

Service Manual

General Description
Adjustment Procedures
Block/ Schematic Diagrams
Exploded Views / Parts List

Video Cassette Recorder

Panasonic **VHS** **HQ**
NTSC / PAL

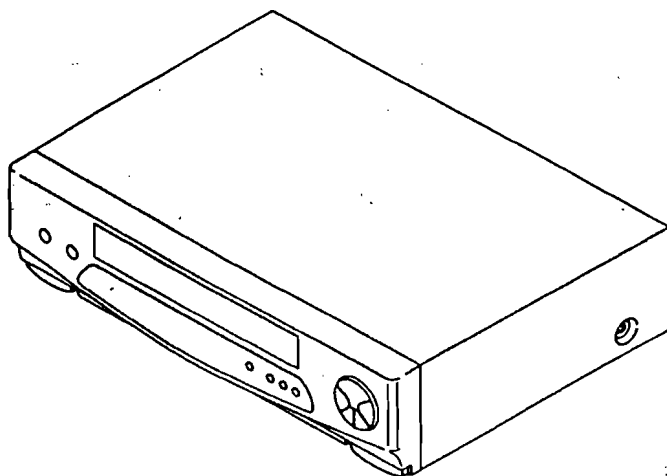
NV-SD400 **PX**
AR
BR

K-MECHANISM

2893

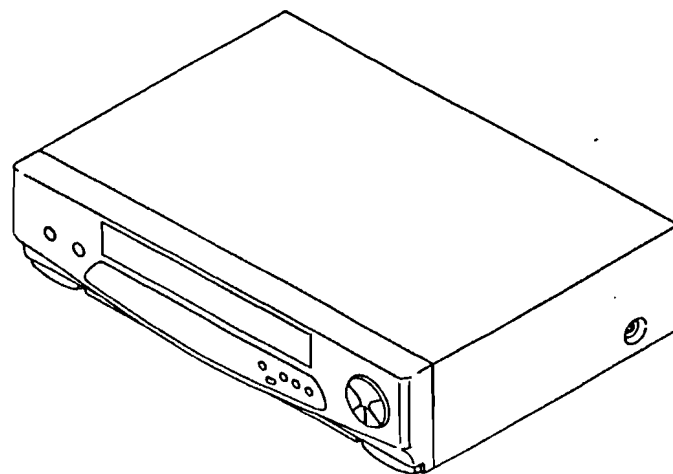
Esquema

27



NV-SD400PX

ESQUEMATECA AURORA
 Rua Aurora, Nº 174
 Fone: (011) 220-2799



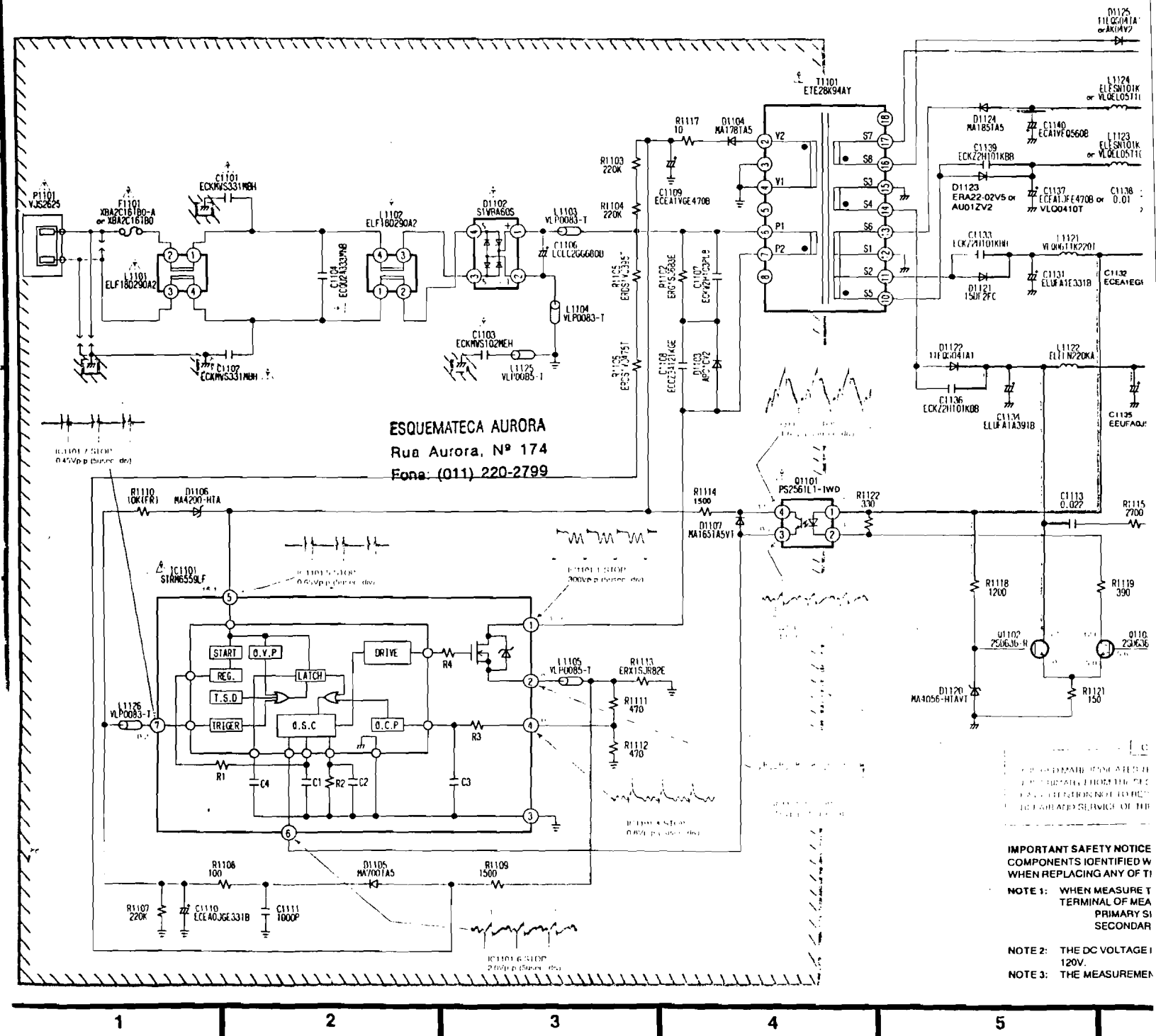
NV-SD400AR/BR

Panasonic

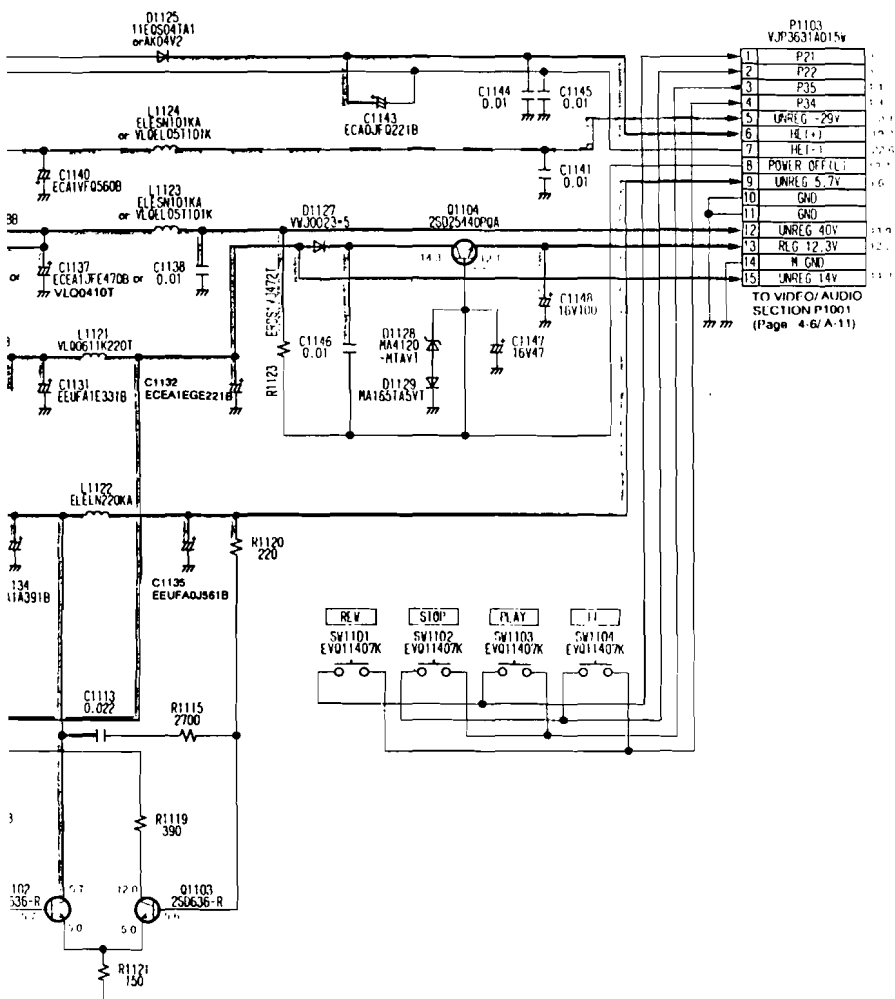
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SECTION 4 SCHEMATIC DIAGRAMS

