

May 2006 (ver b)

HITACHI PROJECTION TELEVISION

DP - 5X CHASSIS TRAINING

2005 MODEL RELEASE
DIGITAL HD READY PTV



Model	Chassis	Remote	P/N
51F710A	DP-55	CLU-4351UG2	HL02072
57F710A	DP-55	CLU-4351UG2	HL02072
65F710A	DP-55	CLU-4351UG2	HL02072
51F710R	DP-57	CLU-4351UG2	HL02072
57F710R	DP-57	CLU-4351UG2	HL02072

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Materials Prepared by... Alvie Rodgers C.E.T. (Chamblee, GA.)

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POWER SUPPLY INFORMATION

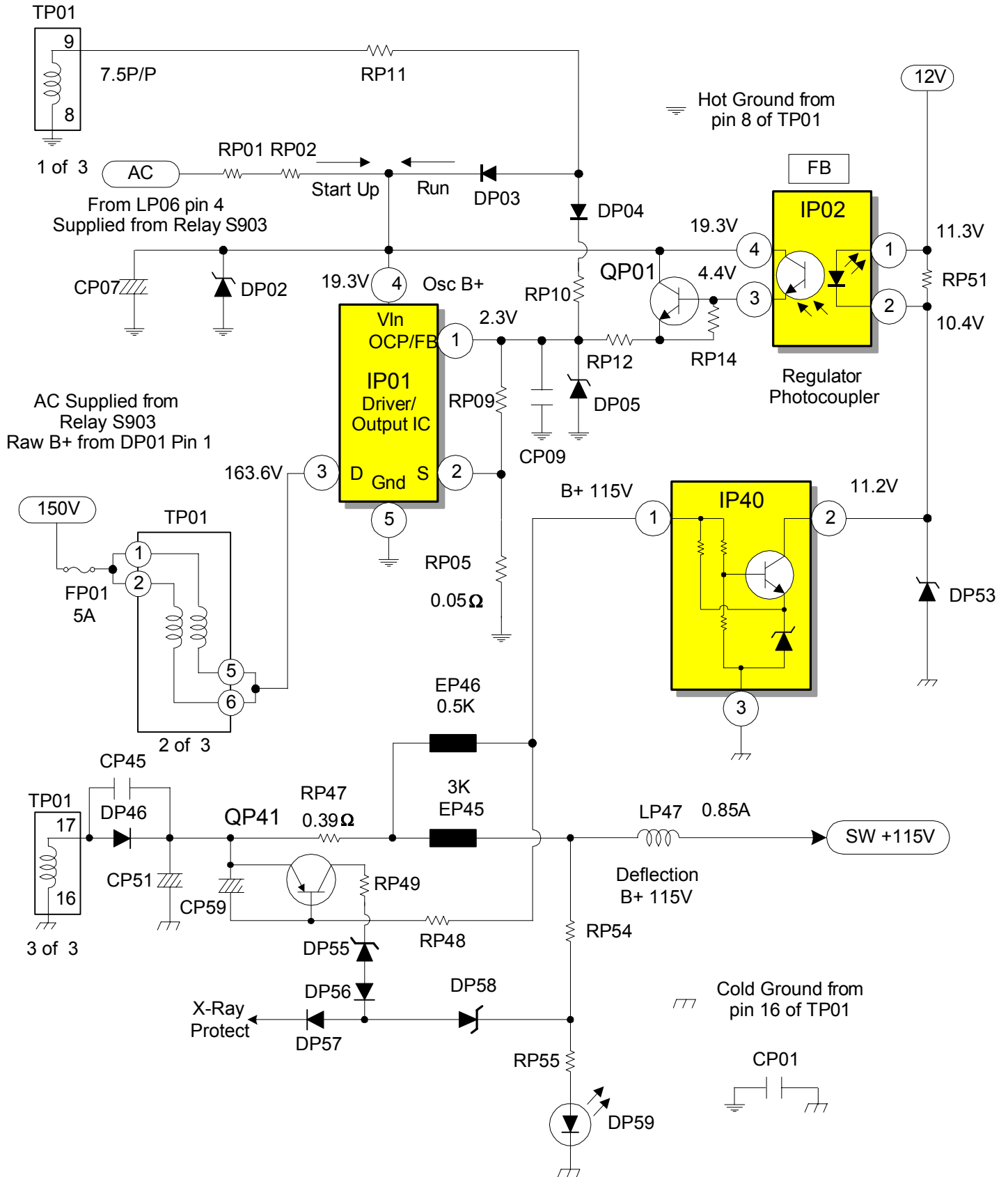
**DP-5X
CHASSIS INFORMATION**

SECTION 01

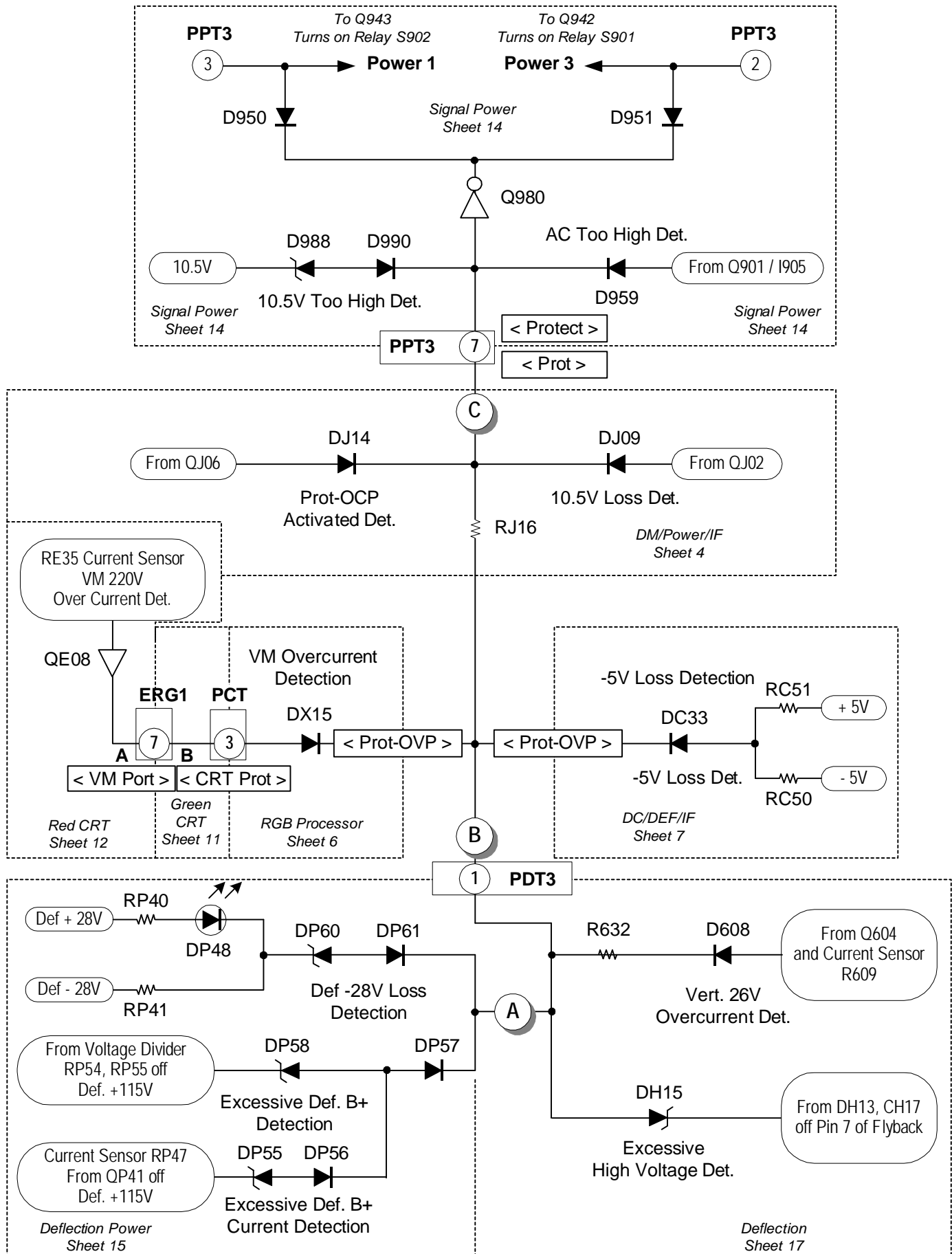
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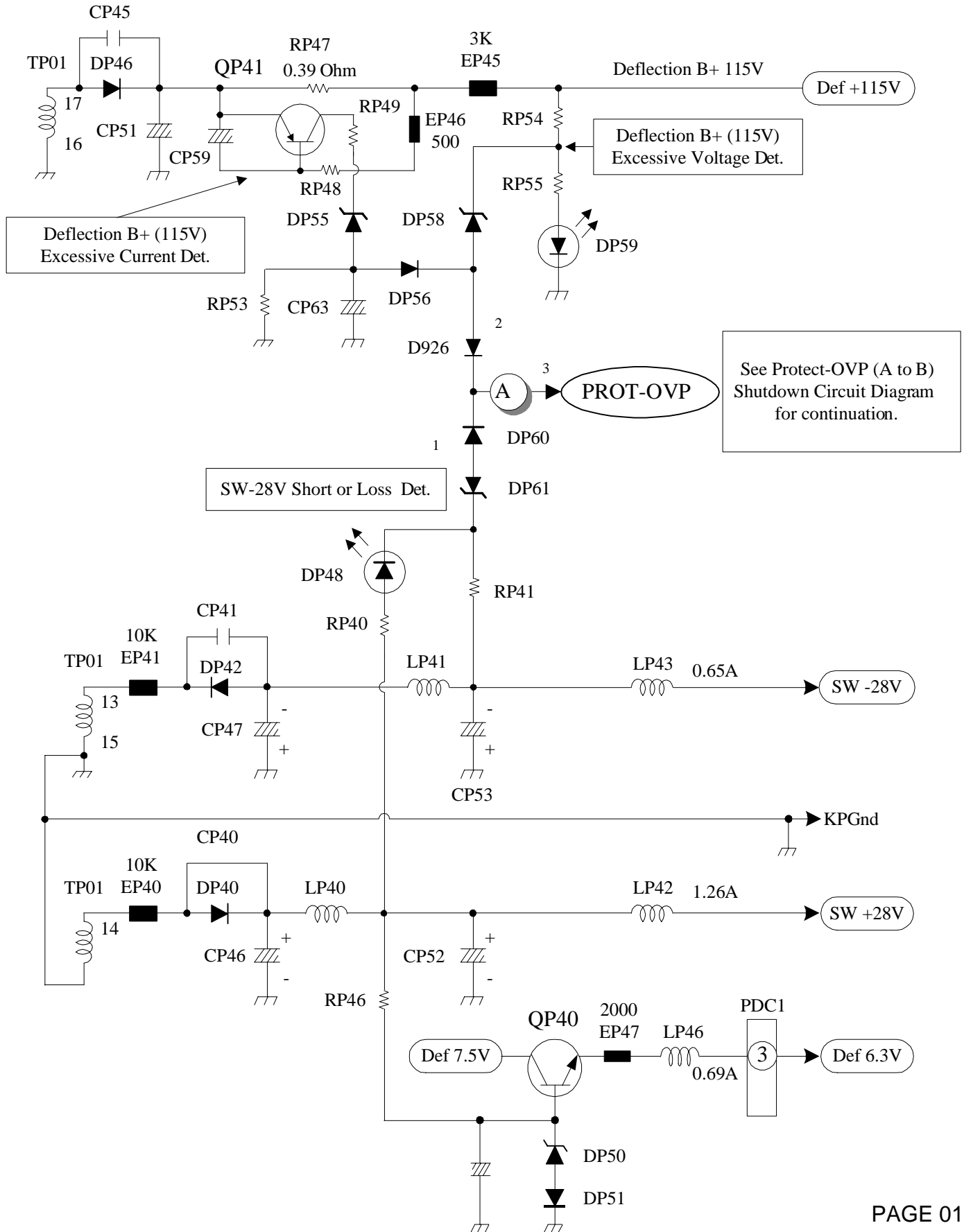
DP-5X CHASSIS POWER SUPPLY SW +115V REGULATION High Voltage Power Supply



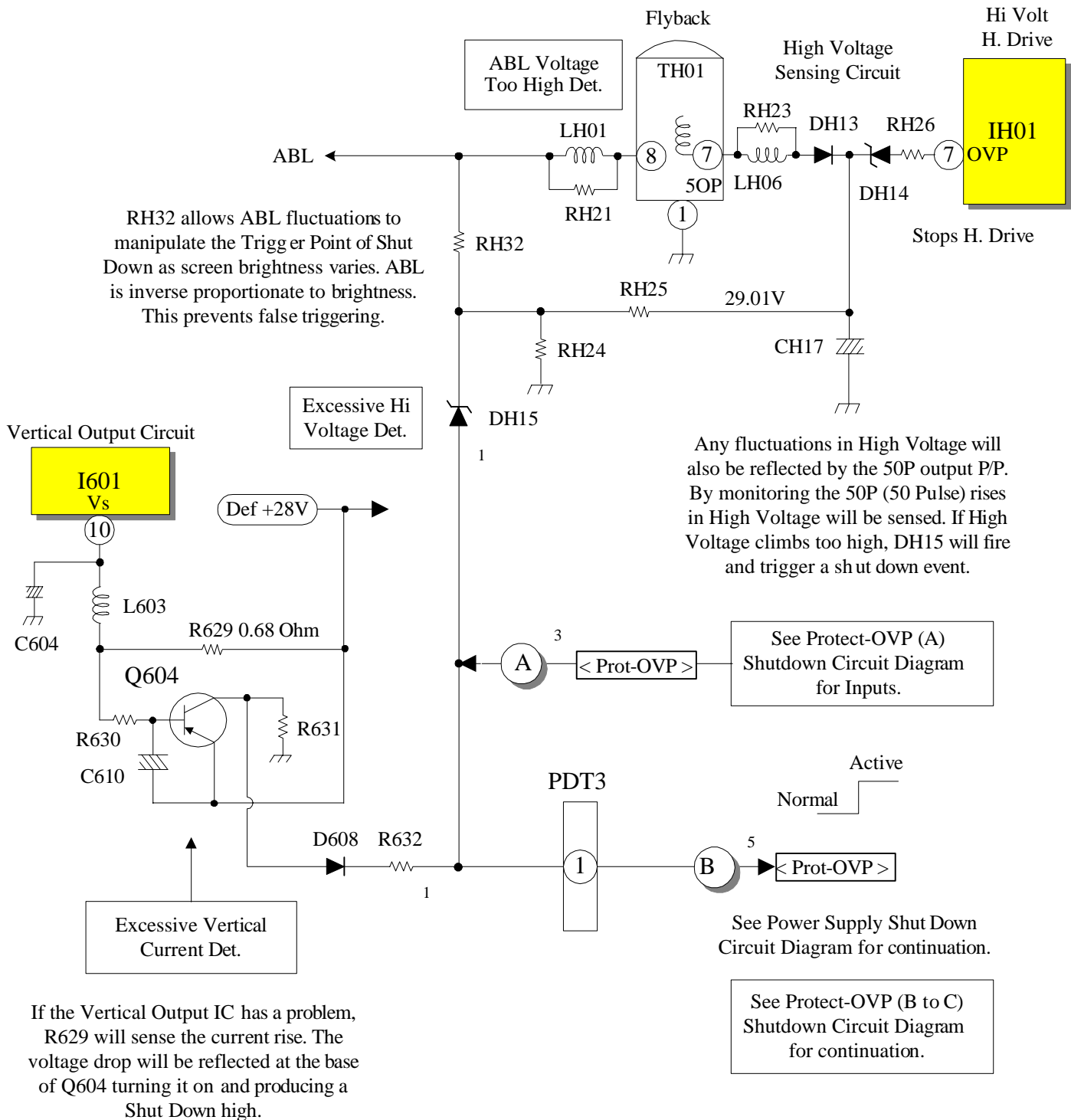
DP-5X PROTECT-OVP SHUTDOWN BLOCK DIAGRAM



