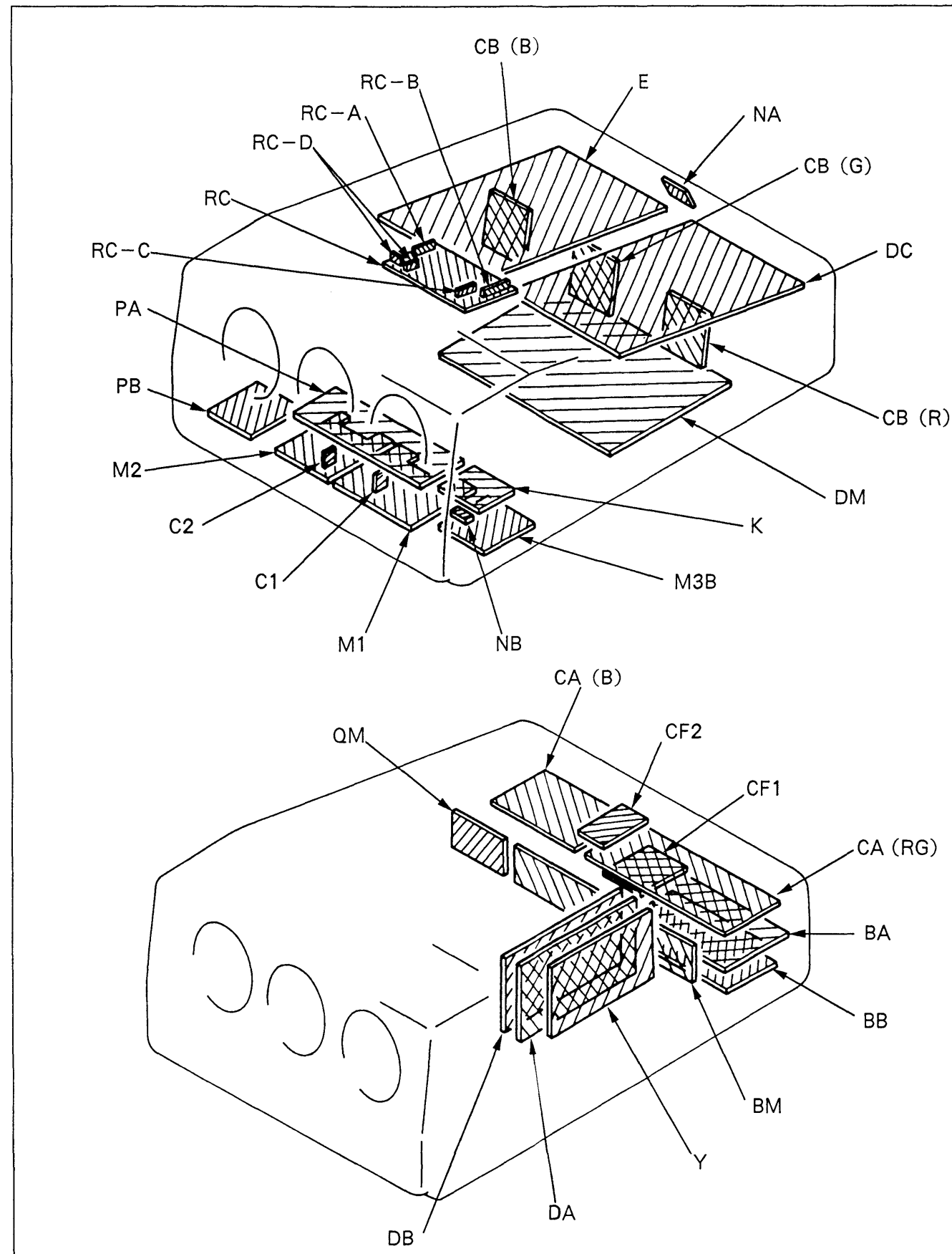


SECTION 7 DIAGRAMS

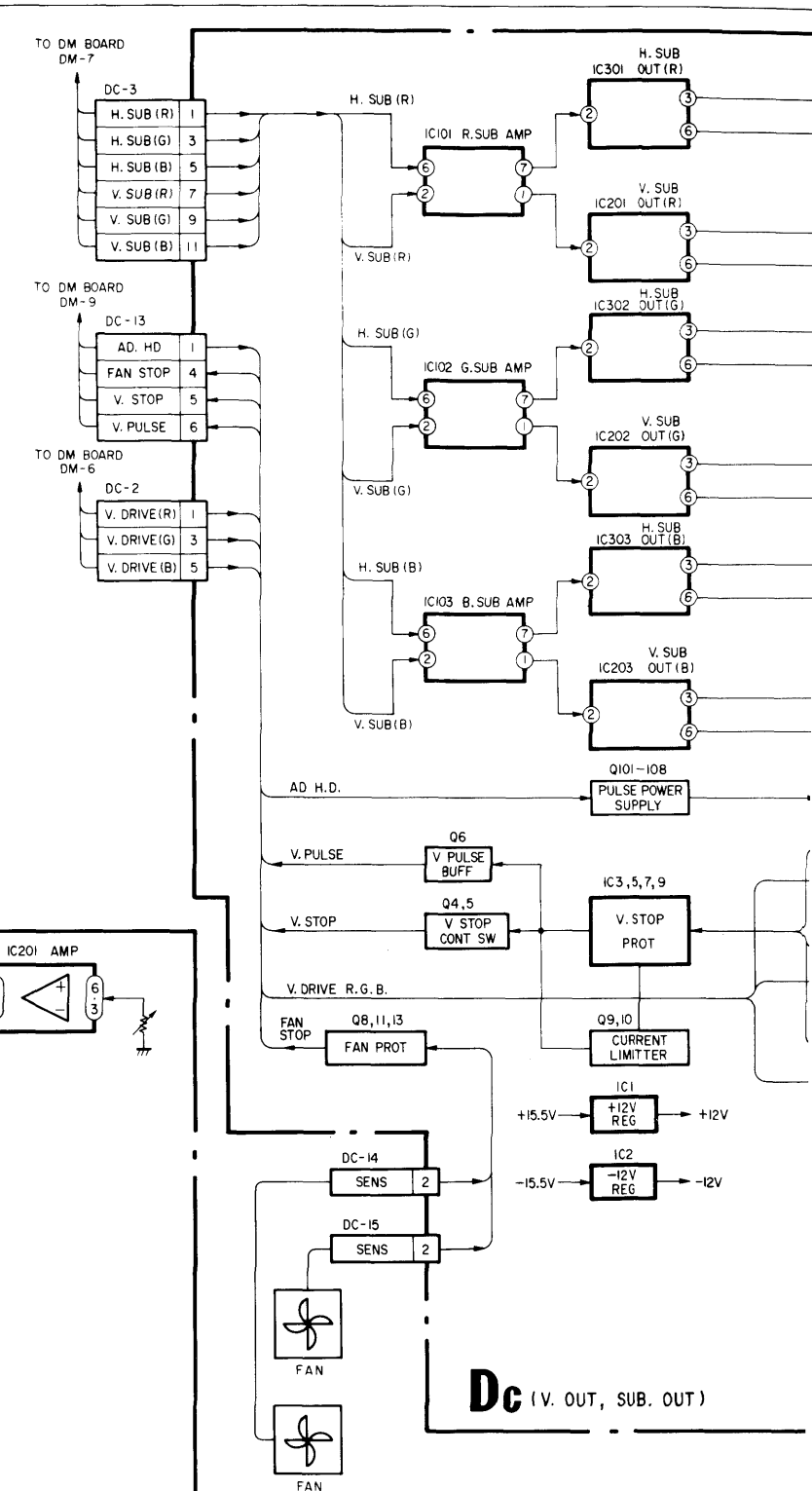
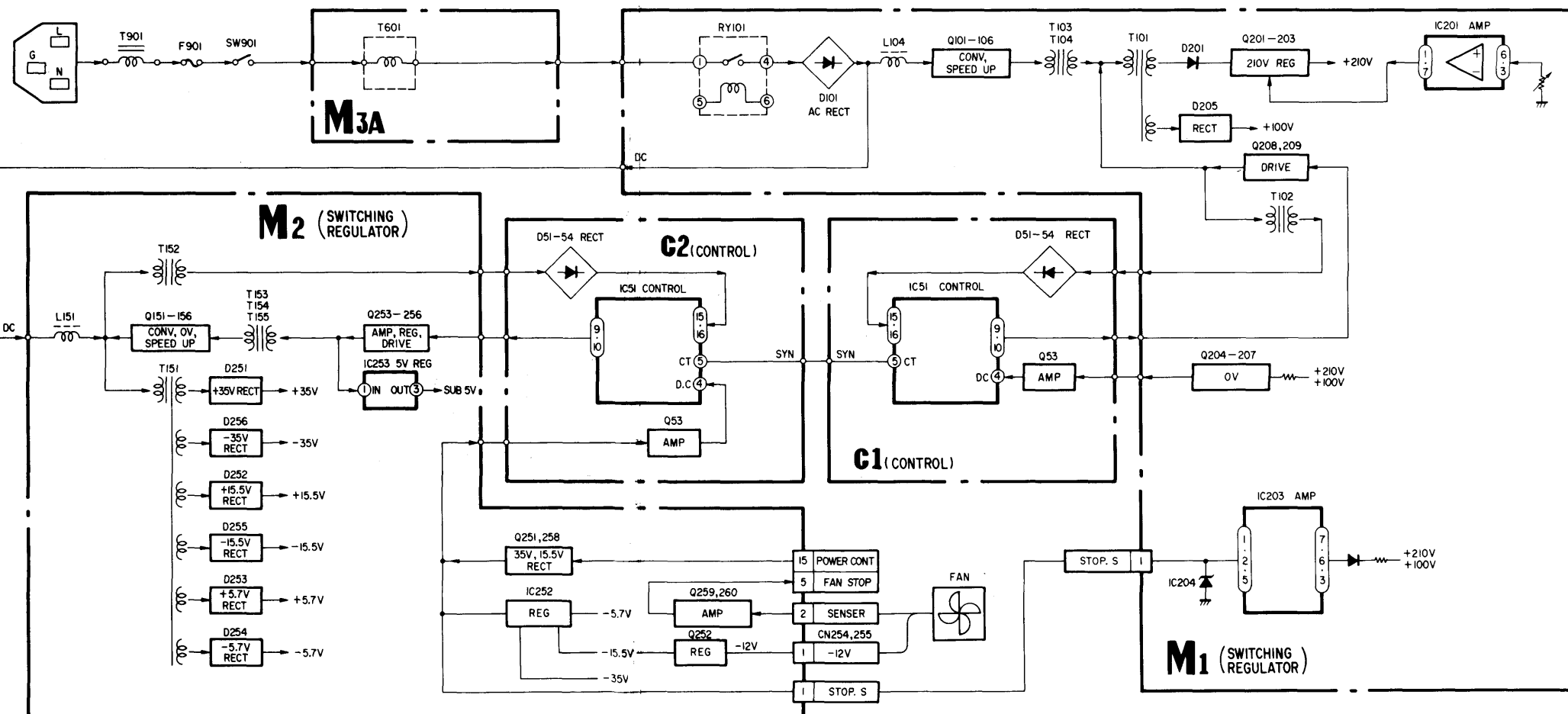
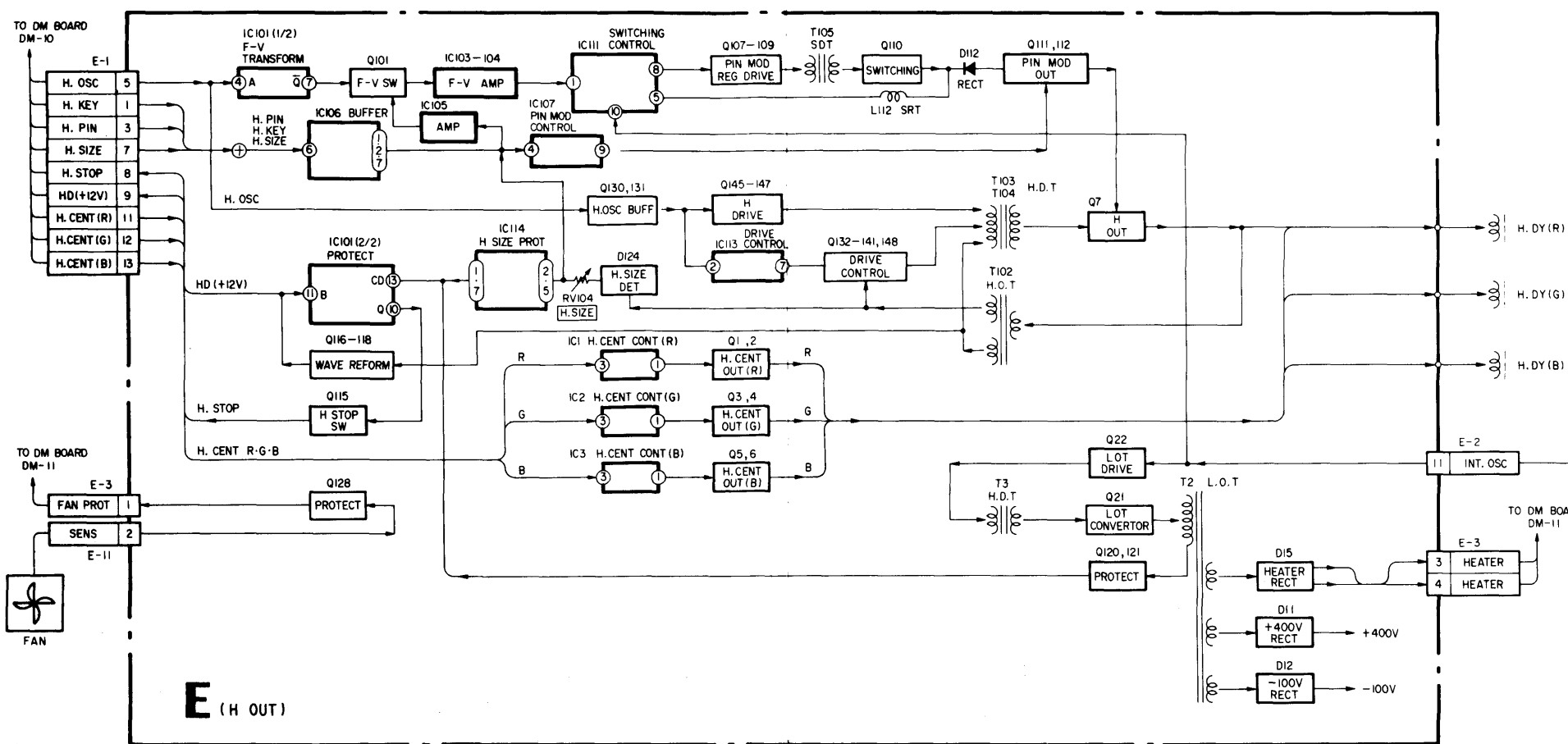
7-1. CIRCUIT BOARDS LOCATION

