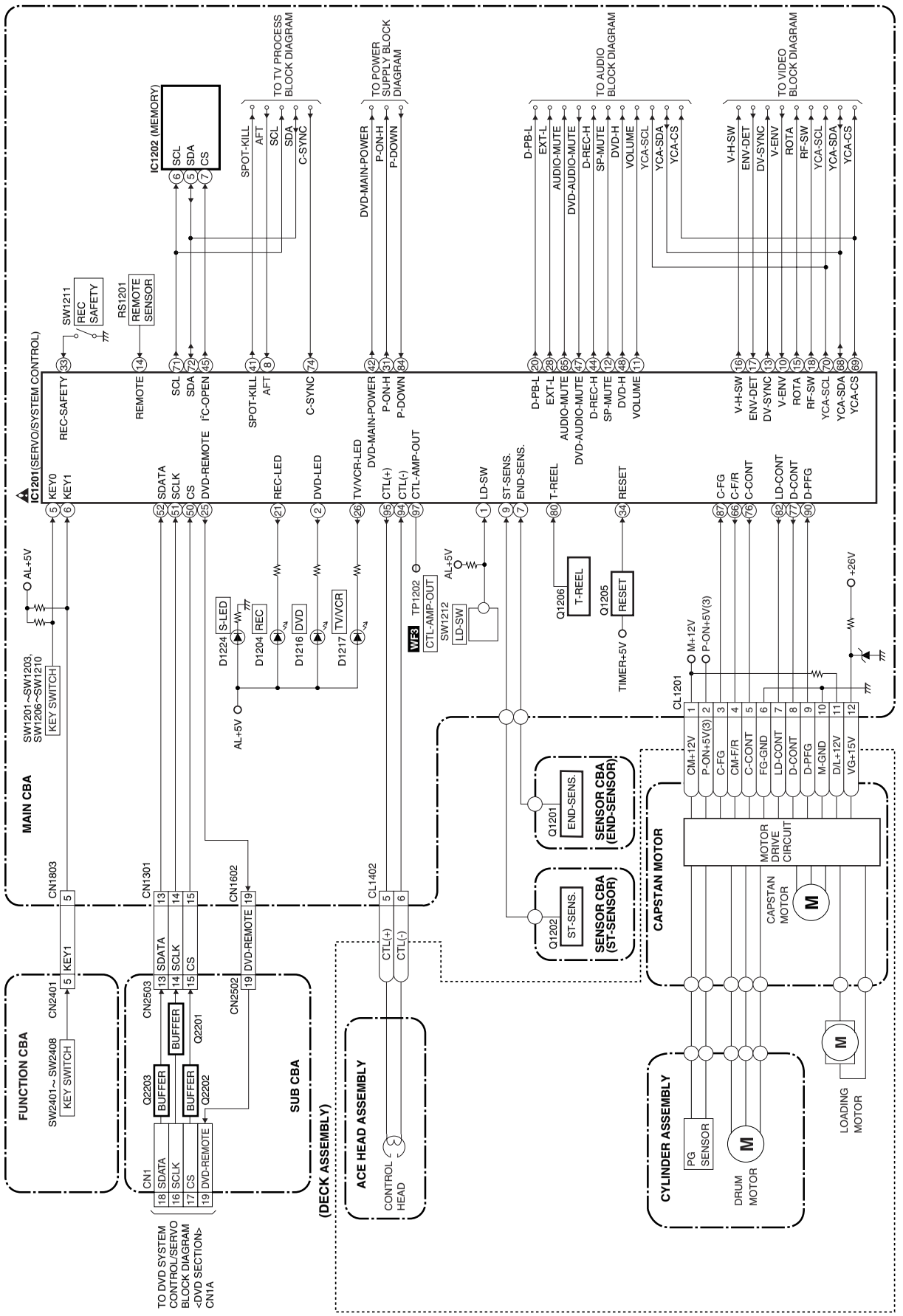
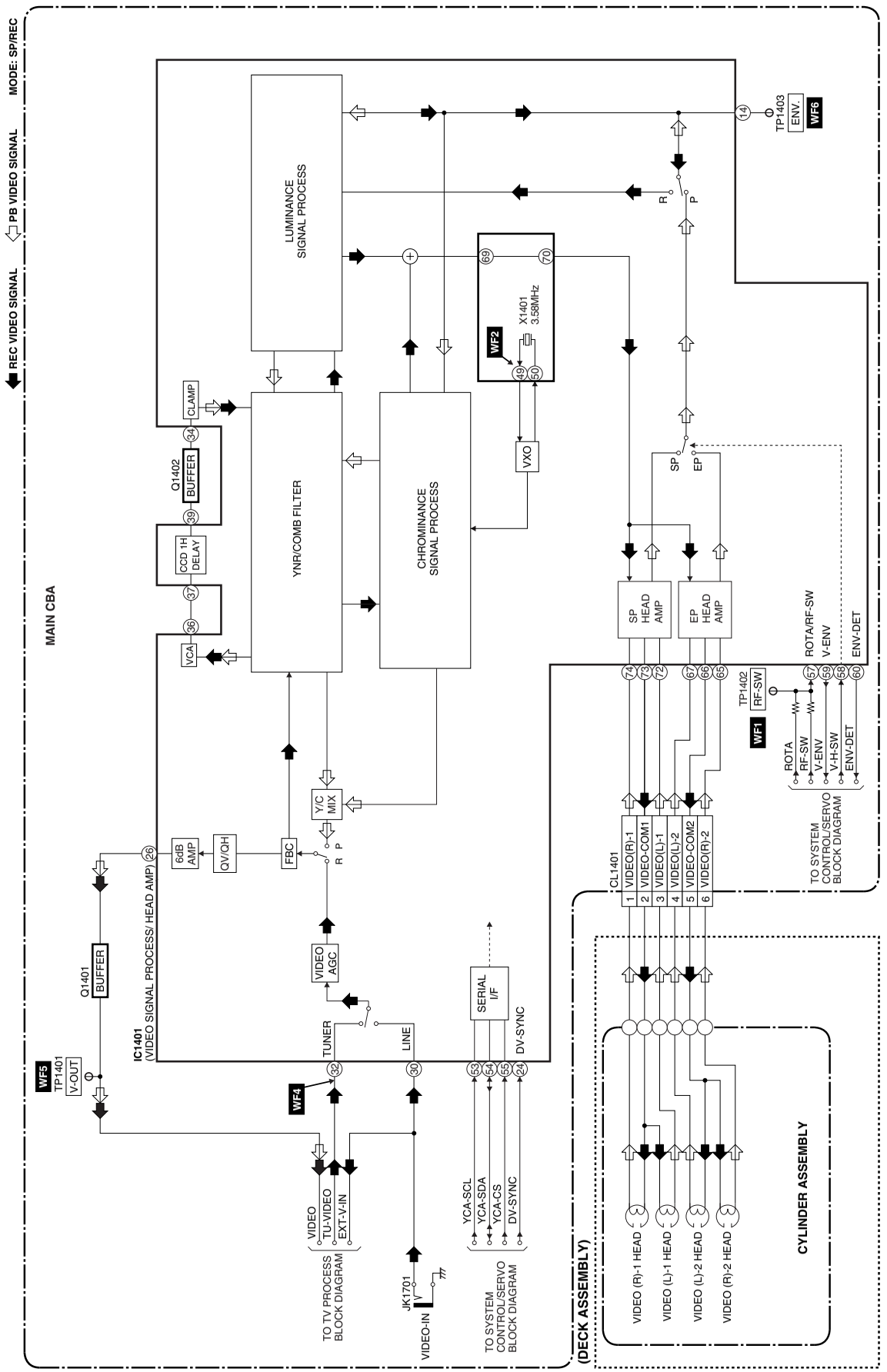
BLOCK DIAGRAMS < TV/VCR Section >