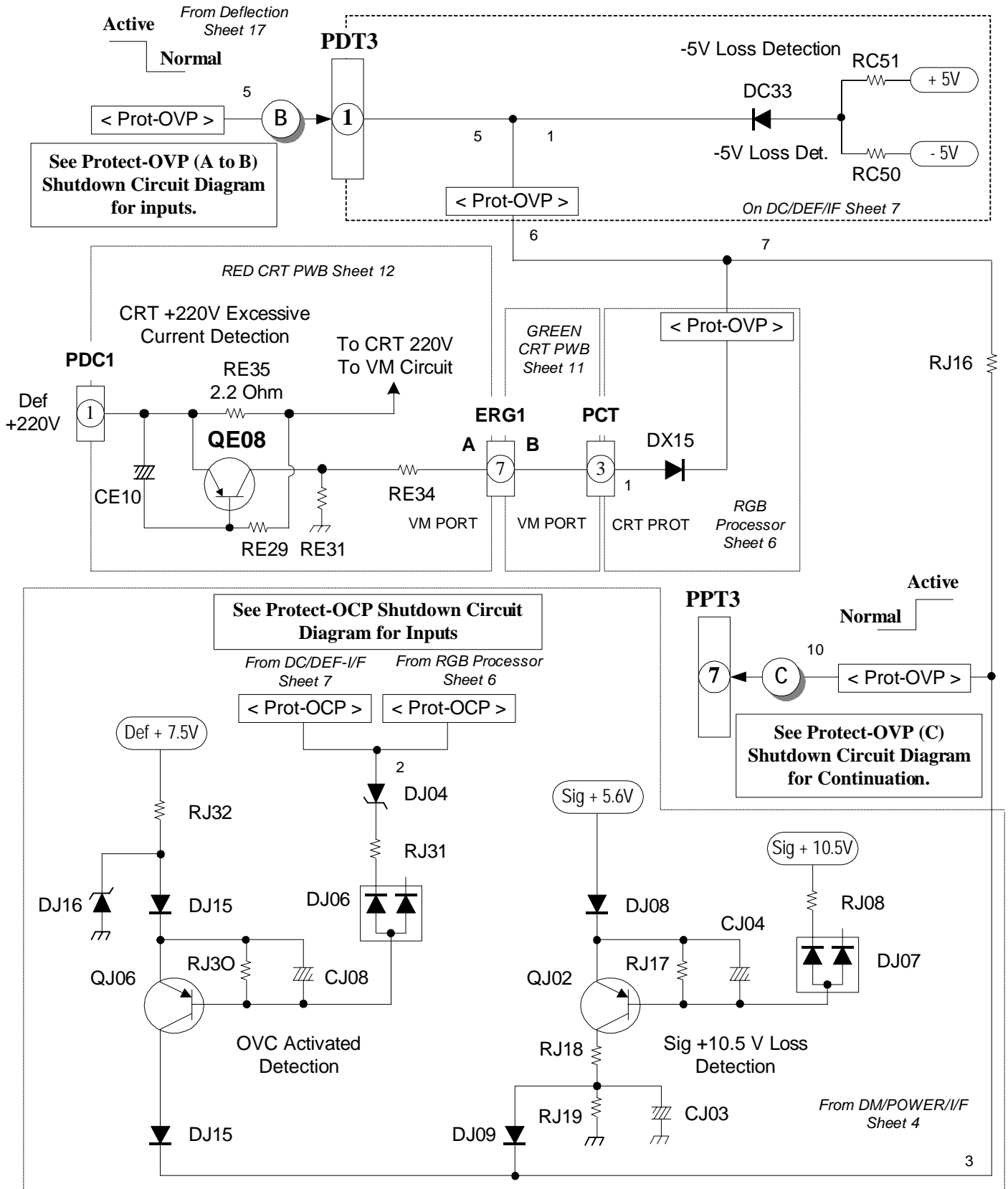
DP-5X PROTECT-OVP (A) DIAGRAM



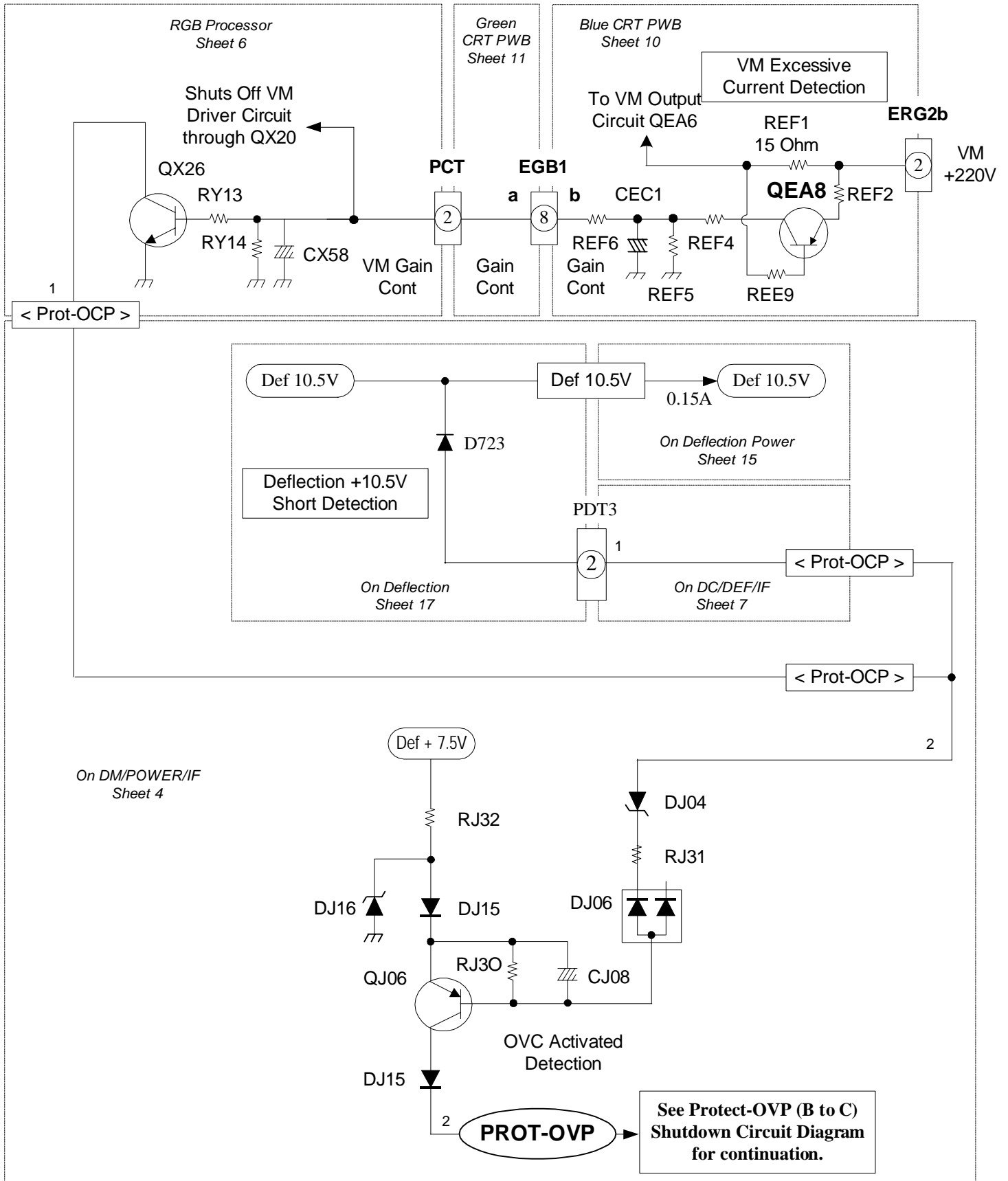
DP-5X PROTECT-OVP (A to B) SHUTDOWN DIAGRAM



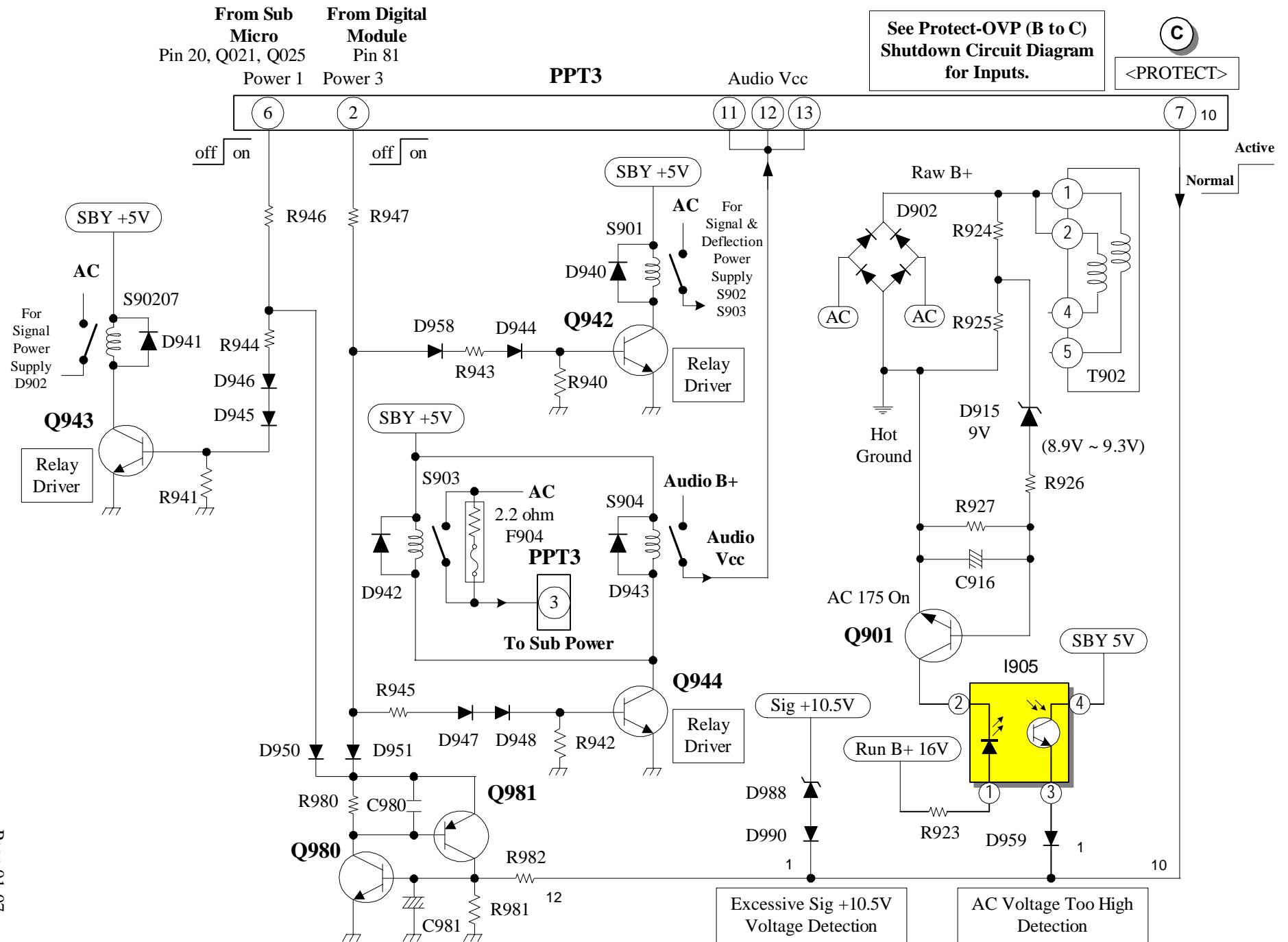
DP-5X PROTECT-OVP (B to C) SHUTDOWN DIAGRAM



DP-5X PROTECT-OCP DIAGRAM



DP-5X PROTECT-OVP (C) SHUTDOWN CIRCUIT



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VIDEO INFORMATION

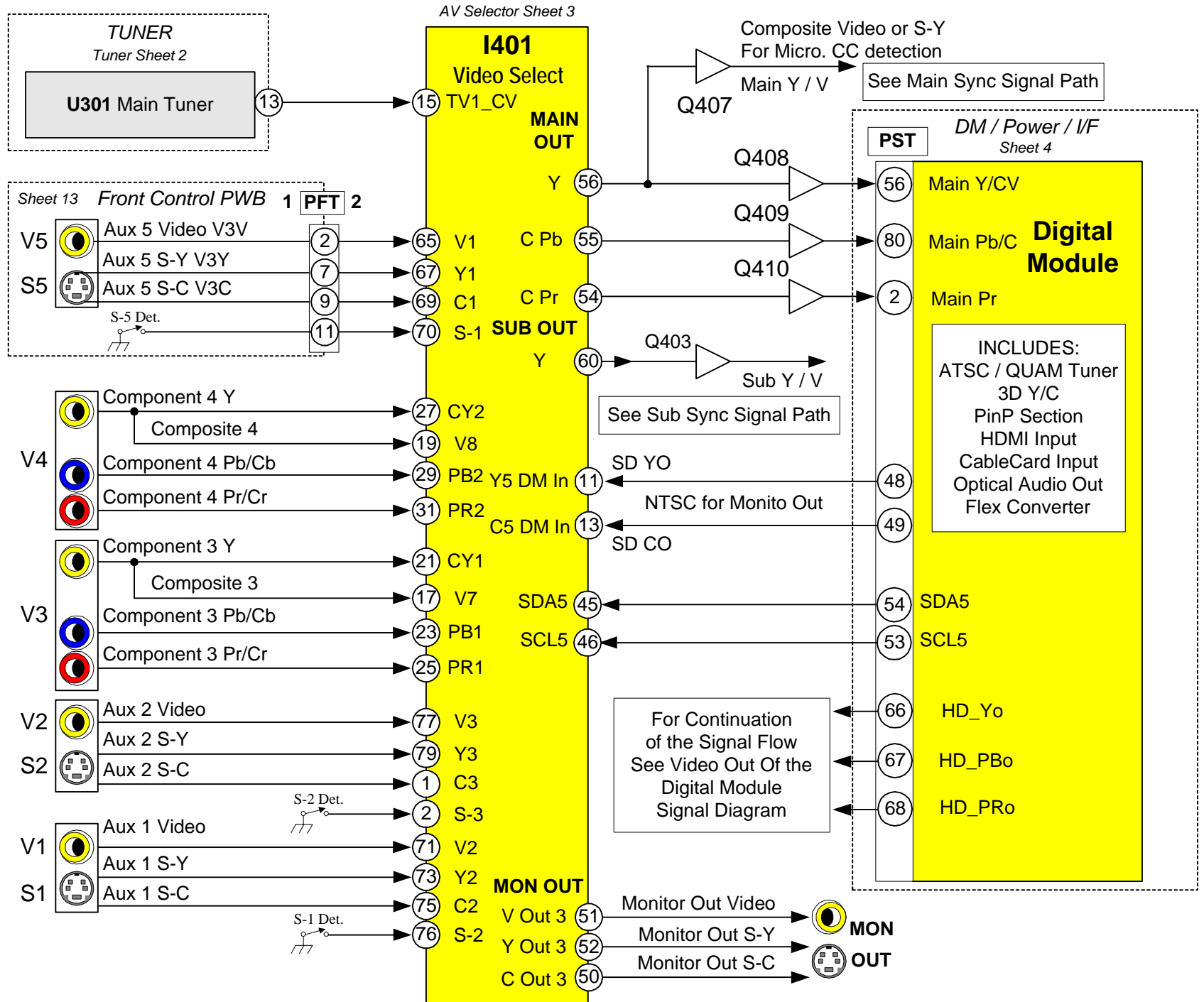
**DP-5X
CHASSIS INFORMATION**

SECTION 02

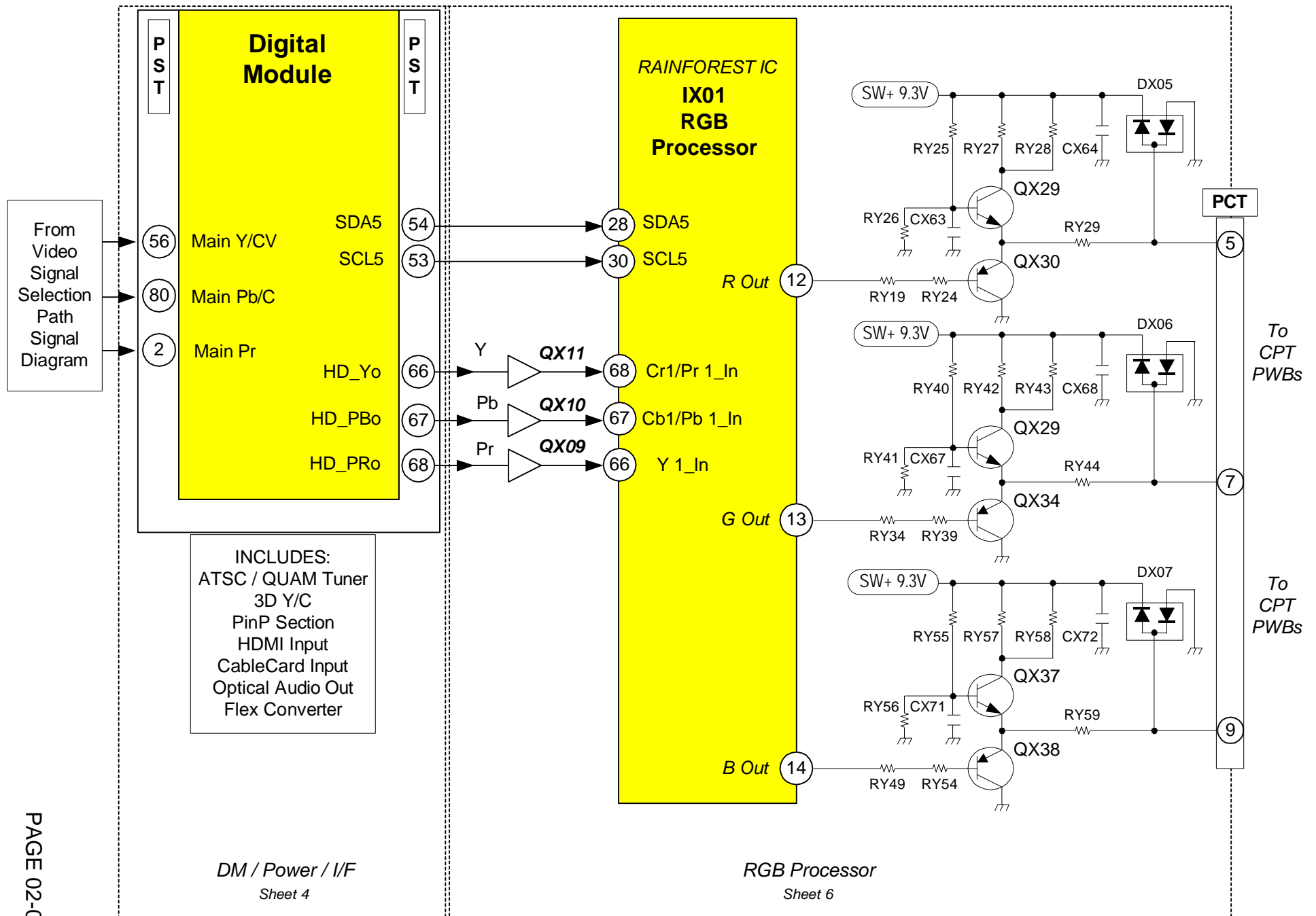
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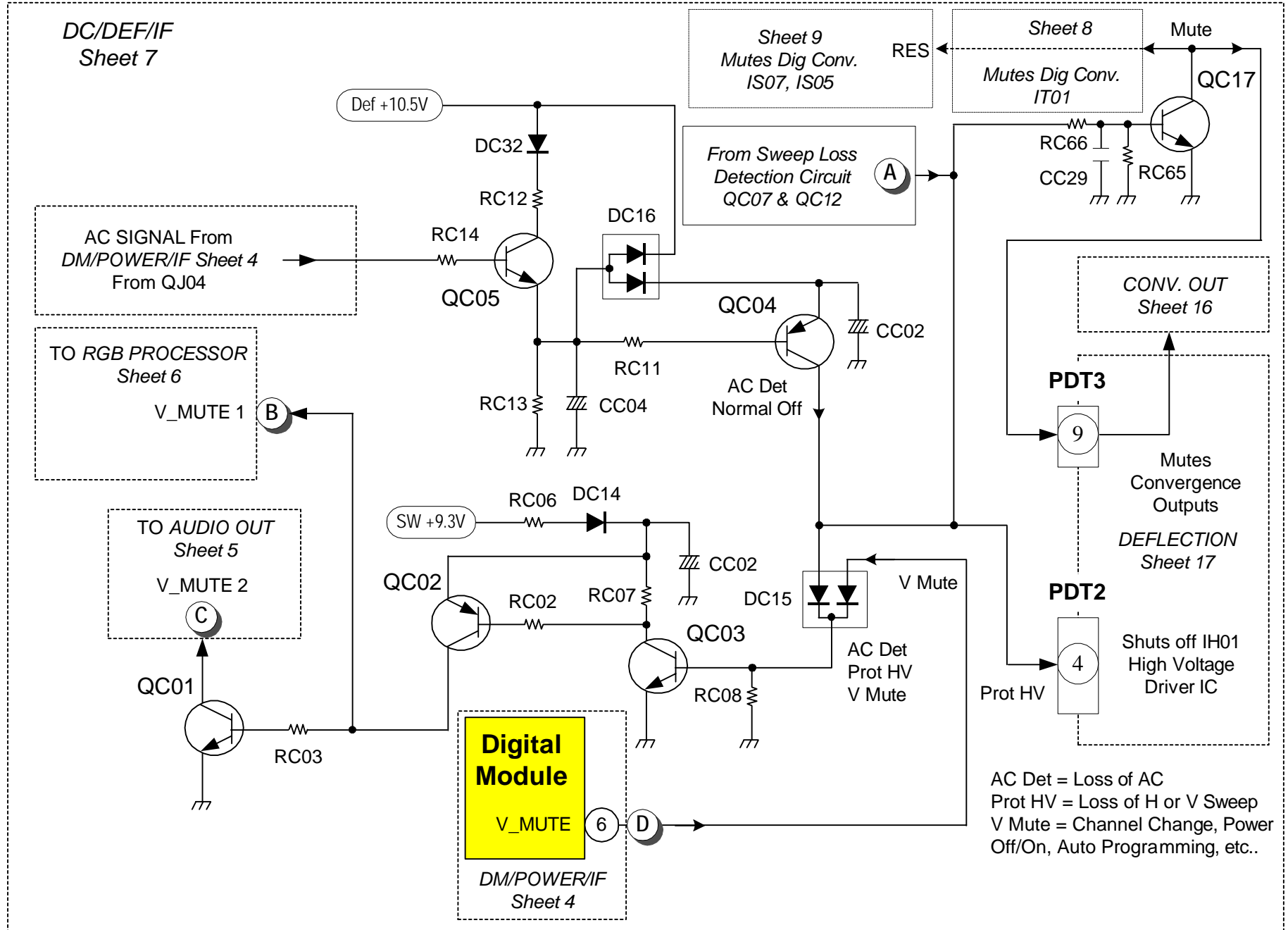
DP-5X CHASSIS VIDEO SIGNAL SELECTION PATH CIRCUIT DIAGRAM



DP-5X Chassis Video From The Digital Module Circuit Diagram



DP-5X CHASSIS VIDEO MUTE GENERATION CIRCUIT DIAGRAM



DP-5X ABL CIRCUIT EXPLANATION

(See ABL Circuit Diagram on the next page for details)

The ABL voltage is generated from the Flyback transformer **TH01** ABL pin (8). The ABL pull-up resistors are **RH27** and **RH28**. They receive their pull up voltage from the **SW +115V** which is the B+ line for Deflection created in the Power Supply.

