

SAMSUNG

TFT-LCD МОНИТОР

Код модели

MJ17MS

MJ19MS

Модель

710TM/713BM

910TM/913TM

Руководство по ремонту

TFT-LCD МОНИТОР



MJ17MS



MJ19MS

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1 Precautions

Follow these safety, servicing and ESD precautions to prevent damage and to protect against potential hazards such as electrical shock.

1-1 Safety Precautions

1-1-1 Warnings

1. For continued safety, do not attempt to modify the circuit board.
2. Disconnect the AC power and DC power jack before servicing.

1-1-2 Servicing the LCD Monitor

1. When servicing the LCD Monitor, Disconnect the AC line cord from the AC outlet.
2. It is essential that service technicians have an accurate voltage meter available at all times. Check the calibration of this meter periodically.

1-1-3 Fire and Shock Hazard

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

1. Inspect each lead dress to make certain that the leads are not pinched or that hardware is not lodged between the chassis and other metal parts in the monitor.
2. Inspect all protective devices such as nonmetallic control knobs, insulating materials, cabinet backs, adjustment and compartment covers or shields, isolation resistor-capacitor networks, mechanical insulators, etc.
3. Leakage Current Hot Check (Figure 1-1):

WARNING:

Do not use an isolation transformer during this test.

Use a leakage current tester or a metering system that complies with American National Standards Institute (*ANSI C101.1, Leakage Current for Appliances*), and Underwriters Laboratories (*UL Publication UL1410, 59.7*).

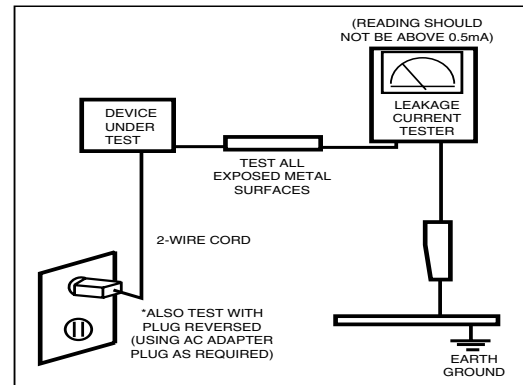


Figure 1-1. Leakage Current Test Circuit

4. With the unit completely reassembled, plug the AC line cord directly into a 120V AC outlet. With the unit's AC switch first in the ON position and then OFF, measure the current between a known earth ground (metal water pipe, conduit, etc.) and all exposed metal parts, including: metal cabinets, screwheads and control shafts. The current measured should not exceed 0.5 milliamp. Reverse the power-plug prongs in the AC outlet and repeat the test.

1-1-4 Product Safety Notices

Some electrical and mechanical parts have special safety-related characteristics which are often not evident from visual inspection. The protection they give may not be obtained by replacing them with components rated for higher voltage, wattage, etc. Parts that have special safety characteristics are identified by ⚠ on schematics and parts lists. A substitute replacement that does not have the same safety characteristics as the recommended replacement part might create shock, fire and/or other hazards. Product safety is under review continuously and new instructions are issued whenever appropriate.

1-2 Servicing Precautions

WARNING: An electrolytic capacitor installed with the wrong polarity might explode.

Caution: Before servicing units covered by this service manual, read and follow the Safety Precautions section of this manual.

Note: If unforeseen circumstances create conflict between the following servicing precautions and any of the safety precautions, always follow the safety precautions.

1-2-1 General Servicing Precautions

1. Always unplug the unit's AC power cord from the AC power source and disconnect the DC Power Jack before attempting to:
 - (a) remove or reinstall any component or assembly,
 - (b) disconnect PCB plugs or connectors, (c) connect a test component in parallel with an electrolytic capacitor.
2. Some components are raised above the printed circuit board for safety. An insulation tube or tape is sometimes used. The internal wiring is sometimes clamped to prevent contact with thermally hot components. Reinstall all such elements to their original position.
3. After servicing, always check that the screws, components and wiring have been correctly reinstalled. Make sure that the area around the serviced part has not been damaged.
4. Check the insulation between the blades of the AC plug and accessible conductive parts (examples: metal panels, input terminals and earphone jacks).
5. Insulation Checking Procedure: Disconnect the power cord from the AC source and turn the power switch ON. Connect an insulation resistance meter (500 V) to the blades of the AC plug.
The insulation resistance between each blade of the AC plug and accessible conductive parts (see above) should be greater than 1 megohm.
6. Always connect a test instrument's ground lead to the instrument chassis ground before connecting the positive lead; always remove the instrument's ground lead last.

1-3 Electrostatically Sensitive Devices (ESD) Precautions

Some semiconductor (solid state) devices can be easily damaged by static electricity. Such components are commonly called Electrostatically Sensitive Devices (ESD). Examples of typical ESD are integrated circuits and some field-effect transistors. The following techniques will reduce the incidence of component damage caused by static electricity.

1. Immediately before handling any semiconductor components or assemblies, drain the electrostatic charge from your body by touching a known earth ground. Alternatively, wear a discharging wrist-strap device. To avoid a shock hazard, be sure to remove the wrist strap before applying power to the monitor.
2. After removing an ESD-equipped assembly, place it on a conductive surface such as aluminum foil to prevent accumulation of an electrostatic charge.
3. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ESDs.
4. Use only a grounded-tip soldering iron to solder or desolder ESDs.
5. Use only an anti-static solder removal device. Some solder removal devices not classified as "anti-static" can generate electrical charges sufficient to damage ESDs.
6. Do not remove a replacement ESD from its protective package until you are ready to install it. Most replacement ESDs are packaged with leads that are electrically shorted together by conductive foam, aluminum foil or other conductive materials.
7. Immediately before removing the protective material from the leads of a replacement ESD, touch the protective material to the chassis or circuit assembly into which the device will be installed.
Caution: Be sure no power is applied to the chassis or circuit and observe all other safety precautions.
8. Minimize body motions when handling unpackaged replacement ESDs. Motions such as brushing clothes together, or lifting your foot from a carpeted floor can generate enough static electricity to damage an ESD.

2 Product Specifications

2-1 MJ17MS/MJ19MS Specifications

Item	Description	
	MJ17MS	MJ19MS
LCD Panel	TFT-LCD panel, RGB vertical stripe, normally black transmissive, 17-Inch viewable, 0.264 (H) x 0.264 (V) mm pixel pitch	TFT-LCD panel, RGB vertical stripe, normally black transmissive, 19-Inch viewable, 0.297 (H) x 0.297 (V) mm pixel pitch
Scanning Frequency	Horizontal : 31 kHz ~ 81 kHz (Automatic) Vertical : 56 Hz ~ 75 Hz	
Display Colors	16.2 Million colors	16.7 Million colors
Maximum Resolution	Horizontal : 1280 Pixels Vertical : 1024 Pixels	
Input Video Signal	Analog, 0.714 Vp-p \pm 5% positive at 75 Ω , internally terminated	
Input Sync Signal	Type : Separate H/V sync, Composite H/V Level : TTL level (V high \geq 2.0 V, V low \leq 0.8 V), Sync-on-Green (\leq -0.25 V)	
Maximum Pixel Clock rate	135 MHz	
Active Display Horizontal/Vertical	338 \pm 3 mm / 270 \pm 3 mm	376.32 mm \pm 3 mm / 301.056 mm \pm 3 mm
AC power voltage & Frequency	AC 90 ~ 264 Volts, 60/50 Hz \pm 3 Hz	
Power Consumption	38W (normal)	42W (normal)
Dimensions		
Set (W x D x H)	14.57 x 2.52 x 13.48 Inches (370.0 x 64.1 x 342.3 mm)(Without Stand) 14.57 x 7.87 x 15.91 Inches (370.0 x 200.0 x 404.0 mm)(With Stand)	16.40 x 2.53 x 14.87 Inches (416.6 x 64.2 x 377.5 mm)(Without Stand) 16.40 x 7.87 x 16.56 Inches (416.6 x 200.0 x 420.6 mm)(With Stand)
Package(Outside Dimension)	20 x 9.25 x 16.97 Inches (508 x 235 x 431 mm)	20.71 x 9.25 x 18.46 Inches (526.0 x 235.0 x 469.0 mm)
Weight (Set/Package)	5.8 Kg (12.79 lbs) (with Basic Stand) / 8.0 Kg (17.64 lbs) (with Basic Stand)	7.2 Kg (15.87 lbs) (with Basic Stand) / 9.0 Kg (19.84 lbs) (with Basic Stand)
Environmental Considerations	Operating Temperature : 50°F ~ 104°F (10°C ~ 40°C) Operating Humidity : 10 % ~ 80 % Storage Temperature : -13°F ~ 113°F (-25°C ~ 45°C) Storage Humidity : 5 % ~ 95 %	
<ul style="list-style-type: none"> • Designs and specifications are subject to change without prior notice. 		