1. POWER SCHEMATIC DIAGRAM



4-2. POWER C.B.A. (VEP01616A)



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CAUTION

FOR RED MARK INDICATES THE PRIMARY CIRCUIT TO DISINTEGRATE
THE PRIMARY FROM THE SECONDARY CIRCUIT
PAY ATTENTION NOT TO RE-CEIVE AND ELECTRICAL SHOCK DURING
REPAIR AND SERVICE OF THE PRODUCTS

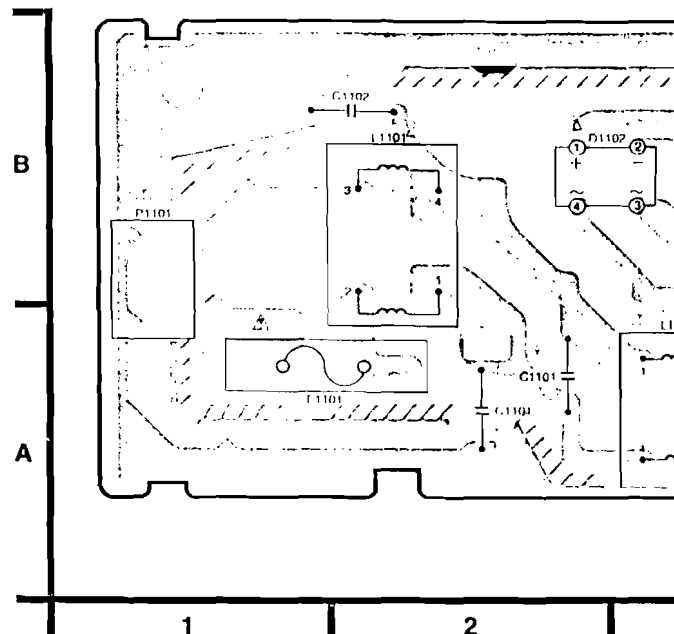
IMPORTANT SAFETY NOTICE:

COMPONENTS IDENTIFIED WITH THE MARK * HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

NOTE 1: WHEN MEASURE THE VOLTAGE OR WAVEFORM ON THE POWER CIRCUIT, SET THE GND
TERMINAL OF MEASURING POINT AS FOLLOWS.
PRIMARY SIDE T1101-4Pm
SECONDARY SIDE T1101-12Pm

NOTE 2: THE DC VOLTAGE INDICATED IN PRIMARY SIDE IS SHOWN THE VOLTAGE WHEN INPUT AC IN
120V.

NOTE 3: THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.



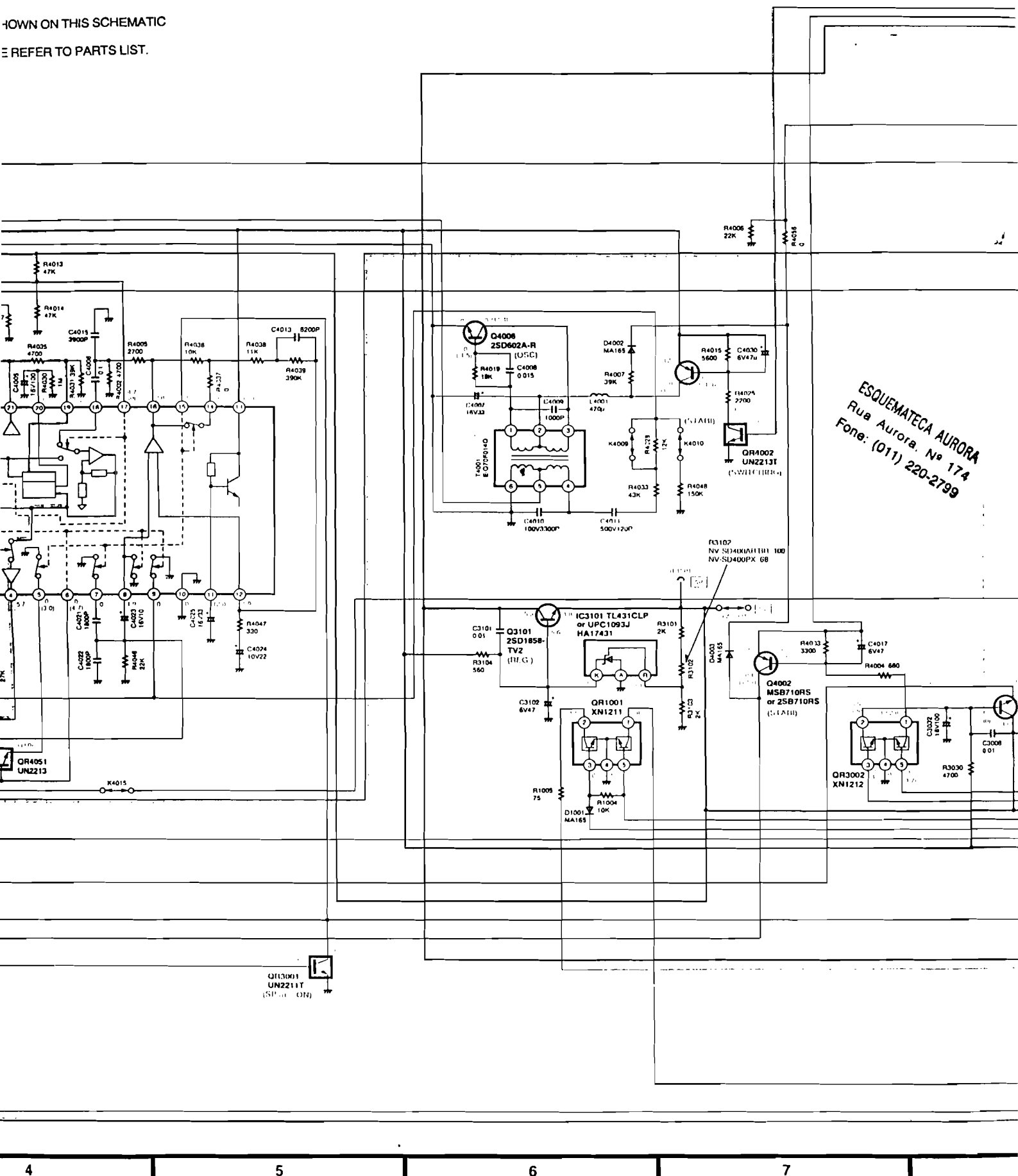
VI

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCH
DIAGRAM FOR ORDERING.
WHEN YOU ORDER A PART, PLEASE REFER TO PARTS

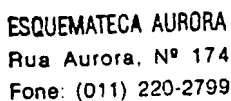


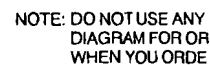
SHOWN ON THIS SCHEMATIC

REFER TO PARTS LIST.

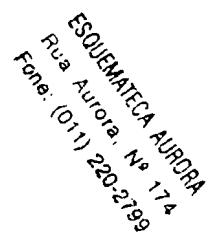


AUDIO MAIN SIGNAL PATH IN PLAYBACK MODE





CYLINDER SERVO SPEED LOOP



9

SYSTEM CONTROL & SERVO ICs VOLTAGE CHART (SP MODE)

REF. NO.	IC 2501																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
STOP	1.8	4.4	1.8	13.8	1.1	14.3	0	0	0.7	2.7	2.3	0	0	4.8	1.4	0	2.1	2.1	2.1	2.1
PLAY	—	4.2	—	13.0	2.1	14.1	0	0.6	0.6	2.7	2.3	0.3	0	4.7	1.4	0	2.1	2.1	2.0	2.1
REC	2.9	4.2	3.0	12.8	2.1	13.9	0	0.5	0.5	2.6	2.3	0.2	0	4.7	1.4	0	2.1	2.1	2.0	2.0
F. F	7.1	14.0	7.1	8.2	12.1	14.1	0	0.7	0.6	2.6	2.1	0.3	0	4.7	1.4	0	2.1	2.1	2.1	2.1
REW	7.1	14.0	6.9	8.6	12.1	14.1	0	0.6	0.6	2.6	2.2	0.3	0	4.7	1.4	0	2.1	2.1	2.1	2.1

REF. NO.	IC 2501																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32								
STOP	2.1	2.1	0	6.2	6.1	6.2	5.8	12.1	2.3	1.8	0	0								
PLAY	2.1	2.1	0	—	6.1	6.2	5.8	12.2	0	3.1	0	0								
REC	2.1	2.1	0	—	6.1	6.2	5.8	12.2	0	3.1	0	0								
F. F	2.1	2.1	0	6.2	6.1	6.2	5.8	12.1	0	6.9	0	0								
REW	2.1	2.1	0	6.2	6.2	8.2	5.8	12.2	4.7	7.3	0	0								