ABL VOLTAGE OPERATION

The ABL voltage is determined by the current draw through the Flyback transformer. As the picture brightness becomes brighter or increases, the demand for replacement of the High Voltage being consumed is greater. In this case, the Flyback will work harder and the current through the Flyback increases. This in turn will decrease the ABL voltage. The ABL voltage is inversely proportionate to screen brightness.

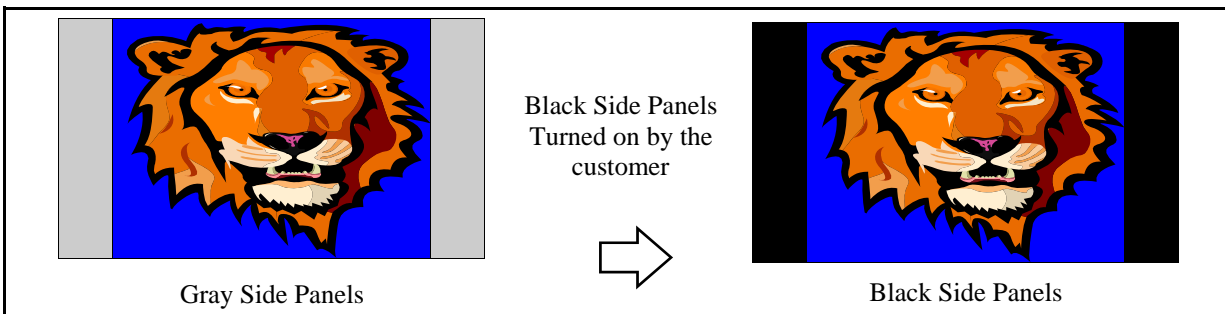
Also connected to the ABL voltage line is **DH16**. This zener diode acts as a clamp for the ABL voltage. If the ABL voltage tries to increase above 10.5V due to a dark scene which decreases the current demand on the flyback, the ABL voltage will rise to the point that **DH16** dumps the excess voltage into the 10.5V line.

ACCL TRANSISTOR OPERATION

The ABL voltage is routed through the **PDT2** connector pin **3** to the Signal PWB. Then the ABL voltage is routed through the acceleration circuit **RX45** and **DX01** to the base of **QX12**. Under normal conditions, this transistor is nearly saturated. **QX12** determines the voltage being supplied to the cathode of **DX00**, which is connected to pin **78** of the Rainforest IC, **IX01**. During an ABL voltage decrease due to an excessive bright circumstance, the base of **QX12** will go down, this will drop the emitter voltage which in turn drops the cathode voltage of **DX00**. This in turn will pull voltage away from pin **78** of the Rainforest IC, **IX01**. Internally, this reduces the brightness, contrast and color gain voltage which is being controlled by the **I²C** bus data communication from the Microprocessor arriving at pins **28** and **30** of the Rainforest IC and reduces the overall brightness, preventing blooming as well as reducing the Color saturation level to prevent color smear.

ABL SWITCH QH03 AND QH05

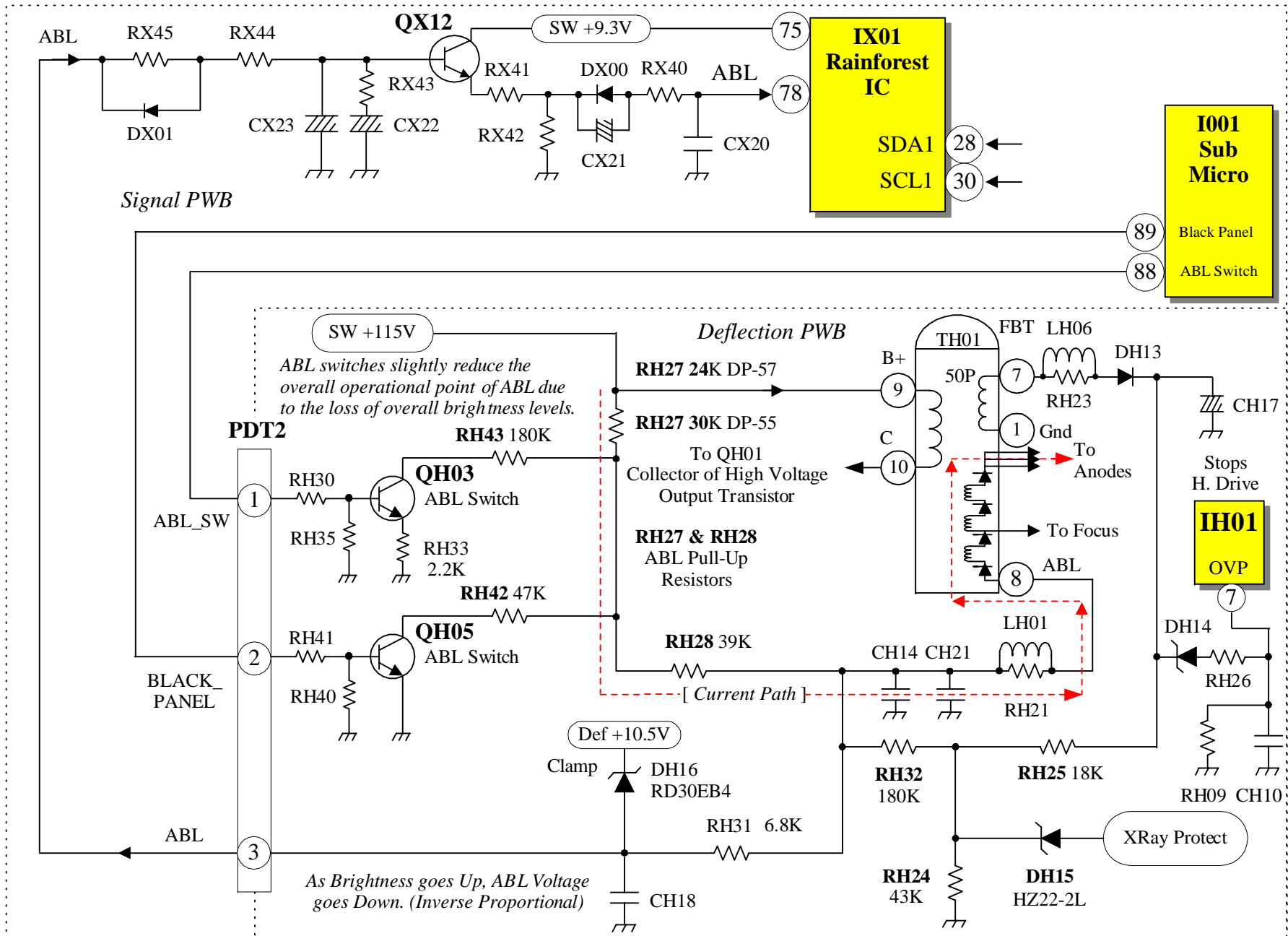
This chassis has the ability to change the Side Panels when watching a NTSC 4X3 image. When a 4X3 image is displayed on a 16X9 set, the sides do not reach the edges. To avoid excessive ageing at the 4X3 display area, the side panels IRE levels are raised. However, sometimes the customer may want to turn the side gray panels off. Through the Video Advanced features Menu the customer can do this. When the Side panels are turned off, the overall average ABL level for the image is reduced. To compensate, **QH03** ABL Switch is turned on. The Microprocessor in the Digital Module tells the Sub Microprocessor IC **I001** via **I²C** communication to output a high from the DAC lines pin **88** or **89**. This high is routed through the **PPT2** connector, either pin **1** or **2**, to the base of **QH03** or **QH05** turning either one **On**. This adds either Resistor **RH42** or **RH43** to the ABL pull up circuit and the ABL level drops slightly to compensate for the loss of brightness when the side panels go black.



RH32 manipulates the trigger point of shutdown dependant upon the ABL level avoiding false triggering.

NOTE: For the Circuit connected to the Xray Protect line, see the **PROTECT-OVP (A to B) SHUTDOWN DIAGRAM** for details on Page 01-04.

DP-5X Chassis A.B.L. Circuit Diagram



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AUDIO INFORMATION

**DP-5X
CHASSIS INFORMATION**

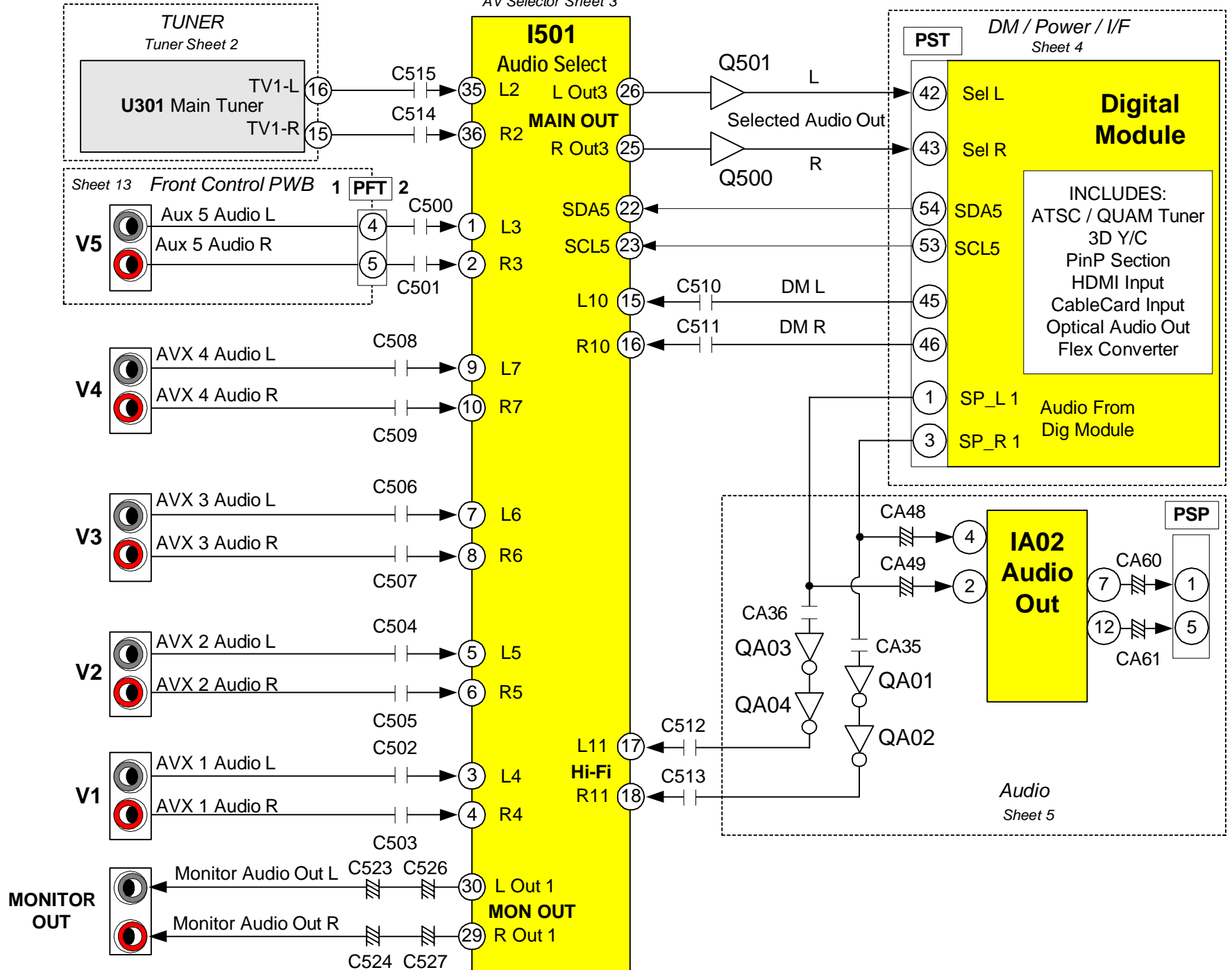
SECTION 03

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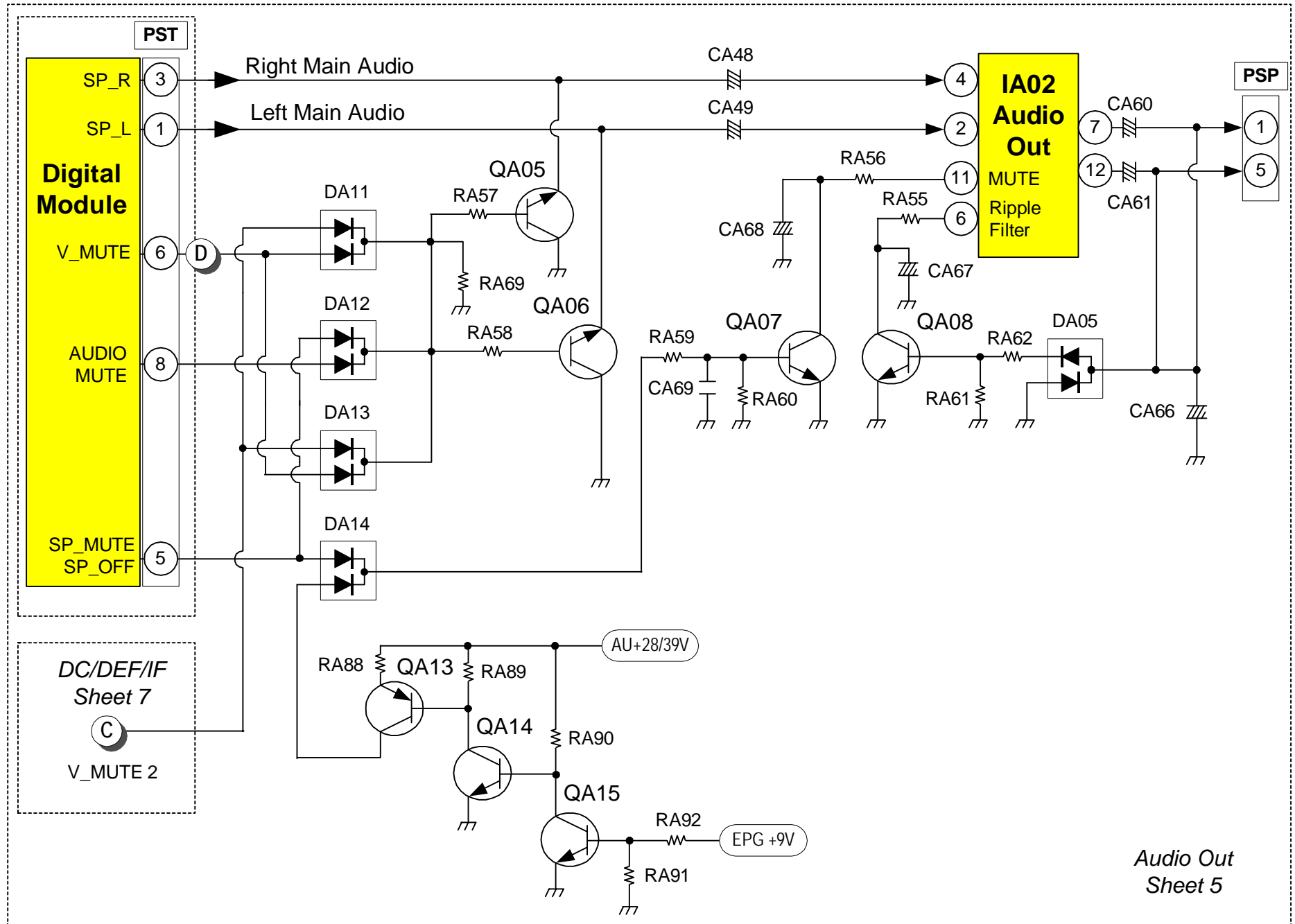
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DP-5X CHASSIS AUDIO SIGNAL SELECTION PATH CIRCUIT DIAGRAM