2-2 Pin Assignments

Pin No.	Sync Type	15-Pin D-Sub Signal Cable Connector		
		Separate	Composite	Sync-on-green
1		Red	Red	Red
2		Green	Green	Green + H/V Sync.
3		Blue	Blue	Blue
4		GND	GND	GND
5		DDC Return (GND)	DDC Return (GND)	DDC Return (GND)
6		GND-R	GND-R	GND-R
7		GND-G	GND-G	GND-G
8		GND-B	GND-B	GND-B
9		DDC Power Input (+5V)	DDC Power Input (+5V)	DDC Power Input (+5V)
10		Self Raster	Self Raster	Self Raster
11		GND	GND	GND
12		Bi-Dr Data (SDA)	Bi-Dr Data (SDA)	Bi-Dr Data (SDA)
13		H-Sync.	H/V-Sync.	Not Used
14		V-Sync.	Not Used	Not Used
15		DDC Clock (SCL)	DDC Clock (SCL)	DDC Clock (SCL)

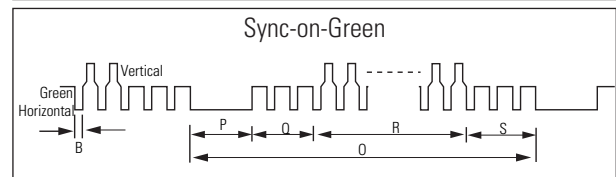
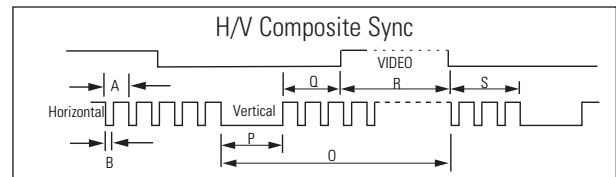
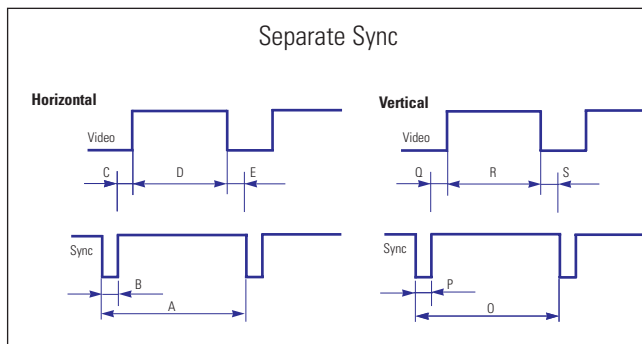
Pin No.	Sync Type	24P DVI-D		
1		Rx2-	13	No Connection
2		Rx2+	14	+5V_M
3		GND	15	Self Raster
4		No Connection	16	+5V_M
5		No Connection	17	Rx0-
6		DDC Clock (SCL)	18	Rx0+
7		DDC Data (SDA)	19	NC
8		NC	20	No Connection
9		Rx1-	21	No Connection
10		Rx1+	22	NC
11		NC	23	RxC+
12		No Connection	24	RxC-

2-3 Timing Chart

This section of the service manual describes the timing that the computer industry recognizes as standard for computer-generated video signals.

Table 2-1 Timing Chart

Mode Timing	IBM		VESA					VESA	
	VGA2/ 70 Hz 720 x 400	VGA3/ 60 Hz 640 x 480	640/75 Hz 640 x 480	800/60 Hz 800 x 600	800/75 Hz 800 x 600	1024/60 Hz 1024 x 768	1024/75 Hz 1024 x 768	1280/60 Hz 1280 x 1024	1280/75 Hz 1280 x 1024
fH (kHz)	31.469	31.469	37.500	37.879	46.875	48.363	60.023	63.981	79.975
A μ sec	31.777	31.778	26.667	26.400	21.333	20.677	16.660	11.852	12.504
B μ sec	3.813	3.813	2.032	3.200	1.616	2.092	1.219	1.037	1.067
C μ sec	1.589	1.589	3.810	2.200	3.232	2.462	2.235	2.296	1.837
D μ sec	26.058	26.058	20.317	20.000	16.162	15.754	13.003	9.259	9.481
E μ sec	0.318	0.318	0.508	0.000	0.323	0.369	0.203	0.000	0.119
fV (Hz)	70.087	59.940	75.000	60.317	75.000	60.004	75.029	60.020	75.025
O msec	14.268	16.683	13.333	16.579	13.333	16.666	13.328	16.005	13.329
P msec	0.064	0.064	0.080	0.106	0.064	0.124	0.050	0.047	0.038
Q msec	0.858	0.794	0.427	0.607	0.448	0.600	0.466	0.594	0.475
R msec	13.155	15.761	12.800	15.840	12.800	15.880	12.795	15.630	12.804
S msec	0.191	0.064	0.027	0.0261	0.021	0.062	0.017	0.016	0.013
Clock Freq. (MHz)	28.322	26.175	31.500	40.000	49.500	75.000	78.750	108.000	135.000
Polarity H.Sync	Negative	Negative	Negative	Positive	Positive	Negative	Positive	Positive	Positive
V.Sync	Positive	Negative	Negative	Positive	Positive	Negative	Positive	Positive	Positive
Remark	Separate	Separate	Separate	Separate	Separate	Separate	Separate	Separate	Separate



A : Line time total	B : Horizontal sync width	O : Frame time total	P : Vertical sync width
C : Back porch	D : Active time	Q : Back porch	R : Active time
E : Front porch		S : Front porch	

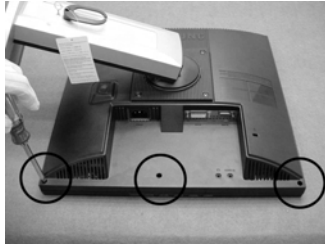
3 Disassembly and Reassembly

This section of the service manual describes the disassembly and reassembly procedures for the MJ17MS/MJ19MS TFT-LCD monitors.

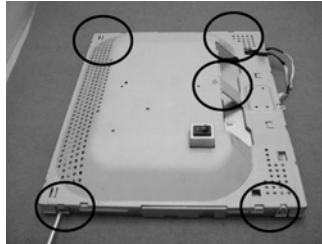
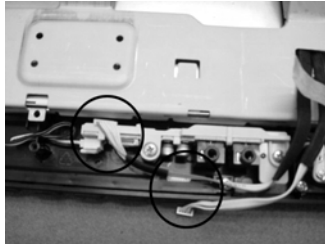
⚠ WARNING: This monitor contains electrostatically sensitive devices. Use caution when handling these components.

3-1-1 MJ17MS

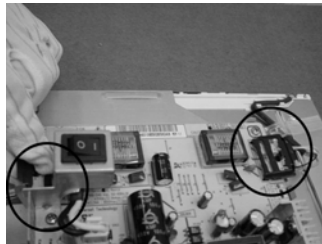
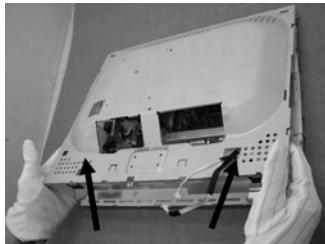
⚠ Cautions: 1. Disconnect the monitor from the power source before disassembly.



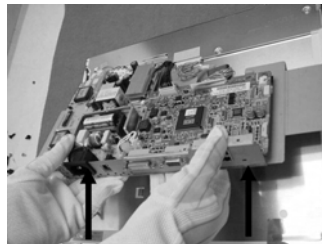
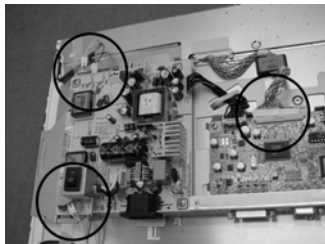
1. Place monitor face down on cushioned table. Remove 3 screws from the rear cover. Lift up the stand while holding the rear cover.



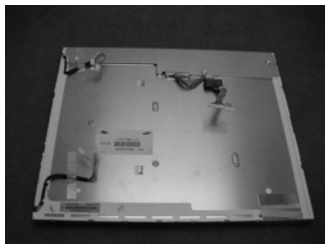
2. Disconnect function cable, audio cable from the panel and remove 5 screws from the shield.