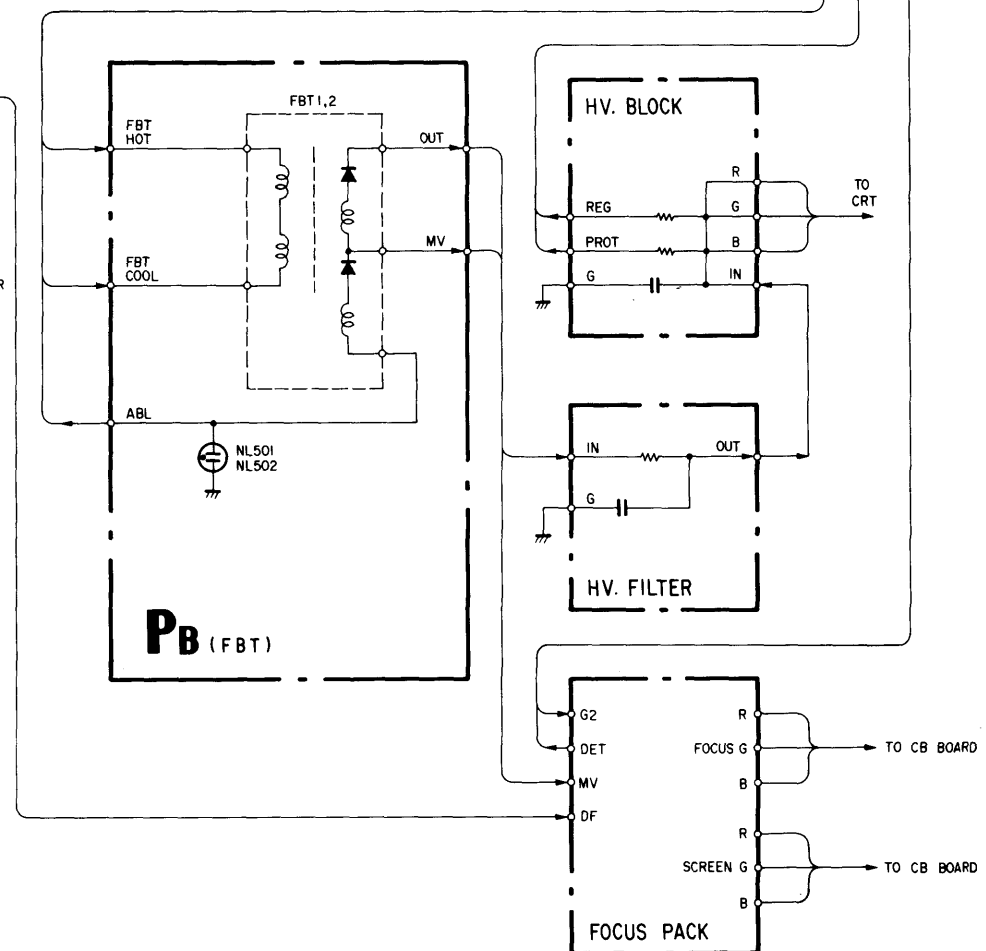


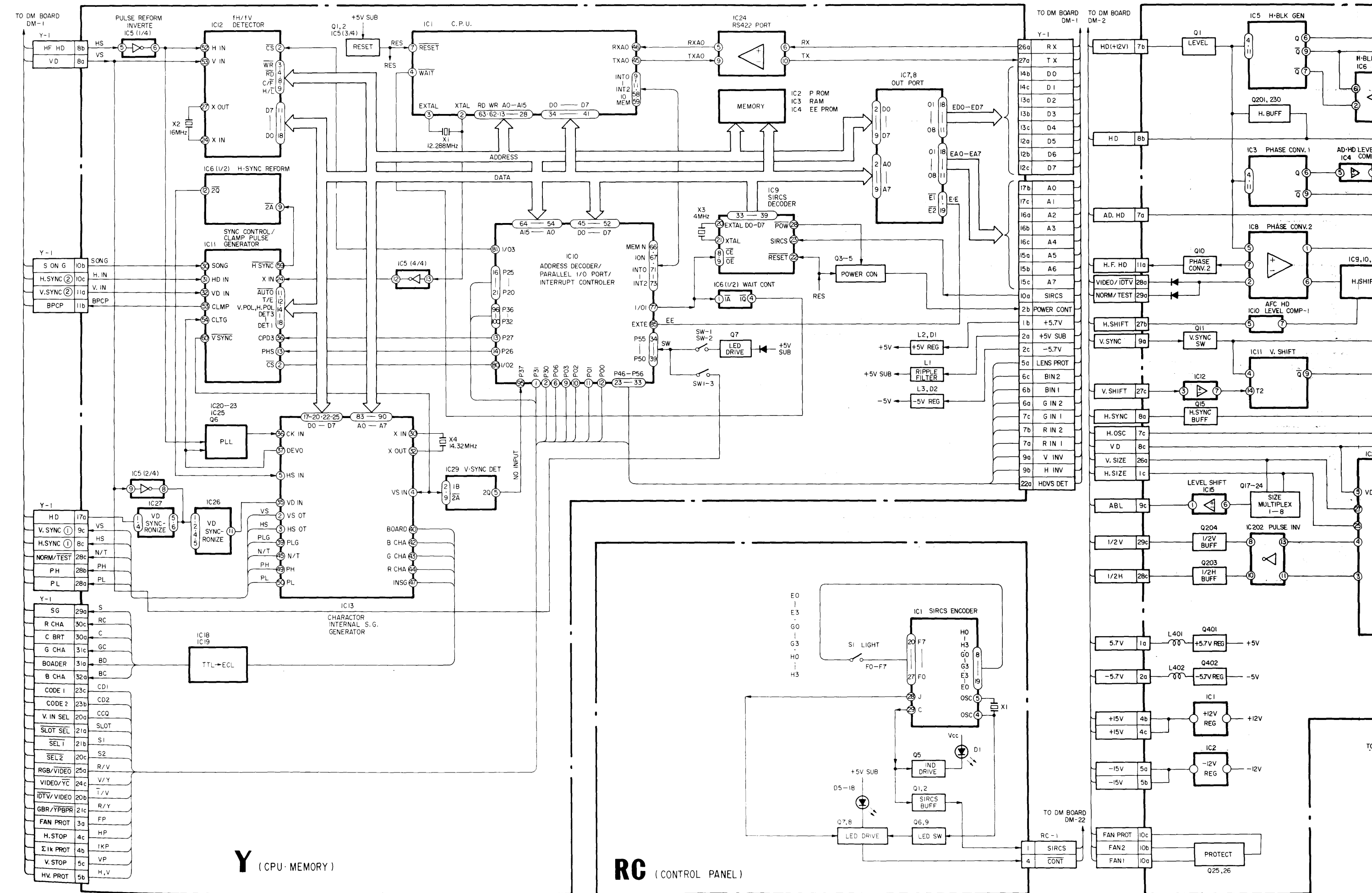
7-2. QUICK REFERENCE

BOARD	BM	BA	BB	PB	PA	QM	NA	NB	DM
ITEM									
CIRCUIT BOARD GUIDE TO OPERATION	—	38	43	60	60	—	—	—	—
ADJUSTMENT	—	76	78	—	—	—	—	—	—
BLOCK DIAGRAM	—	94	92	86	85	—	89	89	—
PRINTED WIRING BOARD	179	133	197	110	108	179	189	189	139
SCHEMATIC DIAGRAM	176	130	194	111	111	178	188	188	141, 143
ELECTRICAL PARTS LIST	213	213	217	222	223	225	225	225	232
BOARD	CF1	CF2	CB (R)	CB (G)	CB (B)	CA (RG)	CA (B)	DA	DB
ITEM									
CIRCUIT BOARD GUIDE TO OPERATION	—	—	—	—	—	—	—	51	55
ADJUSTMENT	—	—	—	—	—	—	—	78	—
BLOCK DIAGRAM	95	96	96	96	96	95	95	89	90
PRINTED WIRING BOARD	192	190	203	202	202	169	189	165	122
SCHEMATIC DIAGRAM	190	191	202	201	201	171	186	162	125
ELECTRICAL PARTS LIST	226	227	227	227	227	228	230	232	237
BOARD	DC	E	K	Y	X	RC-A	RC-B	RC-C	RC-D
ITEM									
CIRCUIT BOARD GUIDE TO OPERATION	57	62	58	59	—	—	—	—	—
ADJUSTMENT	—	78	—	—	—	—	—	—	—
BLOCK DIAGRAM	84	83	85	87	—	—	—	—	—
PRINTED WIRING BOARD	151	119	110	154	204	183	183	183	826
SCHEMATIC DIAGRAM	148	116	113	157	—	182	181	181	181
ELECTRICAL PARTS LIST	240	244	249	249	252	226	226	226	226
BOARD	RC	M1	M2	M3B	C1	C2	DY	SW	
ITEM									
CIRCUIT BOARD GUIDE TO OPERATION	—	—	—	—	—	—	—	—	
ADJUSTMENT	—	—	—	—	—	—	67	—	
BLOCK DIAGRAM	88	84	83	83	84	83	—	85	
PRINTED WIRING BOARD	183	105	106	106	107	107	—		
SCHEMATIC DIAGRAM	181	102	102	102	103	103	—		
ELECTRICAL PARTS LIST	225	252	254	—	254	256	—		