REF. NO.	IC 2502																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		
STOP	14.0	14.0	0	0.4	0	2.3	2.3	0.4	0.4	2.5	4.8	3.5	3.4	3.4	0.8	14.3	14.0	0		
PLAY	13.8	13.8	0	0.4	0	2.3	2.3	0.4	0.4	2.5	4.8	3.5	3.4	3.4	0.8	14.1	13.8	0		
REC	13.5	13.5	0	0.4	0	2.3	2.2	0.4	0.4	2.4	4.7	3.4	3.4	3.4	0.8	13.9	13.6	0		
F. F	13.6	13.8	0	0.5	0	2.3	2.3	0.5	0.5	2.5	4.7	3.4	3.4	3.4	1.1	14.0	13.7	0		
REW	13.8	13.8	0	0.5	0	2.3	2.3	0.5	0.4	2.4	4.7	3.4	3.4	3.4	0.8	14.1	13.7	0		

REF. NO.	IC 6001																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
STOP	0	4.8	0	0	0	0	0	4.8	4.7	0	4.7	0	0	4.8	0	4.8	0	0	0	4.7
PLAY	0	4.7	0	0	0	4.7	4.7	4.7	4.7	0	4.7	0	0	0	4.7	4.7	0	0	0	4.7
REC	0	4.7	0	0	0	0	0	4.7	4.7	0	4.7	0	0	4.7	0	4.7	0	0	0	4.7
F. F	0	4.7	0	0	0	0	0	4.7	0	0	0	0	0	4.7	0	4.7	0	0	0	4.7
REW	0	4.7	0	0	0	0	0	4.7	0	0	0	0	0	4.7	0	4.7	0	0	0	4.7

REF. NO.	IC 6001																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
STOP	4.8	0	4.7	0	0	4.9	0	4.8	4.8	0	0	0	0	0	0	4.8	0	0	—	—
PLAY	4.7	0	4.7	0	0	4.9	0	4.7	4.7	0	0	0	0	0	0	4.7	0	0	—	—
REC	0	0	4.7	0	0	4.9	0	4.7	4.7	0	4.7	4.7	0	0	0	4.7	4.7	4.1	—	—
F. F	0	0	4.7	0	0	4.9	0	4.7	4.7	0	0	0	0	0	0	4.7	0	0	—	—
REW	0	0	4.7	0	0	4.9	0	4.7	4.7	0	0	0	0	0	0	4.7	0	0	—	—

REF. NO.	IC 6001																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
STOP	0	0	2.1	0	0	0	0	0	4.8	0	0	0	4.4	4.4	4.2	0	0	0	2.3	0
PLAY	0	0	2.8	0	0	0	0	0	4.7	0	0	4.7	4.4	4.4	4.2	0	0	0	0	4.7
REC	0	0	2.1	0	0	4.7	4.7	0	0	0	0	0	4.4	4.4	4.2	0	0	0	0	4.7
F. F	0	0	2.3	0	0.3	0	0	0	4.7	0	0	0	4.4	4.4	0.3	0	0	0	0	4.7
REW	0	0	2.3	0	0	0	0	0	4.7	0	0	0	4.4	4.4	4.2	0	0	0	4.7	4.7

REF. NO.	IC 6001																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
STOP	0	0	0	4.7	0	0	0	4.7	2.3	0	4.4	0	4.8	2.4	2.4	1.1	0	0	2.4	2.4
PLAY	0	0	0	4.7	4.7	0	3.8	4.7	2.3	0	4.4	4.8	4.8	2.3	2.3	1.1	0	0	2.3	2.3
REC	0	0	0	4.7	4.7	0	4.6	4.7	2.3	0	4.4	4.8	4.8	2.3	2.3	1.1	0	0	2.3	2.3
F. F	0	0	0	4.7	0	0	1.8	4.7	2.3	0	4.4	2.2	2.2	2.3	2.3	0.6	0	0	2.3	2.3
REW	0	0	0	4.7	0	0	2.3	4.7	2.3	0	4.4	2.3	2.3	2.3	2.3	0.6	0	0	2.3	2.3

REF. NO.	IC 6001																			
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
STOP	2.2	2.4	1.8	0	0	0	2.3	2.3	0	0	2.3	4.8	2.3	2.3	4.8	0	4.7	4.7	4.8	4.7
PLAY	2.4	2.2	—	0	—	—	—	2.3	0	0	2.3	4.7	2.3	2.2	4.7	0	4.7	4.6	4.7	4.7
REC	2.2	2.4	1.2	3.0	3.4	0	2.3	2.3	0	0	2.3	4.7	2.3	2.2	4.7	0	4.7	4.7	4.7	4.7
F. F	2.9	2.8	1.9	0	0	0	2.3	2.3	0	0	2.3	4.7	2.1	2.2	4.7	0	4.7	4.7	4.7	4.7
REW	2.9	2.1	1.8	0	0	0	2.3	2.3	0	0	2.3	4.7	2.3	2.2	4.7	0	4.7	4.7	4.7	4.7

REF. NO.	IC 6001																			
MODE	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
STOP	3.1	0	1.8	0	0	0	0	0	0	4.7	4.8	0	0	4.8	4.8	0	4.8	0	0	4.7
PLAY	3.5	0	1.8	0	0	0	0	0	0	4.7	0	0	0	4.7	4.7	4.7	4.7	0	0	4.7
REC	0.3	0	1.7	0	0	0	0	0	0	4.7	0	0	0	4.7	4.7	4.7	4.7	0	0	4.7
F. F	3.1	0	1.4	0	0	0	0	0	0	4.7	0	0	0	4.7	4.7	4.7	4.7	0	4.7	4.7
REW	3.2	0	1.2	0	0	0	0	0	0	4.7	0	0	0	4.7	4.7	4.7	4.7	0	4.7	4.7

SYSTEM CONTROL & SERVO ICs VOLTAGE CHART (SP MODE)

4-5. T

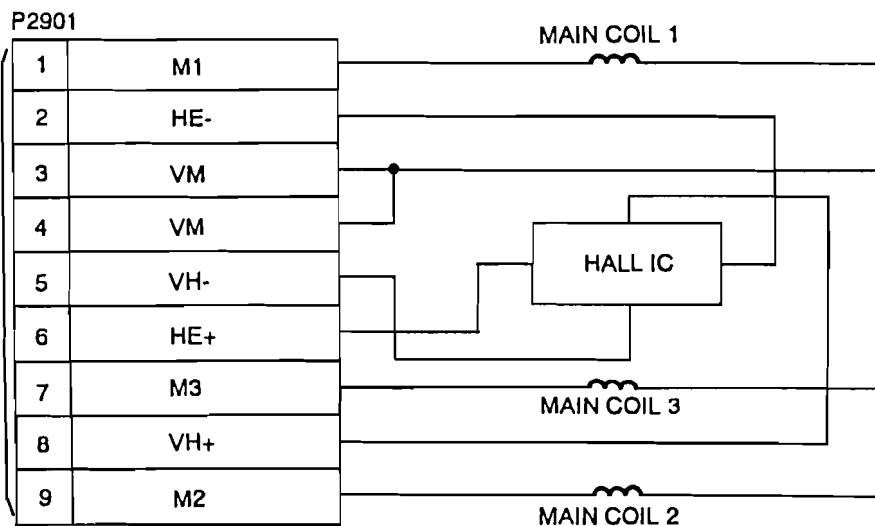
REF. NO.	IC 6001									IC 6003									
MODE	121	122	123	124	125	126	127	128		1	2	3	4	5	6	7	8	9	10
STOP	0	4.8	0	4.8	0	0	4.8	0		1.8	14.3	14.3	0	0	0	6.7	9.2	1.8	0
PLAY	0	4.7	0	4.7	0	0	2.4	0		1.2	14.1	14.1	0	0	0	6.8	9.1	1.6	0
REC	0	4.7	0	4.7	0	0	4.7	0		1.4	13.9	13.9	0	0	0	6.7	8.9	1.7	0
F. F	0	4.7	0	4.7	0	0	4.7	0		2.0	14.1	14.1	0	0	0	14.1	9.1	2.0	0
REW	0	4.7	0	4.7	0	0	4.7	0		0.6	14.1	14.1	0	0	0	14.1	9.1	1.0	0

SYSTEM CONTROL & SERVO TRANSISTORS VOLTAGE CHART (SP MODE)

