

LCD TV SERVICE MANUAL

Model list

KLC-1508US

KLC-1521US

KONKA GROUP CO,LTD.

Digital Flat Display Division

IMPORTANT SERVICE SAFETY INFORMATION

Operating the receiver outside of its cabinet or with its back removed involves a shock hazard. Work on these models should only be performed by those who are thoroughly familiar with precautions necessary when working on high voltage equipment.

Exercise care when servicing this chassis with power applied. If carelessly contacted, can cause serious shock or result in damage to the chassis. Maintain interconnecting ground lead connections between chassis, escutcheon, picture tube tag and tuner when operating chassis.

When it is necessary to make measurements or tests with AC power applied to the receiver chassis, an Isolation Transformer must be used as a safety precaution and to prevent possible damage to transistors. The Isolation Transformer should be connected between the TV line cord plug and the AC power outlet.

It is important to maintain specified values of all components and anywhere else in the receiver that could cause a rise in operating supply voltages. No changes should be made to the original design of the receiver.

Components shown in the shaded areas on the schematic diagram and/or identified by in the replacement parts list should be replaced only with exact factory recommended replacement parts. The use of unauthorized substitute parts may create shock, fire, or other hazards.

Before returning the receiver to the user, perform the following safety checks:

1. Inspect all lead dress to make certain that leads are not pinched or that hardware is not lodged between the chassis and other metal parts in the receiver.
2. Replace all protective devices such as non-metallic control knobs, insulating fish papers, cabinet backs, adjustment and compartment covers of shields, isolation resistor-capacitor networks, mechanical insulators etc.
3. To be sure that no shock hazard exists, a check for the presence of leakage current should be made at each exposed metal part having a return path to the chassis (antenna, cabinet metal, screw heads knobs and/or shafts, escutcheon, etc.) in the following manner.

Plug the AC line cord directly into a 110V/220V/240V, AC receptacle. (Do not use an Isolation Transformer during these checks.) All checks must be repeated with the AC line cord plug connection reversed. (If necessary, a non-polarized adapter plug must be used only for the purpose of completing these checks.)

PLEASE READ BEFORE ATTEMPTING SERVICE

1. Use an Isolation Transformer when performing any service on this chassis.
2. Never disconnect any leads while receiver is in operation.
3. Disconnect all power before attempting any repairs.
4. Do not short any position of the circuit while the power is on.
5. For safety reasons, replace components only with identical replacement parts (SEE PARTS LIST).
6. Before alignment, warm up the TV for at least 30 minutes.
7. When removing a PCB or related component, after unfastening or changing a wire, be sure to put the wire back in its original position.
8. Inferior silicon grease can damage IC's and transistors. When replacing IC's and transistors, use only specified silicon grease. Remove all old silicon when applying new silicon.
9. Before removing the anode cap, discharge electricity because it contains high voltage.

A. SPECIFICATION

System : NTSC-M
Channel : Antenna 2-69
 CATV 1-125
IF Frequency Video: 45.75MHz
 Sound: 42.17MHz
 Chroma: 41.25MHz
Audio output power 10% THD 1W X 2
Antenna Impedance 75 Ω (Unbalance)
Power Consumption 36W
Power Supply : AC~100-240V,50/60Hz (Adapter)
 DC12V 3A (TV)

item	Port list (KLC-1508US)
1	RF cable
2	Video and Audio
3	S-Video
4	Headphone audio output
5	DC 12V input

item	Port list (KLC-1521US)
1	RF cable
2	Y、Pb /Cb、Pr /Cr
3	Audio2(Y、Pb/Cb、Pr/Cr Audio input)
4	VGA
5	Audio3 (PC Audio input)
6	Video and Audio1
7	S-Video
8	Headphone audio output
9	DC 12V input

ADJUSTMENT MANUAL

I . TEST NOTE

1. Please follow the pointed test steps and choose the right test equipment to conduct adjustment, otherwise good effect of Unit could not be obtained. The unit should be warmed up for 30 minutes before adjustment and every parameter should be adjusted repeatedly till the optimum value obtained, the pointed voltage value should be ensured during test to get satisfied test result.

2. Test environment

- 1) Temperature : 15°C-35°C
- 2) Relative Humidity : 45-75%
- 3) Air pressure : 86-106KPa

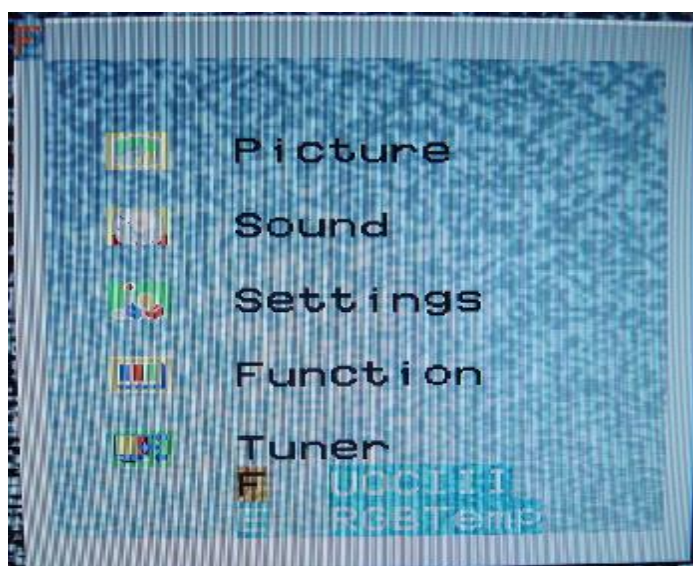
3 Test equipments (The following equipment should be calibrated before testing)

- | | |
|--|---------|
| 1) Computer | 1 set |
| 2) Multi-meter (VICTOR VC9801) | 1 set |
| 3) Video Signal Generator (Chroma Model 2227/2327) | 1 set |
| 4) Color Analyzer (Chroma Model 7120) | 1 set |
| 5) DDC card (DYNACOLOR, INC D8330) | 1 slice |
| 6) TV Video Signal Generator (FLUKE PM54200) | 1 set |

4 Factory mode adjustment

4.1 Enter factory mode adjustment

Using the remote control, press Menu button once first , then press PRE.CH(or named RECALL) button five times,and you can see manufacture menu on the LCD panel.



4.2 factory menu operation method

Press the channel +/- button to selection the sub menu of factory menu (including F、E、UOCIII、RGBTemp、Temp) , and press the vol+ to enter the sub menu and setting the value.

4.3 exit the factory menu

Press the MUTE button again and again or turn off the TV, it can exit the factory menu.

4.4 AGC adjustment

In TV mode,Receive 60dB split field signal.Enter factory mode menu "UOC III" item, press"CHAN▽" to select "RF AGC" , then use VOL+/- to adjust the item until the voltage of Pin 1 of N100 to be about $2.5V \pm 0.2V$,then noise wave of the picture point disappears.

