Pioneer

SERVICE KNOWHOW

Date: Mar.25, 2000 **No.:** **SKH54002** **(1/1)**

MODEL No.
DV-525
PDV-LC10

MODEL No.
DV-626D

SUBJECT Summary in each block diagram for 99 model DVD player

PIONEER CORPORATION

Memo: TS, 70

Y.YAMAMOTO ,MANAGER
HE
Service Engineering Section **Classify:**
Service Division

Power Supply ASS'Y

	DV-515	DV-525
Manufacturer	MURATA	MITSUMI(100-120V) SHINDENGEN(110-240V)
Standby power consumption	1～2W	less 1W
Power supply specification	EV+5V EV+12V SW+5V SW+3.3V EV FLAC EV FL-27V	EV+5V SW+12V SW+5V SW+3.3V SW FLAC SW FL-27V
Transformer	1 piece	2 pieces Sub-Trans : EV+5V only Main-Trans : others
Power cord	Inlet	Outlet

DVDM

	DV-515	DV-525
Form	4 layers substrate	4 layers substrate
Size	189*118.5(189*237/2)	156*95.5(156*191/2)
Circuit		AV1 chip 3.3V->2.5V include A/D in IC12(Decoder) combined 1 chip with Mech/Sys con New servo DSP
Others		Flash ROM : TSOP Reduce number of parts

FLKB

	DV-515	DV-525
Size	329*196/2	246*196/2
Circuit	Illumination exist Stand-by LED exist	none none

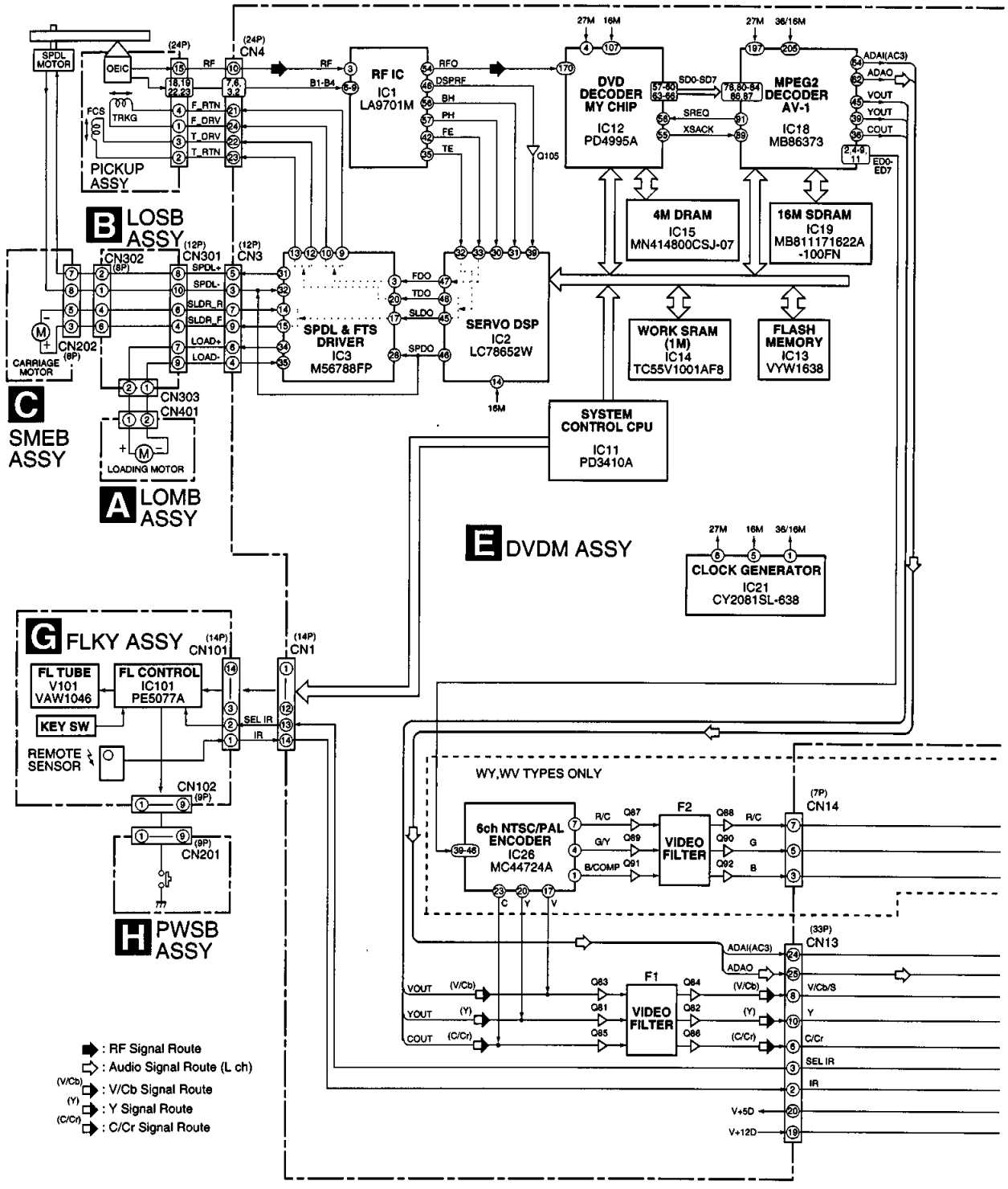
JKSB

	DV-515	DV-525
Size	329*196/2	329*196/2
Circuit 及びその他	Virtual Dolby exist VNR none 2 Flexible cables(DVDM-JKSB) Flexible cable for service exist	none VNR exist 1 Flexible cable(DVDM-JKSB) none

