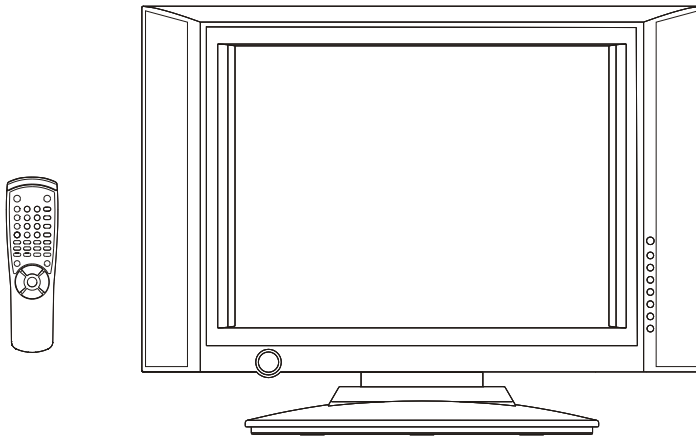


SERVICE MANUAL

H-LCD2001

8T83 CHASSIS

HYUNDAI



15.1INCH LCD TV
MANUAL

*Design and specifications are subject to change without prior notice.
(ONLY REFERENCE)*

ENGINEER BY:

CHECKED BY:

PPROVED BY:FROLOV V.

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TECHNICAL SPECIFICATION

FEATURES:

- AC 100-240V 50/60Hz
- MULTI SYSTEM: PAL BG/DK/I, SECAM BG/DK, NTSC M, NTSC 3.58/4.43
(AV ONLY) PLAYBACK
- 256 PROGRAMS MEMORY
- Frequency SYNTHESISED TUNING SYSTEM
- BLUE BACK FUNCTION
- 120 MINUTES SLEEP TIMER
- FULL AUTO PROGRAM
- 1 AV INPUT+1 S-VIDEO INPUT+1 SCART (CVBS/RGB 4:30 INPUT OR Y、Cb、Cr
INPUT+1 TV +PC VGA
- FOUR PICTURE MODE: **CUSTOM ,SOFT ,STANDARD ,RICH**
- FOUR SOUND MODE: BG ,I , D/K , M, **L, L**

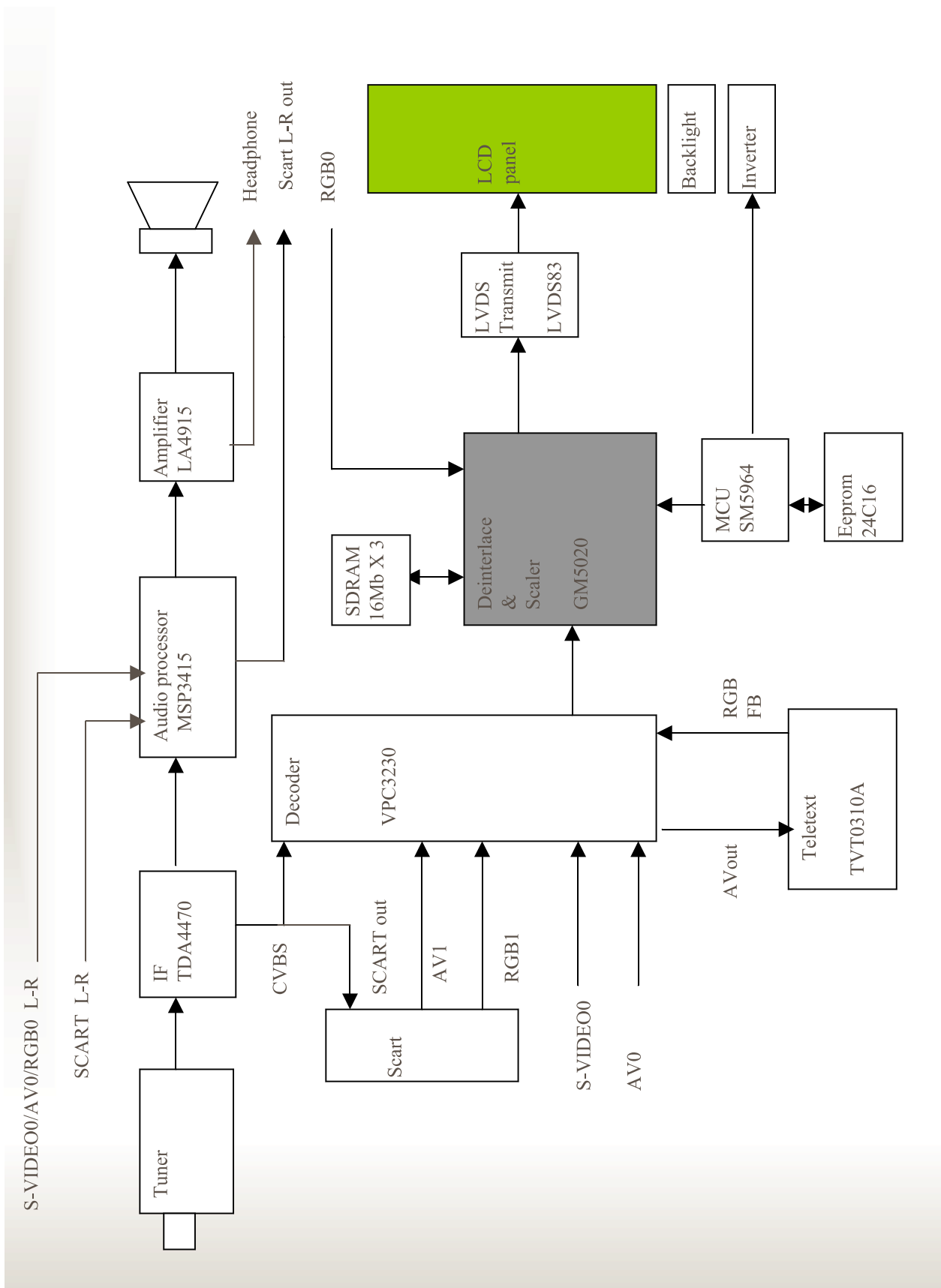
GENERAL SPECIFICATION:

- 1. POWER CONSUMPTION:** 44W (MAX.)
STANDBY POWER CONSUMPTION: $\leq 2W$
- 2. RECEIVE SYSTEM:** B/G , D/K , I, M
- 3. COLOUR SYSTEM:** PAL/ SECAM/ NTSC
- 4. VISION INTERMEDIATE FREQUENCY :** 38.9MHz
- 5. INTER-CARRIER FREQUENCY:** 4.5 MHz (M)
5.5 MHz (B/G)
6.0 MHz (I)
6.5 MHz (D/K)
5.85 MHz (NICAM B/G,D/K)
6.55 MHz (NICAM I)
5.74MHz(GERMAN STEREO)
- 6. CHROMA IF FREQUENCY PAL/NTSC:** 34.47/35.32 MHz
- 7. ANTENNA TYPE:** DIN TYPE 75 OHM
- 8. CHANNELS RECEIVING:**
- | | | |
|-------|-----------------|------------------|
| VHF-1 | A0;E2-E4;S1-S9 | 44.25-161.25MHz |
| VHF-2 | S10-S41; E5-E12 | 168.25-463.25MHz |
| UHF | E21-E69 CH | 471.25-863.25MHz |
- 9. TUNING SYSTEM:** VS TUNING
- 10. AV IN/OUT:** 1 AV IN; 1 S-VIDEO IN
21PIN SCART (OPTION) OR Y Cb Cr INPUT
- 11. AV IN/OUT SPECIFICATION:** Y/C IN-----Y: $1.0 \pm 0.2V_{p-p}$ 75 OHM C: $0.7 V_{p-p}$ 75 OHM
VIDEO IN---- $1.0 \pm 0.2V_{p-p}$ 75 OHM
AUDIO IN----0-2V (r.m.s)
VIDEO OUT---- $1.0 \pm 0.2 V_{p-p}$ 75 OHM
AUDIO OUT----0-2V (r.m.s)
- 12. OSD LANGUAGE:** ENGLISH
- 13. TELETEXT LANUAGE:** PAN-EUROPEAN,CYRILLIC1 , ARABIC ,LATIN ,GREEK

TECHNICAL SPECIFICATION

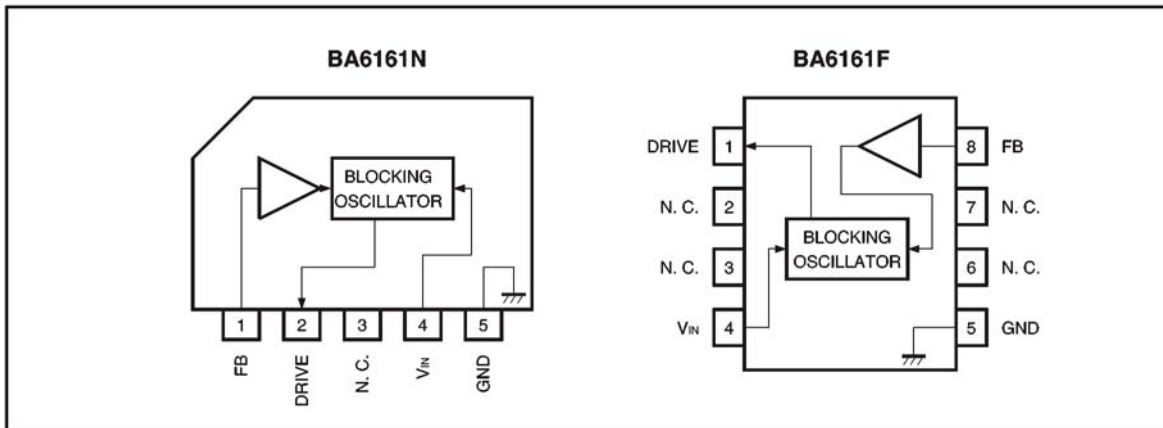
- 15. SAFETY AUTHENTICATION STANDARD: CB/ CE
- 16. LED INDICATORS: POWER ON
- 17. HAND SET TYPE : RC08
- 18. HAND SET POWER SUPPLY : BATTERY 3V (UM-3/R6/AA) x2
- 19. COLOUR PICTURE TUBE: 15" 120 DEGREE TFT
- 20. MAX REMOTE CONTROL DISTANCE: ≥ 5 m