AV Selector Sheet 3

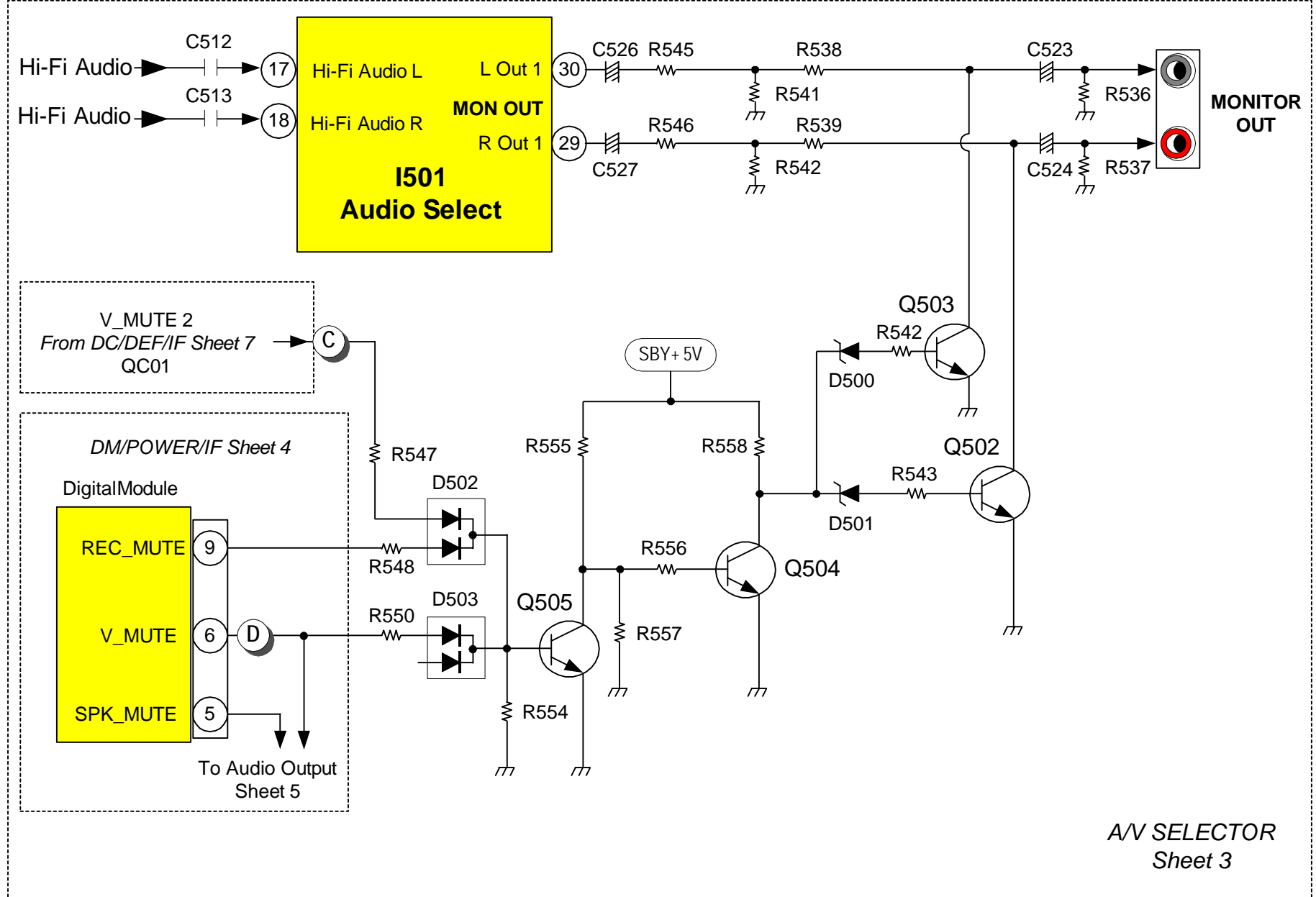


DP-5X CHASSIS AUDIO OUTPUT SELECTION MUTE CIRCUIT DIAGRAM



Audio Out
Sheet 5

DP-5X CHASSIS MONITOR OUTPUT MUTE CIRCUIT DIAGRAM



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DEFLECTION INFORMATION

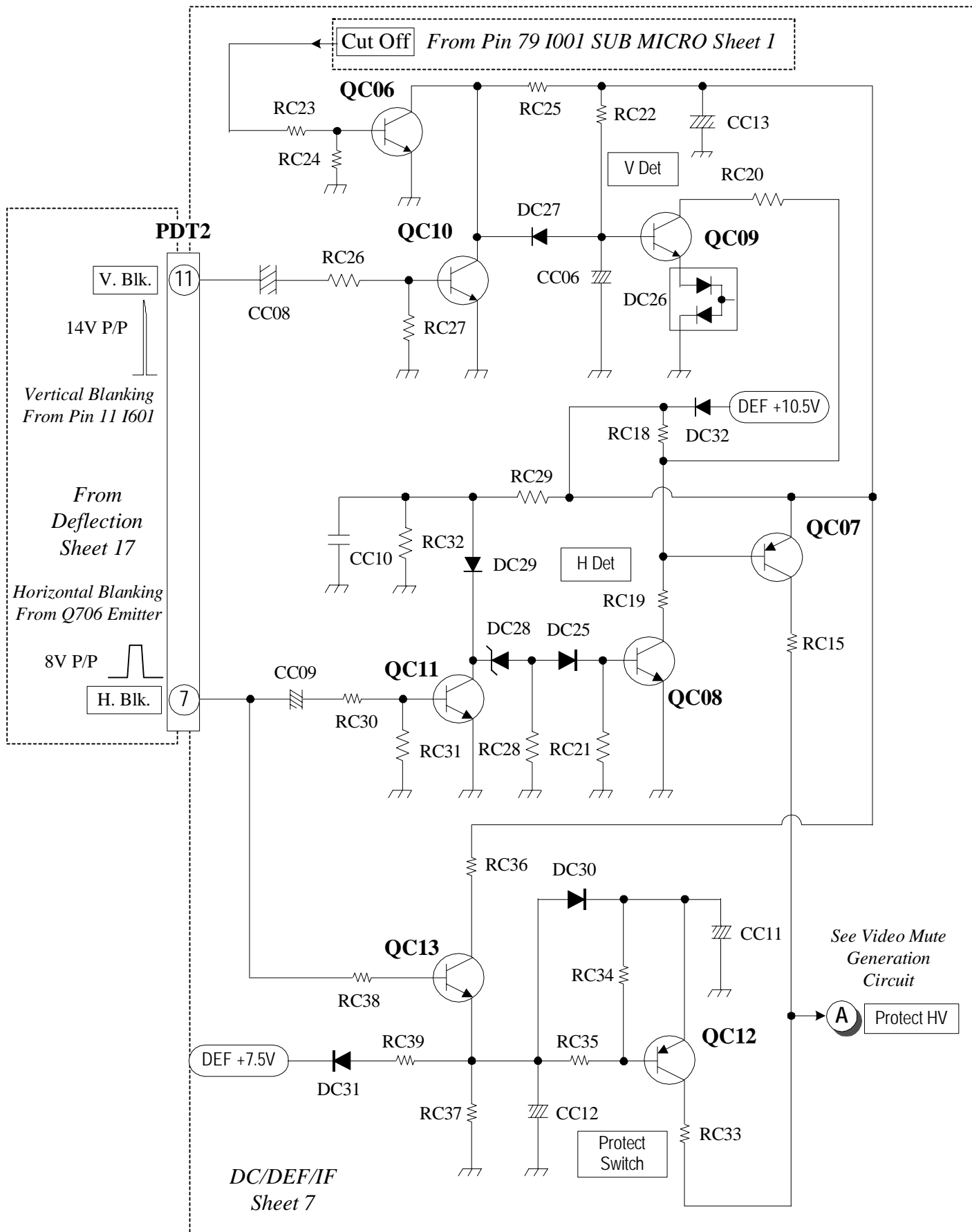
**DP-5X
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SECTION 04

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DP-5X SWEEP LOSS DETECTION CIRCUIT



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DIGITAL CONVERGENCE INFORMATION

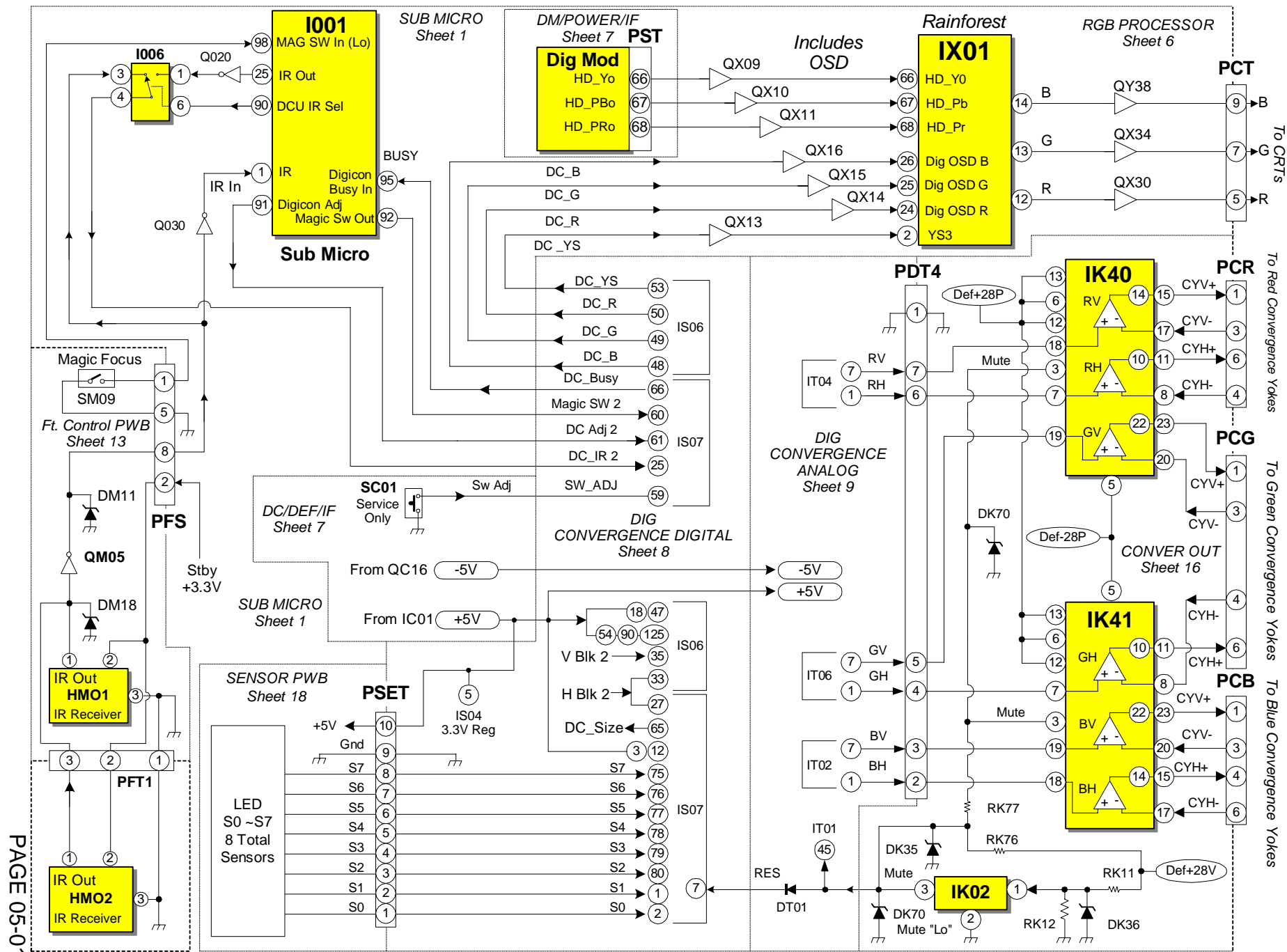
**DP-5X
CHASSIS INFORMATION**

SECTION 05

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DP-5X CHASSIS "DIGITAL CONVERGENCE" INTERCONNECTION CIRCUIT DIAGRAM




DP-55 REMOTE CONTROL CLU-4351UG2 (p/n HL02072)

When Convergence is adjusted by this Remote, this Remote must be changed to DCU mode. Remote begins in TV mode. Press and hold the "TV" key. Press all at one time, "MENU, INFO and (-) DASH" keys.

To return to normal TV mode. Press and hold the "TV" key. Press the "0" then "1" keys.

BLUE Select
13X9 Mode
(5 Times)

REMOVE COLOR
Outside Signal + Grid
Outside Signal + Cursor
Outside Signal w/o Cursor

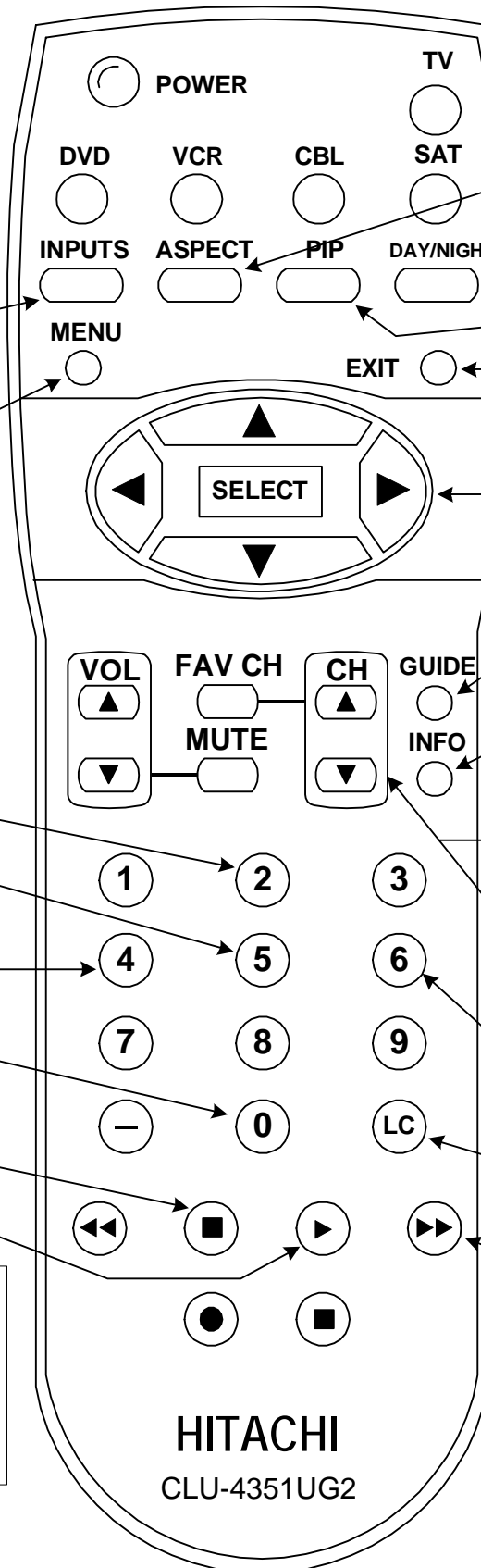
NOTE: Sensor Error Code place in DCAM, place TV in DCAM, press DAY/NIGHT then 

RED Select
7X5 Mode (5 Times)

INITIALIZE

RASTER POSITION

NOTE: The 3X3 mode can only be entered after the RAM is cleared. With Power Off press and hold the Service Only switch. Then Press the Power Button.



ROM WRITE

ROM READ
(Read Old ROM Data)

SINGLE CROSSHAIR

CROSSHATCH / VIDEO
(5 Times)

ADJUSTMENT

CALCULATION

GREEN Select
3X3 Mode (5 Times)

CH UP Moves
Adjustment Point
Counter Clockwise
Spiraling Outward

CH DW Moves
Adjustment Point
Clockwise Spiraling
Inward

CURSOR RIGHT

Removes
Adjustment Marker

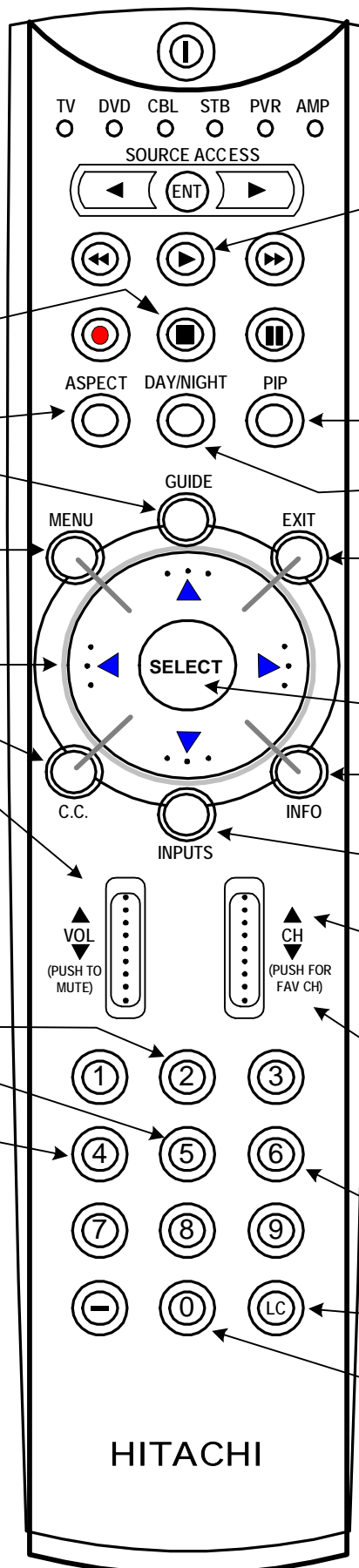
DCU PHASE

NOTE: DCU Phase
Press 
then the EXIT key

DP-57 REMOTE CONTROL CLU-3842WL HL02062

When Convergence is adjusted by this Remote, this Remote must be changed to DCU mode. Remote begins in TV mode. While holding the "ENT" key, press "MENU" then "INFO" keys. TV LED will blink 3 times. Can not change Source Access.

To return to normal TV mode. Remote begins in TV mode. Hold down the ENT key and enter 1345 (Hitachi Pre-Code).



NOTE: Sensor Error Code place Remote and TV in DCAM, press DAY/NIGHT then [C.C. button]

ADJUSTMENT POINT UP
ADJUSTMENT POINT DOWN
ADJUSTMENT POINT LEFT

NOTE: The 3X3 mode can only be entered after the RAM is cleared. With Power Off press and hold the Service Only switch. Then Press the Power Button.

DP-5X REMOTE INTO DCAM

ENTERING THE REMOTE CONTROL INTO THE DIGITAL CONVERGENCE MODE (DCAM).

To enter the Remote Control into DCAM do the following:

FOR THE CLU-3842WL

Remote must be in the TV mode. Use the **ENT** left or right to make the TV LED light.

Press and hold down the **ENT** Key

Press the **MENU** and then **INFO** key.

Remote TV LED will blink 3 times to indicate remote in the DCAM.

- **Note: The SOURCE ACCESS arrow Left and Right will no longer move the source to DVD, CBL, STB, PVR or AMP while the Remote is in DCAM.**
- **Also the LED will not light in DCAM.**

FOR THE CLU-435IUG2

Remote must be in the TV mode.

Press and hold down the "**TV**" button.

Press and hold down the "**MENU, INFO** and the (-) **DASH**" button.

Release all at one time.

To return the Remote Control into normal mode do the following:

FOR THE CLU-3842WL

Remote will already be in TV mode.

Press and hold down the **ENT** key and enter **1345** to select Hitachi pre-codes.

Remote TV LED will blink 3 times to indicate remote in normal mode.

FOR THE CLU-435IUG2

Press and Hold down the "**TV**" key.

Then press "**0**" and then "**1**" keys.

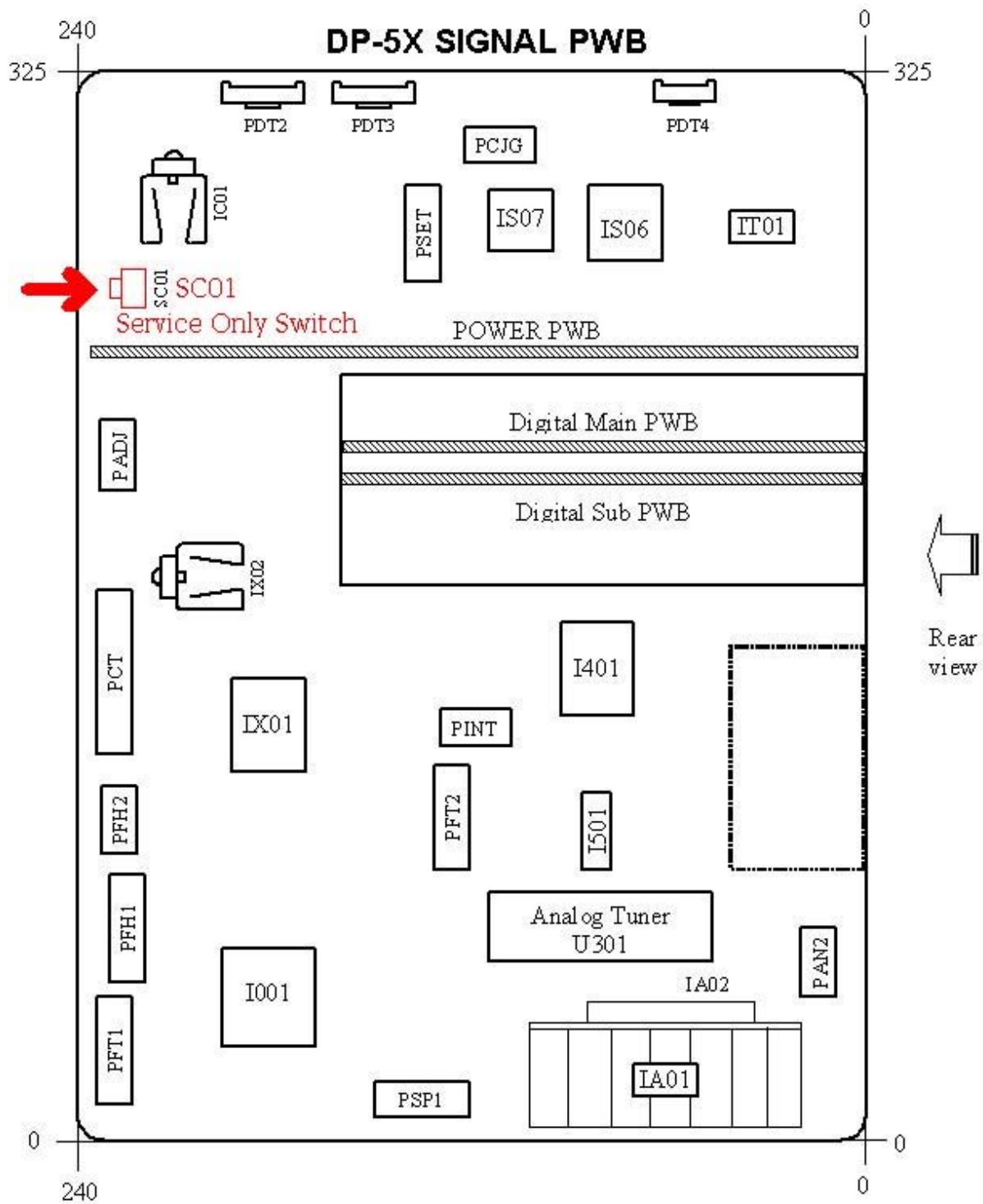
WARNING:

If the Remote Controls are left in the DCAM mode, then there will be problems operating the TV. One sure way to tell is to test the ASPECT key while the TV is in normal mode. The ASPECT key will not have any effect on the picture. In this case, the remote is in DCAM and must be returned to normal mode.

Note: * DCAM means Digital Convergence Adjustment Mode.

DP-5X SERVICE ONLY SWITCH LOCATION

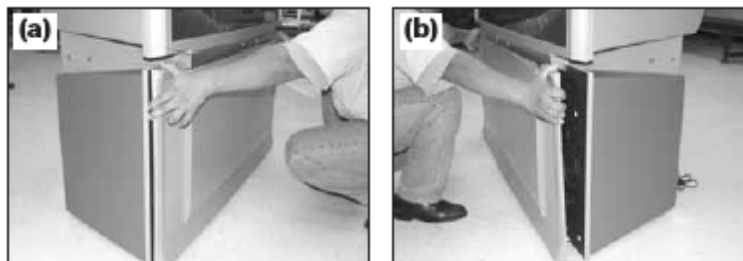
The Service Only Switch is located on the Signal PWB this year.