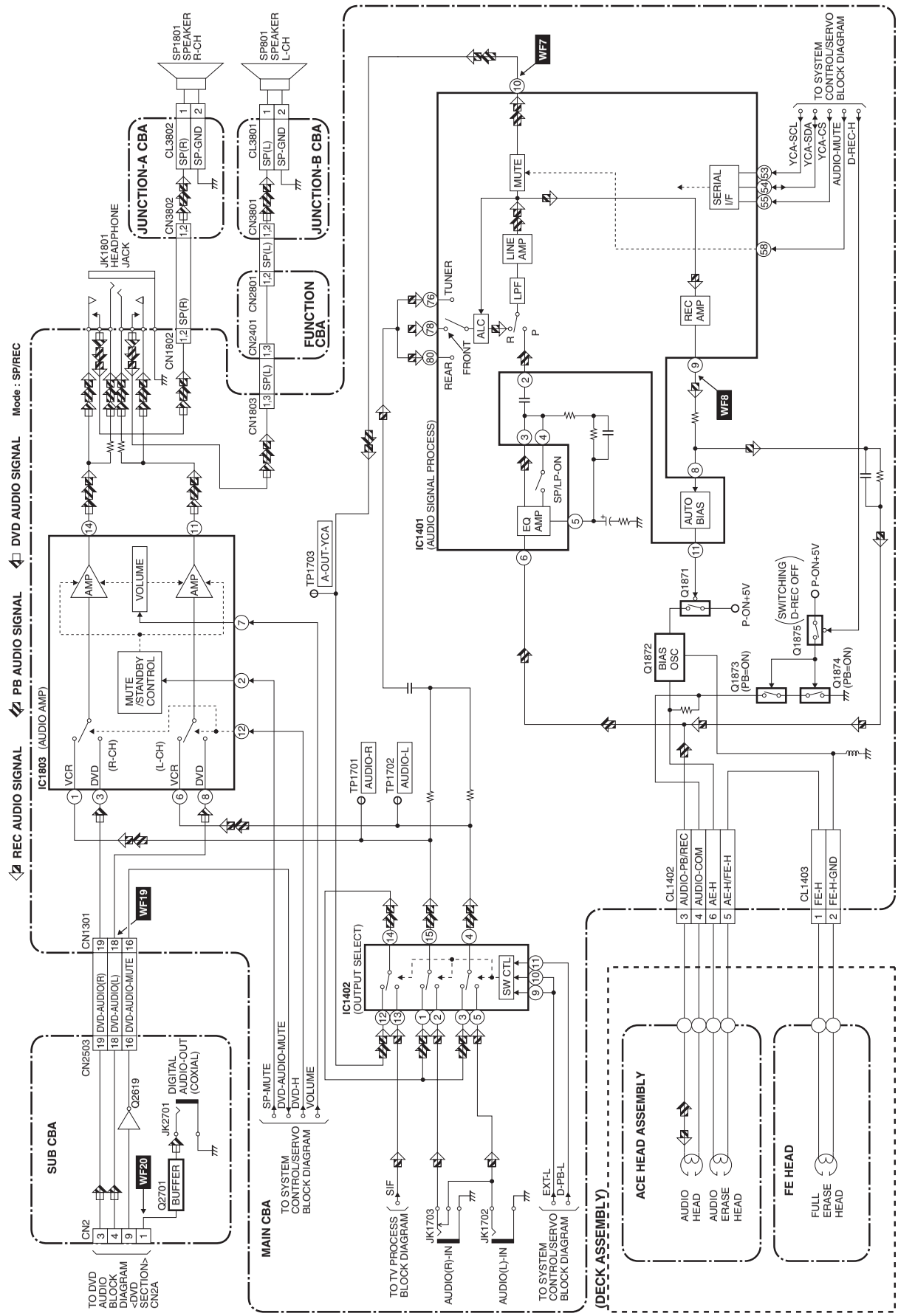
System Control / Servo Block Diagram



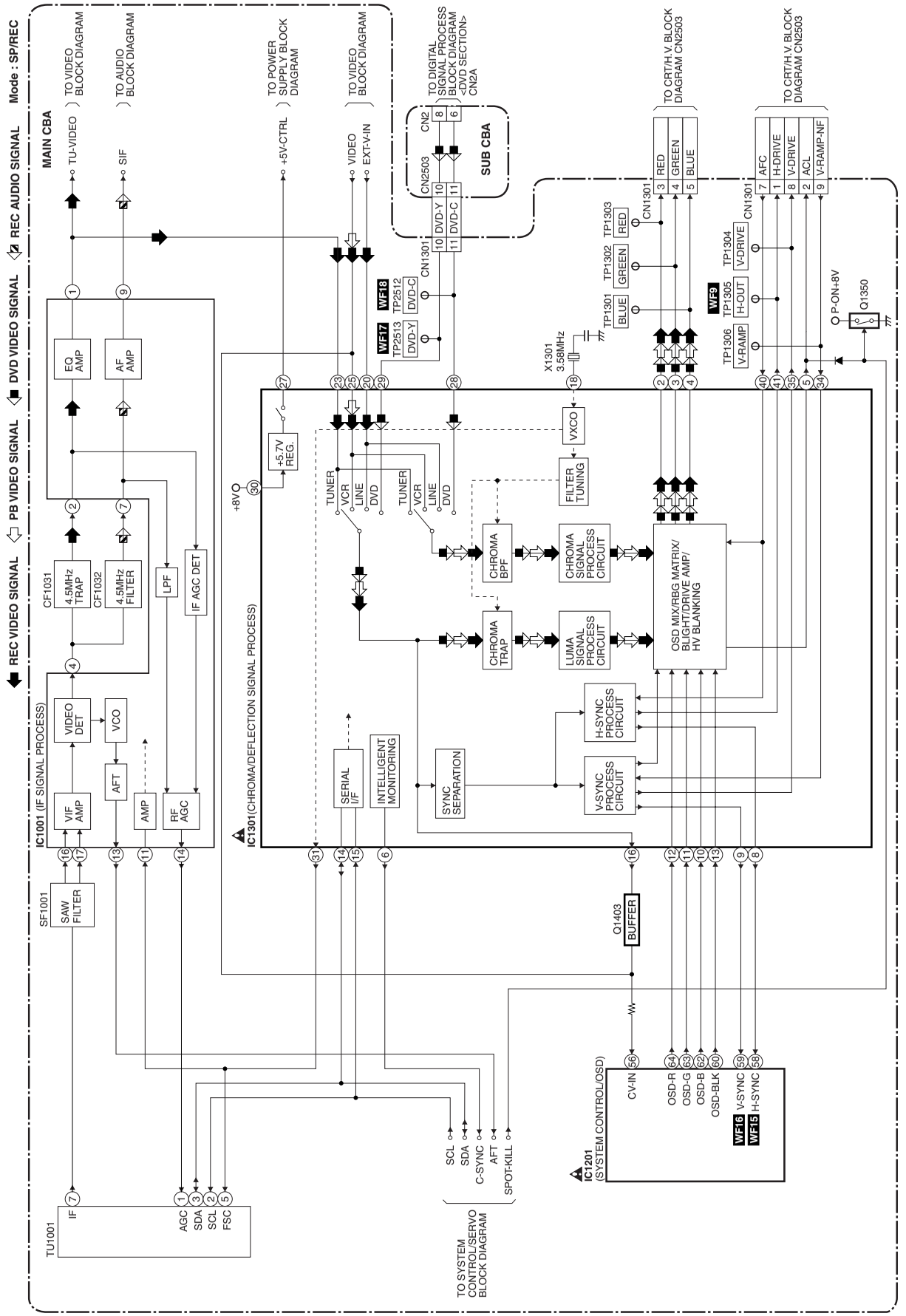
Video Block Diagram



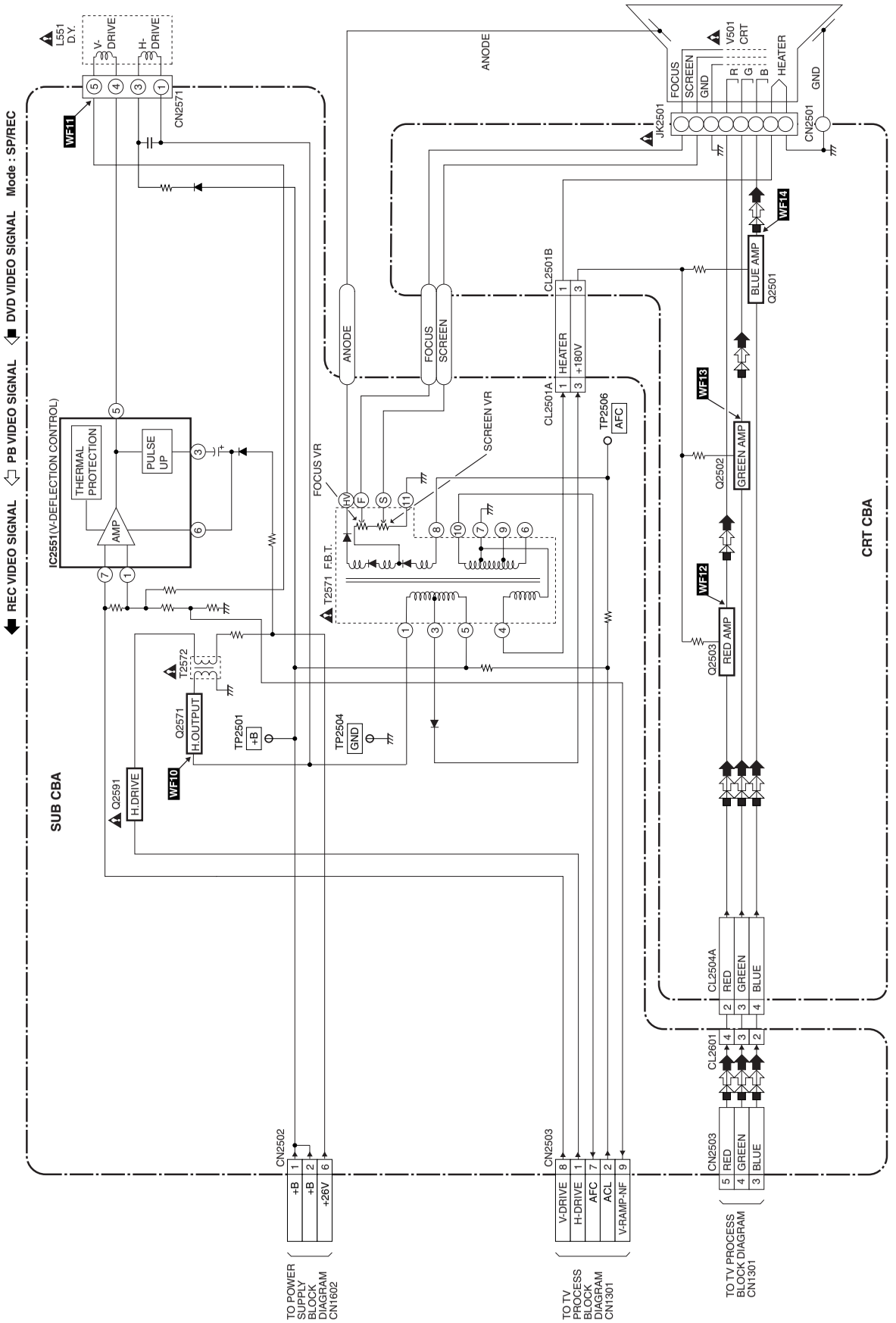
Audio Block Diagram



TV Process Block Diagram



CRT/H.V. Block Diagram



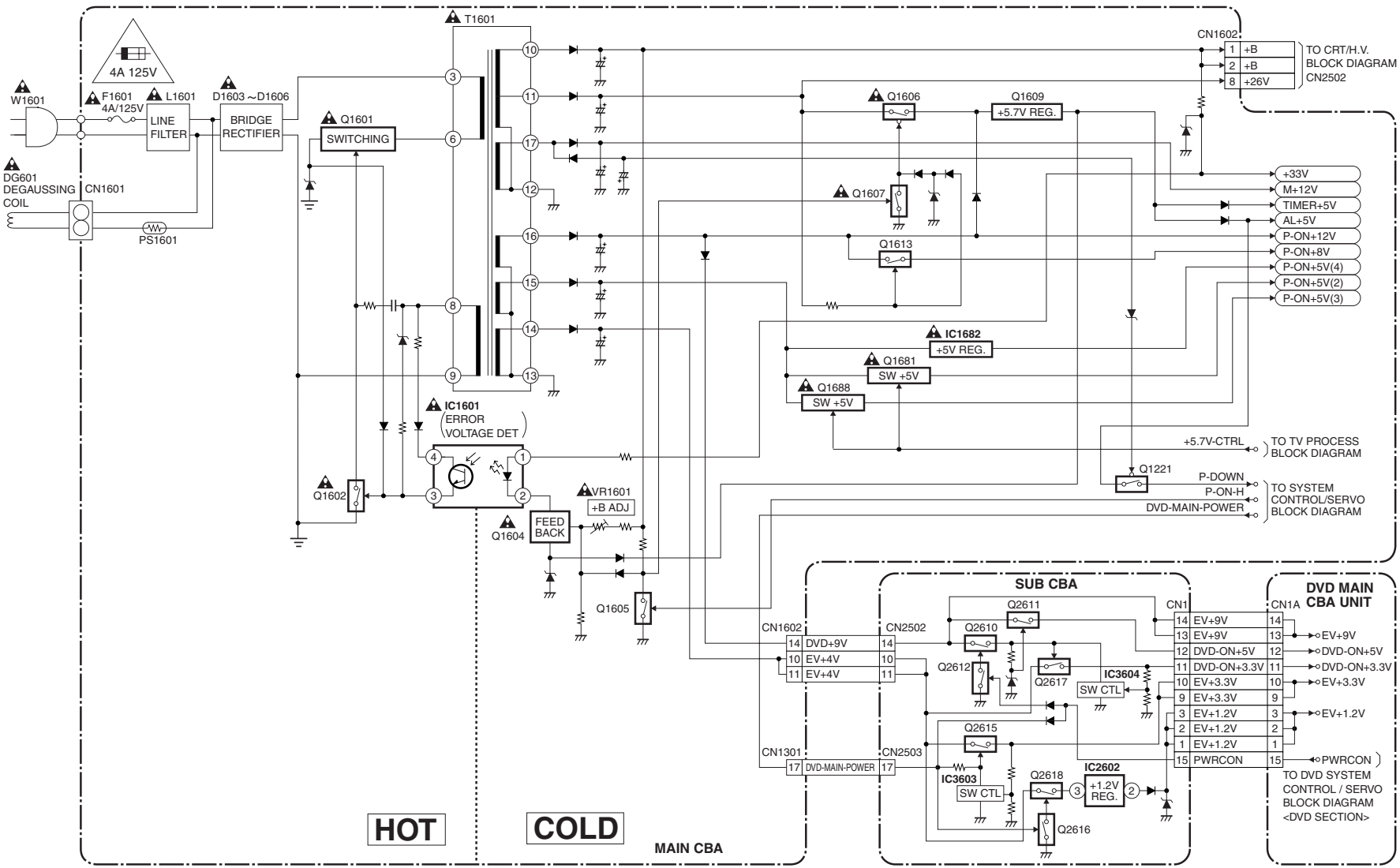
Power Supply Block Diagram

CAUTION !
Fixed voltage (or Auto voltage selectable) power supply circuit is used in this unit.
If Main Fuse (F1601) is blown , check to see that all components in the power supply circuit are not defective before you connect the AC plug to the AC power supply.
Otherwise it may cause some components in the power supply circuit to fail.

4A 125V

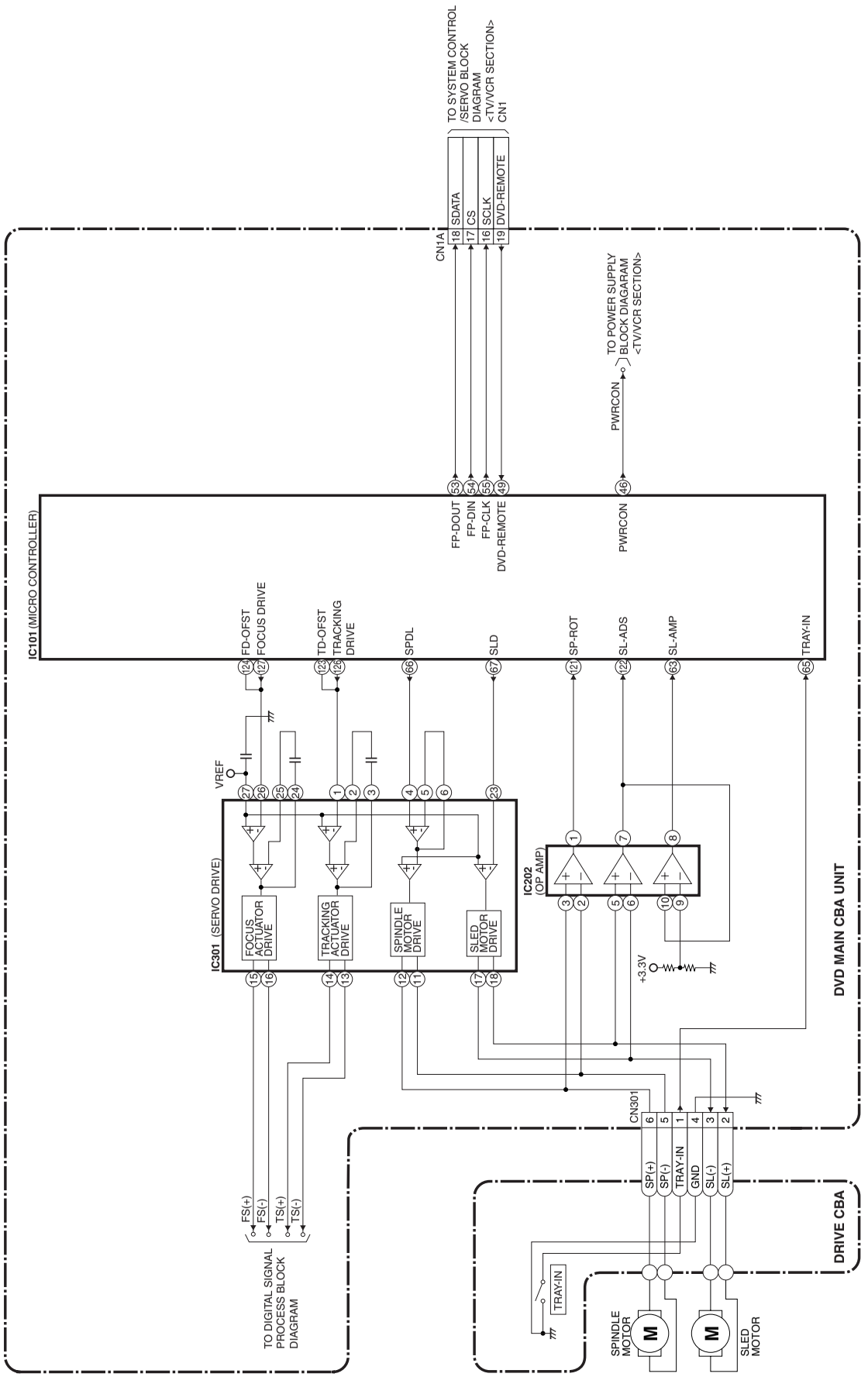
CAUTION ! : For continued protection against risk of fire, replace only with same type 4 A, 125V fuse.
ATTENTION : Utiliser un fusible de rechange de même type de 4A, 125V.

NOTE:
The voltage for parts in hot circuit is measured using hot GND as a common terminal.

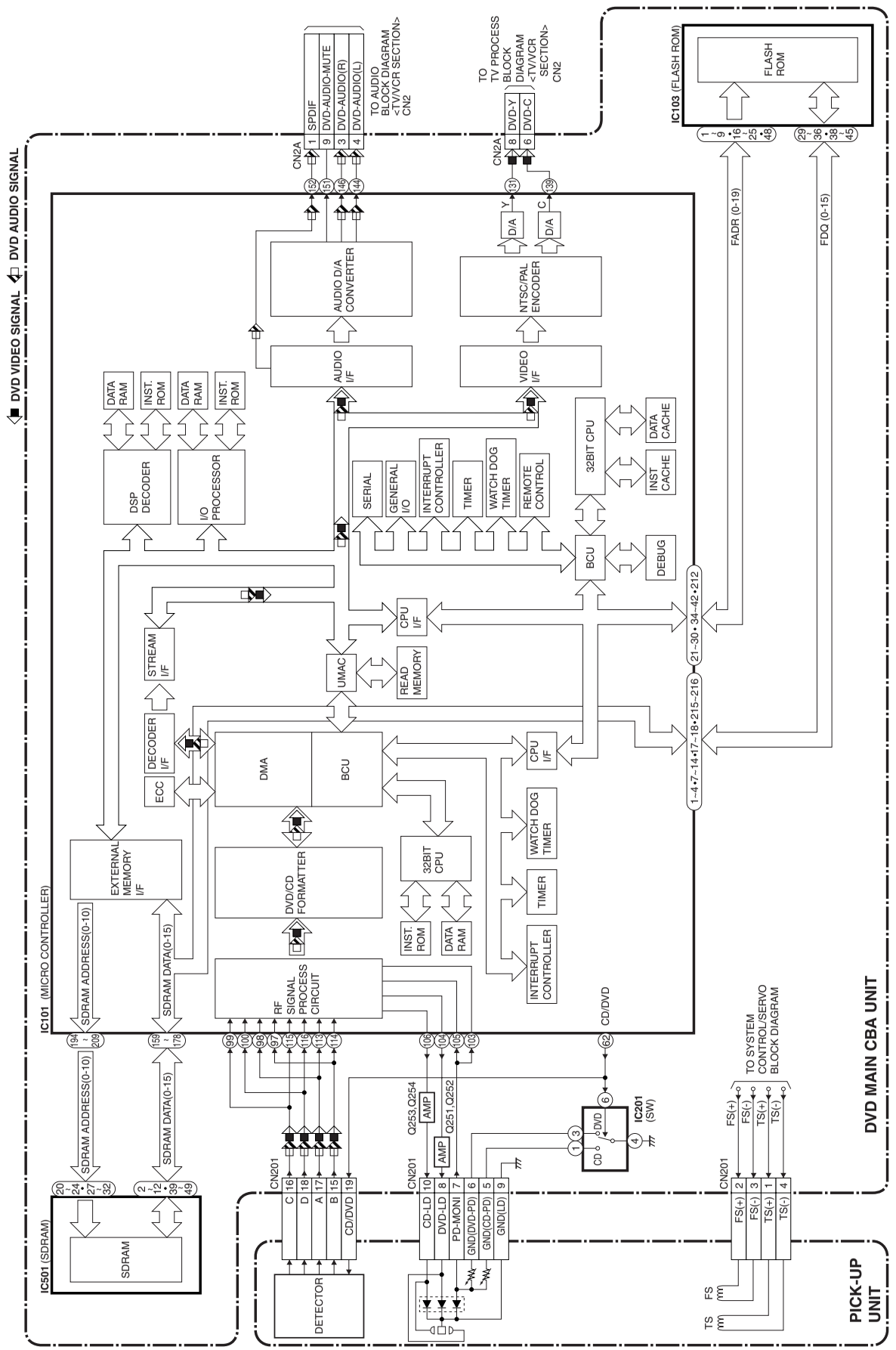


BLOCK DIAGRAMS < DVD Section >

DVD System Control / Servo Block Diagram



Digital Signal Process Block Diagram



SCHEMATIC DIAGRAMS / CBA'S AND TEST POINTS

Standard Notes

WARNING

Many electrical and mechanical parts in this chassis have special characteristics. These characteristics often pass unnoticed and the protection afforded by them cannot necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts that have these special safety characteristics are identified in this manual and its supplements; electrical components having such features are identified by the mark "⚠" in the schematic diagram and the parts list. Before replacing any of these components, read the parts list in this manual carefully. The use of substitute replacement parts that do not have the same safety characteristics as specified in the parts list may create shock, fire, or other hazards.