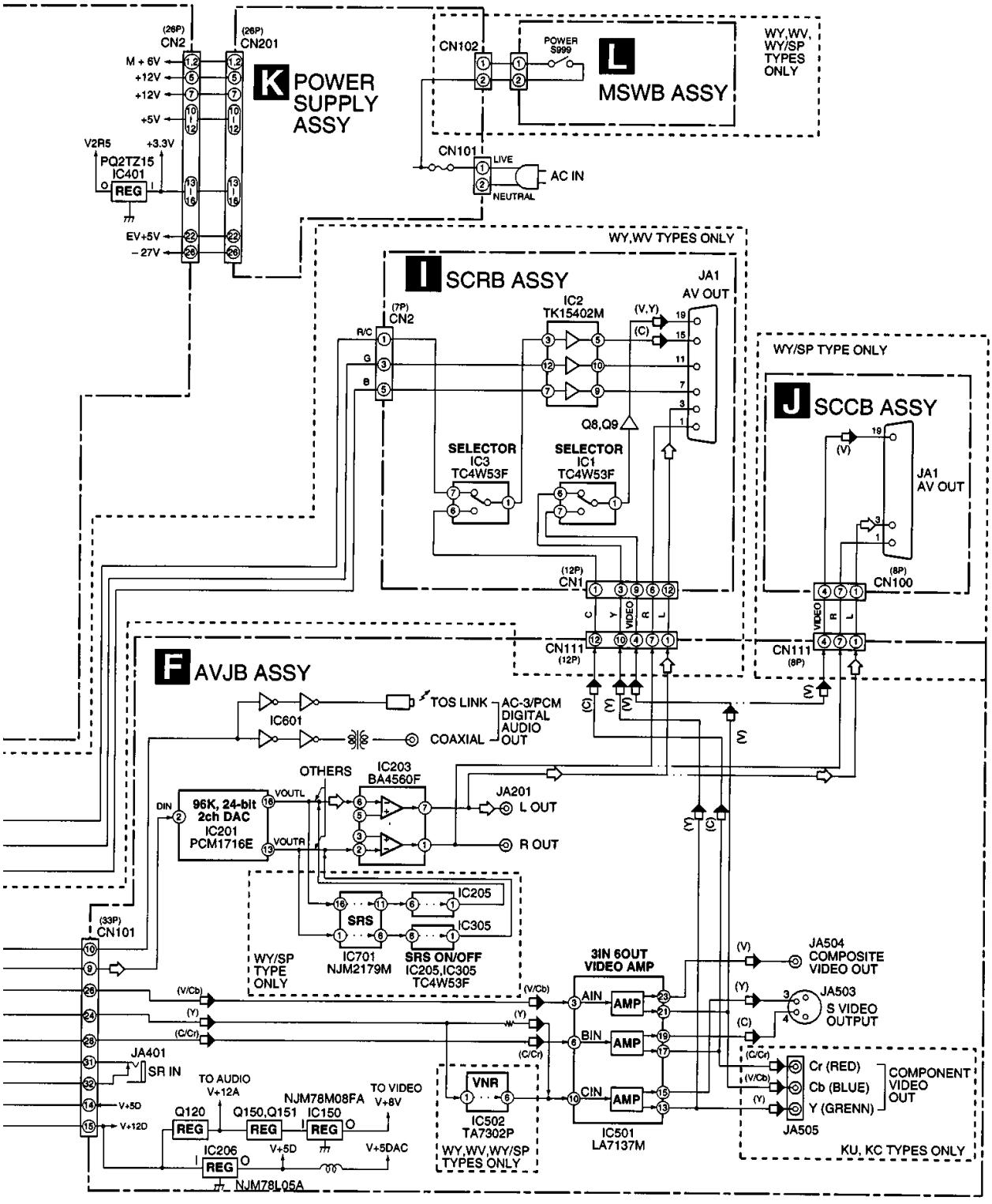
DV-525

3. BLOCK DIAGRAM AND SCHEMATIC DIAGRAM

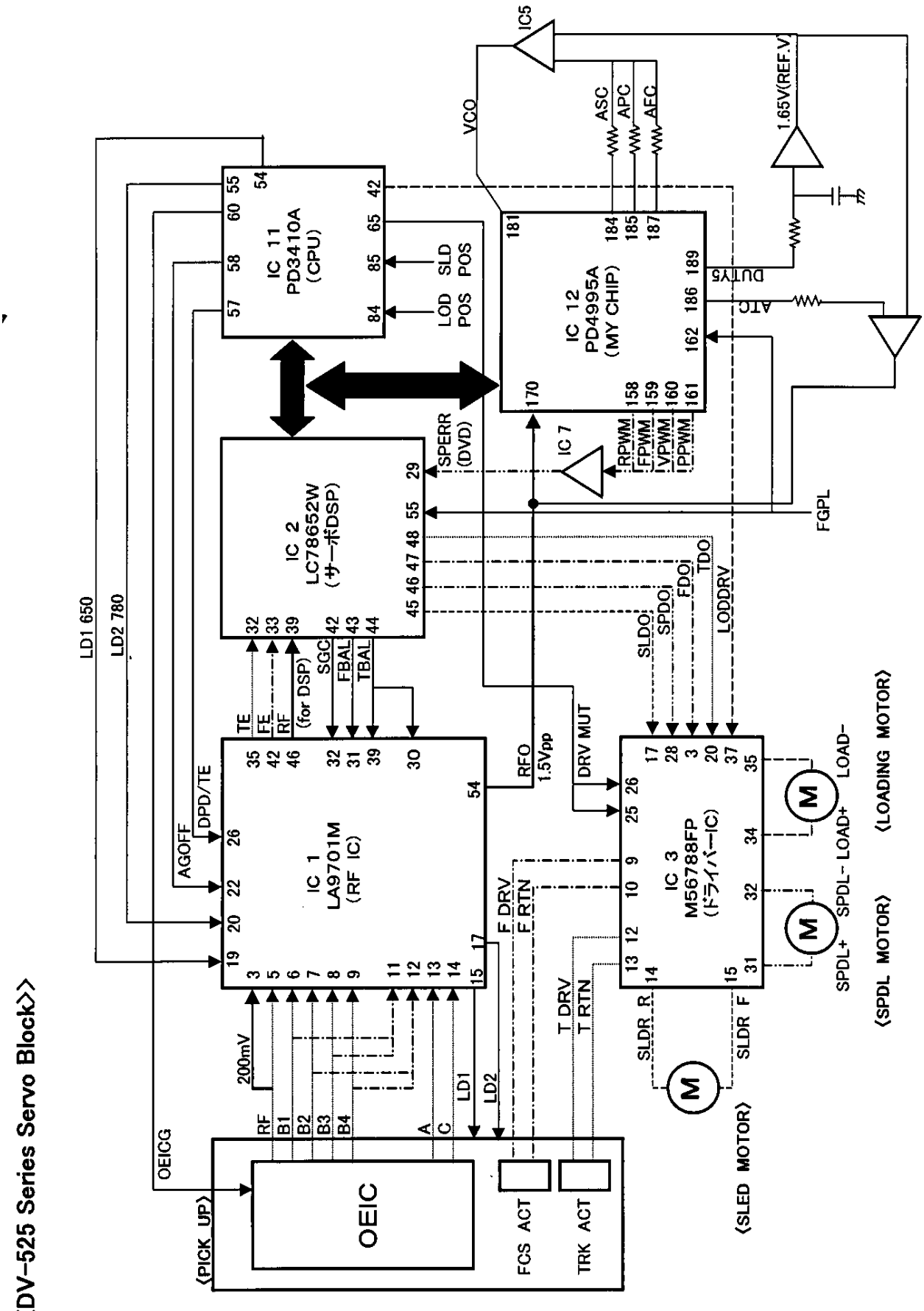
3.1 BLOCK DIAGRAM



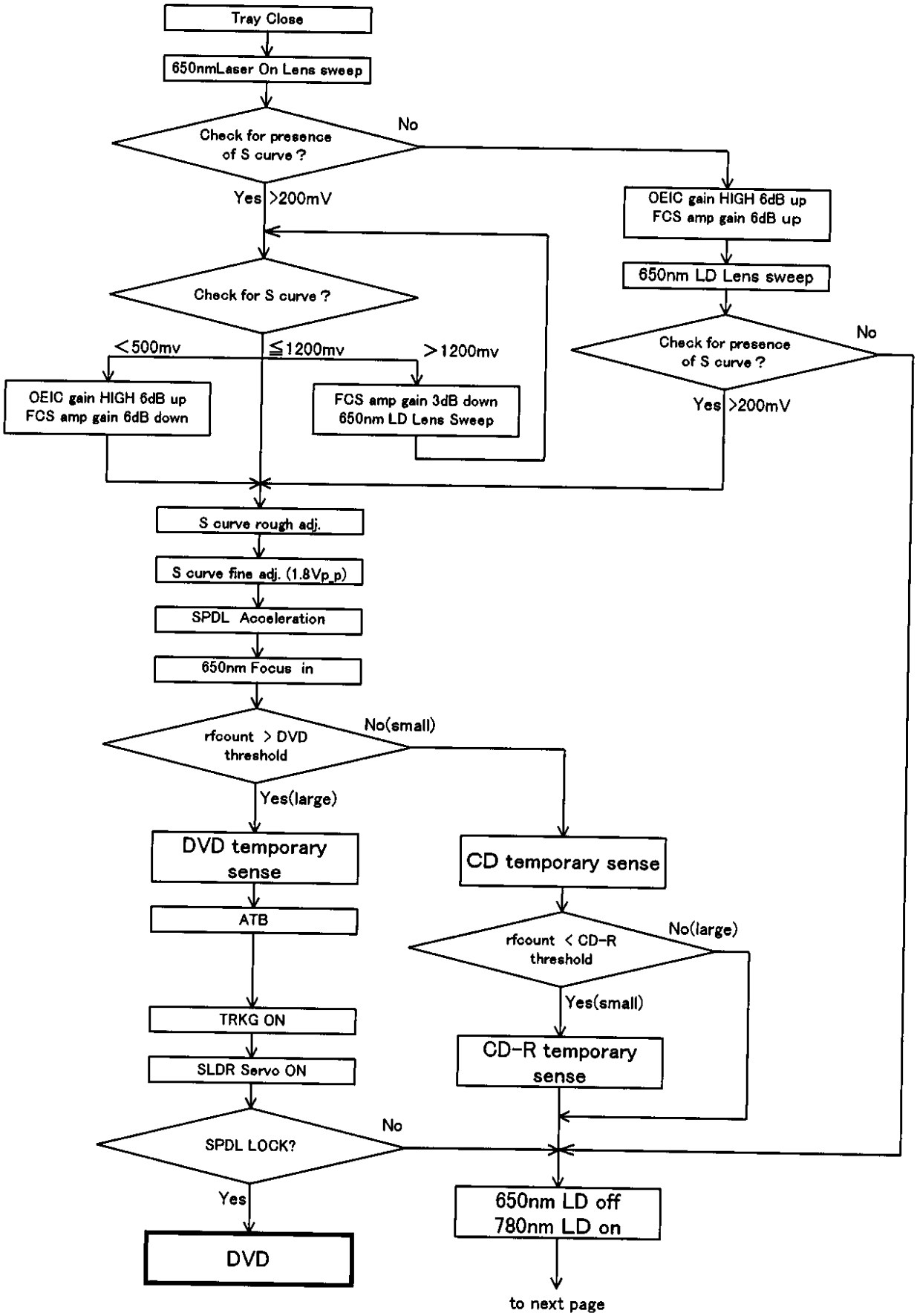
DV-525

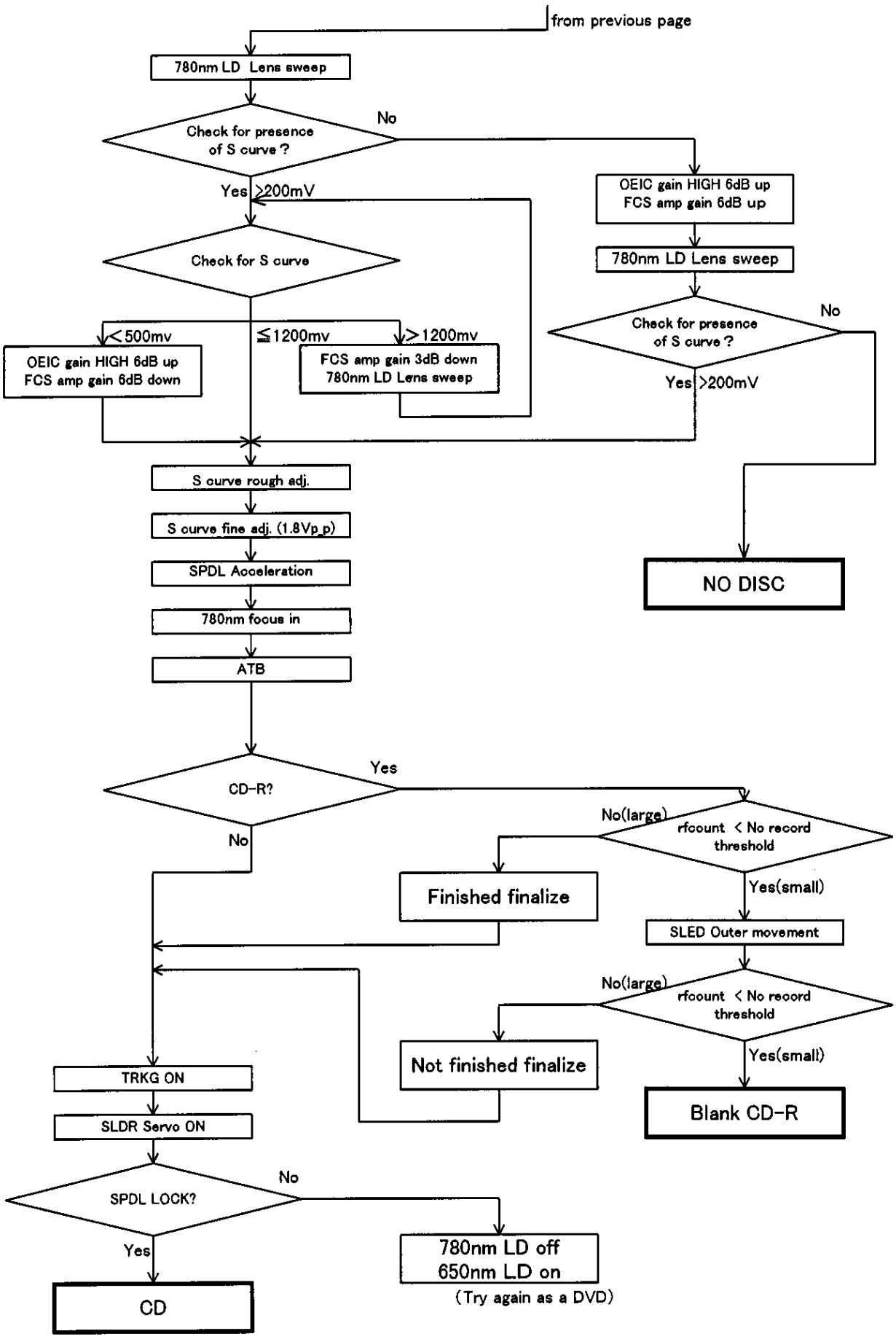

K POWER SUPPLY ASSY
L MSWB ASSY
WY,WV, WY/SP TYPES ONLY
I SCRB ASSY
WY,WV TYPES ONLY
J SCCB ASSY
WY/SP TYPE ONLY
F AVJB ASSY
CN2
CN201
CN102
CN101
POWER S999
AC IN
LIVE
NEUTRAL
M + 6V
+12V
+12V
+5V
V2R5
+3.3V
PQ2TZ15 IC401
REG
EV+5V
– 27V
JA1 AV OUT
IC2 TK15402M
SELECTOR IC3 TC4W53F
SELECTOR IC1 TC4W53F
Q8,Q9
CN1
CN100
CN111
TOS LINK
COAXIAL
AC-3/PCM DIGITAL AUDIO OUT
IC601
OTHERS
IC203 BA4560F
96K, 24-bit 2ch DAC IC201 PCM1716E
JA201
L OUT
R OUT
IC205
SRS
IC305
IC701 NJM2179M
SRS ON/OFF IC205,IC305 TC4W53F
WY/SP TYPE ONLY
CN101
JA401
SR IN
TO AUDIO V+12A
TO VIDEO V+8V
NJM78M08FA
Q120
Q150,Q151
IC150
IC206
NJM78L05A
V+5DAC
3IN 6OUT VIDEO AMP
AMP
IC501 LA7137M