3. Lift up the panel shield and disconnect 2 inverter holder from the PCB board.

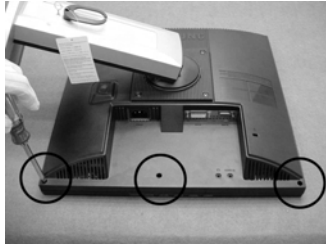


4. Disconnect inverter cable, LVDS cable from the PCB boards and lift up the PCB board shield.

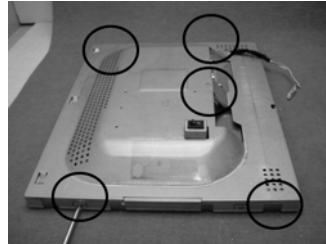
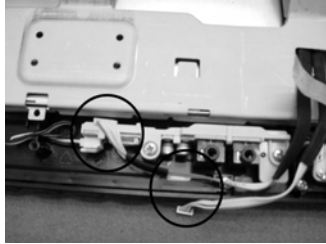


5. This picture is panel.

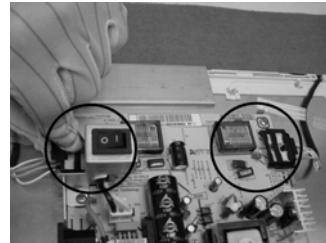
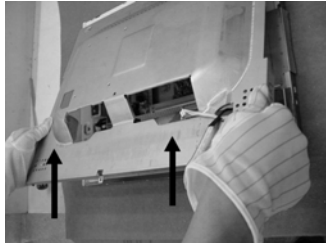
3-1-2 MJ19MS



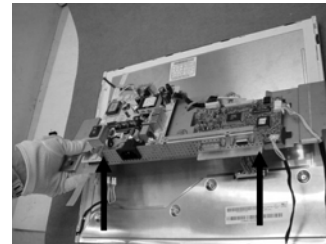
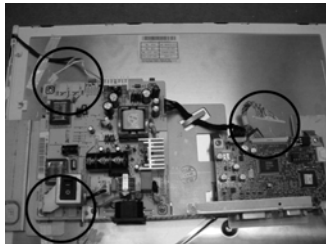
1. Place monitor face down on cushioned table. Remove 3 screws from the rear cover. Lift up the stand while holding the rear cover.



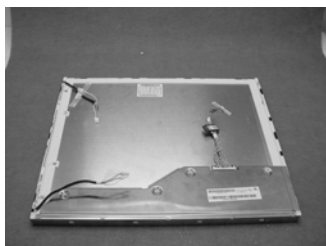
2. Disconnect function cable, audio cable from the panel and remove 5 screws from the shield.



3. Lift up the panel shield and disconnect 2 inverter holder from the PCB board.



4. Disconnect inverter cables, LVDS cable from the PCB boards and lift up the PCB board shield.



5. This picture is panel.

3-2 Reassembly

Reassembly procedures are in the reverse order of disassembly procedures.

4 Настройки и регулировки

В этом разделе Руководства по обслуживанию объясняется, как пользоваться технологическим стендом RS232. Он необходим при замене платы AD и программной памяти (IC110).

4-1 Необходимое оборудование

Для настройки монитора необходимо следующее оборудование:

- Компьютер с ОС Windows 95, Windows 98 или Windows NT.
- MTI-2031 DDC MANAGER

4-2 Автоматическая настройка цвета

Для ввода видеоизображения используйте шкалу 16 уровней серого или любую другую черно-белую.

1. Выберите в качестве языка OSD - English (Английский).
2. Нажмите клавишу "Enter/Source" и удерживайте ее нажатой в течение 5 секунд.

4-3 Ввод данных DDC EDID

1. При замене платы AD введите данные DDC EDID.
2. Получите/загрузите соответствующий для модели DDC файл из отдела контроля качества. Установите нижеуказанный стенд (Рисунок 1) и введите данные.

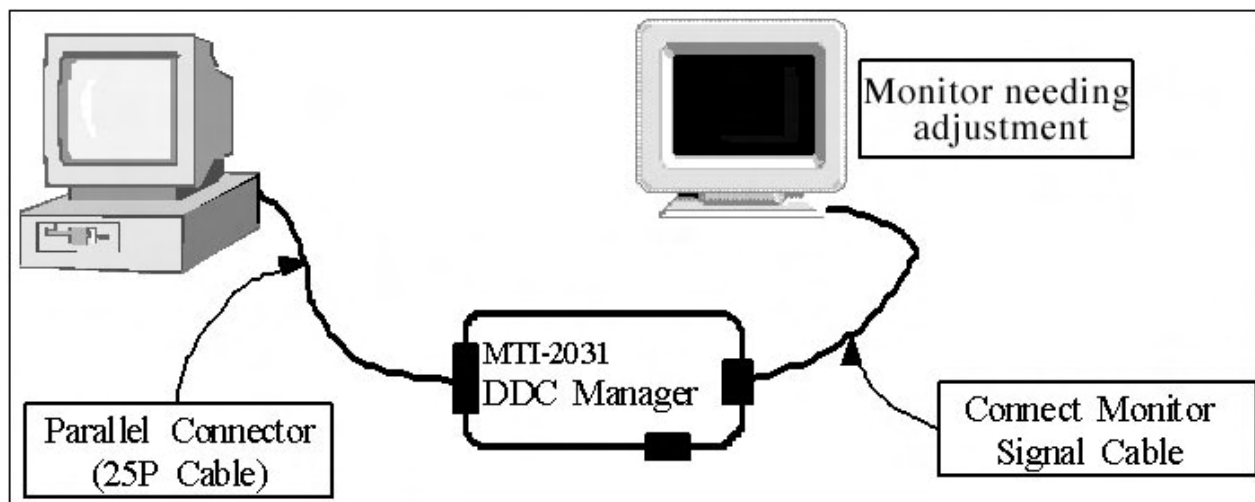


Рисунок 1.

4-4 Настройки с помощью OSD при замене панели

1. Установите яркость и контрастность на 0. Затем нажмите клавишу <Enter/Source> и удерживайте ее нажатой в течение 5 секунд. На экране появится меню сервисного режима.
2. Нажимайте клавишу <+>, чтобы установить курсор на позицию "Panel". В течение 5 секунд удерживайте в нажатом состоянии клавишу <Menu>.

4-5 Настройки с помощью OSD при замене лампы

1. Установите яркость и контрастность на 0. Затем в течение 5 секунд удерживайте в нажатом состоянии клавишу <Exit>. На экране появится меню сервисного режима.
2. Нажмите клавишу <+>. Выберите верхнюю лампу (Upper Lamp) и в течение 5 секунд удерживайте в нажатом состоянии клавишу <Menu>. Затем выберите нижнюю лампу (Lower Lamp) и в течение 5 секунд удерживайте в нажатом состоянии клавишу <Menu>.

***Примечание** : Для детального ознакомления с сервисным режимом прочитайте нижеприведенные инструкции.

4-6 Пояснение работы с сервисным режимом

4-6-1 Как выводить на экран меню сервисного режима

1. Необходимо установить на ноль значения яркости и контрастности.
2. В течение 5 секунд удерживайте в нажатом состоянии клавишу \square "Enter/Source".
3. На экране появится служебная функция OSD.

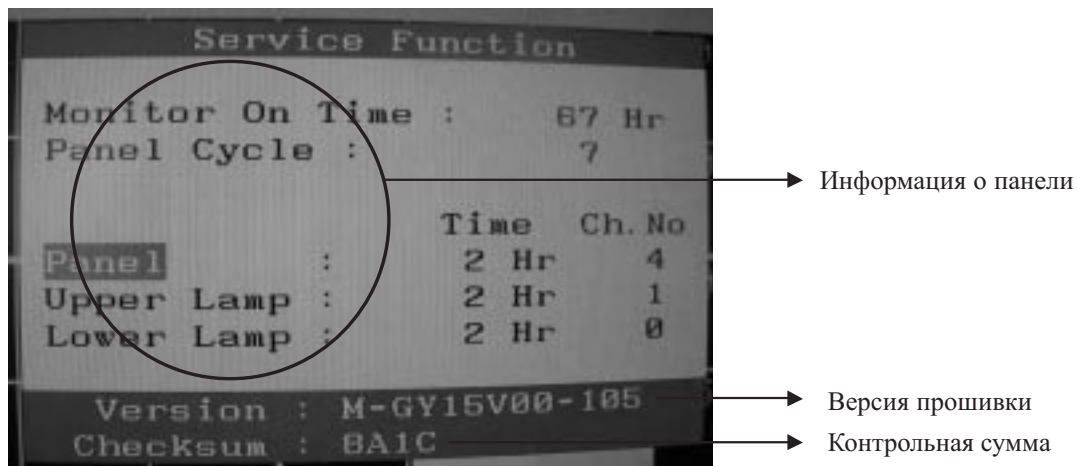


Рисунок 2. Пример меню сервисного режима

Меню сервисного режима основано на сетке из 29 колонок x 12 рядов. Меню сервисного режима содержит информацию о панели, версию программы и контрольную сумму MICOM.

4-6-2 Как управлять работой в сервисном режиме

1. Переход по пунктам меню "Panel", "Upper Lamp", "Lower Lamp" осуществляется клавишей <+>. При этом активный пункт меню подсвечивается синим цветом.