Chassis Block Diagram

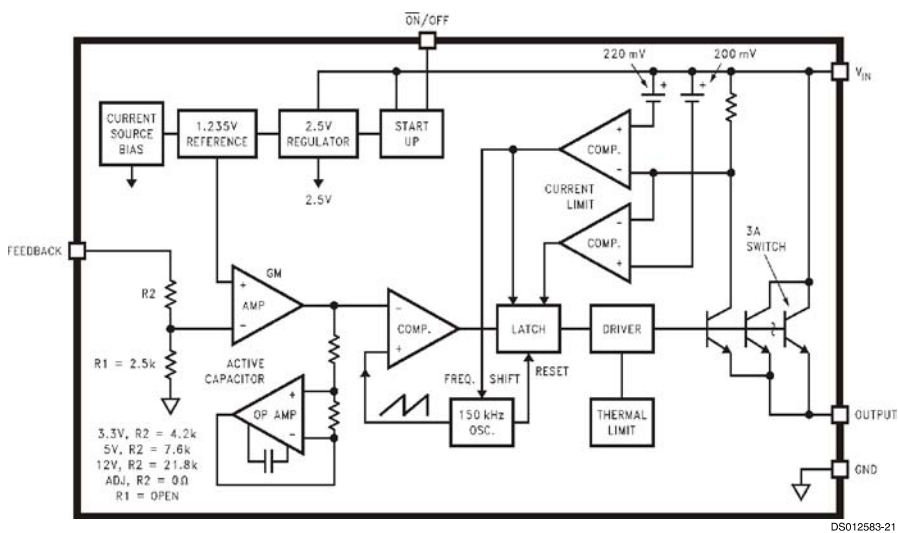


IC Block Diagram

IC 900 (SWITCHING REGULATOR FOR ELECTRONIC TUNING) BA6161A

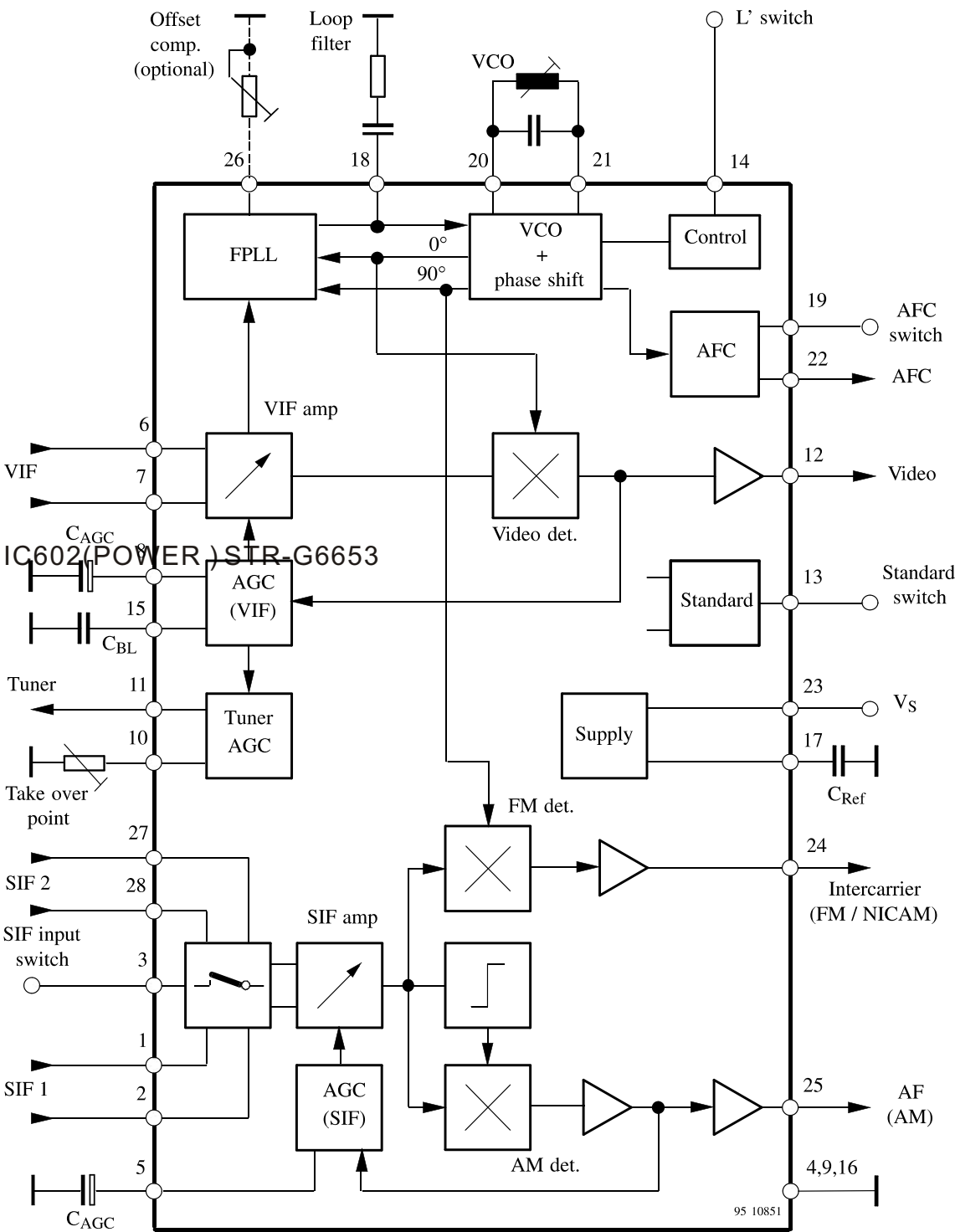


IC 905(3A STEP-DOWN VOLTAGE REGULATOR) LM2596S



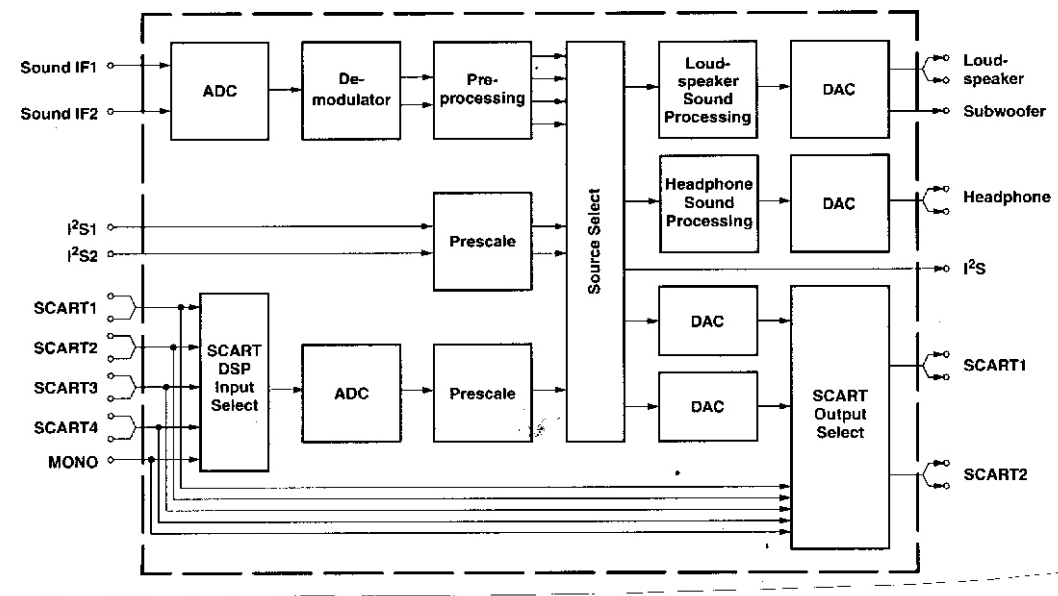
IC Block Diagram

IC2 (MULTI STANDARD VIDEO-IF)TDA4470

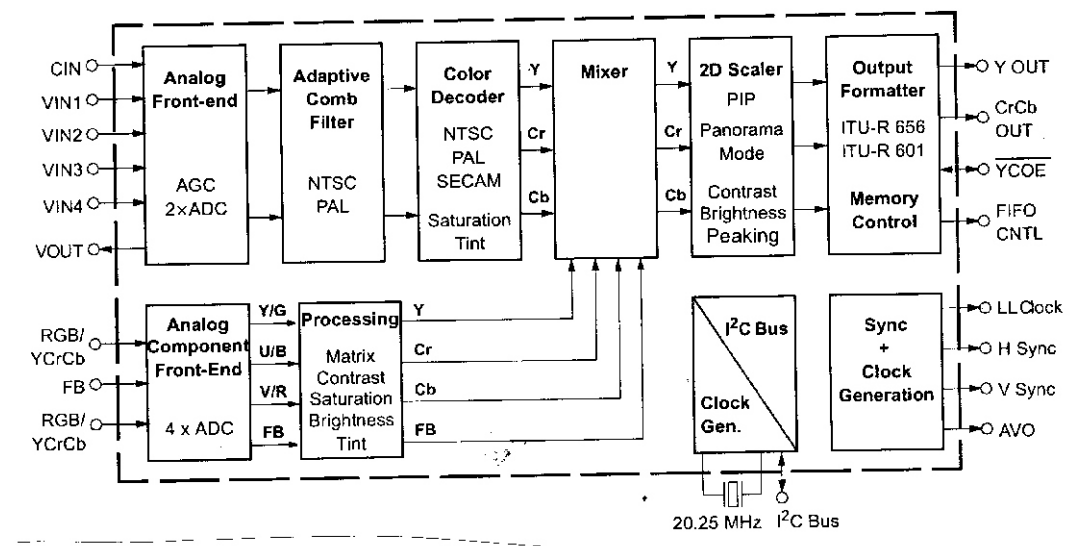


IC Block Diagram

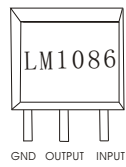
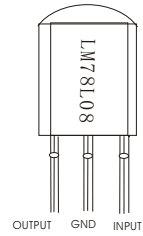
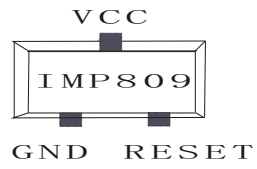
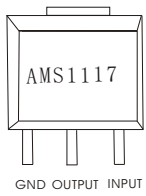
IC 300 (Multi standard Sound Processor Familyt) MSP3415G



Ic700 (Filter Video Processor) VPC3230D-C5

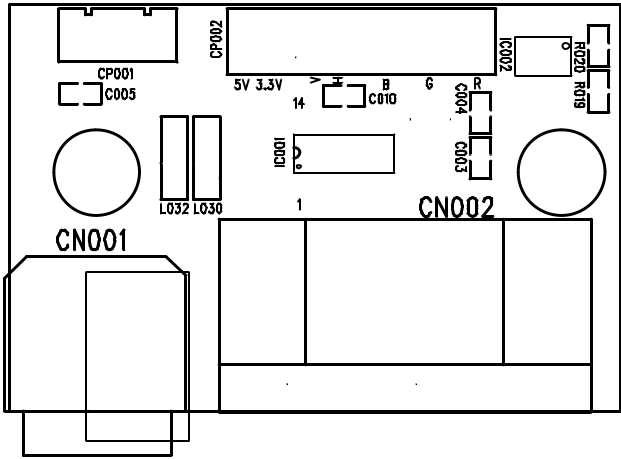


Transistor Mark

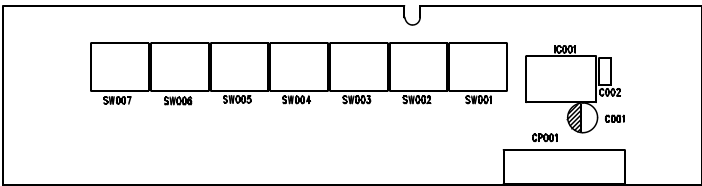


VGA&CONTROL PCB Top Layer

VGA PCB TOP LAYER



CONTROL PCB TOP LAYER



Service Adjustments

This Adjust Manual is used for LCD Color TV using 8T82 chassis .

1. appoint

1.1 This chassis use DC power supply, an AC-DC ADAPTER with +12VDC output is needed

1.2 The ADAPTER AC input voltage should be 100~240VAC 50/60Hz.

1.3 Working condition

1.3.1 : Temperature : $25^{\circ}\text{C} \pm 5^{\circ}\text{C}$

1.3.2 : Relative humidity : $60\% \pm 20\%$

1.4 The TV should be adjusted after working 20 minutes if no prior notice.

1.5 Equipments used

1.5.1 Multimeter

Max Input Current : up to 1A / Max Input Voltage : 500Vdc

Measurement Range : 10Mv~100Vdc / Accuracy : 0.03%

1.5.2 Oscilloscope :

Frequency Band : up to 20M

1.5.3 PC

XGA (1024X768@60Hz)

1.6 Signal

60~80dBu standard color bar from PM5418 or from factory central signal generator is used if no prior notice

2. software

2.1 notice

Software using in this chassis is stored in FLASH ROM. The flash ROM is re-writable.

3. Chassis checking

3.1 The upside of the chassis should be clear and no short or open circuit, no missing components or wrong polarity components insertion.

3.2 Check the input and output pins of 12V, 5V, 3.3V regulator IC (U111, U112, U113, U115, U116), confirm no short circuit to GND.