Notes:

1. Do not use the part number shown on these drawings for ordering. The correct part number is shown in the parts list, and may be slightly different or amended since these drawings were prepared.
2. All resistance values are indicated in ohms ($K = 10^3$, $M = 10^6$).
3. Resistor wattages are 1/4W or 1/6W unless otherwise specified.
4. All capacitance values are indicated in μF ($P = 10^{-6}$ μF).
5. All voltages are DC voltages unless otherwise specified.

LIST OF CAUTION, NOTES, AND SYMBOLS USED IN THE SCHEMATIC DIAGRAMS ON THE FOLLOWING PAGES:

1. CAUTION: FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE ONLY WITH SAME TYPE_A,_V FUSE.
ATTENTION: UTILISER UN FUSIBLE DE RECHANGE DE MÊME TYPE DE_A,_V.

2. CAUTION:

Fixed Voltage (or Auto voltage selectable) power supply circuit is used in this unit.
If Main Fuse (F1601) is blown, first check to see that all components in the power supply circuit are not defective before you connect the AC plug to the AC power supply. Otherwise it may cause some components in the power supply circuit to fail.

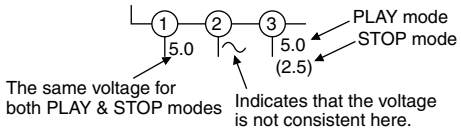
3. Note:

1. Do not use the part number shown on the drawings for ordering. The correct part number is shown in the parts list, and may be slightly different or amended since the drawings were prepared.
2. To maintain original function and reliability of repaired units, use only original replacement parts which are listed with their part numbers in the parts list section of the service manual.

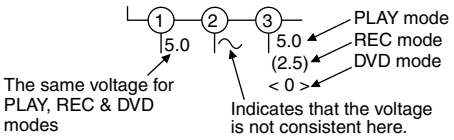
4. Mode: SP/REC

5. Voltage indications for PLAY and REC modes on the schematics are as shown below:

< DVD Section >



< TV/VCR Section >

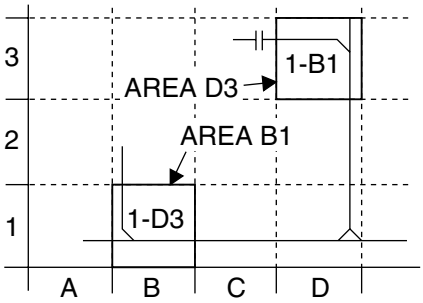


Unit: Volts

6. How to read converged lines

1-D3
- Distinction Area
- Line Number (1 to 3 digits)

Examples:
1. "1-D3" means that line number "1" goes to the line number "1" of the area "D3".
2. "1-B1" means that line number "1" goes to the line number "1" of the area "B1".



7. Test Point Information

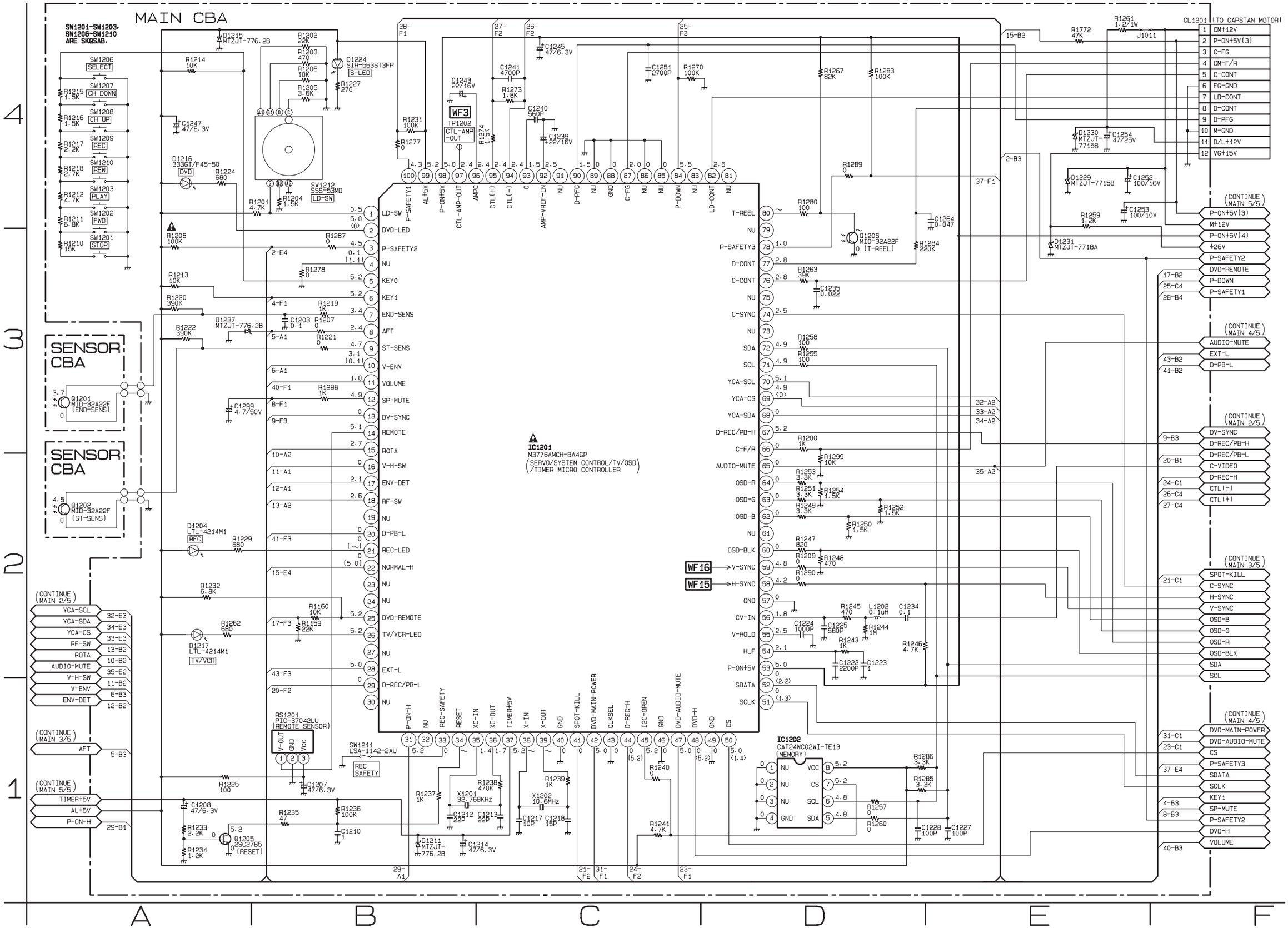
: Indicates a test point with a jumper wire across a hole in the PCB.

: Used to indicate a test point with a component lead on foil side.

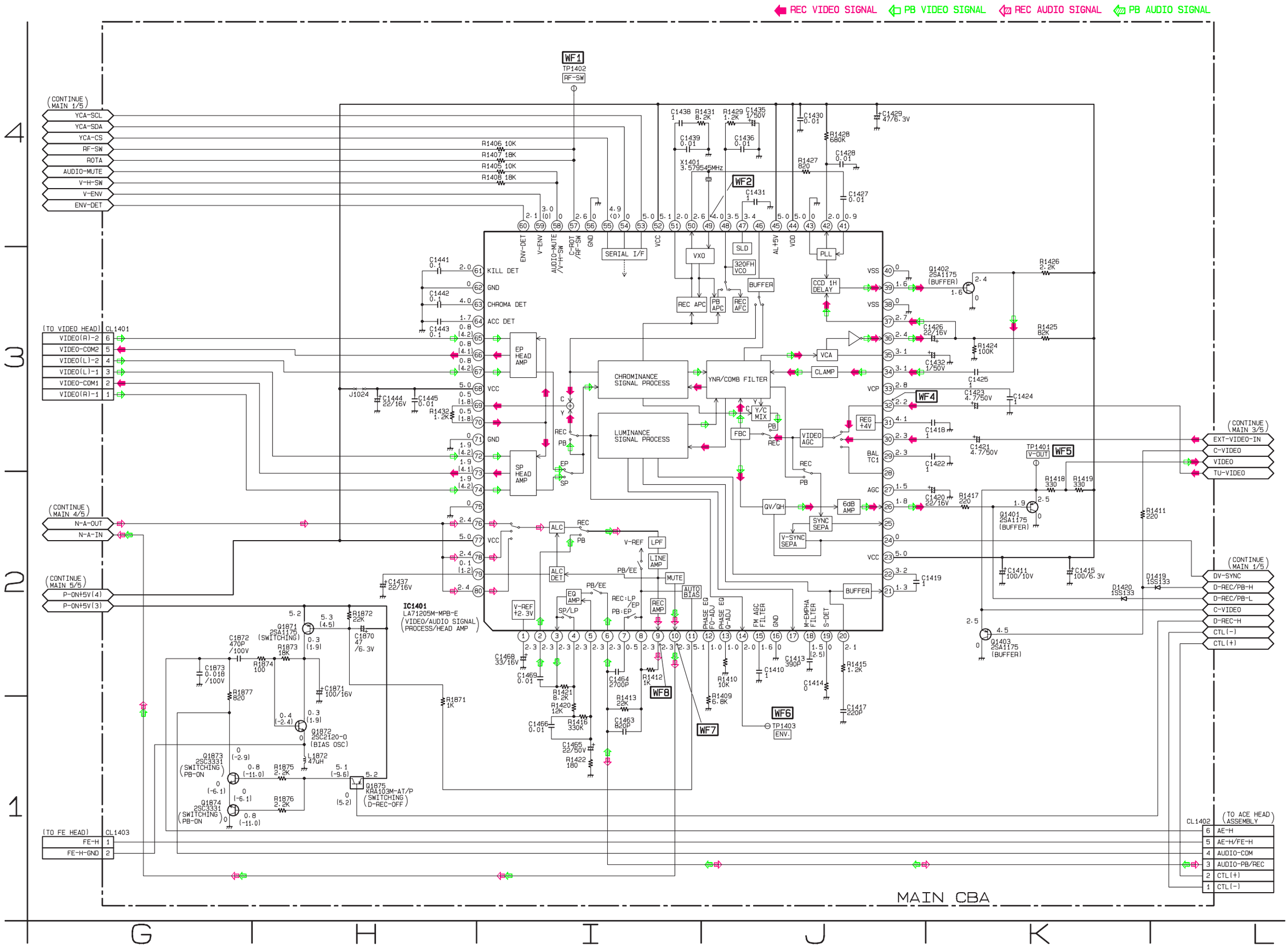
: Used to indicate a test point with no test pin.

: Used to indicate a test point with a test pin.

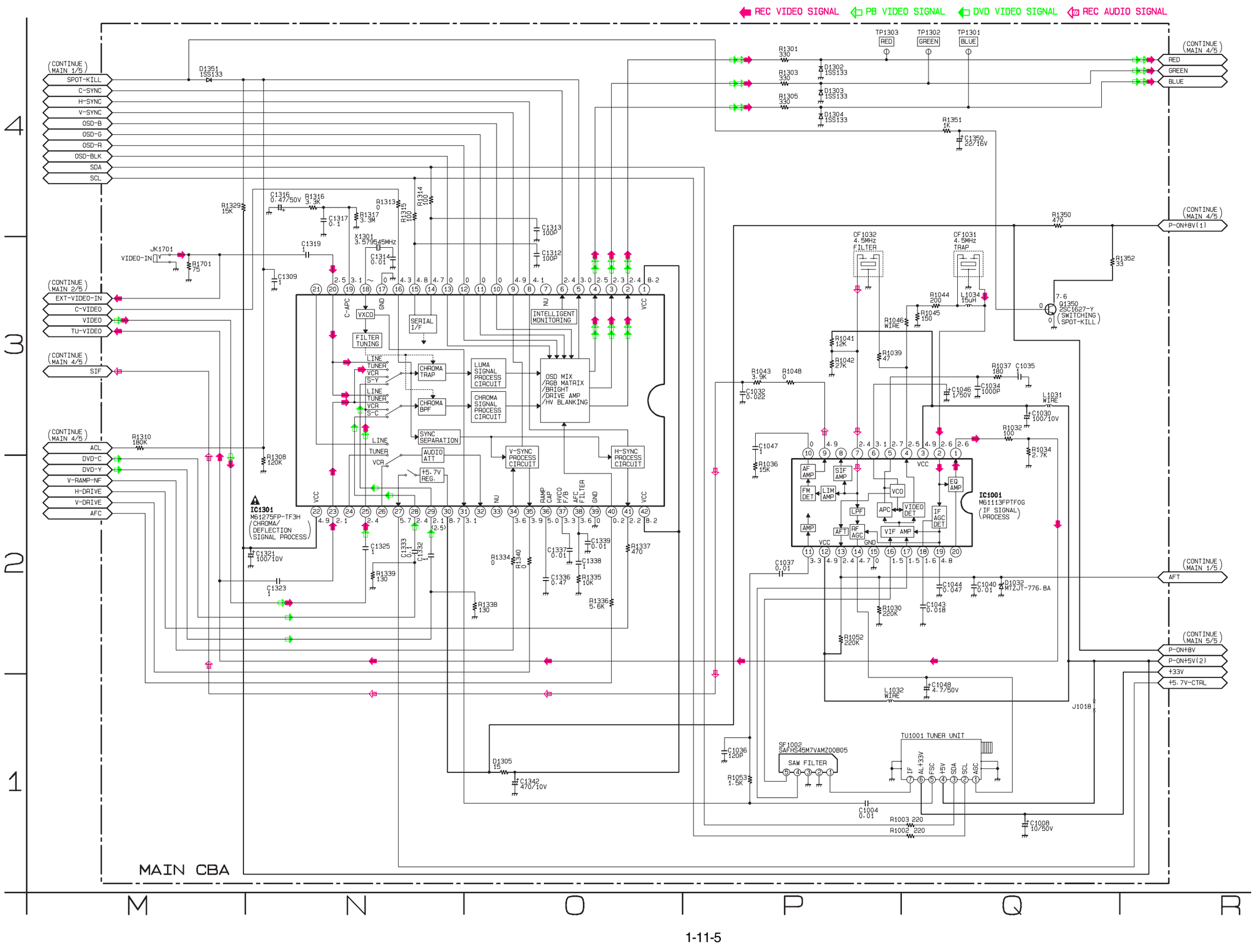
Main 1/5 & Sensor Schematic Diagram < TV/VCR Section >



