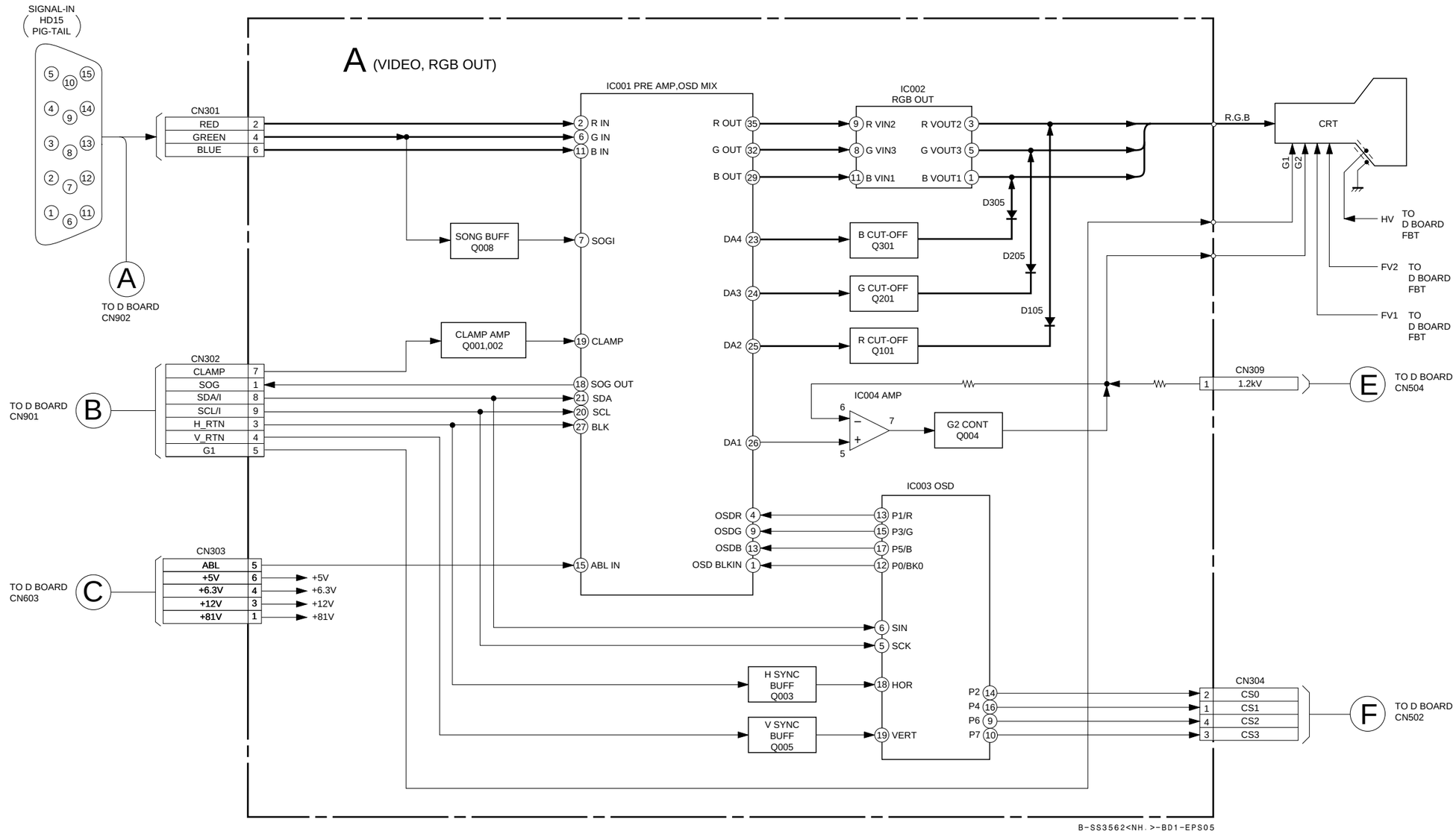
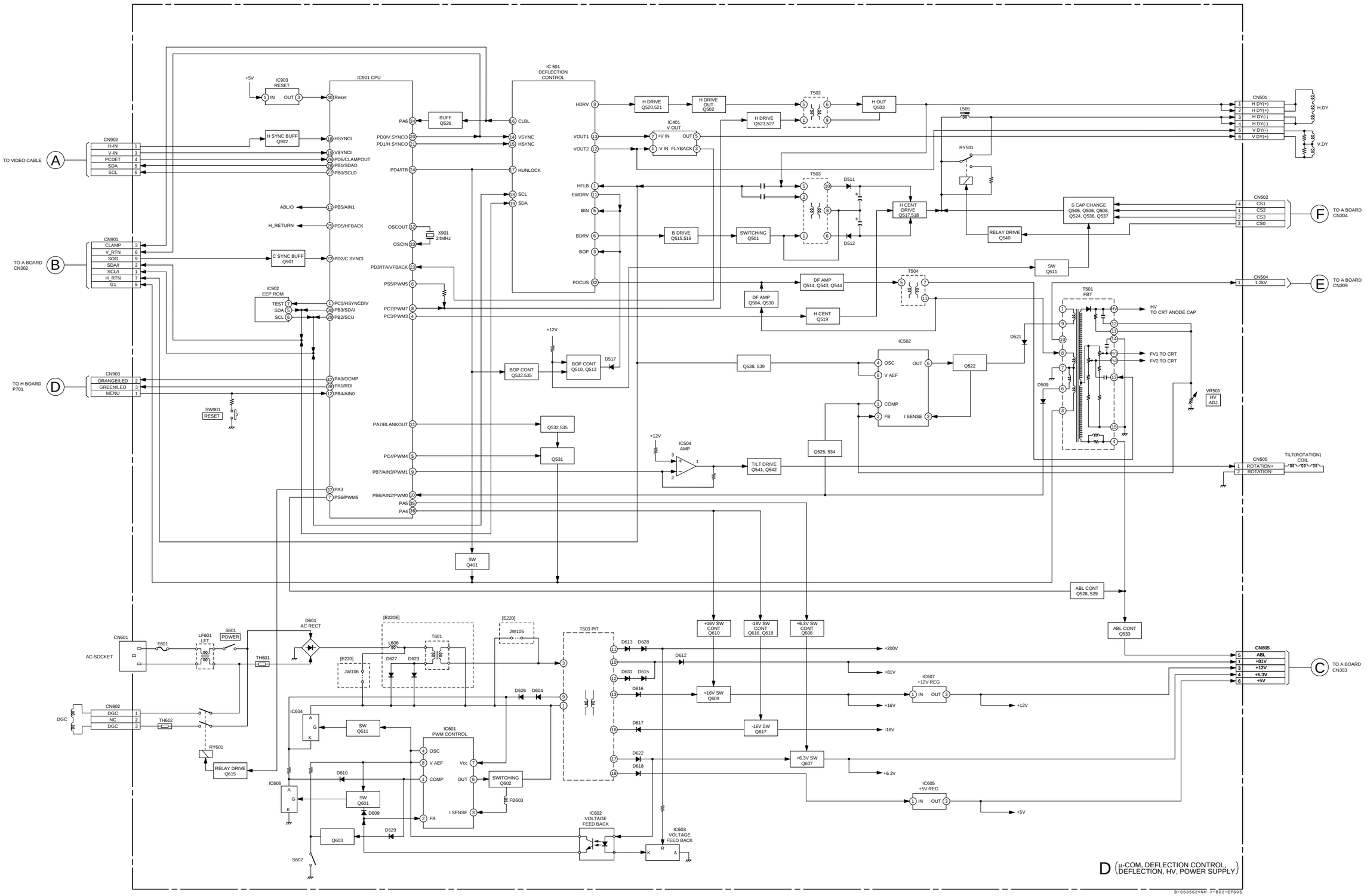