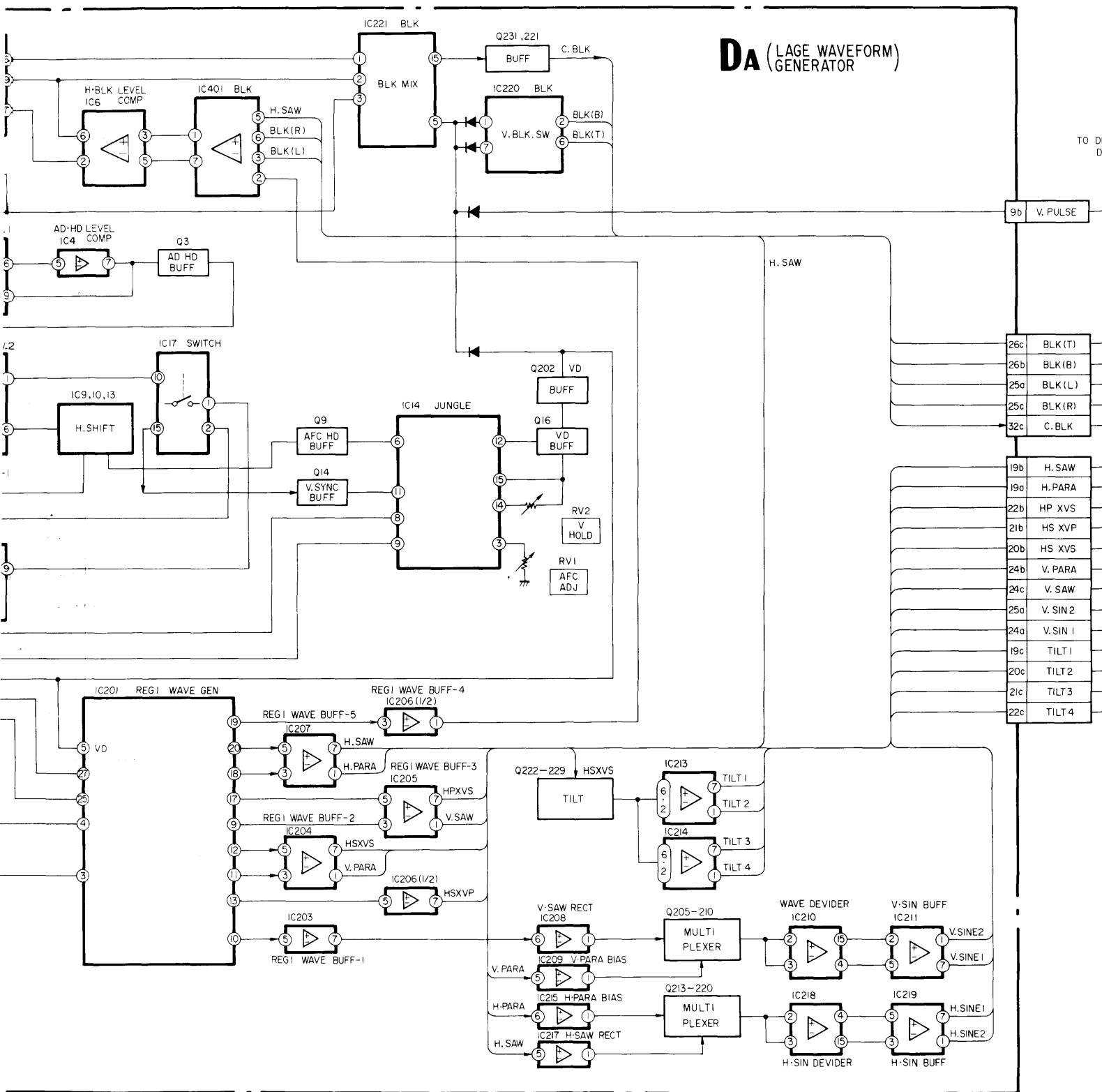
7-3. BLOCK DIAGRAMS



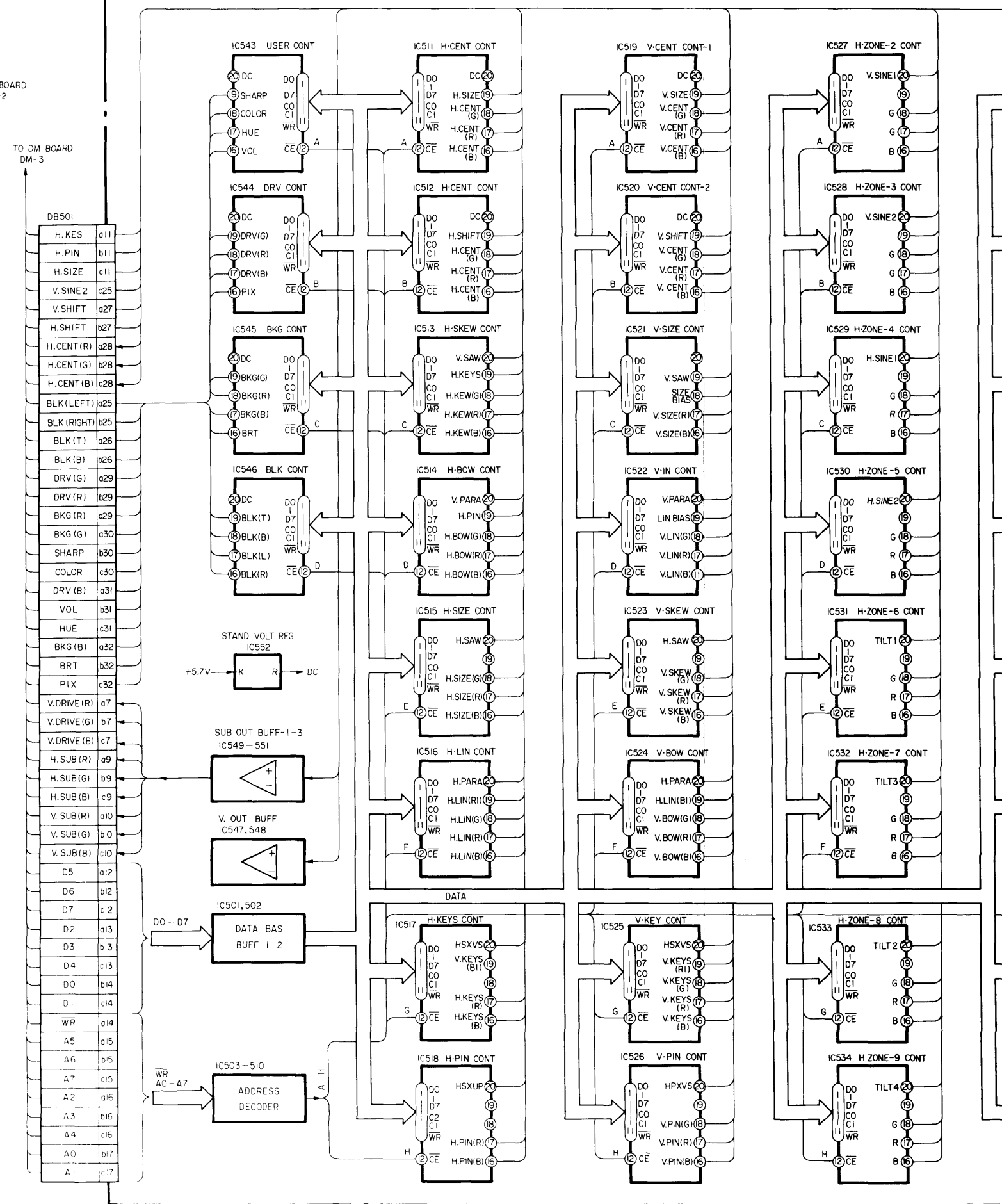


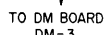


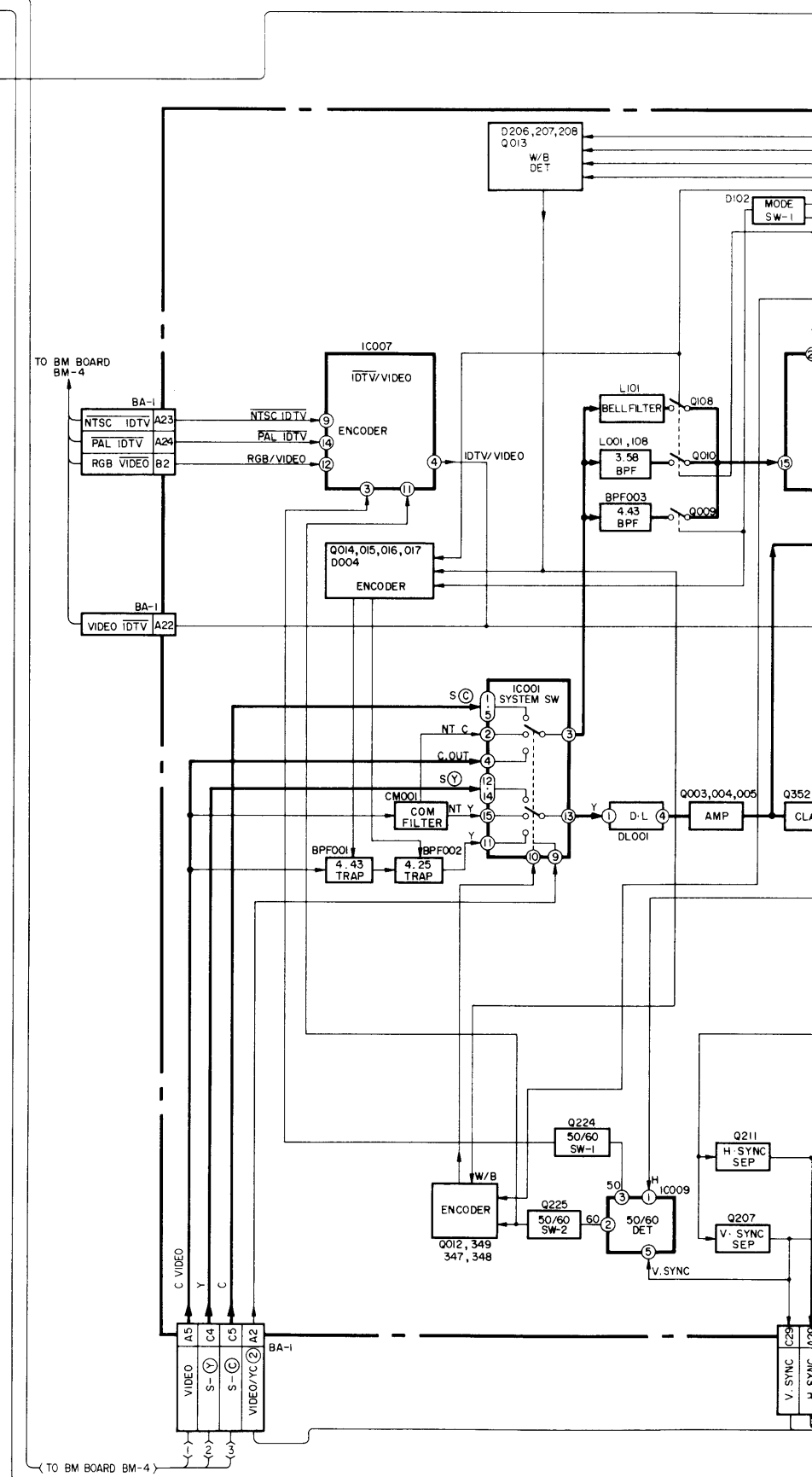
Da (LAGE WAVEFORM) GENERATOR

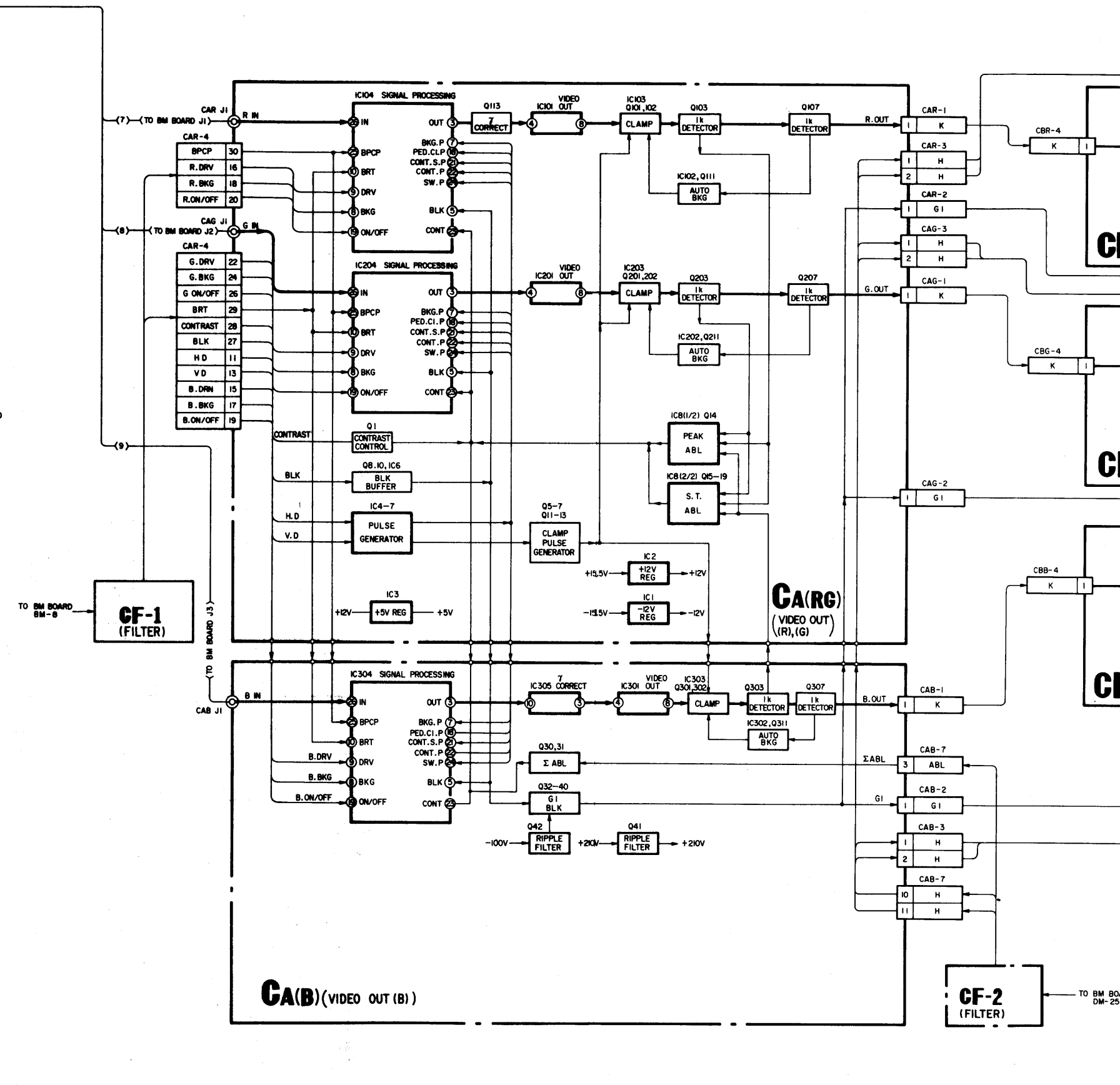
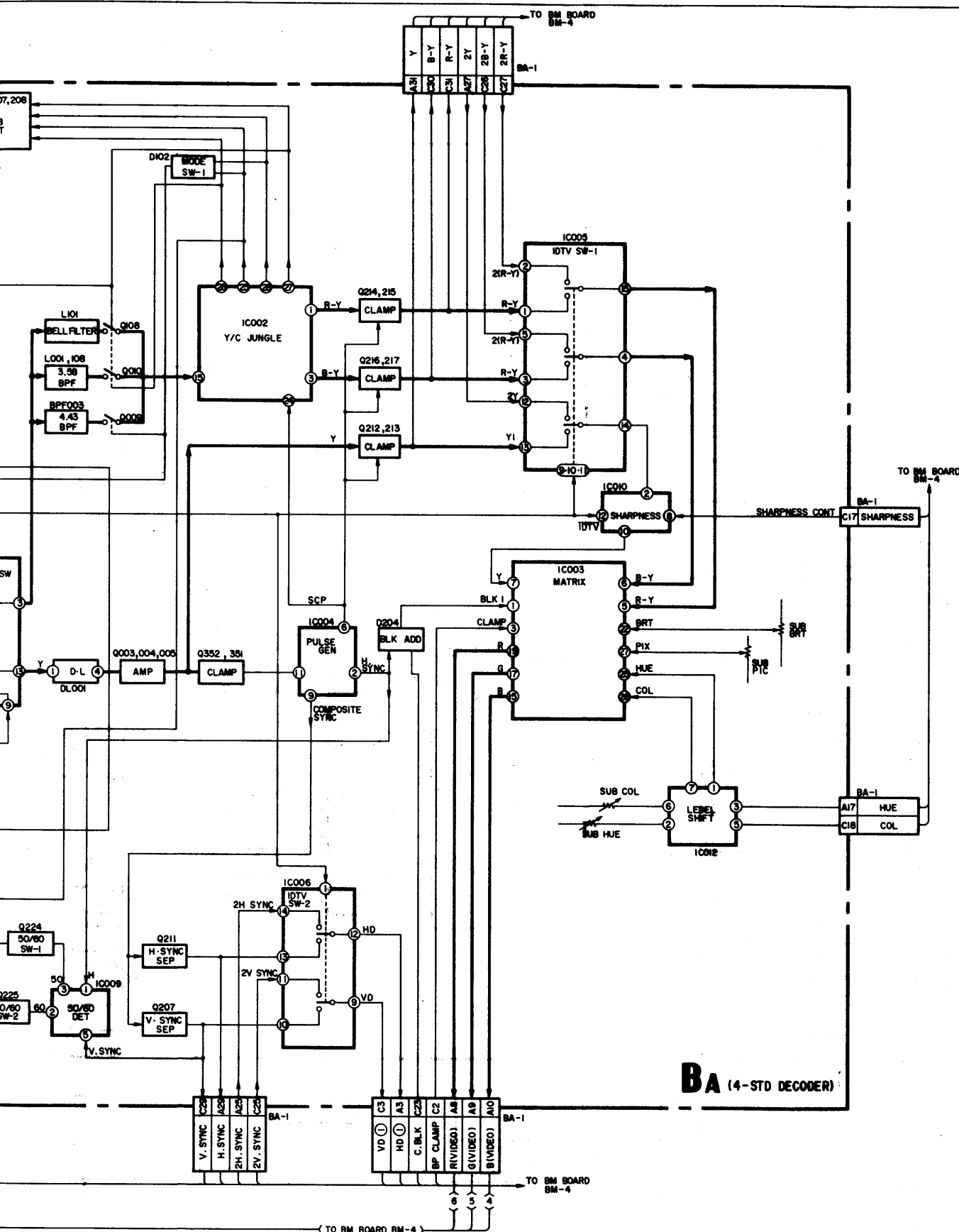


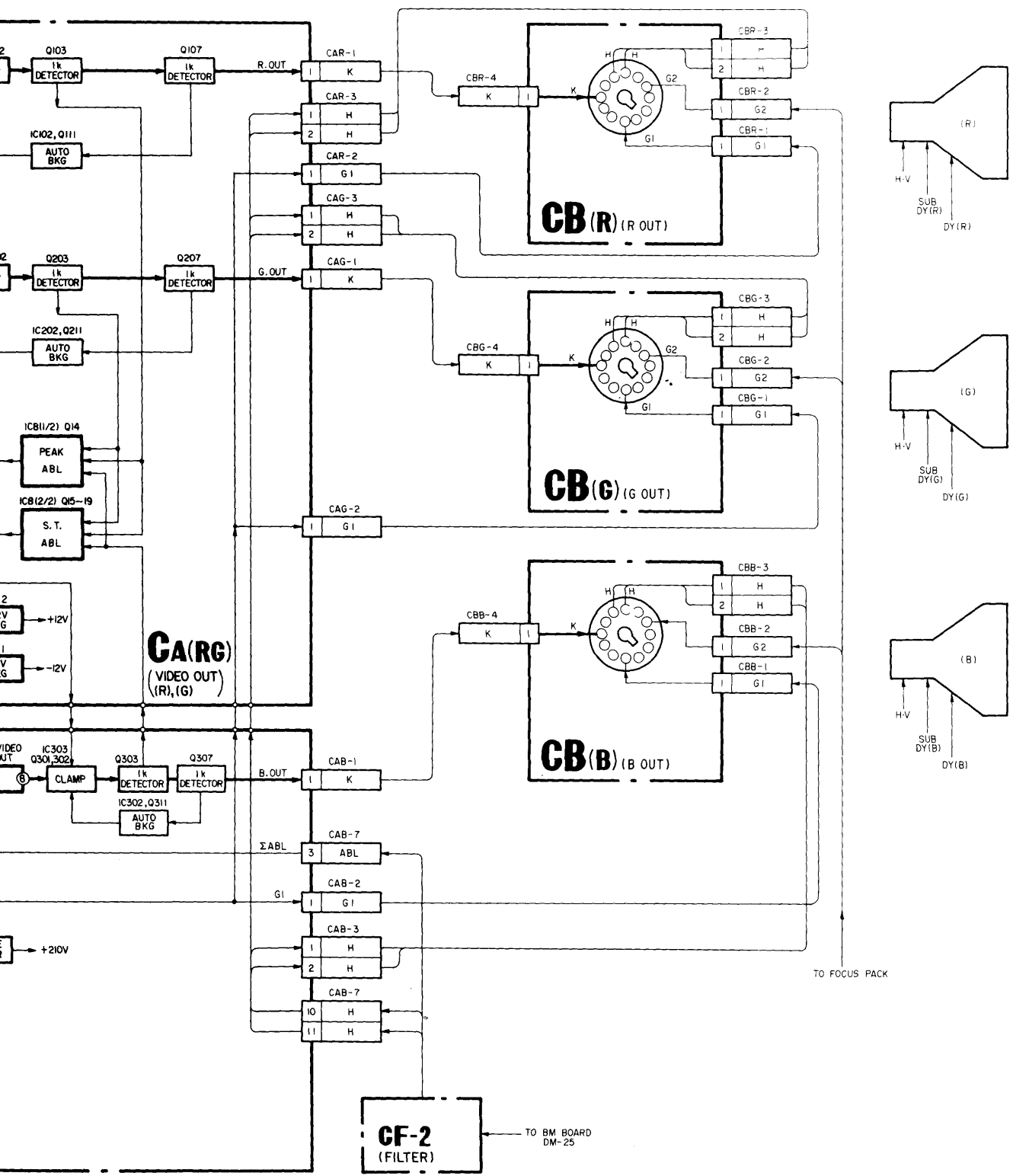
Db (ELECTRONIC VR)

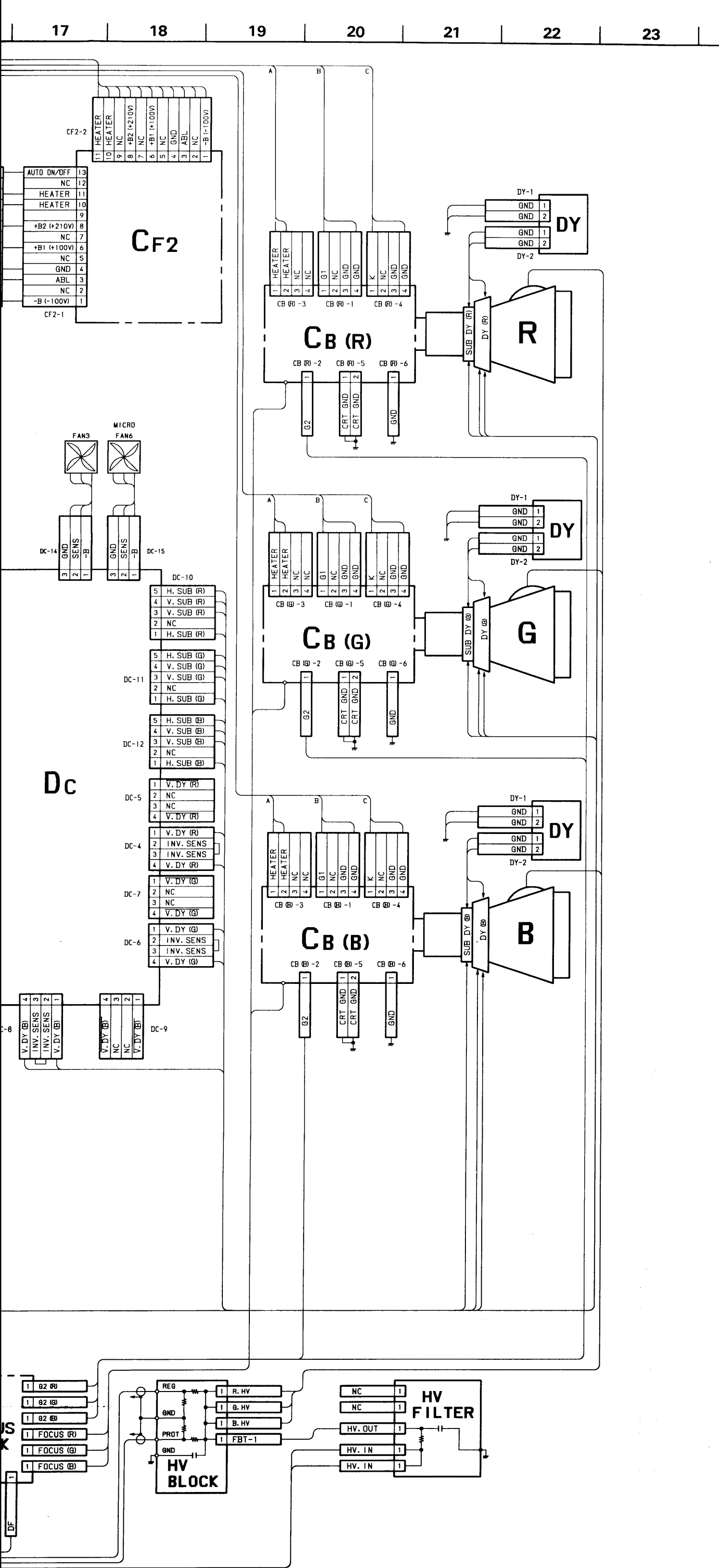





















Note :




- All capacitors are in μF unless otherwise noted. pF : $\mu \mu F$
50WV or less are not indicated except for electrolytics.

Pitch : 5mm

Rating electrical power : $\frac{1}{4}W$

- All resistors are in ohms.
-  : nonflammable resistor.
-  : fusible resistor.
-  : internal component.
-  : panel designation and adjustment for repair.
- The components identified by  in this basic schematic diagram have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.
- When replacing components identified by  , make the necessary adjustments indicated. If results do not meet the specified value, change the component identified by  and repeat the adjustment until the specified value is achieved. (Refer to R1, R4, R29, R30, R33, R34, R41, R42 adjust on Page 72~75.)

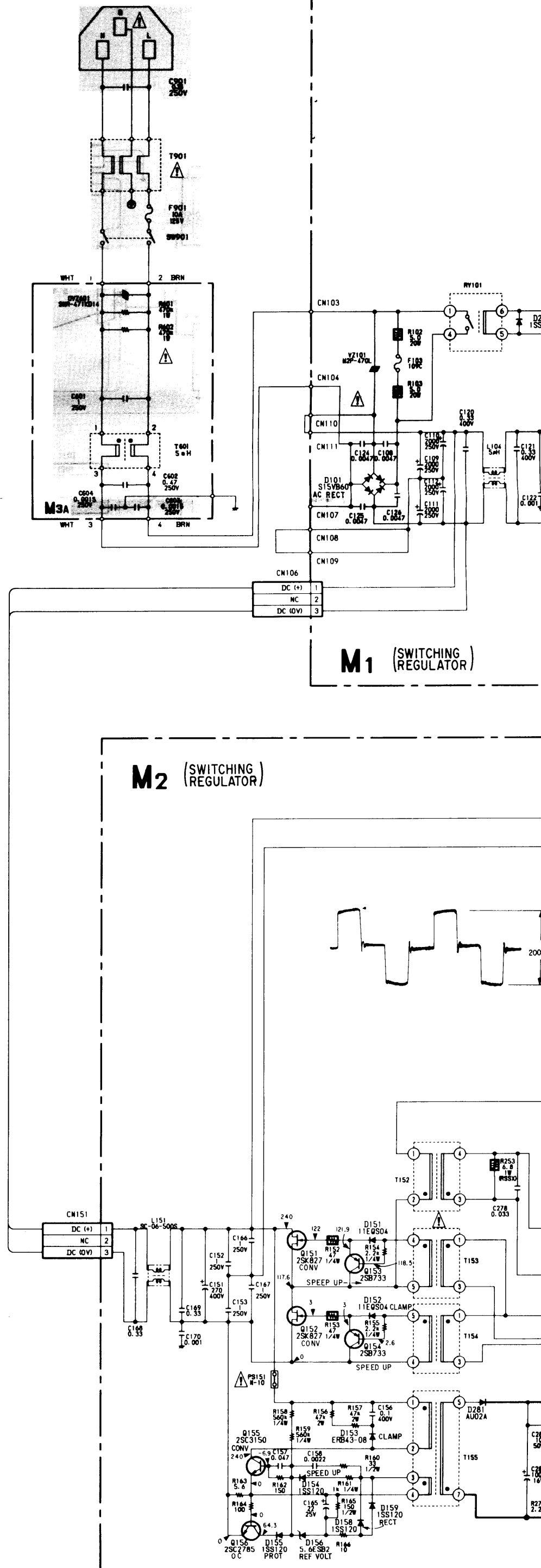
Part replaced ()	Adjustment ()
IC2, Q7, D9, D12, C13, R20, R21, R22, R23, R24, R32, R33, R34, R35, R36, R82, (PA BOARD) PA MOUNT HV BLOCK	HV HOLD DOWN (R33, R34)
IC1, IC6, IC7, IC8, IC9, D13, C16, R37, R38, R39, R40, R41, R42, R53, R55, R56, R58, R59, R129, X1, (PA BOARD) PA MOUNT, PB MOUNT HV BLOCK	HV REGULATION (R41, R42)
IC2, IC3, IC5, Q1, Q2, Q7, Q8, D4, D5, D9, R1, R2, R3, R4, R5, R6, R7, R8, R9, R10, R20, R21, R22, R23, R24, R43, R44, R45, R46, R47, R82, R88, R119, R120, R121, R122, (PA BOARD) R199 (DA BOARD) PA MOUNT, PB MOUNT	BEAM CURRENT PROTECTOR (R1, R4)
IC1, IC3, IC5, Q8, D4, D5, D10, D11, R9, R10, R26, R28, R29, R30, R31, R88, R95 (PA BOARD) PA MOUNT	LOW B PROTECTOR (R29, R30)

- Voltage value is the reference value between it & the earth, when NTSC 3.58 color bar signal is received from color bar generator (digital multi-meter used : 10M ohms/V DC).
- ☆ : Displays a list of BB, BA board modes.
(PAL, SECAM, NTSC 3.58, NTSC 4.43)
Displays a list of existing voltages, when board E has issued a white pattern of internal signals.
- Unit of voltage values is V (volt).
- For other modes, see the respective circuit diagrams.
-  : Measurement disabled
-  : B+ line
-  : B- line
(Actual measured value may be different).
- Round numerals indicate Waveform Table No.