4.5 White calibration adjustment

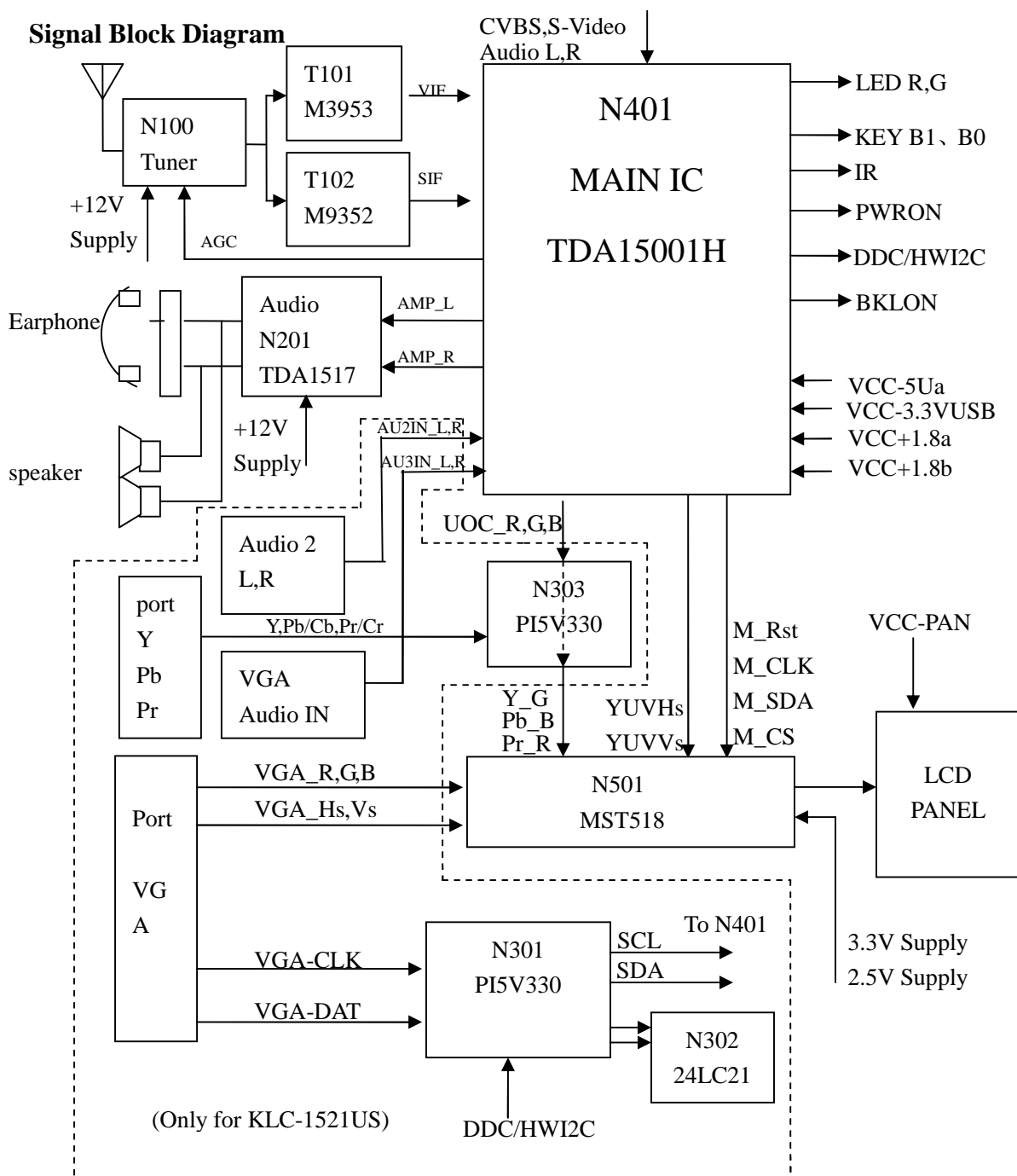
1 Receive black or white signal under AV or PC mode, adjusting brightness and contrast to set the brightness to 15Nit in dark area and 90 Nit in bright area.

2 Adjust white balance. Press "MENU" button once, then press "PRE.CH" five times to enter factory menu, select "Temp" Menu,

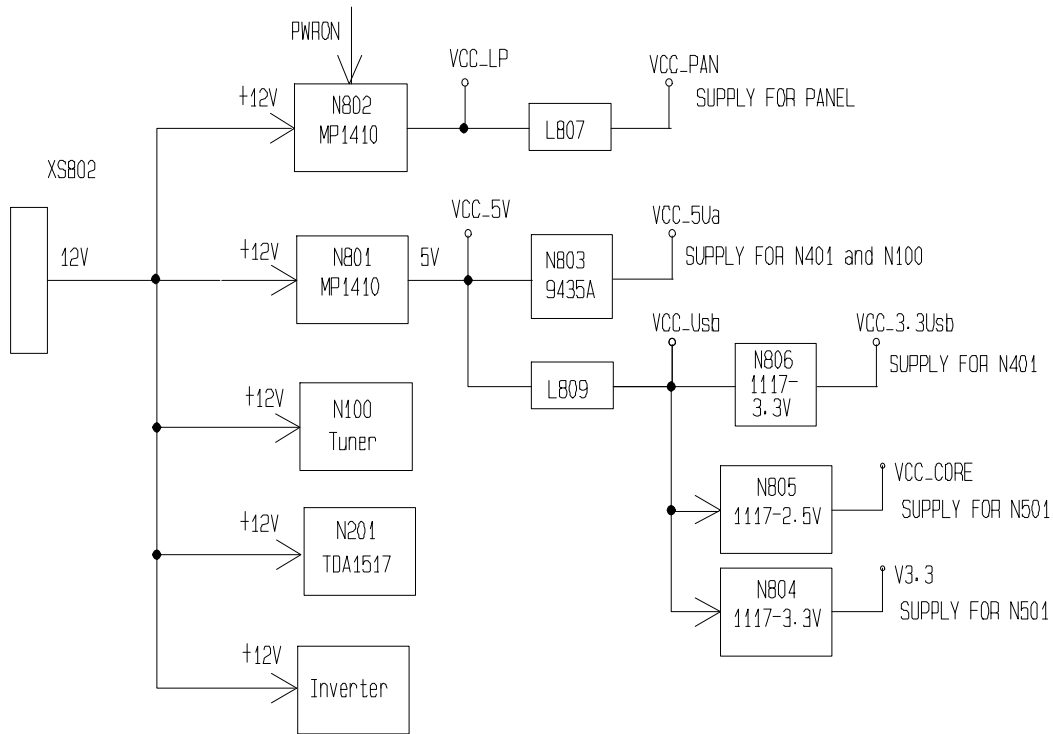
Adjust	Red	0-100
	Green	0-100
	Blue	0-100

3 Adjusting chromaticity coordinates of black and white to fit the requirement ($X=0.285$, $Y=0.293$), or plug automatic calibration system to adjust white calibration automatically.