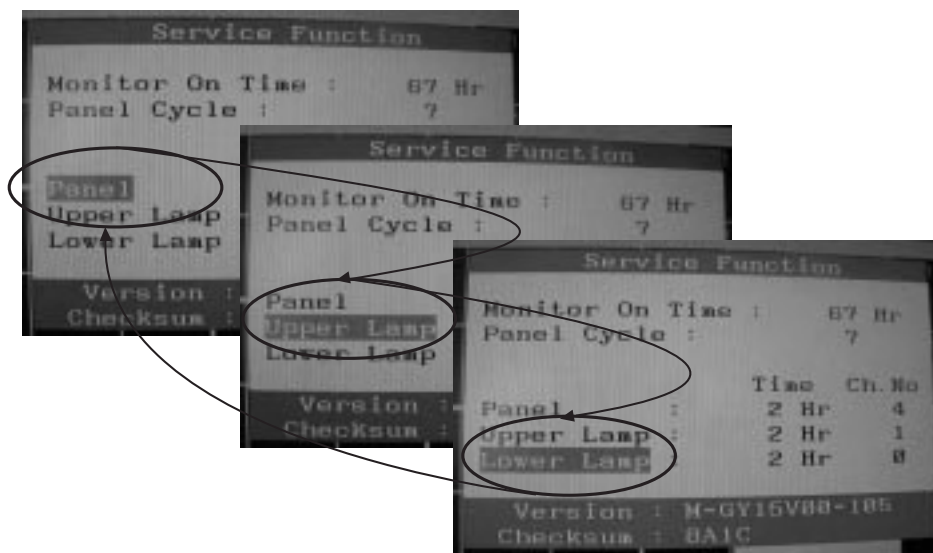


Рисунок 3.

4-6-3 Как управлять работой в сервисном режиме

- После замены панели или лампы вы должны установить в ноль время работы панели или ламп.
- В случае замены панели

После замены панели в течение 5 секунд удерживайте в нажатом состоянии клавишу <Menu>.

После чего число замен панели (Ch. No) увеличится на единицу, а информация о времени работы панели сбросится в ноль. Одновременно остальная выведенная информация будет сброшена в ноль ("Upper/Lower lamp", "Panel cycle").

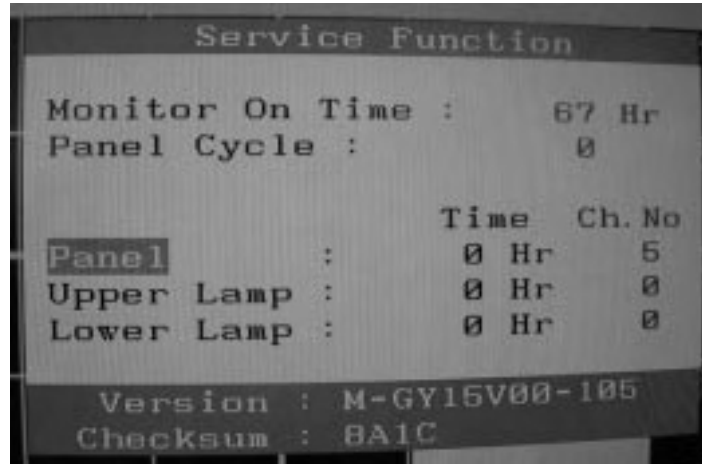


Рисунок 4.

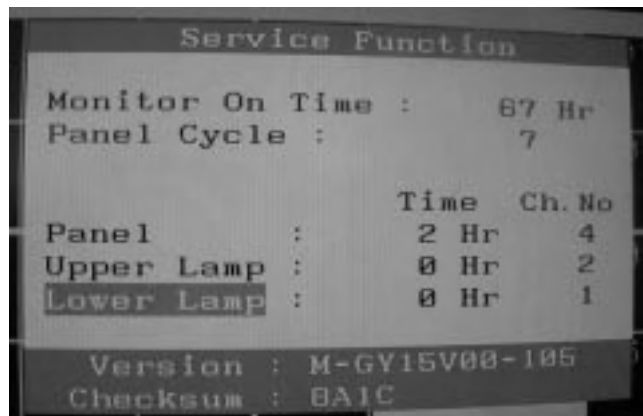
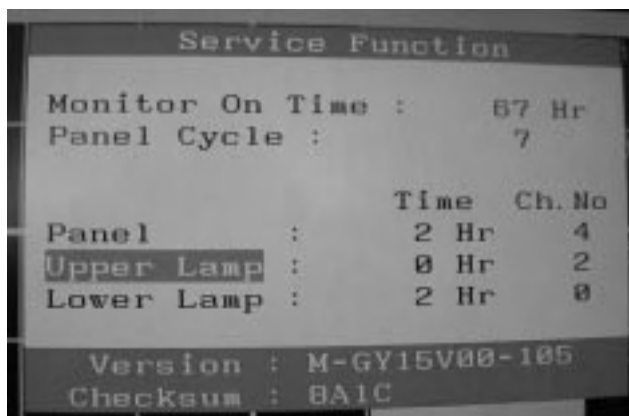
4-6-4 Как управлять работой в сервисном режиме

- В случае замены верхней или нижней лампы

Проделайте следующие операции после замены верхней или нижней лампы.

1. В меню сервисного режима выберите пункт "Upper Lamp" или "Lower Lamp", соответственно замененной лампе.
2. Нажмите и удерживайте в течение 5 секунд клавишу <Menu>.

После этого число замен ("Ch. No") увеличится на единицу, а время наработки ("Time") сбросится в ноль (только для выбранного пункта меню)




Рисунки 5, 6.

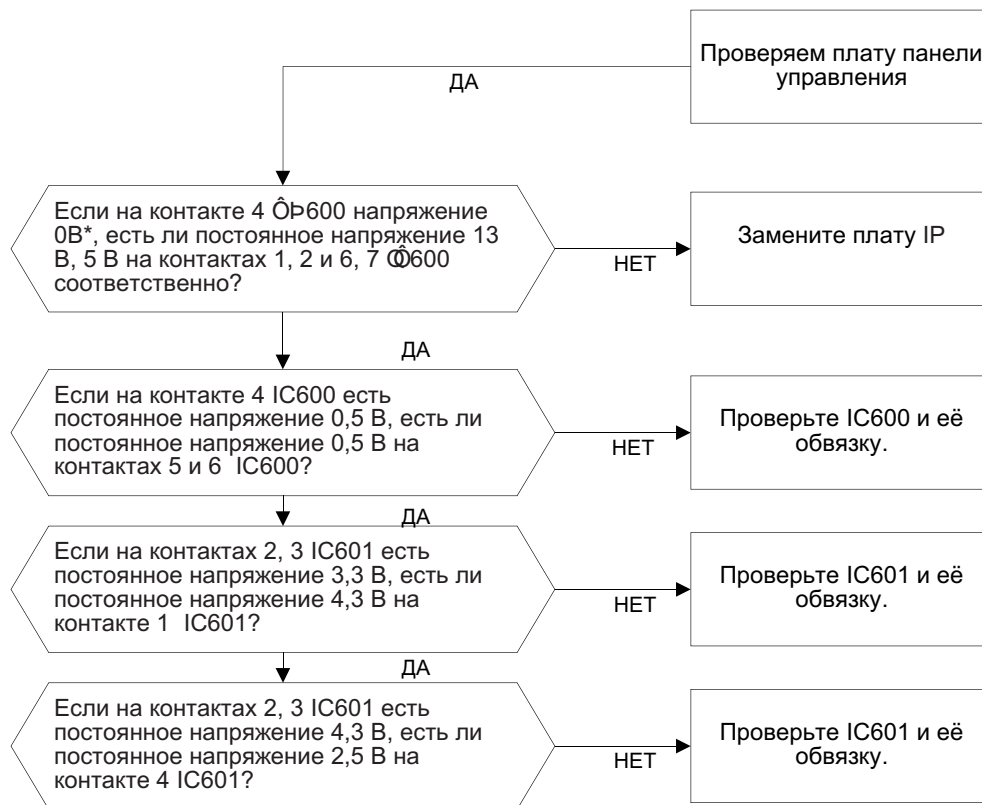
Для заметок

5 Поиск и устранение неисправностей

Примечание:

- Перед началом поиска неисправностей установите следующие параметры дисплея ПК:
 - Разрешение: 1G € x F€G
 - Частота строчной развертки: 64 кГц
 - Частота вертикальной развертки: 60 Гц
- Если изображение не появляется, проверьте правильность подключения сетевого шнура.
- Проверьте следующие цепи
 - Не появилось раstra: плату панели управления, основную плату, плату I/D.
 - Напряжение 5 В есть, но нет изображения: Основную плату.
 - Отсутствует напряжение 5 В: Плату I/D.
- Если вы нажмете кнопку  <Enter/Source> и будете удерживать ее в нажатом состоянии более 5 секунд, параметры монитора автоматически вернуться к значениям заводской настройки.