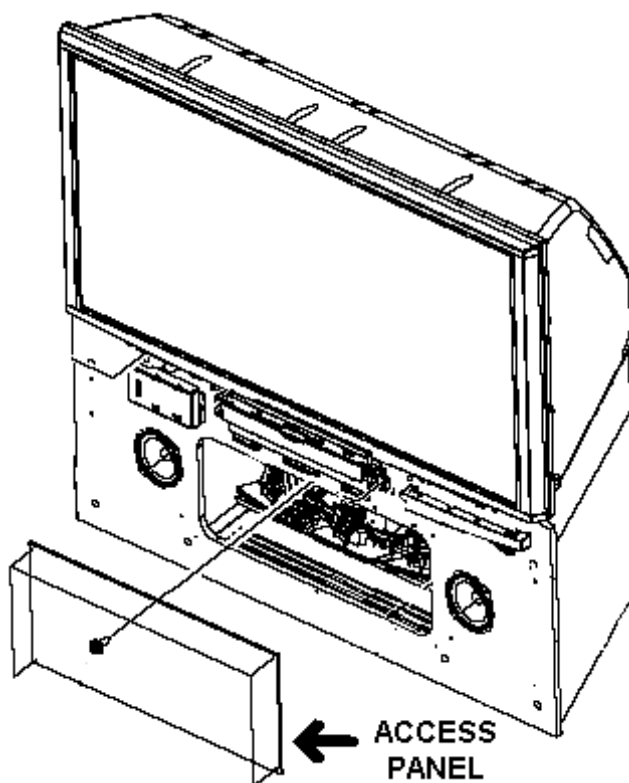
DP-5X GAINING ACCESS TO THE SERVICE ONLY SWITCH

To Get to the Service Only Switch;

1. Remove the speaker grille by grabbing the sides
2. Pulling left and right side see (a) (b).



3. Remove the Screws holding the Front Access Panel to the Cabinet.
4. Remove the Access Panel.



5. The Service Only Switch is located on the Signal PWB located on the Right Side.
 - See previous page for location on the Signal PWB.

DP-5X ENTERING DCAM VIA MAGIC FOCUS

ENTERING DIGITAL CONVERGENCE MODE (DCAM) WITHOUT REMOVING SPEAKER GRILL.

Note: The original Service Manual on page 34 had the wrong procedure. This page was modified on our web site 12/23/2005.

PROCEDURE: FOR THE CLU-4351UG2 THE REMOTE MUST BE PLACED IN THE "LINE ADJUST MODE" FIRST:

- See Picture of Remote on page 05-03.

To enter the Remote Control into Line Adjust Mode do the following:

Press all 4 keys and hold down [TV] + [ASPECT] + [9] + [INFO] button.
Release all the keys.
Remote is now in Line Adjust Mode.

To enter DCAM using the Remote Control do the following:

Remote is still in Line Adjust Mode
Press the STOP [■] button.
TV enters DCAM.

THE REMOTE MUST NOW BE PLACED INTO DCAM MODE TO MAKE ADJUSTMENTS:

To enter the Remote Control into DCAM do the following:

Remote must be in the TV mode.
Press all 4 keys and hold down [TV] + [MENU] + [INFO] + [-] (DASH) buttons.
Release all at one time.
Remote is now in DCAM.

Make all necessary Adjustments. Be sure to Save the Data and Initialize the Sensors when complete.

To Exit the TV from DCAM, Press the PLAY [►] then the [EXIT] keys, picture returns to normal.

To return the Remote Control into normal mode do the following:

Press and Hold down the [TV] key.
Then press [0] then the [1] key.

WARNING:

If the Remote Controls are left in the DCAM mode, then there will be problems operating the TV. One sure way to tell is to test the ASPECT key while the TV is in normal mode. The ASPECT key will not have any effect on the picture. In this case, the remote is in DCAM and must be returned to normal mode.

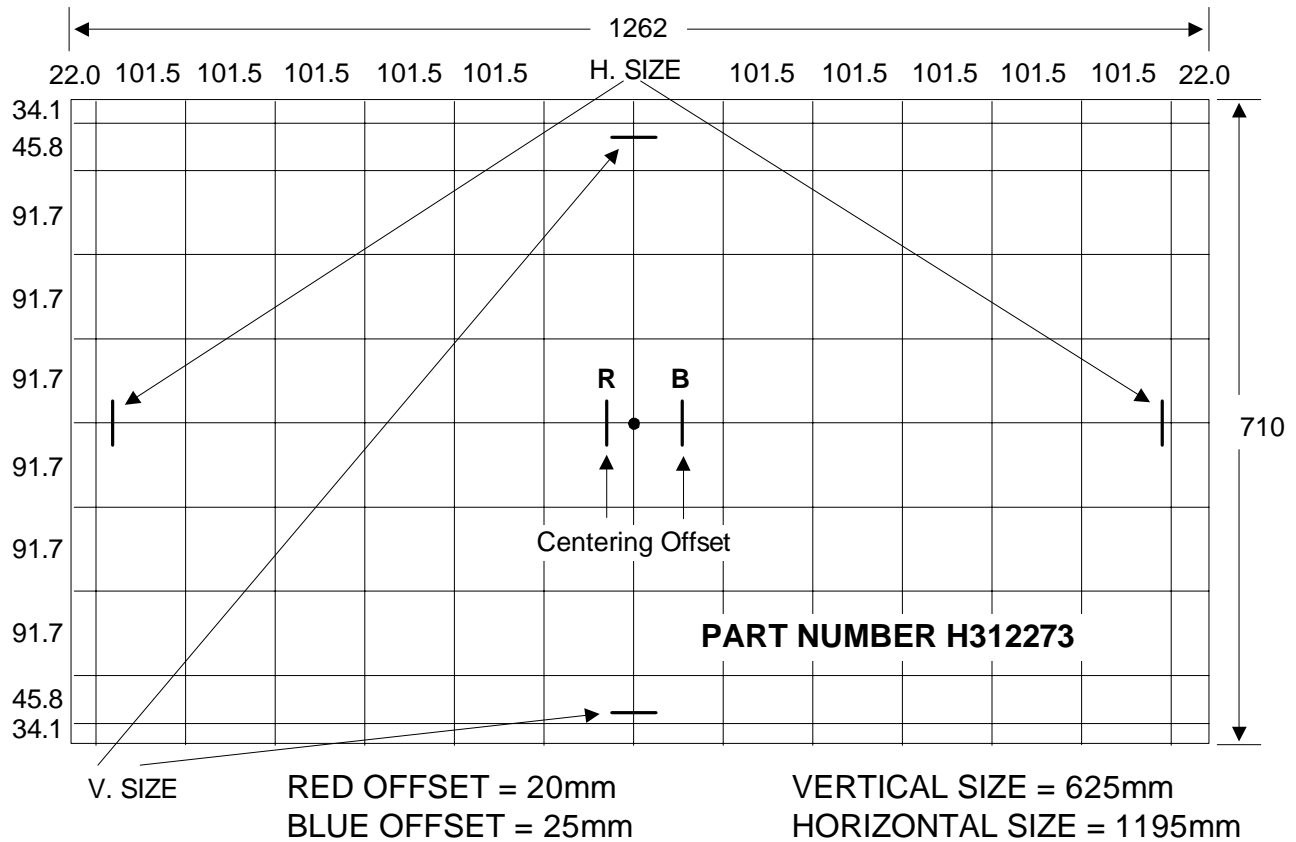
Note: * DCAM means Digital Convergence Adjustment Mode.

51F710A and 51F710R DP-55 and DP-57 Chassis OVERLAY DIMENSIONS



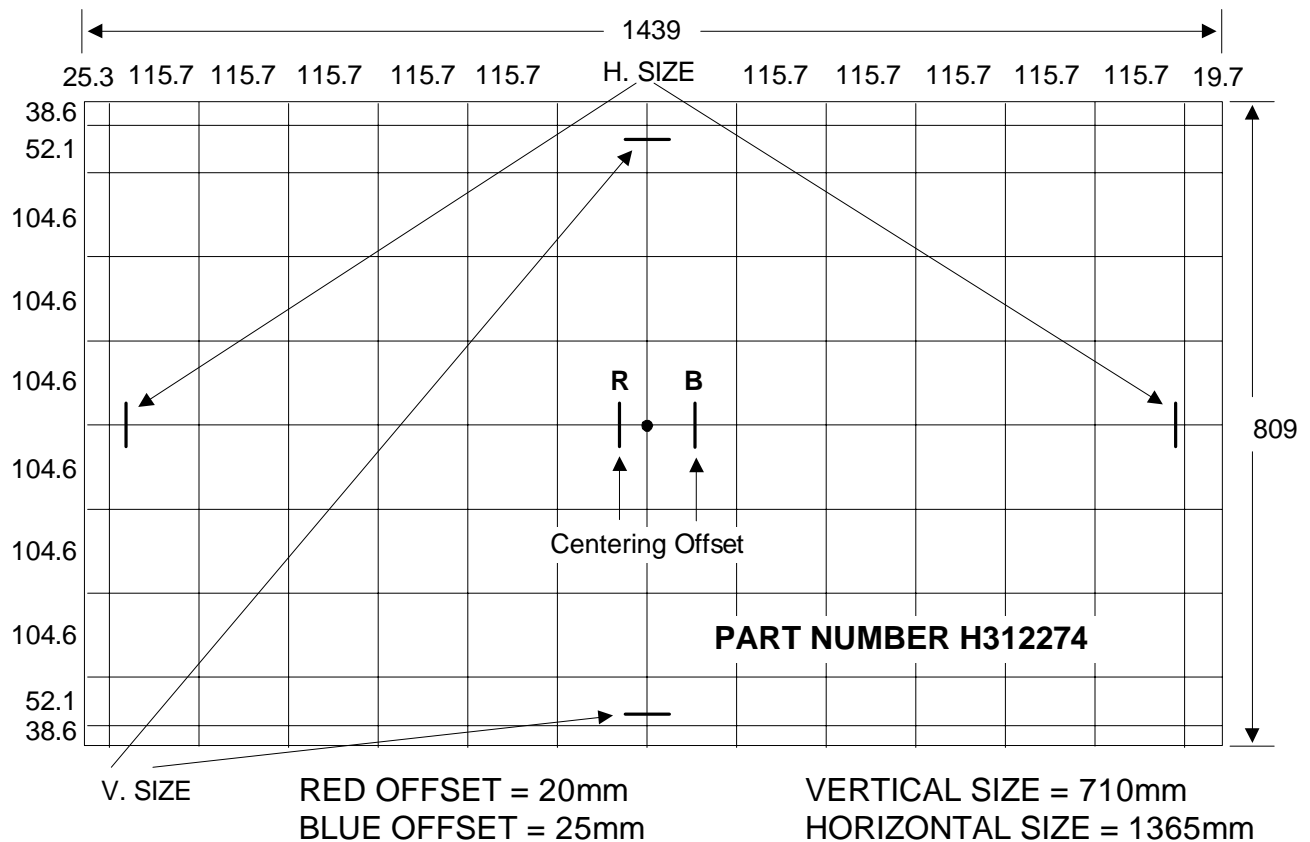
NOTE: Aspect may not be correct but dimensions are correct.
57 INCH DIGITAL CONVERGENCE OVERLAY DIMENSIONS

57F710A and 57F710R DP-55 and DP-57 Chassis OVERLAY DIMENSIONS



NOTE: Aspect may not be correct but dimensions are correct.
65 INCH DIGITAL CONVERGENCE OVERLAY DIMENSIONS

65F710A and 65F710R DP-55 and DP-57 Chassis OVERLAY DIMENSIONS

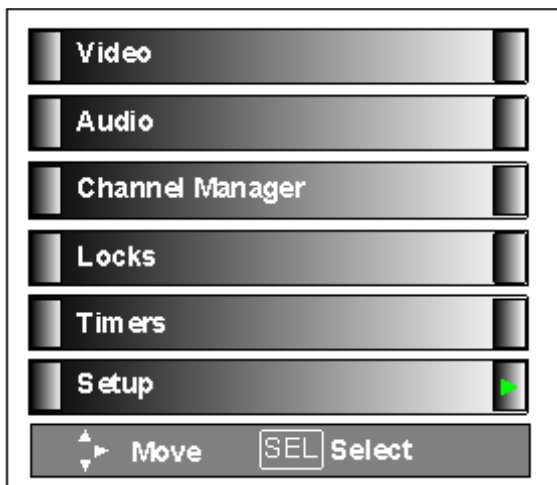


DP-5X MAGIC FOCUS TUNE UP VIA CUSTOMER'S MENU

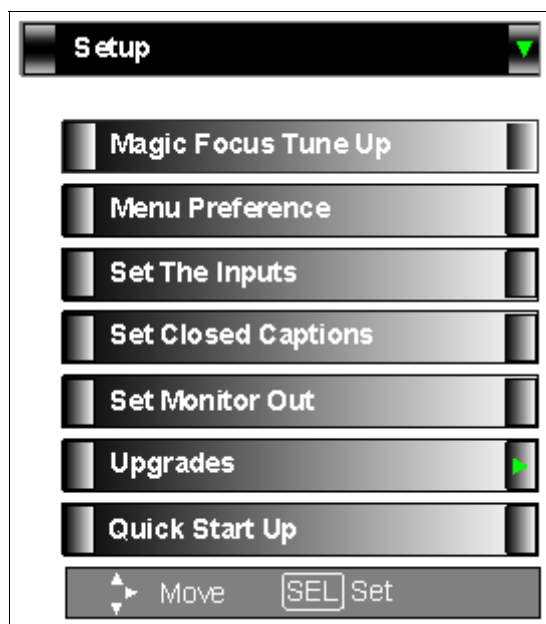
The Digital Convergence or Manual convergence can be accessed through the Customer's Menu. This section will outline the Customer's Menu selections under each condition.

To Access the Convergence Menu, press the **MENU** button on the remote control. The Customer's Menu will appear.

Navigate down by using the Cursor down button to highlight **Setup**.

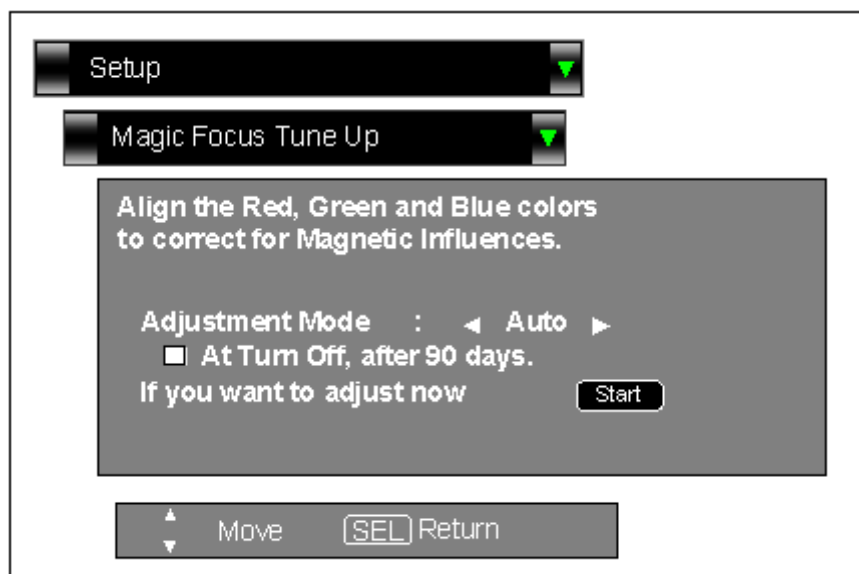


This will bring up the Customer's **Setup Menu**.



Navigate down by using the Cursor down button to highlight **Magic Focus Tune Up**.

With the Magic Focus Tune Up Menu now shown, Navigate down by using the Cursor down button to highlight **Start** and press the **Select** (center button between the cursor keys) and Magic Focus begins.



DP-5X MAGIC FOCUS TUNE UP VIA CUSTOMER'S MENU

Magic Focus begins displaying multi colored light patters and as the process advances, the marks below the wording Magic Focus gets closer and closer together until it completes.

If the "At Turn Off, 90 Days is checked, the set will automatically enter Magic Focus each 90 days when the set is turned off.

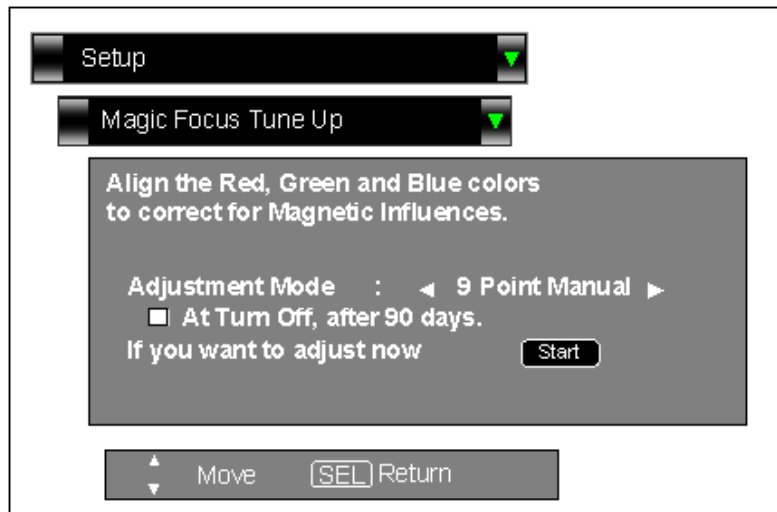


The Adjustment Mode can also be set for 9 Point and 117 Point Manual adjustments.

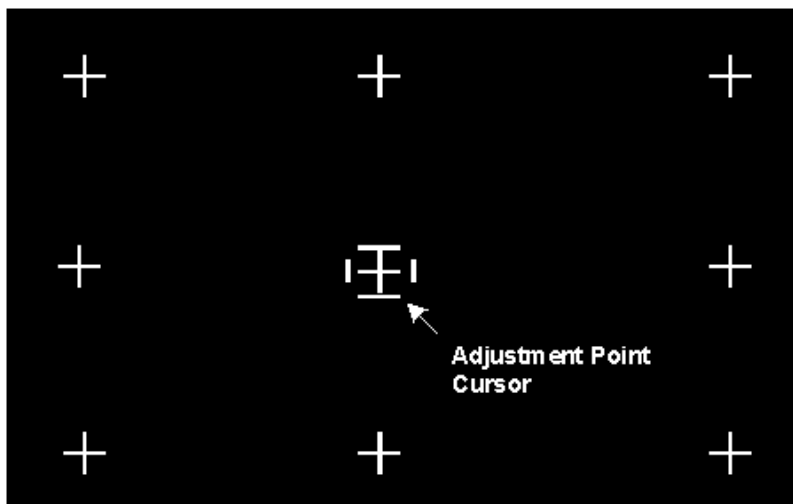
NOTE: Remember, the set must be turned on for at least 20 minutes before making an Manual adjustments. Allowing time for all circuits to reach temperature and to stabilize.

9 POINT CUSTOMER'S MANUAL CONVERGENCE ADJUSTMENT:

This indicates the 9 Point Manual Mode has been selected. Scroll down to **Start** and press the **Select** button to begin manual adjustments.



In this mode, 9 points on the screen can be adjusted Red or Blue. (Green is never adjusted manually).



DP-5X MAGIC FOCUS TUNE UP VIA CUSTOMER'S MENU

MOVING THE ADJUSTMENT POINT:

The adjustment point can be moved it two ways: (1) using the cursor keys, Note: The cursor must be white. (2) using the 2, 3, 4 and 6 keys. Note. When moving the adjustment point with the number keys, the adjustment point changes to Red.

SELECTION THE COLOR TO ADJUST:

Only Red or Blue can be adjusted in manual mode. By repeatedly pressing the Select Key on the remote, the adjustment point changes in the following manner: White ~ Red ~ Blue ~ White.