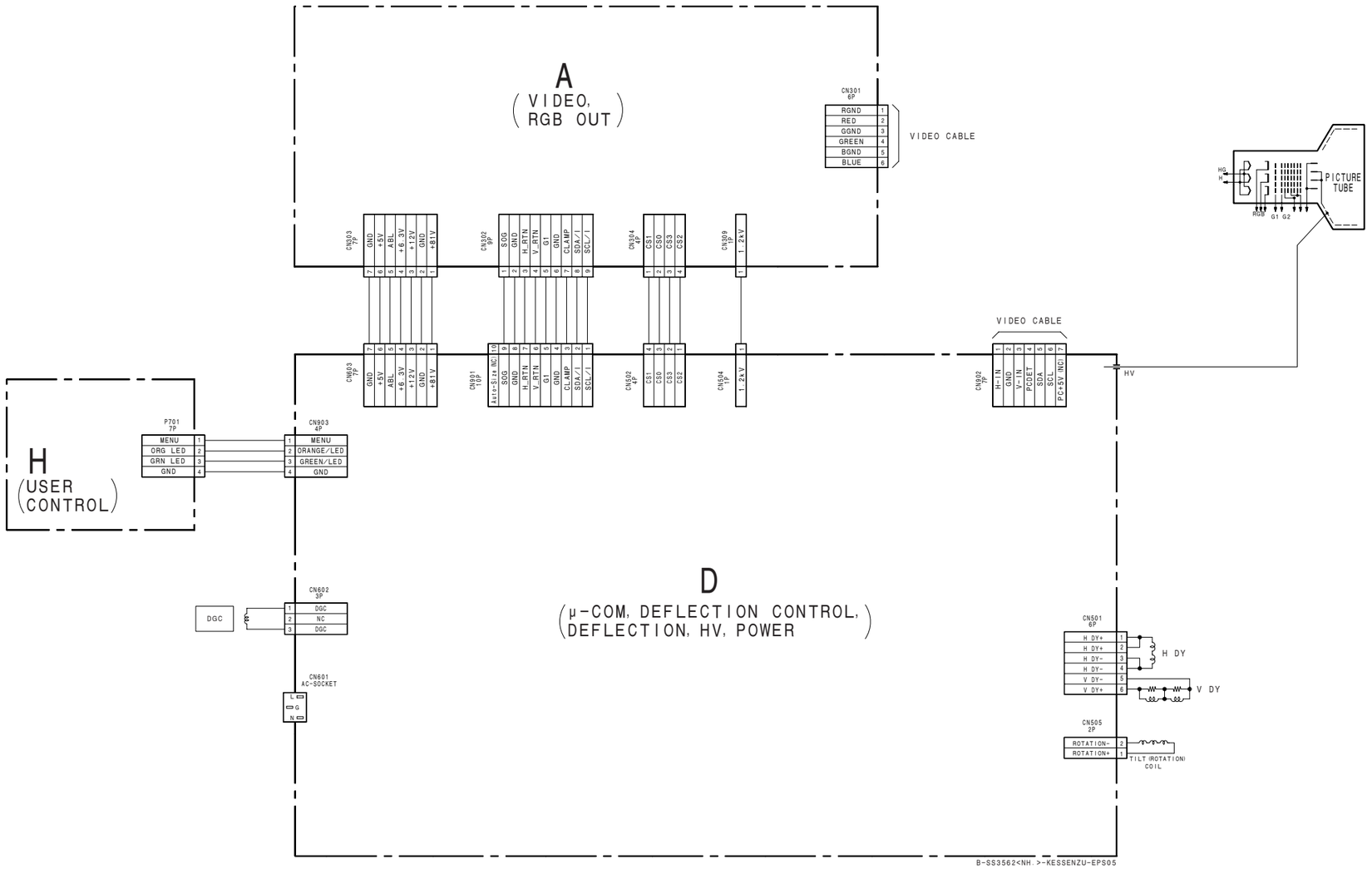
SECTION 5
DIAGRAMS