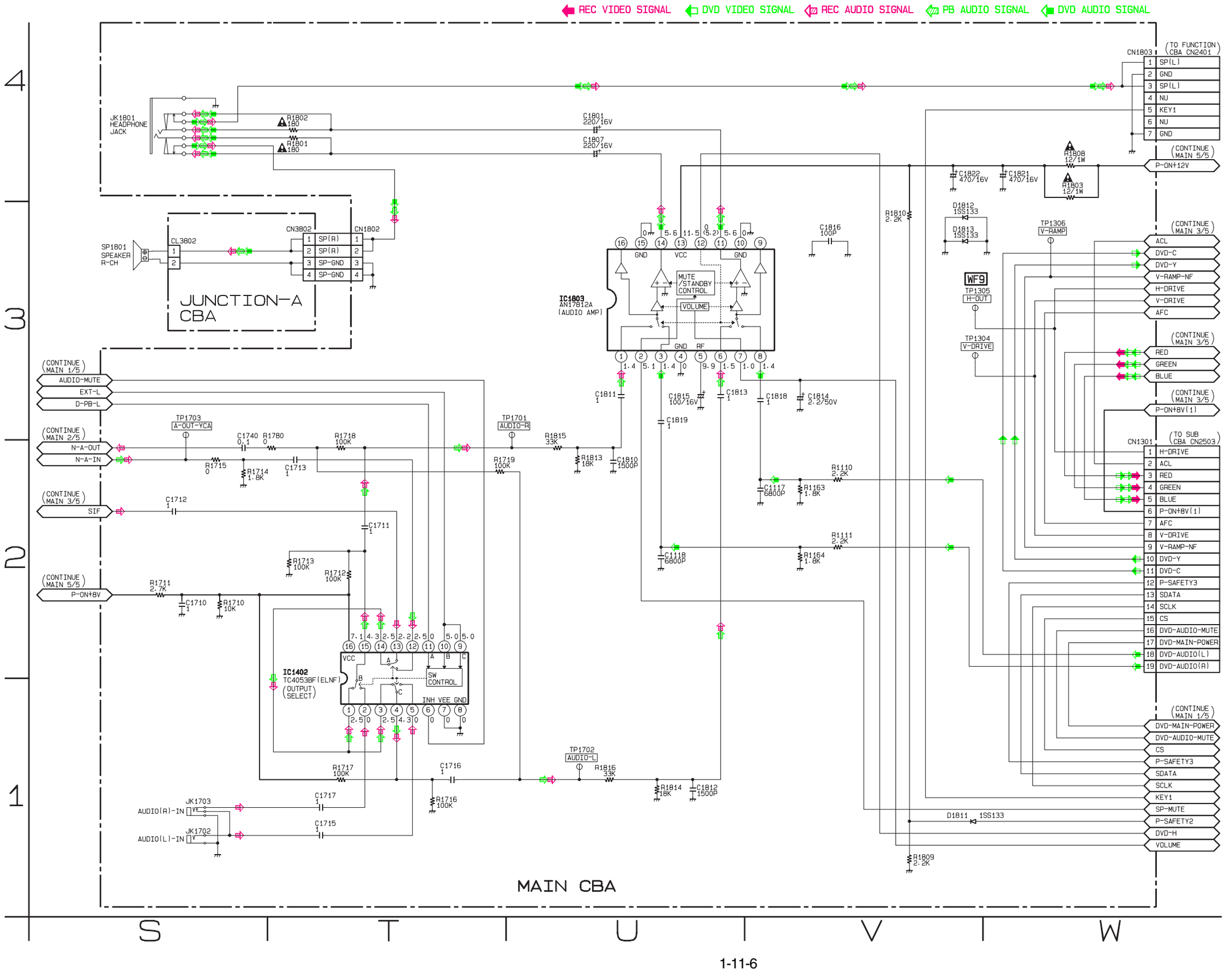
Main 2/5 Schematic Diagram < TV/VCR Section >



Main 3/5 Schematic Diagram < TV/VCR Section >

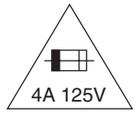


Main 4/5 & Junction-A Schematic Diagram < TV/VCR Section >



Main 5/5 Schematic Diagram < TV/VCR Section >

CAUTION !
Fixed voltage (or Auto voltage selectable) power supply circuit is used in this unit.
If Main Fuse (F1601) is blown , check to see that all components in the power supply circuit are not defective before you connect the AC plug to the AC power supply. Otherwise it may cause some components in the power supply circuit to fail.



CAUTION ! : For continued protection against risk of fire, replace only with same type 4 A, 125V fuse.
ATTENTION : Utiliser un fusible de rechange de même type de 4A, 125V.

NOTE:
The voltage for parts in hot circuit is measured using hot GND as a common terminal.

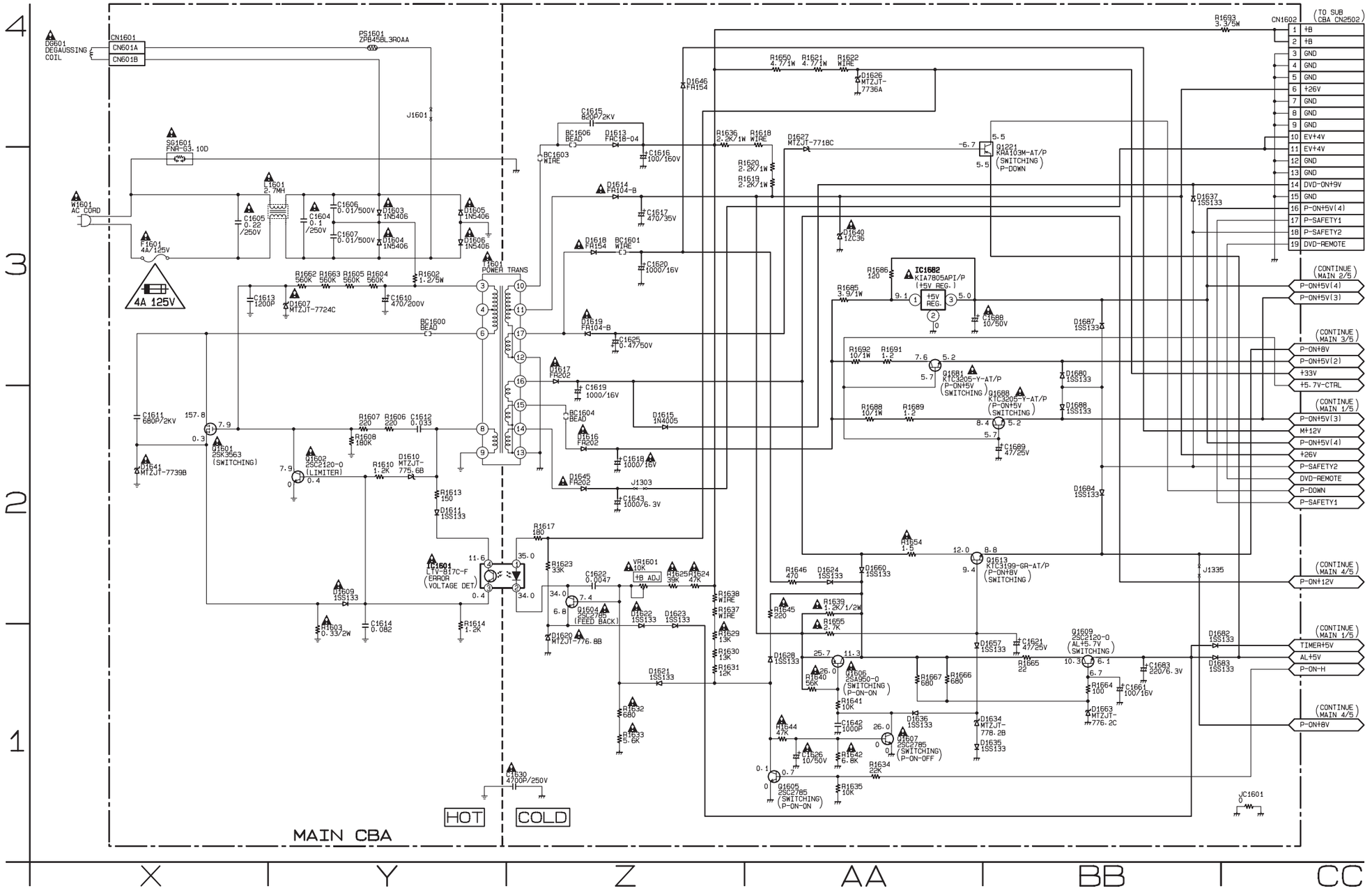
VOLTAGE CHART (Power off mode)

Ref. No.	1	2	3	4
IC1601	25.7	24.7	0.3	1.2

Ref. No.	1	2	3
IC1682	3.2	0	1.7

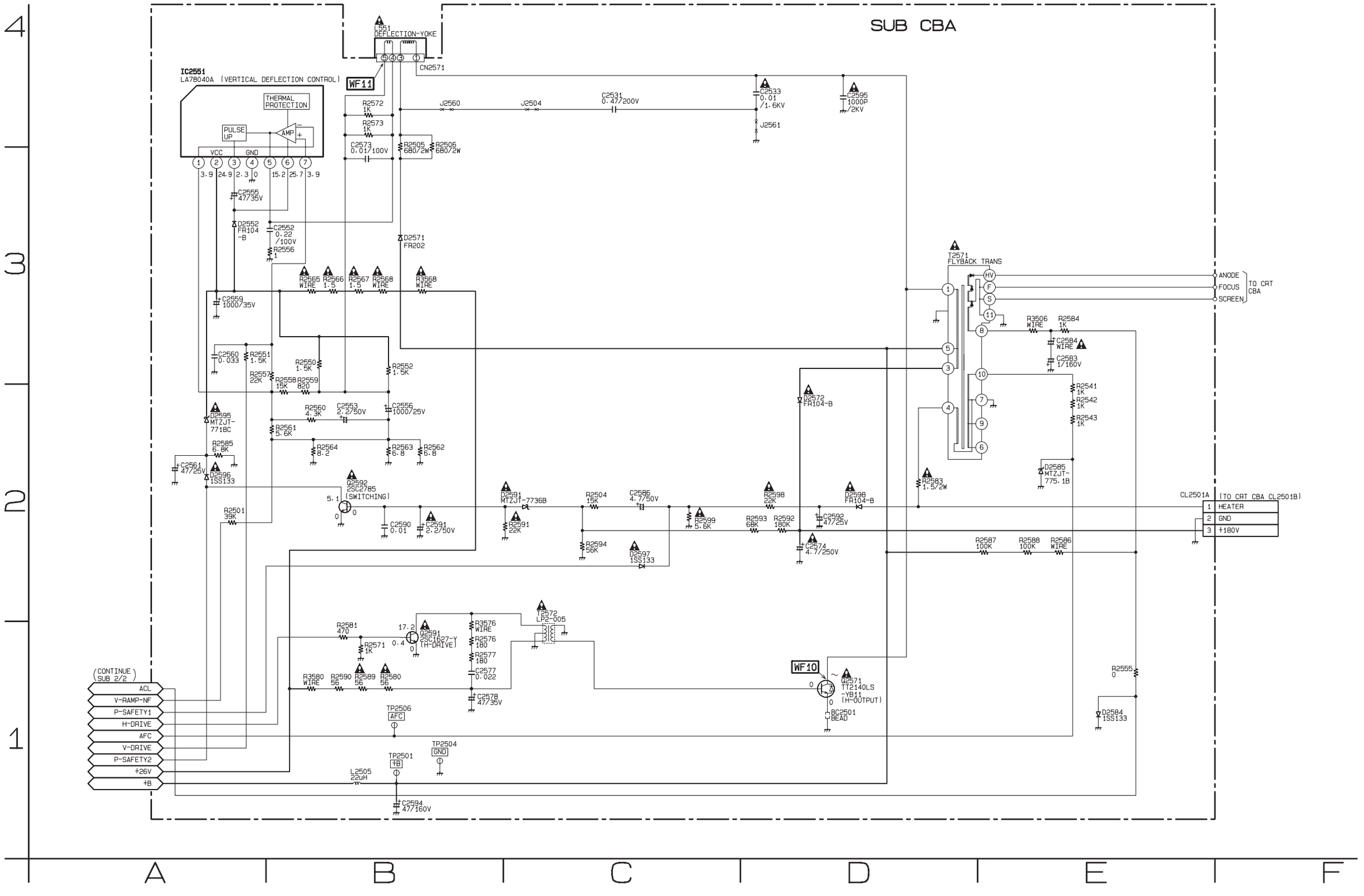
Ref. No.	S	D	G
Q1601	0	162.8	1.9

Ref. No.	E	C	B
Q1221	5.2	5.1	4.6
Q1602	0	1.9	0.3
Q1604	6.7	24.7	7.3
Q1605	0	7.9	0
Q1606	8.5	8.5	7.8
Q1607	0	7.7	6.6
Q1609	5.9	8.2	6.5
Q1613	0.8	4.2	1.4
Q1681	0	3.3	0
Q1688	0	3.3	0