VNR
IC502 TA7302P
WY,WV,WY/SP TYPES ONLY
JA504 COMPOSITE VIDEO OUT
JA503 S VIDEO OUTPUT
Cr (RED)
Cb (BLUE)
Y (GRENN)
COMPONENT VIDEO OUT
JA505
KU, KC TYPES ONLY

<<DV-525 Series Servo Block>>



DV-525 Disc Sensing




from previous page
780nm LD Lens sweep
Check for presence of S curve ?
No
Yes ≥200mV
OEIC gain HIGH 6dB up
FCS amp gain 6dB up
780nm LD Lens sweep
Check for presence of S curve ?
No
Yes ≥200mV
Check for S curve
<500mv
≦1200mv
>1200mv
OEIC gain HIGH 6dB up
FCS amp gain 6dB down
FCS amp gain 3dB down
780nm LD Lens sweep
S curve rough adj.
S curve fine adj. (1.8Vp_p)
SPDL Acceleration
780nm focus in
ATB
NO DISC
CD-R?
Yes
No
No(large)
rfcount < No record threshold
Finished finalize
Yes(small)
SLED Outer movement
No(large)
rfcount < No record threshold
Not finished finalize
Yes(small)
Blank CD-R
TRKG ON
SLDR Servo ON
SPDL LOCK?
No
Yes
780nm LD off
650nm LD on
(Try again as a DVD)
CD

