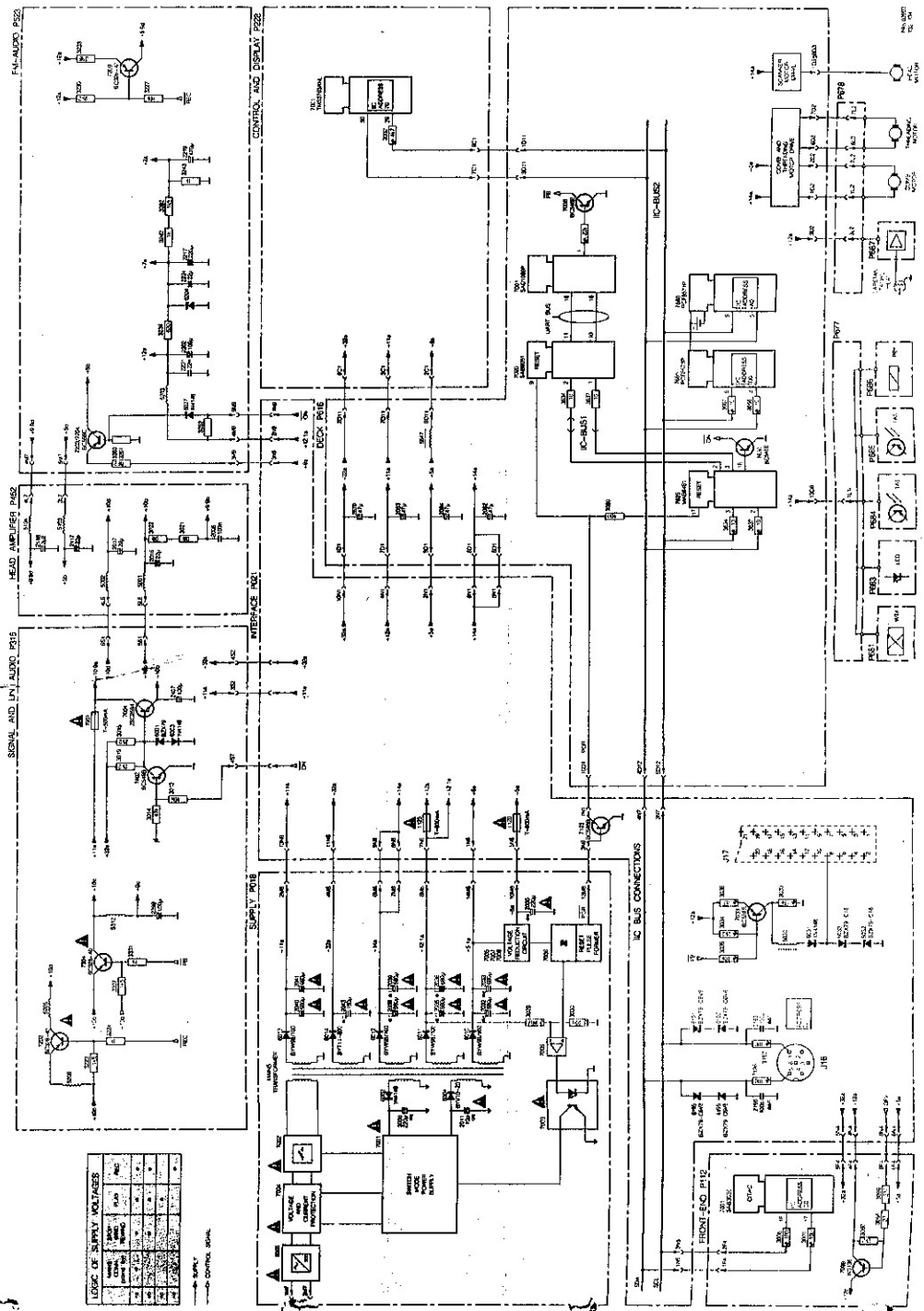
- * VR87-85
- * VR88-09
- * Information included in the documentation

PCB/function survey

PCB	Function
P018	Supply
P021	Input/output
P112	Front end PAL B/G
P115	Front end PAL-I
P227	Cinch connectors
P228	Operation
P315	Signal (lin. audio and video) PAL B/G, PAL-I
P316	Signal (lin. audio and video) PAL SECAM-OST
P452	Head amplifier
P523	FM audio
P616	Servo
P809	Video program system