BLOCK DIAGRAM

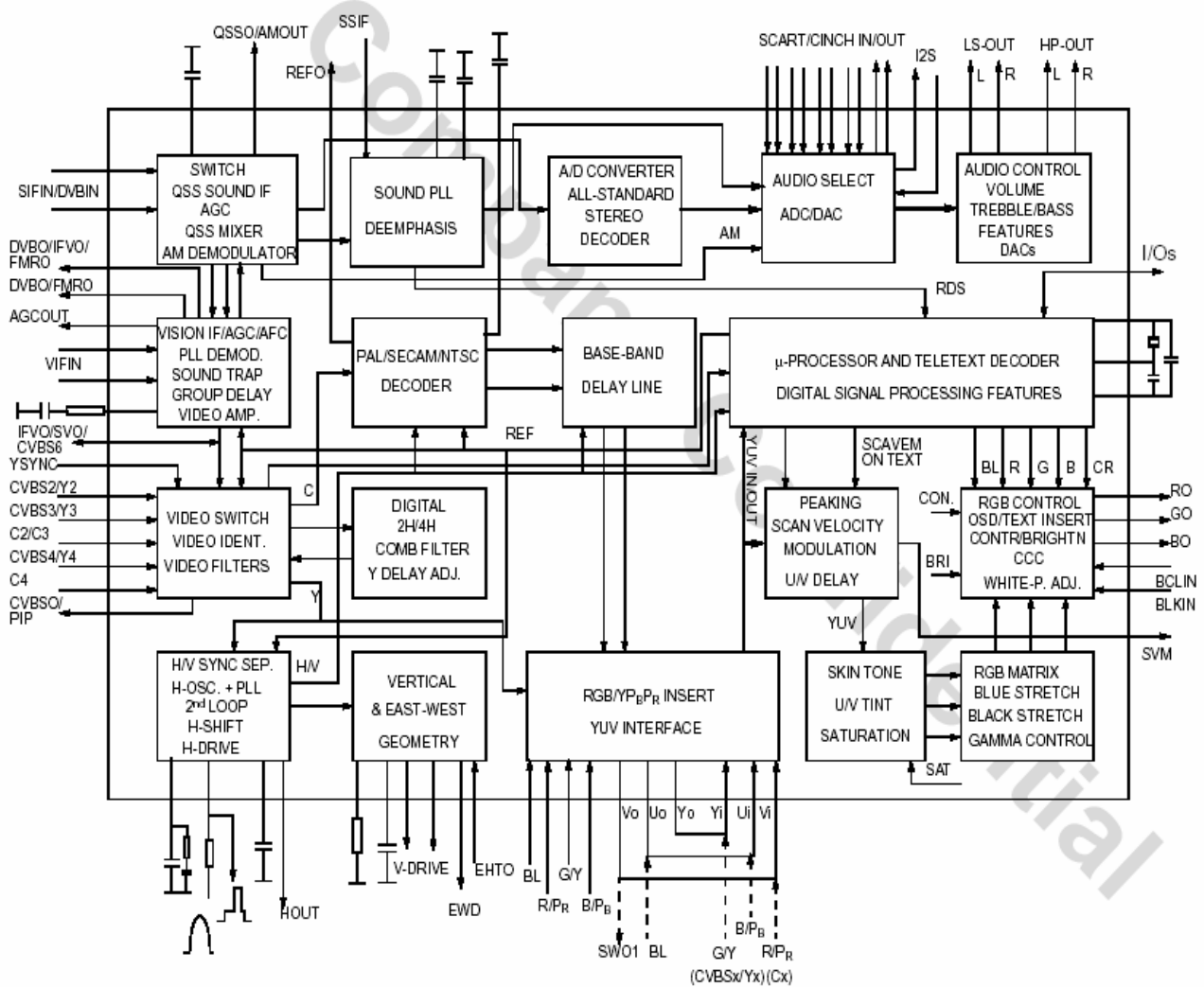


Signal Board Power Digram



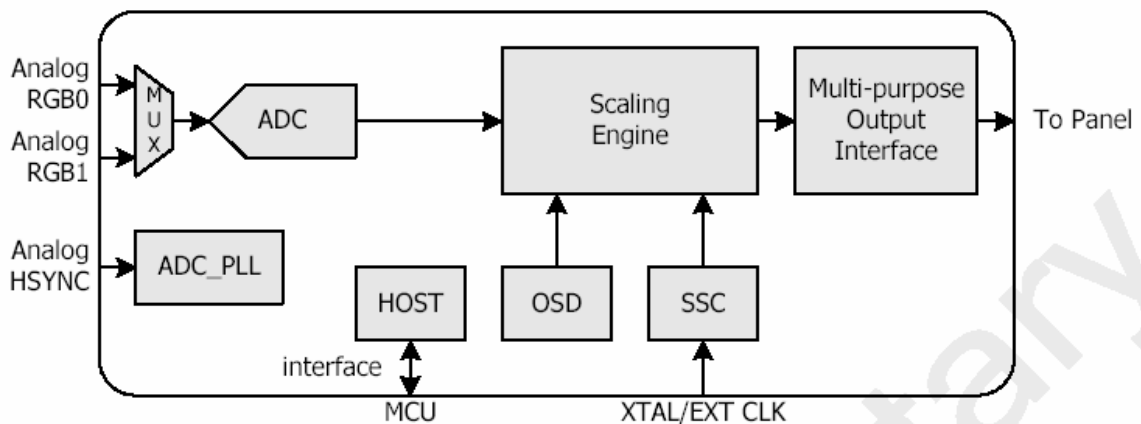
IC BLOCK DIAGRAM

1 N401(TDA15001H1)



2 N501 (MST518)

BLOCK DIAGRAM

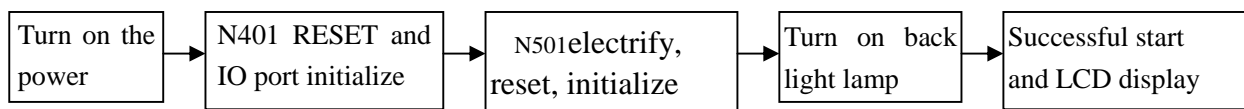


Trouble Shooting

Key IC list

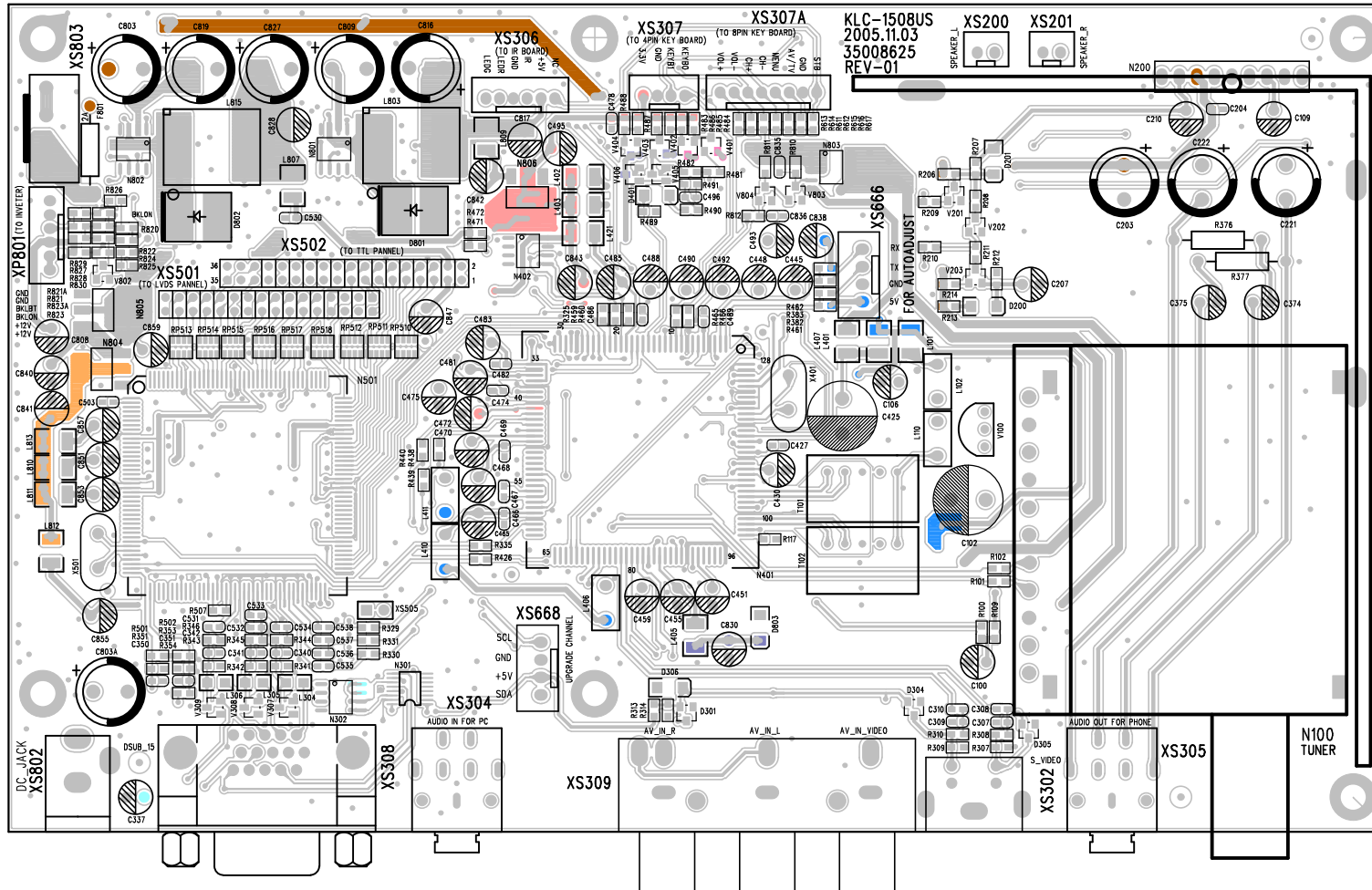
Item	Type	Maker	Package	Circuit No.	Qty.
1	TDA15001H1	Philips	QFP128	N401	1
2	MST518	MSTAR	PQFP160	N501	1
3	24LC32A	MICROCHIP	SOIC-8	N402	1
4	24LC21A	MICROCHIP	SOIC-8	N302	1
5	MP1410ES-SOIC-8	MPS	SOIC-8	N801,N802	2
6	FDS9435A	FAIRCHILD	SOIC-8	N803	1
8	TDA1517	PHILIPS	SIL9MPF	N200	1
9 (only for KLC-1521US)	FSAV330	FAIRCHILD	TSSOP-16	N301,N303	2
	TS5V330	TI			
11	1117-3.3V	1117 serial	SOT223	N804,N806	2
12	1117-2.5V	1117 serial	SOT223	N805	1
14	Tuner AFT1/L301	Qingjia		N100	1