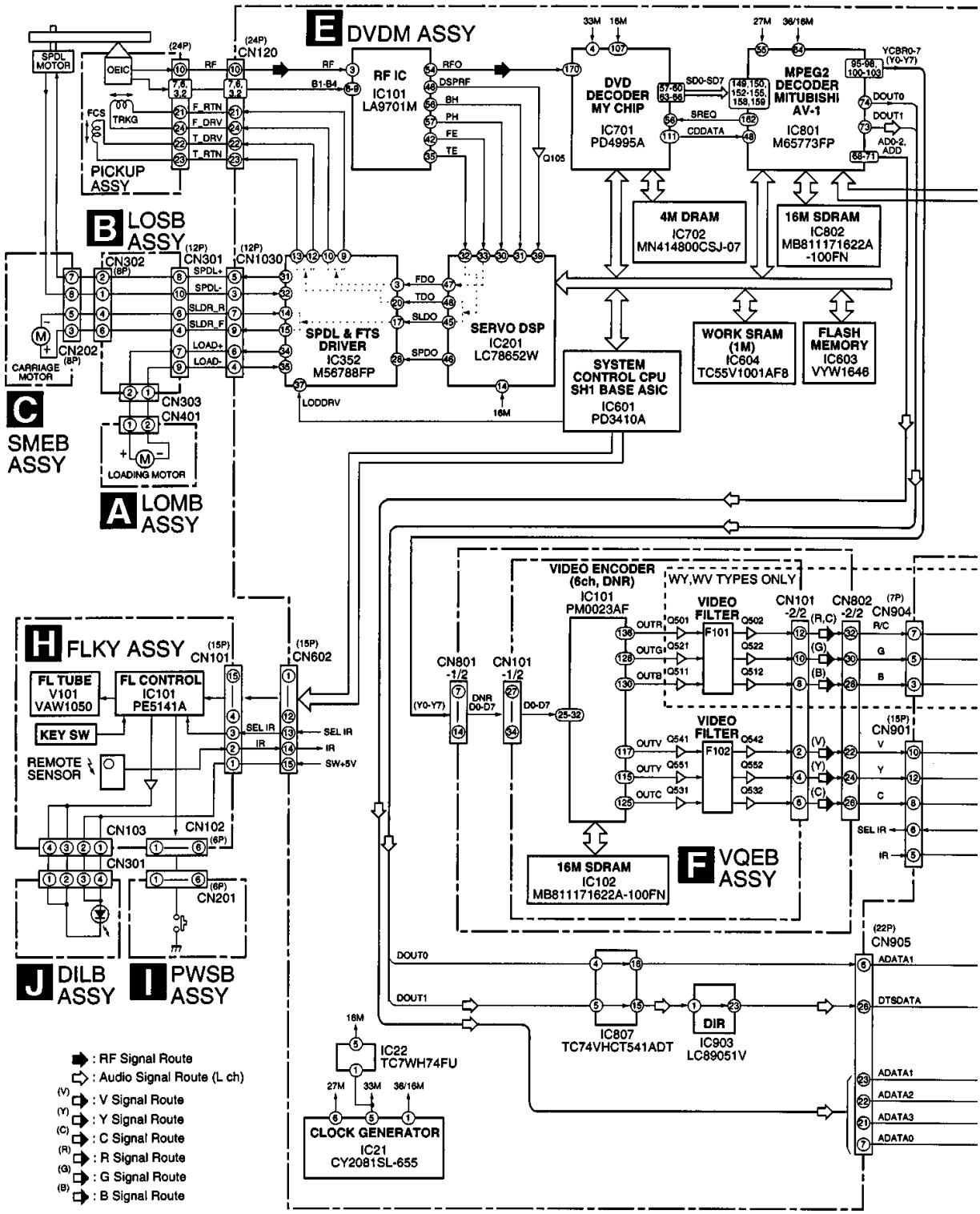
Comparison Chart between DV-626D and DV-525

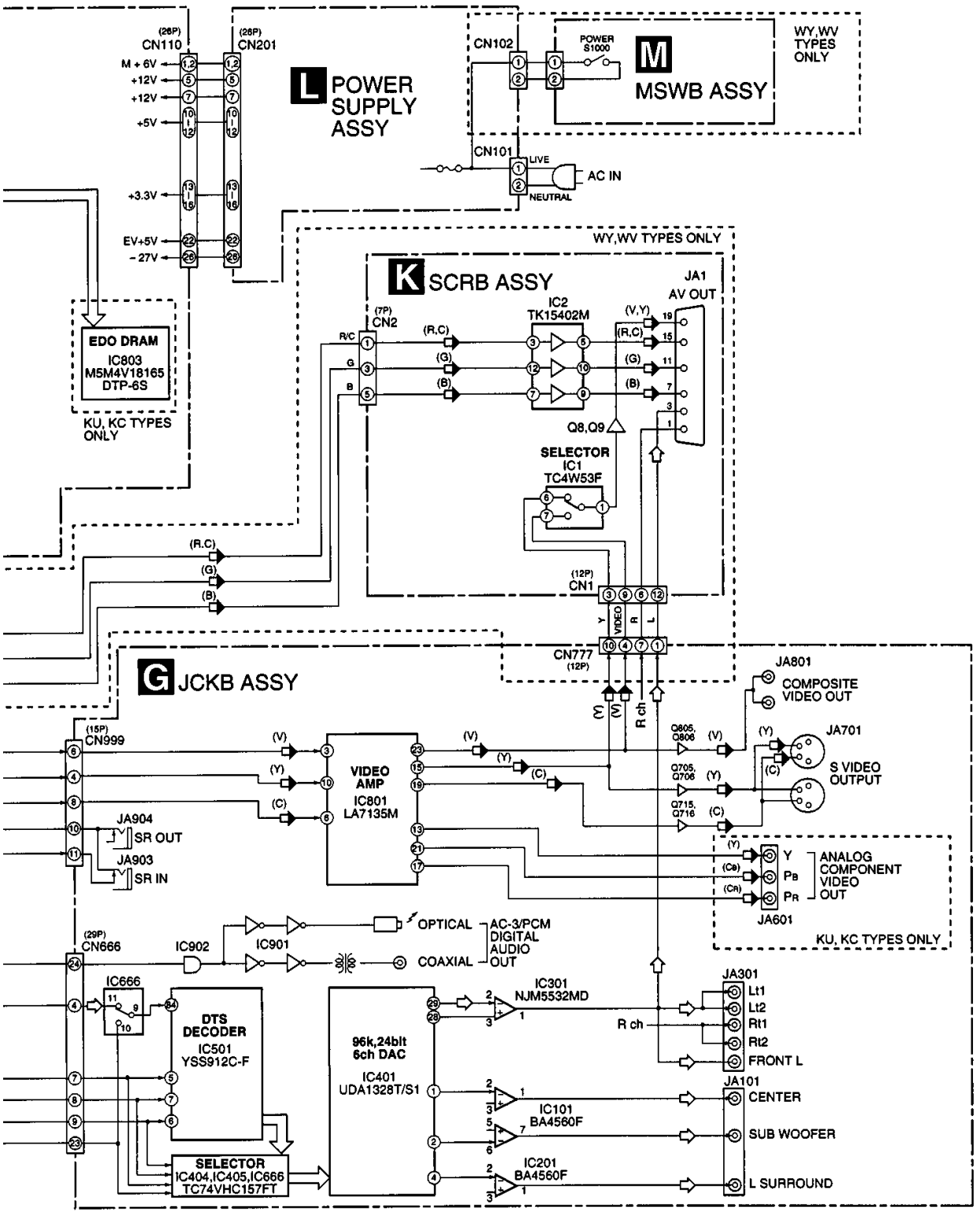
		DV-626D	DV-525
IC	AV-1chip(IC801) Memory for TPP(Trick Play processor,IC803) Video Encoder(DNR processor,IC101) Audio DAC(IC401) DTS Decoder(IC501) Flash Memory(IC603) DIR(Digital Interface Receiver)(IC903)	MITSUBISHI M5M4V18165DTP-6S VQE4(Video Quality Encoder),PM0023AF UDA1328TS:6ch DAC YSS912C-F 16M LC89051V	FUJITU - MC44724A PCM1716E - 4M -
Clock	MY-Chip(DVD Decoder,IC701)	33.8688M (1.3 times speed)	27M (1 time speed)
Function	Video NR Audio output Rotation with DVD playback	DNR(process of VQE4) 6ch 1.3 times speed	YNR 2ch 1 time speed
Power supply unit		SHINDENGEN	MITSUMI(for J,KU) SHINDENGEN(for others)