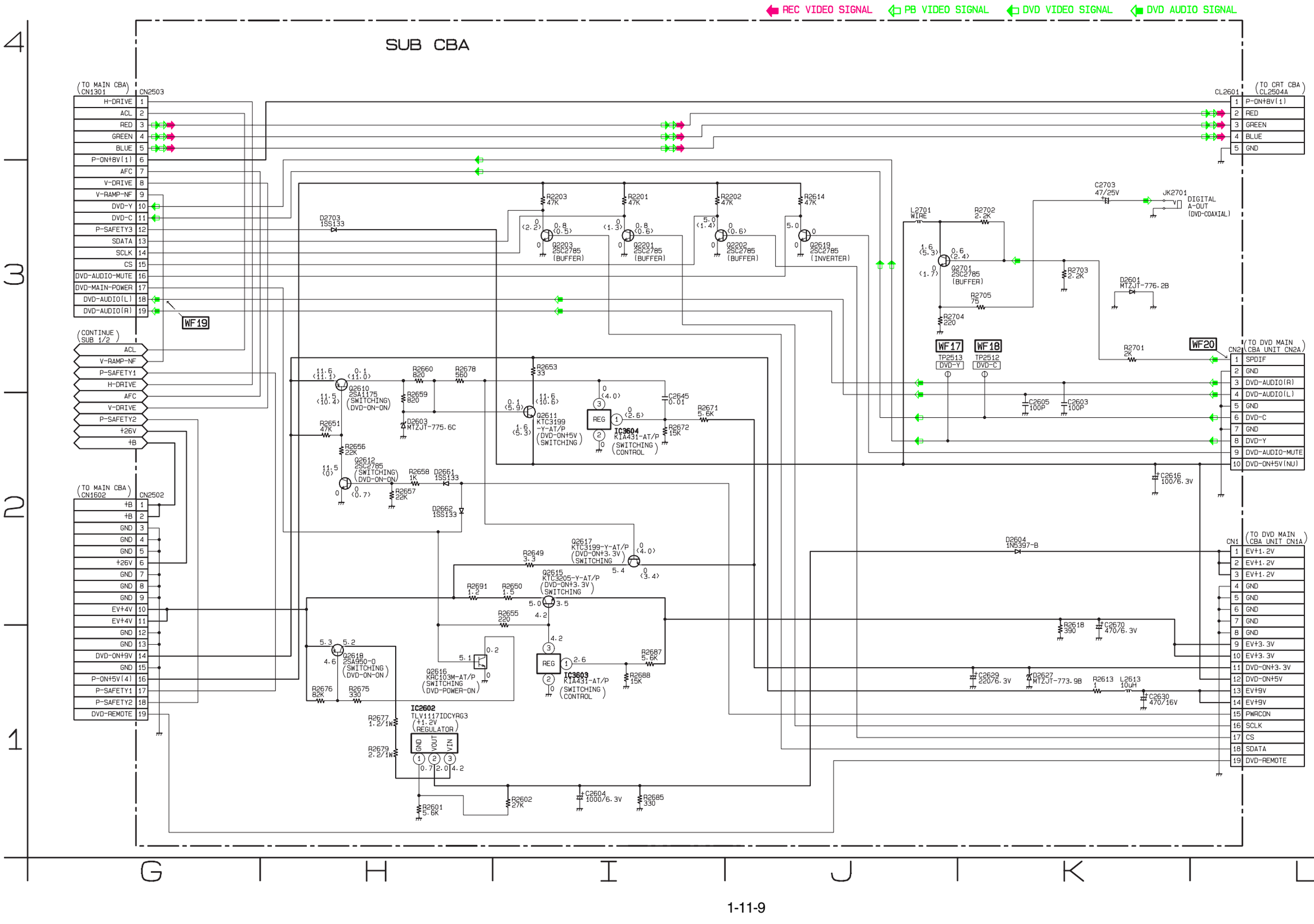


T0204SCM5

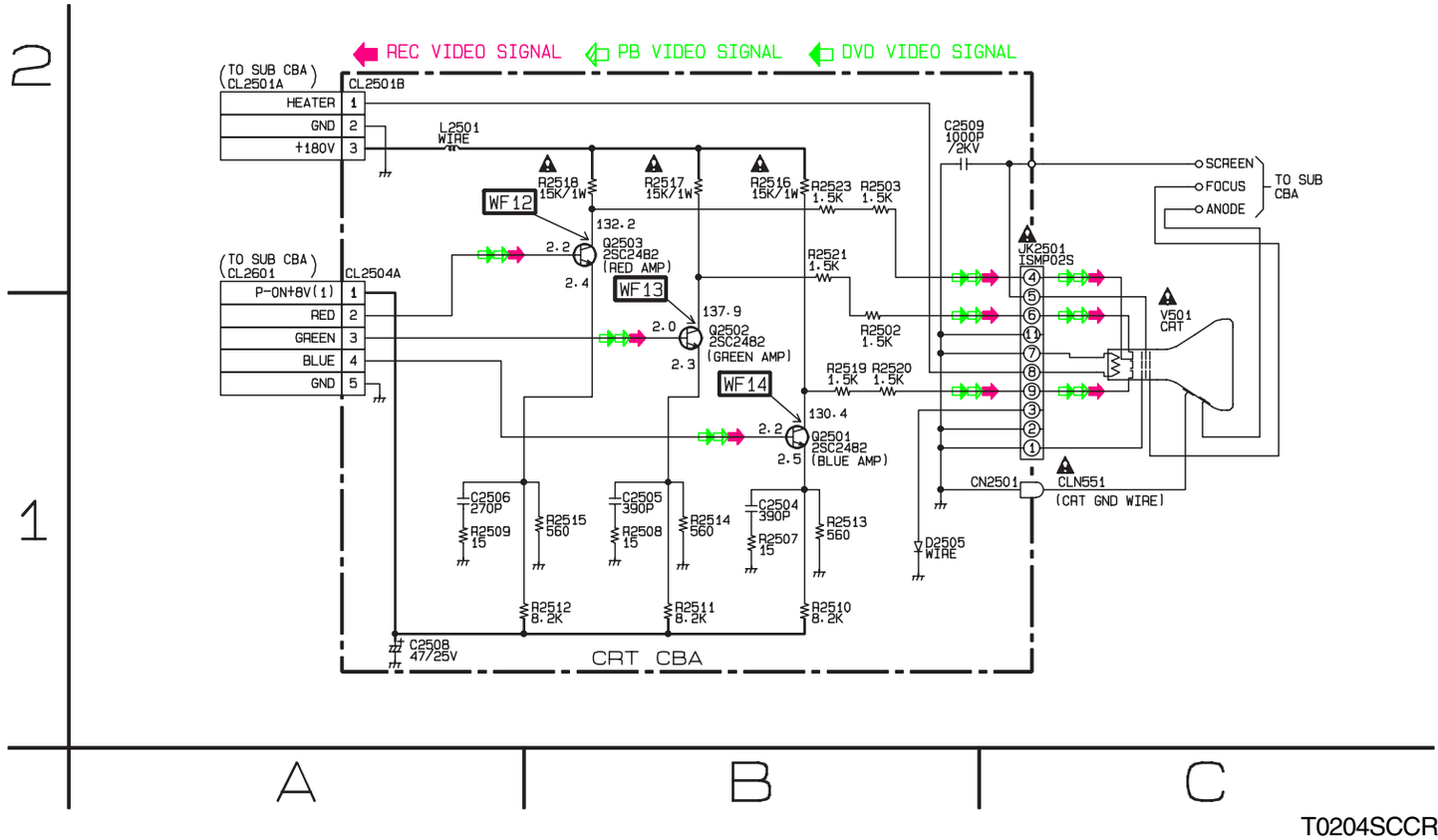
Sub 1/2 Schematic Diagram < TV/VCR Section >