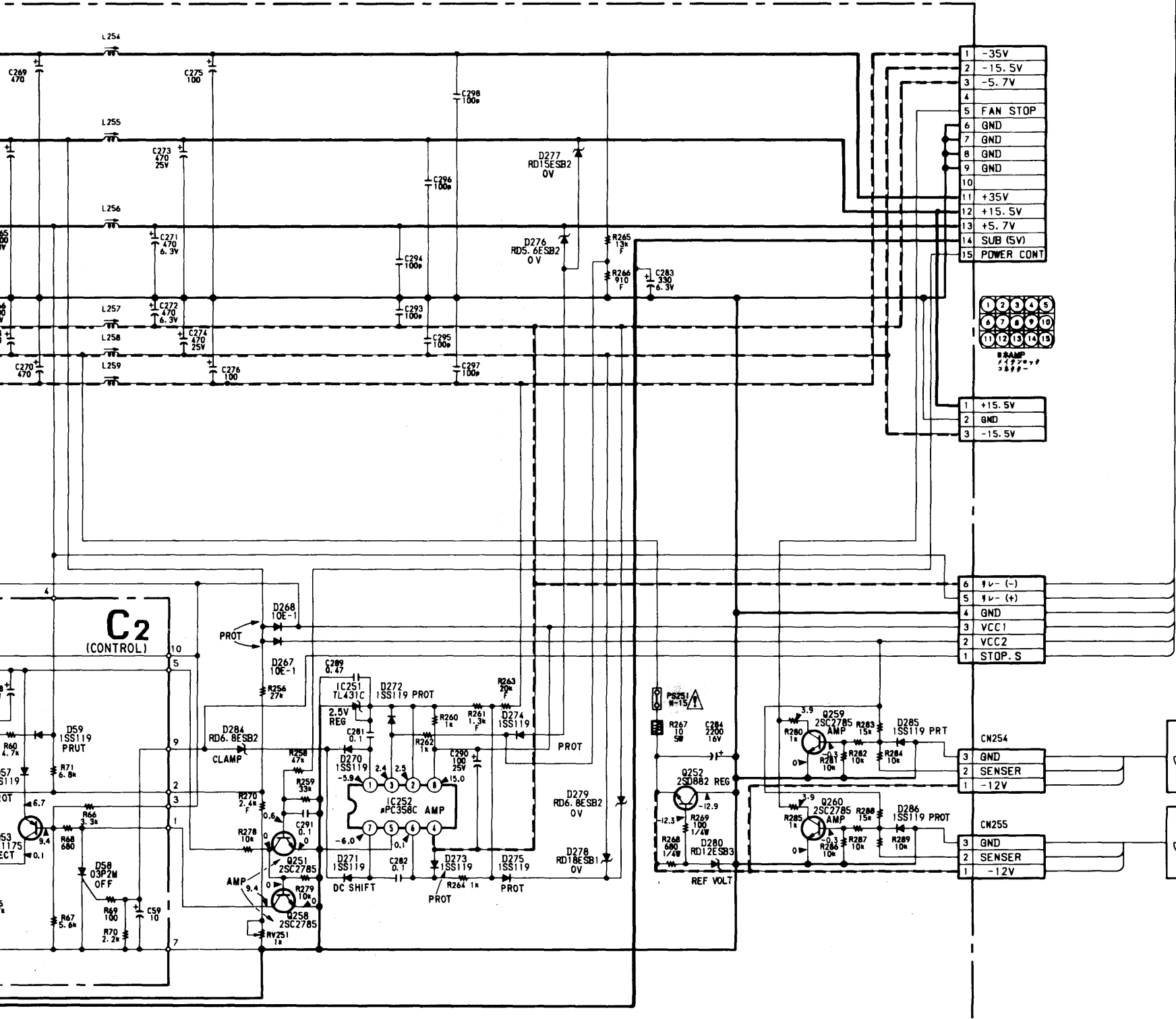
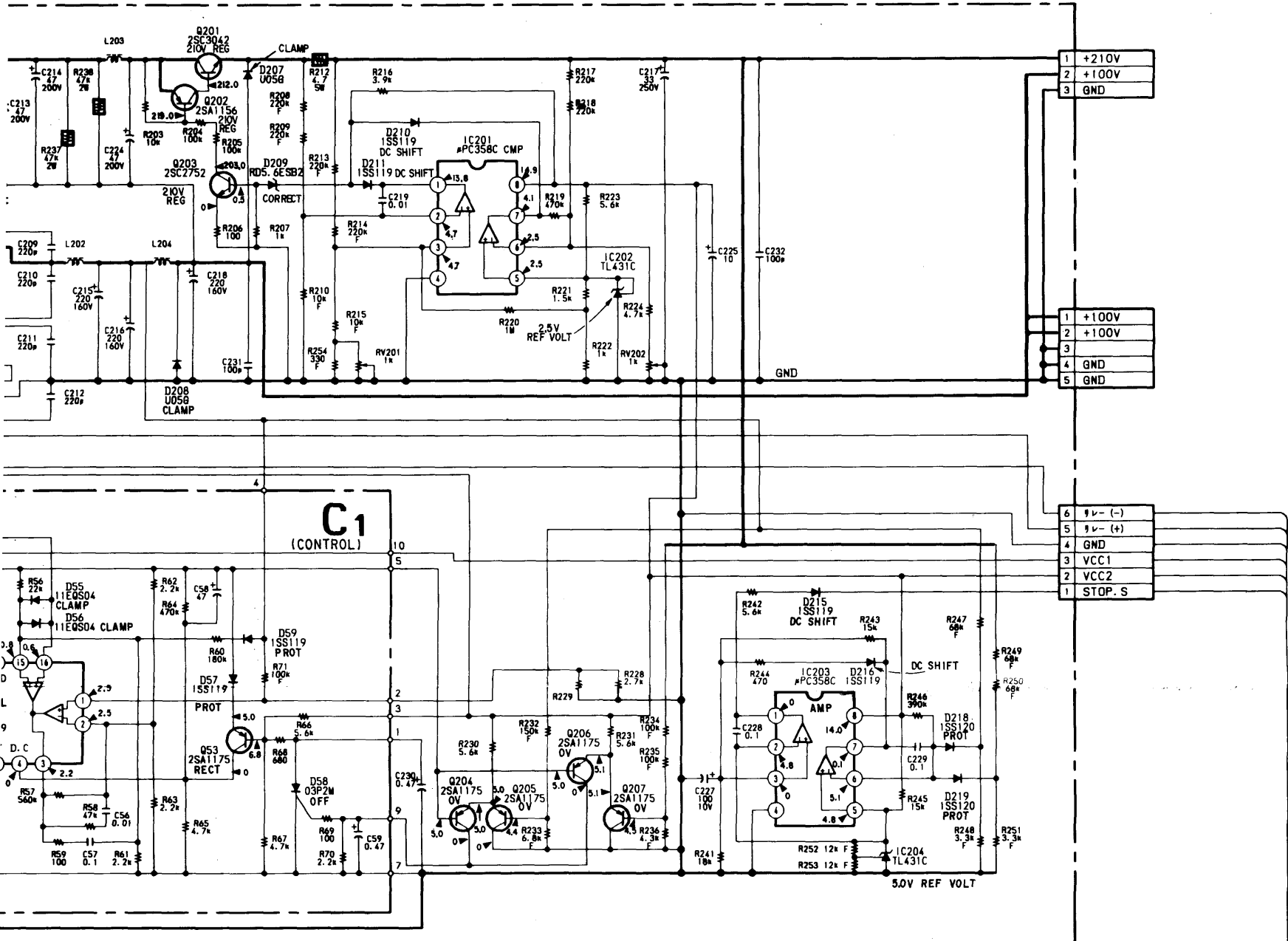
Reference information

RESISTOR	: RN	METAL FILM
	: RC	SOLID
	: FPRD	NONFLAMMABLE CARBON
	: FUSE	NONFLAMMABLE FUSIBLE
	: RS	NONFLAMMABLE METAL OXIDE
	: RB	NONFLAMMABLE CEMENT
	: RW	NONFLAMMABLE WIREWOUND
	: ※	ADJUSTMENT RESISTOR
COIL	: LF-8L	MICRO INDUCTOR
CAPACITOR	: TA	TANTALUM
	: PS	STYROL
	: PP	POLYPROPYLENE
	: PT	MYLAR
	: MPS	METALIZED POLYESTER
	: MPP	METALIZED POLYPROPYLENE
	: ALB	BIPOLAR
	: ALT	HIGH TEMPERATURE
	: ALR	HIGH RIPPLE

A
B
C
D
E
F
G
H
I
J
K
L
M
N
O



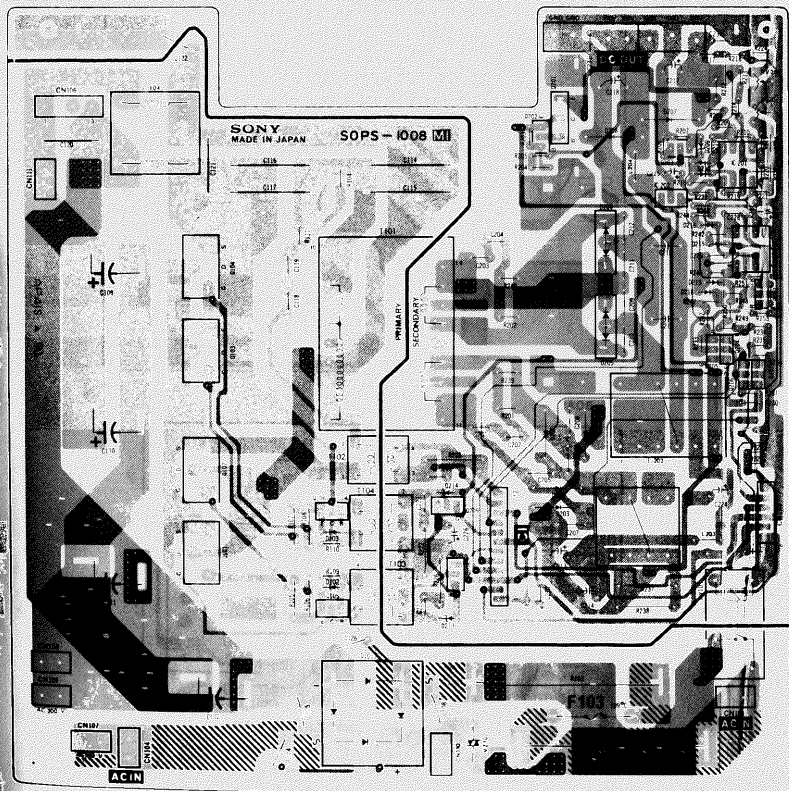




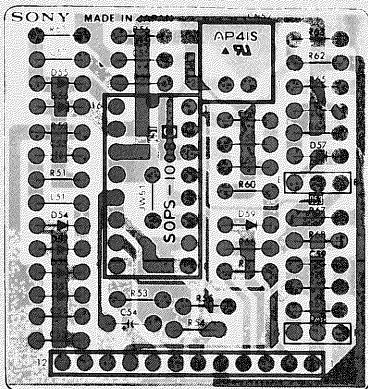
M1

[SWITCHING REGULATOR]

- M1 BOARD -



-C1, C2 BOARDS-



Pattern from the side which enables seeing.

Pattern of the rear side.

PA

[HIGH VOLTAGE REG]

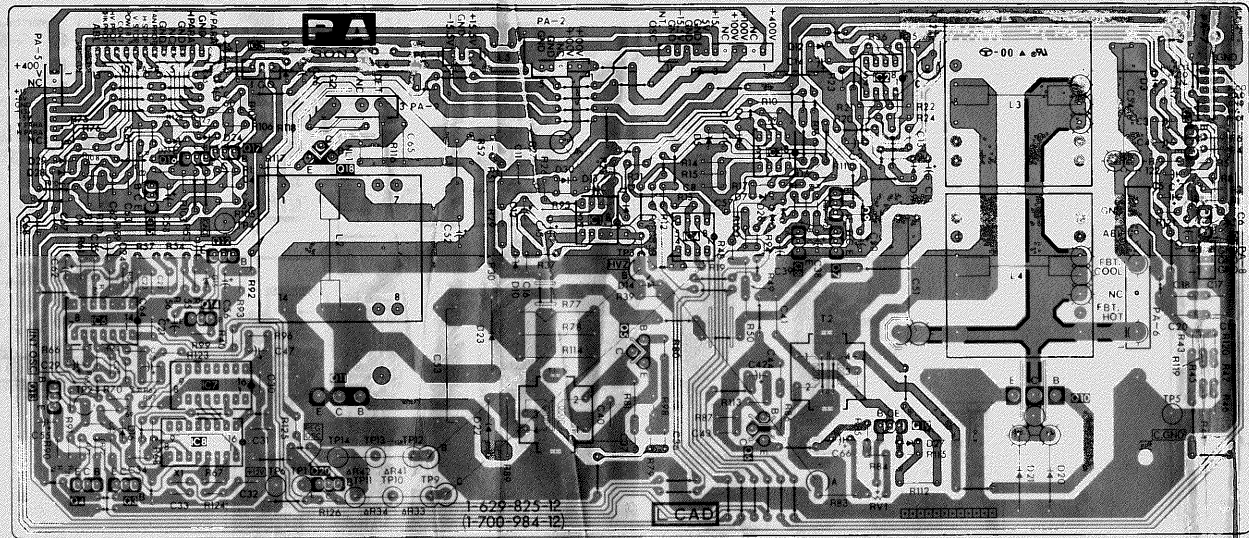
PB

[FBT]

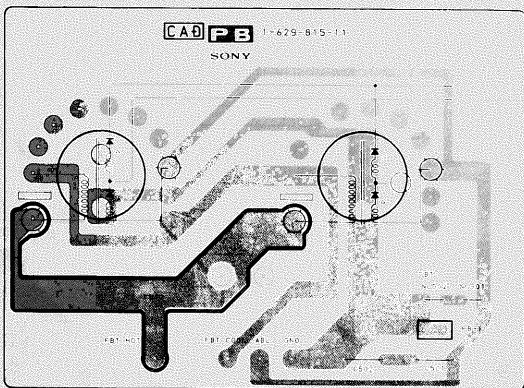
K

[AUDIO. DYNAMIC FOCUS]

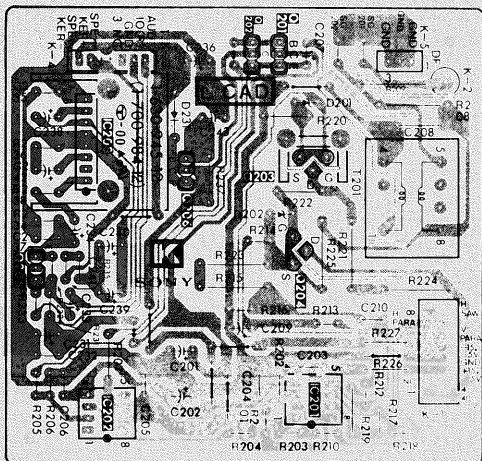
-PA BOARD-



— PB BOARD —



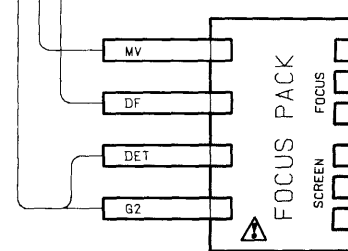
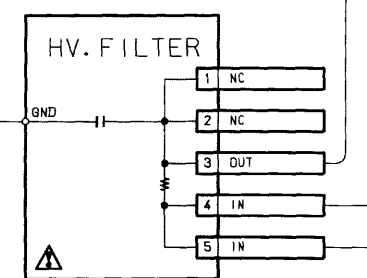
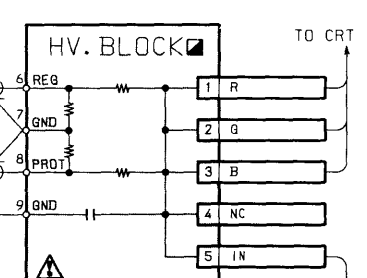
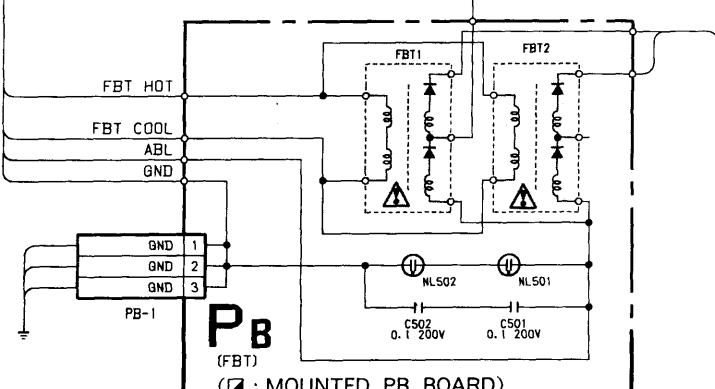
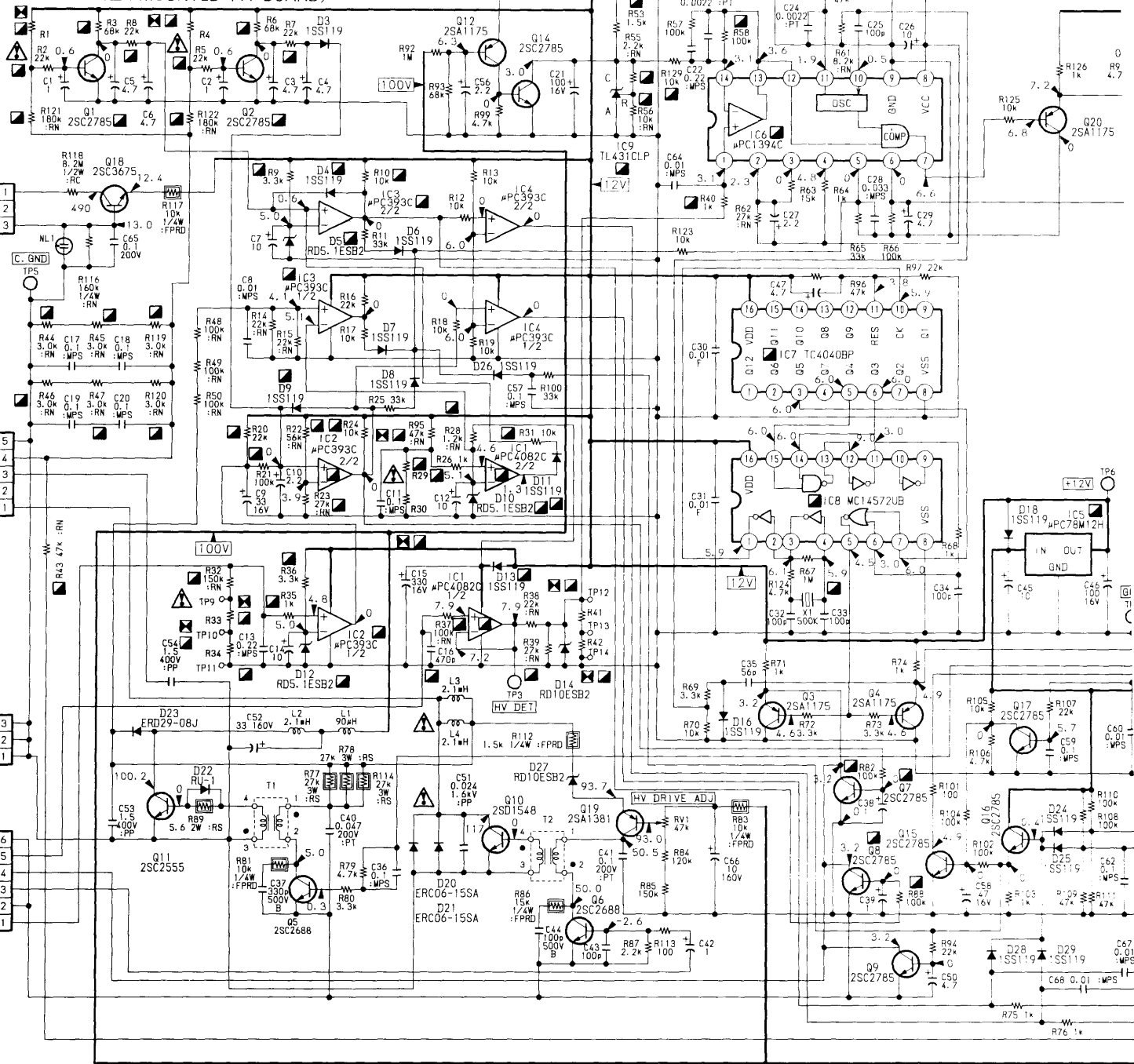
— K BOARD —