DV-626D

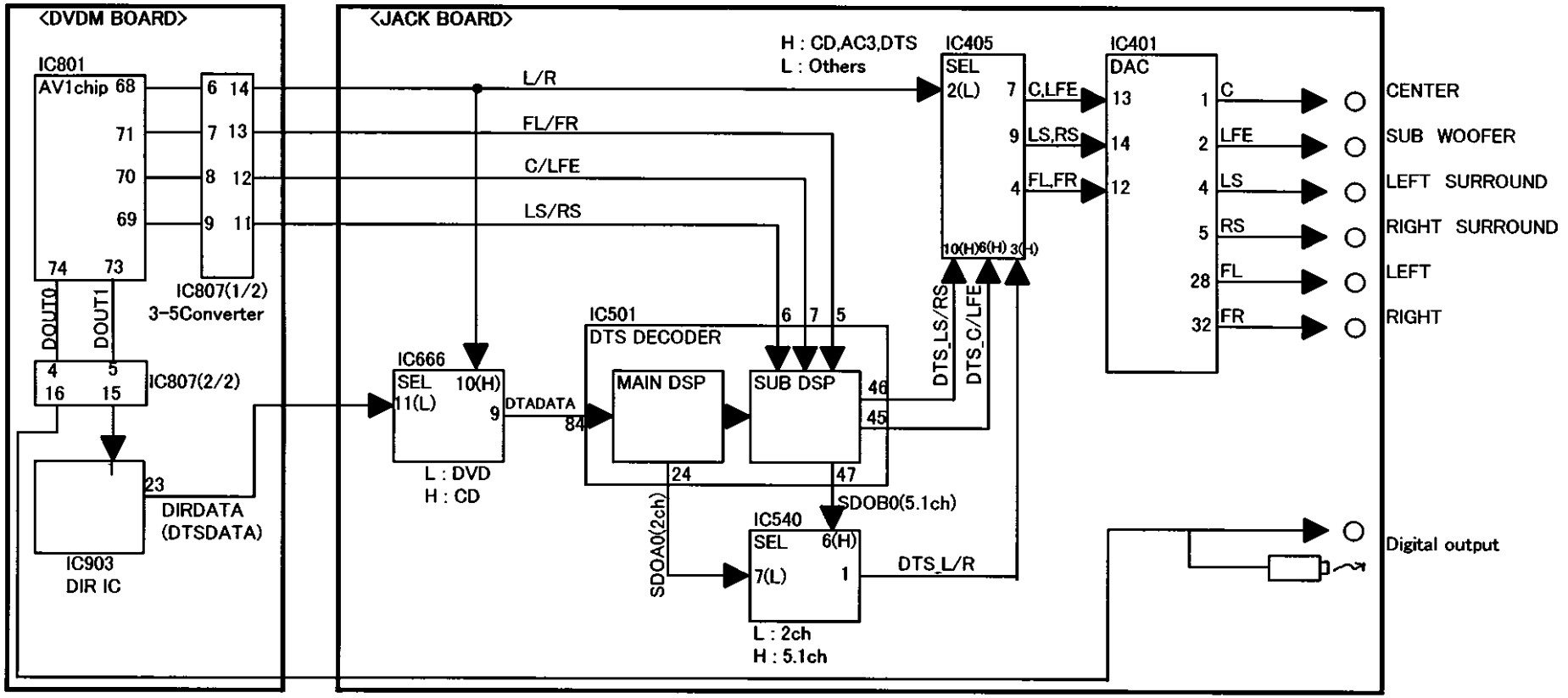
3. BLOCK DIAGRAM AND SCHEMATIC DIAGRAM

3.1 BLOCK DIAGRAM




L POWER SUPPLY ASSY
M MSWB ASSY
WY,WV TYPES ONLY
CN110
CN201
CN102
POWER S1000
CN101
LIVE
AC IN
NEUTRAL
M + 6V
+12V
+12V
+5V
+3.3V
EV+5V
- 27V
EDO DRAM
IC803
M5M4V18165
DTP-6S
KU, KC TYPES ONLY
K SCRB ASSY
CN2
IC2
TK15402M
JA1
AV OUT
Q8,Q9
SELECTOR
IC1
TC4W53F
CN1
CN777
G JCKB ASSY
CN999
VIDEO AMP
IC801
LA7135M
JA904
SR OUT
JA903
SR IN
JA801
COMPOSITE VIDEO OUT
JA701
S VIDEO OUTPUT
ANALOG COMPONENT VIDEO OUT
JA601
KU, KC TYPES ONLY
CN666
IC902
IC901
OPTICAL
COAXIAL
AC-3/PCM DIGITAL AUDIO OUT
IC666
DTS DECODER
IC501
YSS912C-F
SELECTOR
IC404,IC405,IC666
TC74VHC157FT
96k,24bit 6ch DAC
IC401
UDA1328T/S1
IC301
NJM5532MD
IC101
BA4560F
IC201
BA4560F
JA301
FRONT L
JA101
CENTER
SUB WOOFER
L SURROUND
R ch

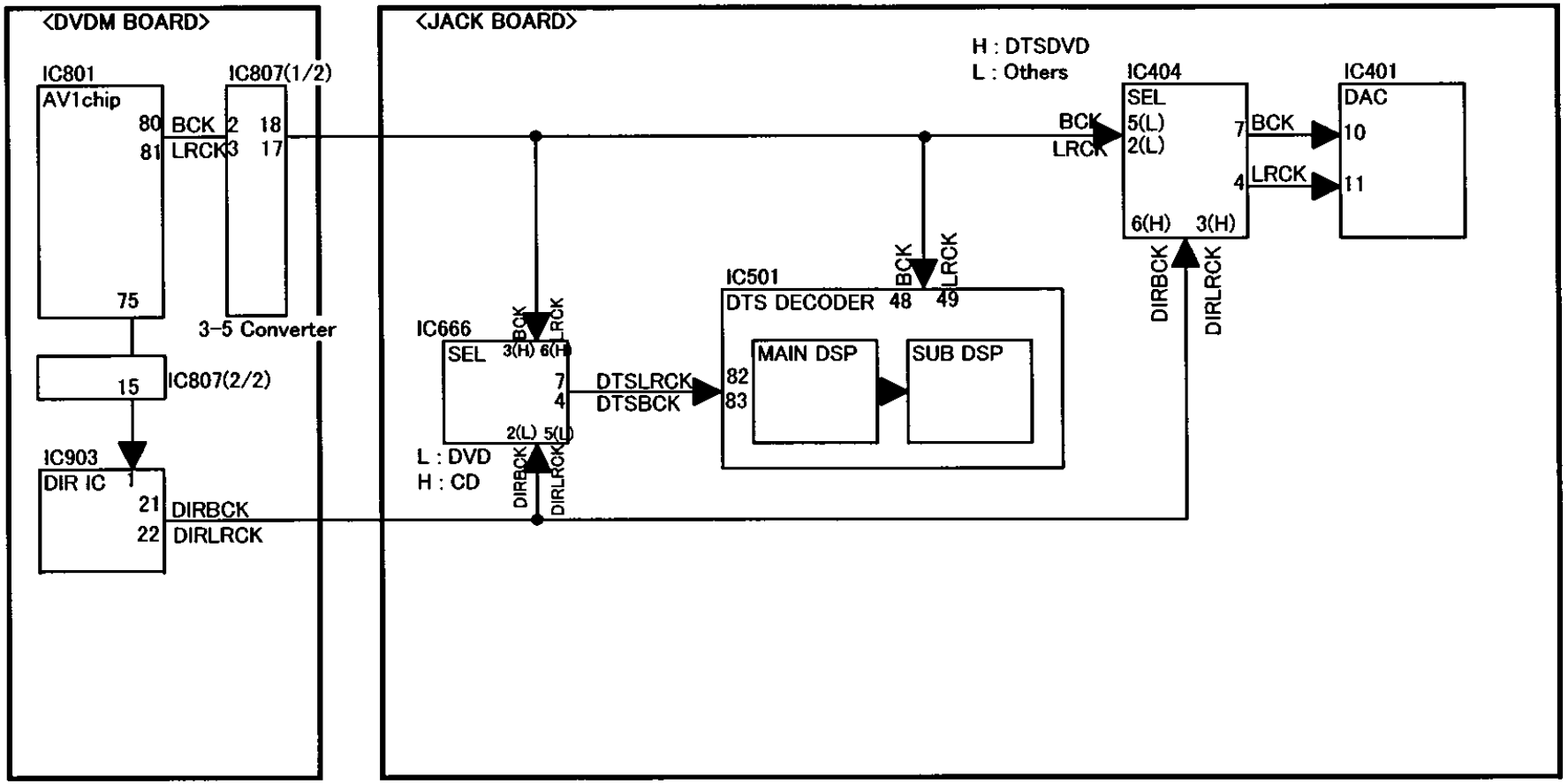
DV-626D AUDIO PART BLOCK DIAGRAMS ~DATA Flow~