3.3 Connect the chassis to LCD panel and +12V AD-DC ADAPTER ,confirm 5V,3.3V from any regulators are OK.

3.4 Confirm OSD is OK, blue back ground appears if AUTOBLUE is set to ON without signal input.

3.5 Confirm remote control functions and all local keys control functions are ok.

3.6 Confirm search function, factory programs store function, sound and picture system(PAL/SEC AM BG/DK/I,NTSC-AV) are ok.

3.7 Confirm sound and picture from AV/SCART(or YUV IN) S-VIDEO and PC are ok.

3.8 After complete assembly, set TV to snow dot mode to aging line

Service Adjustments

4. Chassis checking

- 4.1 Check picture in TV,AV,PC mode, confirm H and V linearity and size are right. Set PC to XGA(1024x768@60Hz) mode, set the TV set to auto adjustment mode by selecting AUTO ADJUST item in GEOMETRY menu, then confirm H and V linearity and size are right.
- 4.2 Check picture's white balance.
- 4.3 Confirm sound and picture with any systems (PAL/SECAM BG/DK/I,NTSC-AV) are ok, check week Signal's picture and sound, check picture in low voltage power input mode.
- 5.4 Confirm NICAM function is ok.
- 5.5 Confirm teletext function is ok.
- 5.6 Confirm sound and picture from AV/SCART(or YUV IN) S-VIDEO and PC are ok.
- 5.6 Confirm remote control and local control functions are ok, we can set the TV to standby mode then normal mode to confirm if the set can work properly.

5. Final setting

- ① PICTURE : MOVIES
- ② VOLUME : 30
- ③ BALANCE : MUSIC
- ④ CCD : BG (※)
- ⑤ SLEEP TIME : ON

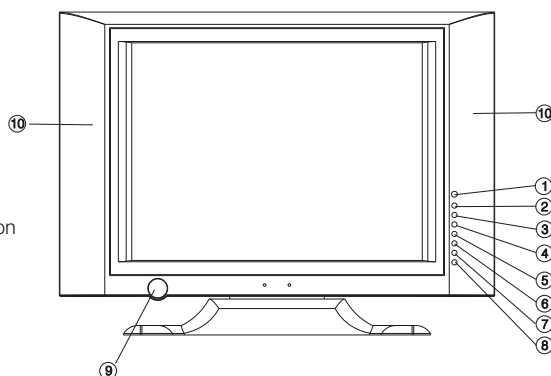
Or set according to customer suggestion.

Control Location

FUNCTIONAL PARTS

Front View of TV Set

1. Remote Sensor
2. AV Button
3. OK Button
4. Main Menu Button
5. PROG.+Button
6. PROG.- Button
7. VOL.+Button
8. VOL.- Button
9. Power Indicator/Stand by Button
10. Speakers



To turn the TV power ON

Put the TV set on the correct place, then connect the DC plug of the AC-DC adaptor to the DC 12V socket at the back of the TV set. Connect the adaptor main cord to the wall outlet, then the power indicator will turn red, the TV set at Standby Mode. After you press the Standby Button the power indicator will change to green. It needs a few seconds before the picture appears.

To turn the TV power OFF

Press the Standby Button to make the TV set in Standby Mode., then disconnect the power plug from the wall outlet.

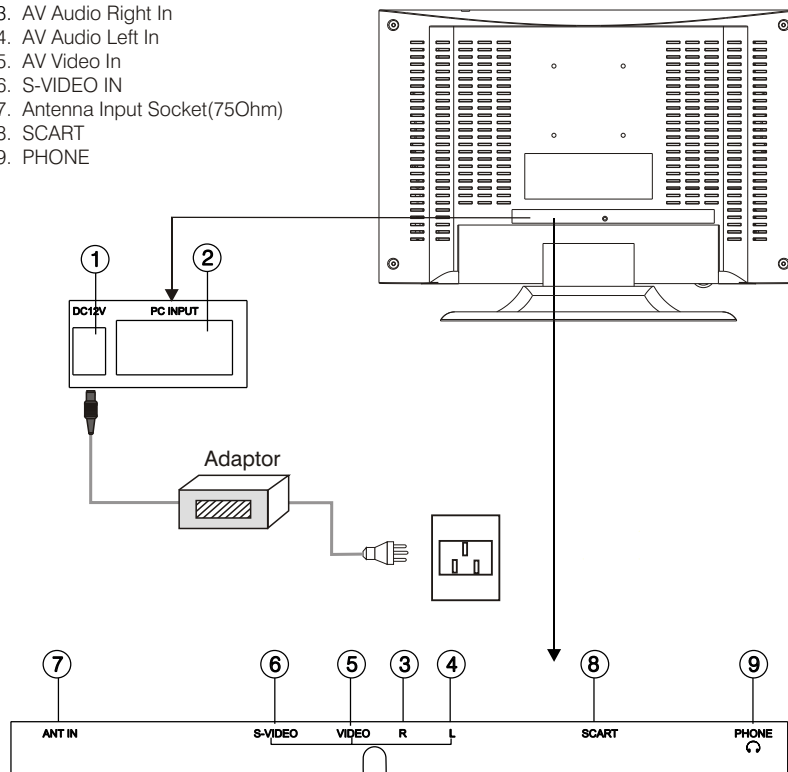
NOTE

- If the TV set does not receive any signal for 5 minutes, it will enter standby mode.
 - If you are not going to use this TV set for a long time, switch off the set using the power switch on the TV set and disconnect the power plug from the wall outlet.
-

Operation Instructions

Rear View of TV Set

1. DC 12V In
2. VGA In
3. AV Audio Right In
4. AV Audio Left In
5. AV Video In
6. S-VIDEO IN
7. Antenna Input Socket(75Ohm)
8. SCART
9. PHONE

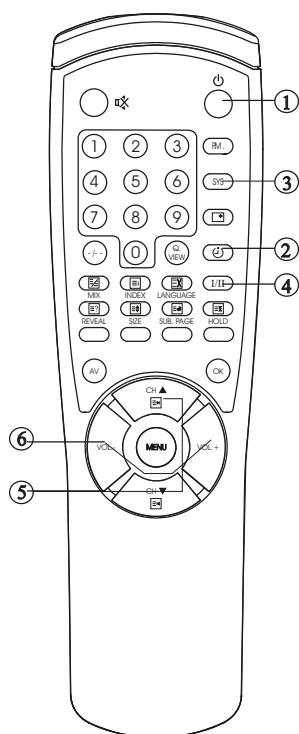


NOTE

- S.VIDEO and AV IN 1 (VIDEO) inputs cannot be used at the same time.
- **Precautions when connecting to other equipment**
 - When using external equipment with this TV set, please read the instruction manual of the external equipment.
 - Switch off all power supplies to the equipment and TV set before connection. Always ensure that the input and output terminals are correctly connected.

Operation Instructions

Remote Control Unit



1 POWER ON / STANDBY button

Press this button to switch on the TV when at standby mode.

2 SLEEP button

Press this button to set the sleep timer. When the preset length of time has passed, the TV set enters standby mode.

3 SOUND SYSTEM button

Press this button to select the correct sound system.

4 STEREO/BILINGUAL SOUND button (option)

When stereo program is received, press this button to select STEREO or MONO. When bilingual program is received, press this button to select DUAL-1, DUAL-2 or MONO.

The screen will display NICAM or A2 when such broadcast is received.

Mode	Description
STEREO	Stereo mode.
MONO	Mono mode.
DUAL-1	Multi-sound channel for language 1.
DUAL-2	Multi-sound channel for language 2.

5 CHANNEL UP **CH+** / DOWN **CH-** buttons

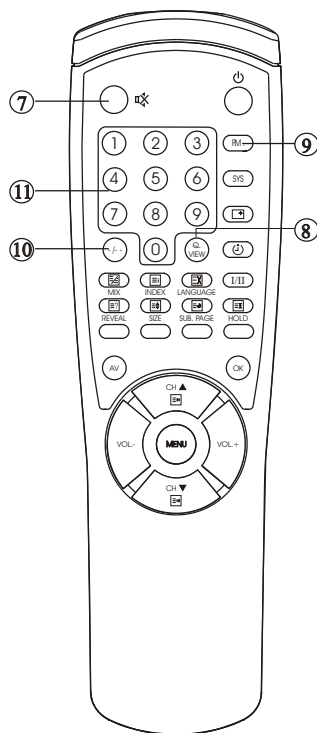
Press these buttons to select channels in ascending or descending order.

6 VOLUME UP **VOL+** / DOWN **VOL-** buttons

Press these buttons to adjust the volume level up or down.

Operation Instructions

Remote Control Unit



7 MUTE button

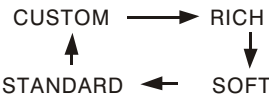
Press once to mute the sound. Press again to restore the sound volume.

8 QUICK VIEW button

Press this button to return to the previously viewed program.

9 PICTURE MODE button

Press this button to select the desired picture mode.



Picture Mode	Description
CUSTOM	User preset picture mode.
SOFT	Low contrast and low brightness level.
STANDARD	Middle contrast and middle brightness level.
RICH	High contrast and high brightness level.

10 DIGIT button

This TV allows you to select channels from 0 to 255.

Press this button to select one-digit, two-digit or three-digit channels input options.

To select a one-digit channel (e.g. Channel 8), press this  button to change channel selection to "-" on screen display and press the "8" button only.

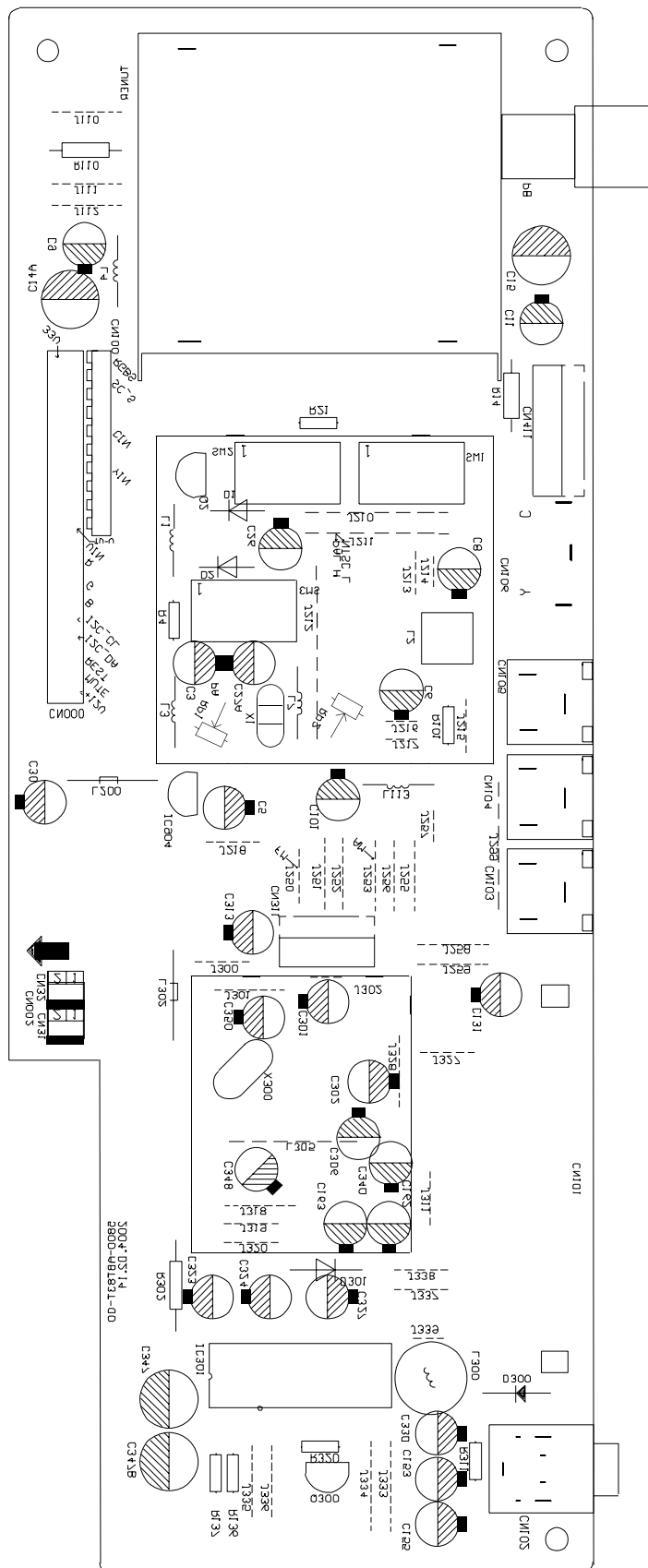
To select a two-digit channel (e.g. Channel 28), press this  button to change channel selection to "--" on screen display and press "2" and "8" buttons.