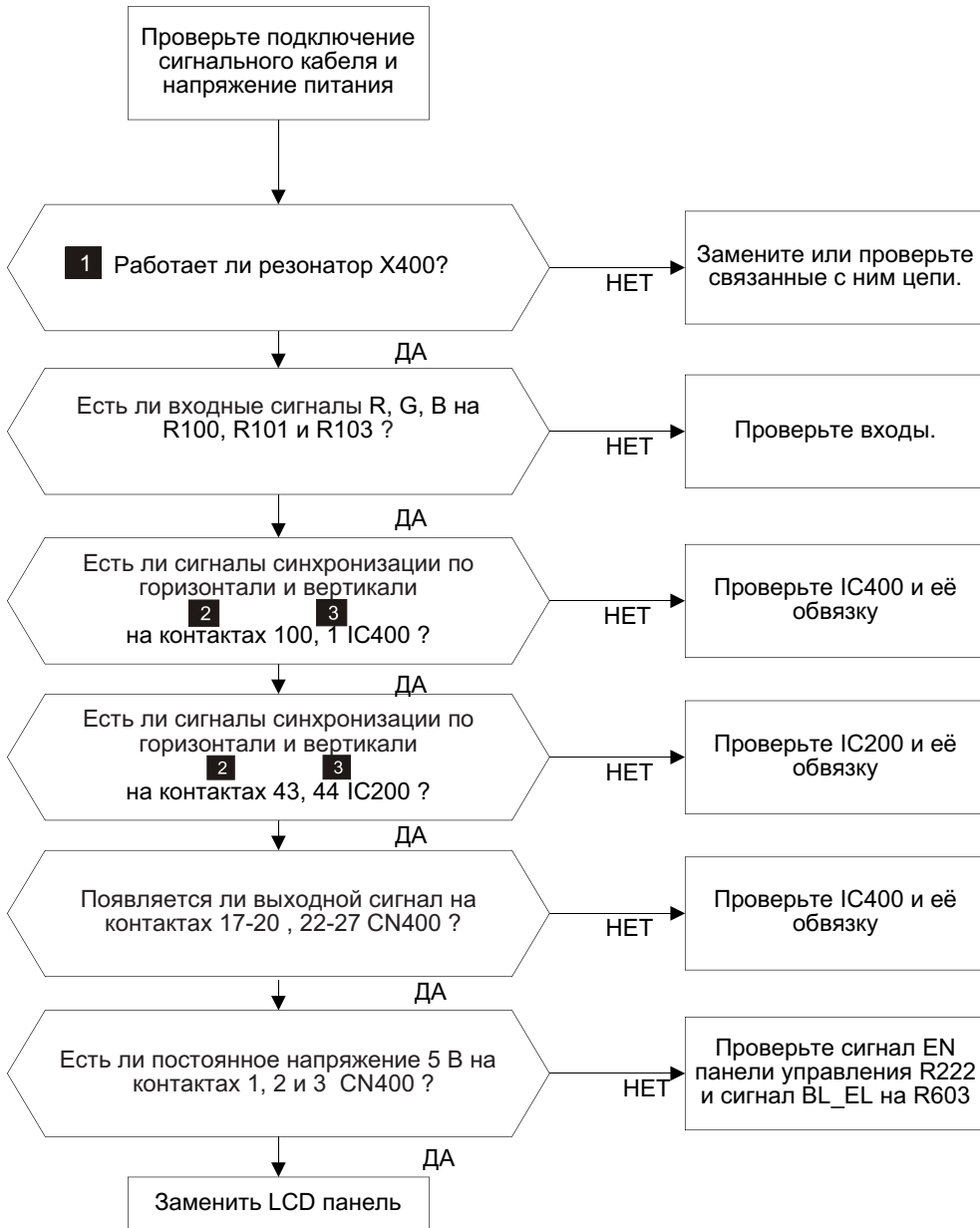
5-1-2 Нет напряжения питания



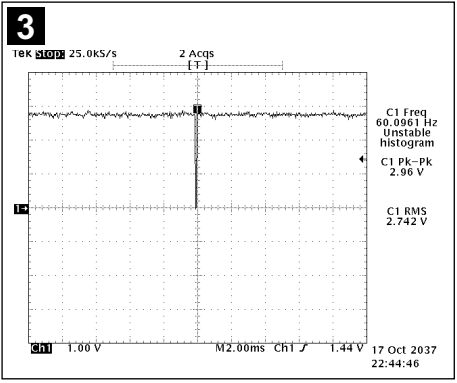
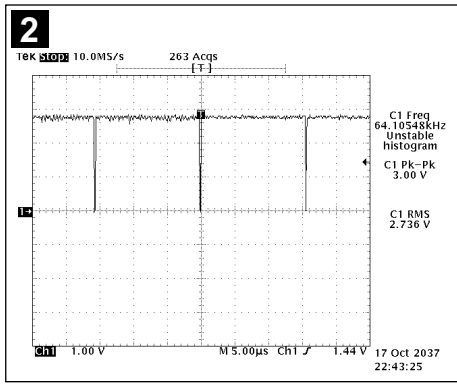
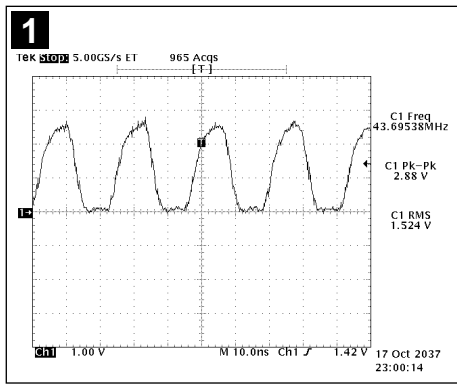
* 0 В означает включенное состояние.

Если монитор работает в обычном режиме, за исключением DPMS и выключенного положения выключателя питания, 0 В должно быть приложено к контакту 4 IC600.

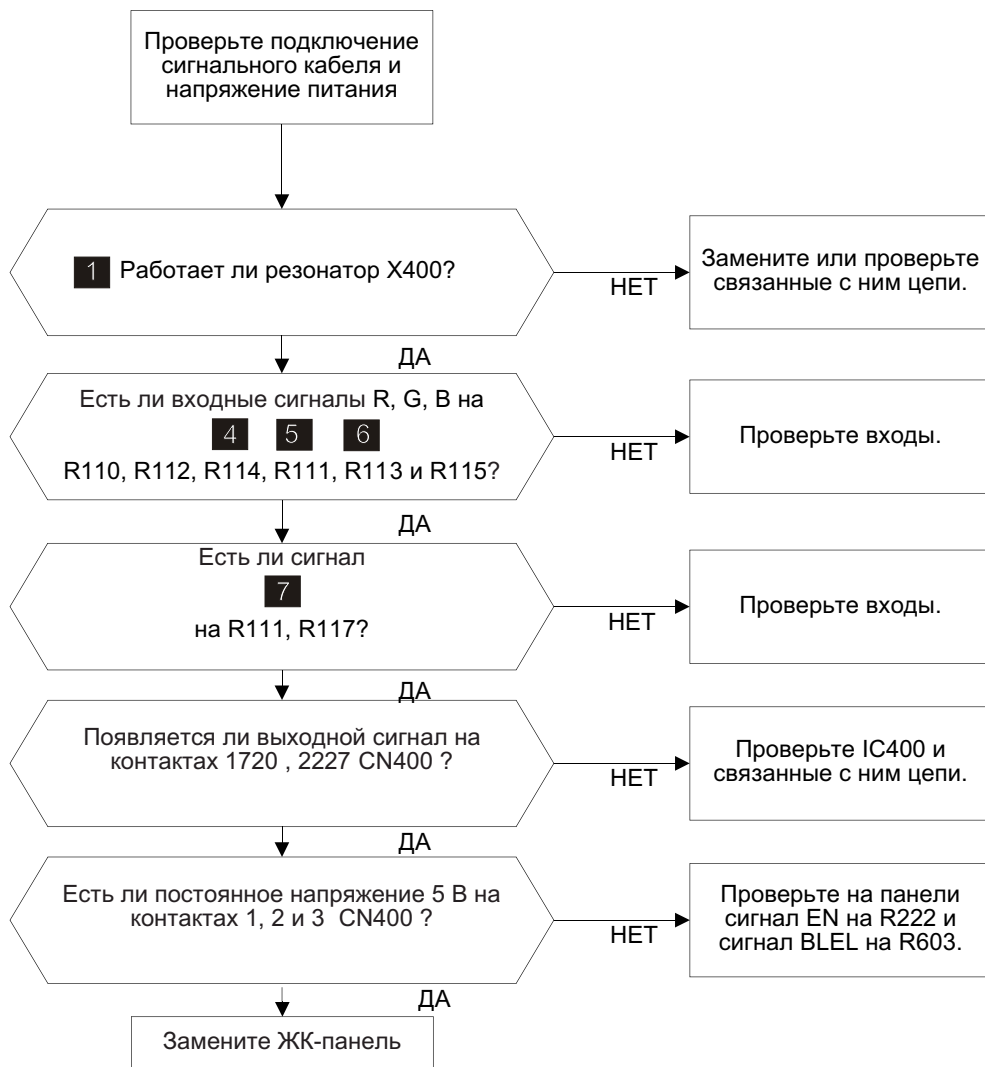
5-2-1 Нет видеосигнала (аналогового)