ADJUSTING THE SELECTED COLOR:

Once the alignment cursor is at the location in need of correction, and while the adjustment cursor is either Red and/or Blue, use the cursor keys on the remote to make the appropriate correction to the color to make the + white, with no offending color sticking out.

SAVING THE NEWLY MANUALLY ADJUSTED CONVERGENCE DATA:

When the affected color or mis-convergence is corrected, press the **EXIT** key on the remote. This will bring up another menu.

From this Menu, you can do the following.

CANCEL:

- Highlight **CANCEL** and press **SELECT**, the Magic Focus Tune UP menu is canceled and the picture returns to the Normal Picture.

DONE:

- Highlight **DONE** and press **SELECT**, the Magic Focus correction data is stored and the picture returns to the Normal Picture.

RESET:

- Highlight **RESET** and press **SELECT**, the Magic Focus correction data is returned to the previous state before any manual adjustments were made. In other words, the old ROM data is re-read and convergence returns to previous state.

BACK:

- Highlight **BACK** and press **SELECT**, and the screen will revert back to the 9 point adjustment screen where additional adjustment can be made. Press **EXIT** after making additional adjustments to return to this screen to Save the newly adjusted data.

NOTE: If the Adjustment mode is return to Auto, all Manual adjustments are lost.

NOTE: If the Magic Focus button is pressed, all Manual adjustments are lost.

The Adjustment Mode can also be set for 9 Point and 117 Point Manual adjustments.

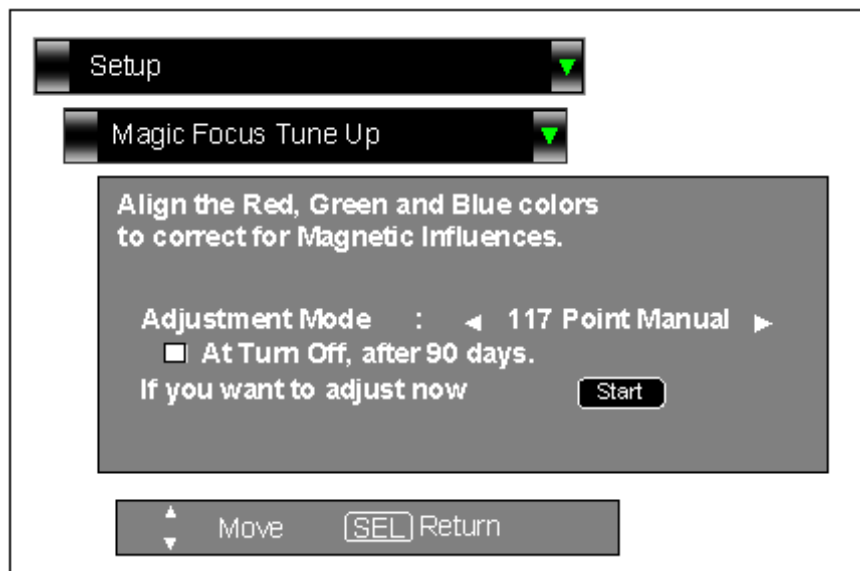
NOTE: Remember, the set must be turned on for at least 20 minutes before making an Manual adjustments. Allowing time for all circuits to reach temperature and to stabilize.

117 POINT CUSTOMER'S MANUAL CONVERGENCE ADJUSTMENT:

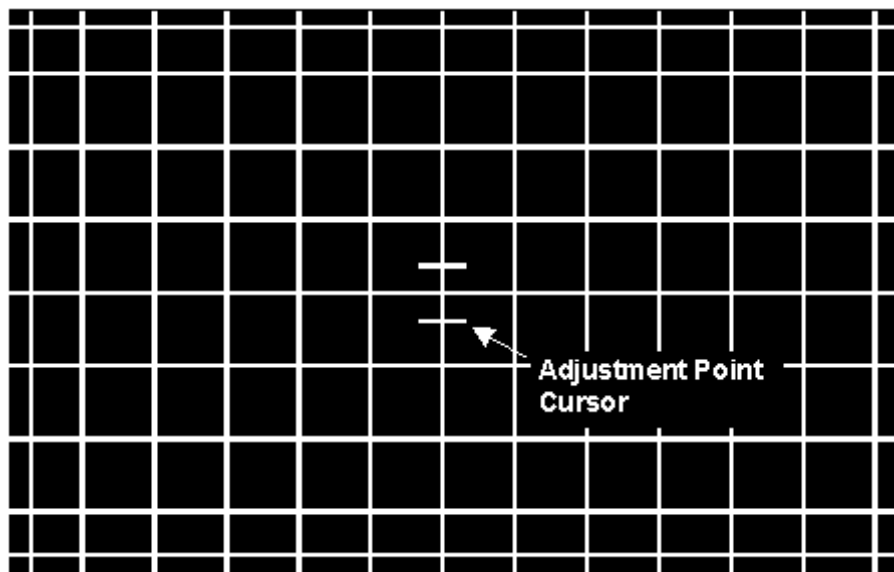
This indicates the 117 Point Manual Mode has been selected. Scroll down to **Start** and press the **Select** button to begin manual adjustments.



DP-5X MAGIC FOCUS TUNE UP VIA CUSTOMER'S MENU



In this mode, 117 points on the screen can be adjusted Red or Blue. (Green is never adjusted manually).



MOVING THE ADJUSTMENT POINT:

The adjustment point can be moved in two ways: (1) using the cursor keys, Note: The cursor must be white. (2) using the 2, 3, 4 and 6 keys. Note. When moving the adjustment point with the number keys, the adjustment point changes to Red.

SELECTION THE COLOR TO ADJUST:

Only Red or Blue can be adjusted in manual mode. By repeatedly pressing the Select Key on the remote, the adjustment point changes in the following manner: White ~ Red ~ Blue ~ White.

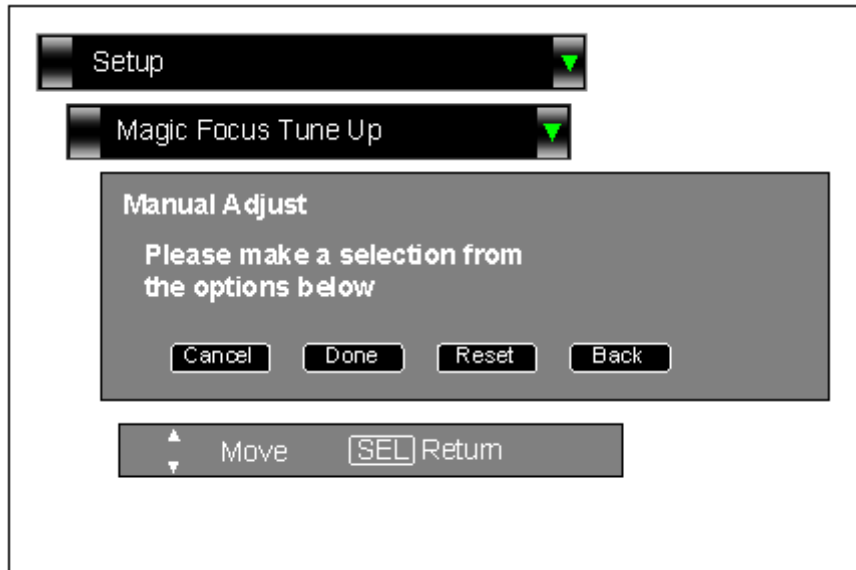
ADJUSTING THE SELECTED COLOR:

Once the alignment cursor is at the location in need of correction, and while the adjustment cursor is either Red and/or Blue, use the cursor keys on the remote to make the appropriate correction to the color to make the + white, with no offending color sticking out.

DP-5X MAGIC FOCUS TUNE UP VIA CUSTOMER'S MENU

SAVING THE NEWLY MANUALLY ADJUSTED CONVERGENCE DATA:

When the affected color or mis-convergence is corrected, press the **EXIT** key on the remote. This will bring up another menu.



From this Menu, you can do the following.

CANCEL:

- Highlight **CANCEL** and press **SELECT**, the Magic Focus Tune UP menu is canceled and the picture returns to the Normal Picture.

DONE:

- Highlight **DONE** and press **SELECT**, the Magic Focus correction data is stored and the picture returns to the Normal Picture.

RESET:

- Highlight **RESET** and press **SELECT**, the Magic Focus correction data is returned to the previous state before any manual adjustments were made. In other words, the old ROM data is re-read and convergence returns to previous state.

BACK:

- Highlight **BACK** and press **SELECT**, and the screen will revert back to the 9 point adjustment screen where additional adjustment can be made. Press **EXIT** after making additional adjustments to return to this screen to Save the newly adjusted data.

NOTE: If the Adjustment mode is return to Auto, all Manual adjustments are lost.

NOTE: If the Magic Focus button is pressed, all Manual adjustments are lost.

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CHASSIS PICTURES

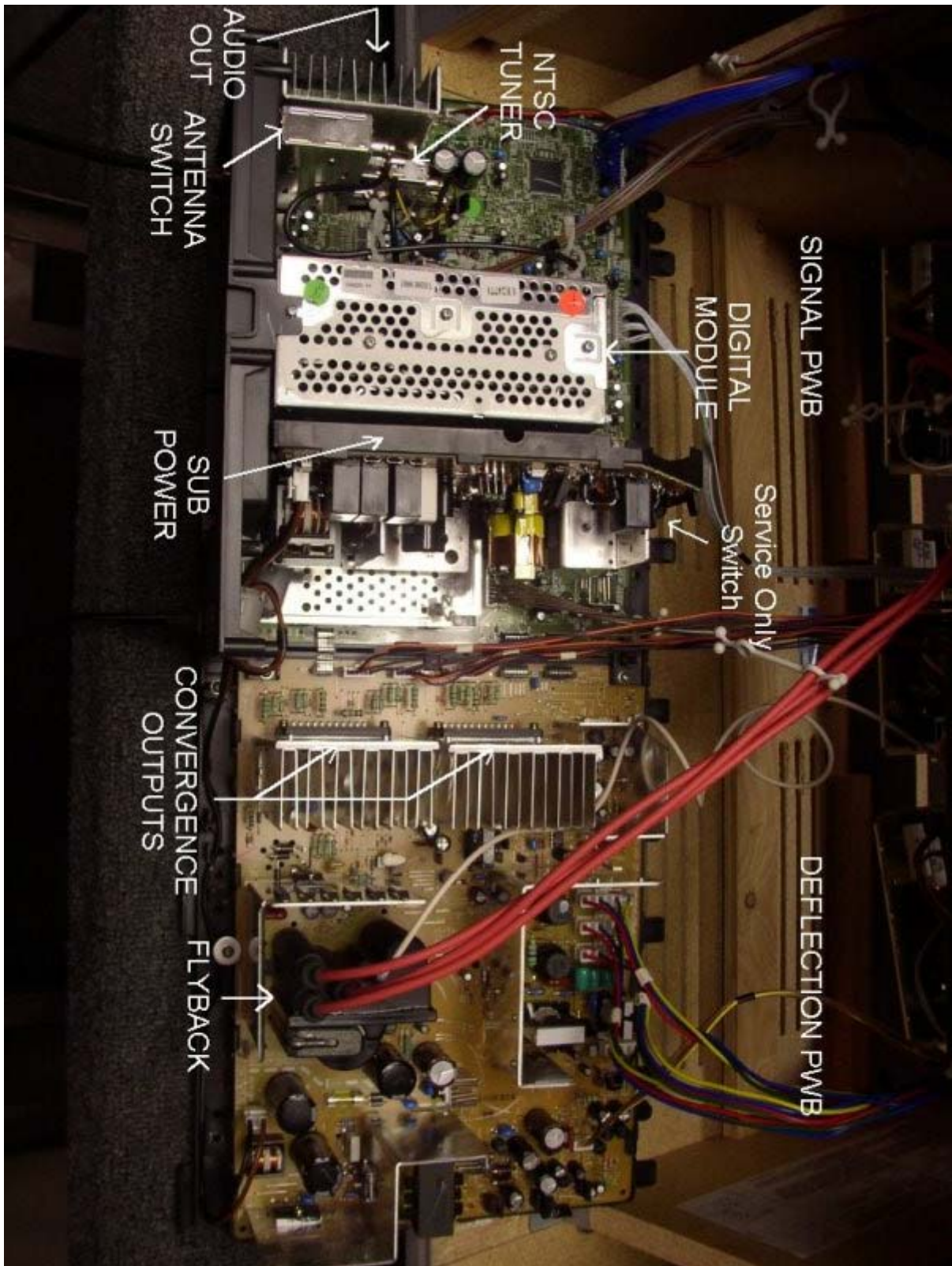
**DP-5X
CHASSIS INFORMATION**

SECTION 06

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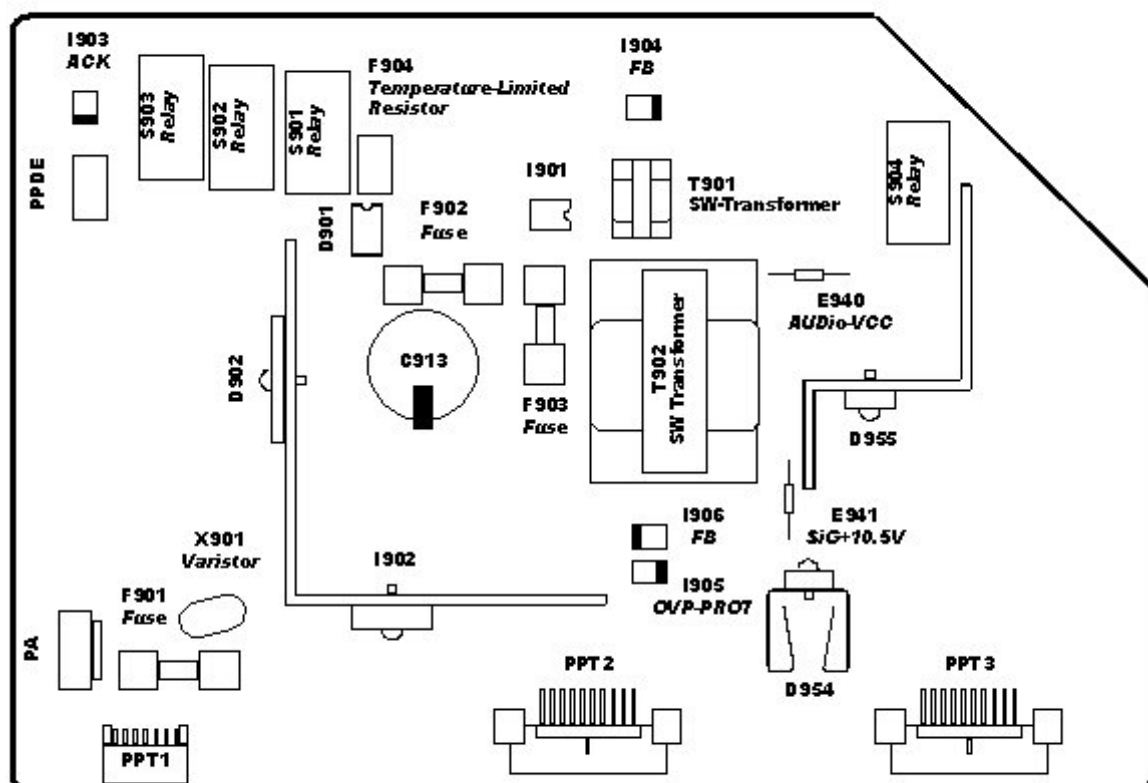
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DP-5X CHASSIS PICTURE



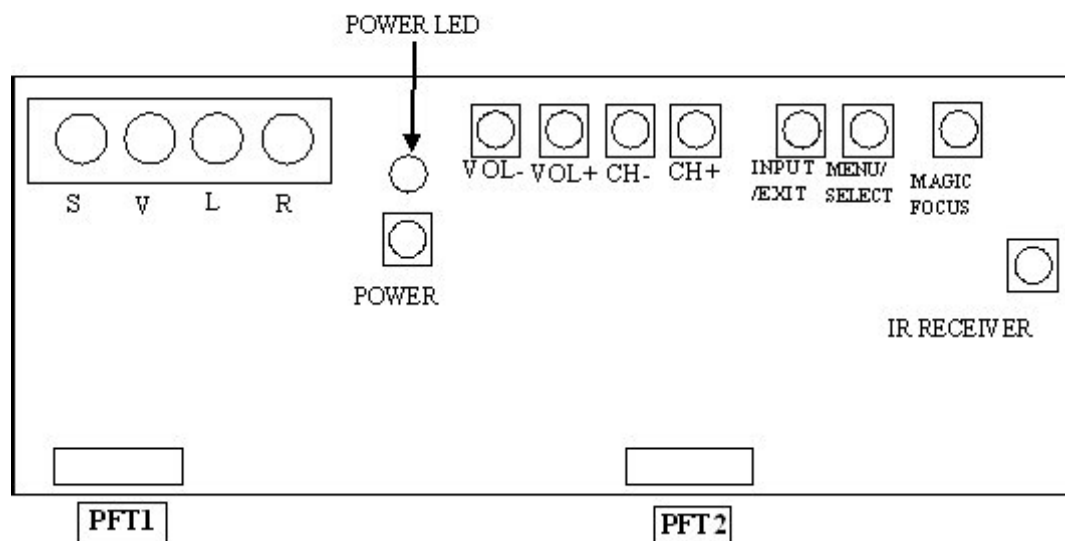
DP-5X CHASSIS PICTURE

DP5X POWER P.W.B.