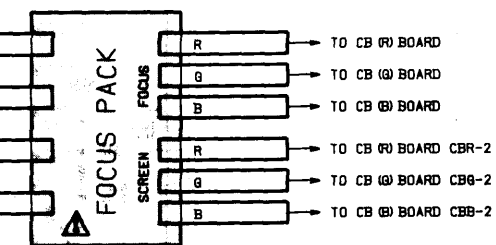
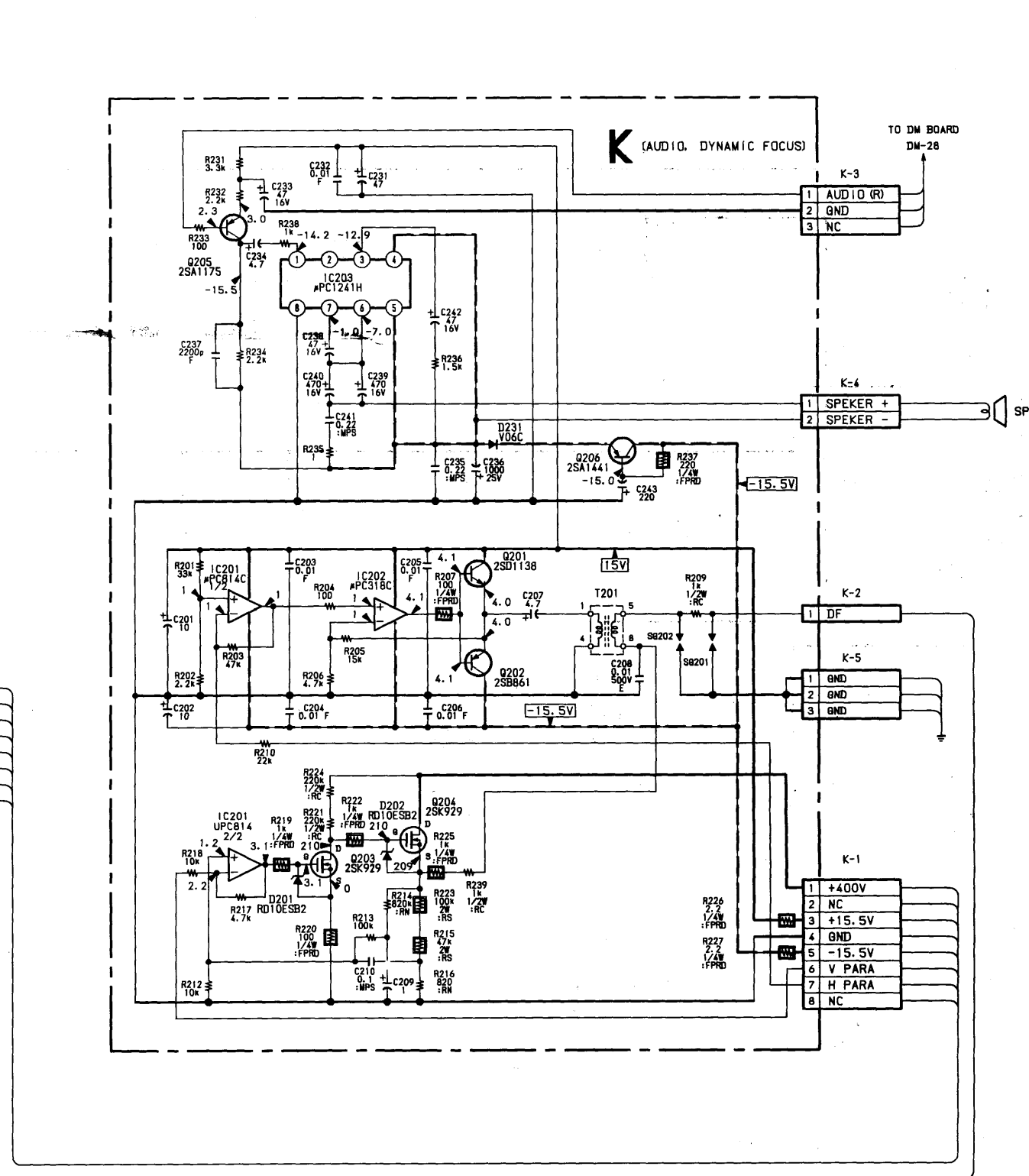
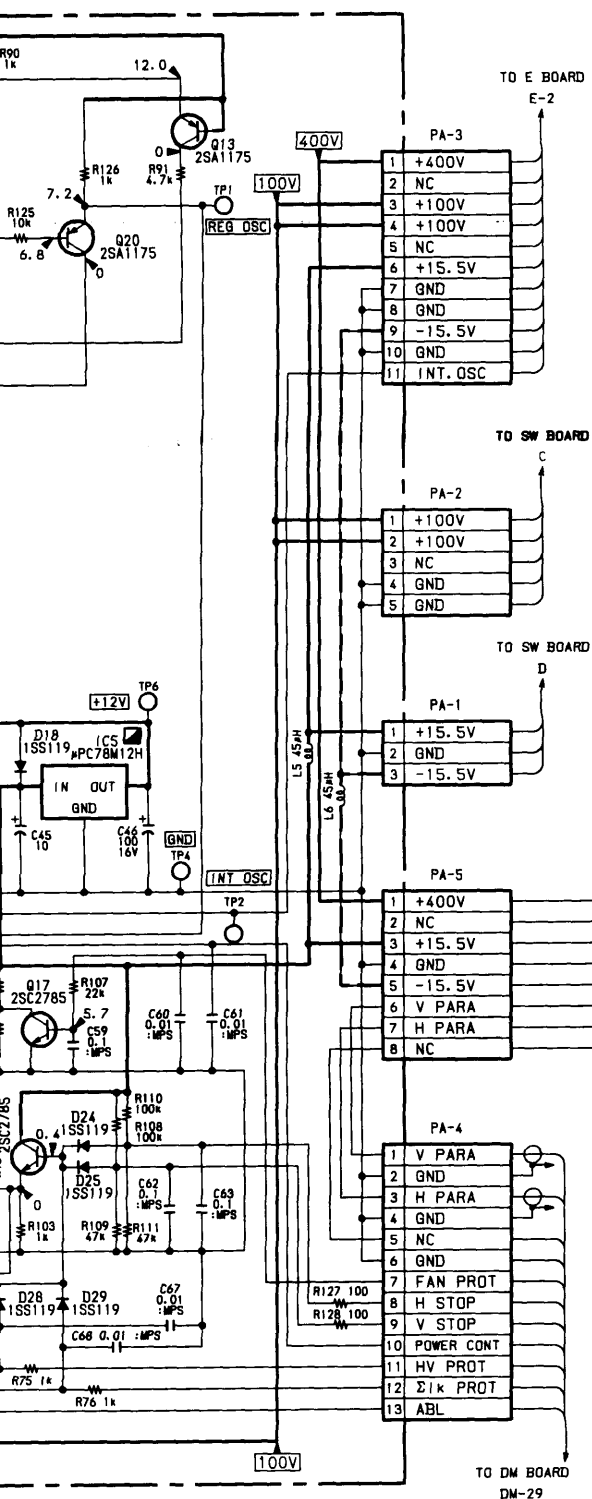


MARK : See Page 72-75

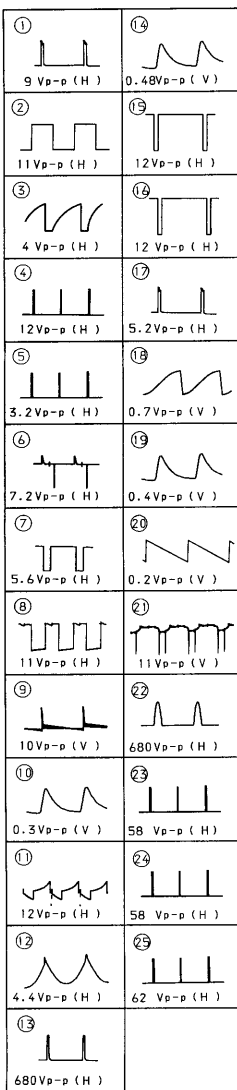
PA

(HIGH VOLTAGE REG)
(MOUNTED PA BOARD)



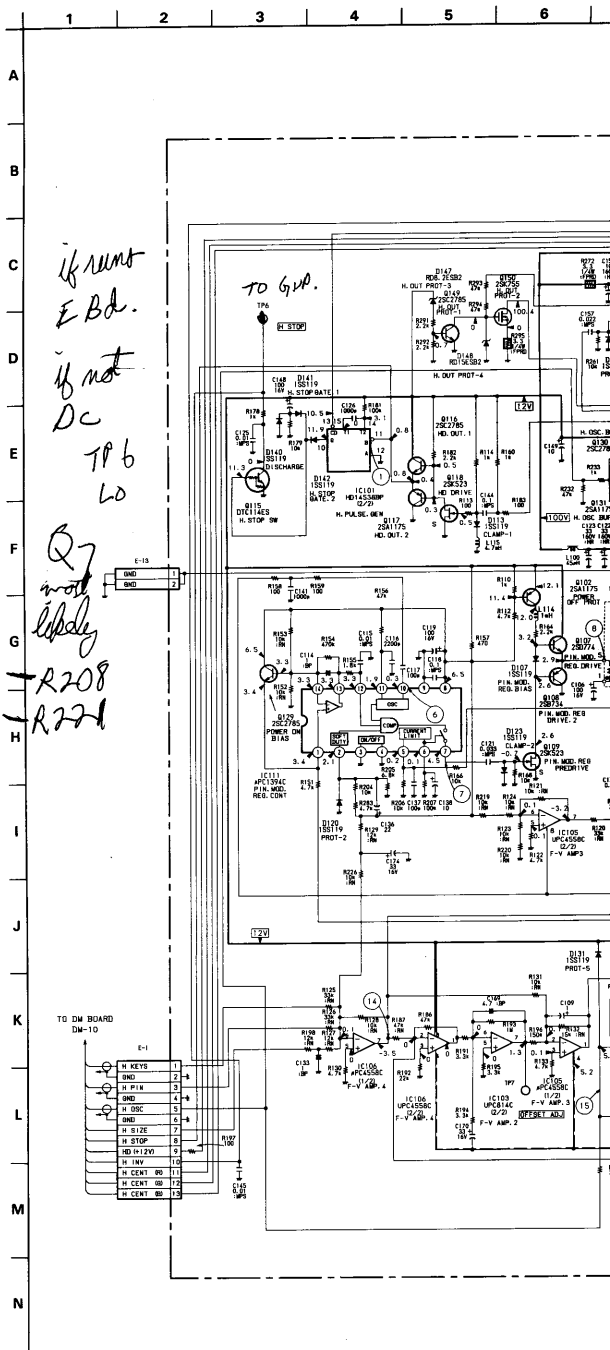


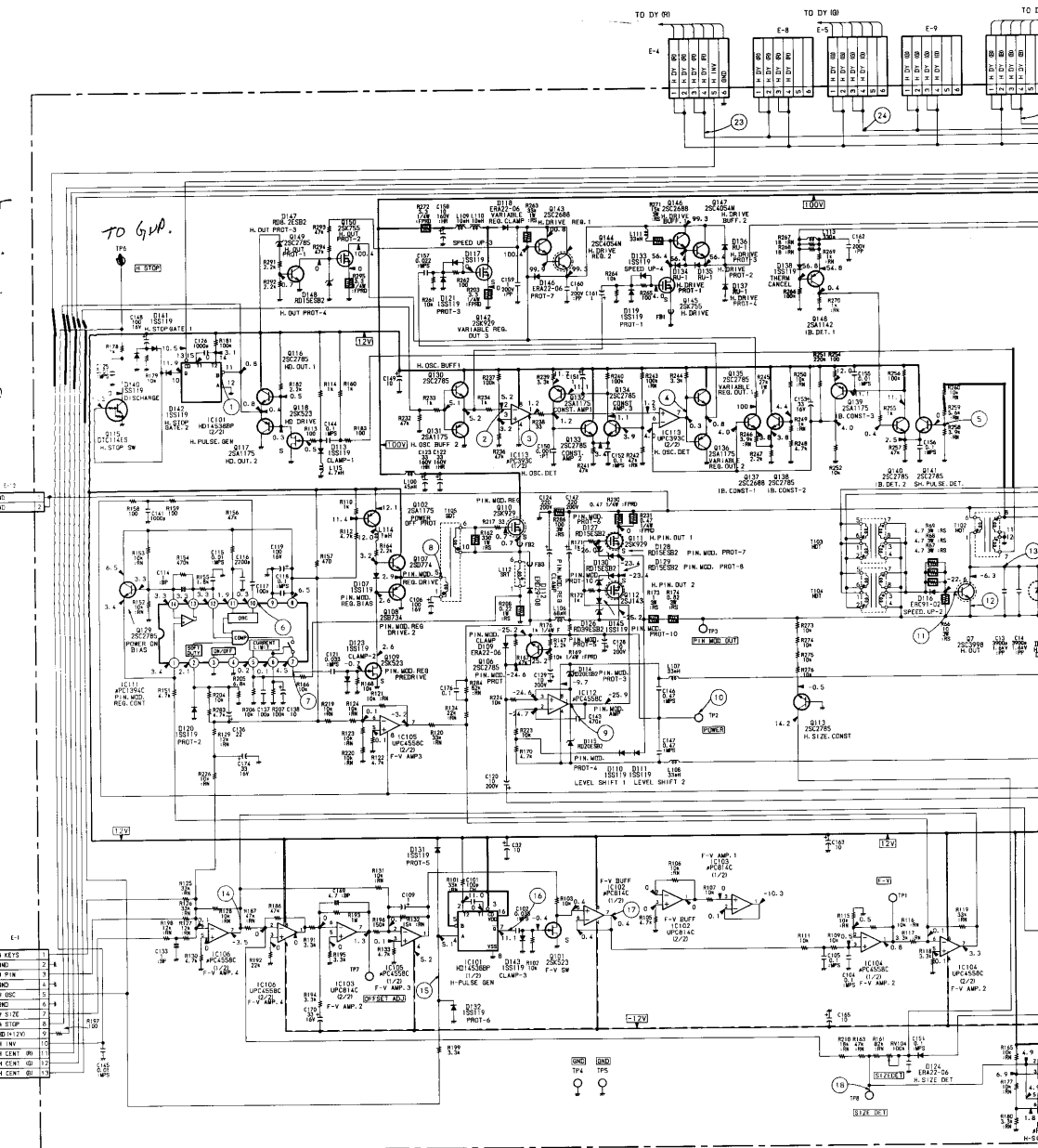
• E BOARD WAVEFORM

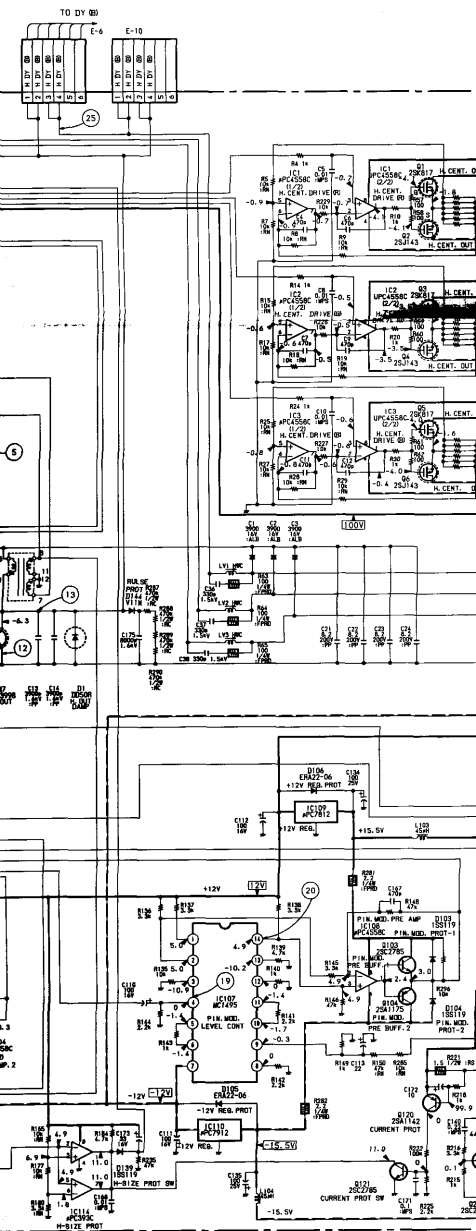


IC-NO.	PIN-NO.	WHITE
IC801	①	8.4
IC801	②	4.2
IC801	③	28.1
IC110	①	23.5
IC110	②	29.5
IC110	③	29.7
IC114	①	4.4

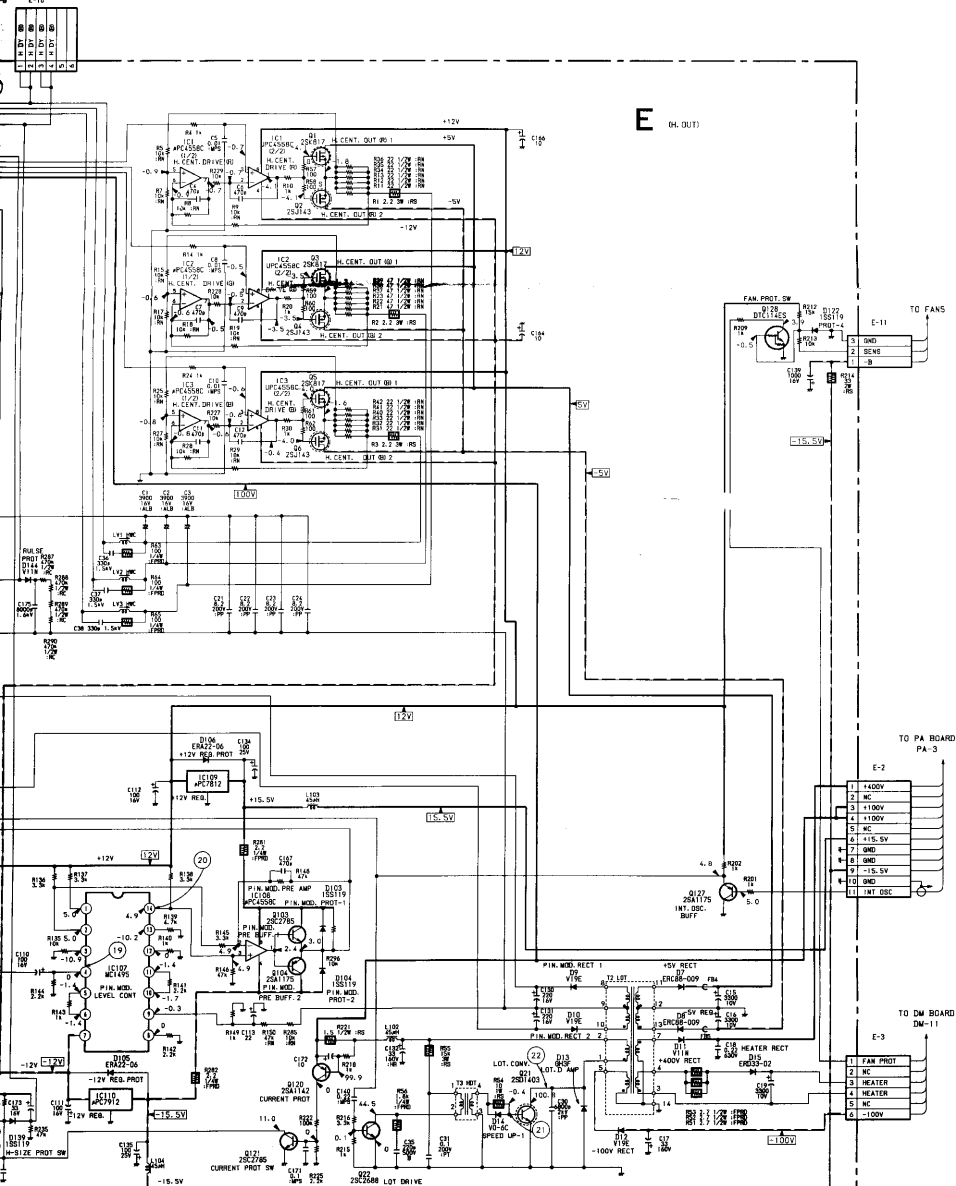
Q-NO.	WHITE
Q007	4.9
Q106	20.4
Q106	28.1
Q107	3.0
Q108	2.2
Q115	14.8
Q117	5.4
Q137	1.3
Q137	94.5
Q139	4.8
Q140	11.7
Q143	98.1
Q143	98.9
Q144	94.2
Q144	98.1
Q144	98.9
Q146	95.7
Q146	95.9
Q147	52.8
Q147	55.8
Q148	51.2
Q148	51.1
Q150	94.2