Selection signal for each source

Selection signal	Output	CD	DTSCD	DTSCD Down-mix	VCD	DVD LPCM	DVD MPEG	DVD AC3 5.1ch	DVD AC3 5.1ch Down-mix	DVD DTS	DVD DTS Down-mix
IC666 1pin	Sys-com DVDMAIN IC601 30pin	H	H	H	(H)	(L)	(L)	(H)	(L)	L	L
IC540 5pin	DTS DECODER JCKB IC501 33pin	L	H	L	(L)	(L)	(L)	H	(L)	H	L
IC405 1pin	DTS DECODER JCKB IC501 32pin	H	H	H	L	L	L	H	L	H	H

DV-626D AUDIO PART BLOCK DIAGRAMS ~BCK/LRCK Flow~



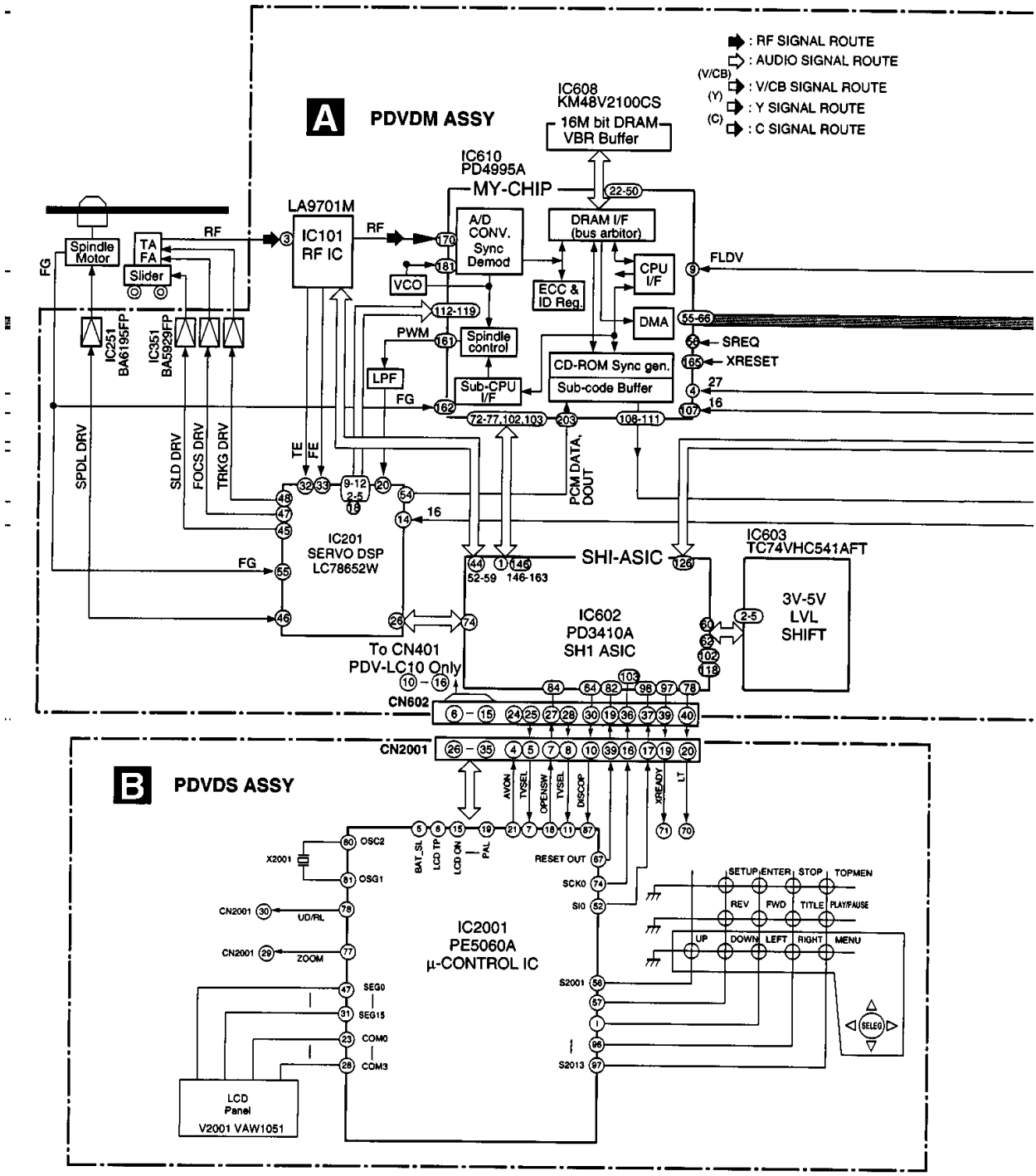
Selection signal for each source

Selection signal	Output	CD	DTSCD	DTSCD Down-mix	VCD	DVD LPCM	DVD MPEG	DVD AC3 5.1ch	DVD AC3 5.1ch Down-mix	DVD DTS	DVD DTS Down-mix
IC666 1pin	Sys-com DVDMAIN IC601 30pin	H	H	H	(H)	(L)	(L)	(H)	(L)	L	L
IC404 1pin	Sys-com DVDMAIN IC601 28pin	L	L	L	L	L	L	L	L	H	H