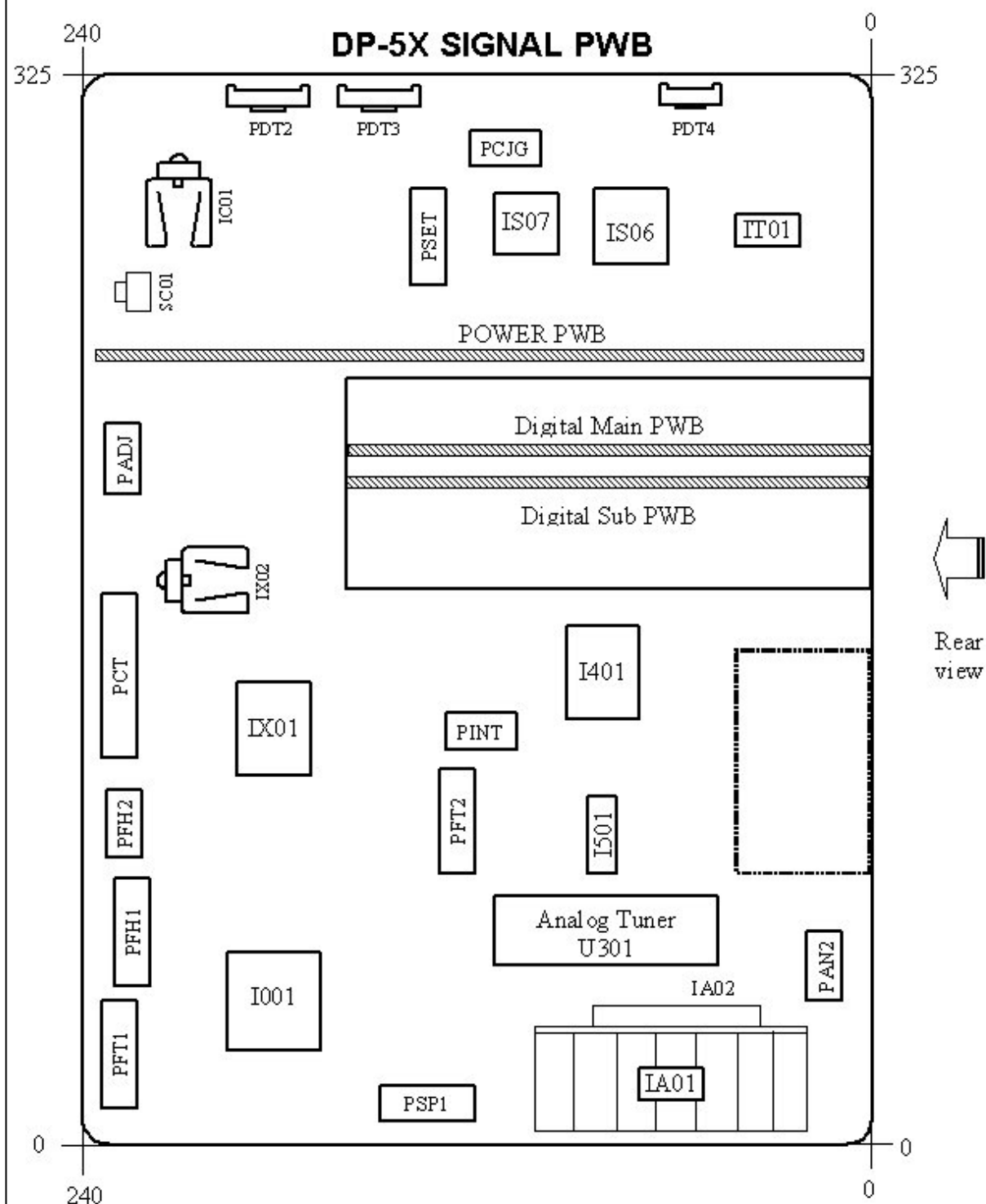


Back Cover Side

DP-5X CONTROL PWB

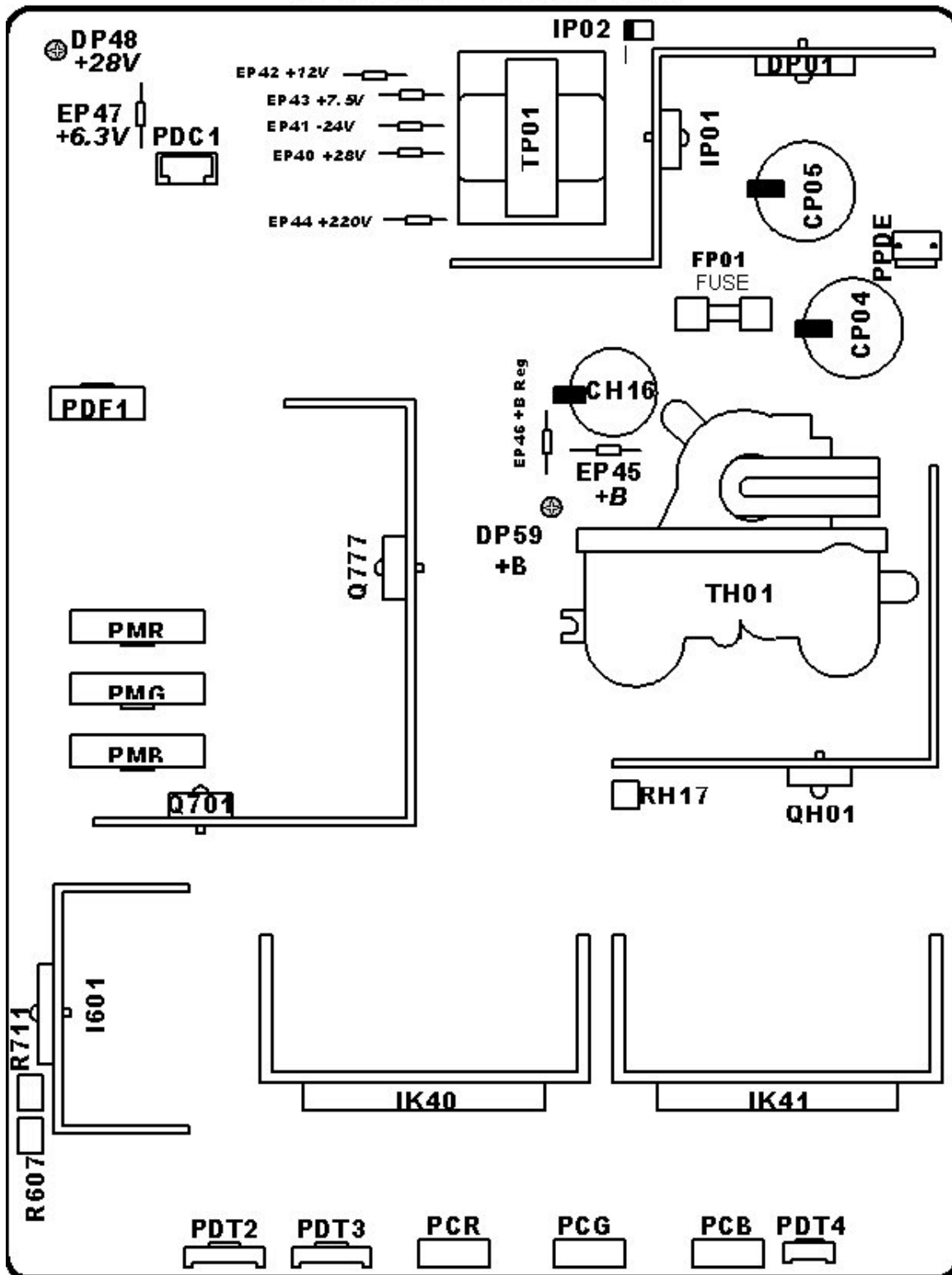


DP-5X CHASSIS PICTURE



DP-5X CHASSIS PICTURE

DP-5X DEFLECTION PWB

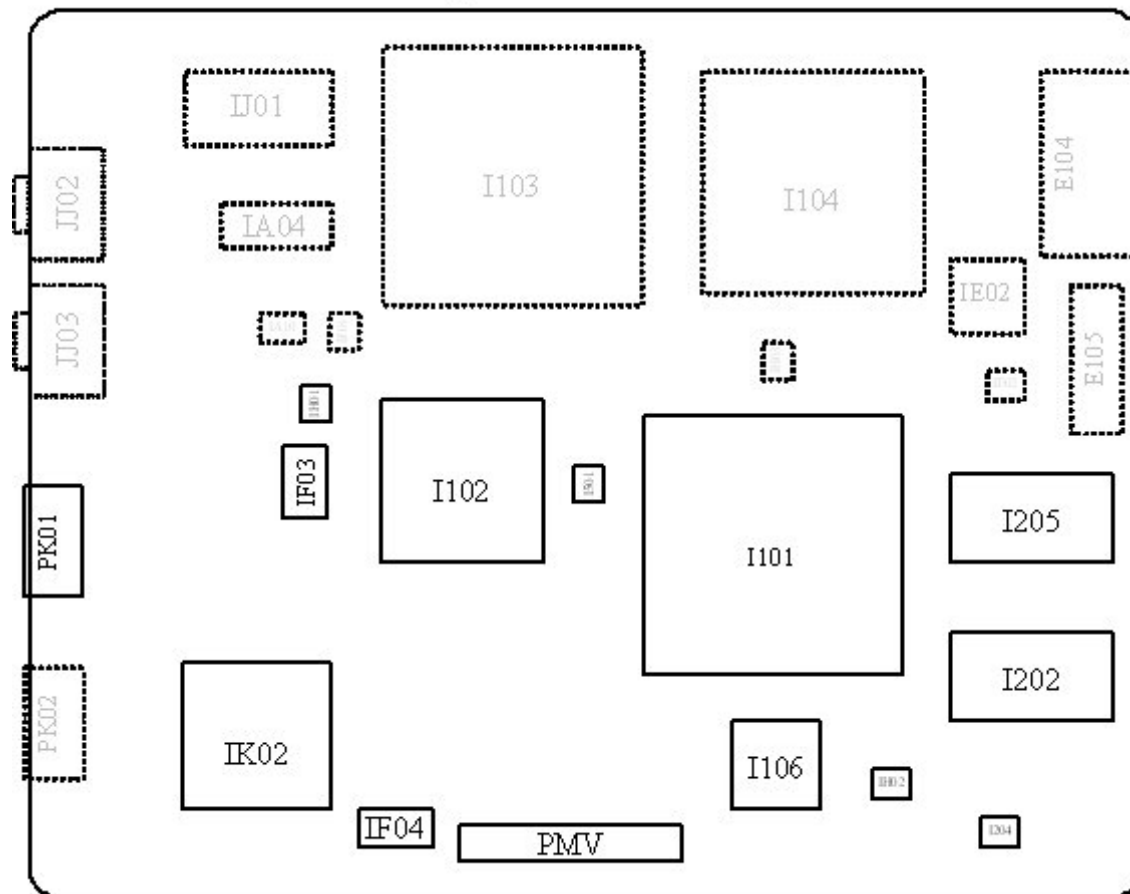


Back Cover Side

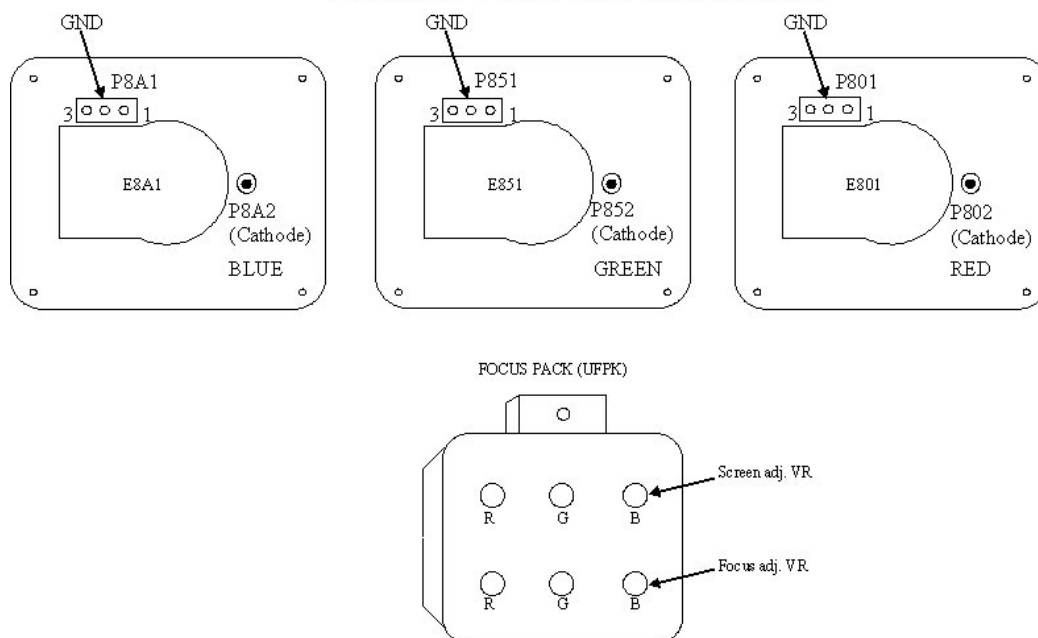


DP-5X CHASSIS PICTURE

Digital Main PWB Side A

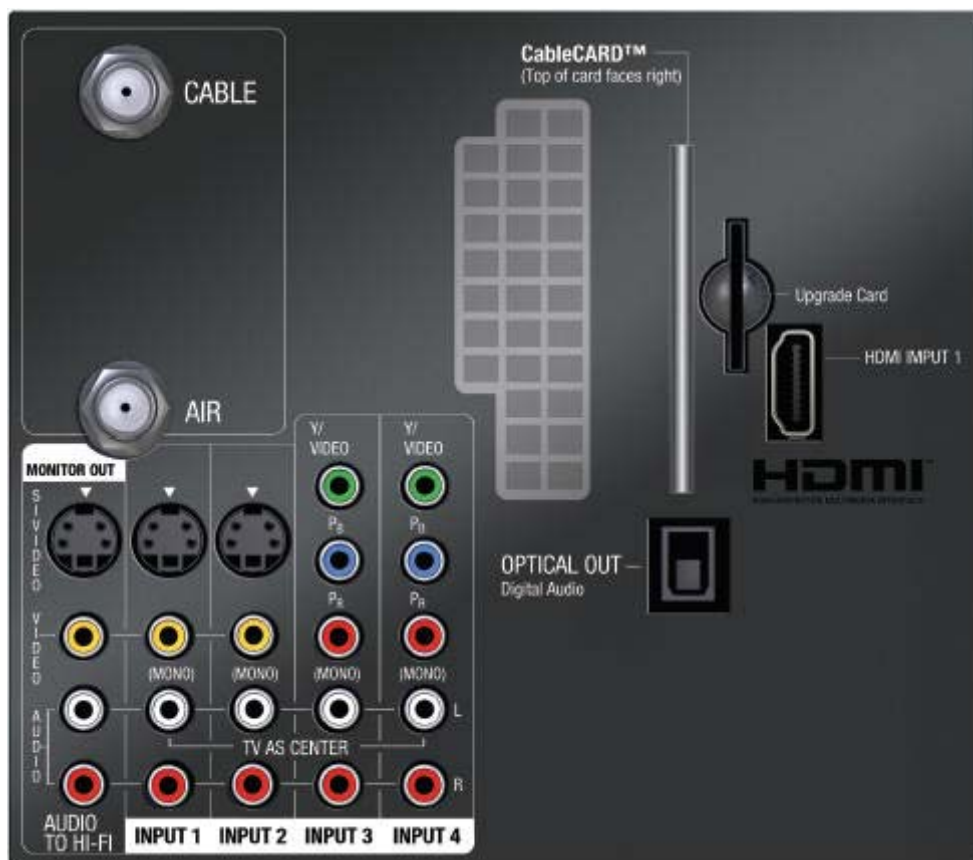


DP-5X CRT PWBs and FOCUS BLOCK



DP-5X PRODUCT INFORMATION

DP-5X REAR INPUT PANEL



DP-5X FRONT INPUT PANEL



DP-5X REMOTE CONTROL CLU-4351UG2 (p/n HL02072)



TROUBLE SHOOTING

**DP-5X
CHASSIS INFORMATION**

SECTION 07

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DP-5X TROUBLESHOOTING

SIGNAL POWER SUPPLY P.W.B.

Preparation for adjustment :

- Set the AC input power supply to 120V \pm 1V.
- Receive a Crosshatch pattern signal.
- Set the Contrast, Brightness controls to maximum.
- Heat Run for at least 30 seconds after the power is turned on.
- Audio : Mute.

Adjustment procedure

- Check the voltage of the Power supply as shown in the table below.
- When the power switch SM01 is turned ON, check that the relay is also turned ON.
- If using a dummy load, it is necessary to short S901 primary side terminal by jig.

Remarks The power supply voltage should be normal. There should be no abnormal operation of the protection circuit. (Latch) There should be no parts that generate an abnormal amount of heat. Make sure that there's no burning smell or smoke.

Table 1-1. DP55 and DP-57 Chassis

No.	Description	Measuring point		Hitachi Circle Pattern B/C max voltage spec		Dummy load (Ω) (W)		SET load (In Amps) (reference)
		+ side	- side					
1	SBY+5V	C957 (+)	C957 (-)	5.0	+/-0.2	89	0.5	0.056 A
2	Sig+5.6V	C951 (+)	C951 (-)	5.8	+/-0.2	2	18	2.86 A
3	Sig+10.5V	C947 (+)	C947 (-)	10.5	+/-0.5	8	15	1.3 A
4	Audio Vcc	C945 (+)	C945 (-)	31-35	Audio mute	440	5	0.08 A

Protection Circuit check

POWER SUPPLY PROTECTION

Apply a 1K ohm short to ground from PPT3 pin 7 (Sig +5.6V line).

S901 should turn off but this is not a Latch state

(Power back on by remote control 2nd push).

- 1st push power off.
- 2nd push, power on.

DP-5X TROUBLESHOOTING

DEFLECTION POWER SUPPLY P.W.B.

Preparation for adjustment :

- Set the AC input power supply to 120V \pm 1V.
- Receive a Crosshatch pattern signal.
- Set the Contrast, Brightness controls to maximum.
- Heat Run for at least 30 seconds after the power is turned on.
- Audio : Mute.

Adjustment procedure

- Check the voltage of the Power supply as shown in the table below.
- When the power switch SM01 is turned ON, check that the relay is also turned ON.
- If using a dummy load, it is necessary to short S901 primary side terminal by jig.

Remarks The power supply voltage should be normal. There should be no abnormal operation of the protection circuit. (Latch) There should be no parts that generate an abnormal amount of heat. Make sure that there's no burning smell or smoke.

Table 1-1. DP55 and DP-57 Chassis

No.	Description	Measuring point		Hitachi Circle Pattern B/C max voltage spec		Dummy load (Ω) (W)		SET load (In Amps) (reference)
		+ side	- side					
1	DEF+28V	CP46 (+)	CP46 (-)	28	+/-1.5	28	30	1.0 A
2	DEF-24V	CP47 (+)	CP47 (-)	-24	+/-1.5	33	20	0.75 A
3	DEF+12V	CP48 (+)	CP48 (-)	11	+/-0.5	193	1	0.06 A
4	DEF+7.5V	CP49 (+)	CP49 (-)	7	+/-0.5	8.5	6	0.83 A
5	DEF+6.3V	PPC1 (3)	PPC1 (4)	6.3	+/-0.2	9.1	4.4	0.69 A
6	DEF+220V	PPC1 (1)	PPC1 (4)	226	+/-2.0	1510	35	0.15 A
7	SW+115V	CH16 (+)	CH16 (-)	115	+/-1.5	140	100	0.825 A

Protection Circuit check

POWER SUPPLY PROTECTION

Apply a 1K ohm short circuit across DP58.

S901 should turn off but this is not a Latch state

(Power back on by remote control 2nd push).

- 1st push power off.
- 2nd push, power on.

DP-5X TROUBLESHOOTING

CONFUSED CROSSHATCH FROM DCU.

If Position Shifted Crosshatch (as show Figure 1) is displayed, check next items.

1. Execute "2-1 Write Standard Data (Item # 1)"
2. Check DCU Phase Data

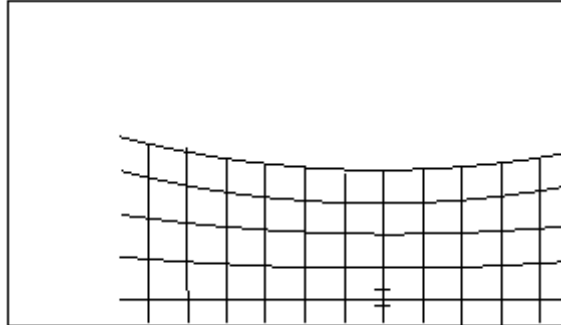


Figure 1 Example Image of Position Shifted DCU Crosshatch

If Confused Crosshatch (as show Figure 2) is displayed, check next items.

1. Assembly Error of DCU uCOM (IS07), EEPROM (IS01, IS0S**1), DCU LSI (IS06), DAC (IT01), PDT4 connector, or other peripheral parts
2. Solder-Bridge of DCU uCOM (IS07) pins 1, 2, 17, 24, 27, 32, 42, 49, 51, 55, 75 or 80.
3. Solder-Bridge of EEPROM (IS01, IS03*)
4. Solder-Bridge of DCU LSI (IS06) pins 5, 7, 14, 20, 25, 33, 35, 38, 39, 48, 50, 52, 60, 64, 79, 84, 88, 103, 110, 111, 118, 125, 128 or 142.
5. Solder-Bridge of DAC (IT01) pins 1, 5, 8, 9, 12, 13, 16, 17, 32, 33, 36, 37, 40, 41, 46, 47 or 48.
6. Solder-Bridge of PDT4 connector
7. "H.BLK/V.BLK" signal line (from PDT2 connector pins 7 or 11 to DCU LSI (IS06) pins 33 or 35).
8. PLL of DCU LSI (RS65, RS67 or CS32)
9. +5V Power supply line (from PDT3 connector pins 10 or 11 to DCU LSI (IS06))
10. +3.3V Power supply line (from +3.3V Regulator (IS04) pin 4 to DCU LSI (IS06))

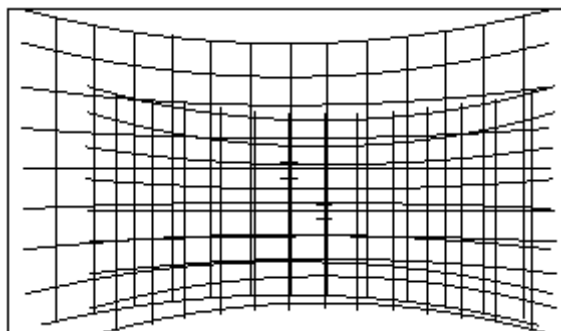


Figure 2 Example Image of Confused DCU Crosshatch

Note

*1 : IS03 (EEPROM) is only use by DP5X chassis.