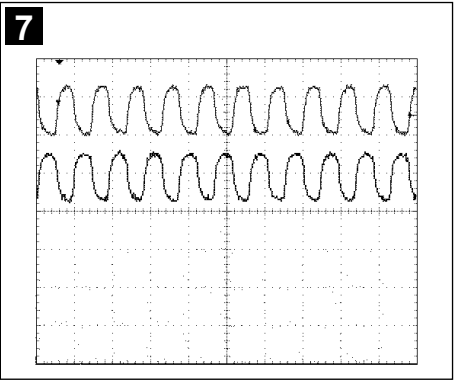
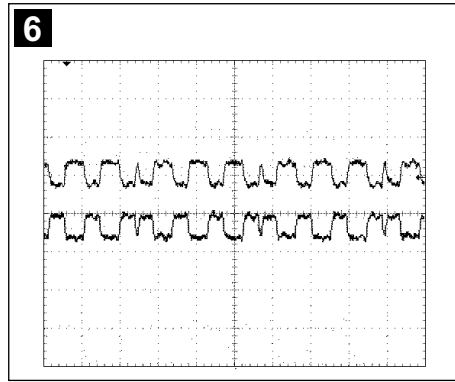
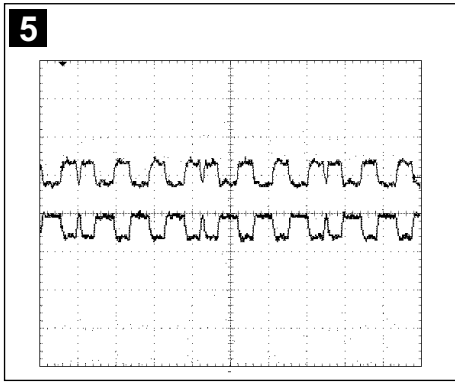
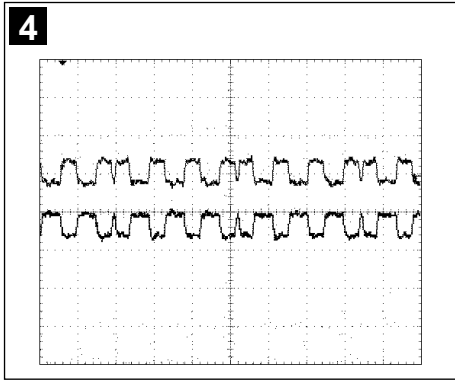
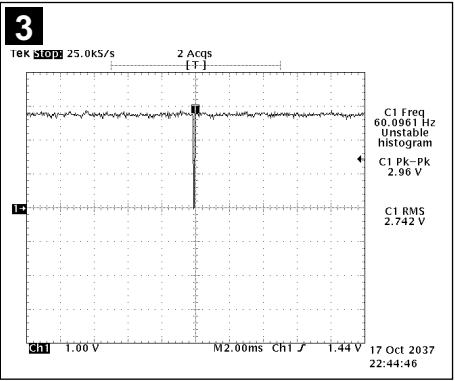
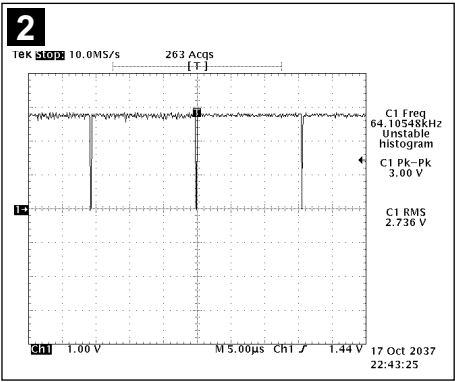
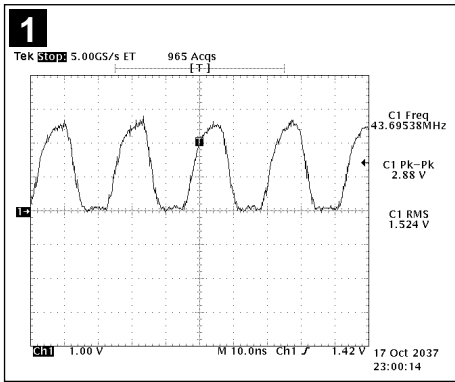
ФОРМЫ СИГНАЛОВ



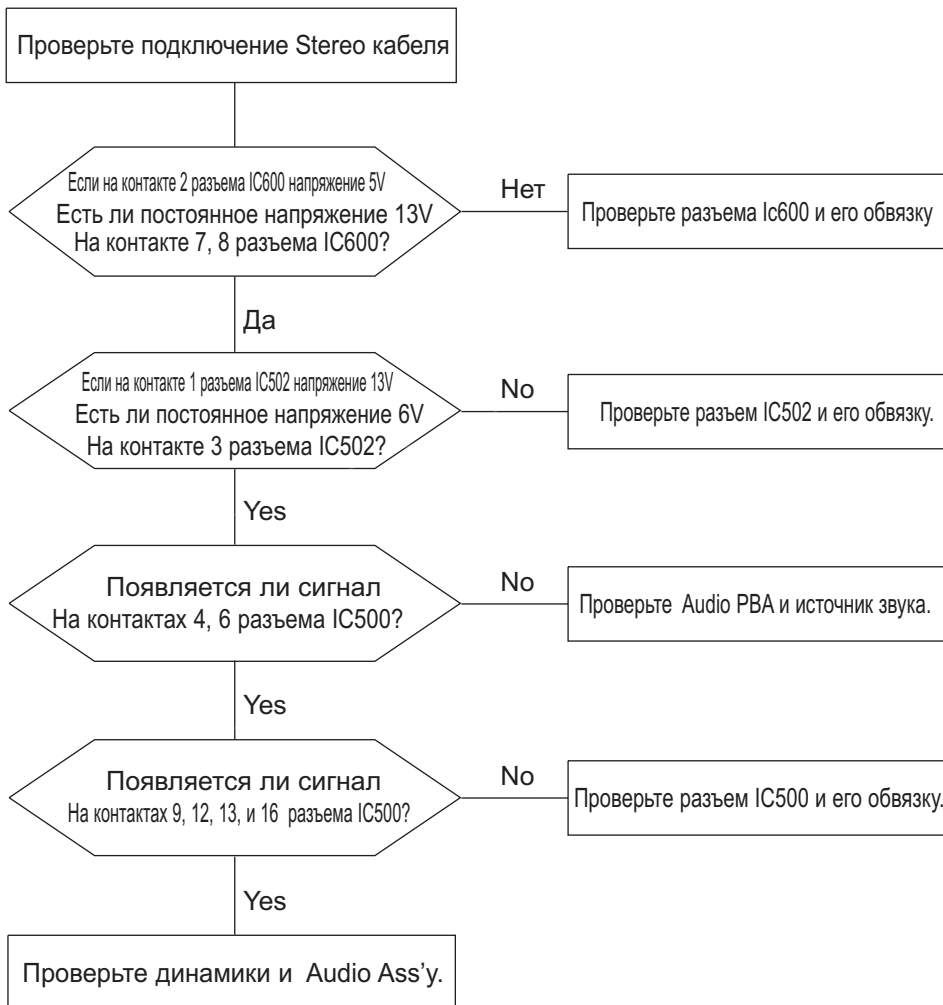
5-2-2 Нет видеосигнала (цифрового)