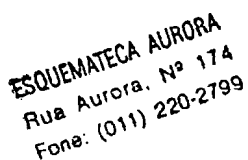
REF. NO.	Q 2 0 0 1			Q 2 0 0 2			Q 6 0 0 1			Q 6 0 0 3								
MODE	E	C	B	E	C	B	E	C	B	E	C	B						
STOP	0	4.8	0.5	0.5	0	0	4.8	5.6	5.4	4.8	-2.3	4.8						
PLAY	0	4.7	0.5	0.5	0	0	4.7	5.6	5.4	4.7	4.7	3.9						
REC	0	4.7	0.5	0.5	0	0	4.7	5.6	5.4	4.7	4.7	3.9						
F. F	0	4.7	0.5	0.5	0	0	4.7	5.6	5.4	4.7	4.7	3.9						
REW	0	4.7	0.5	0.5	0	0	4.7	5.6	5.4	4.7	4.7	3.9						
REF. NO.	Q R 6 0 0 2						Q R 6 0 0 3											
MODE	1	2	3	4	5		1	2	3	4	5							
STOP	0	0	4.7	0	4.7		0	0	4.7	0	4.7							
PLAY	0	0	4.7	0	4.7		0	0	4.7	0	4.7							
REC	0	0	4.7	0	4.7		0	0	4.7	0	4.7							
F. F	0	1.2	0	0	0		14.1	14.1	0	0	0							
REW	0	1.3	0	0	0		14.1	14.1	0	0	0							

CYLINDER STATOR SCHEMATIC DIAGRAM

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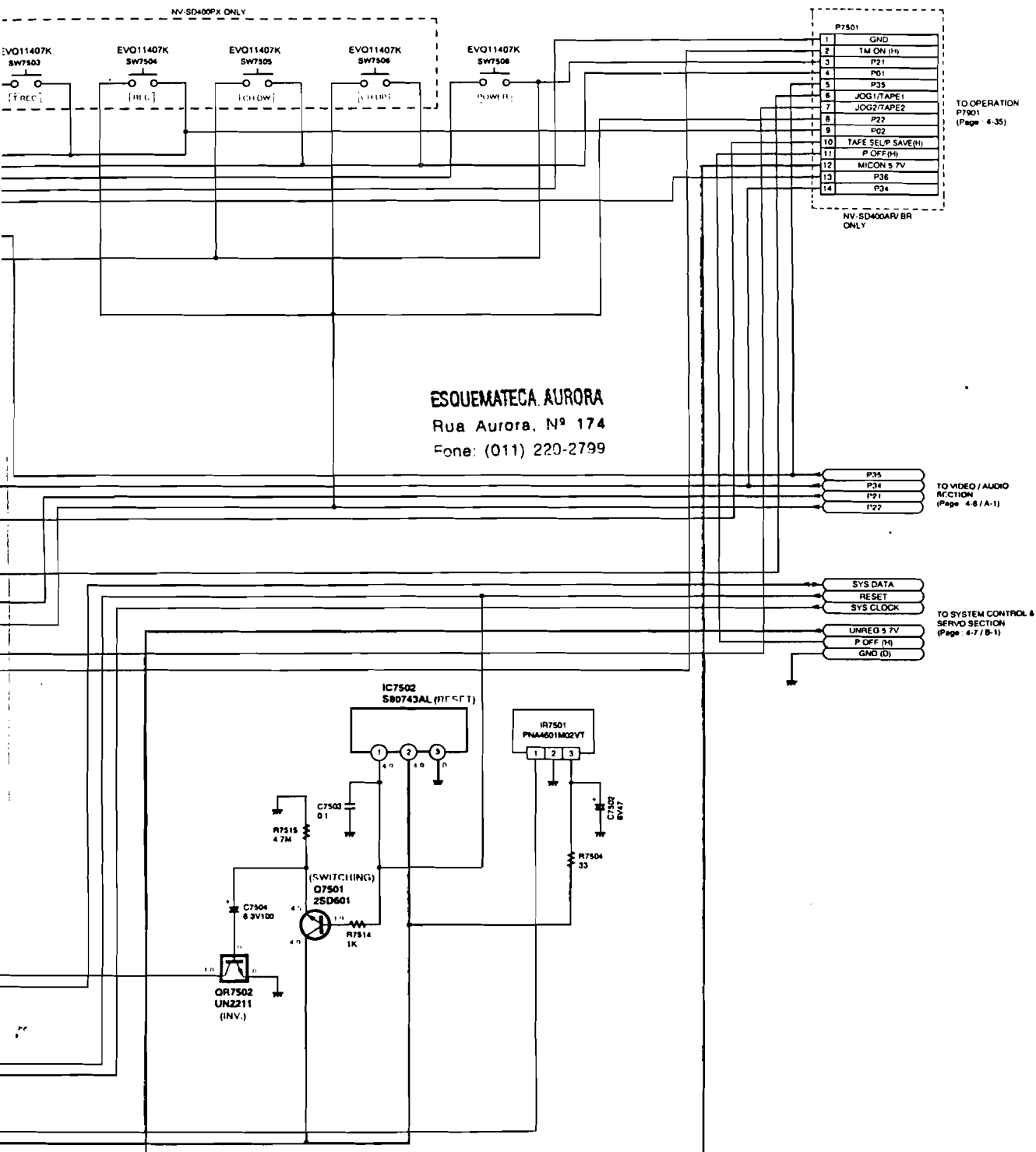


TO SYSTEM CONTROL &
SERVO SECTION P2005
(Page: 4-9 / A-12)