E-10



E Board

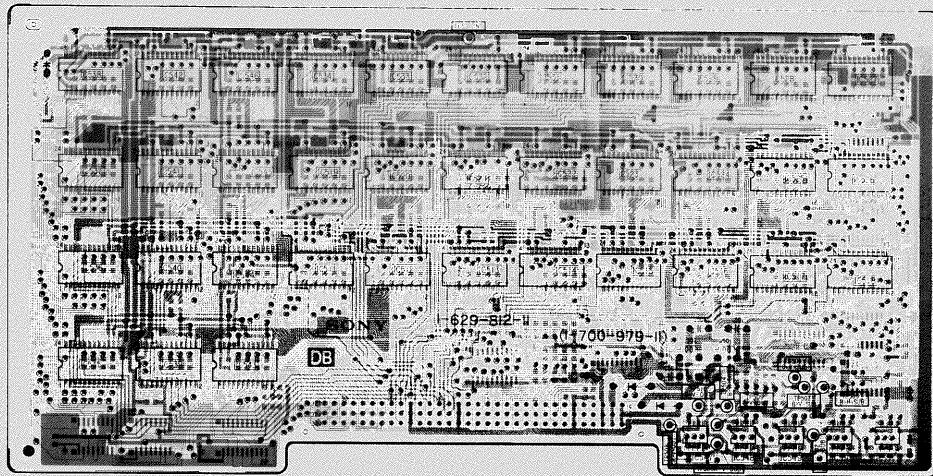
IC		Q128	E-2	D117	I-12
IC001	B-1	Q129	D-5	D118	I-12
IC002	C-2	Q130	H-11	D119	I-10
IC003	C-3	Q131	H-11	D120	D-4
IC101	F-6	Q132	H-11	D121	I-13
IC102	G-9	Q133	H-11	D122	E-2
IC103	G-10	Q134	H-11	D123	B-5
IC104	G-10	Q135	H-12	D124	G-8
IC105	F-10	Q136	H-12	D126	B-7
IC106	F-9	Q137	H-12	D127	B-8
IC107	F-11	Q138	G-12	D128	B-8
IC108	F-12	Q139	H-11	D129	B-8
IC109	G-13	Q140	H-10	D130	B-8
IC110	G-12	Q141	H-10	D131	G-7
IC111	D-4	Q142	I-12	D132	G-6
IC112	B-6	Q143	I-11	D133	I-10
IC113	H-12	Q144	I-11	D134	I-9
IC114	F-8	Q145	I-10	D135	J-9
TRANSISTOR		Q146	I-9	D136	I-9
		Q147	I-9	D137	J-8
		Q148	H-9	D138	H-9
		Q149	H-9	D139	F-8
		RV		D140	F-6
				D141	G-6
		RV104		D142	G-6
				D143	F-8
		DIODE		D144	I-5
				D145	B-7
Q001	A-4	D147		D146	H-9
Q002	A-4			D001	J-4
Q003	A-5			D009	C-9
Q004	A-5			D010	C-9
Q005	A-6			D011	D-12
Q006	A-6			D012	C-11
Q007	J-5			D013	B-12
Q021	A-12			D014	A-13
Q022	C-13			D015	D-10
Q101	G-7			D103	F-12
Q102	C-6			D104	E-12
Q103	F-13			D105	G-12
Q104	E-13			D106	G-13
Q105	C-6			D107	B-6
Q106	B-6			D109	C-6
Q107	B-6			D110	B-7
Q108	B-5			D111	B-6
Q109	A-9			D112	C-7
Q110	A-8			D113	G-5
Q111	A-8			D114	B-7
Q112	A-8			D115	B-6
Q113	H-8			D116	I-6
Q115	G-6				
Q116	F-5				
Q117	F-5				
Q118	D-5				
Q120	C-12				
Q121	E-12				
Q127	C-13				

DB

[ELECTRONIC VR]

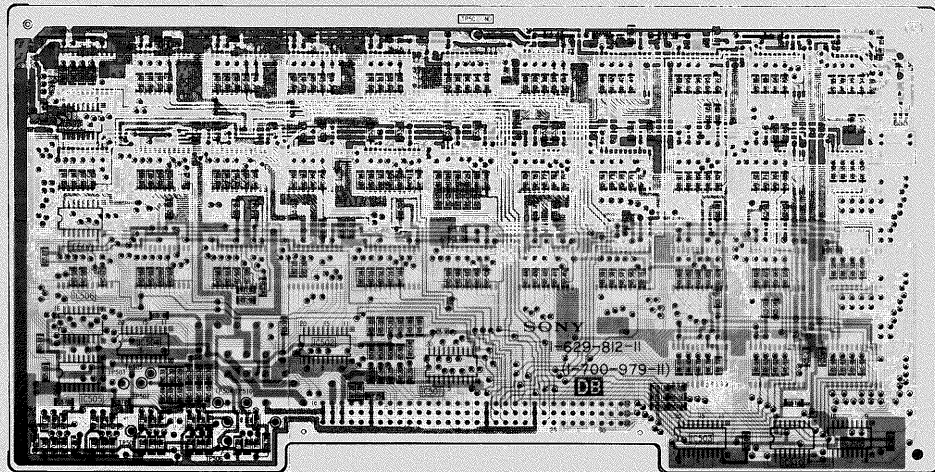
— DB BOARD — (COMPONENT SIDE)

■ : Pattern from the side which enables seeing.
■ : Pattern of the rear side.

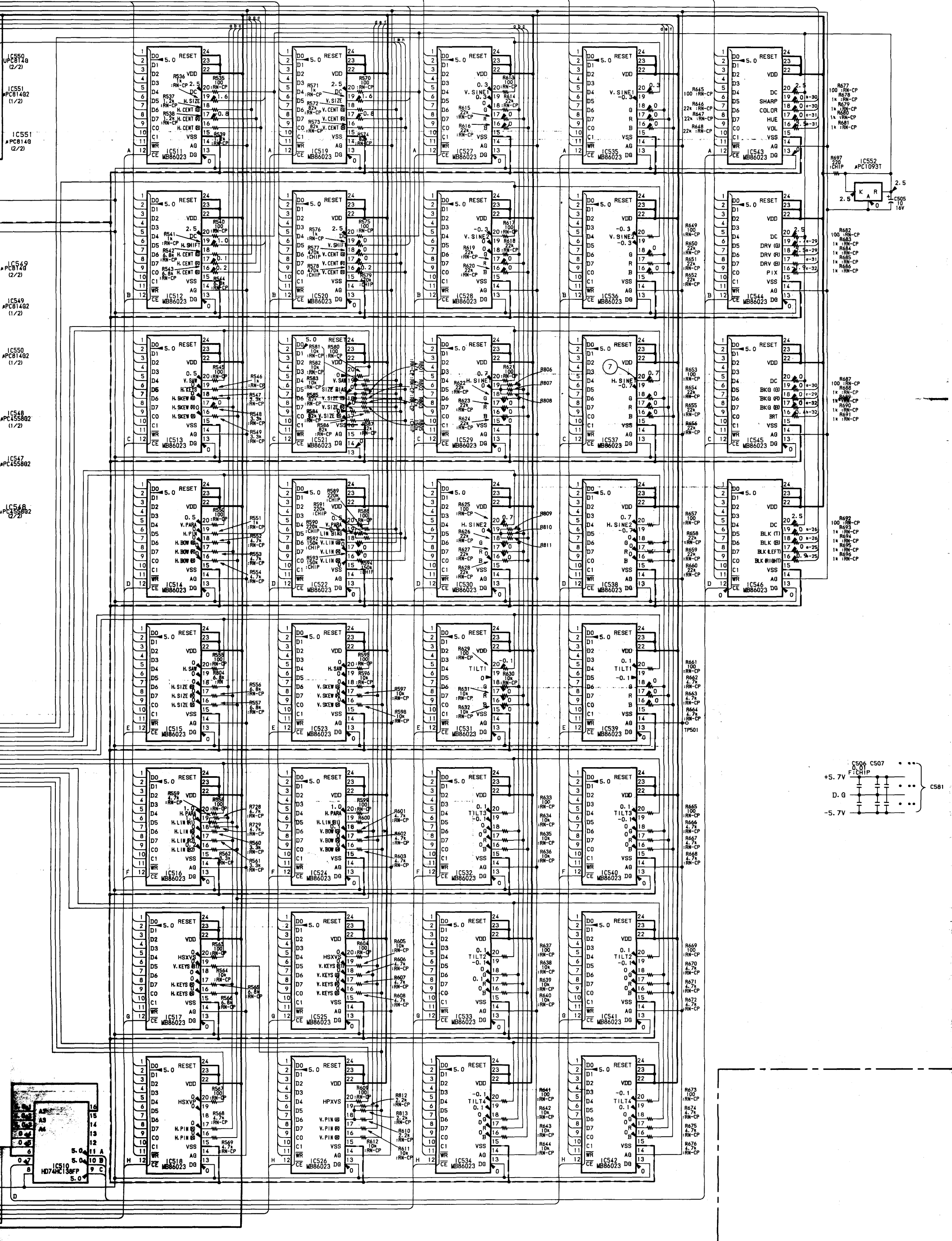


■ : Pattern from the side which enables seeing.
■ : Pattern of the rear side.

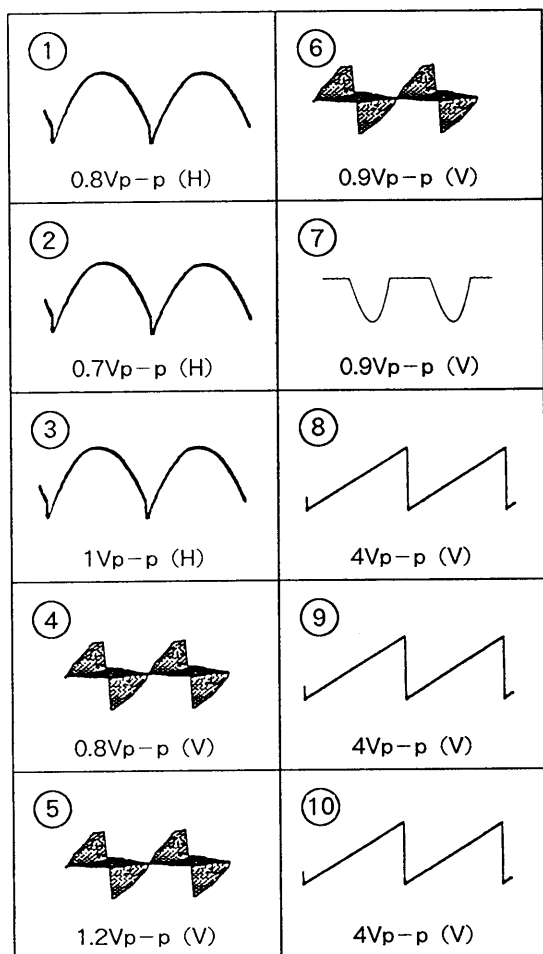
—DB BOARD— (CONDUCTOR SIDE)





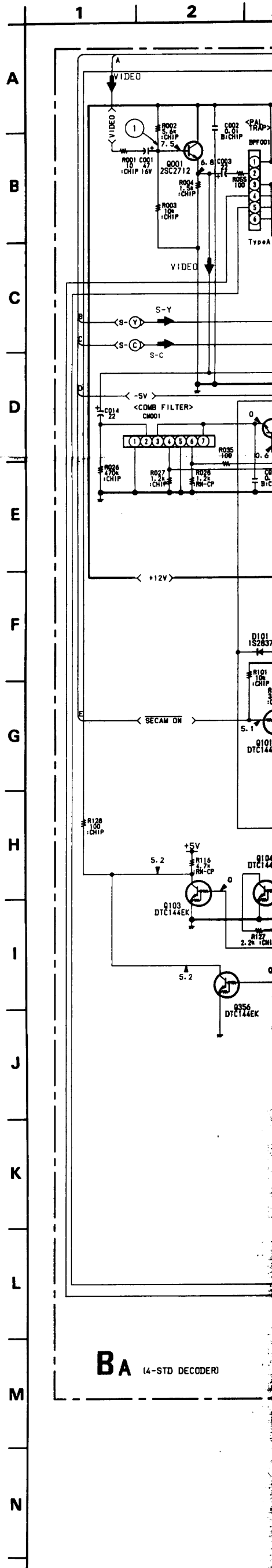
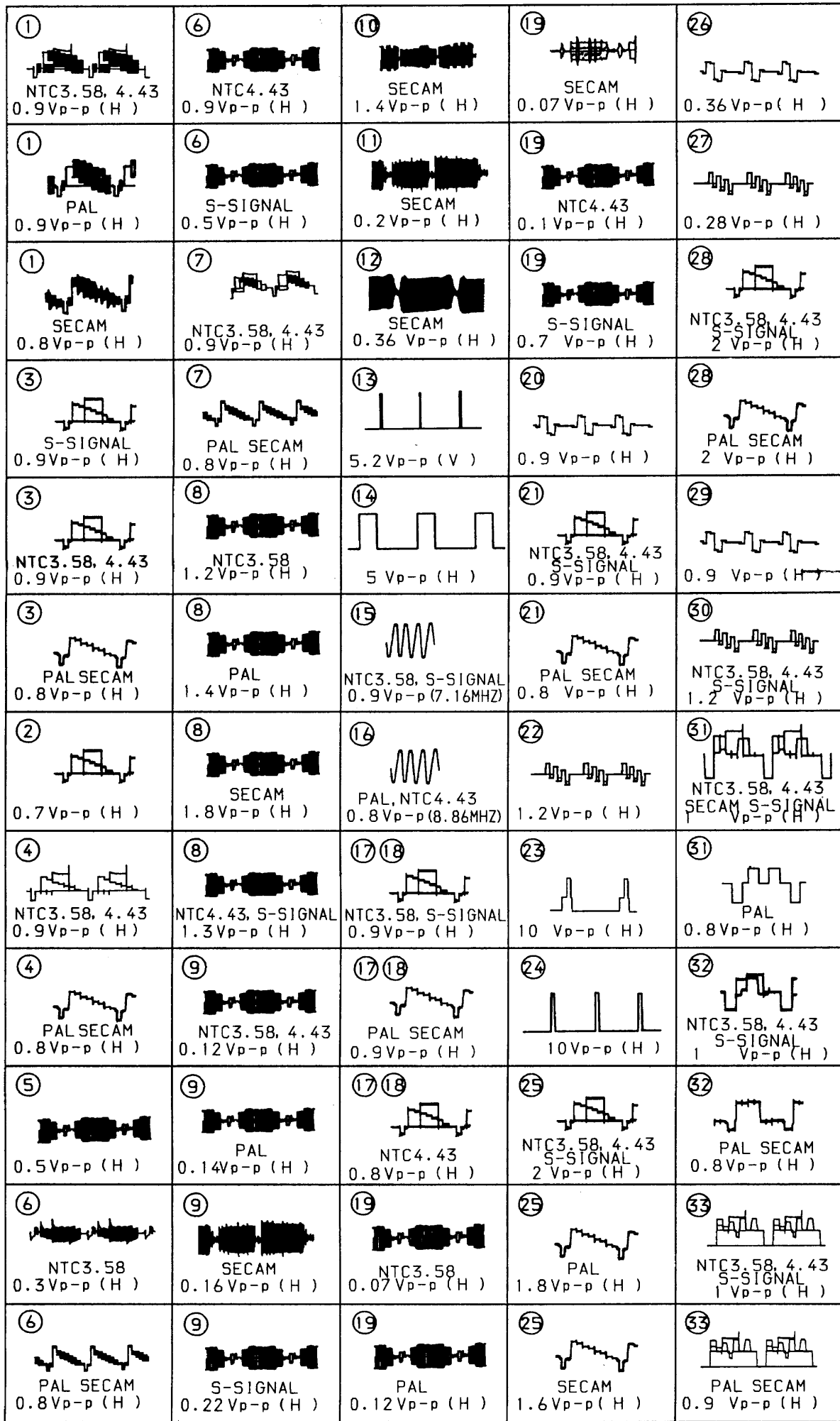


• DB BOARD WAVEFORM



D501	VO-6C	LEVEL SHIFT-1
D502	VO-6C	LEVEL SHIFT-2
D503	1SS123	PROT-1
D504	1SS123	PROT-2
D505	1SS123	PROT-3
D506	1SS123	PROT-4
D507	1SS123	PROT-5
D508	1SS123	PROT-6
IC501	HD74HC244FP	DATA BAS BUFF-1
IC502	HD74HC244FP	DATA BAS BUFF-2
IC503	HD74HC244FP	ADD BAS BUFF-1
IC504	HD74HC244FP	ADD BAS BUFF-2
IC505	HD74HC138FP	ADD DECODE-1
IC506	HD74HC138FP	ADD DECODE-2
IC507	HD74HC138FP	ADD DECODE-3
IC508	HD74HC138FP	ADD DECODE-4
IC509	HD74HC138FP	ADD DECODE-5
IC510	HD74HC138FP	ADD DECODE-6
IC511	MB86023	H CENT CONT-1
IC512	MB86023	H CENT CONT-2
IC513	MB86023	H SKEW CONT
IC514	MB86023	H BOW CONT
IC515	MB86023	H SIZE CONT
IC516	MB86023	H LIN CONT
IC517	MB86023	H KEYS CONT
IC518	MB86023	H PIN CONT
IC519	MB86023	V CENT CONT-1
IC520	MB86023	V CENT CONT-2
IC521	MB86023	V SIZE CONT
IC522	MB86023	V LIN CONT
IC523	MB86023	V SKEW CONT
IC524	MB86023	V BOW CONT
IC525	MB86023	V KEYS CONT
IC526	MB86023	V PIN CONT
IC527	MB86023	H ZONE-2 CONT
IC528	MB86023	H ZONE-3 CONT
IC529	MB86023	H ZONE-4 CONT
IC530	MB86023	H ZONE-5 CONT
IC531	MB86023	H ZONE-6 CONT
IC532	MB86023	H ZONE-7 CONT
IC533	MB86023	H ZONE-8 CONT
IC534	MB86023	H ZONE-9 CONT
IC535	MB86023	V ZONE-2 CONT
IC536	MB86023	V ZONE-3 CONT
IC537	MB86023	V ZONE-4 CONT
IC538	MB86023	V ZONE-5 CONT
IC539	MB86023	V ZONE-6 CONT
IC540	MB86023	V ZONE-7 CONT
IC541	MB86023	V ZONE-8 CONT
IC542	MB86023	V ZONE-9 CONT
IC543	MB86023	USER CONT
IC544	MB86023	DRV CONT
IC545	MB86023	BKG CONT
IC546	MB86023	BLK CONT
IC547	μ PC4558G	V OUT BUFF-1
IC548	μ PC4558G	V OUT BUFF-2
IC549	μ PC814G	SUB OUT BUFF-1
IC550	μ PC814G	SUB OUT BUFF-2
IC551	μ PC814G	SUB OUT BUFF-3
IC552	μ PC1093T	STAND VOLT REG