Start order:

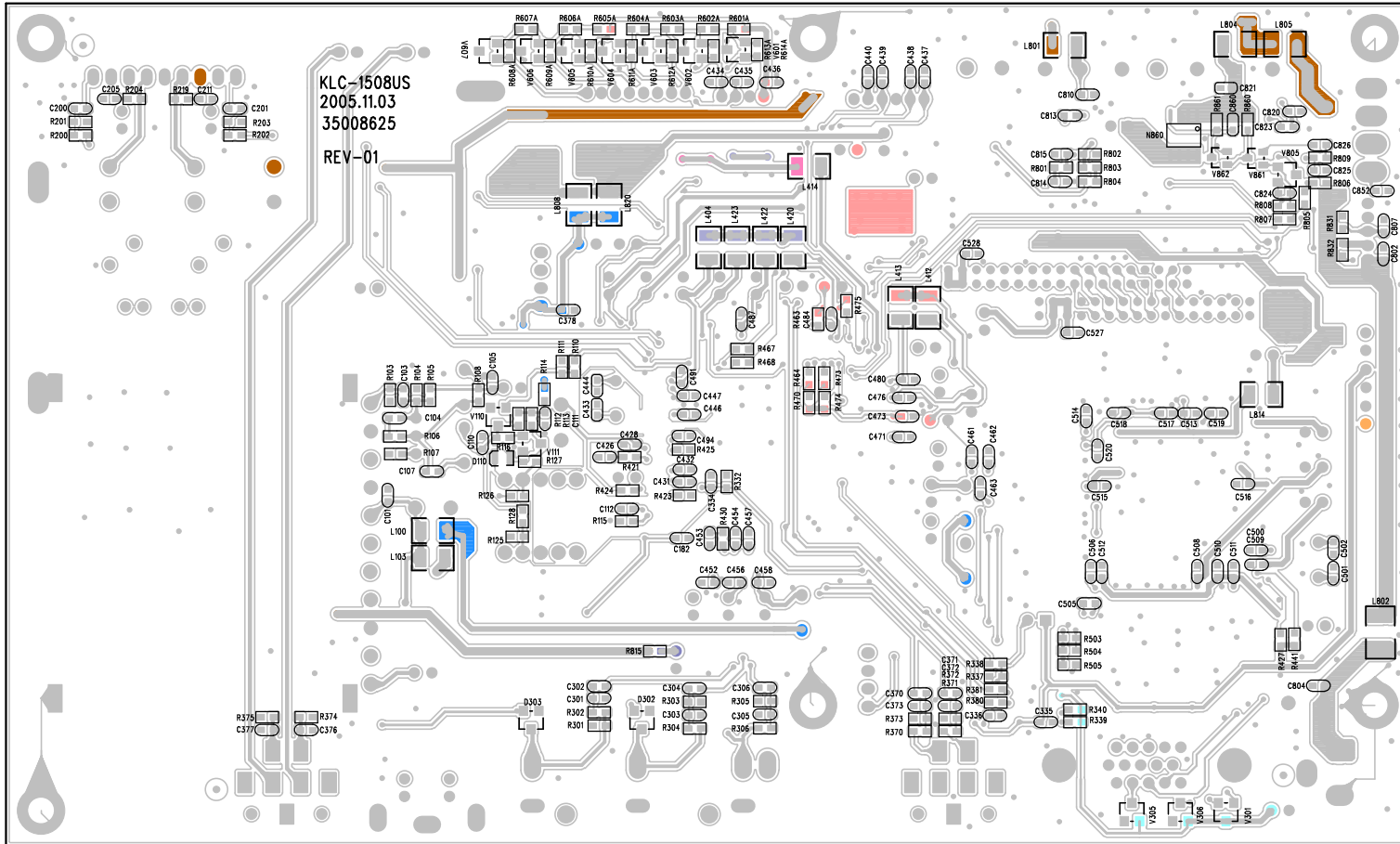


- 1) Verify the state of TV set. Please switch the TV on, then verify the LED color. Red is standby state and green is working state.
- 2) Checking Supply Power. If the color of LED is yellow, the power supply for signal board. N801 supply 5V and N802 supply 3.3V(KLC-1508US, KLC-1521US), N804、N806 supply 3.3V power (Test the PIN 2). N805 supply 2.5V (Test the PIN 2), D803 supply 8.3V, V401 and V402 supply 1.8V. All these are for main IC N401, N501.
- 3) After turning on the power, if blank screen appears (no back light lamp), just press POWER button several times, if blank screen still there. Check if the voltage of every power supply is normal.
- 4) Check if the crystal oscillator X501 (14.318180MHz) X401 (24.576MHz) oscillate or not, and oscillate frequency is right or not.
- 5) Back light control signal (BKLON) of XS801 has high level (about 2.5V) or not, if not, check whether fault soldered or short circuit happened.
- 6) If back light lamp is on while there is no display, check N407 and N501's reset circuit and the output of the oscillator to confirm the CPU and SCALER are working or not. If RGB is abnormal, check N501; If RGB is working correctly and the other channel is abnormal, please check N501.