E

SEGMENT CONTROL SIGNAL

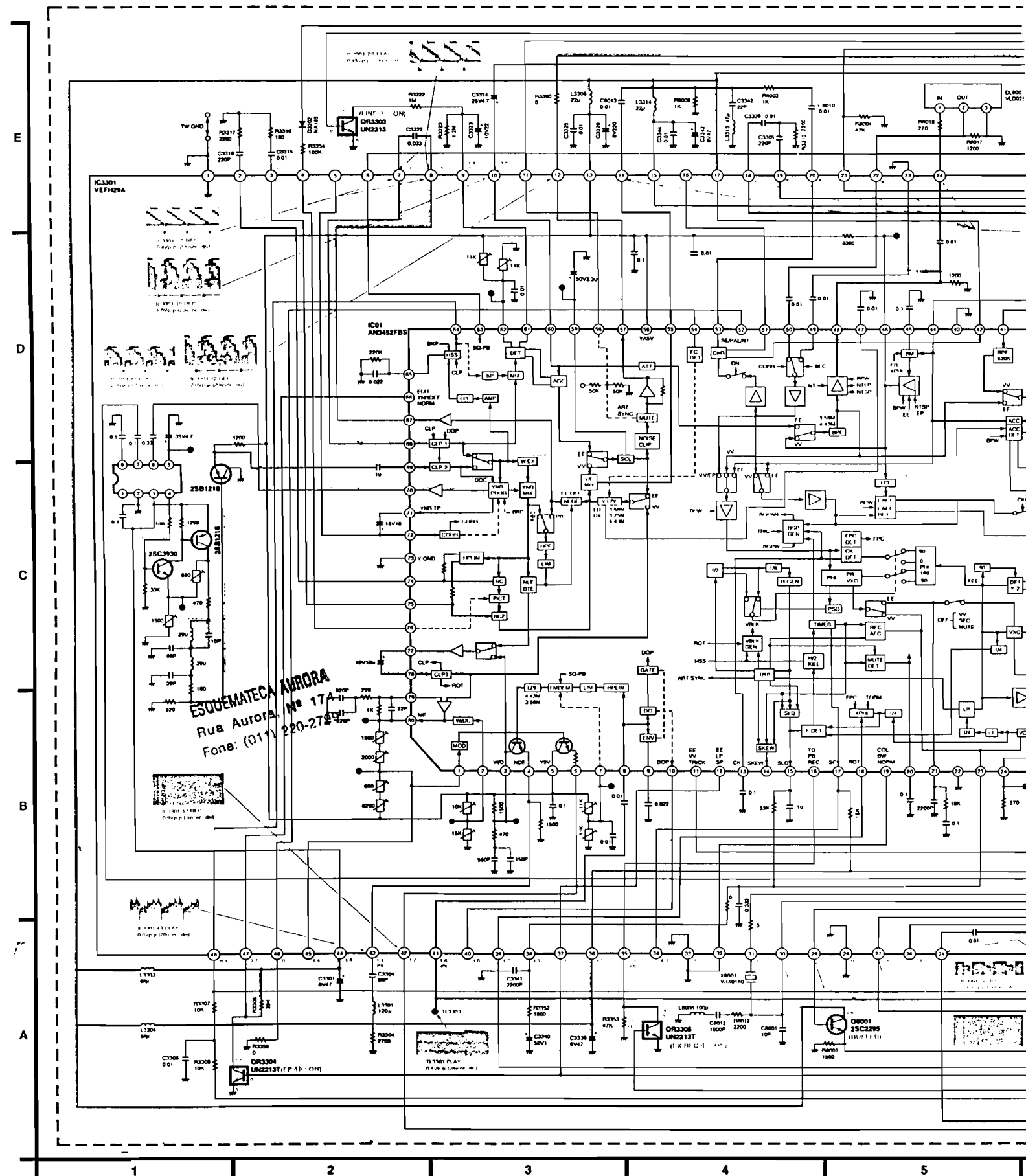


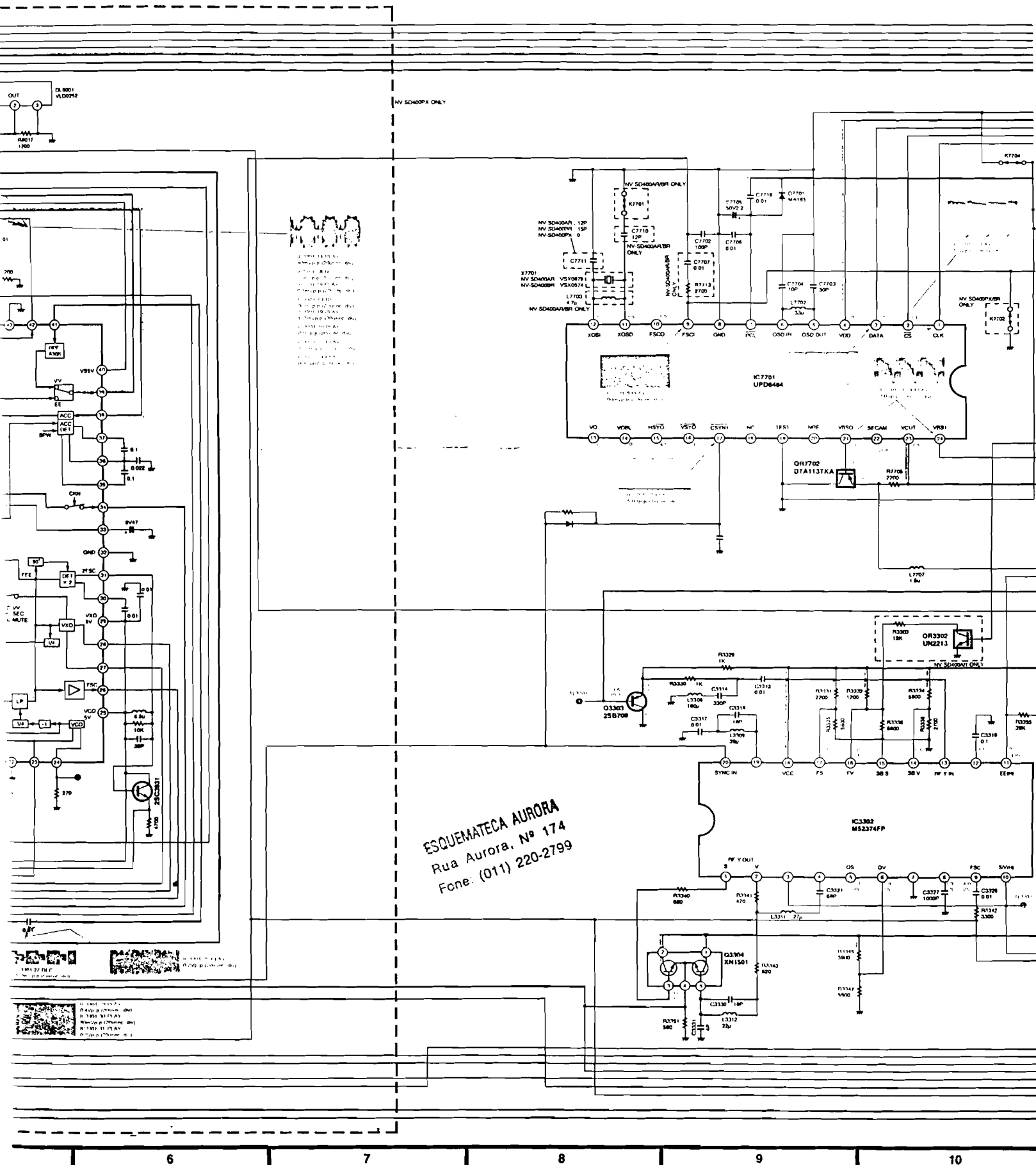


NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.
WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

4-6. LUMINANCE & CHROMINANCE / OSD SECTION SCHEMATIC DIAGRAM





ESQUEMATECA AURORA
Rua Aurora, Nº 174
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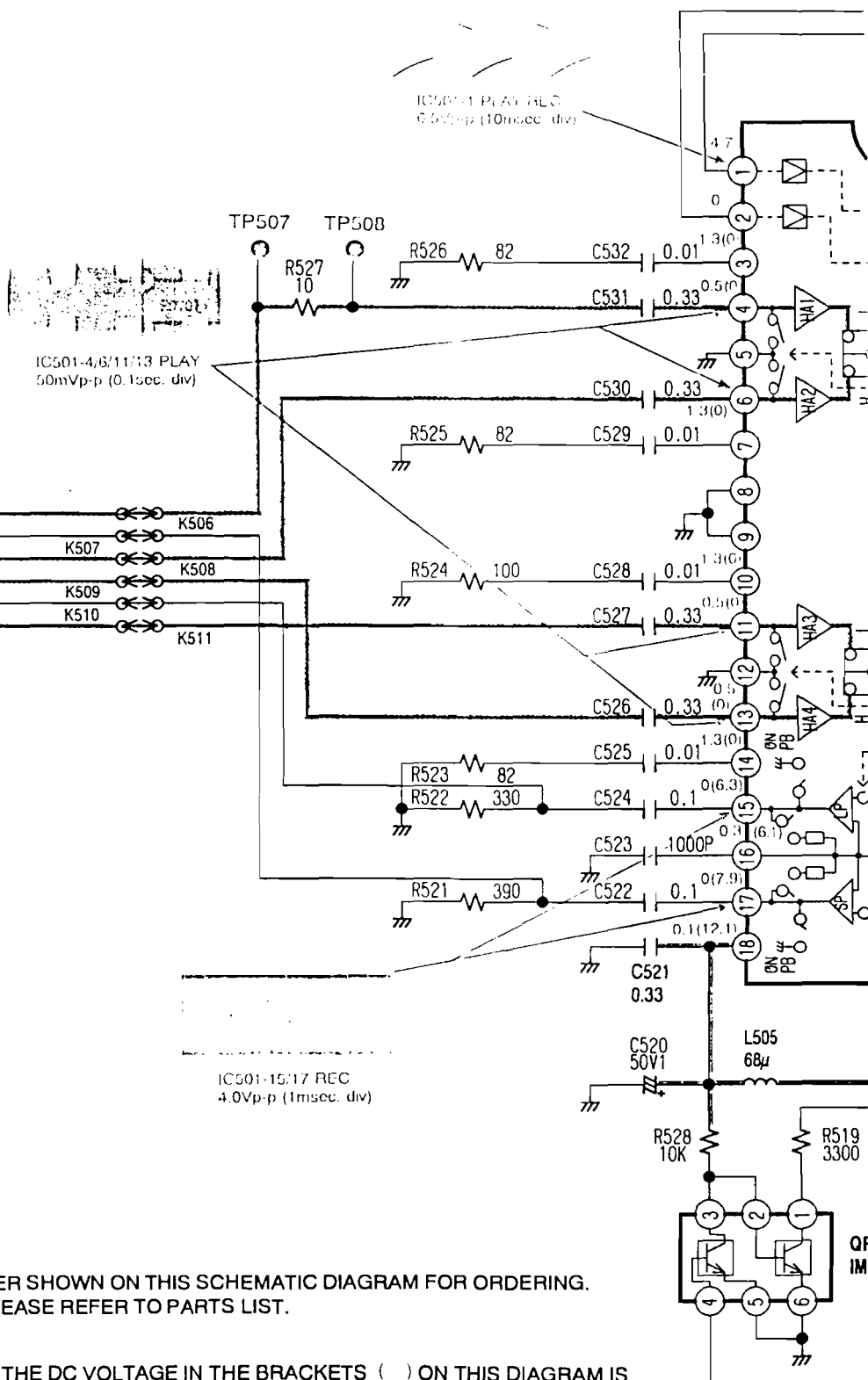
4-8. HEAD AMP SCHEMATIC DIAGRAM

P502
VJS3650

1	GND	1
2	L	2
3	COM	3
4	R	4
5	R	5
6	COM	6
7	L	7
8	GND	8

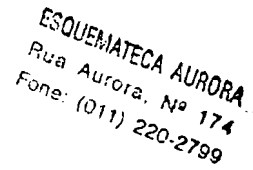
TO MECHANISM UNIT

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Rua Aurora, Nº 174
Fone: (011) 220-2799