ФОРМЫ СИГНАЛОВ



5-3 Отсутствие звука

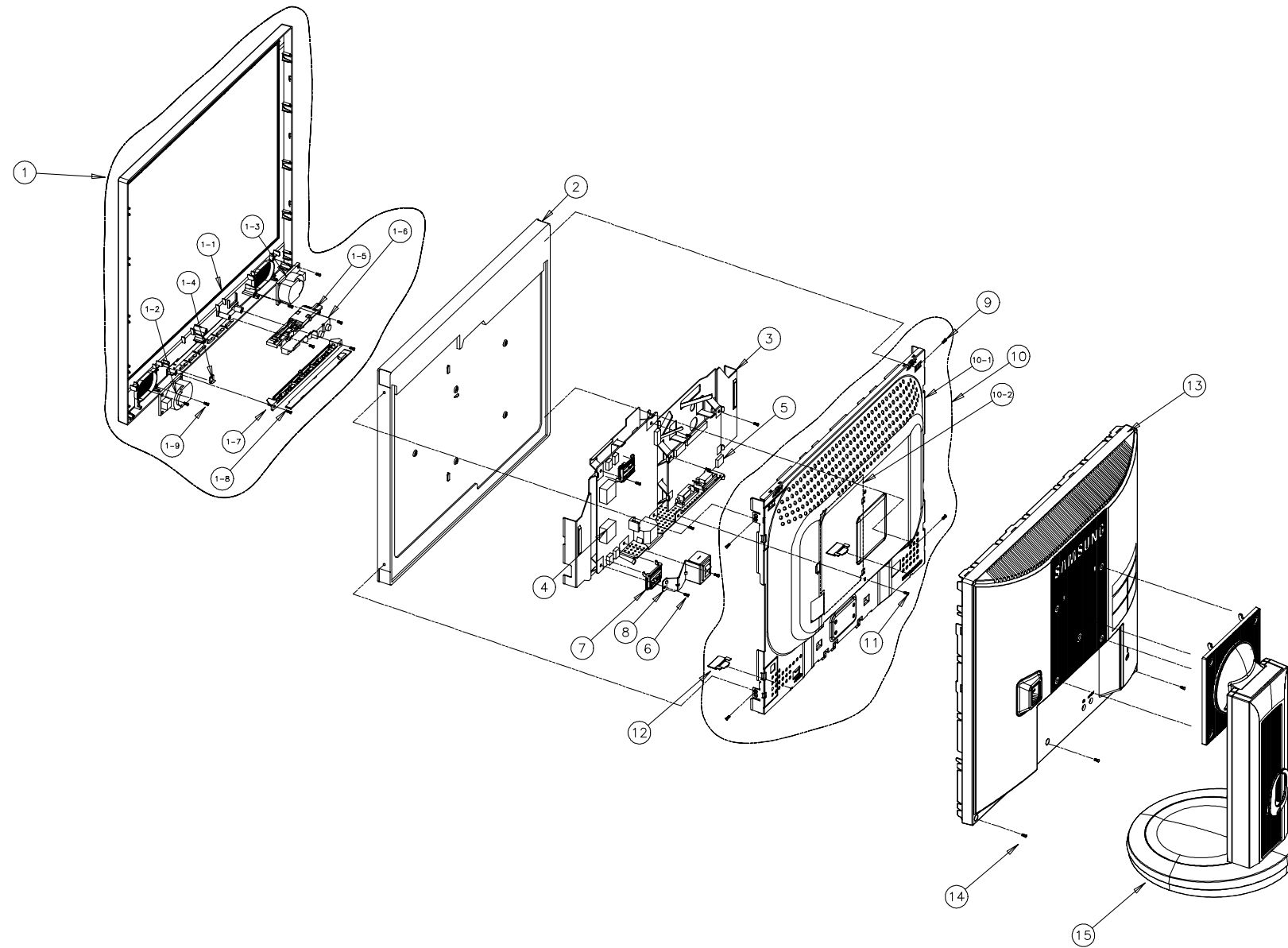


6 Exploded View and Parts List

* You can search for updated part codes through ITSELF web site.

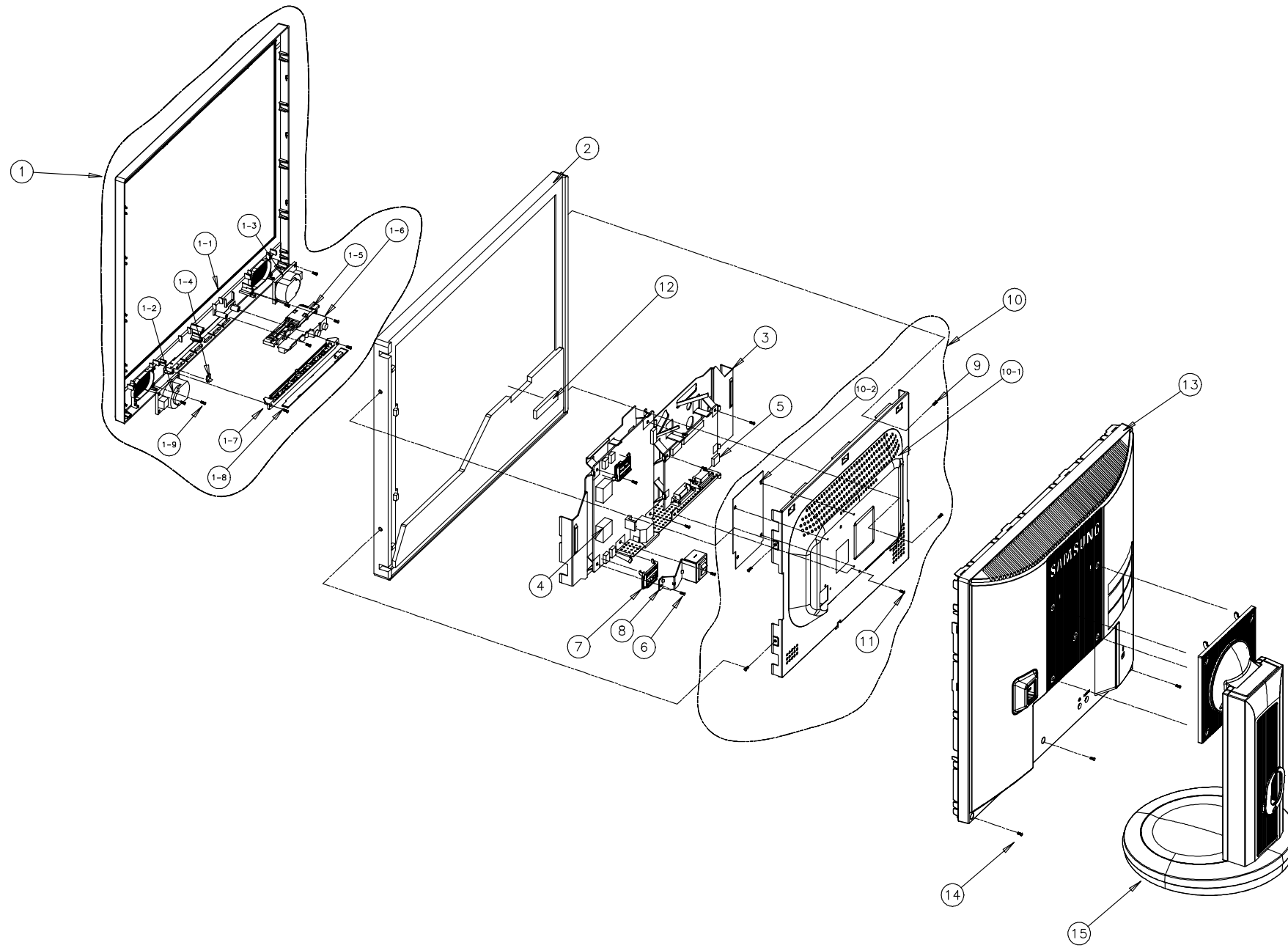
URL : <http://itself.sec.samsung.co.kr>

6-1 MJ17MS



No.	DESCRIPTION	CODE No.	SPECIFICATION	Q'ty	REMARK
1	ASSY, COVER-FRONT	BN96-01319A	ABS HB, GR70, SILVER SPRAY	1	SA
1-1	COVER-FRONT	BN63-01436A	ABS HB GR70 SILVER	1	SNA
1-2	SPEAKER-R	BN96-00518A	8ohm, 2W, 180mm, Right	1	SA
1-3	SPEAKER-L	BN96-00515A	8ohm, 2W, 60mm, Left	1	SA
1-4	LENS-LED	BN67-00131A	Acryl	1	SNA
1-5	GUIDE-AUDIO	BN61-01218A	ABS HB 1V16	1	SNA
1-6	ASSY BOARD-AV JACK	BN96-01120A	AV JACK BOARD	1	SNA
1-7	KNOB-CONTROL	BN64-00304A	MJ17MS/19MS ABS+PC BK07	1	SNA
1-8	ASSY BOARD FUNCTION	BN96-01501A	MJ17MS/19MS FUNCTION	1	SNA
1-9	SCREW-TAPTITE	6003-000259	BH, +, B, M3, L6, ZPC(YEL)	8	SA
2	PANEL	BN07-00148B	L1W170E-L11, 00H, 00IT	1	SA
3	BRKT-PCB	BN61-01102B	SECC T1.0, DUALTYPE	1	SNA
4	IP-BOARD	BN44-00113B		1	SA
5	MAIN-BOARD	BN94-00572U		1	SA
6	SCREW-TAPTITE	6003-000117	BH, +, B, M3, L6, ZPC(YEL), SWRC	7	SA
7	HOLDER-INVERTER	BN61-01234A	ABS V0 BK07	2	SNA
8	WIRE HARNESS-SWITCH	BN39-00207U	MJ17/19, UL1617#22, UL/CSA, 3(2)P, 40mm	1	SA
9	SCREW-MACHINE	6001-000559	FH, +, M3, L6, ZPC(YEL)	4	SA
10	ASSY, SHIELD-COVER	BN96-01059F	SECC T1.0	1	SNA
10-1	SHIELD-COVER	BN63-01211F	SECC T1.0	1	SNA
10-2	COVER-INSULATOR	BN63-01313A	PC SHEET V2, T0.35, 106*144	1	SNA
11	SCREW-TAPTITE	6003-000117	BH, +, B, M3, L6, ZPC(YEL), SWRC	1	SA
12	PANEL-SPACER	BN64-00258A	ABS HB, BK07	2	SNA
13	ASSY, COVER-REAR	BN96-01389A	ABS HB, BK07	1	SA
13-1	COVER-REAR	BN63-01437A	ABS HB, BK07	1	SNA
13-2	BRKT-VESA	BN61-00377A	GY17LS, SECC, T1.0, 100*100	1	SNA
14	SCREW-TAPTITE	6003-001086	BH, +, B, M3, L12, ZPC(BLK), SWRCH18	3	SA
15	ASSY-STAND/SET	BN96-01463A	ABS HB, BLACK+SILVER	1	SA