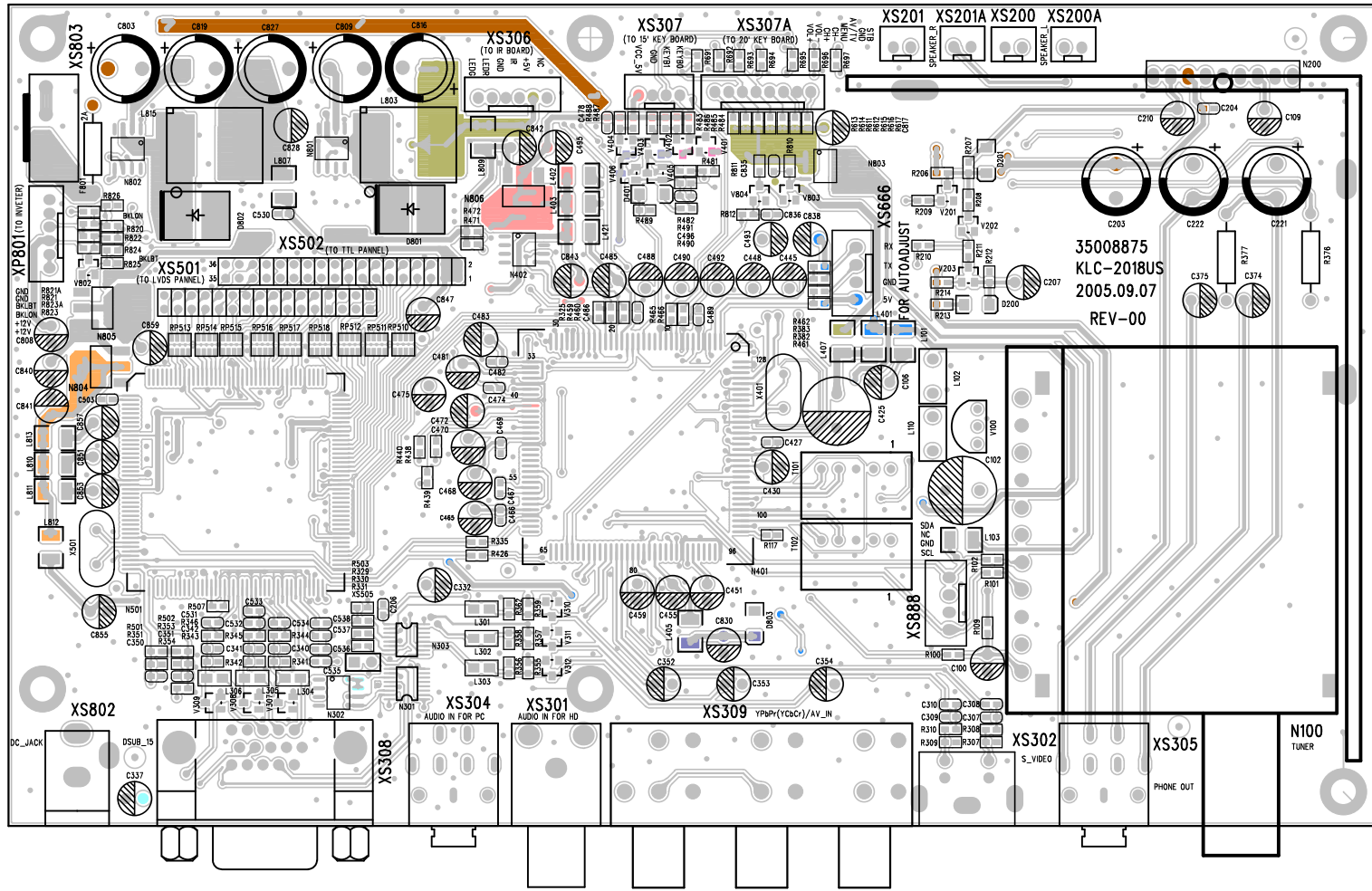
KLC-1508US



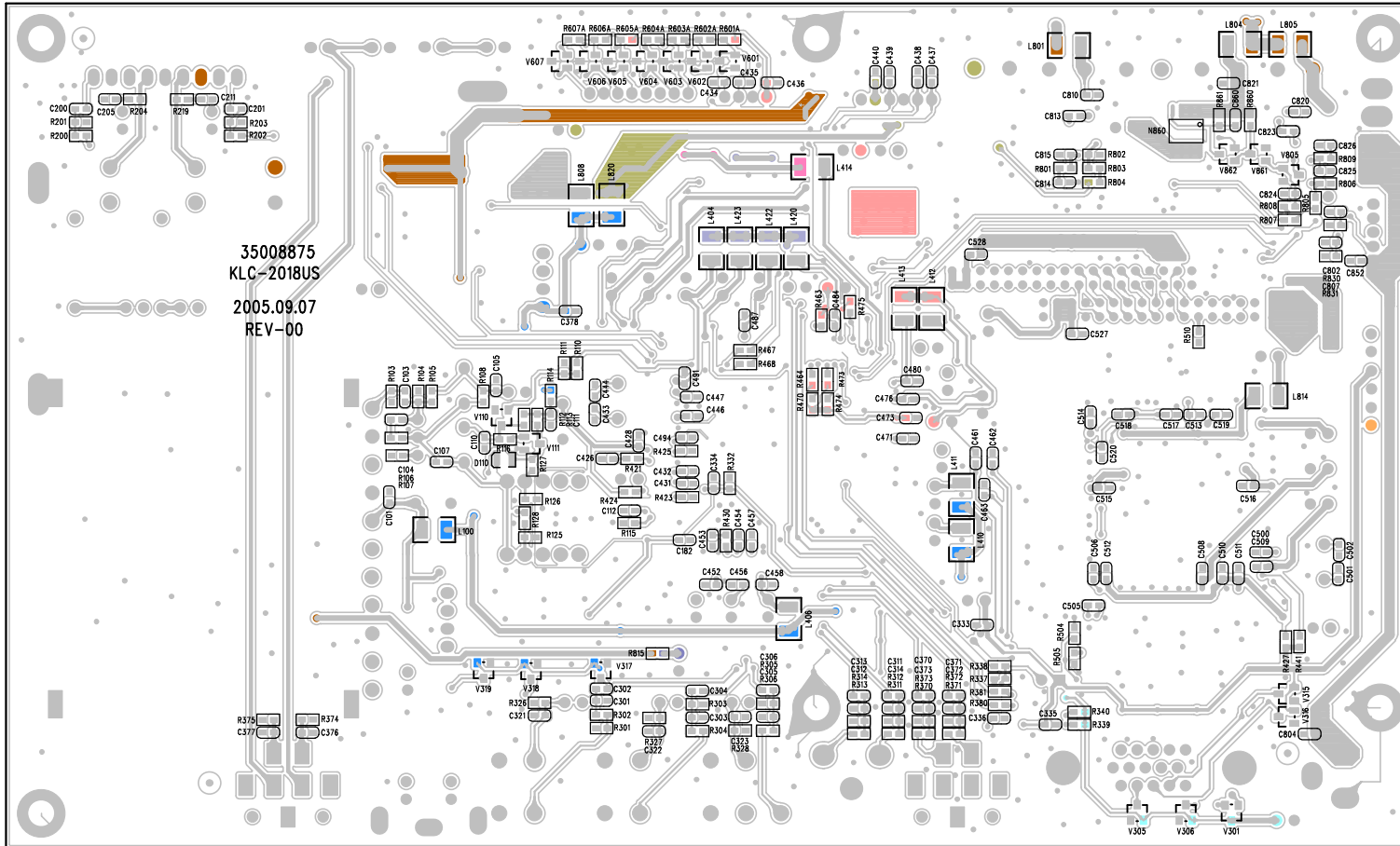
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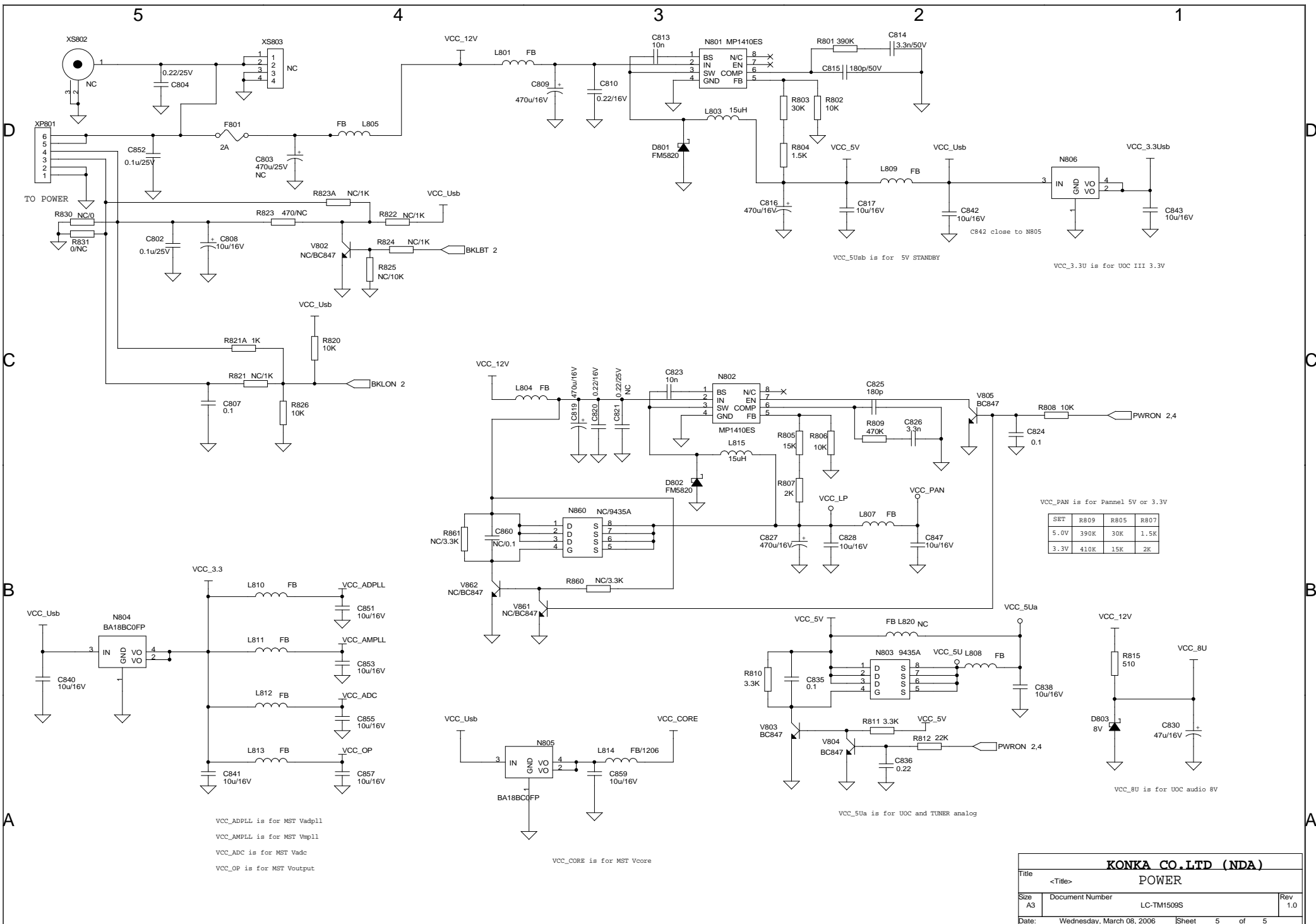