To select a three-digit channel (e.g. Channel 128), press this  button to change channel selection to "---" on screen display and press "1", "2" and "8" buttons.

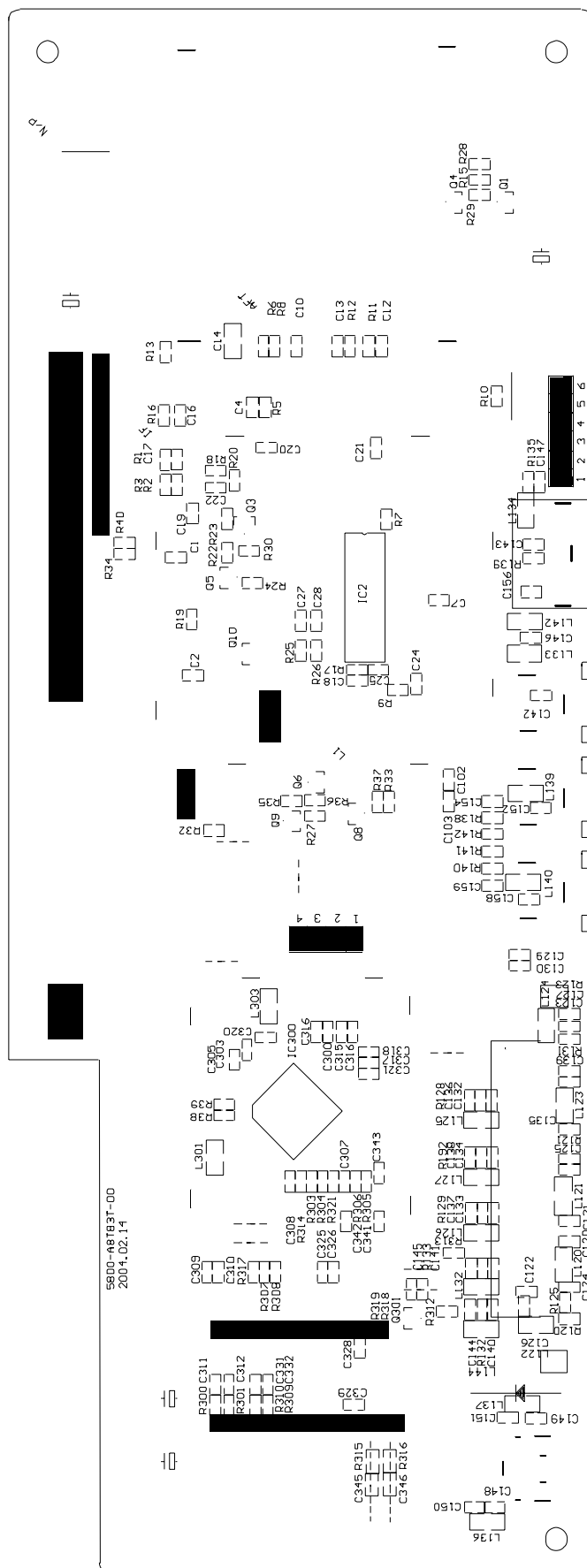
11 CHANNEL SELECTION buttons

Press the number buttons to select a channel.

AV IN/OUT PC IN PCB Top Layer

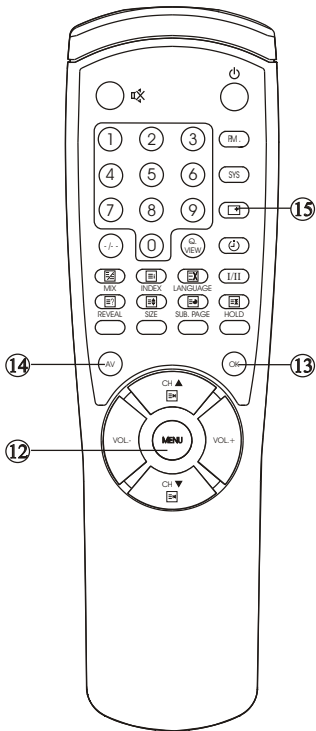


AV IN/OUT PC IN PCB BOTTOM Layer



Operation Instructions

Remote Control Unit



12 MENU button

Press this button to enter the menu screens for various optional adjustable settings.

13 OK button

Press the button to sure the selected item or enter the submenu.

14 AV button

Press this button to switch between TV broadcasts and AV input programs.



15 RECALL button

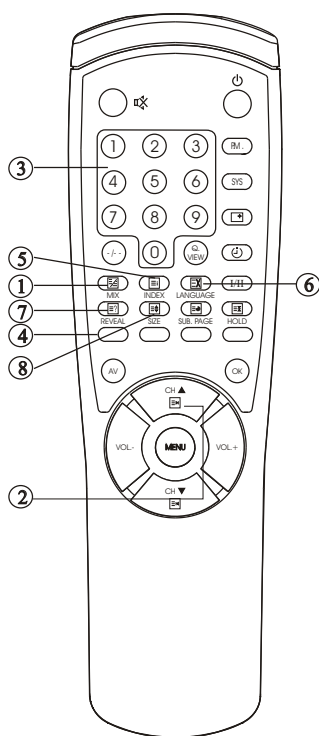
Press this button to display the settings on the screen. (e.g. Channel number, system)

Operation Instructions

TELETEXT OPERATIONS

For models with Teletext function only.

This page shows the function of the buttons on the remote control unit when in Teletext mode.



1 MIX button

Press this button to enter Teletext mode.
Press this button the second time to mix mode.
Press this button again to exit.

2 TELETEXT PAGE UP **CH+** / DOWN **CH-** buttons

Press these buttons to increase or decrease the Teletext page number.

3 PAGE NUMBER SELECTION buttons

Press the number buttons to select a Teletext page number.

4 COLOUR buttons

Press these buttons to access directly to the corresponding pages displayed at the lower part of the Teletext screen.

5 INDEX button

Press this button to go to the index page.

6 LANGUAGE button

Press this button to select the Teletext language group.

7 REVEAL button

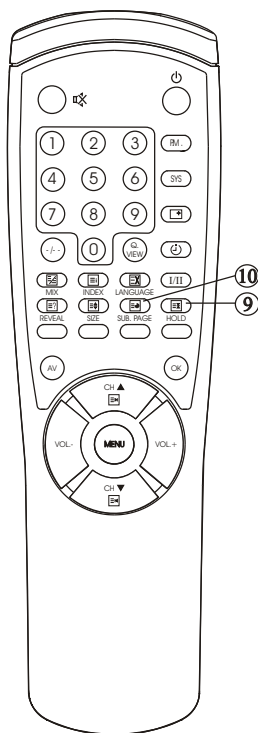
Press this button to reveal the hidden information for some Teletext pages (e.g. answers to puzzles or riddles). Press again to hide the information.

8 SIZE button

Press this button to change the Teletext screen display mode through the following:

- Upper half screen enlarged
- Lower half screen enlarged
- Normal screen state

Operation Instructions



9 HOLD button

Press this button to hold the Teletext page on display to prevent the page from changing. Press again to release the hold state.

10 SUB.PAGE button

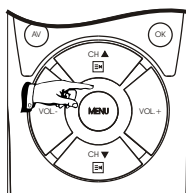
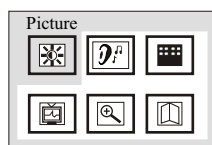
Some Teletext pages (e.g. P250) may contain several sub-pages which are automatically paged in a certain cycle by the TV station. Press this button once, "P250/---" will be displayed on screen. Enter number buttons (0-9) to look for other sub-pages if available. If there are no sub-pages, the screen will be displayed. Press this button again to cancel.

Operation Instructions

MENU SCREENS

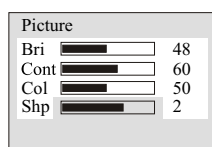
This TV set allows you to adjust any settings by selecting from the menu screens.

Menu button



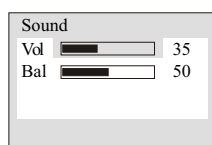
Press this button to display main menu, including Picture, Sound, Setup, Tune, VGA set and Exit. You can select them by pressing the VOL +/- buttons, and enter the submenu by pressing OK menu. The selected item will change to red.

Picture menu



Enter Picture menu, you can select Bright, Contrast, Colour, Sharpness and Hue(if NTSC system) items by pressing PROG +/- Buttons. You can adjust the item selected by pressing VOL +/- .The adjusted level is stored in Custom mode.

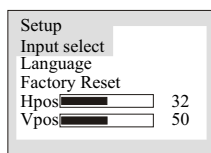
Sound menu



Enter the Sound menu, you can adjust Volume and Balance by pressing VOL +/-.

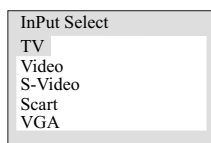
Operation Instructions

Setup menu



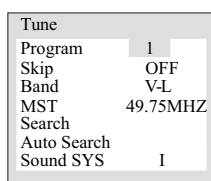
Enter this menu, you can select Input Select ,Language ,Factory Reset ,H position and V position items by pressing PROG+/- buttons. You can adjust the H position and V position to change the OSD position on screen by pressing VOL+/- buttons, or enter the submenu of the Input Select, Language and Factory Reset items by pressing OK button.

Input Select menu



In this menu you can select the signal source, TV, VIDEO, S-VIDEO, SCART or VGA.

Tune menu



In this menu you can complete the tune function. Select the Sound SYS, adjust the item to correct system, then select the Auto item and press OK button to begin search program. After finished search, the program will back to NO.0 the picture will appear the sound will be out.

1. Program

In this item, you can store the program number which are watching, and change the number by VOL+/-.

2. Skip

You can set ON by VOL+/- buttons if you want to cancel the channel number which you are watching.

3. Band

You can select V-L, V-H or UHF.

4. MST

To tune in weak station this item must be used.

5. Search

Press VOL+/- buttons to start searching. The VOL- button decrease the frequency, the VOL+ button increase the frequency.

6. Auto

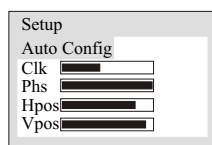
Press OK button to start search program automatically from V-L to UHF, the searched program will be stored orderly.

7. Sound SYS

You can select BG, DK, I or M.

Operation Instructions

VGA SET menu



This menu is only for PC monitor mode (VGA input).

1. Auto Config

Select auto config to adjust the screen position automatically. It need a few seconds, in this time the screen will black.

2. Clk

Press the VOL +/- to minimize any bertical bars or stripes visible on the screen background.

3. Phs

When necessary, adjust the pixel phase of the picture to avoid picture interference.

4. Hpos/Vpos

Press the VOL +/- buttons to adjust the picture Horizontal and Vertical position.