DP-5X TROUBLESHOOTING

CONFUSED CROSSHATCH FROM DCU.

If No Correction Crosshatch (All channels, as show Figure 1) is displayed, check next items.

1. Execute "2-1 Write Standard Data (Item # 1)"
2. Assembly Error of Reset 1C (IS05), DCU LSI (IS06), DAC (IT01), or other peripheral parts
3. Solder-Bridge of DCU LSI (IS06) pins 5, 7, 14, 20, 25, 27, 29, 33, 35, 44, 52 or 88.
4. Solder-Bridge of DAC (IT01) pins 4, 5, or 45.
5. "Mute" signal line (from QC17-C to DAC (IT01) pin 45)
6. +5V Power supply line (from PDT3 connector pins 10 or 11 to DAC (IT01))

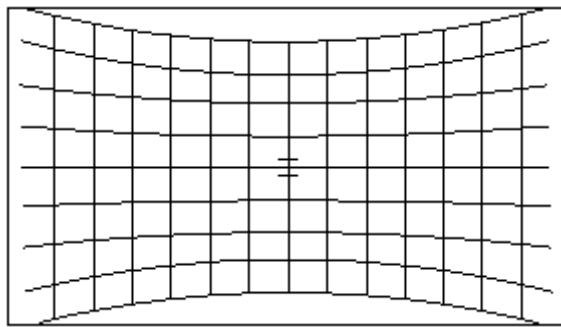


Figure 1 Example Image of No Correction DCU Crosshatch

If No Correction Crosshatch (Only one or two colors) are displayed, check next items.

1. Assembly Error of DCU LSI (IS06), DAC (IT01), Op-Amp (IT02 through IT07), PDT4 connector, or other peripheral parts
2. Solder-Bridge of DCU LSI (IS06) pins 60, 64, 79, 84, 98 or 103.
3. Solder-Bridge of DAC (IT01) pins 1, 3, 8, 9, 12, 13, 16, 17, 32, 33, 36, 37, 40, 41, 46 or 8.
4. Solder-Bridge of Op-Amp (IT02 through IT07)
5. Solder-Bridge of PDT4 connector
6. "Correction Data (Digital)" signal line (from DCU LSI (IS06) pins 60, 64, 79, 84, 98 or 103 to DAC (IT01) 1, 3, 46 or 48)
7. "Correction Data (Analog)" signal line (from DAC (IT01) pins 8, 12, 16, 33, 37 or 41 to PDT4 connector)
8. +5V Power supply line (from PDT3 connector pins 10 or 11 to Op-Amp (IT02 through IT07))
9. -5V Power supply line (from PDT3 connector pins 5 or 6 to Op-Amp (IT02 through IT07))

December, 2005

TB-PTV 01-05

Hitachi Home Electronics (America), Inc.
National Service

PTV
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TECHNICAL BULLETIN

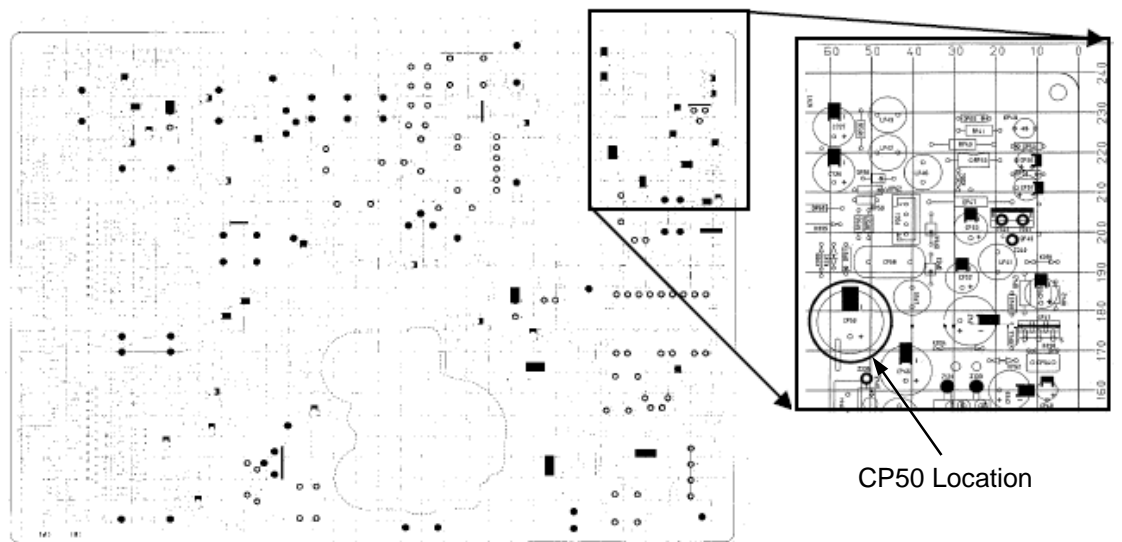
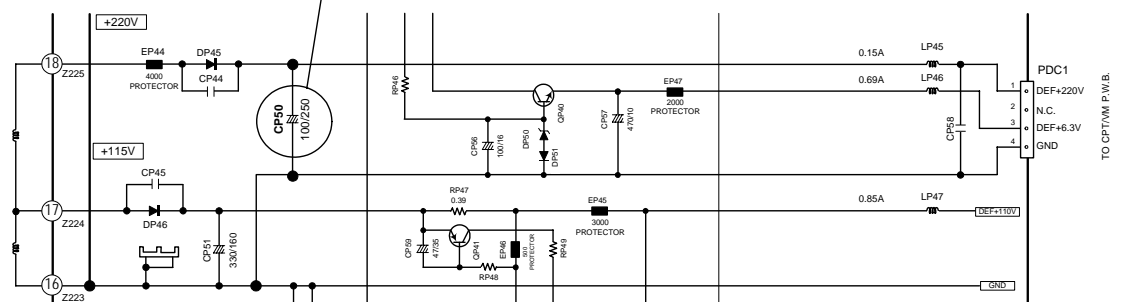
MODELS: 51F710A, 57F710A and 65F710A all DP-55 Chassis.
51F710E and 57F710E all DP-57 Chassis.

SUBJECT: CRT BURN PREVENTION

If one or more of the CRTs show signs of Phosphor Burns, please make the following counter measure to the filtration circuit on the Deflection +220V line.

Component	BEFORE		AFTER	
	Value	P#	Value	P#
CP50	100 uf/250 V	AL02323	220uf/250 V	AL00065S

Change CP50
From 100 uf/250 V AL02323
To 220 uf/250 V p/n AL00065S



DEFLECTION PWB

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KEY PARTS

**DP-5X
CHASSIS INFORMATION**

SECTION 08

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55 KEY PARTS LIST Page 1 of 2

#	SYMBOL	P/N	DESCRIPTION FUNCTION	PWB ASSY
1	A011	JP08641	DP55 MAIN DIGITAL PWB ASY MAIN DIGITAL ASS'Y	MAIN DIGITAL
2	A021	JP08507	DP55 SUB DIGITAL PWB ASY SUB DIGITAL ASS'Y	SUB DIGITAL
3	HM01	CZ01241	GP1FM514TZ0F IR TRANSMITTING/ RECEIVER	SUB DIGITAL
4	IM01	CK37218R	MONO IC TK11150CSCL 5 V VOLTAGE REGULATOR W ON/OFF SW (OPT AUDIO)	SUB DIGITAL
5	IM02	CK50961R	SN74CB3T3306DCUR DUAL FET BUS SWITCH (LEVEL CONVERTER 3.3V <=> 5V)	SUB DIGITAL
6	IM03	CK38326R	IC SN74LVC1G32DCKR SINGLE 2-INPUT POSITIVE-OR GATE	SUB DIGITAL
7	IP02	CK38851R	MAX5026EUT-T PWM STEP UP DC-DC CONVERTER (+34 V FOR VT)	SUB DIGITAL
8	IP05	CK52131R	ANALOG MONOLITHIC IC(VT221H) INTEGRATED STEP DOWN SWITCHING REGULATOR (D+3.3V)	SUB DIGITAL
9	IP12	CK51331R	TK11100CSCB-G ADJ POSITIVE LOW DROPOUT REGULATOR IC (ANALOG +5V)	SUB DIGITAL
10	IPG1	CK33543R	ANALOG MONOLITHIC IC(PST9227N SYSTEM RESET IC	SUB DIGITAL
11	IPS1	CK52141R	ANALOG MONOLITHIC IC(SC4517AI STEP DOWN SWITCHING REGULATOR (ANALOG +5V)	SUB DIGITAL
12	IR01	CK50051R	MAX4788EXS-T 50mA/100mA CURRENT-LIMIT SWITCHES (FOR SD/MMC)	SUB DIGITAL
13	IR02	CK38325R	DIGITAL MONOLITHIC IC (SN74LVC SINGLE SCHMITT TRIGGER BUFFER	SUB DIGITAL
14	IR03	CK38325R	DIGITAL MONOLITHIC IC (SN74LVC SINGLE SCHMITT TRIGGER BUFFER	SUB DIGITAL
15	IT01	CK37218R	MONO IC TK11150CSCL 5 V VOLTAGE REGULATOR W ON/OFF SW (FOR IF LOGIC)	SUB DIGITAL
16	IT02	CK37605R	IC TK11250CM 5 V VOLTAGE REGULATOR W ON/OFF SW (FOR DIG TUNER)	SUB DIGITAL
17	IT04	CK37218R	MONO IC TK11150CSCL 5 V VOLTAGE REGULATOR W ON/OFF SW (FOR OOB LOGIC)	SUB DIGITAL
18	IT05	CK51131R	UPC2711TB 5V MMIC WIDEBAND AMPLIFIER (FOR OOB)	SUB DIGITAL
19	IT06	CK51151R	UPC3221GV 5 V AGC AMPLIFIER	SUB DIGITAL
20	IT07	CK51141R	UPC3220GR CATV OUT-OF-BAND TUNER	SUB DIGITAL
21	IT08	CK51121U	THEATER313 DIGITAL RECEIVER	SUB DIGITAL
22	IT09	CK37211R	MONO IC TK11118CSCL 1.8 V VOLTAGE REGULATOR W ON/OFF SW (FOR IT08)	SUB DIGITAL
23	IT13	CK50071R	TPS62040DGQR HIGH EFFICIENCY STEP DOWN CONVERTER (1.1 V FOR IT08)	SUB DIGITAL
24	IV01	CK51091R	SN74LVC1G3157DCKR SINGLE-POLE, DOUBLE-THROW ANALOG SW	SUB DIGITAL
25	IV02	CK51632R	9DR32DW8-1046 IR BLASTER	SUB DIGITAL
26	IV03	CK38328R	IC SN74LVC1G125DCKR SINGLE BUS BUFFER GATE WITH 3-STATE OUTPUTS	SUB DIGITAL
27	IV04	CK51591R	WM8521H9GED/RV STEREO DAC WITH INTEGRATED OUTPUT STAGE	SUB DIGITAL
28	IV05	CK38328R	IC SN74LVC1G125DCKR SINGLE BUS BUFFER GATE WITH 3-STATE OUTPUTS	SUB DIGITAL
29	IW01	CK37218R	MONO IC TK11150CSCL 5 V VOLTAGE REGULATOR W ON/OFF SW (FOR POD IF)	SUB DIGITAL
30	IW02	CK08271R	DIGITAL MONOLITHIC IC (SN74LVC244PW) OCTAL BUFFER/DRIVER WITH 3-STATE OUTPUTS (FOR POD IF)	SUB DIGITAL
31	IW03	CK08271R	DIGITAL MONOLITHIC IC (SN74LVC244PW) OCTAL BUFFER/DRIVER WITH 3-STATE OUTPUTS (FOR POD IF)	SUB DIGITAL
32	IW04	CK38327R	DIGITAL MONOLITHIC IC (SN74LVC1G86DCKR) SINGLE 2-INPUT EXCLUSIVE-OR GATE	SUB DIGITAL
33	IW05	CK51161R	"PI5C32X245BEX 16-BIT, 2-PORT BUS SWITCH ""	SUB DIGITAL
34	IW06	CK38378R	"DIGITAL MONO IC SI-3012KM 1 A, LOW DROPOUT, 5V/3.3 V REGULATOR (FOR POD IF) ""	SUB DIGITAL
35	IW07	CK38326R	IC SN74LVC1G32DCKR SINGLE 2-INPUT POSITIVE-OR GATE	SUB DIGITAL
36	IW08	CK38917R	DIGITAL MONOLITHIC IC (SN74LVC32APWR) QUADRUPLE 2-INPUT POSITIVE-OR GATES	SUB DIGITAL
37	IW09	CK36321R	SN74LVC125APW QUADRUPLE BUS BUFFER GATE WITH 3-STATE OUT (POD IF)	SUB DIGITAL
38	IW10	CK08271R	DIGITAL MONOLITHIC IC (SN74LVC244PW) OCTAL BUFFER/DRIVER WITH 3-STATE OUTPUTS (FOR POD IF)	SUB DIGITAL
39	IW11	CK08271R	DIGITAL MONOLITHIC IC (SN74LVC244PW) OCTAL BUFFER/DRIVER WITH 3-STATE OUTPUTS (FOR POD IF)	SUB DIGITAL
40	IW12	CK08271R	DIGITAL MONOLITHIC IC (SN74LVC244PW) OCTAL BUFFER/DRIVER WITH 3-STATE OUTPUTS (FOR POD IF)	SUB DIGITAL
41	IXJ1	CK51331R	TK11100CSCB-G ADJ POSITIVE LOW DROPOUT REGULATOR IC (ANALOG +9V)	SUB DIGITAL
42	UT01	HJ00541	ENV56N01D5F DIGITAL TUNER	SUB DIGITAL

55 KEY PARTS LIST Page 2 of 2				
#	SYMBOL	P/N	DESCRIPTION FUNCTION	PWB ASSY
43	DJ02	CH02673R	LED SM3517F6T (GREEN) LED	SIGNAL
44	DJ03	CH02673R	LED SM3517F6T (GREEN) LED	SIGNAL
45	I001	CK50991U	M306H3MC-067FP TV SUB μ CON	SIGNAL
46	I002	CK51111R	BD37A41FVM VOLTAGE DETECTOR IC W/ WATCHDOG TIMER	SIGNAL
47	I004	CK37216R	MONO IC TK11133CSCL 3.3 V VOLTAGE REGULATOR WITH ON/OFF SWITCH	SIGNAL
48	I005	CK50951R	SN74CB3T3125PWR QUADRUPLE FET BUS SWITCH	SIGNAL
49	I006	CK51091R	SN74LVC1G3157DCKR SINGLE-POLE, DOUBLE-THROW ANALOG SW	SIGNAL
50	I301	CP05163S	IC SI-3090F(LF1111) LOW DROPOUT VOLTAGE 9.3 V IC REGULATOR	SIGNAL
51	I302	CK37605R	IC TK11250CM 5 V VOLTAGE REGULATOR W ON/OFF SW	SIGNAL
52	I401	CK39882U	MM1630CQ VIDEO SELECTOR IC	SIGNAL
53	I501	CK39891R	MM1631XJBE AUDIO SELECTOR IC	SIGNAL
54	I591	CP05163S	IC SI-3090F(LF1111) LOW DROPOUT VOLTAGE 9.3 V IC REGULATOR	SIGNAL
55	IA02	2004752	TA8200AHQ DUAL AUDIO POWER AMPLIFIER	SIGNAL
56	IC01	CP08551U	S7805PI 5 V FIXED VOLTAGE REGULATOR	SIGNAL
57	IS01	CK39652R	DIGITAL MONOLITHIC IC (BR24L32FJ-WE2) 4K x 8 BIT EEPROM	SIGNAL
58	IS04	CK37216R	MONO IC TK11133CSCL 3.3 V VOLTAGE REGULATOR WITH ON/OFF SWITCH	SIGNAL
59	IS05	CK37052R	ANALOG MONOLITHIC IC(BD4742G) RESET IC	SIGNAL
60	IS06	CK38242U	DIGITAL MONOLITHIC IC (YGT-043-E1) DCU GATE ARRAY	SIGNAL
61	IS07	CK52631U	HD64336047A13HV DCU MICON H8 FAMILY/H8/300H TINY SERIES	SIGNAL
62	IT01	CK36942R	DIGITAL MONOLITHIC IC (CD0031BM) DCU D/A	SIGNAL
63	IT02	CK37061R	ANALOG MONOLITHIC IC(NJM4565) DUAL OPERATIONAL AMPLIFIER (DCU LPF)	SIGNAL
64	IT03	CK37061R	ANALOG MONOLITHIC IC(NJM4565) DUAL OPERATIONAL AMPLIFIER (DCU LPF)	SIGNAL
65	IT04	CK37061R	ANALOG MONOLITHIC IC(NJM4565) DUAL OPERATIONAL AMPLIFIER (DCU LPF)	SIGNAL
66	IT05	CK37061R	ANALOG MONOLITHIC IC(NJM4565) DCU DUAL OPERATIONAL AMPLIFIER	SIGNAL
67	IT06	CK37061R	ANALOG MONOLITHIC IC(NJM4565) DCU DUAL OPERATIONAL AMPLIFIER	SIGNAL

DP-5X KEY PARTS INFORMATION

DP-55 PWB and OTHER MAJOR PARTS PARTS LIST	
JP08507	DP55/57 SUB DIGITAL PWB ASY
JP08641	DP57 MAIN DIGITAL PWB ASY
JT25012	DP55 SIGNAL PWB ASY
JT25022	DP55 POWER PWB ASY
JT25032	DP55 DEFLECTION .PWB ASY
JT25042	DP55 SENSOR / IR SUB PWB ASY
JT25052	DP55 CPT/CONTROL PWB ASY
PWB ASSEMBLIES	
UE24572	MAIN CHASSIS
UE24592	DP55 SIGNAL B. ASY
UE24771	DP55 DIGITAL CORE B. ASY
UE24602	DP55 POWER DEFLECTION. B. ASY
OTHER COMPONENTS	
HC00642	ANALOG TUNER U301
HP00774	ANTENNA SWITCH BOX YAA41-0188N
BW03171	FLYBACK TH01
AZ00726	FOCUS BLOCK ASSEMBLY 51" AND 57"
AZ00165	FOCUS BLOCK ASSEMBLY 65"
CRTS, SCREENS, ULTRASHIELDS, MIRRORS, SPEAKER GRILLS	
51F710A	
UE25051	DP55 51 PRT ASSY (R)
UE25052	DP55 51 PRT ASSY (G)
UE25053	DP55 51 PRT ASSY (B)
KR03491	SCREEN ASSY 51"
NT04072	SCREEN FRAME 51"
KR02074	ULTRASHIELD 51"
KS07996	MIRROR GLASS 51"
PH34102	SPEAKER GRILLE ASSY 51"
57F710A	
UE25054	DP55 57 PRT ASSY (R)
UE25055	DP55 57 PRT ASSY (G)
UE25056	DP55 57 PRT ASSY (B)
KR03492	SCREEN ASSY 57"
NT04082	SCREEN FRAME 57"
KR03265	ULTRASHIELD 57"
KS07993	57" MIRROR GLASS
PH33952	SPEAKER GRILLE ASSY 57"
65F710A	
UE25061	DP55 65 PRT ASSY (R)
UE25062	DP55 65 PRT ASSY (G)
UE25063	DP55 65 PRT ASSY (B)
KR03493	SCREEN ASSY 65"
NT04662	SCREEN FRAME 65"
KR03263	ULTRASHIELD 65"
KS08151	MIRROR GLASS 65"
PH34151	SPEAKER GRILLE ASSY 65"

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