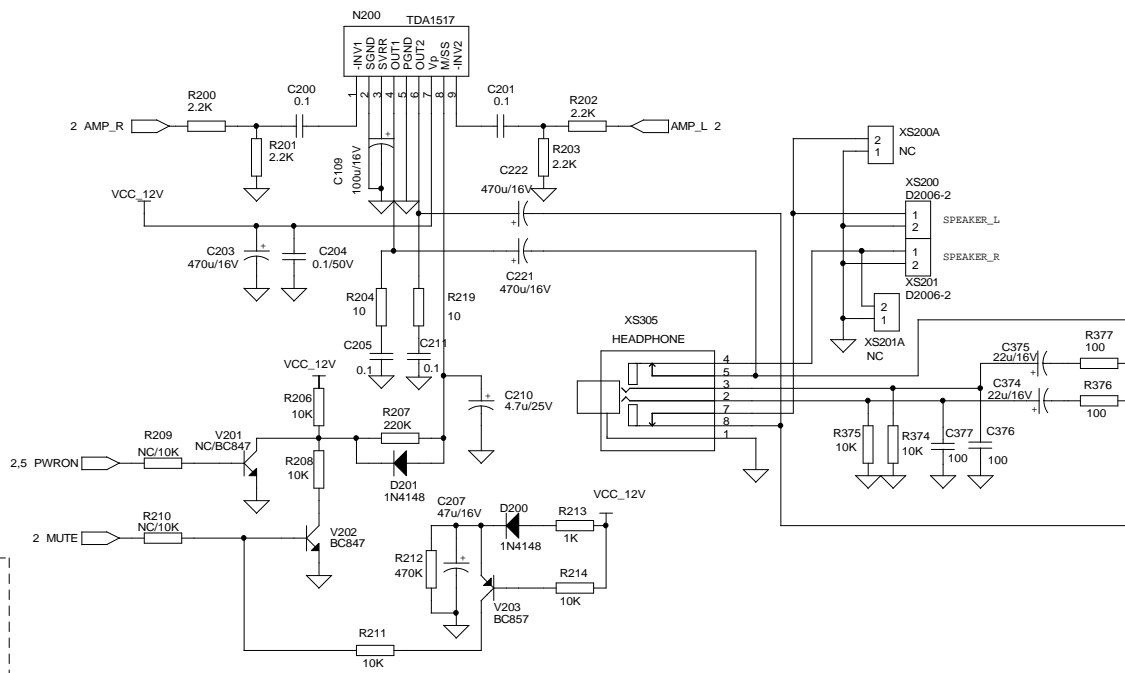
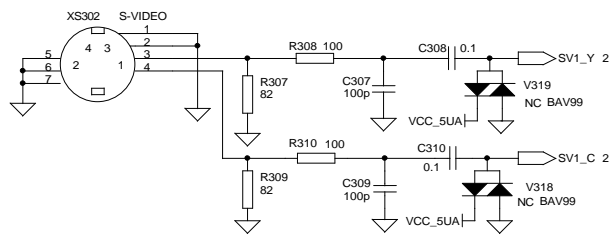
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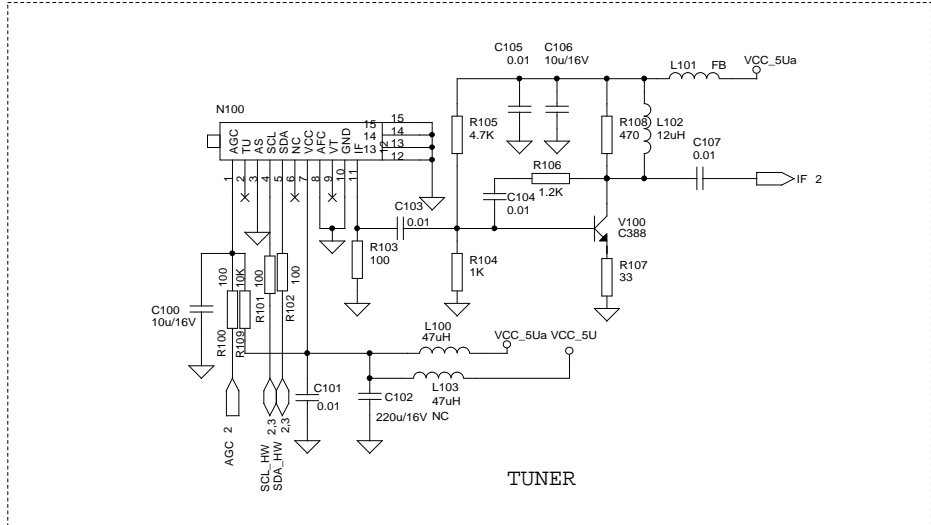