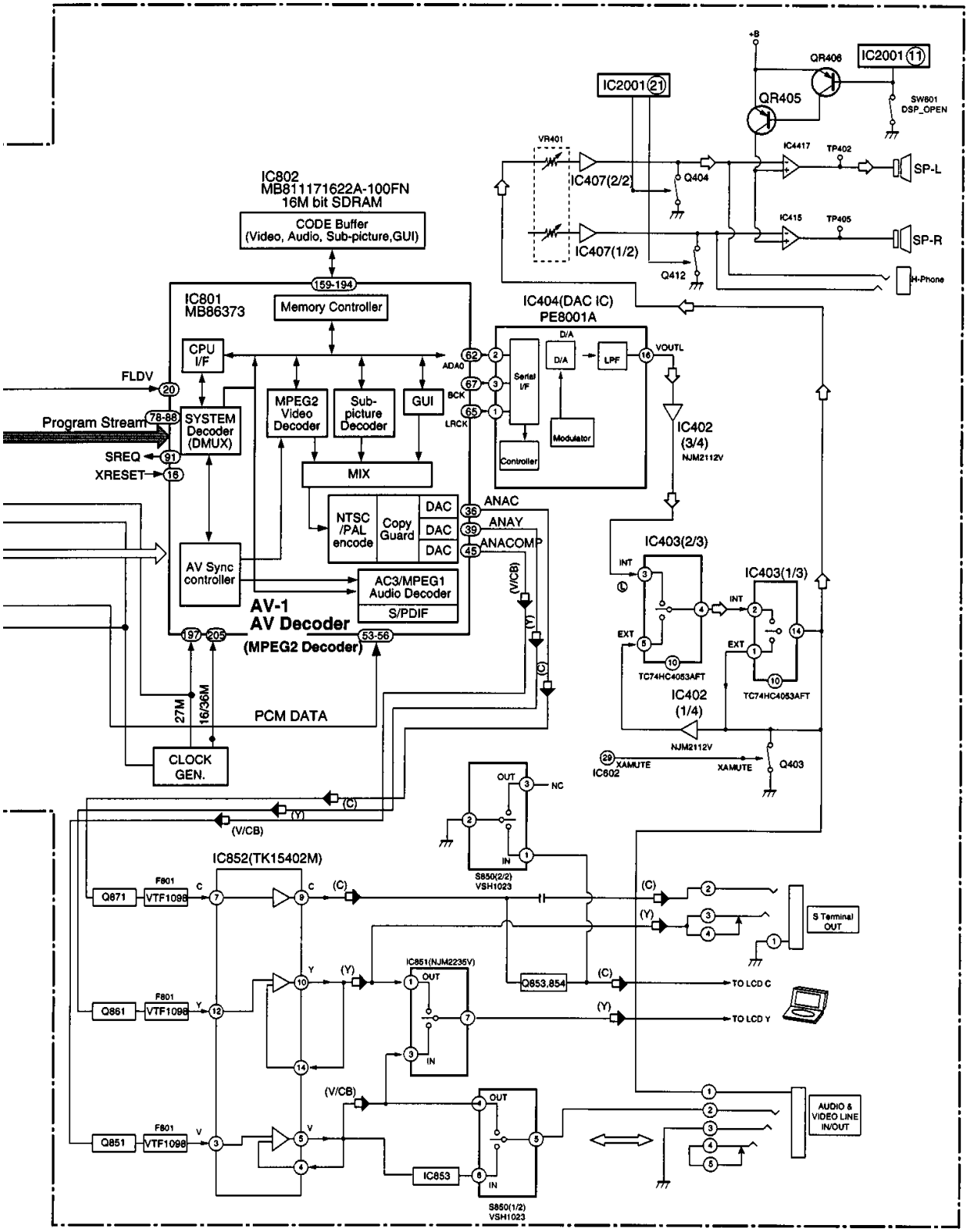
PDV-LC10

3. BLOCK DIAGRAM AND SCHEMATIC DIAGRAM

3.1 BLOCK DIAGRAM



PDV-LC10


IC802
MB811171622A-100FN
16M bit SDRAM
CODE Buffer
(Video, Audio, Sub-picture,GUI)
IC801
MB86373
Memory Controller
CPU I/F
FLDV
Program Stream
SREQ
XRESET
SYSTEM Decoder (DMUX)
MPEG2 Video Decoder
Sub-picture Decoder
GUI
MIX
NTSC /PAL encode
Copy Guard
DAC
AV Sync controller
AC3/MPEG1 Audio Decoder
S/PDIF
AV-1
AV Decoder
(MPEG2 Decoder)
PCM DATA
CLOCK GEN.
IC404(DAC IC)
PE8001A
Serial I/F
Modulator
Controller
LPF
VOUTL
ANAC
ANAY
ANACOMP
IC402
(3/4)
NJM2112V
IC402
(1/4)
IC403(2/3)
IC403(1/3)
TC74HC4053AFT
XAMUTE
Q403
IC2001(21)
IC2001(11)
QR405
QR406
SW801
DSP_OPEN
VR401
IC407(2/2)
IC407(1/2)
Q404
Q412
IC4417
IC415
TP402
TP405
SP-L
SP-R
H-Phone
IC852(TK15402M)
Q871
Q861
Q851
VTF1098
IC851(NJM2235V)
IC853
Q853,854
S850(2/2)
VSH1023
S850(1/2)
VSH1023
S Terminal OUT
TO LCD C
TO LCD Y
AUDIO & VIDEO LINE IN/OUT