Sub 2/2 Schematic Diagram < TV/VCR Section >

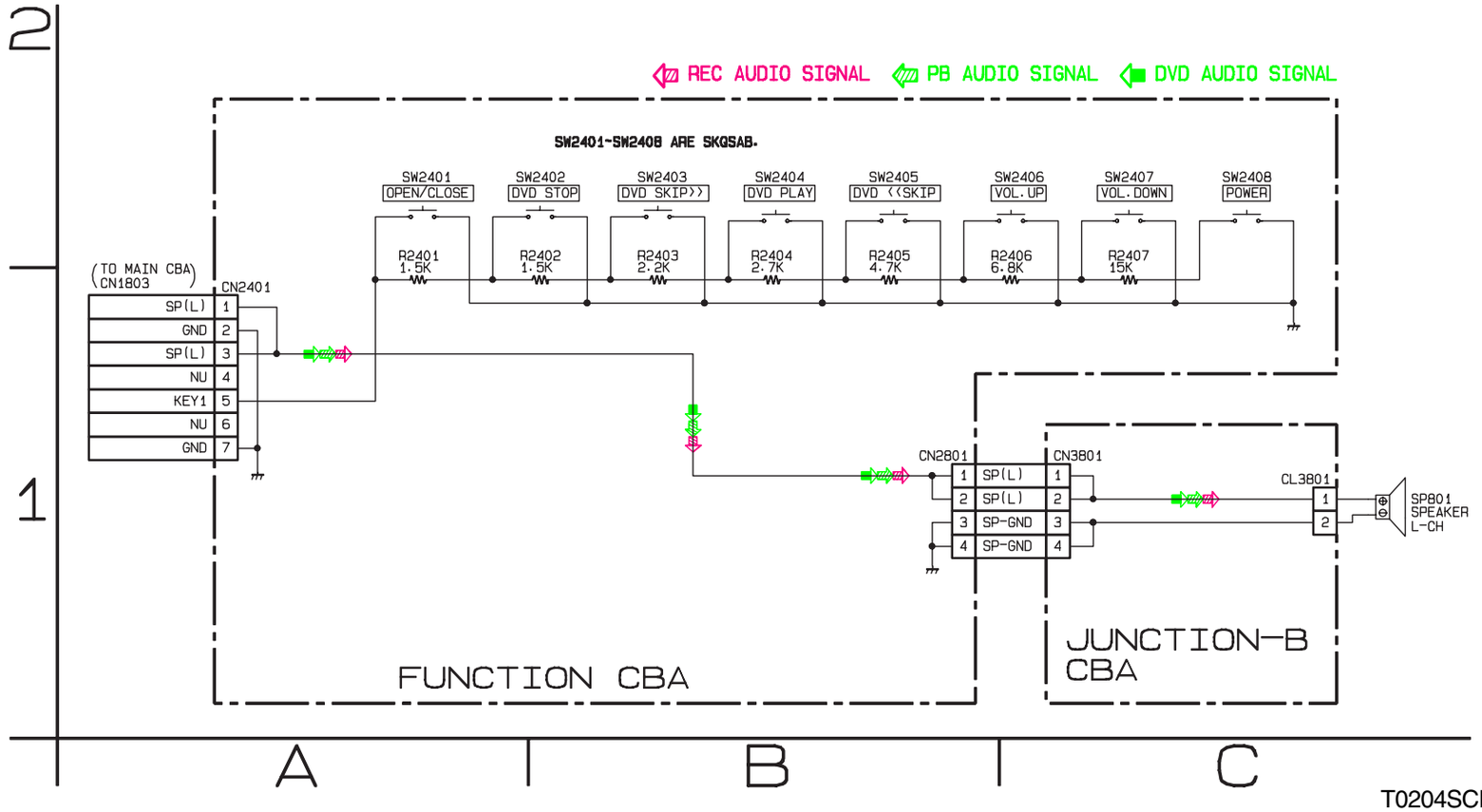


CRT Schematic Diagram < TV/VCR Section >



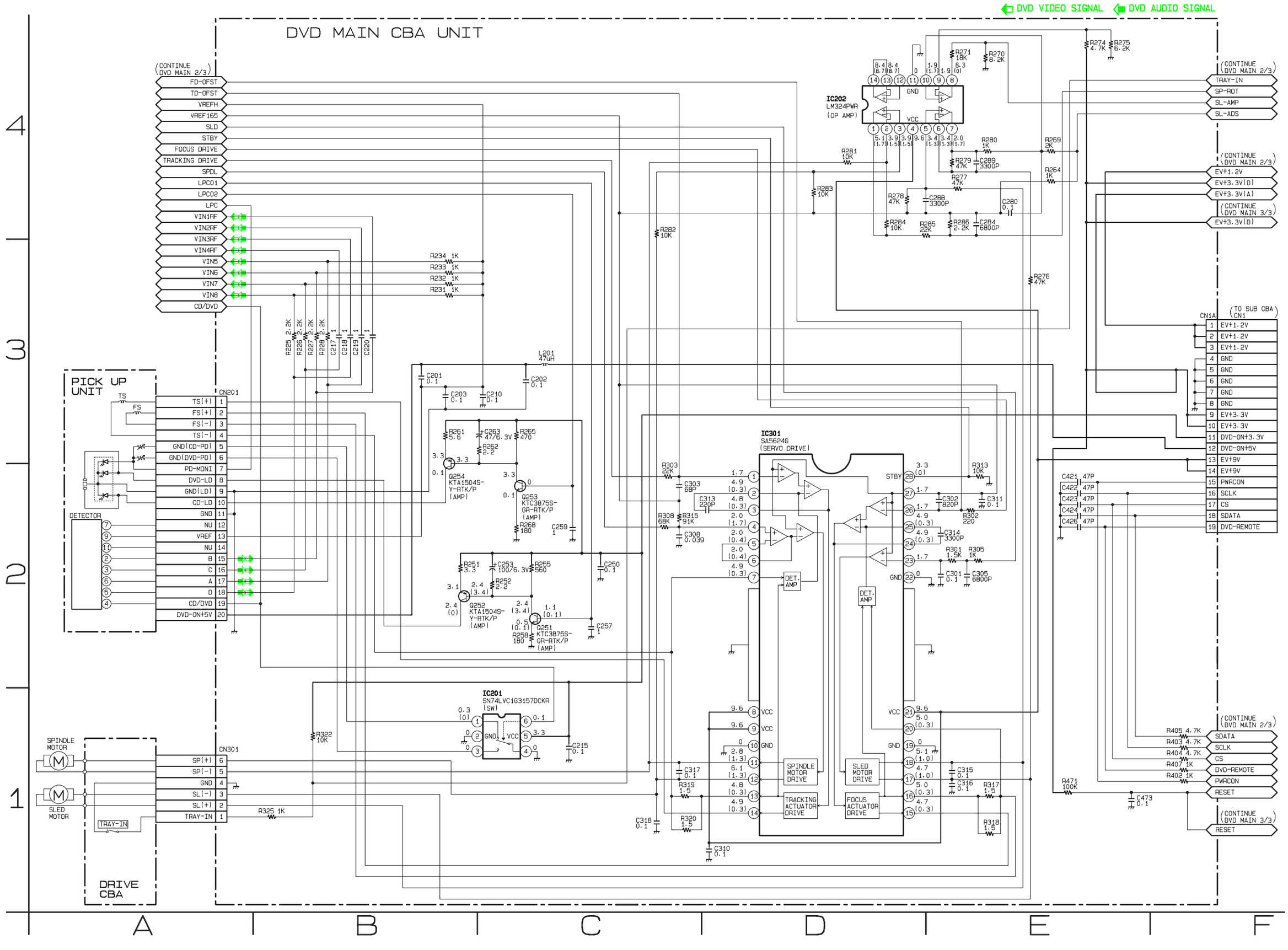
T0204SCCRT

Function & Junction-B Schematic Diagram < TV/VCR Section >

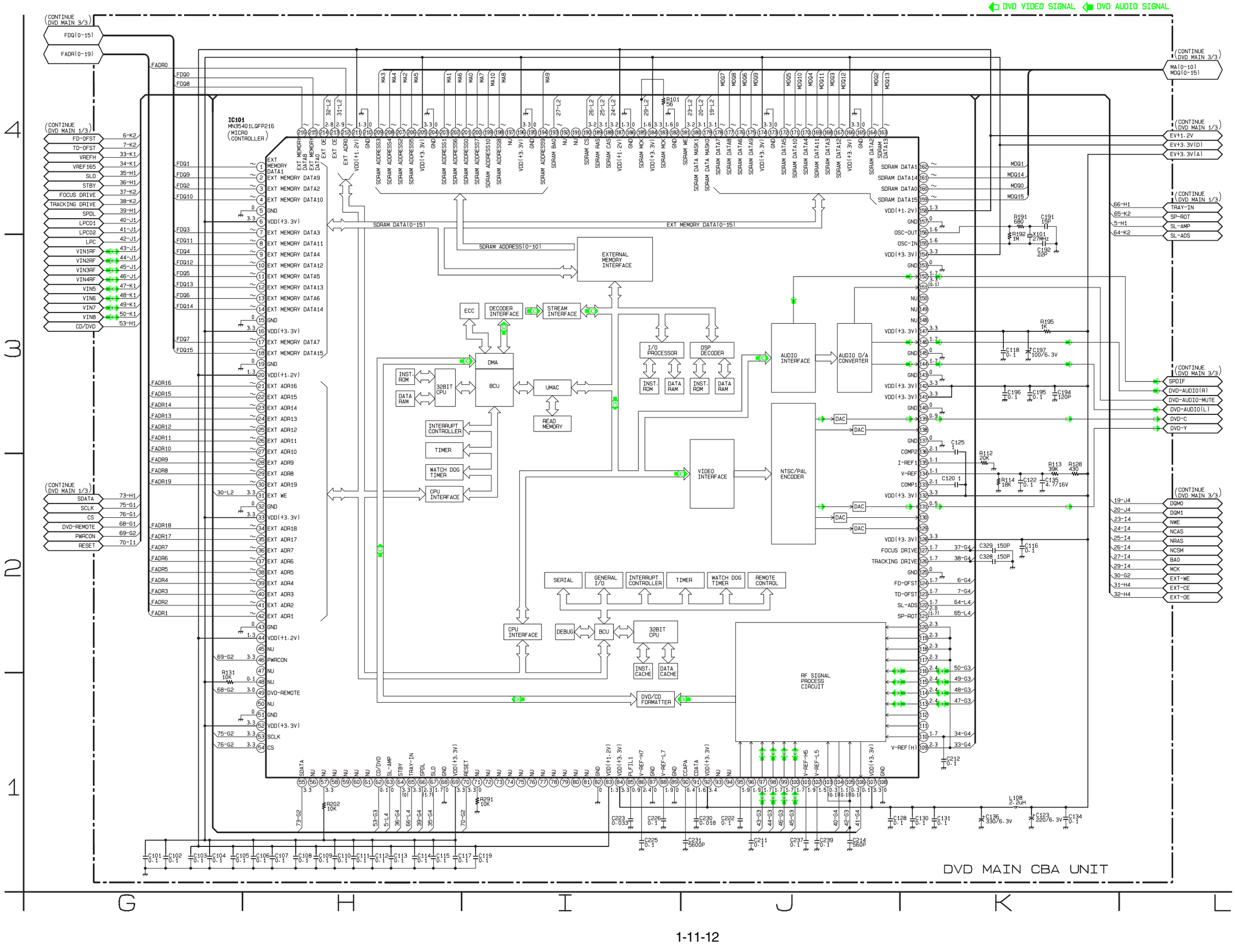


T0204SCF

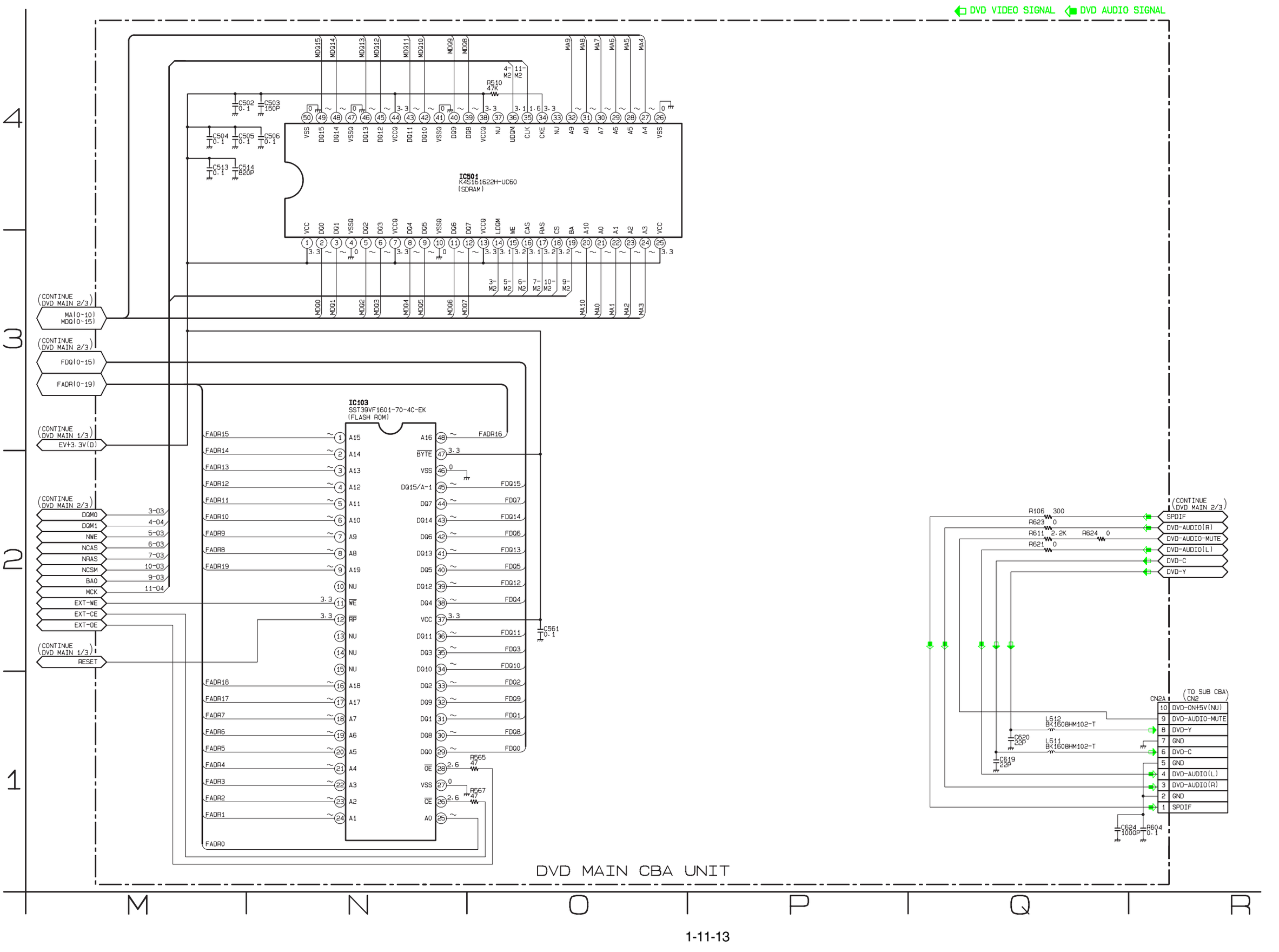
DVD Main 1/3 Schematic Diagram < DVD Section >



DVD Main 2/3 Schematic Diagram < DVD Section >



DVD Main 3/3 Schematic Diagram < DVD Section >



Main CBA Top View < TV/VCR Section >

Because a hot chassis ground is present in the power supply circuit, an isolation transformer must be used. Also, in order to have the ability to increase the input slowly,when troubleshooting this type power supply circuit, a variable isolation transformer is required.

4A 125V

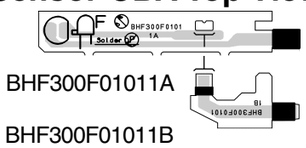
CAUTION ! : For continued protection against risk of fire, replace only with same type 4 A, 125V fuse.

ATTENTION : Utiliser un fusible de rechange de même type de 4A, 125V.

NOTE:
The voltage for parts in hot circuit is measured using hot GND as a common terminal.

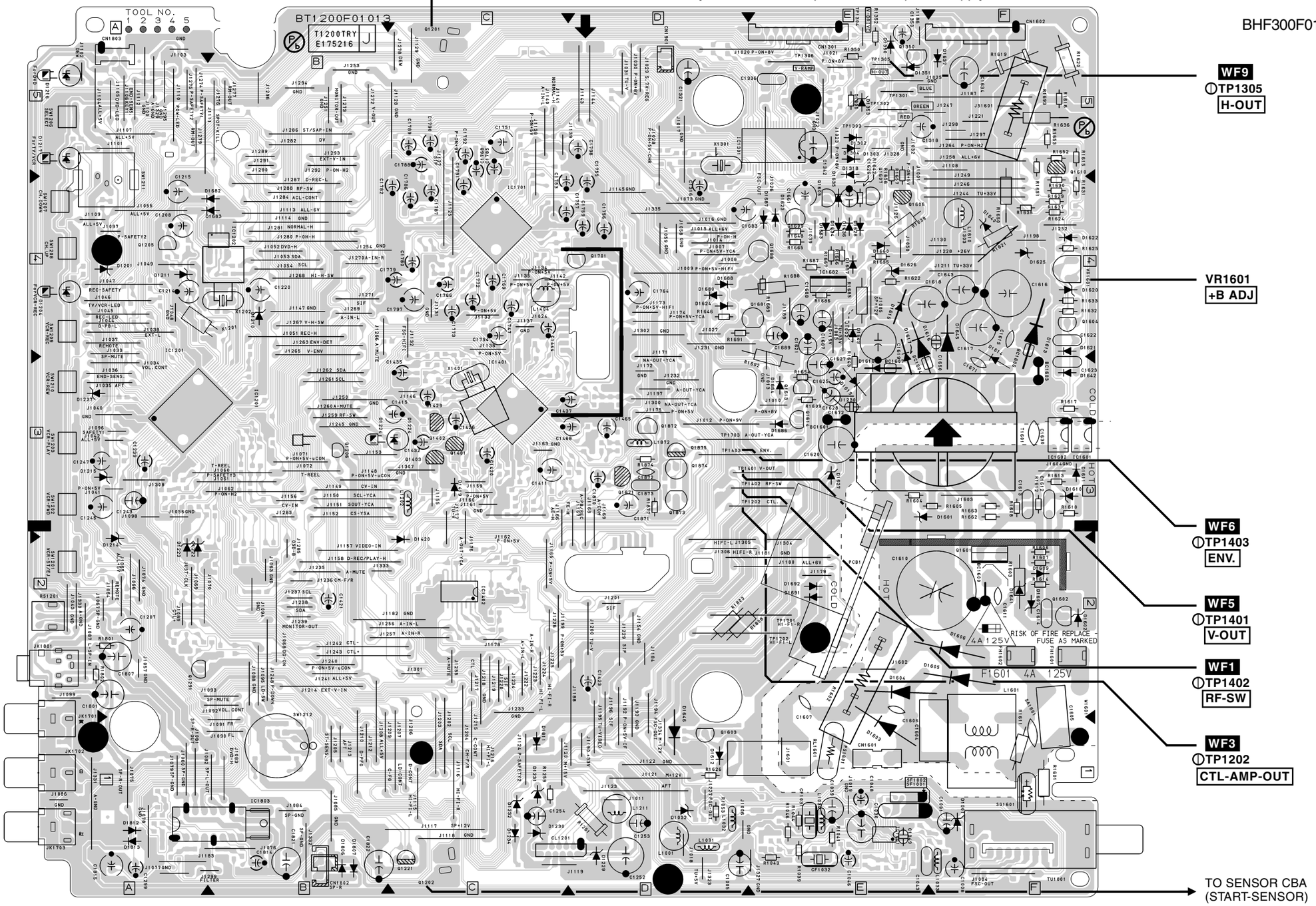
CAUTION !
Fixed voltage (or Auto voltage selectable) power supply circuit is used in this unit.
If Main Fuse (F1601) is blown , check to see that all components in the power supply circuit are not defective before you connect the AC plug to the AC power supply.
Otherwise it may cause some components in the power supply circuit to fail.

Sensor CBA Top View



BHF300F01011A

BHF300F01011B



BT1200F01013

Main CBA Bottom View < TV/VCR Section >

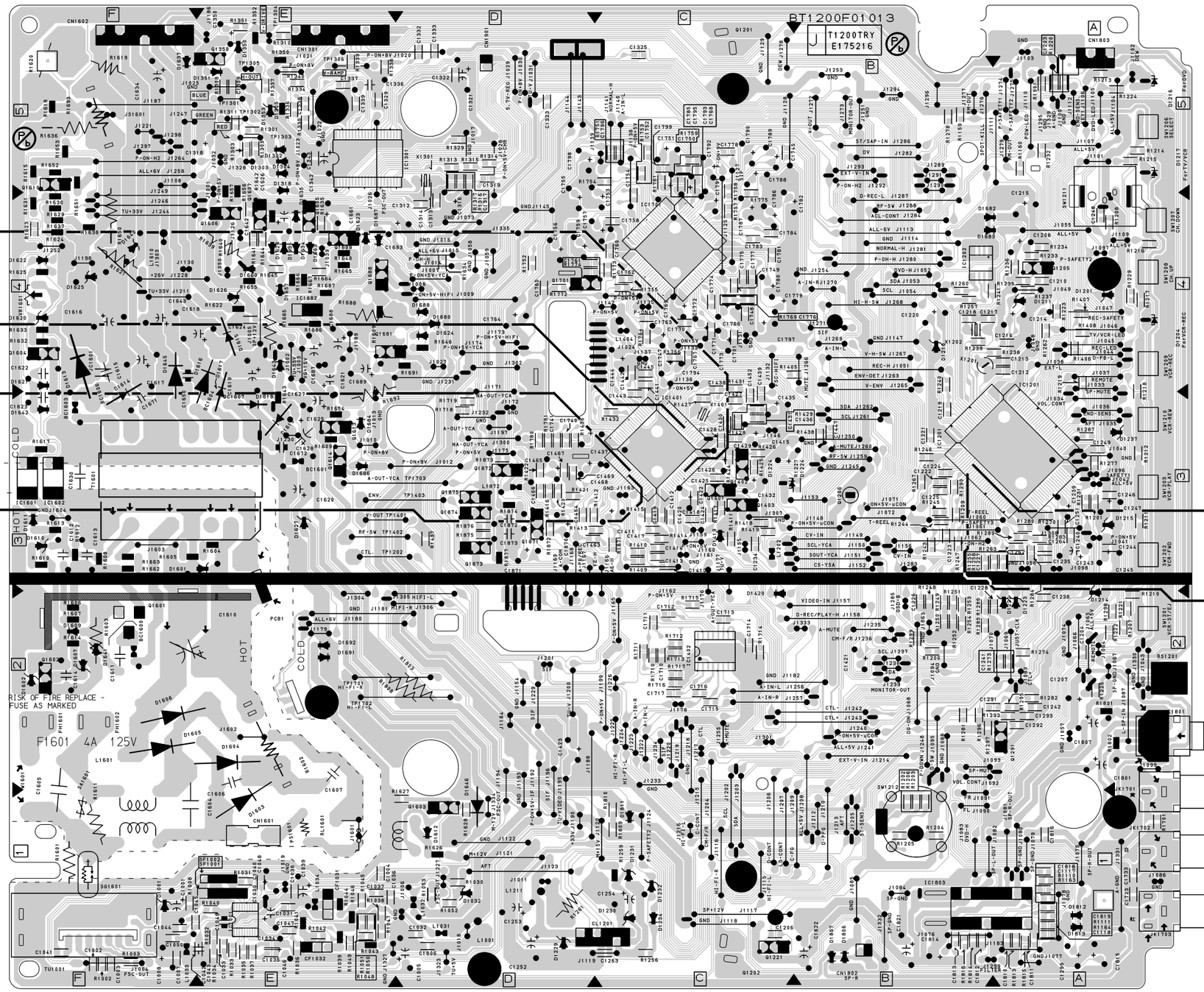
Because a hot chassis ground is present in the power supply circuit, an isolation transformer must be used. Also, in order to have the ability to increase the input slowly,when troubleshooting this type power supply circuit, a variable isolation transformer is required.