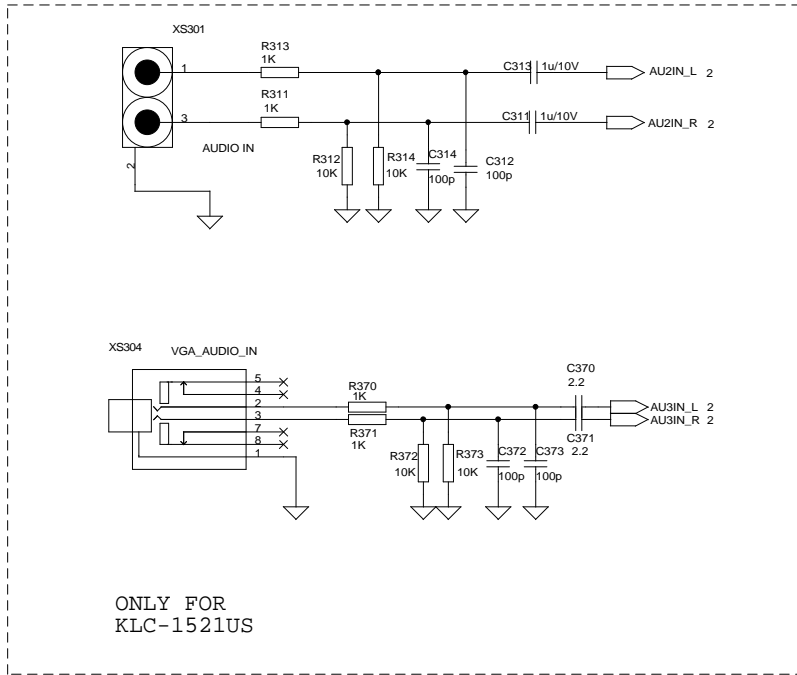
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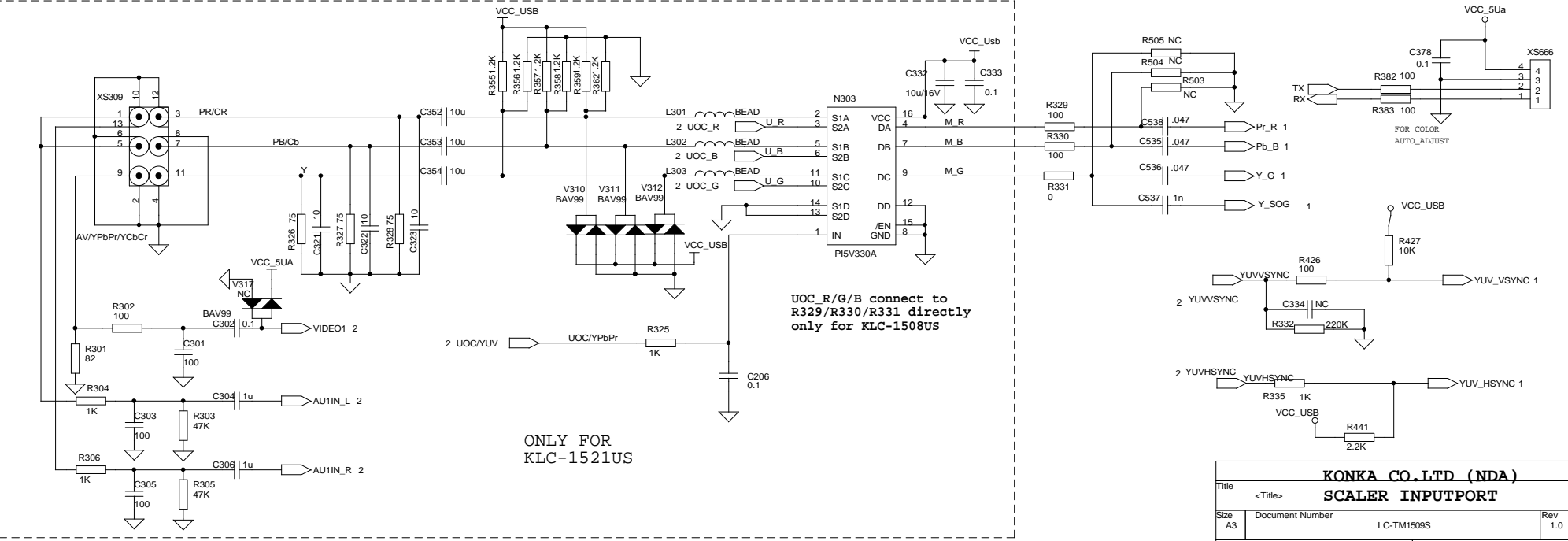
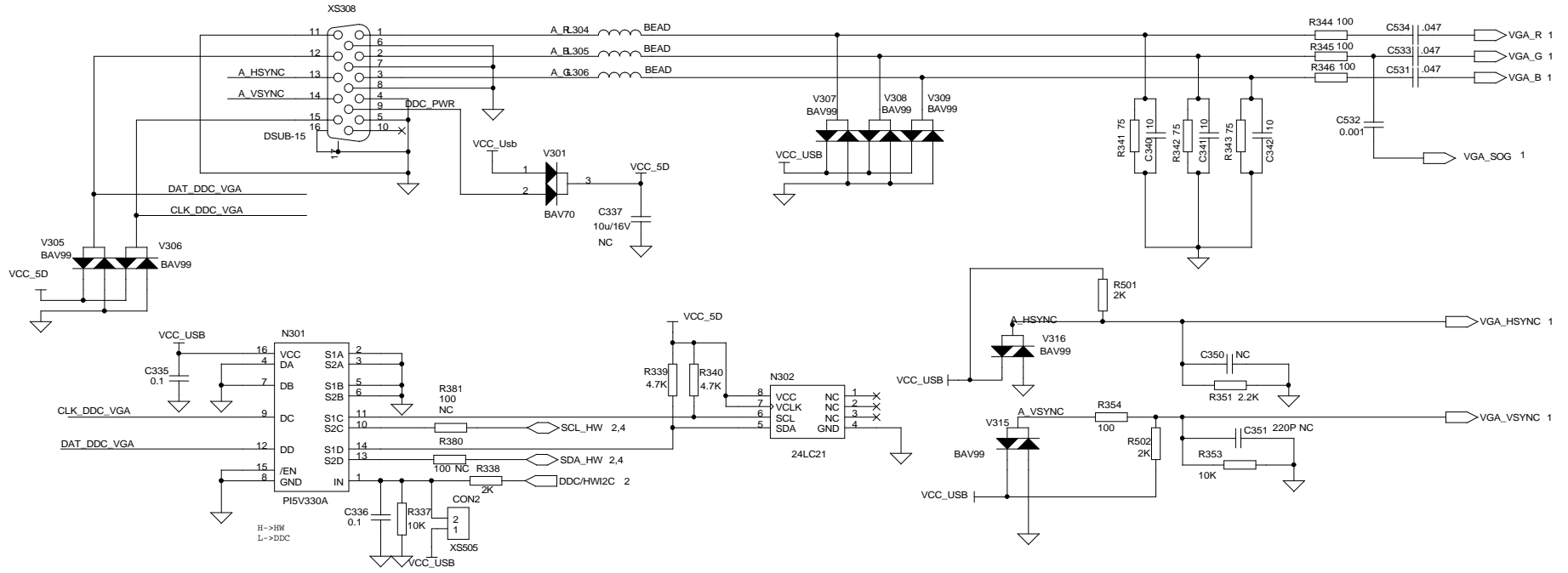
Audio AMP