5-1. BLOCK DIAGRAMS

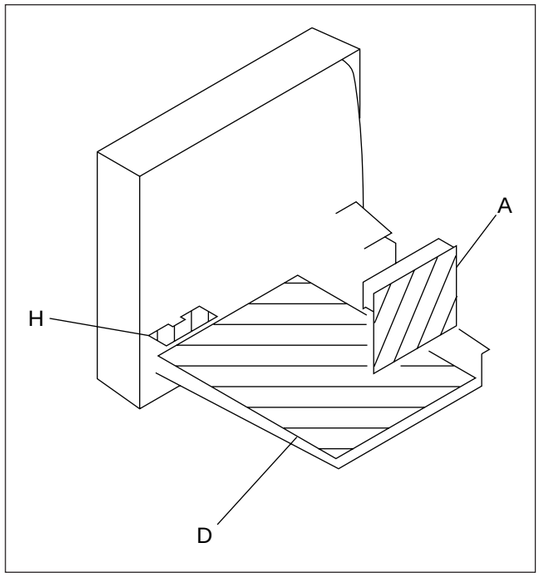



IC 501 DEFLECTION CONTROL
IC901 CPU
IC903 RESET
+5V
CN902
H-IN
V-IN
PCDET
SDA
SCL
TO VIDEO CABLE
A
H SYNC BUFF Q902
C SYNC BUFF Q901
ABL/O
H_RETURN
CN901
CLAMP
V_RTN
SOG
SDA/I
SCL/I
H_RTN
G1
TO A BOARD CN302
B
IC902 EEP ROM
TEST
SDA
SCL
CN903
ORANGE/LED
GREEN/LED
MENU
TO H BOARD P701
D
SW901 RESET
HSYNCI
VSYNCI
PD6/CLAMPOUT
PB1/SDAD
PB0/SCLD
PB5/AIN1
PD5/HFBACK
PD2/C SYNCI
PC0/HSYNCDIV
PB3/SDAI
PB2/SCU
PA0/OCMP
PA1/RDI
PB4/AIN0
PA3
PS6/PWM6
PA6
PD0/V SYNCO
PD1/H SYNCO
PD4/ITB
OSCOUT
OSCIN
X901 24MHz
PD3/ITA/VFBACK
PS5/PWM5
PC7/PWM7
PC3/PWM3
PA7/BLANKOUT
PC4/PWM4
PB7/AIN3/PWM1
PB6/AIN2/PWM0
PA5
PA4
BUFF Q526
CLBL
VSYNC
HSYNC
HUNLOCK
SCL
SDA
SW Q401
HDRV
VOUT1
VOUT2
HFLB
EWDRV
BIN
BDRV
BOP
FOCUS
H DRIVE Q520,521
H DRIVE OUT Q502
H DRIVE Q523,527
IC401 V OUT
+V IN
-V IN
OUT
FLYBACK
T502
H OUT Q503
L505
RY501
T503
D511
D512
H CENT DRIVE Q517,518
S CAP CHANGE Q505, Q506, Q508, Q524, Q536, Q537
RELAY DRIVE Q540
SW Q511
B DRIVE Q515,516
SWITCHING Q501
DF AMP Q504, Q530
DF AMP Q514, Q543, Q544
T504
H CENT Q519
BOP CONT Q532,535
BOP CONT Q510, Q513
D517
+12V
Q538, 539
IC502
OSC
V AEF
COMP
FB
OUT
I SENSE
Q522
D521
D509
T501 FBT
HV TO CRT ANODE CAP
FV1 TO CRT
FV2 TO CRT
VR501 HV ADJ
Q532,535
Q531
Q525, 534
IC504 AMP
TILT DRIVE Q541, Q542
CN501
H DY(+)
H DY(+)
H DY(-)
H DY(-)
V DY(-)
V DY(+)
H.DY
V.DY
CN502
CS1
CS2
CS3
CS0
F
TO A BOARD CN304
CN504
1.2kV
E
TO A BOARD CN309
CN505
ROTATION+
ROTATION-
TILT(ROTATION) COIL
ABL CONT Q528, 529
ABL CONT Q533
+16V SW CONT Q610
-16V SW CONT Q616, Q618
+6.3V SW CONT Q608
+16V SW Q609
-16V SW Q617
+6.3V SW Q607
+200V
+81V
+16V
-16V
+6.3V
IC607 +12V REG
IC605 +5V REG
+12V
+5V
CN905
ABL
+81V
+12V
+6.3V
+5V
C
TO A BOARD CN303
CN601
AC-SOCKET
F601
LF601 LET
S601 POWER
TH601
D601 AC RECT
[E220E]
L606
T601
D627
D623
[E220]
JW106
JW105
T603 PIT
D613
D628
D612
D631
D615
D616
D617
D622
D618
D626
D604
CN602
DGC
NC
DGC
TH602
RY601
RELAY DRIVE Q615
IC604
IC606
SW Q611
SW Q601
D610
D609
D629
Q603
S602
IC601 PWM CONTROL
SWITCHING Q602
FB603
IC602 VOLTAGE FEED BACK
IC603 VOLTAGE FEED BACK
D DC-DC CONVERTER
(µ-COM, DEFLECTION CONTROL, DEFLECTION, HV, POWER SUPPLY)
B-S53562<NH.>-BD2-EPS05