4A 125V

CAUTION ! : For continued protection against risk of fire, replace only with same type 4 A, 125V fuse.
ATTENTION : Utiliser un fusible de rechange de même type de 4A, 125V.

CAUTION !
Fixed voltage (or Auto voltage selectable) power supply circuit is used in this unit.
If Main Fuse (F1601) is blown , check to see that all components in the power supply circuit are not defective before you connect the AC plug to the AC power supply.
Otherwise it may cause some components in the power supply circuit to fail.

NOTE:
The voltage for parts in hot circuit is measured using hot GND as a common terminal.



WF4
PIN 32
OF IC1401

WF2
PIN 49
OF IC1401

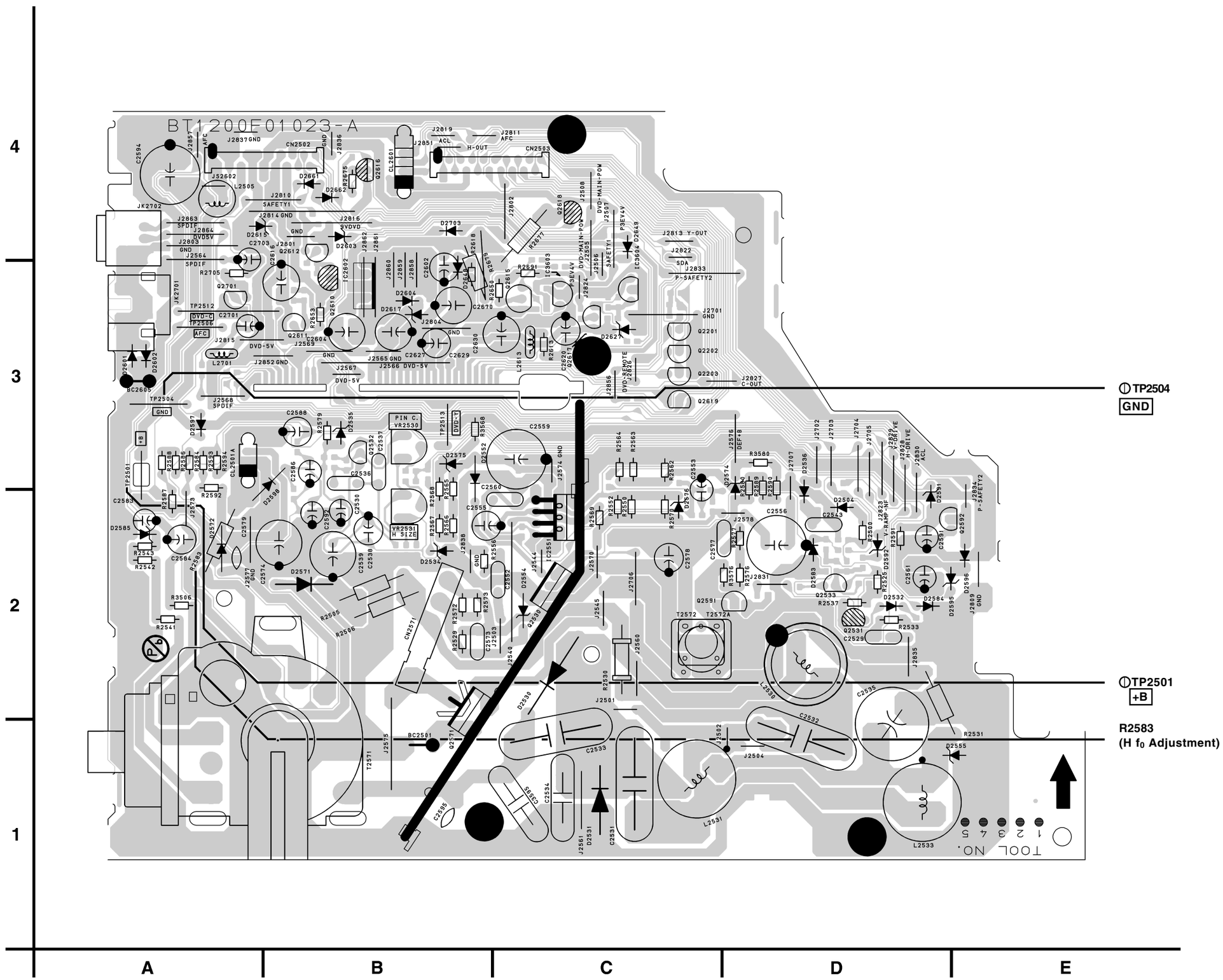
WF8
PIN 9
OF IC1401

WF7
PIN 10
OF IC1401

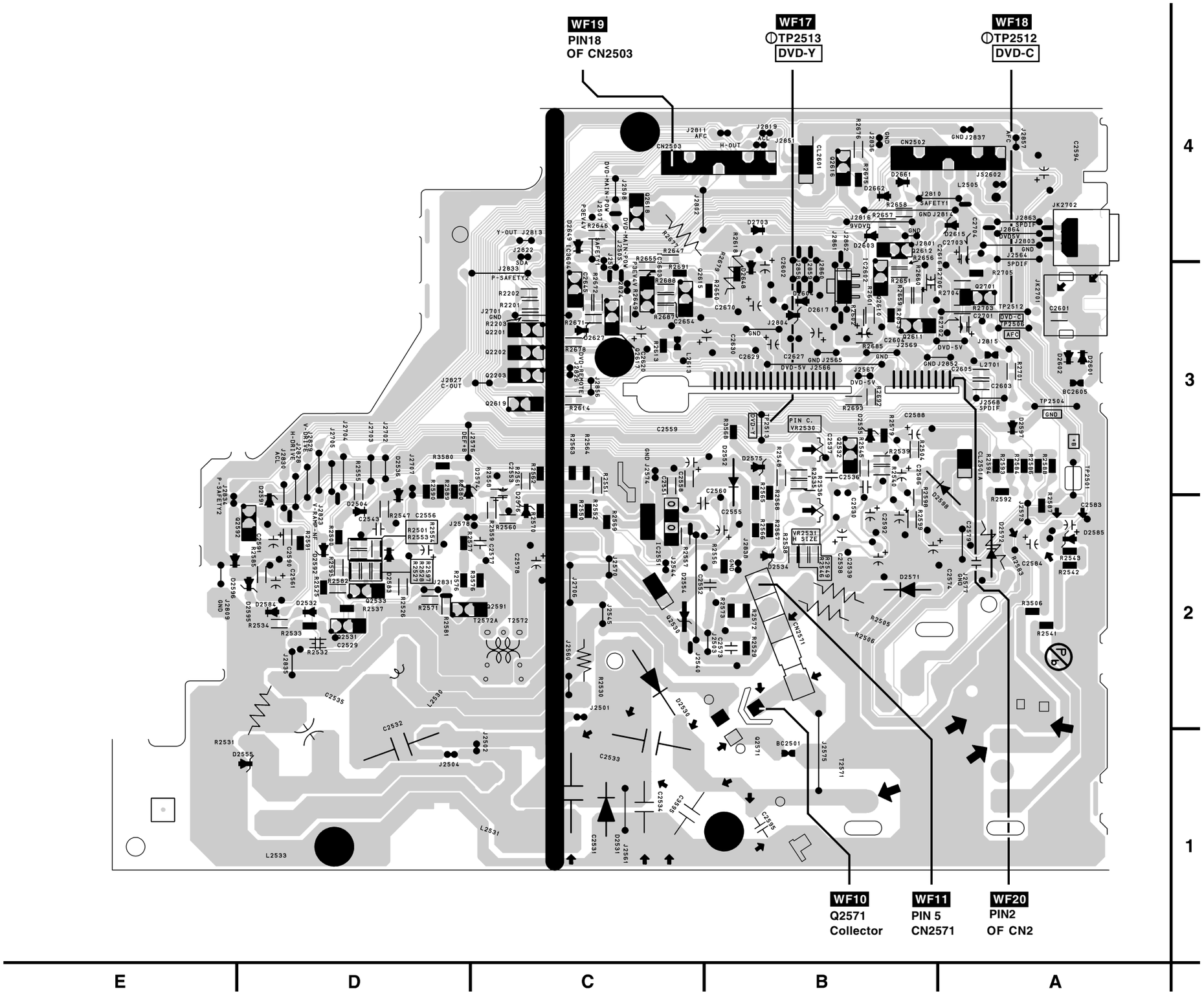
WF15
PIN 58
OF IC1201

WF16
PIN 59
OF IC1201

Sub CBA Top View < TV/VCR Section >

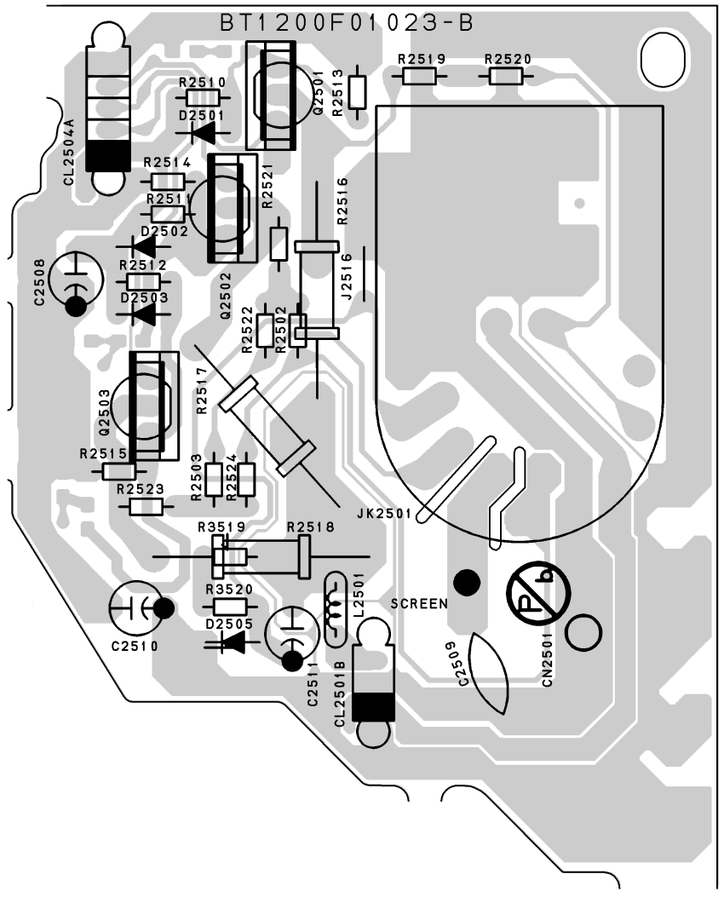


Sub CBA Bottom View < TV/VCR Section >

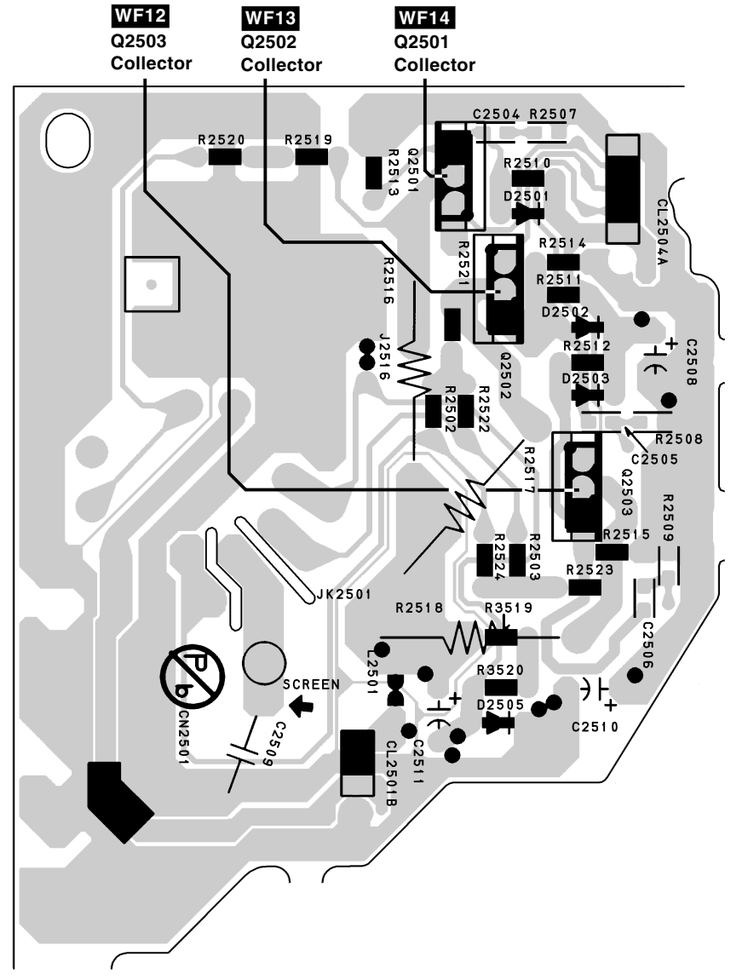


BT1200F01023-A

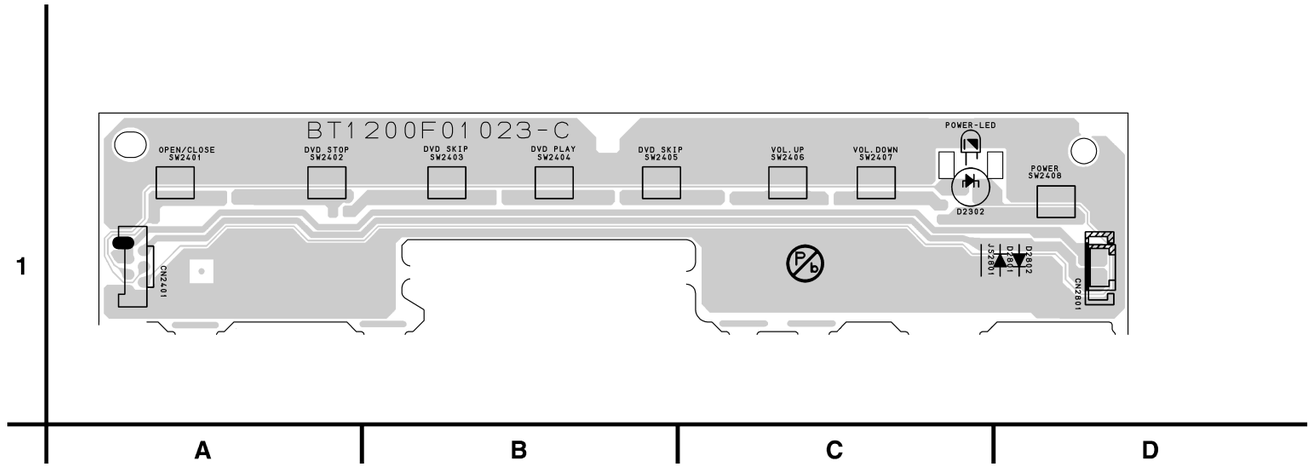
CRT CBA Top View < TV/VCR Section >



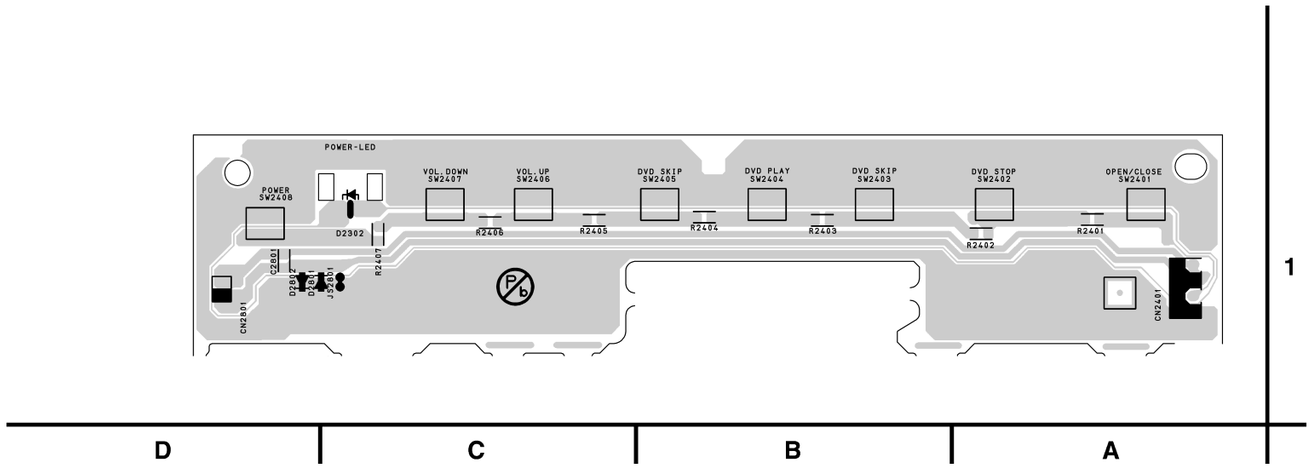
CRT CBA Bottom View < TV/VCR Section >



Function CBA Top View < TV/VCR Section >

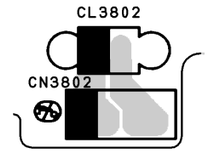


Function CBA Bottom View < TV/VCR Section >

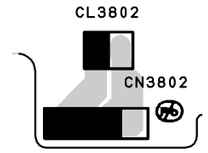


BT1200F01023-C

Junction-A CBA Top View < TV/VCR Section >



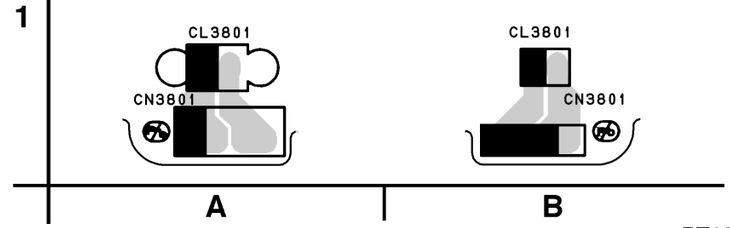
Junction-A CBA Bottom View < TV/VCR Section >



BT1200F01023-D

Junction-B CBA Top View < TV/VCR Section >

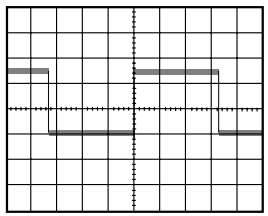
Junction-B CBA Bottom View < TV/VCR Section >



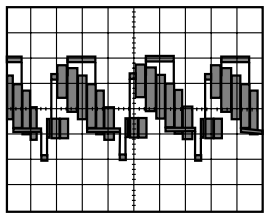
BT1200F01023-E

WAVEFORMS

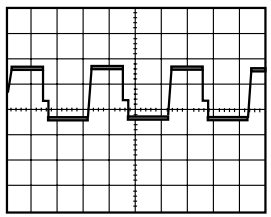
Input: NTSC Color Bar Signal (with 1kHz Audio Signal) --- WF1~WF16