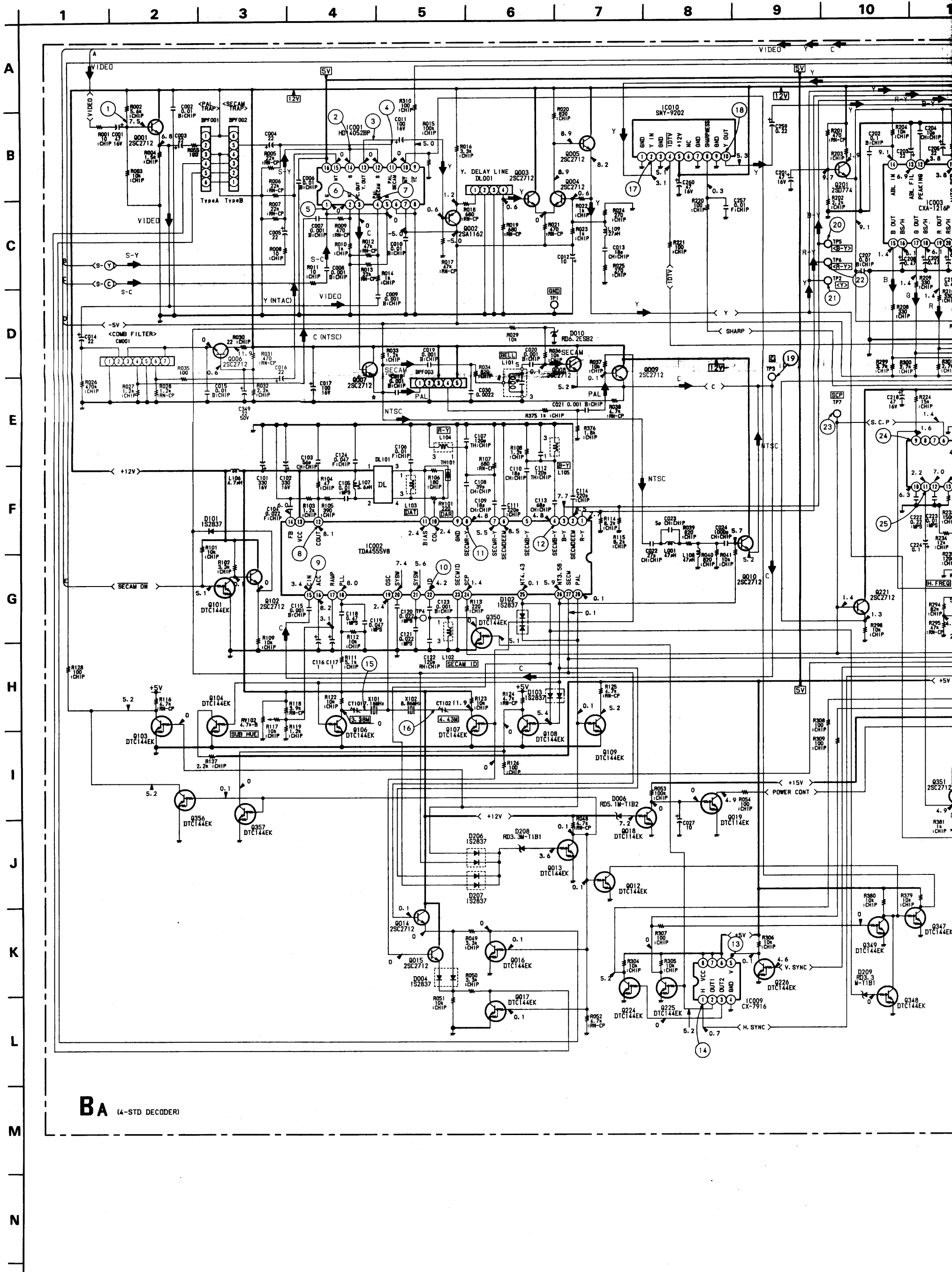
• BA BOARD WAVEFORM

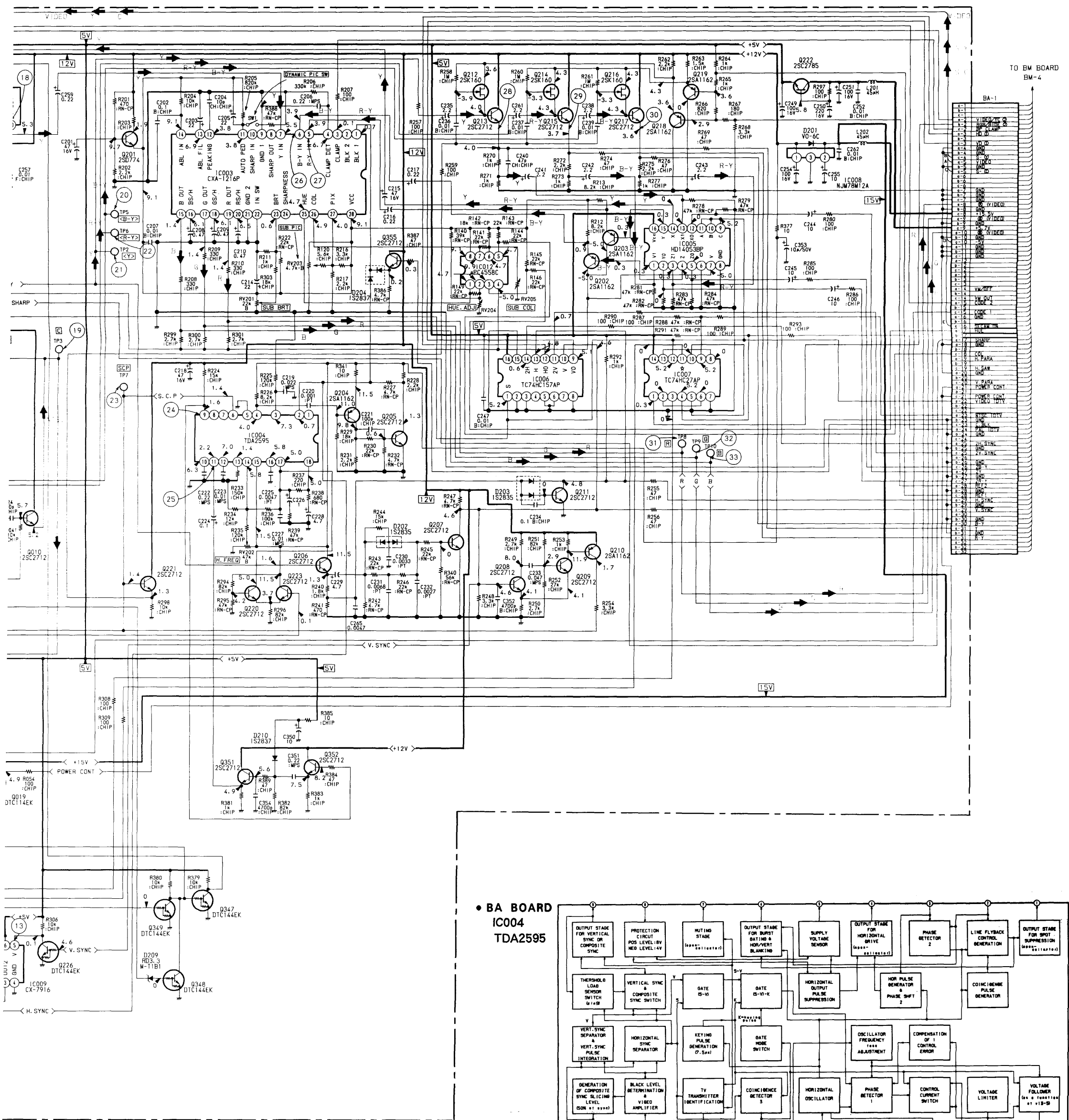


D004	1S2837	JT3.58DET
D006	RD5.1M-T1B2	POWER CONT
D010	RD6.2ESB2	PROT
D101	1S2837	SECAM SW
D102	1S2837	MODE SW-1
D103	1S2837	MODE SW-2
D201	V06C-152	+12V PROT
D202	1S2835	SYNC SEP
D203	1S2835	H SYNC SW
D204	1S2837	BLK ADD
D206	1S2837	W/B SW-2
D207	1S2837	W/B SW-3
D208	RD3.3M-11B1	W/B SW-1
D209	RD3.3M-11B1	NT4.43 SW
D210	1S2837	Y CLAMP
Q001	2SC2712	VIDEO BUFF
Q002	2SA1162	Y BUFF-1
Q003	2SC2712	Y AMP-1
Q004	2SC2712	Y AMP-2
Q005	2SC2712	Y AMP-3
Q006	2SC2712	9V REG-1
Q007	2SC2712	C BUFF
Q008	2SC2712	SECAM C BUFF
Q009	2SC2712	PAL C BUFF
Q010	2SC2712	NTSC C BUFF
Q012	DTC144EK	W/B SW-1
Q013	DTC144EK	W/B SW-2
Q014	2SC2712	3.58 SW
Q015	2SC2712	4.43 SW
Q016	DTC144EK	TRAP SW-1
Q017	DTC144EK	TRAP SW-2
Q018	DTC114EK	POWER CONT-1
Q019	DTC114EK	POWER CONT-2
Q101	DTC144EK	SECAM SW-1
Q102	2SC2712	SECAM SW-2

Q103	DTC144EK	MODE SW-1
Q104	DTC144EK	MODE SW-2
Q106	DTC144EK	NT OSC SW
Q107	DTC144EK	PAL OSC SW
Q108	DTC144EK	MODE SW-3
Q201	2SD774	9V REG-2
Q202	2SA1162	B-Y BUFF-1
Q203	2SA1162	R-Y BUFF-1
Q204	2SA1162	AFC-1
Q205	2SC2712	AFC-2
Q206	2SC2712	SYNC BUFF
Q207	2SC2712	V SYNC SW-1
Q208	2SC2712	V SYNC SW-2
Q209	2SC2712	V SYNC SW-3
Q210	2SA1162	V SYNC SW-4
Q211	2SC2712	H SYNC SW
Q212	2SK160-11K6	Y CLAMP-1
Q213	2SC2712	Y BUFF-2
Q214	2SK160-11K6	R-Y CLAMP
Q215	2SC2712	R-Y BUFF-2
Q216	2SK160-11K6	B-Y CLAMP
Q217	2SC2712	B-Y BUFF-2
Q218	2SA1162	CLAMP
Q219	2SA1162	REF DC BUFF-1
Q220	2SC2712	REF DC BUFF-2
Q221	2SC2712	SCP BUFF
Q222	2SD774	+5V REG
Q223	2SC2712	BGP SHIFT
Q224	DTC144EK	50/60 SW-1
Q225	DTC144EK	50/60 SW-2
Q226	DTC144EK	V SYNC SW-5
Q347	DTC144EK	SYSTEM SW-1
Q348	DTC144EK	NT4.43 SW
Q349	DTC144EK	SYSTEM SW-2

Q350	DTC144EK	ID
Q351	2SC2712	Y BUFF-3
Q352	2SC2712	Y CLAMP-2
Q355	2SC2712	BLK BUFF
Q356	DTC144EK	MODE SW-5
Q357	DTC144EK	MODE SW-6
IC001	HD14052BP	SYSTEM SW
IC002	TDA4555-V8	DECODER
IC003	CXA1216P	MATRIX
IC004	TDA2595	JUNGLE
IC005	HD14053BP	ID TV SW-1
IC006	TC74HC157AP	ID TV SW-2
IC007	TC74HC27AP	ID TV SW-3
IC008	NJM78M12A	12V REG
IC009	CX-7916	50/60 DET
IC010	SHARPNESS	(SNY-9202)
IC012	μ PC455BC	LEVEL SHIFT

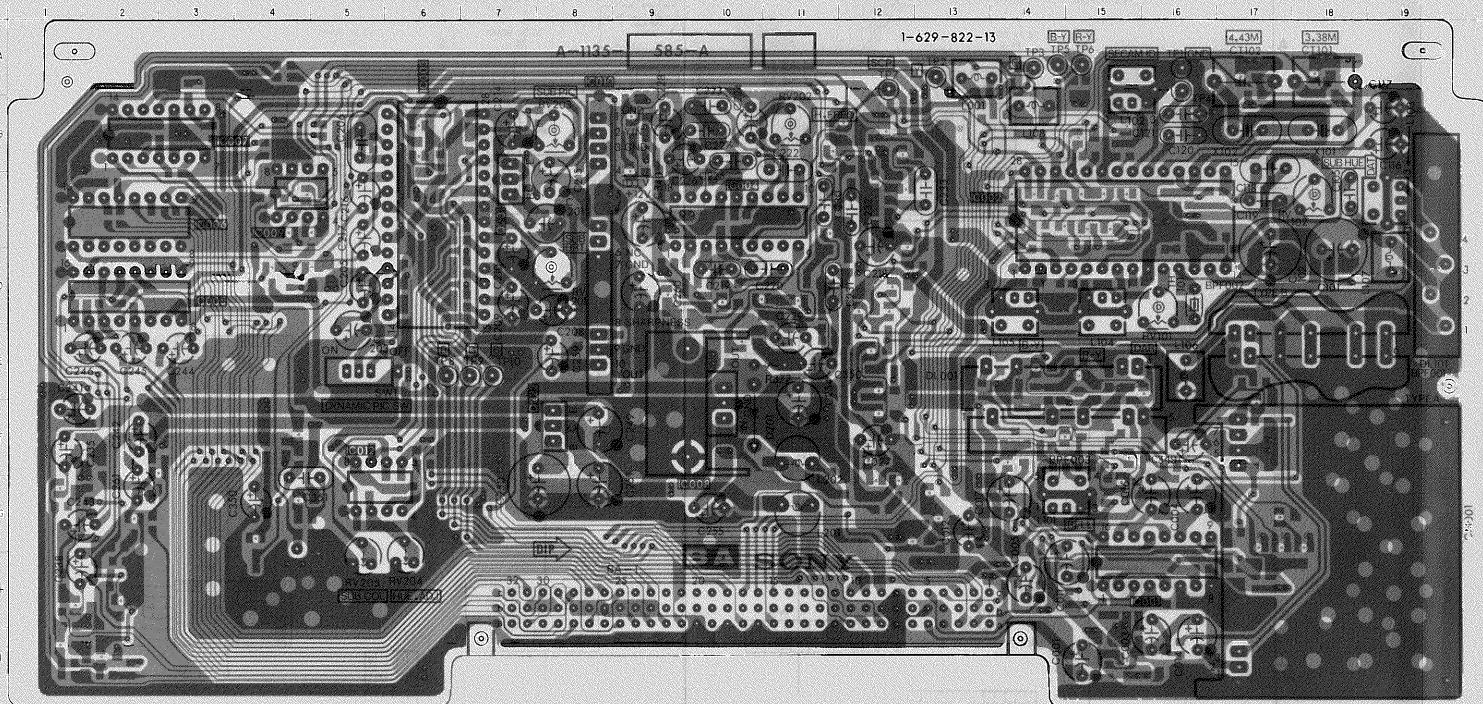




BA

[4STD DECODER]

-BA BOARD- (COMPONENT SIDE)

VPH-1270Q
RM-1270VPH-1270Q
RM-1270

BA Board

IC	TRANSISTOR				Q013	D-8	Q201	C-13	Q214	G-19	Q347	H-4	RV	O101	G-8
IC001	H-5	Q001	F-5	F-5	Q014	D-9	Q202	D-17	Q215	F-18 <td>Q348</td> <td>H-3</td> <td></td> <td>D102</td> <td>B-6</td>	Q348	H-3		D102	B-6
IC002	C-4	Q002	H-6	H-6	Q015	E-9	Q203	D-17	H-19	H-19	Q349	H-3	RV101	F-5	O103
IC003	C-15	Q003	E-5	E-5	Q016	D-10	Q204	D-11	H-19	C-11	Q350	H-3	RV102	C-3	O201
IC004	C-10	Q004	E-6	E-6	Q017	E-9	Q205	D-11	I-19	I-19	Q351	F-10	RV201	O-13	Q202
IC005	B-18	Q005	E-7	E-7	Q018	G-8	Q206	E-10	Q219	I-19	Q352	G-16	RV202	B-10	Q203
IC006	B-18	Q006	E-7	E-7	Q019	G-8	Q207	B-9	Q220	C-12	Q353	B-15	RV203	B-15	Q204
IC006	B-18	Q006	F-4	F-4	Q101	C-9	Q208	C-8	Q221	B-9	Q356	C-6	RV204	H-15	Q206
IC007	B-18	Q007	F-7	F-7	Q102	G-8	Q209	B-8	Q222	F-13	Q357	C-6	RV205	H-16	Q207
IC008	E-11	Q008	F-5	F-5	Q103	C-7	Q210	B-8	Q223	B-12				Q208	C-5
IC009	C-16	Q009	G-5	G-5	Q104	C-6	Q211	D-10	Q224	C-16			DIODE		
IC010	D-12	Q010	A-7	A-7	Q106	A-3	Q212	G-19	Q225	C-16				D004	D-8
IC012	F-5	Q012	F-9	F-9	Q106	A-3	Q213	F-19	Q226	C-16				D006	F-9
															F-9
															D010