Monitor Display modes

MODE	Resolution	Horizontal Frequency(KHZ)	Vertical Frequency(KHZ)
VGA	640X480	31.5KHz 37.7KHz 37.5KHz	60Hz 72Hz 75Hz
SVGA	800X600	37.9KHz 48.1KHz 46.9KHz	60Hz 72Hz 75Hz
XGA	1024X768	48.4KHz 56.5KHz 60.0KHz 64.0KHz	60Hz 70Hz 75Hz 80Hz

Note:

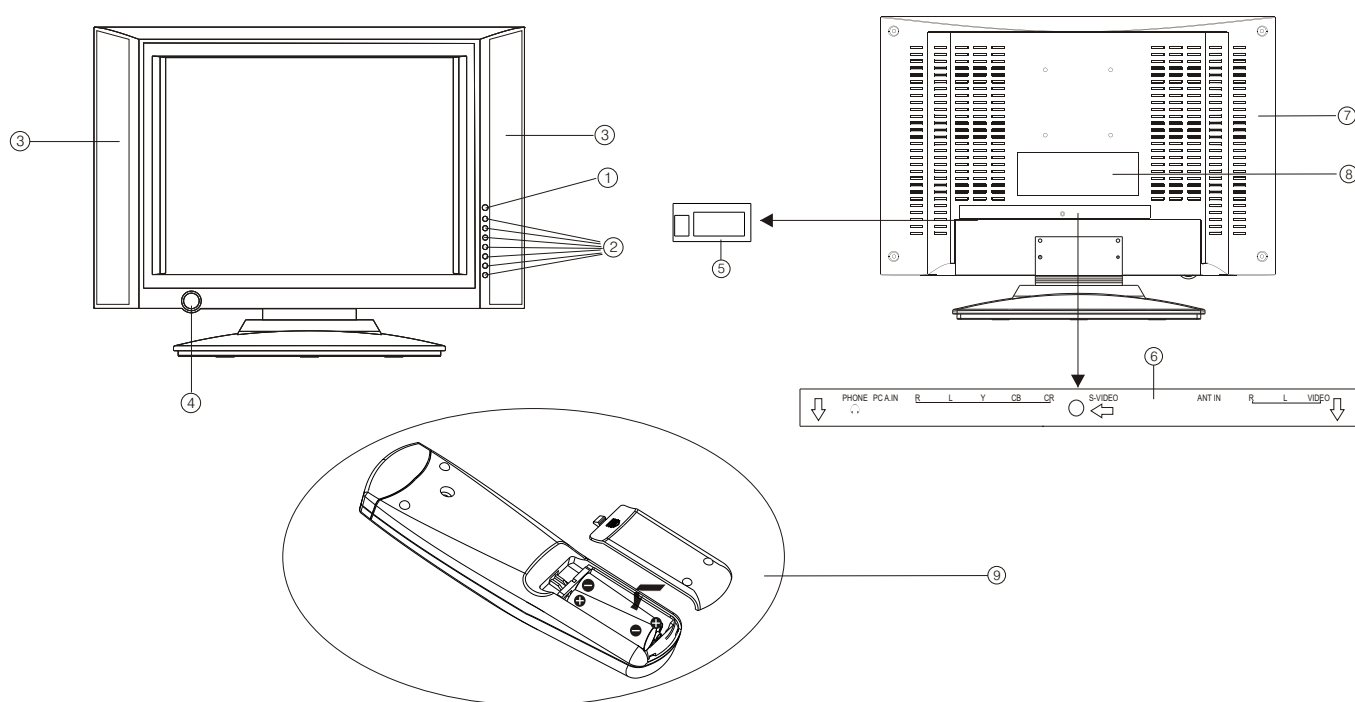
1.If the set is cold, there may be a small "flicker" when the set is switched on. This is normal, There is nothing wrong with the set .

2.If possible , use the VESA 1024X768@60HZ video mode to obtain the best image quality for your LCD monitor. If used under the other resolutions some scaled or processed pictures may appear on the screen. The TV has pre-adjusted to the mode VESA 1024X768@60HZ.

3. Some dot defects may appear on the screen ,like red, green or blue. Spots, However, this will have no impact or effect on the monitor performance.

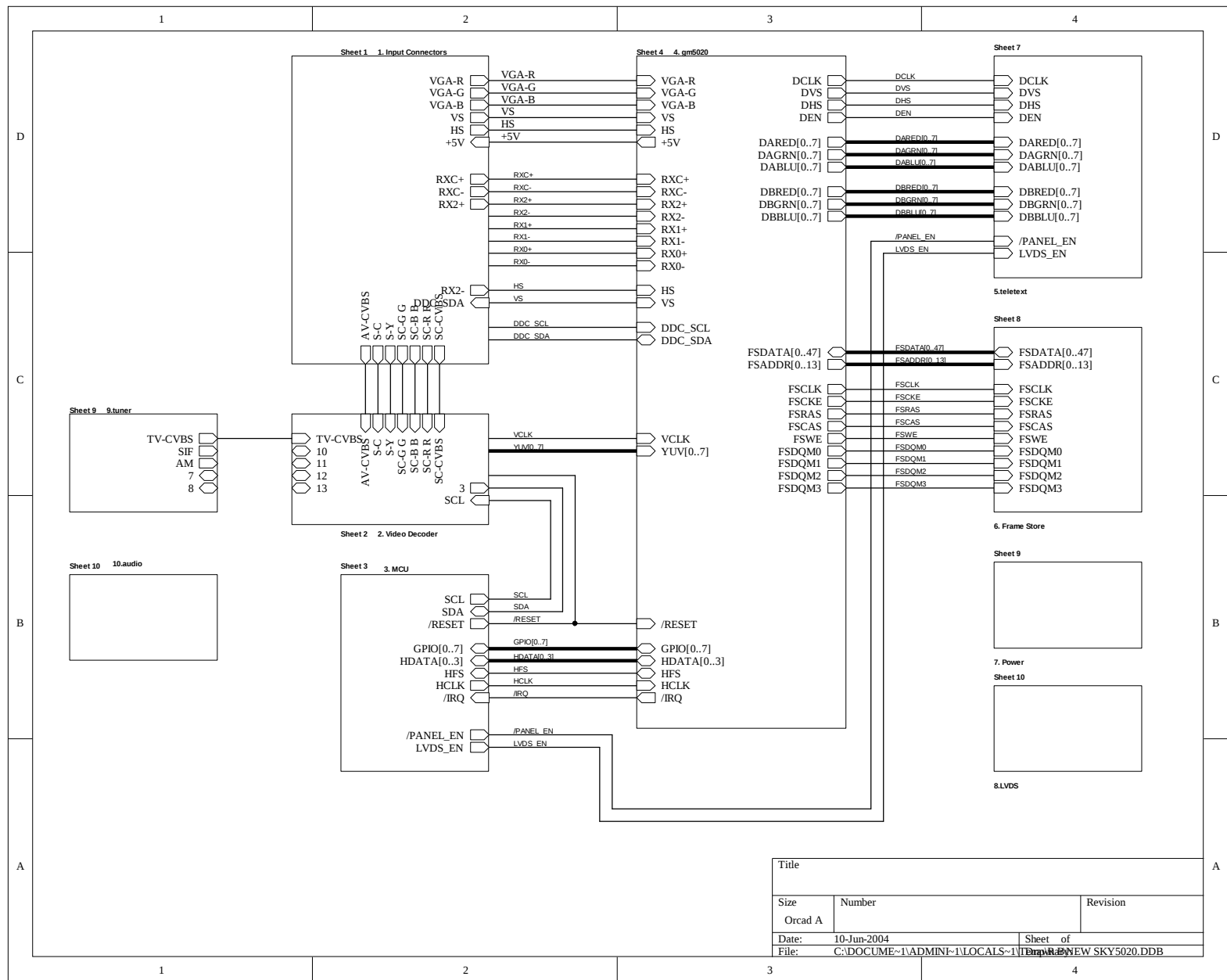
4. Do not press the LCD screen with your finger for a long time as this may incur some after Images.

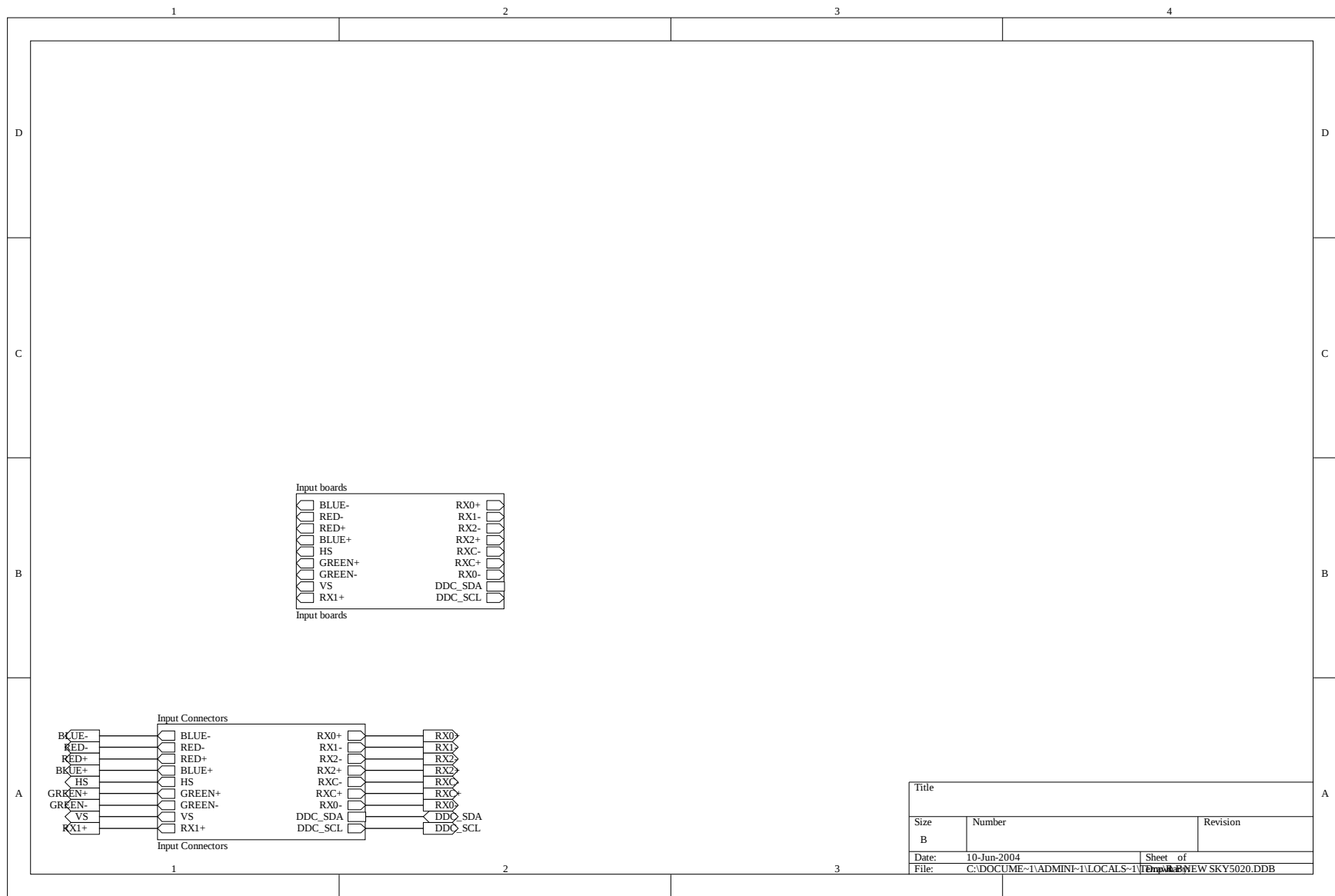
Cabinet Parts List

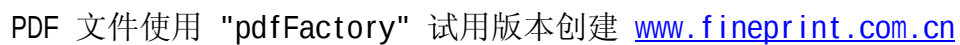


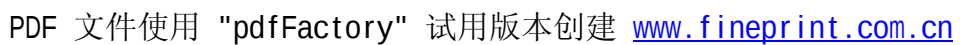
Key No.	Part No.	Description
1	1007-15L010-01	POWER KNOB HOLDER LENS
2	1008-15L01M-01	CONTROL KEY KNOB - #MSG001
3	1001-15L01M-01	FRONT CABINET - #MSG001 FOR 8T81
4	1009-15L01M-01	POWER KNOB - #MSG001
5	1213-15L010-01	INLAY (A) - VGA INPUT COVER #MSG001 ENG (PVC)
6	1213-15L010-02	INLAY (B) - BACK AV JACK COVER #MSG001 (8T81)ENG FOR SCART PVC
7	1002-15L01M-01	BACK CABINET - #MSG001
8	0601-15L010-01	BACK LABEL ENG (8T81)
9	0806-RC0800-03	HANDSET - 33 KEYS FOR (8T81)