DVD Video (Power on (Stop) MODE) --- WF17, WF18
CD (1KHz Play) --- WF19, WF20
INITIAL POSITION: Unplug unit from AC outlet for at least five minutes, reconnect to AC outlet and then turn power on.
(Brightness---Center Color---Center Tint --- Center Contrast---Approx 70%)



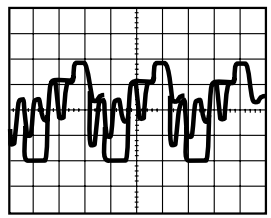
WF1 1DIV: 2V 5ms
TP1402 RF-SW



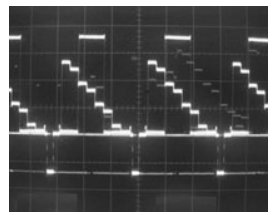
WF5 1DIV: 0.5V 20µs
TP1401 V-OUT



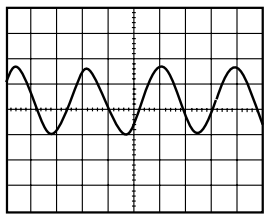
WF9 1DIV: 2V 20µs
TP1305 H-OUT



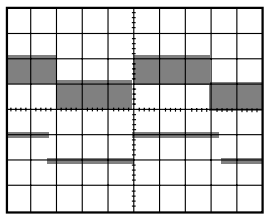
WF13 1DIV: 20V 20µs
Q2502 COLLECTOR



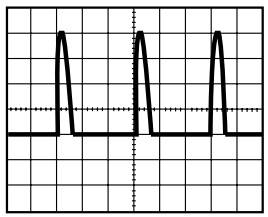
WF17 1DIV: 0.2V 20µs
TP2513 DVD-Y



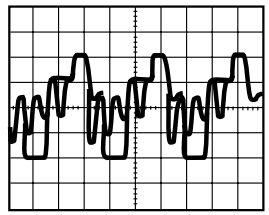
WF2 1DIV: 0.2V 0.1µs
IC1401 Pin 49



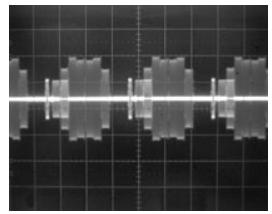
Upper: **WF6** Lower: **WF1**
1DIV: 0.2V 2DIV: 5V 5ms
TP1403 ENV.



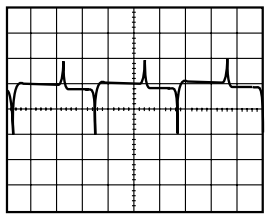
WF10 1DIV: 200V 20µs
Q2571 COLLECTOR



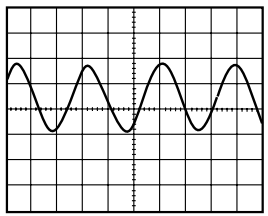
WF14 1DIV: 20V 20µs
Q2501 COLLECTOR



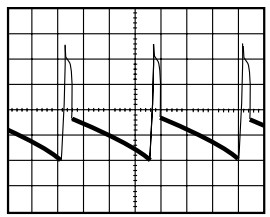
WF18 1DIV: 0.2V 20µs
TP2512 DVD-C



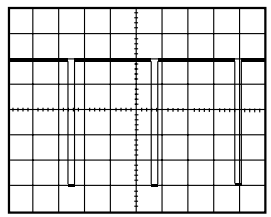
WF3 1DIV: 1V 10ms
TP1202 CTL-AMP-OUT



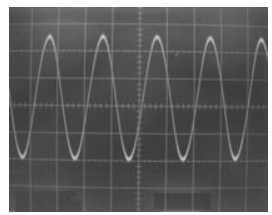
WF7 1DIV: 0.5V 0.5ms
IC1401 PIN10



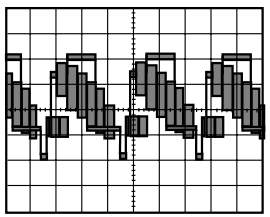
WF11 1DIV: 10V 5ms
CN2571 PIN 5



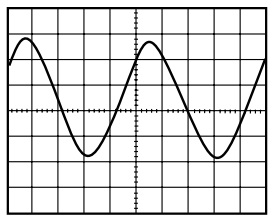
WF15 1DIV: 1V 20µs
IC1201 PIN 58



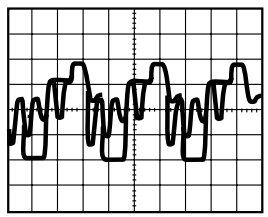
WF19 1DIV: 0.5V 0.5ms
CN2503 PIN 18



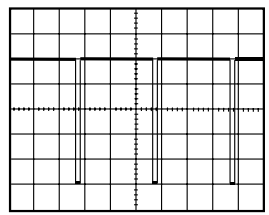
WF4 1DIV: 0.25V 20µs
IC1401 Pin 32



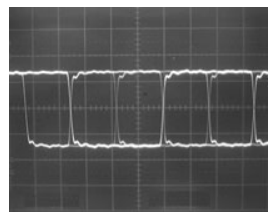
WF8 1DIV: 0.5V 0.5ms
IC1401 PIN9



WF12 1DIV: 20V 20µs
Q2503 COLLECTOR

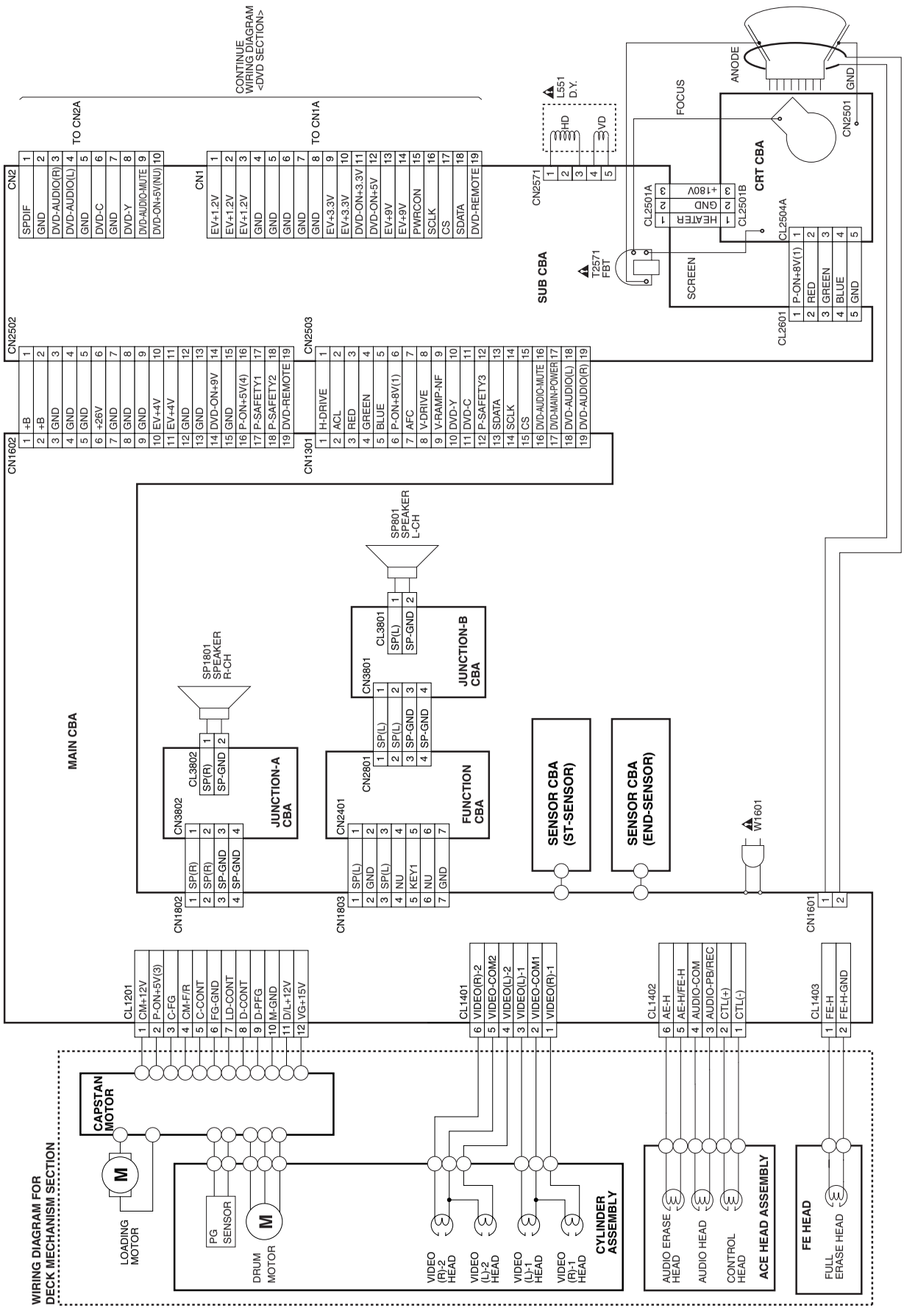


WF16 1DIV: 1V 5ms
IC1201 PIN 59



WF20 1DIV: 1V 0.1µs
CN2 PIN 1

WIRING DIAGRAM < TV/VCR Section >



WIRING DIAGRAM < DVD Section >