SUPPLY AND IIC BUS CONNECTION DIAGRAM



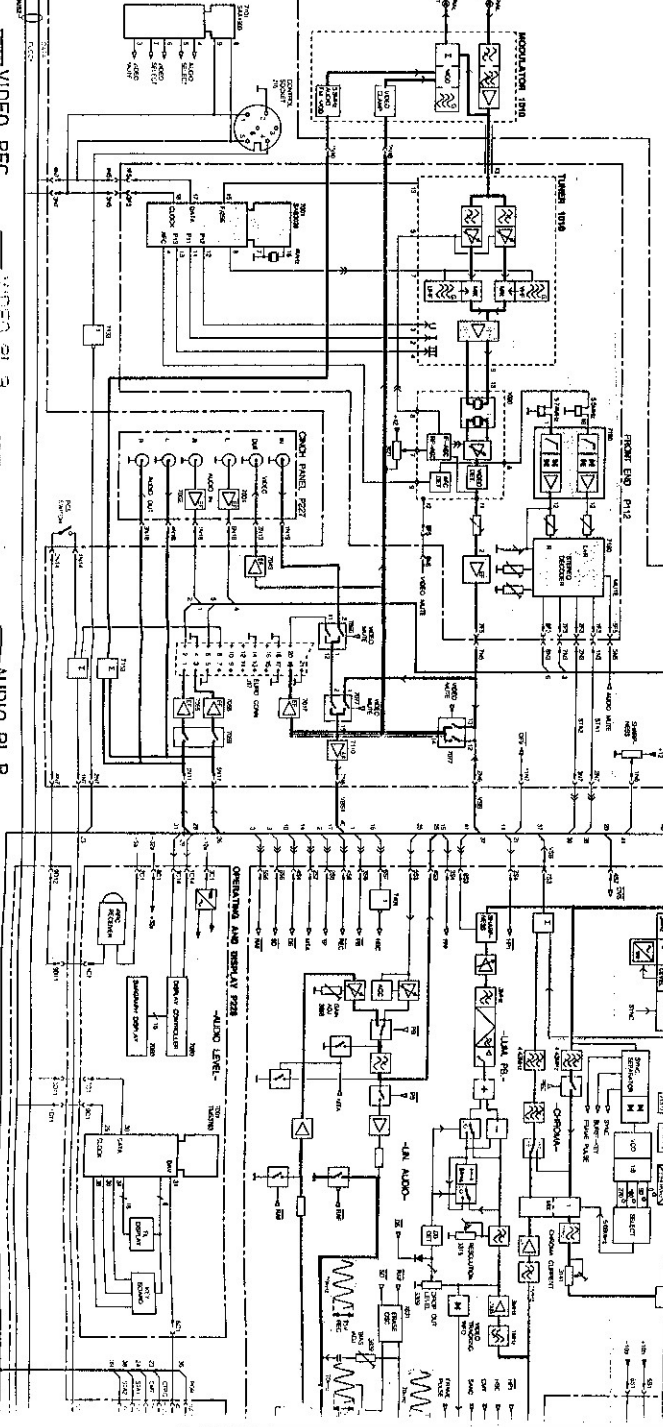
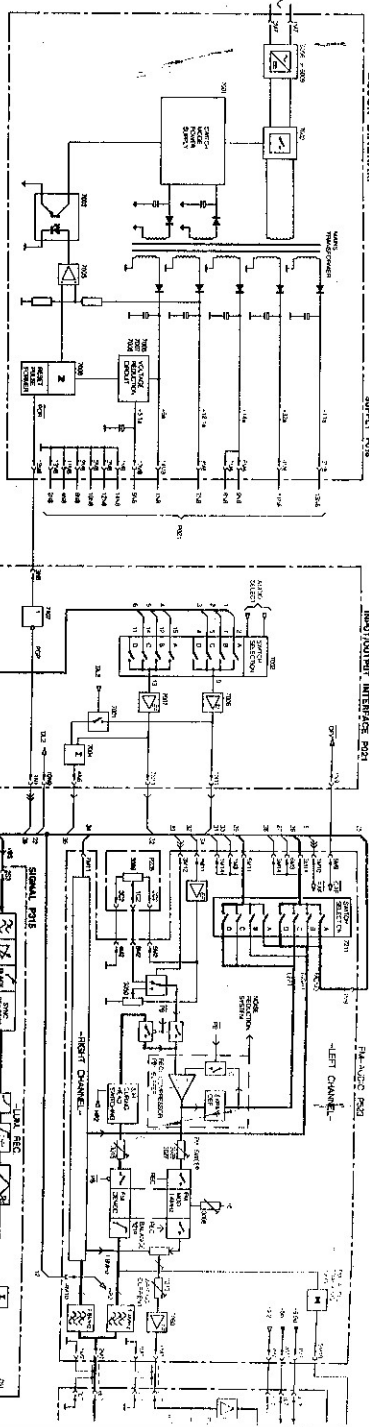
BLOCK DIAGRAM