5-2. FRAME SCHEMATIC DIAGRAM



5-3. CIRCUIT BOARDS LOCATION



5-4. SCHEMATIC DIAGRAMS AND PRINTED WIRING BOARDS

Note:

- All capacitors are in µF unless otherwise noted. (pF: µµF) Capacitors without voltage indication are all 50 V.
- Indication of resistance, which does not have one for rating electrical power, is as follows.

  Pitch: 5 mm
  Rating electrical power 1/4 W (CHIP : 1/10 W)

- All resistors are in ohms.
- : nonflammable resistor.
- : fusible resistor.
- △ : internal component.
- : panel designation, and adjustment for repair.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- : earth-ground.
- : earth-chassis.
- All voltages are in V.
- Readings are taken with a 10 M digital multimeter.
- Readings are taken with a color-bar signal input.
- Voltage variations may be noted due to normal production tolerances.
- ∗ : Can not be measured.
- Circled numbers are waveform references.
- : B + bus.
- : B – bus.
- When replacing components identified by ◪, make the necessary adjustments indicated. (See page 3-1)
- When replacing the part in below table, be sure to perform the related adjustment.

	Part Replaced (◪)
HV Regulator Circuit Check	D board IC502, T501 (FBT)
HV Hold-down Circuit Check	D board D538, R521, T501 (FBT)
Beam Current Protector Circuit Check	D board IC901, R949, T501 (FBT)

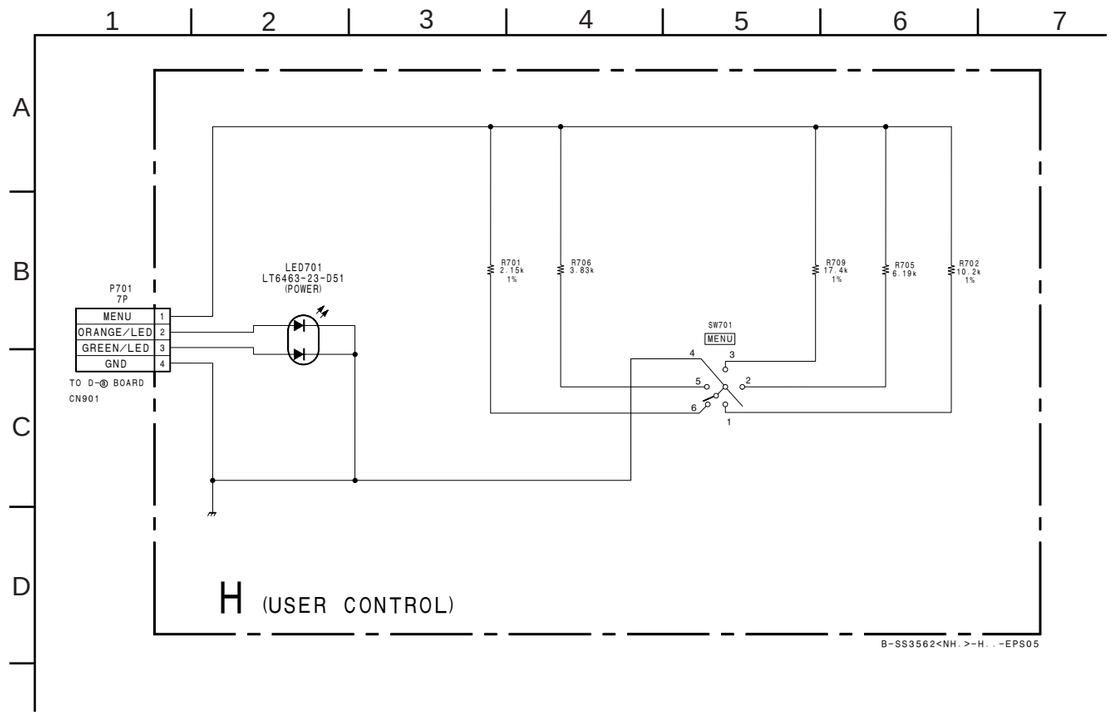
- Divided circuit diagram
  One sheet of D board circuit diagram is divided into four sheets, each having the code D-ⓐ to D-ⓓ . For example, the destination ⓐb1 on the D-ⓐ sheet is connected to ⓐb1 on the D-ⓑ sheet.

a b 1
- 1 → Ref. No.
- a b → Circuit diagram division code

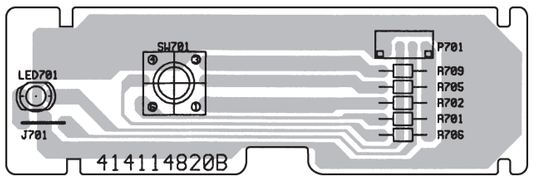
Note: The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Note: Les composants identifiés par un tramé et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