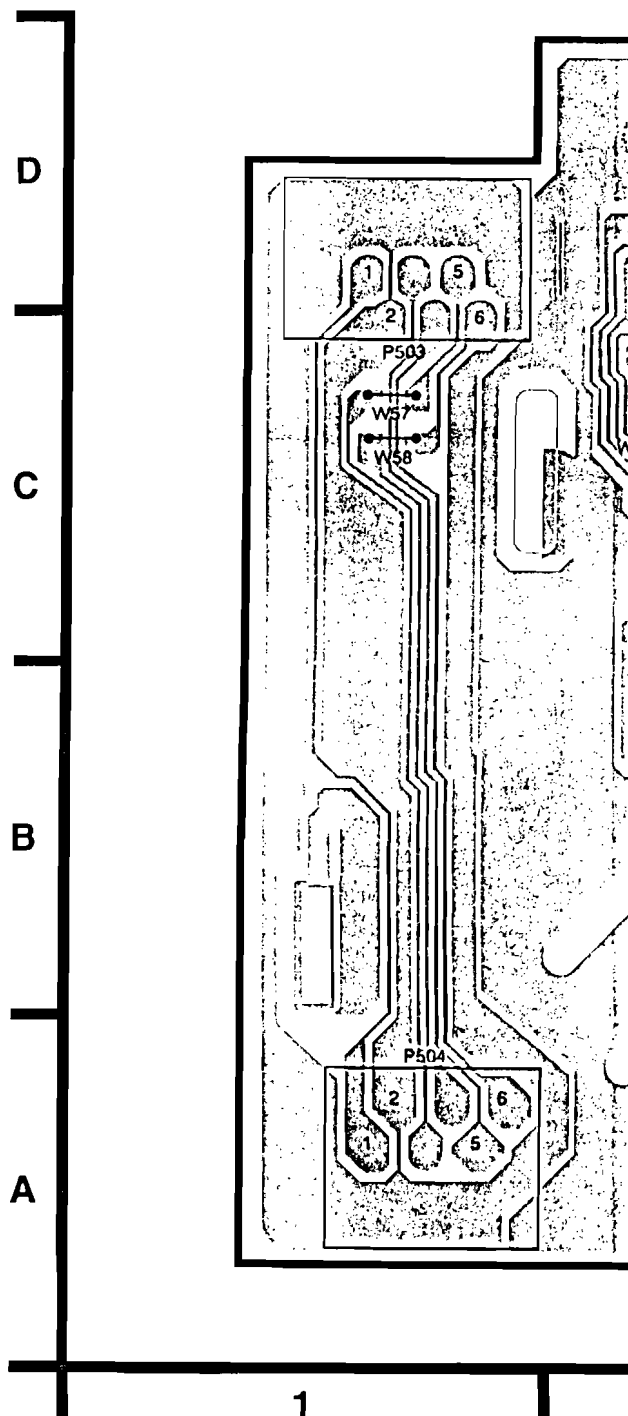
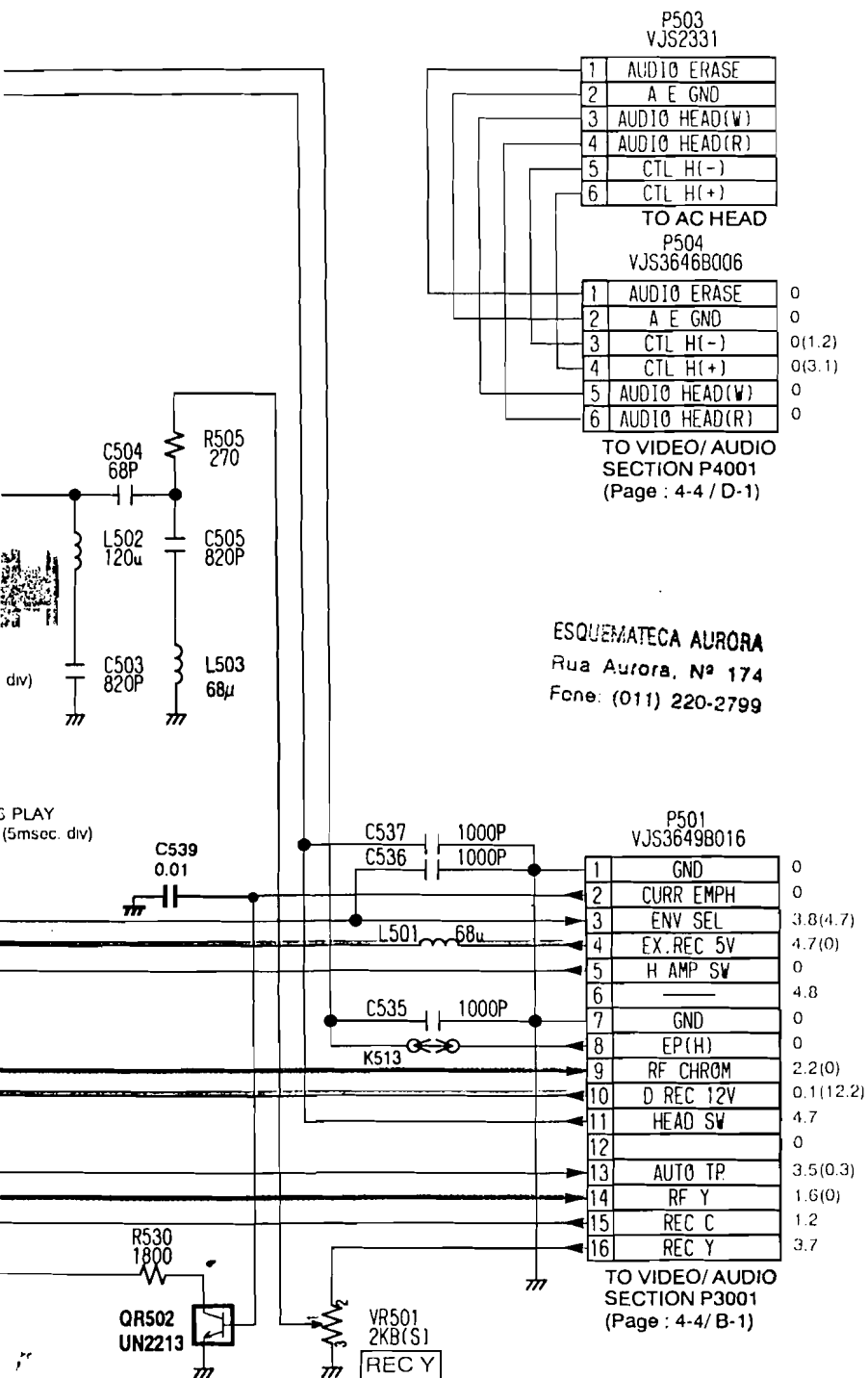


NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

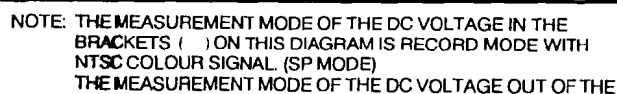
NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS () ON THIS DIAGRAM IS RECORD MODE WITH NTSC COLOUR SIGNAL. (SP MODE)
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH NTSC COLOUR SIGNAL. (SP MODE)



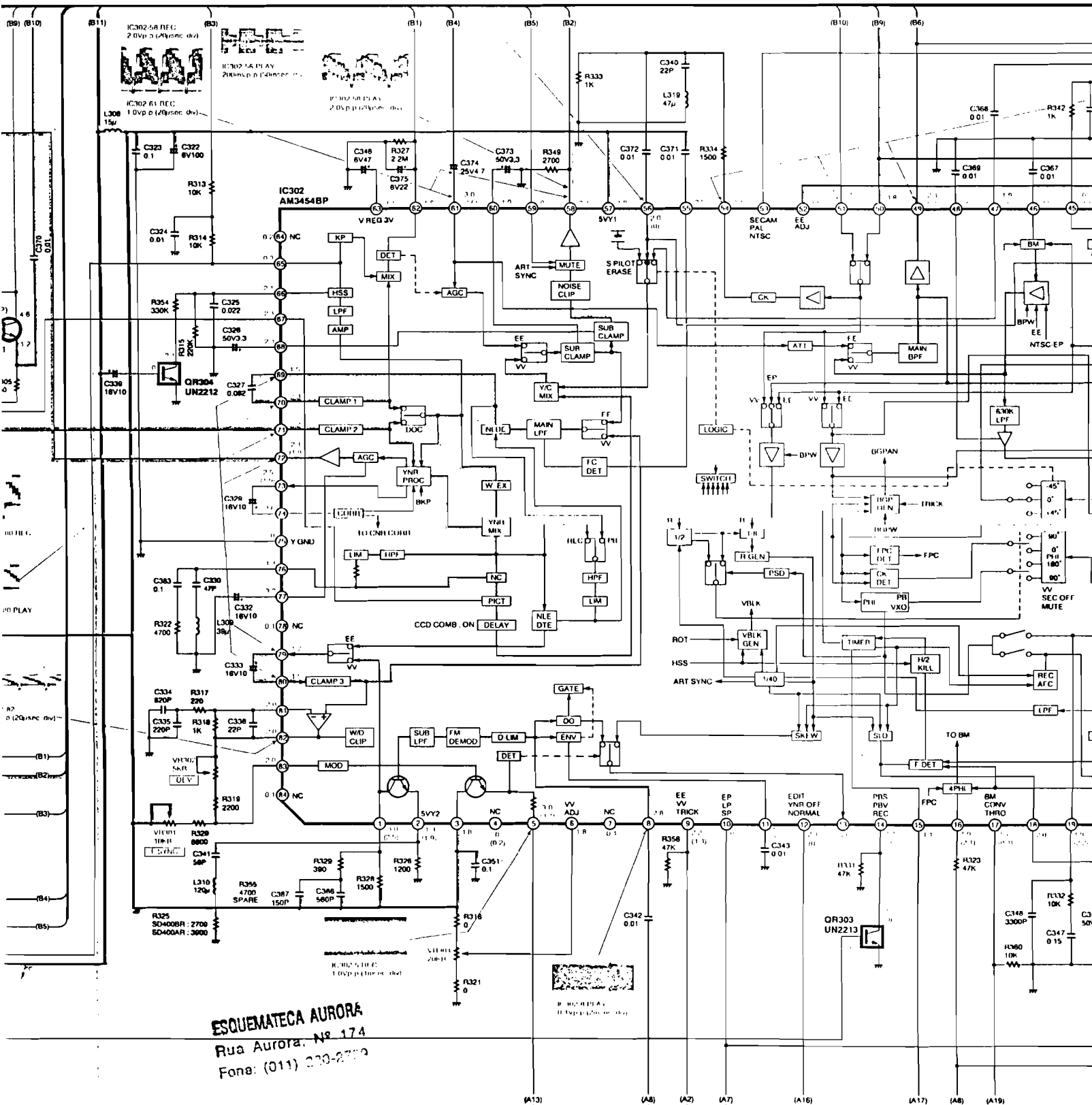
4-9. HEAD AMP C.B.A. (VEP05214A)