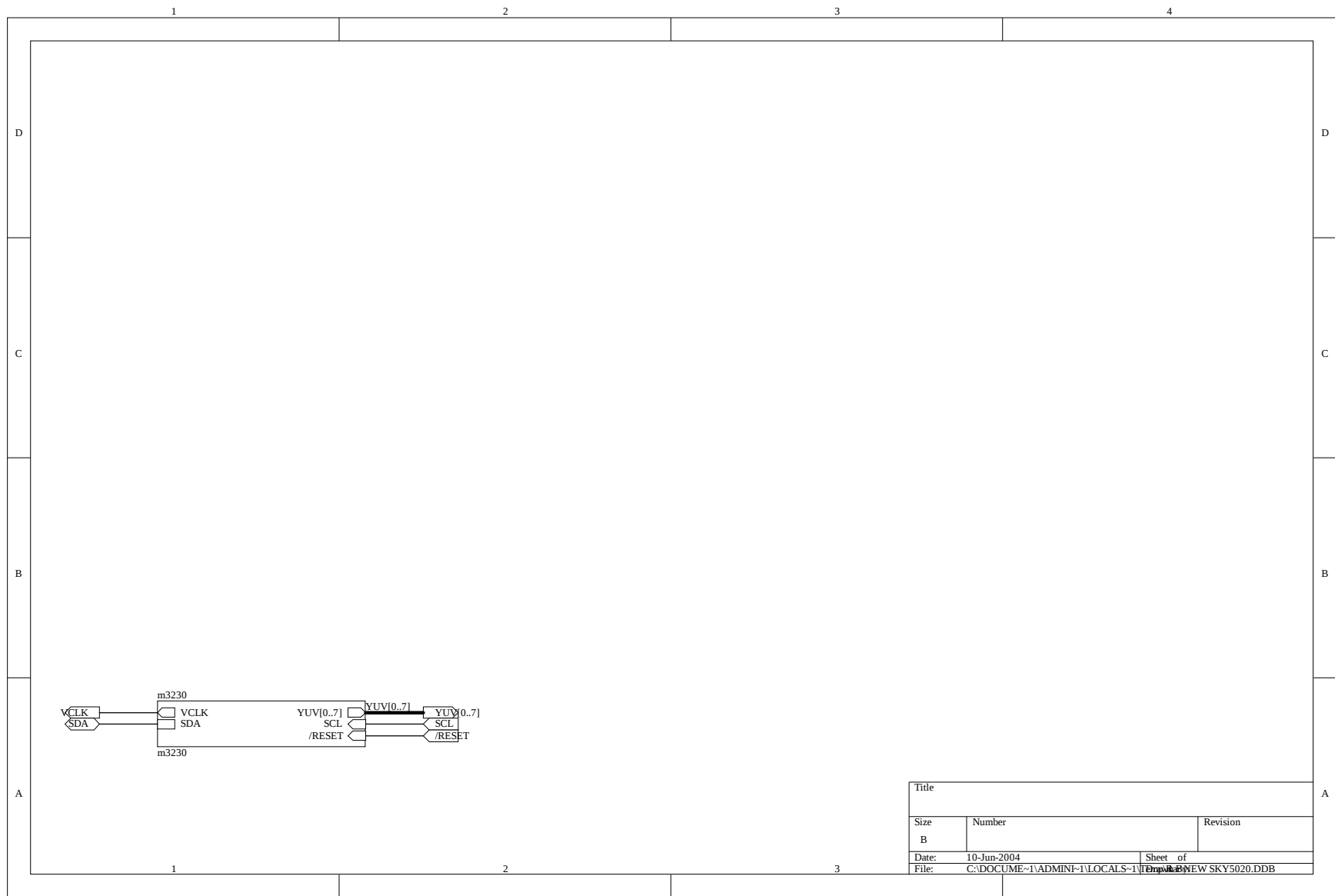
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B	Top Level Top Level_1																		
A	<table border="1"><thead><tr><th colspan="3">Title</th></tr><tr><th>Size</th><th>Number</th><th>Revision</th></tr></thead><tbody><tr><td>B</td><td></td><td></td></tr><tr><td>Date:</td><td>10-Jun-2004</td><td>Sheet of</td></tr><tr><td>File:</td><td colspan="2">C:\DOCUME~1\ADMINI~1\LOCALS~1\Temp\NEW SKY5020.DDB</td></tr></tbody></table>				Title			Size	Number	Revision	B			Date:	10-Jun-2004	Sheet of	File:	C:\DOCUME~1\ADMINI~1\LOCALS~1\Temp\NEW SKY5020.DDB	
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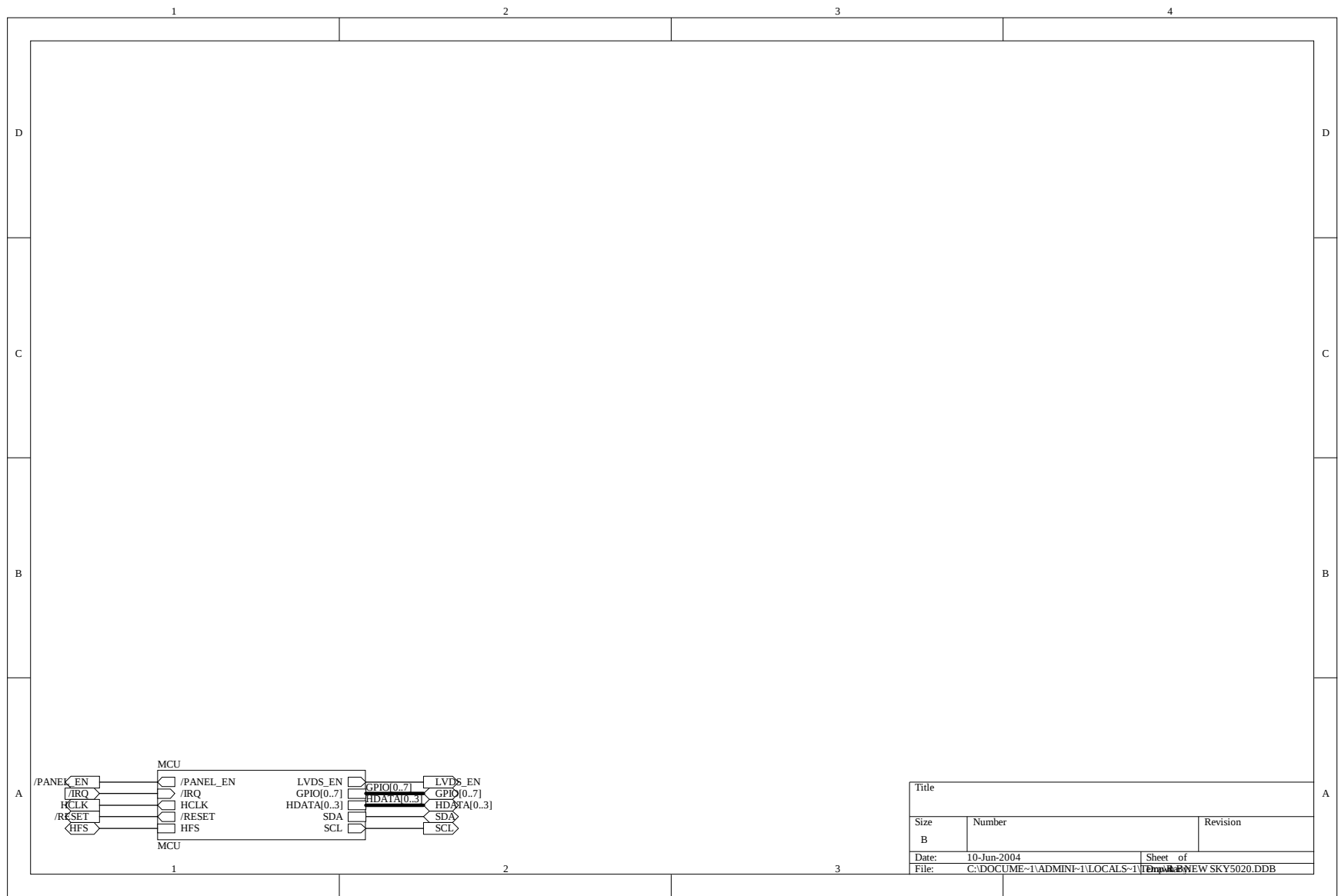