(1) Schematic Diagram of H Board

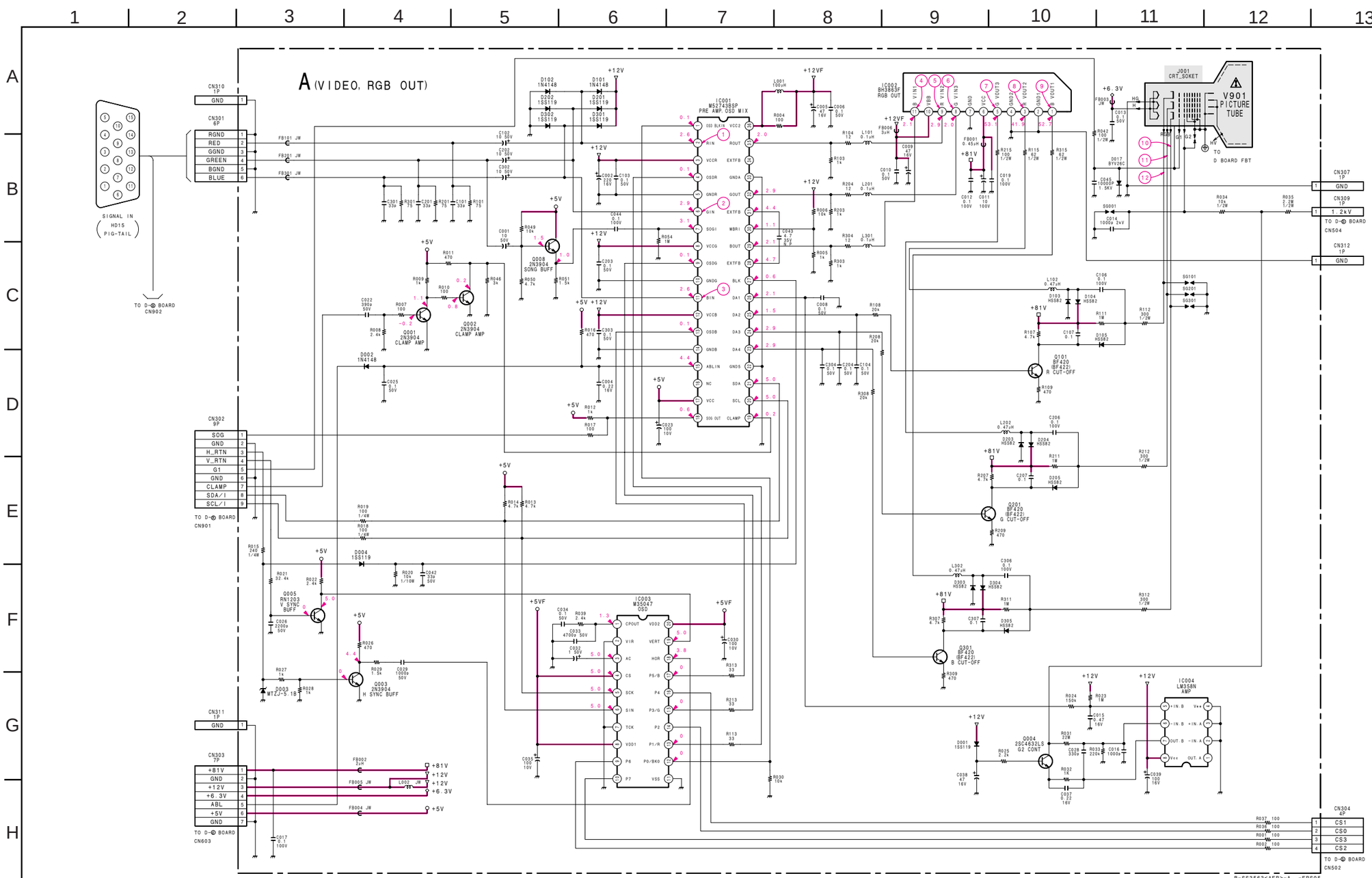


H ［USER CONTROL］



Schematic diagram
H Board ➡

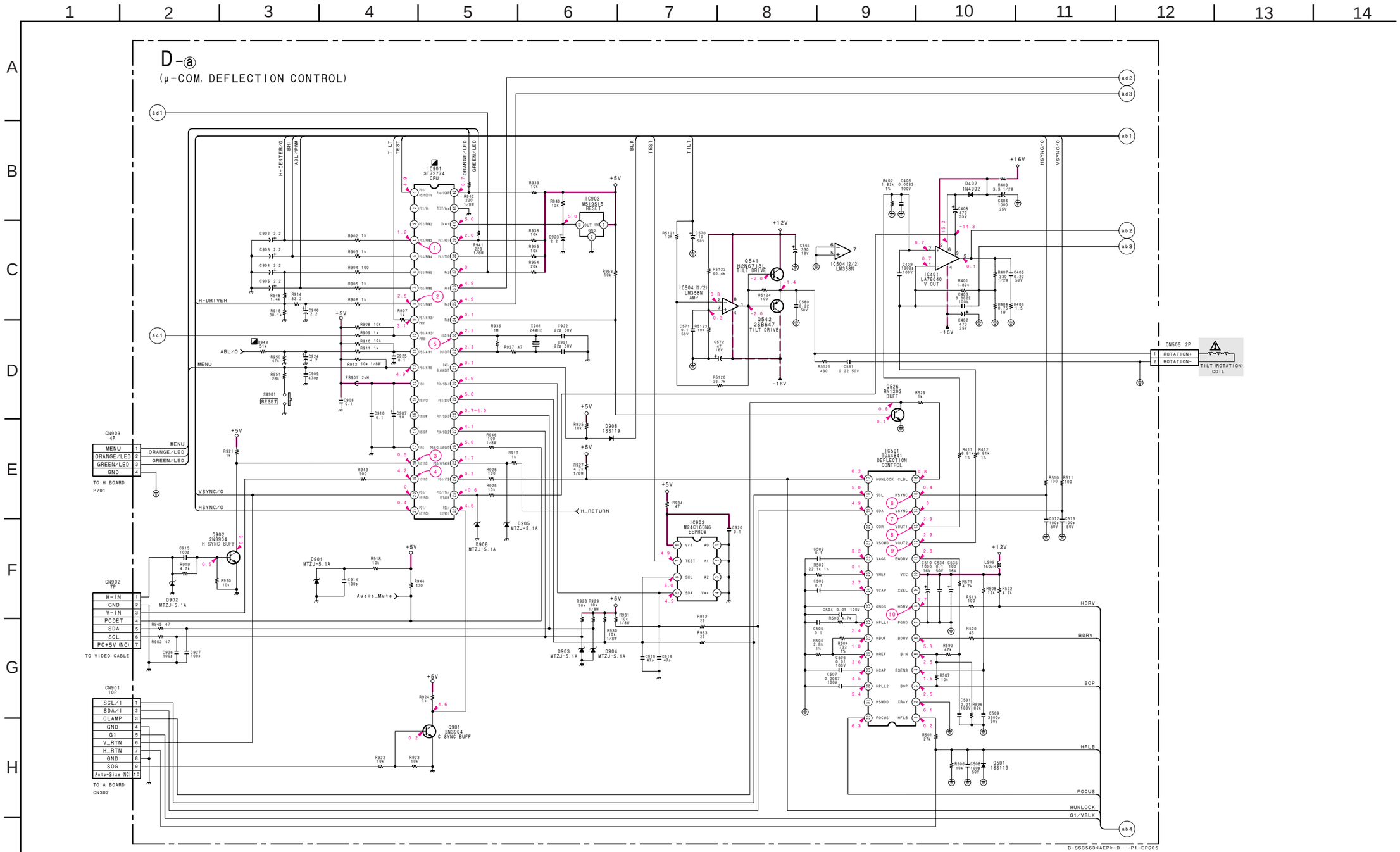
(2) Schematic Diagram of A Board



• A BOARD WAVEFORMS

①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩	⑪	⑫
0.75 Vp-p (H)	1.08 Vp-p (H)	0.75 Vp-p (H)	3.10 Vp-p (H)	3.24 Vp-p (H)	3.02 Vp-p (H)	43.5 Vp-p (H)	44.5 Vp-p (H)	43.5 Vp-p (H)	43.5 Vp-p (H)	43.5 Vp-p (H)	44.5 Vp-p (H)

(3) Schematic Diagrams of D (ⓐ, ⓑ, ⓒ, ⓓ) Board



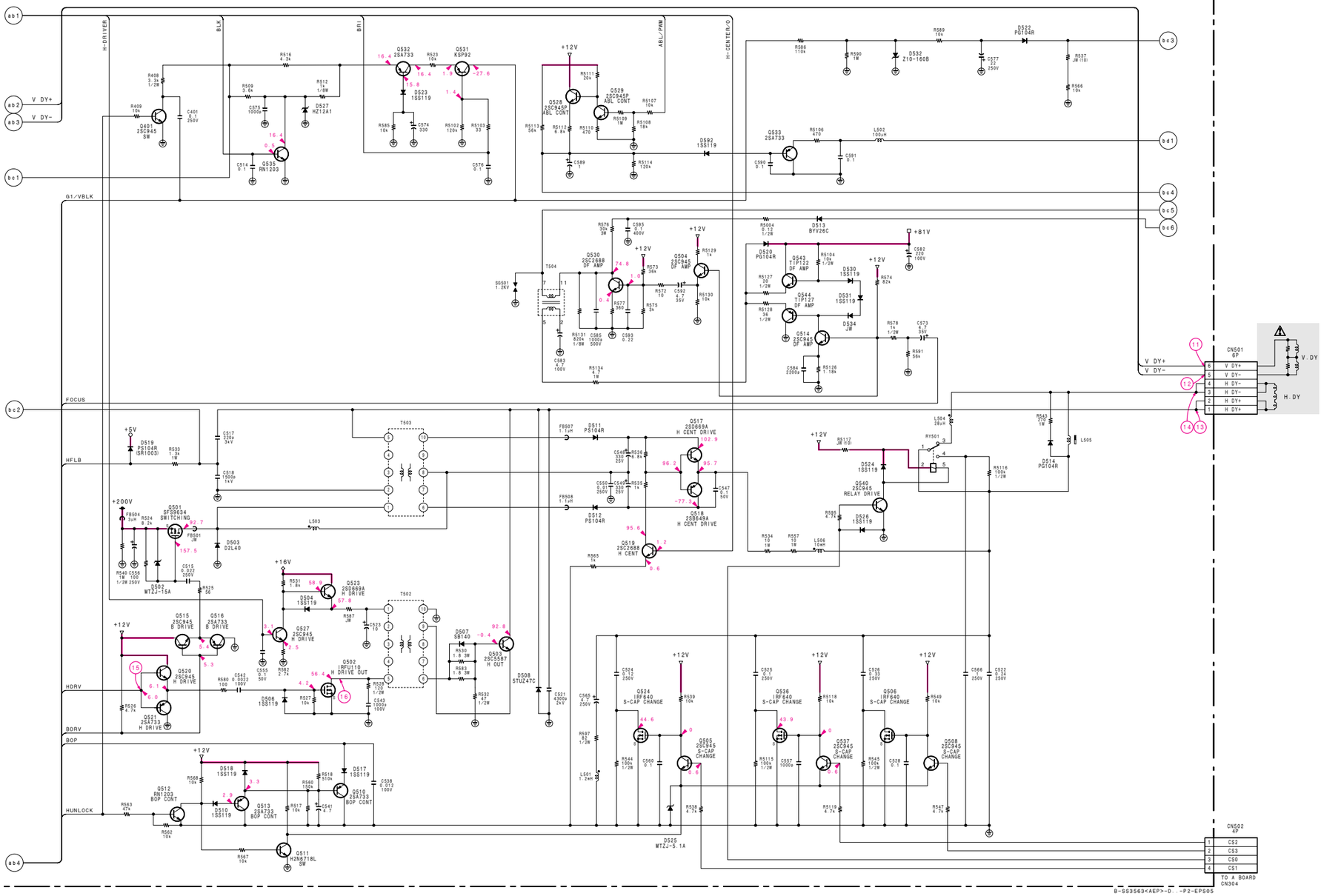
- Divided circuit diagram
  One sheet of D board circuit diagram is divided into four sheets, each having the code D-ⓐ to D-ⓓ. For example, the destination ab1 on the D-ⓐ sheet is connected to ab1 on the D-ⓑ sheet.