SIGNAL PATH

INTERFACED INTERFACE BOX

PALETTE BOX

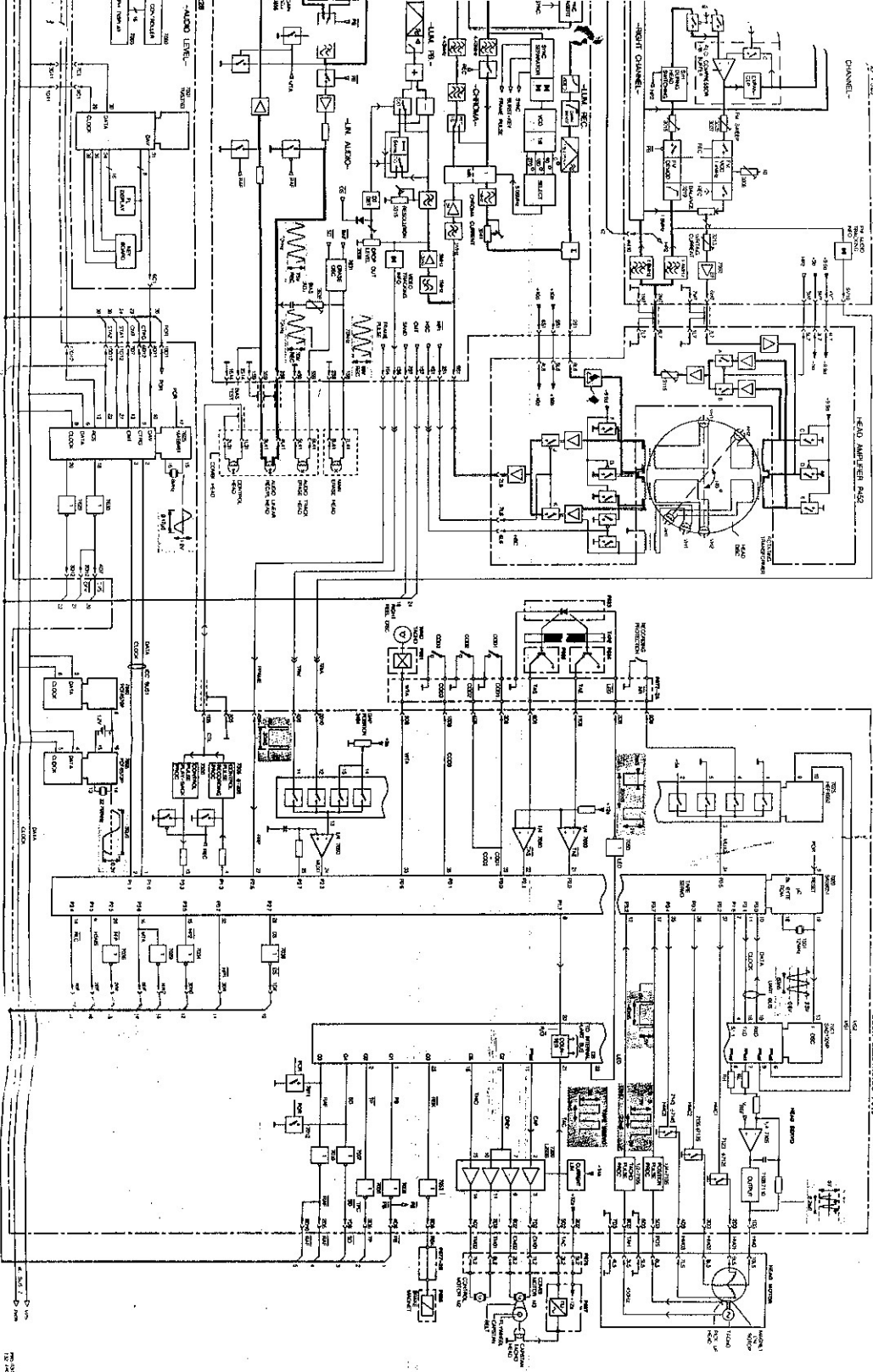
4-5 PAL SIG
4-5 PAL SIG

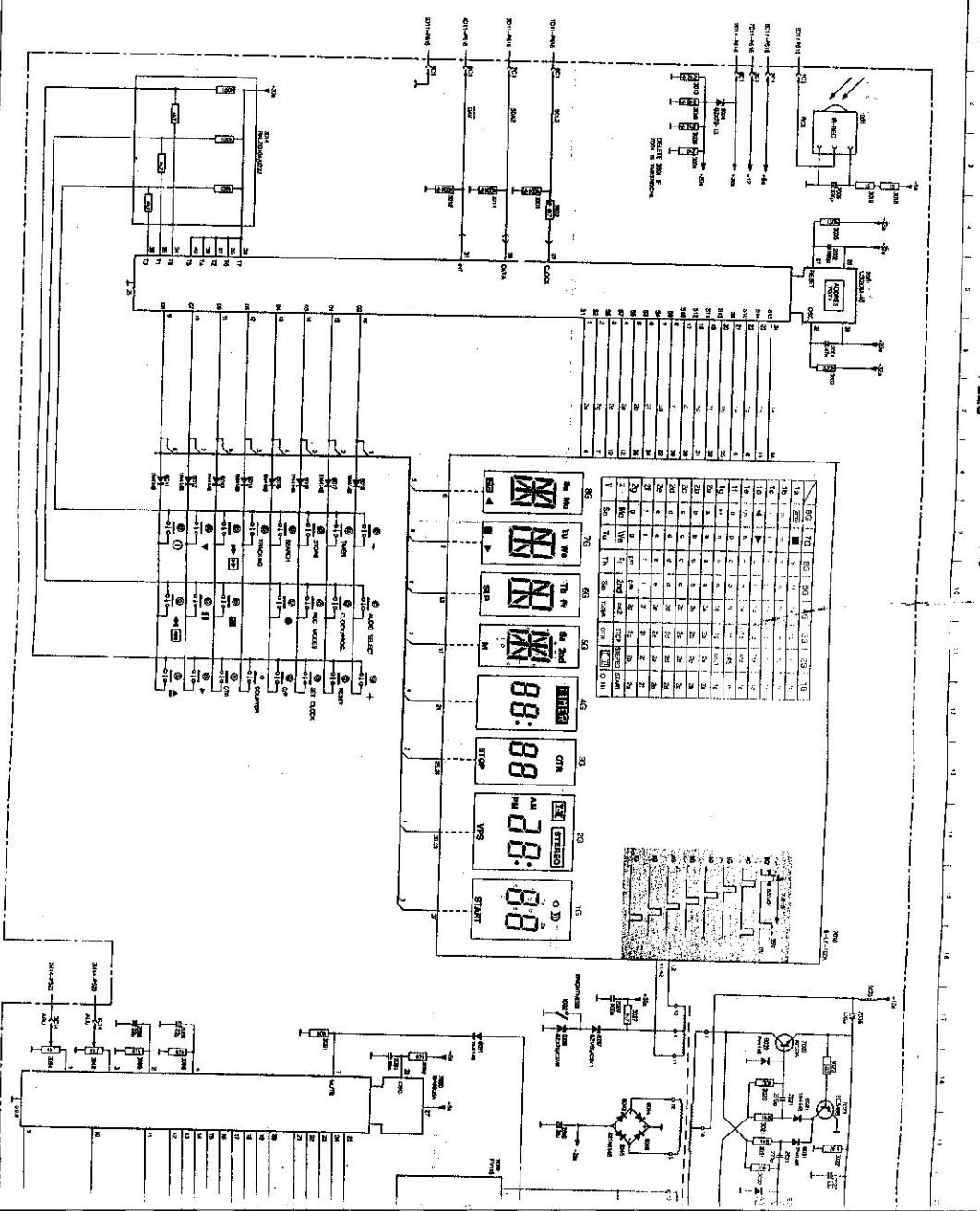


VIDEO REC.

VIDEO PL. 3.

AUDIO PL. 3.





1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	-----

STOP

START

ENTER

STOP

EX STEREO

STOP

START