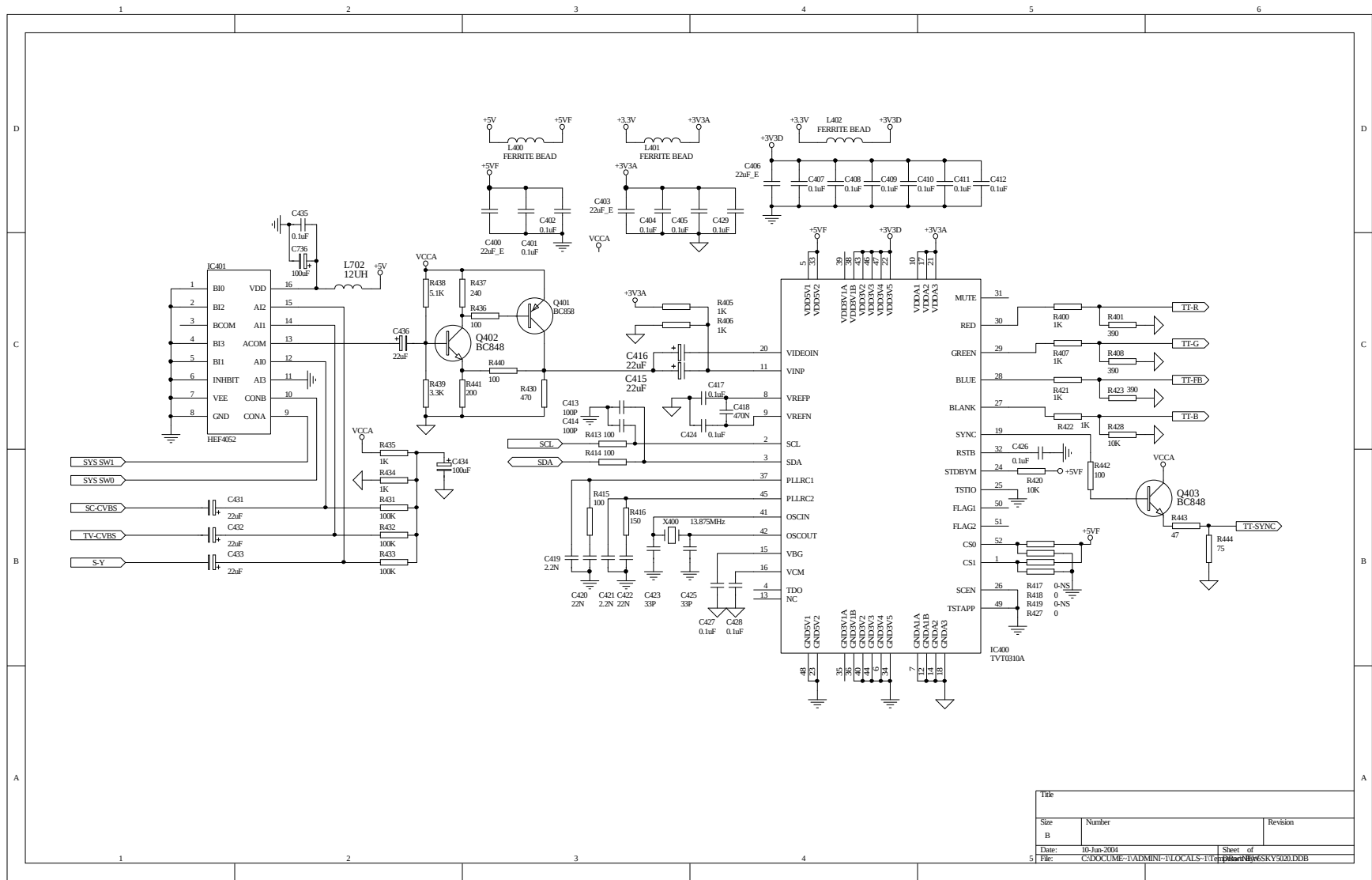




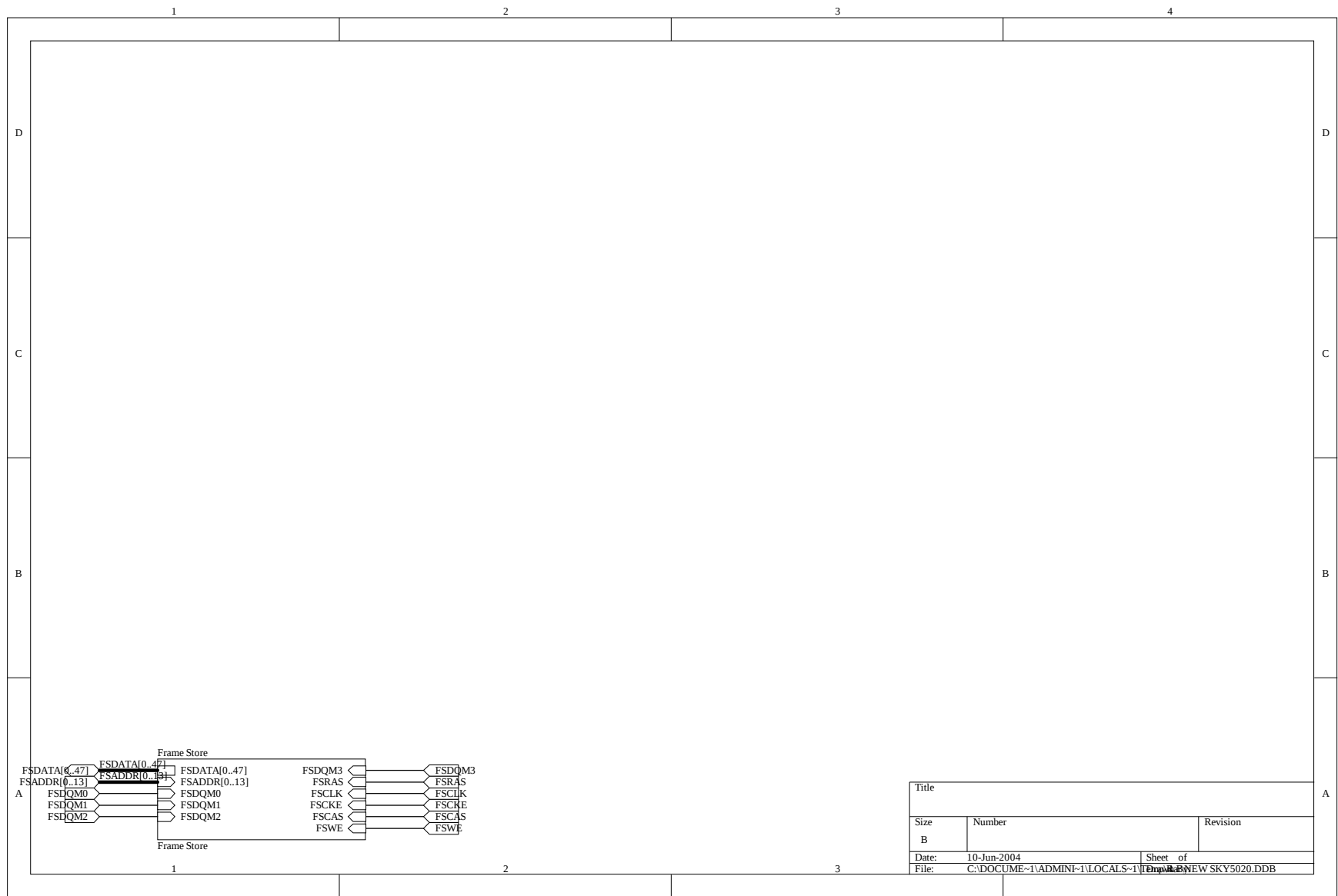
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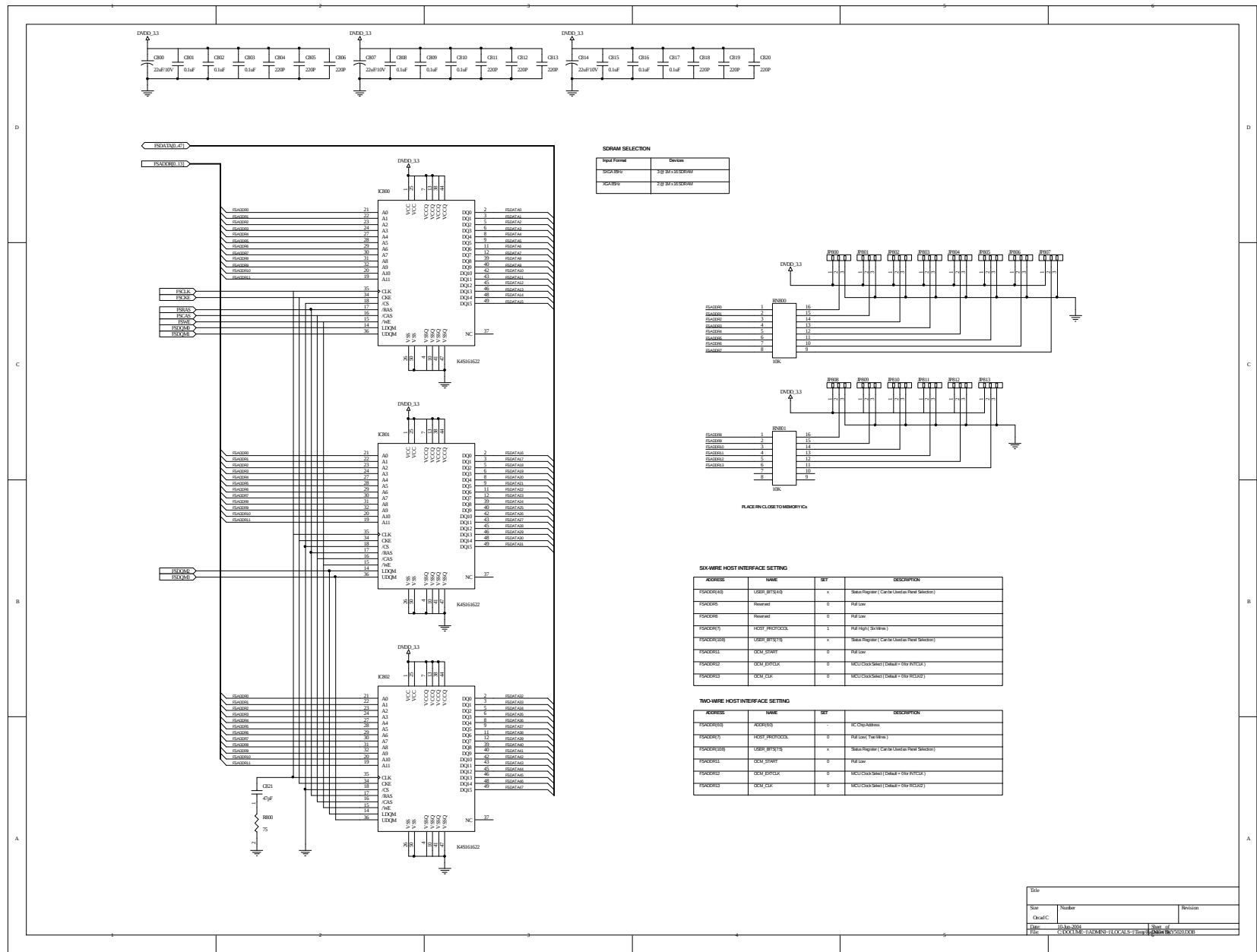
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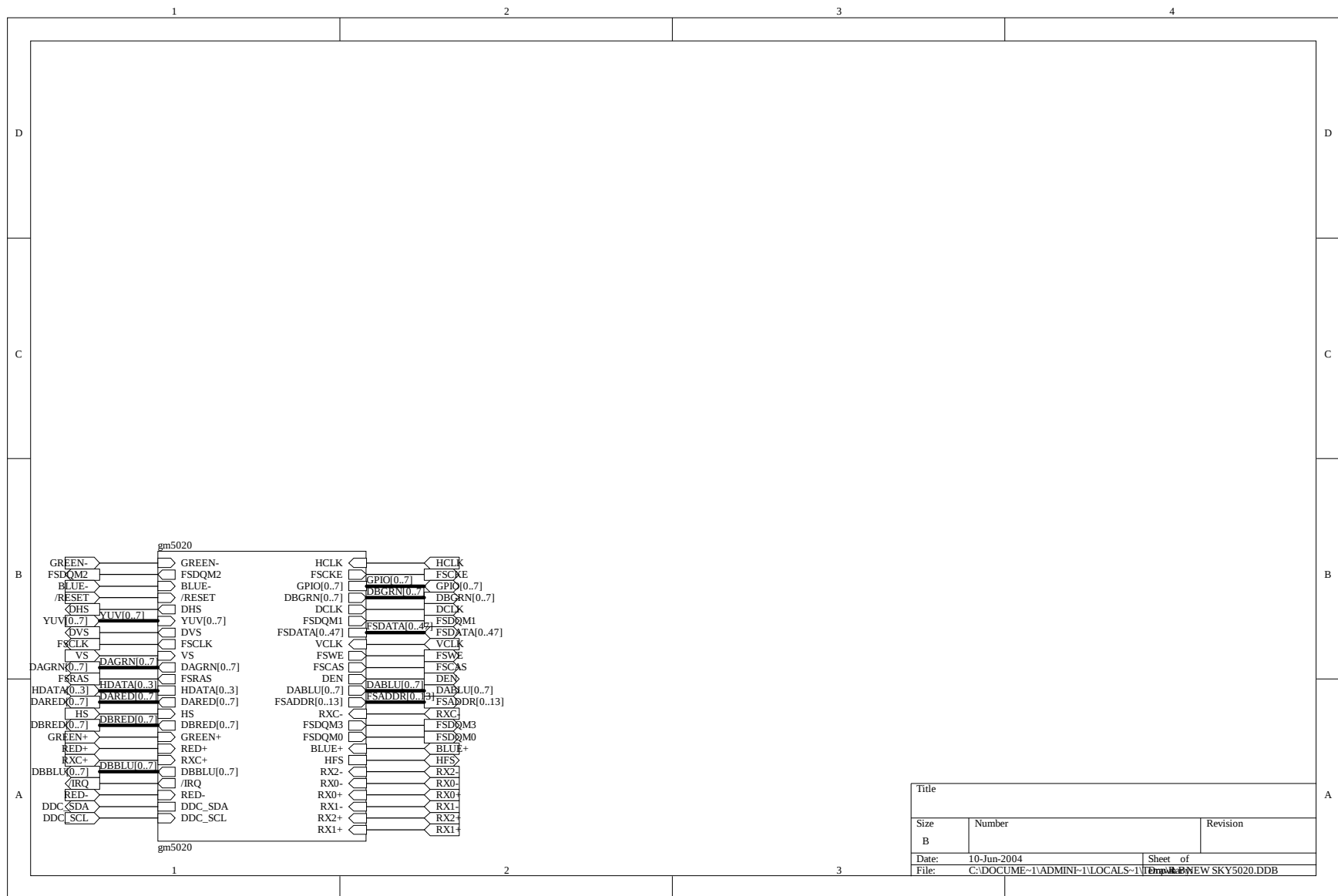
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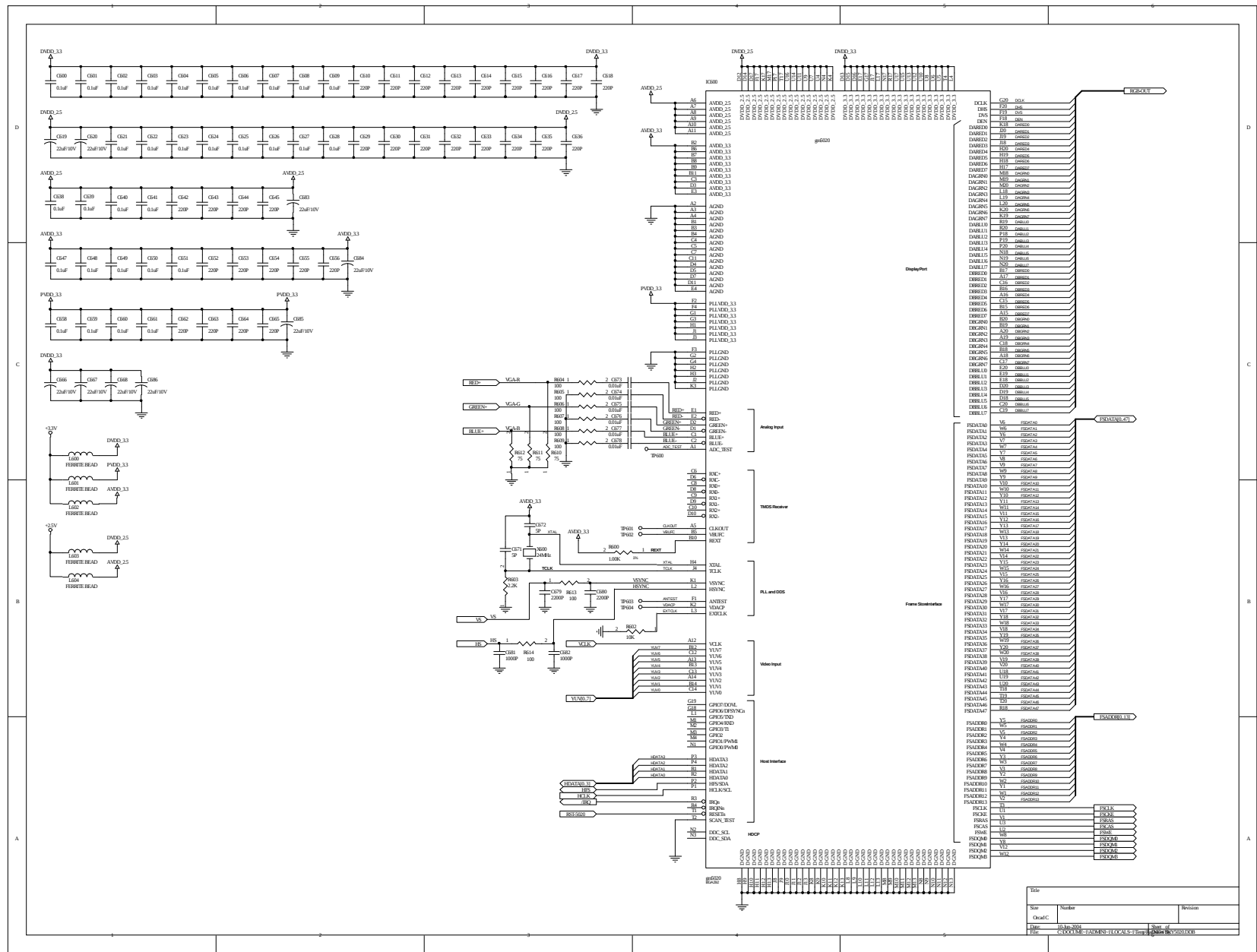