A



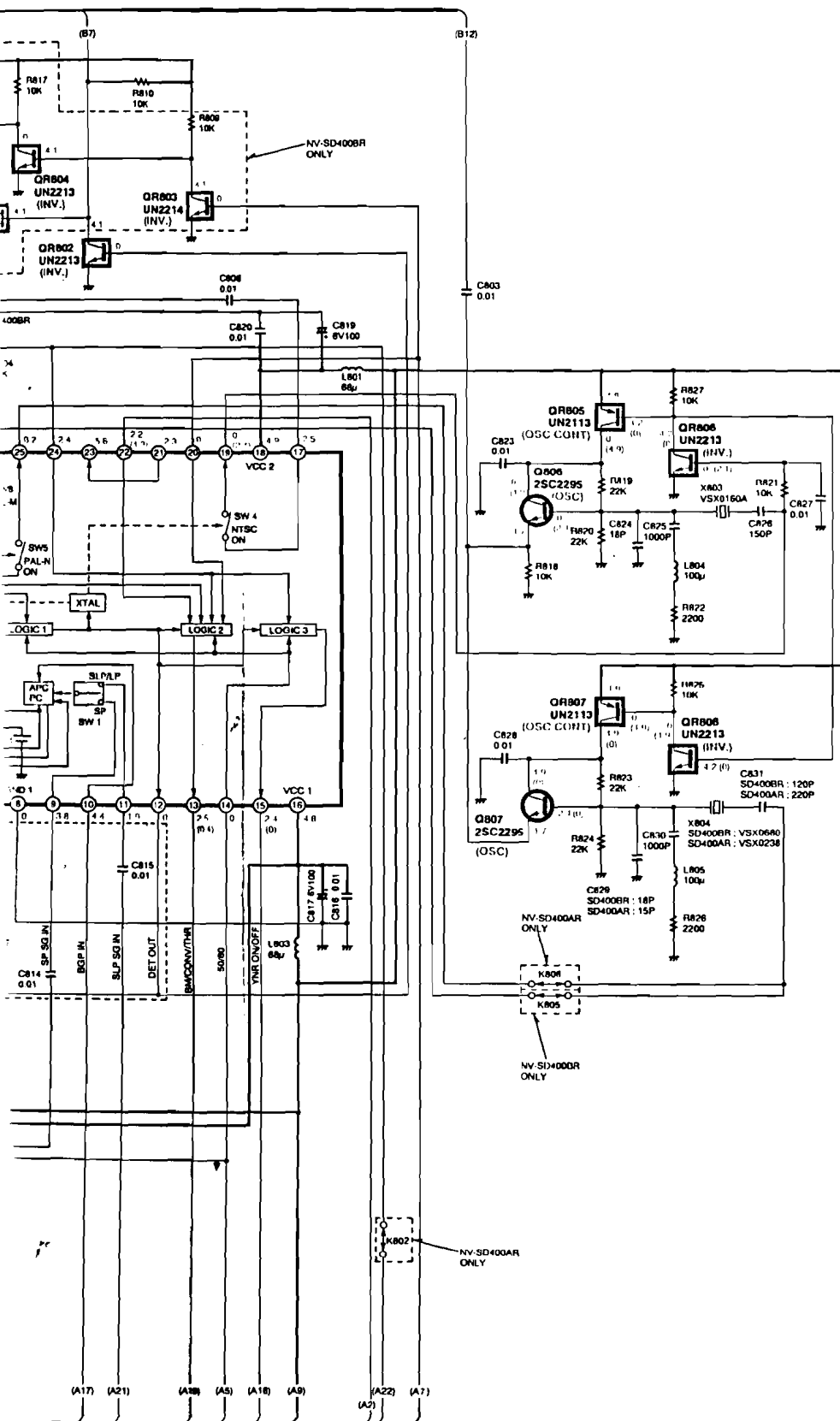
SD400AR/ BR ONLY)

VOLTAGE IN THE
ORD MODE WITH

VOLTAGE OUT OF THE

BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH NTSC
COLOUR SIGNAL. (SP MODE)NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC
DIAGRAM FOR ORDERING.
WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

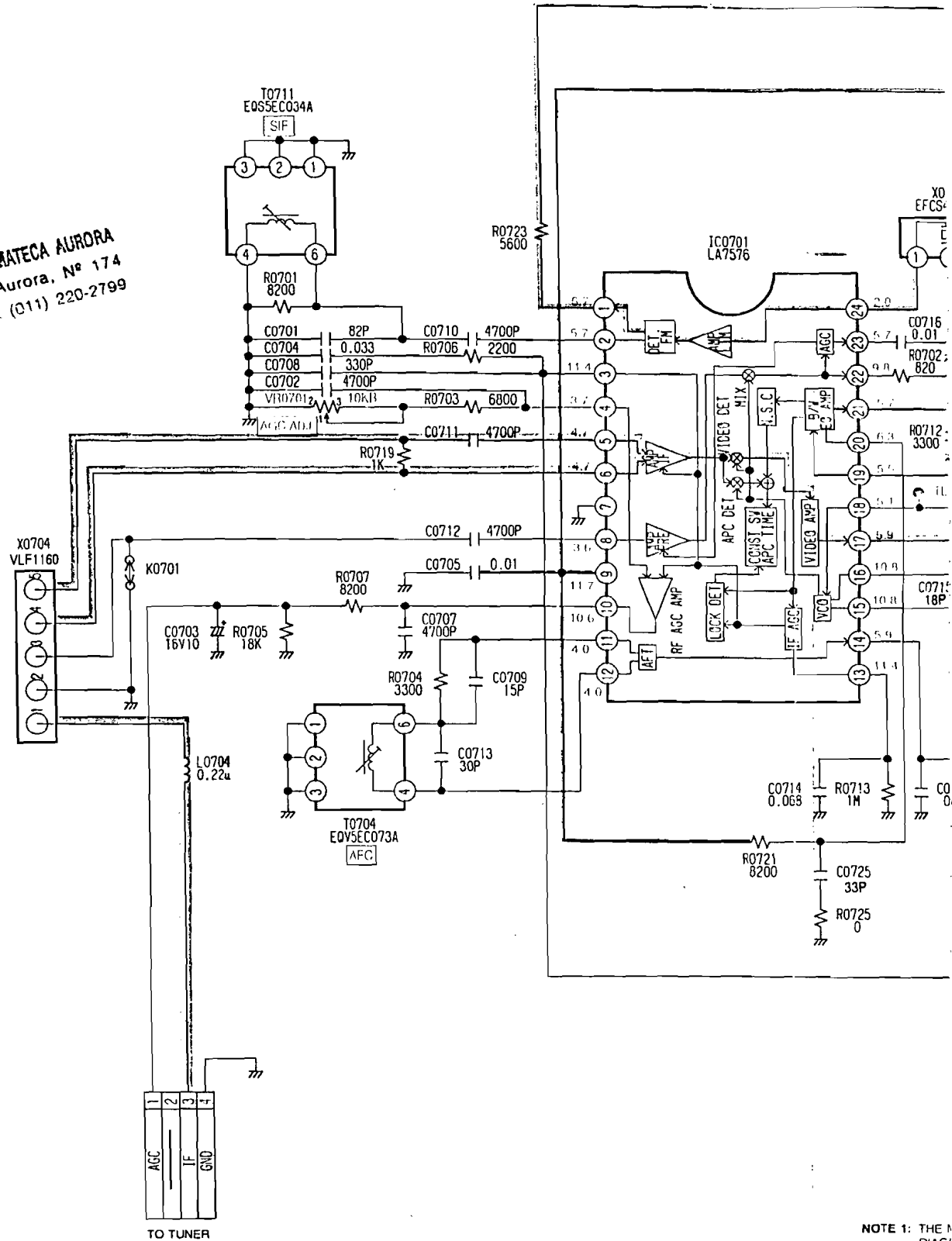




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1-12. TV DEMODULATOR PACK SCHEMATIC DIAGRAM (NV-SD400PX ONLY)