RV

RV101

RV102

RV201

RV202

RV203

RV204

RV205

RV206

RV207

RV208

RV209

RV210

RV211

RV212

RV213

RV214

RV215

RV216

RV217

RV218

RV219

RV220

RV221

RV222

RV223

RV224

RV225

RV226

RV227

RV228

RV229

RV230

RV231

RV232

RV233

RV234

RV235

RV236

RV237

RV238

RV239

RV240

RV241

RV242

RV243

RV244

RV245

RV246

RV247

RV248

RV249

RV250

RV251

RV252

RV253

RV254

RV255

RV256

RV257

RV258

RV259

RV260

RV261

RV262

RV263

RV264

RV265

RV266

RV267

RV268

RV269

RV270

RV271

RV272

RV273

RV274

RV275

RV276

RV277

RV278

RV279

RV280

RV281

RV282

RV283

RV284

RV285

RV286

RV287

RV288

RV289

RV290

RV291

RV292

RV293

RV294

RV295

RV296

RV297

RV298

RV299

RV300

RV301

RV302

RV303

RV304

RV305

RV306

RV307

RV308

RV309

RV310

RV311

RV312

RV313

RV314

RV315

RV316

RV317

RV318

RV319

RV320

RV321

RV322

RV323

RV324

RV325

RV326

RV327

RV328

RV329

RV330

RV331

RV332

RV333

RV334

RV335

RV336

RV337

RV338

RV339

RV340

RV341

RV342

RV343

RV344

RV345

RV346

RV347

RV348

RV349

RV350

RV351

RV352

RV353

RV354

RV355

RV356

RV357

RV358

RV359

RV360

RV361

RV362

RV363

RV364

RV365

RV366

RV367

RV368

RV369

RV370

RV371

RV372

RV373

RV374

RV375

RV376

RV377

RV378

RV379

RV380

RV381

RV382

RV383

RV384

RV385

RV386

RV387

RV388

RV389

RV390

RV391

RV392

RV393

RV394

RV395

RV396

RV397

RV398

RV399

RV400

RV401

RV402

RV403

RV404

RV405

RV406

RV407

RV408

RV409

RV410

RV411

RV412

RV413

RV414

RV415

RV416

RV417

RV418

RV419

RV420

RV421

RV422

RV423

RV424

RV425

RV426

RV427

RV428

RV429

RV430

RV431

RV432

RV433

RV434

RV435

RV436

RV437

RV438

RV439

RV440

RV441

RV442

RV443

RV444

RV445

RV446

RV447

RV448

RV449

RV450

RV451

RV452

RV453

RV454

RV455

RV456

RV457

RV458

RV459

RV460

RV461

RV462

RV463

RV464

RV465

RV466

RV467

RV468

RV469

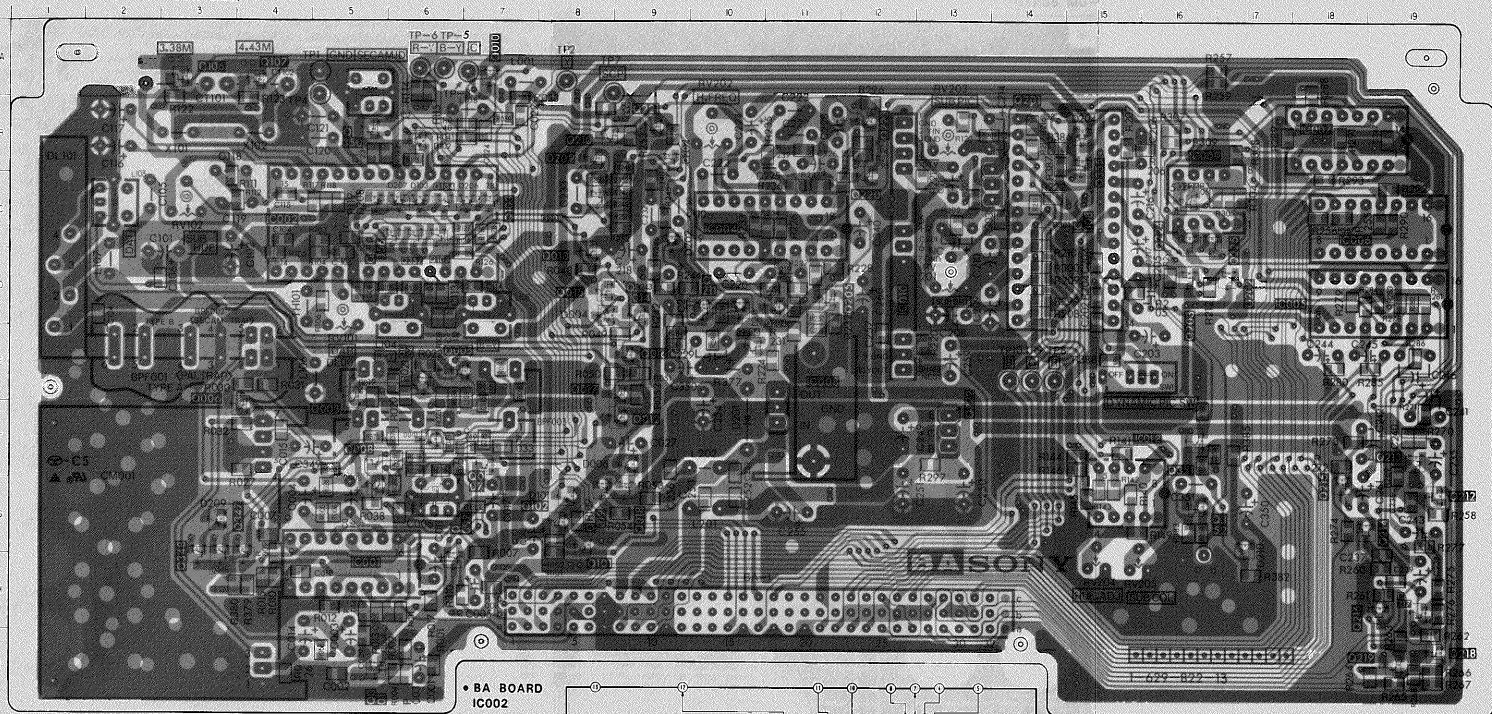
RV470

RV471

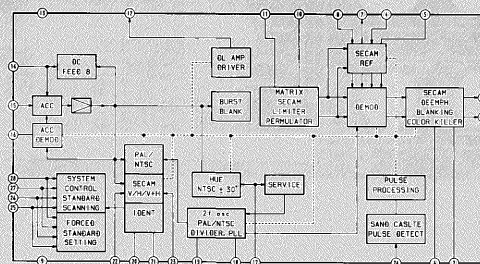
RV472

RV473

-BA BOARD- (CONDUCTOR SIDE)



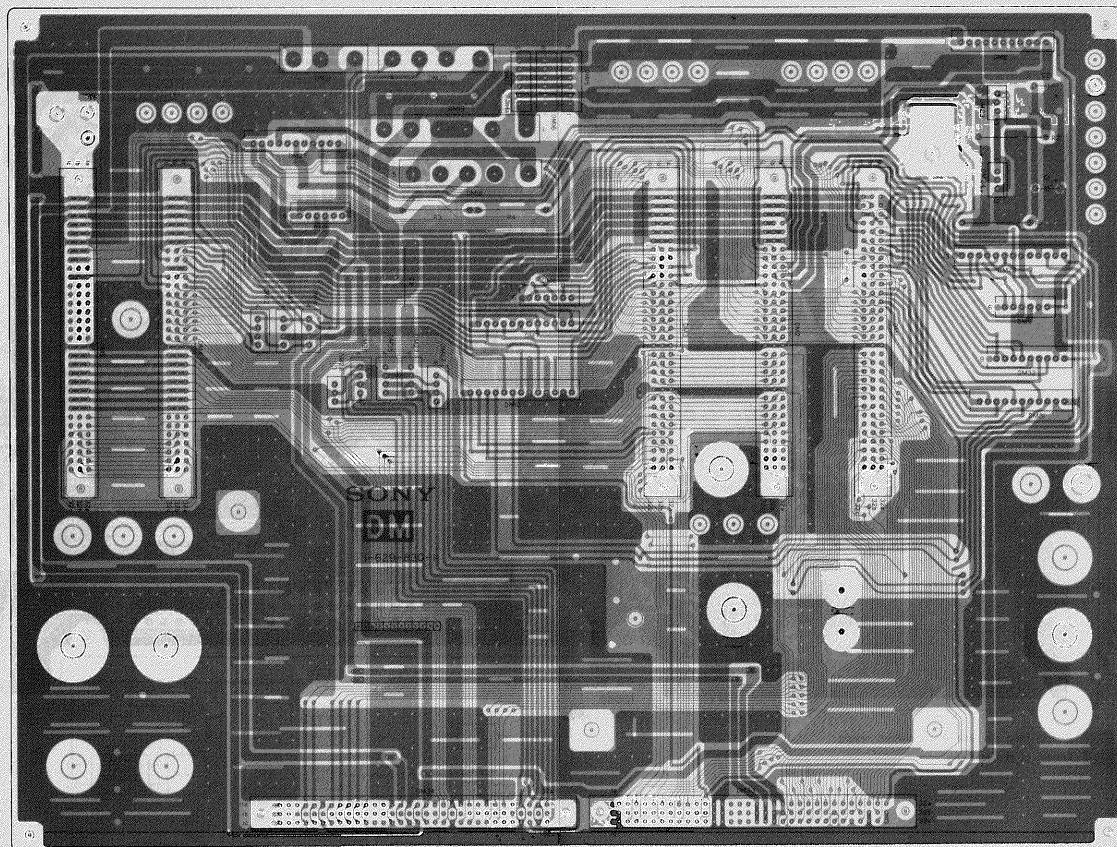
• BA BOARD
IC002
TDA4555V8





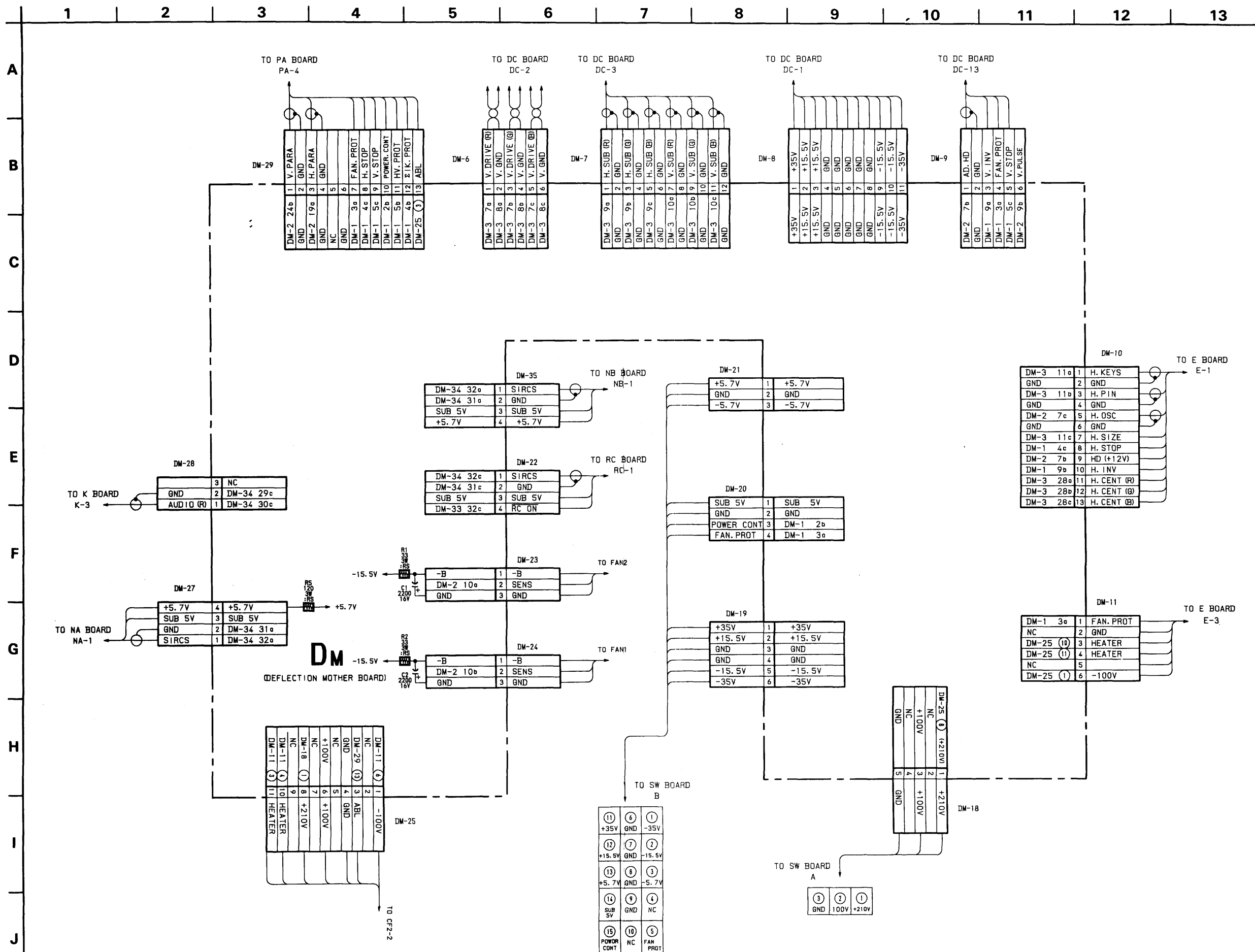


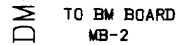
[DEFLECTION MOTHER BOARD]

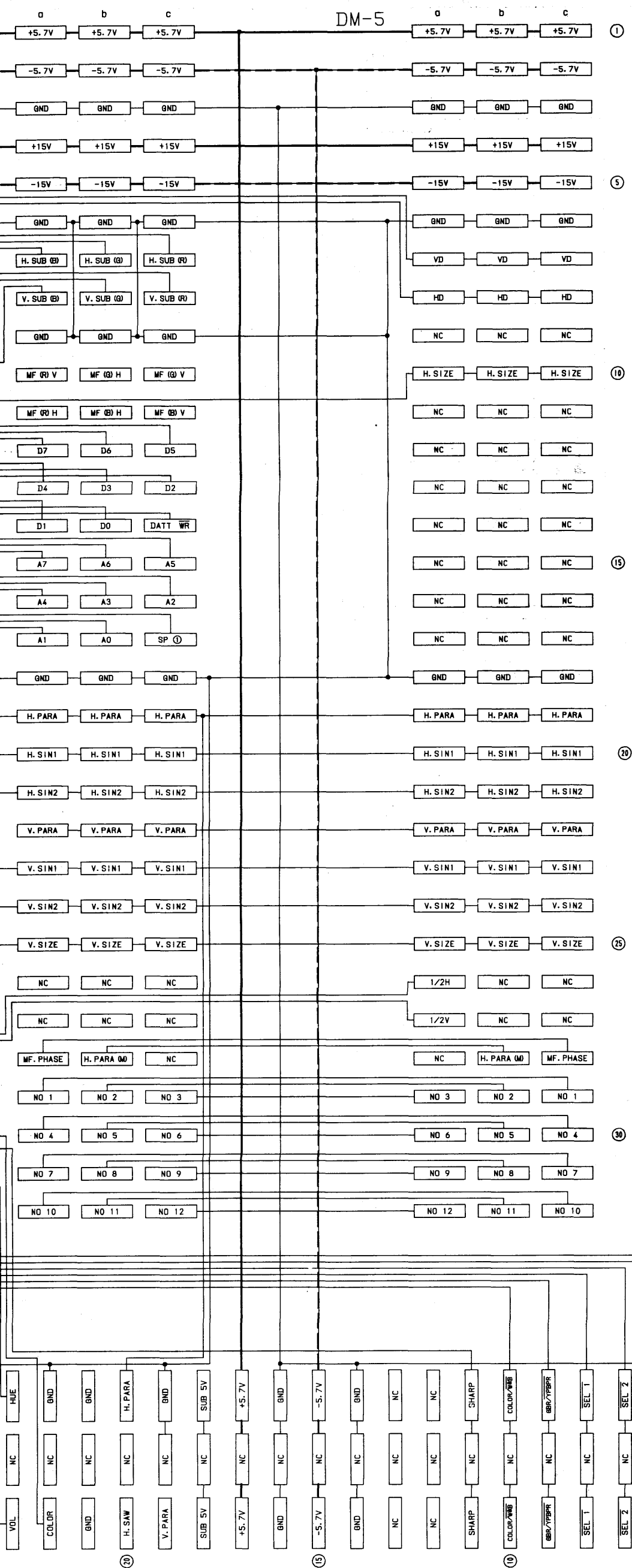
—DM BOARD—



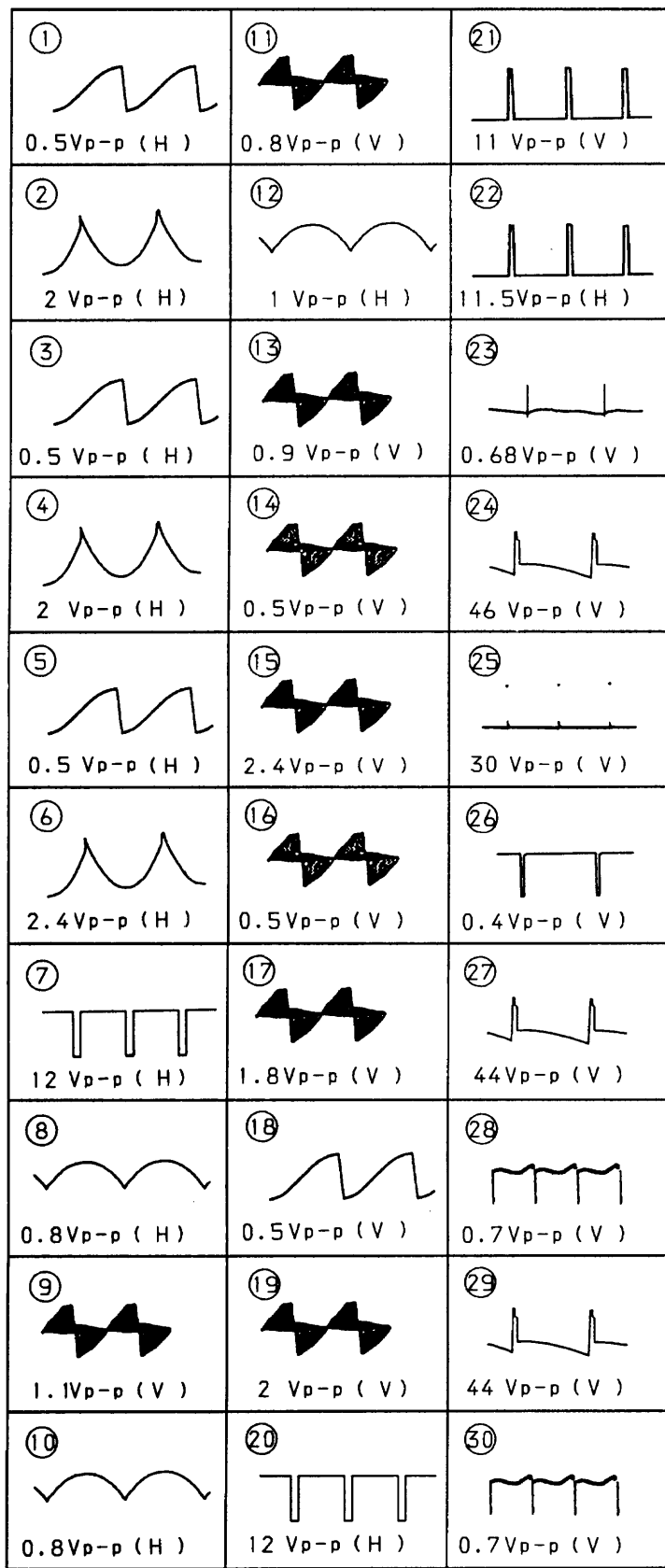
 : Pattern from the side which enables seeing.
 : Pattern of the rear side.



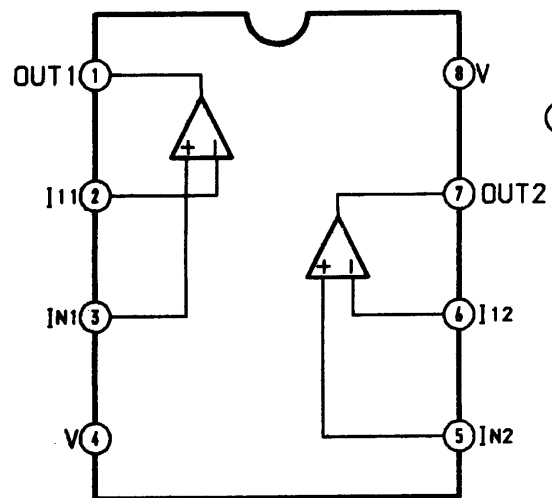




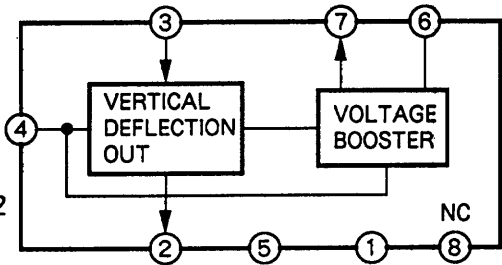
• DC BOARD WAVEFORM



• DC BOARD IC3 μ PC4558C



• DC BOARD IC4 μ PC1498A-J



• DC BOARD IC101 μ PC814C