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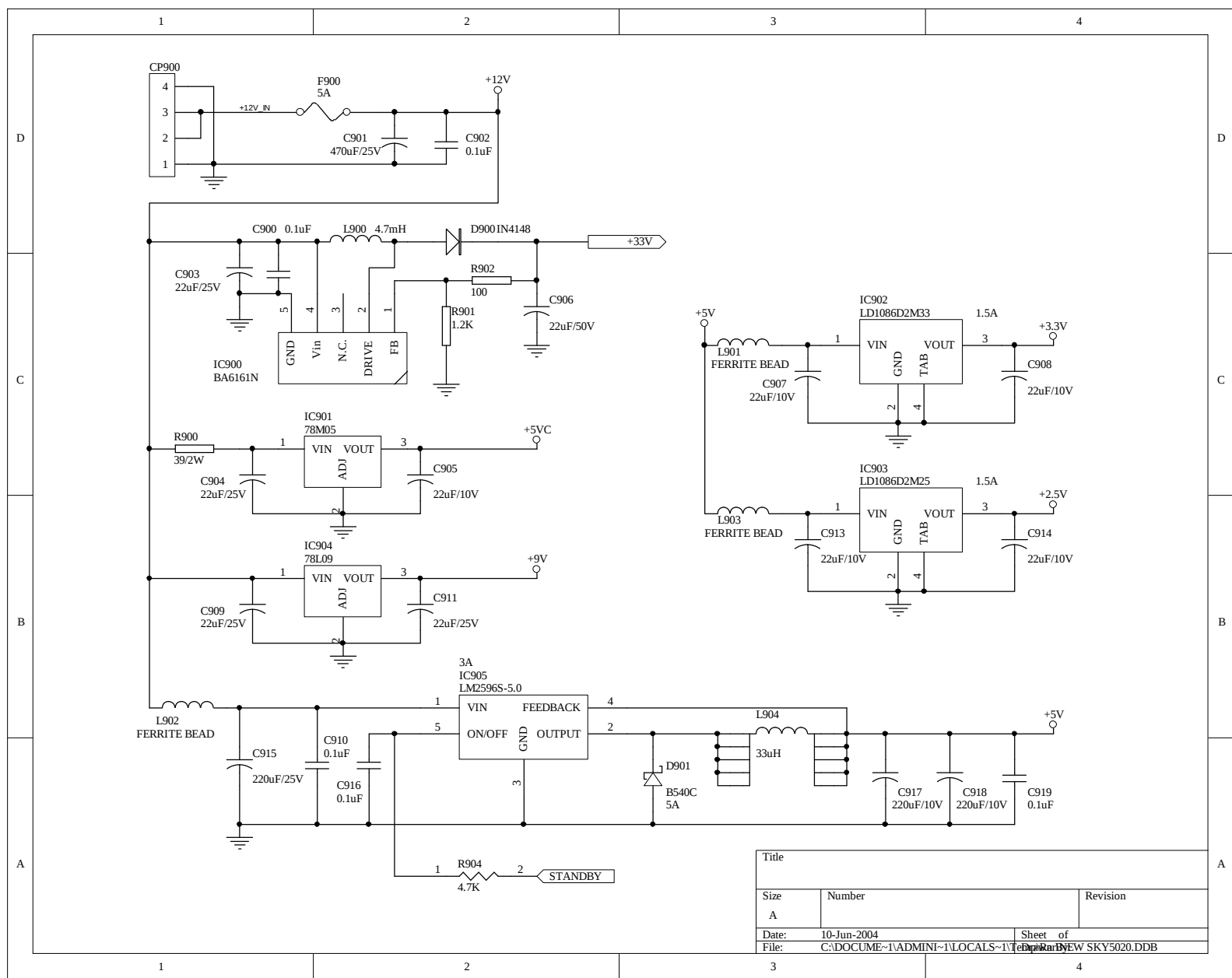
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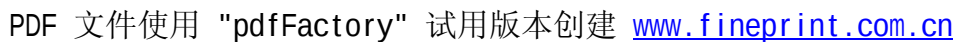
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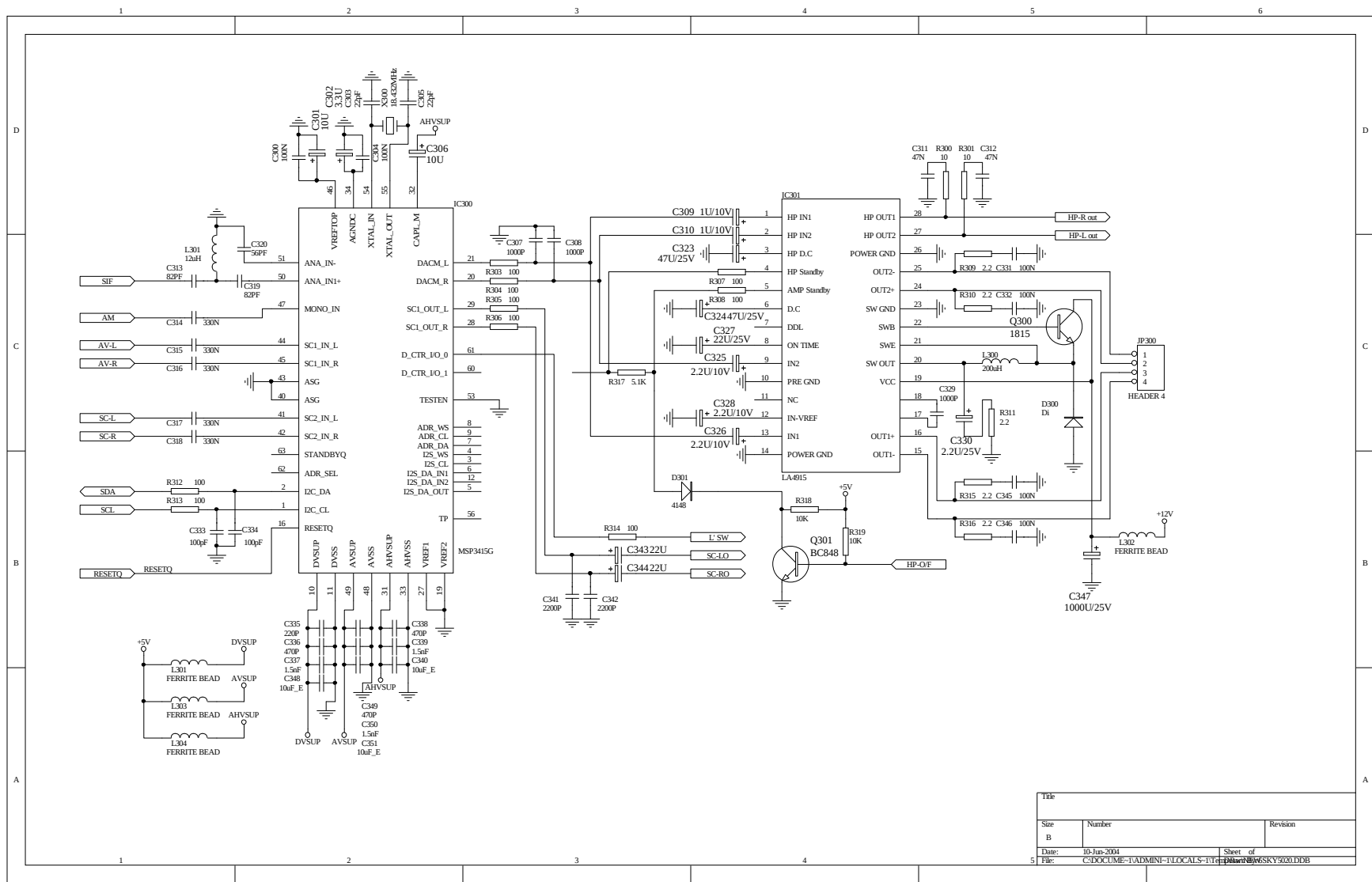


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