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Rua Aurora, Nº 174
Fone: (011) 220-2799

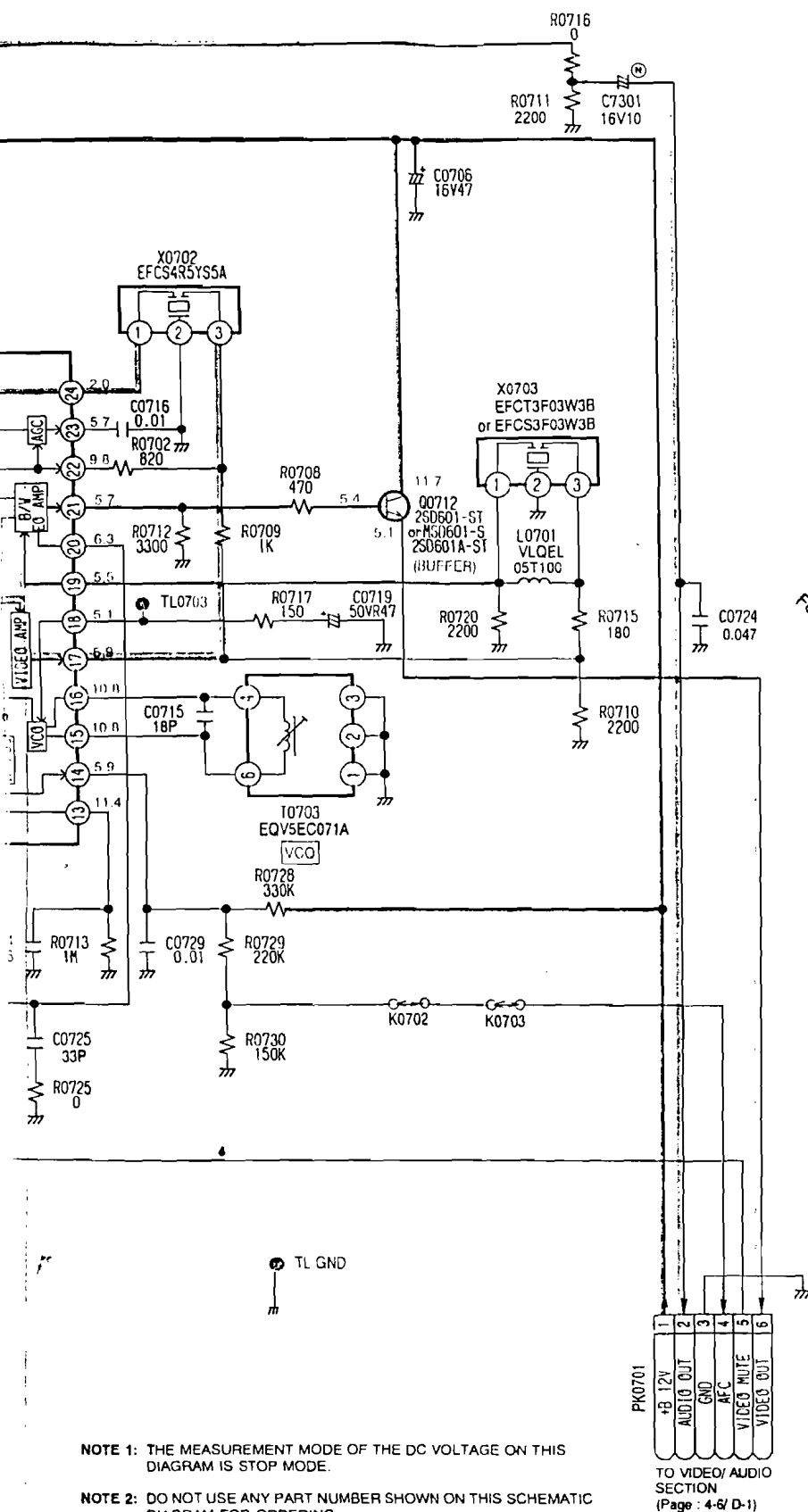


NOTE 1: THE A
DIAG

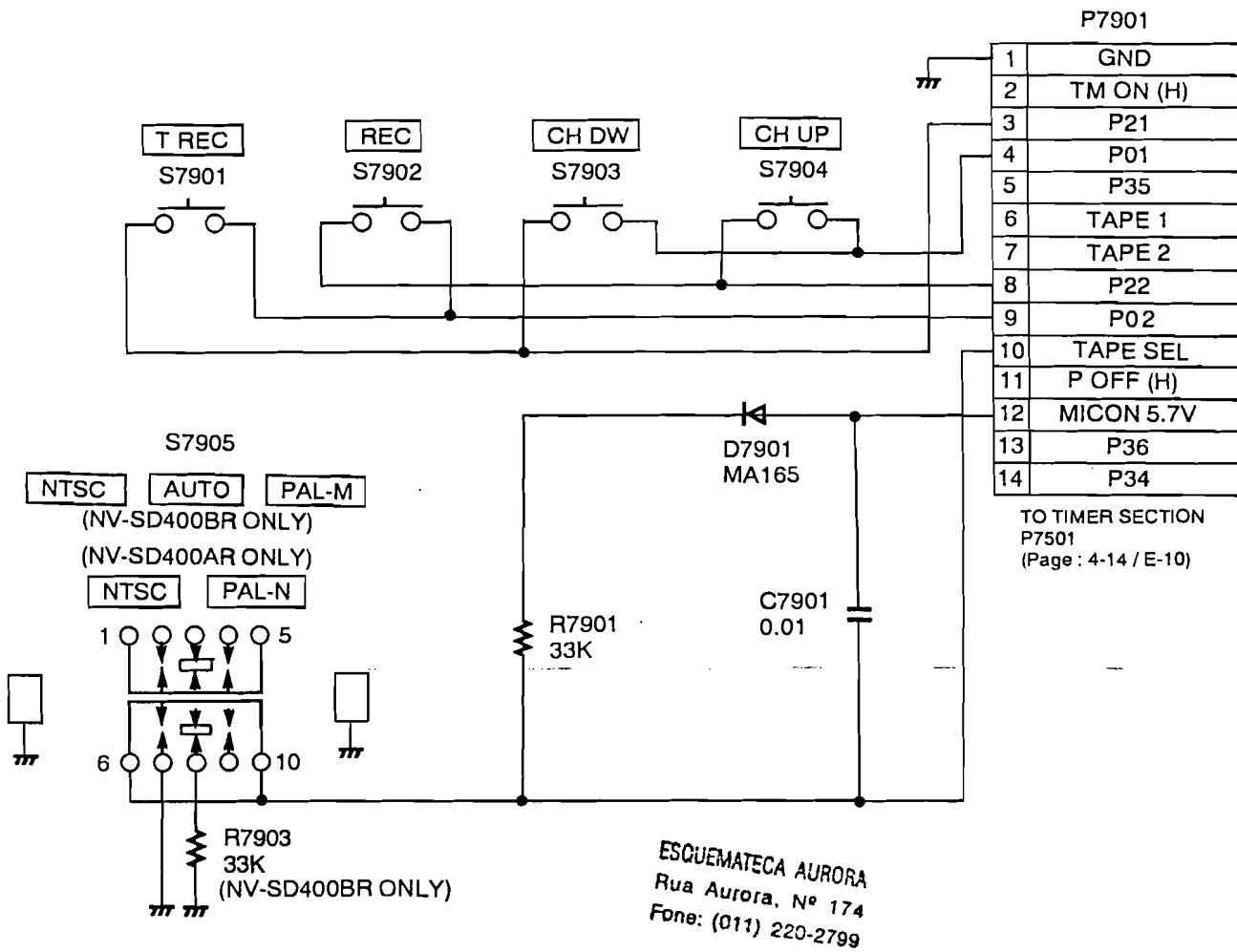
NOTE 2: DO NOT
DIAG
WHEN

VIDEO SIGNAL PATH

AUDIO SIGNAL PATH



4-14. OPERATION SCHEMATIC DIAGRAM (NV-SD400AR/ BR ONLY)



4-15. OPERATION C.B.A. (VEP07818B : NV-SD400AR) (VEP07818A : NV-SD400BR)