a b 1
- 1 — Ref. No.
- a b — Circuit diagram division code

• D - ⓐ BOARD WAVEFORMS

①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
3.2 Vp-p (H)	3.4 Vp-p (H)	5.0 Vp-p (H)	4.0 Vp-p (V)	2.8 Vp-p (24MHz)	5.0 Vp-p (H)	5.0 Vp-p (V)	3.0 Vp-p (V)	2.0 Vp-p (V)	12.0 Vp-p (H)

D-ⓑ
(DEFLECTION)



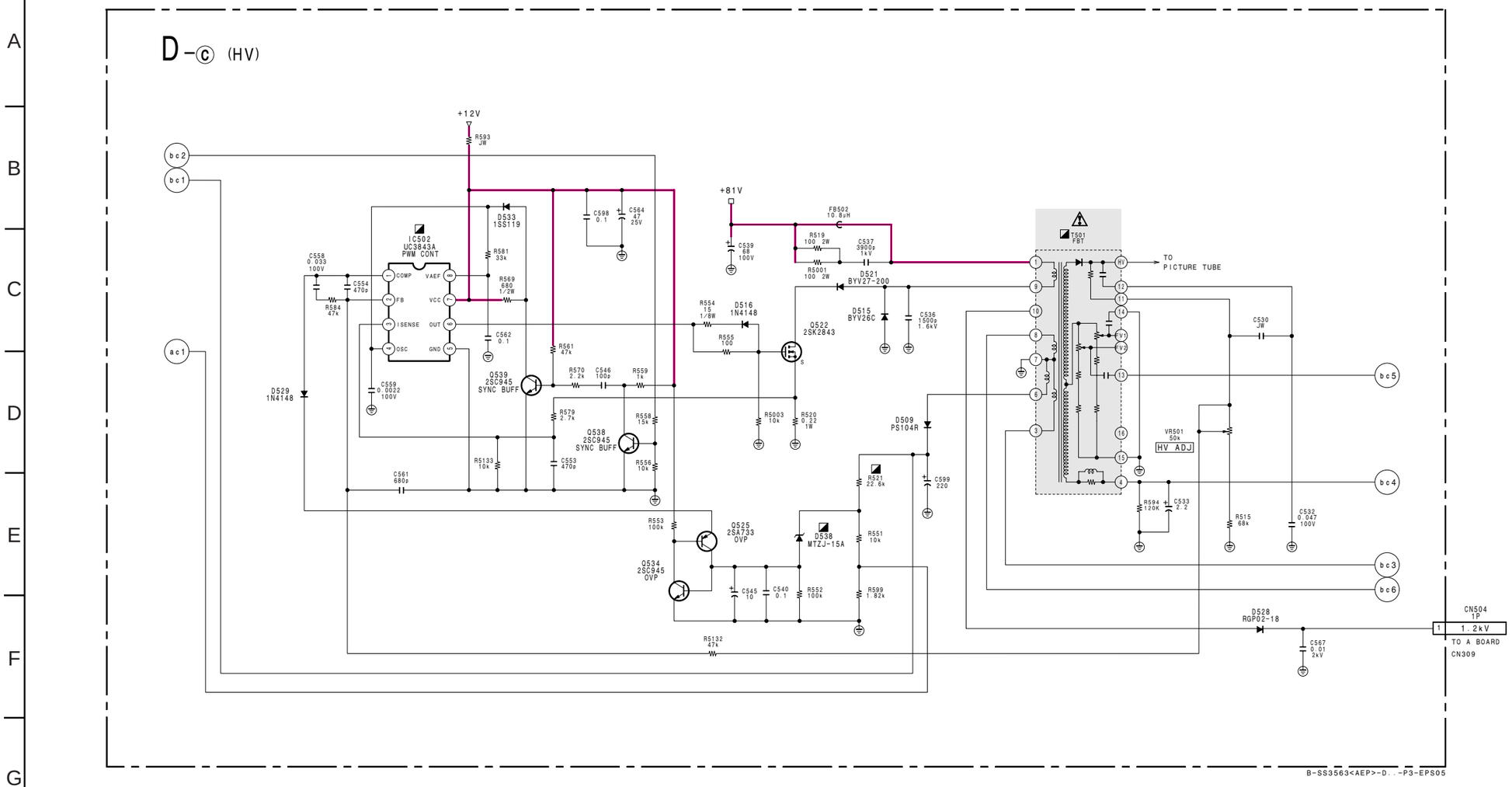
8-SS3563<AEP>-D. -P2-EPS05

- Divided circuit diagram
  One sheet of D board circuit diagram is divided into four sheets, each having the code D-ⓐ to D-ⓓ . For example, the destination ab1 on the D-ⓐ sheet is connected to ab1 on the D-ⓑ sheet.