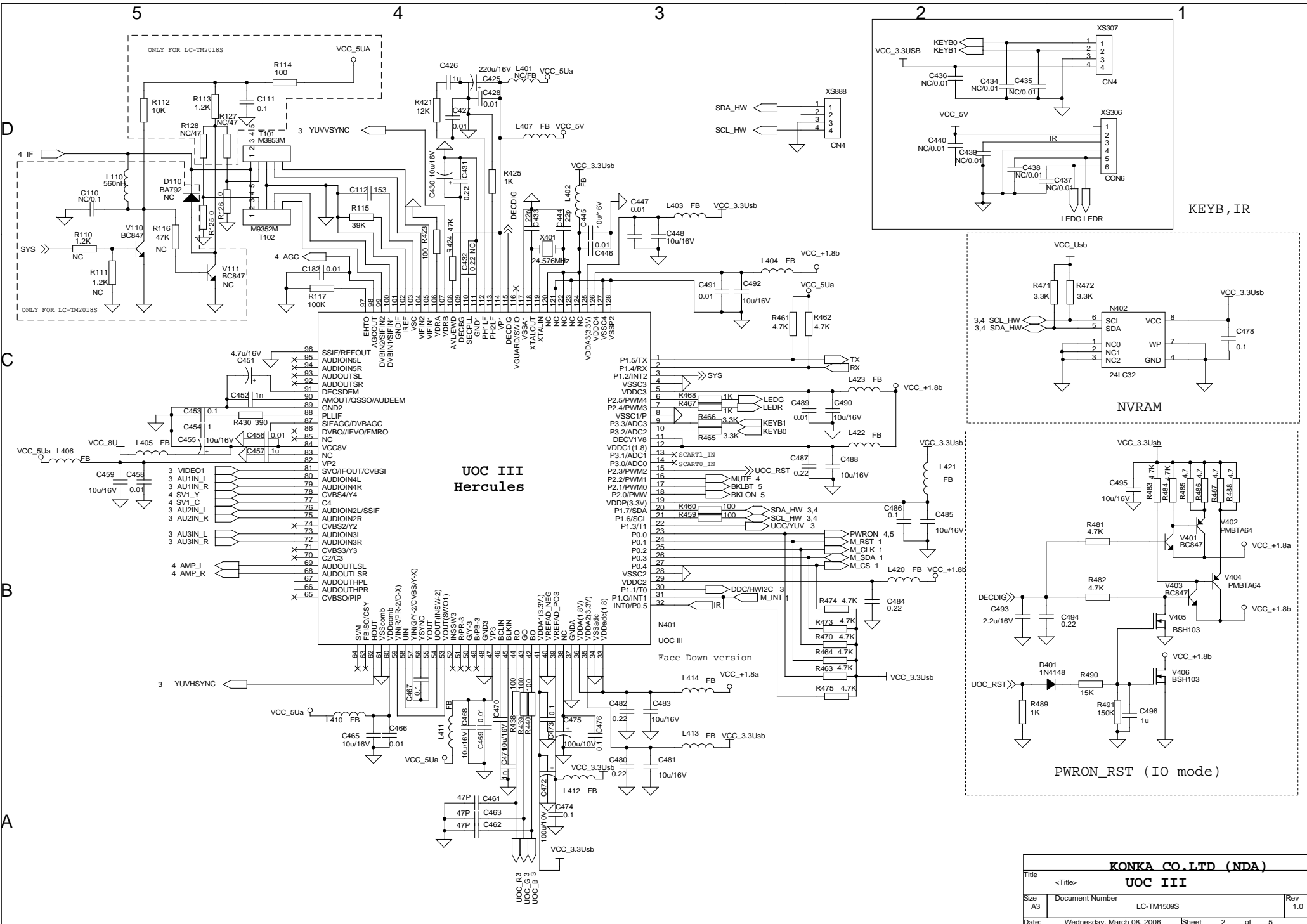
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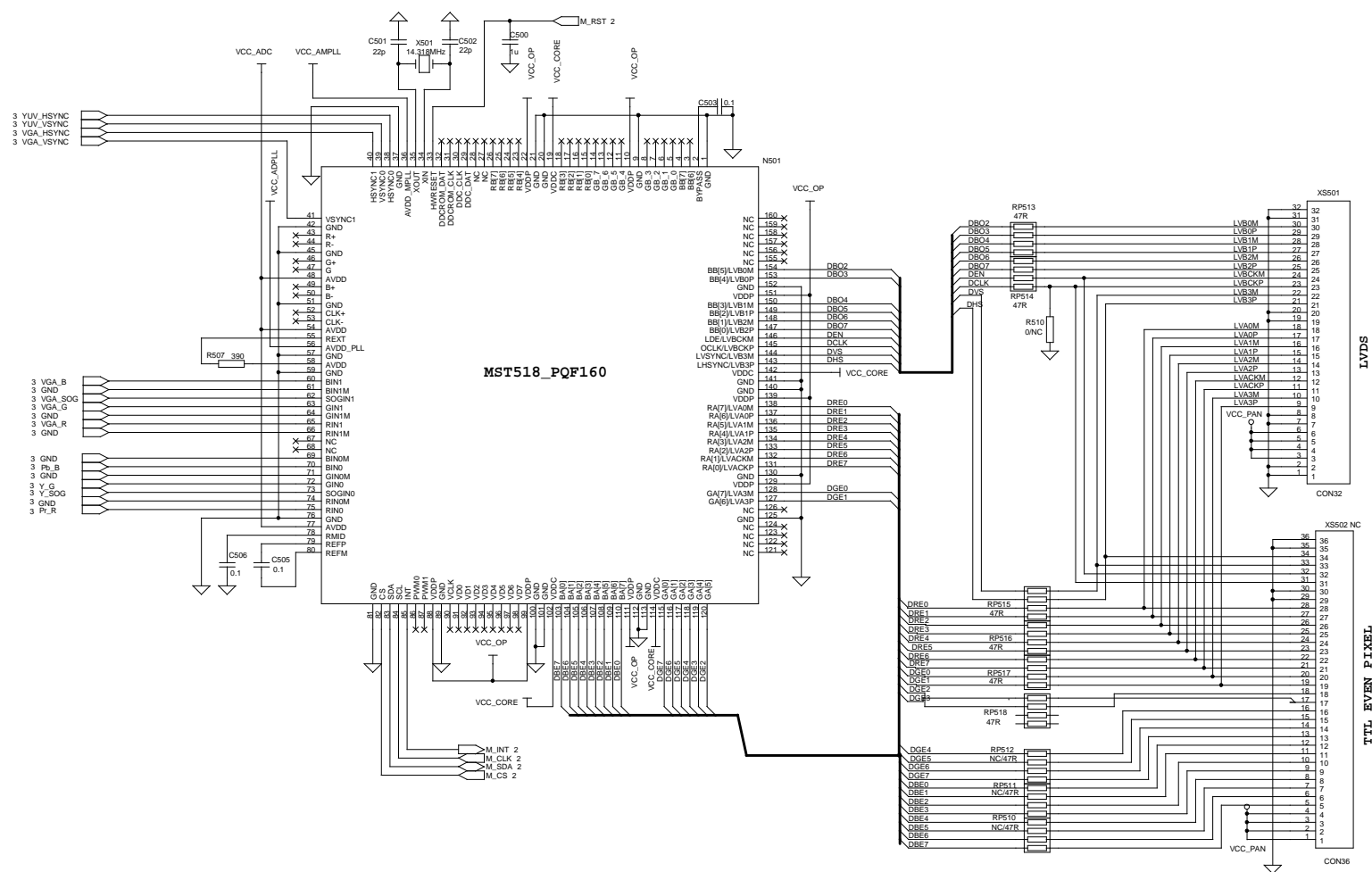
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XS501

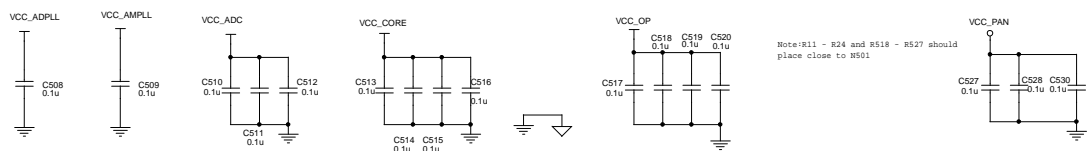
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CON32

XS502 NC

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CON36



Note: R11 - R24 and R518 - R527 should place close to N501

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