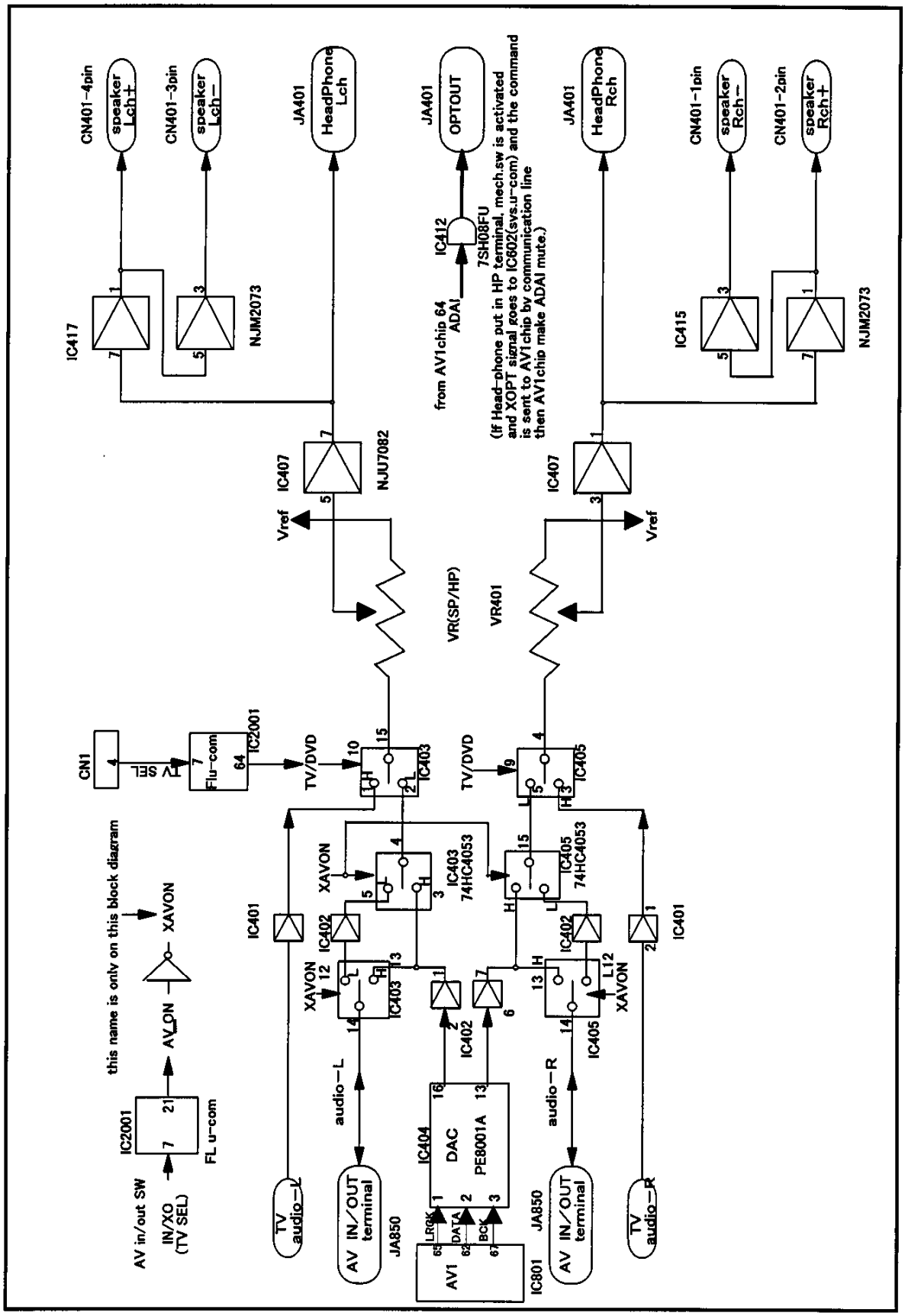


fig1 AUDIO BLOCK part

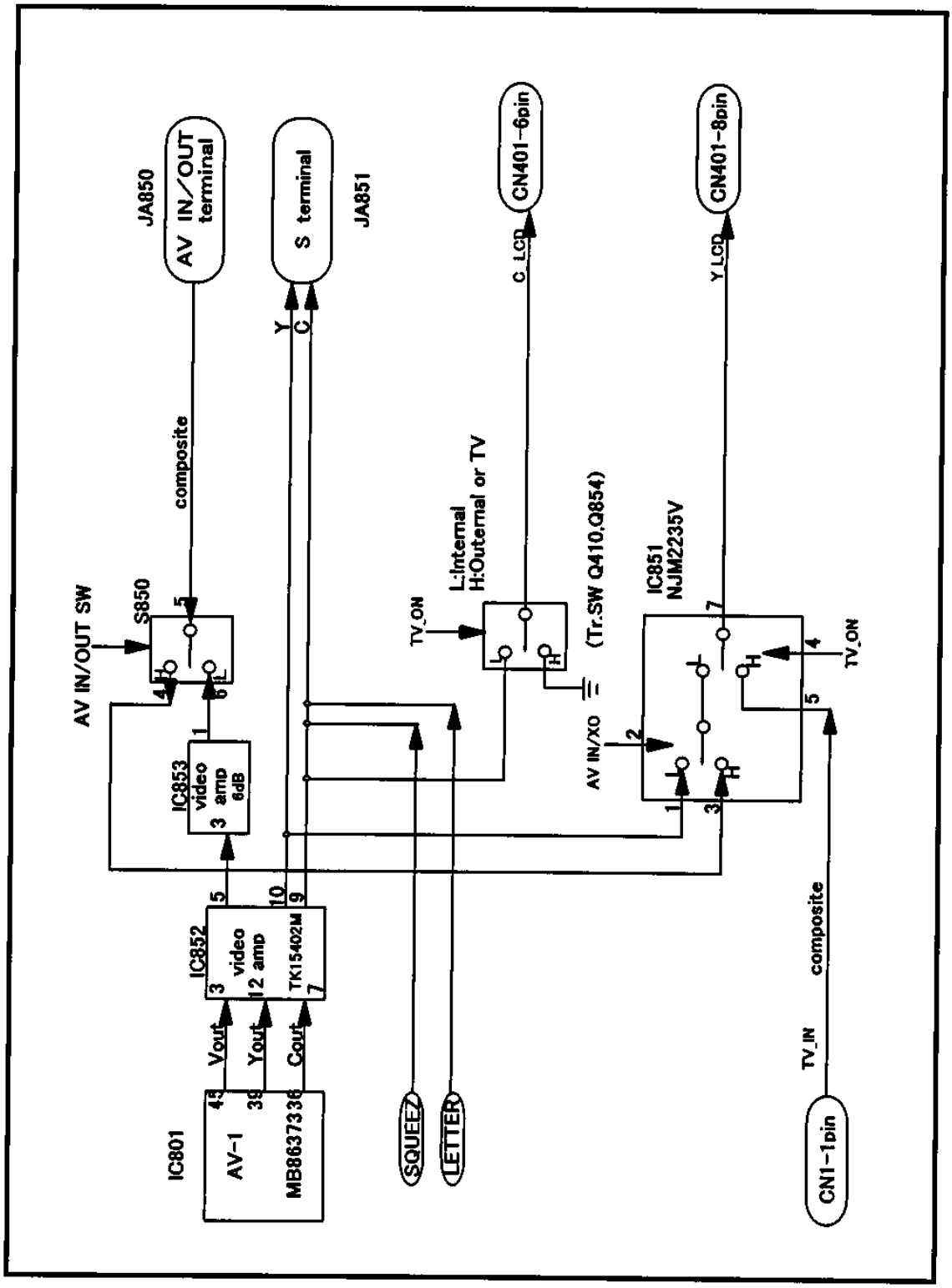
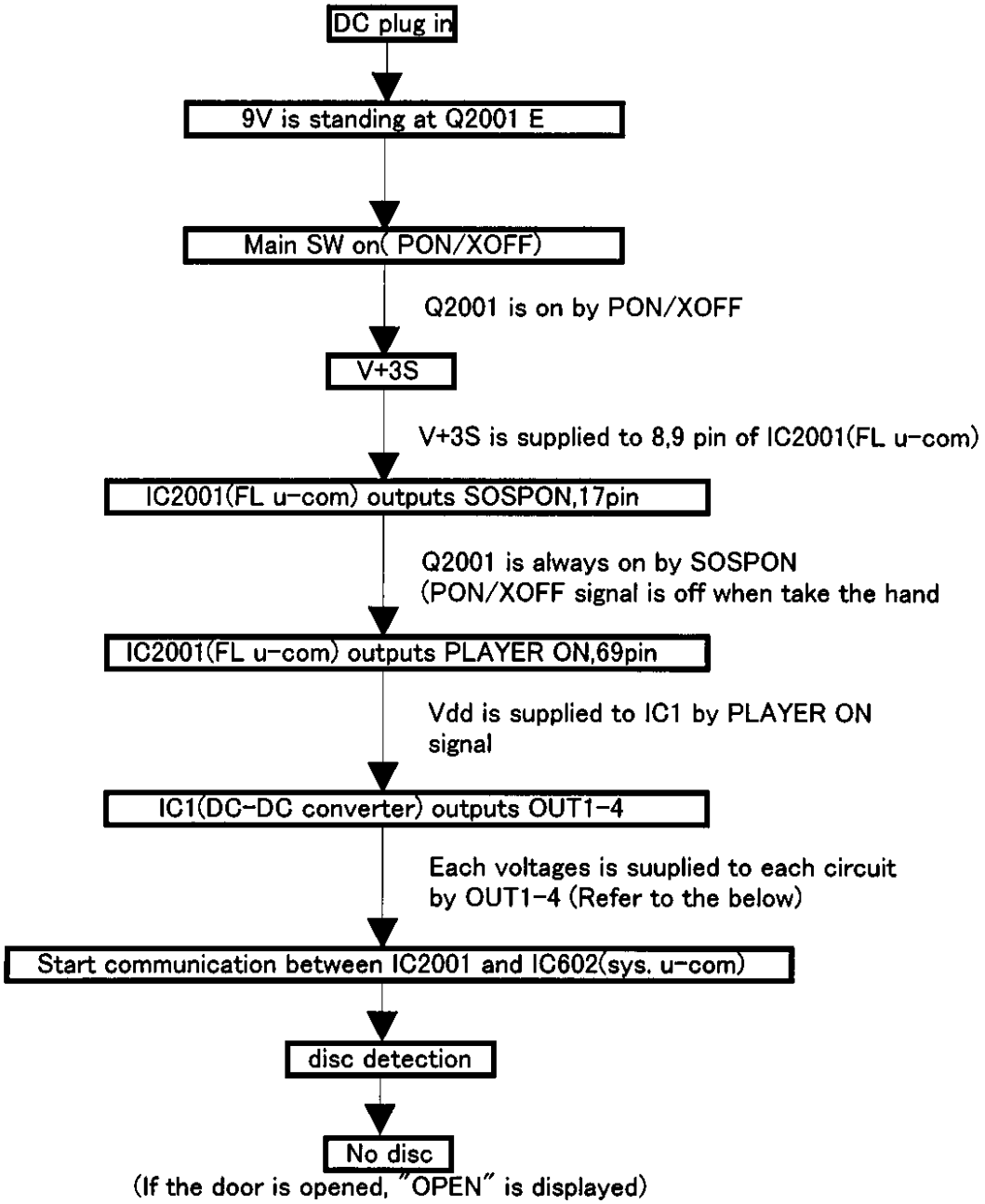


fig 2 VIDEO BLOCK part

Set up operation



Voltage	supply to
V5DR	IC351(FTS DRV)
V+5S	IC351(FTS DRV),IC201(DSP)
V5AV	analog circuit after IC801(AV1chip)
V+5A	not used
V+5D	IC201(DSP)
V+3D	IC610(MY CHIP),IC602(sys-com),IC201(DSP),each memory IC's
V2R5	IC801(AV1)