a b 1
- 1 — Ref. No.
- a b — Circuit diagram division code

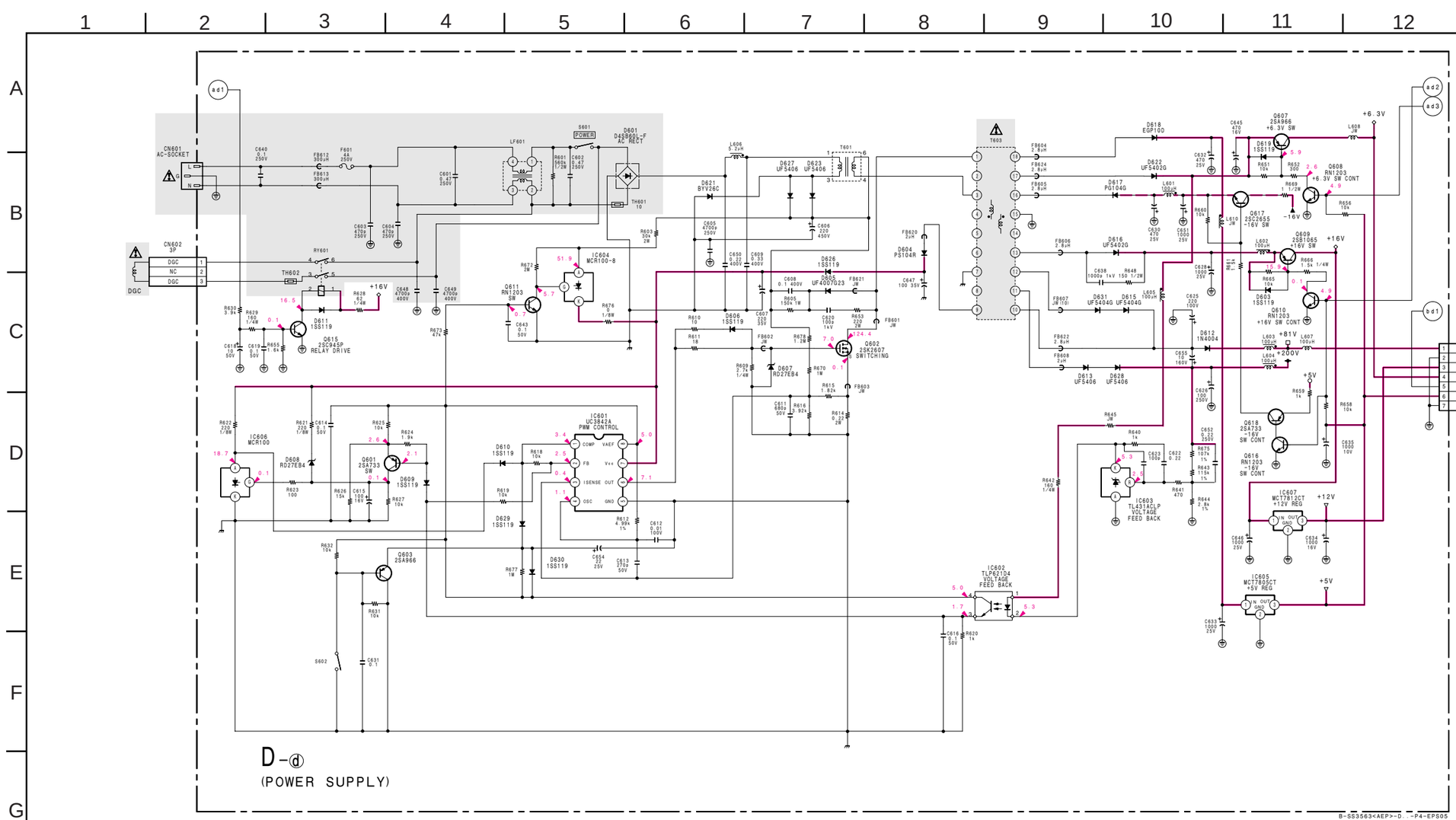
• D - ⓑ BOARD WAVEFORMS

⑪	⑫	⑬	⑭	⑮	⑯
58.0 Vp-p (V)	1.8 Vp-p (V)	1k Vp-p (H)	62.0 Vp-p (H)	12.0 Vp-p (H)	120 Vp-p (H)



- Divided circuit diagram
  One sheet of D board circuit diagram is divided into four sheets, each having the code D-ⓐ to D-ⓓ . For example, the destination ab1 on the D-ⓐ sheet is connected to ab1 on the D-ⓑ sheet.

a b 1
- 1 → Ref. No.
- a b → Circuit diagram division code



- Divided circuit diagram
  One sheet of D board circuit diagram is divided into four sheets, each having the code D-ⓐ to D-ⓓ . For example, the destination ab1 on the D-ⓐ sheet is connected to ab1 on the D-ⓑ sheet.

  a b 1 — 1: Ref. No.; a b: Circuit diagram division code