6-2 MJ19MS



No.	DESCRIPTION	CODE No.	SPECIFICATION	Q'ty	REMARK
1	ASSY, COVER-FRONT	BN96-01387A	ABS HB,GR70,SILVER SPRAY	1	SA
1-1	COVER-FRONT	BN63-01435A	ABS HB GR70 SILVER	1	SNA
1-2	SPEAKER-R	BN96-00518A	8ohm,2W,180mm,Right	1	SA
1-3	SPEAKER-L	BN96-00515A	8ohm,2W,60mm,Left	1	SA
1-4	LENS-LED	BN67-00131A	Acryl	1	SNA
1-5	GUIDE-AUDIO	BN61-01218A	ABS HB 1V16	1	SNA
1-6	ASSY BOARD-AV JACK	BN96-01120A	AV JACK BOARD	1	SNA
1-7	KNOB-CONTROL	BN64-00304A	MJ17MS/19MS ABS+PC BK07	1	SNA
1-8	ASSY BOARD FUNCTION	BN96-01501A	MJ17MS/19MS FUNCTION	1	SNA
1-9	SCREW-TAPTITE	6003-000259	BH,+,B,M3,L8,ZPC(YEL)	8	SA
2	PANEL	BN07-00170A	M190M2,GY,BBIT	1	SA
3	BRKT-PCB	BN61-01281A	SECC T1.0,DUALTYPE	1	SNA
4	IP-BOARD	BN44-00113B		1	SA
5	MAIN-BOARD	BN94-00595T		1	SA
6	SCREW TAPTITE	6003-000117	BH,+,B,M3,L6,ZPC(YEL),SWRC	7	SA
7	HOLDER-INVERTER	BN61-01234A	ABS VO BK07	2	SNA
8	WIRE HARNESS-SWITCH	BN39-00207J	MJ17/19,UL1617#22,UL/CSA,3(2)P,40mm	1	SA
9	SCREW-MACHINE	6001-000364	FH,+,M3,L8,ZPC(YEL)	4	SA
10	ASSY,SHIELD-COVER	BN96-01318B	SECC T1.0	1	SNA
10-1	SHIELD-COVER	BN63-01211F	SECC T1.0	1	SNA
10-2	COVER-INSULATOR	BN63-01313A	PC SHEET V2,TO.35,106*144	1	SNA
11	SCREW-TAPTITE	6003-000117	BH,+,B,M3,L6,ZPC(YEL),SWRC	1	SA
12	RUBBER-CUSHION	BN73-00030A	RUBBER,40X15X1.5T,BLACK,SL-020508	1	SNA
13	ASSY, COVER-REAR	BN96-01388A	ABS HB,BK07	1	SA
13-1	COVER-REAR	BN63-01434A	ABS HB,BK07	1	SNA
13-2	BRKT-VESA	BN61-00377A	GY17LS,SECC,T1.0,100*100	1	SNA
14	SCREW-TAPTITE	6003-001086	BH,+,B,M3,L12,ZPC(BLK),SWRCH18	3	SA
15	ASSY-STAND/SET	BN96-01522A	ABS HB,BLACK+SILVER	1	SA

7 Electrical Parts List

-You can search for updated part codes through ITSELF web site.

URL : <http://itself.sec.samsung.co.kr/>

Level	Loc. No.	Code No.	Description & Specification	Q'ty	SA/SNA
0		LS17MJSKS/EDC	713BM,SGL3/S17AH-LMJ,17,LCD-MO,NETHERLAN	0	
0.1	M0216	BN90-00486D	ASSY STAND;MJ17BS/GS17VT/GS17MS,EDC	1	S.N.A
.2	M0216	BN96-01063A	ASSY STAND P-SIMPLE;MJ15/17ASBS,ABS HB,B	1	
...3	M0081	6003-000269	SCREW-TAPTITE;BH,+,-,S,M3,L6,ZPC(YEL),SW	2	S.N.A
...3	M0081	6003-001086	SCREW-TAPTITE;BH,+B,M3,L12,ZPC(BLK),SWR	4	S.N.A
...3	STD	BN61-00822A	STAND-BRKT HINGE;GS17VS,SECC,T1.2	1	S.N.A
...3	T0063	BN61-00825A	STAND-FRONT;GS17VS,ABS HB,BK07	1	S.N.A
...3	T0081	BN61-00826A	STAND-REAR;GS17VS,ABS HB,BK07	1	S.N.A
...3	M0122	BN96-01061A	ASSY MISC P-HINGE;MJ15-17AS/BS,ZNDC2	1	S.N.A
0.1	M0001	BN90-00755M	ASSY COVER FRONT;LS17MJSTV/EDC	1	S.N.A
.2	M0081	6003-001086	SCREW-TAPTITE;BH,+B,M3,L12,ZPC(BLK),SWR	3	S.N.A
.2	T0003	BN96-01319F	ASSY COVER P-FRONT;LS17MJS,ABS HB,GR70	1	
...3	M0081	6003-000259	SCREW-TAPTITE;BH,+B,M3,L8,ZPC(YEL),SWRC	8	S.N.A
...3	C/F	BN61-01218A	GUIDE-AUDIO;GS17MS,MJ17BS,ABS,HB	1	S.N.A
...3	M0112	BN63-01436A	COVER-FRONT;MJ17MS,ABS HB	1	S.N.A
...3	M0007	BN64-00304A	KNOB-FUNCTION;MJ17MS,ABS+PC,5V,BK07	1	S.N.A
...3	M0105	BN67-00131A	LENS-LED;MJ17MS,ACRYL,CLEAR	1	S.N.A
...3	T0175	BN96-00515A	ASSY SPEAKER P;8ohm,2W,60mm,LEFT	1	
...3	T0175	BN96-00518A	ASSY SPEAKER P;8ohm,2W,180mm,RIGHT	1	
...3	M0130	BN96-01120A	ASSY BOARD P-AV JACK;GS15/17/19MS,AV JAC	1	
...3	M0145	BN96-01501A	ASSY BOARD P-FUNCTION;MJ17/19MS,FUNCTION	1	
0.1	M0002	BN90-00756J	ASSY COVER REAR;LS17MJSKS/EDC	1	S.N.A
.2	M0081	6003-000337	SCREW-TAPTITE;BH,+S,M4,L10,ZPC(BLK),SWR	4	
.2	M0013	BN96-01389D	ASSY COVER P-REAR;LS17MJS,ABS HB,BK-07,S	1	
...3	M0113	BN61-00377A	BRACKET-VESA;GOYA19"(193V),SECC,T1.0	1	S.N.A
...3	M0006	BN63-01437C	COVER-REAR;LS17MJS,ABS,HB,BK07	1	S.N.A
0.1	M0106	BN91-00841E	ASSY LCD-STZ;GS17ES	1	S.N.A
.2	M0215	BN07-00202A	LCD-PANEL:LTM170EU-L21,GY,6BIT FRC,358.5	1	
0.1	M0112	BN91-00911G	ASSY SHIELD;LS17MJS*,NEW SIMPLE	1	S.N.A
.2	CCM1	6001-000346	SCREW-MACHINE;FH,+M3,L4,ZPC(YEL),SWRCH1	4	S.N.A
.2	M0081	6003-000117	SCREW-TAPTITE;BH,+B,M3,L6,ZPC(YEL),SWRC	1	
.2	M0135	BH73-60304G	RUBBER-SUPPORT;152X,SILICON,5*7,60### 5	2	S.N.A
.2	M0114	BN39-00244A	CBF SIGNAL;BU15AO(T541A),15P/15P,20276-N	1	
.2	M2893	BN39-00513A	LEAD CONNECTOR;MJ17AS(BS),UL1571#30,UL/C	1	
.2	M2893	BN39-00515C	LEAD CONNECTOR;MJ17/19MS,UL1061#28,UL,7P	1	
.2	M2893	BN39-00576A	LEAD CONNECTOR;MJ17/19MS,UL1061#28,UL/CS	1	
.2	M0145	BN64-00258A	PANEL-SPACER;MJ17AS/BS,ABS HB,BK07	2	S.N.A
.2	T0376	BN96-01059C	ASSY MISC P-SHIELD COVER;MJ17BS,SECC T1.	1	S.N.A
...3	M0107	BN63-01211C	SHIELD-COVER;MJ17BS,SECC,T1.0,"C" CORE	1	S.N.A
...3	M0412	BN63-01313A	COVER-INSULATOR;MJ17,19AS/BS,PET,T0.35	1	S.N.A
0.1	M0017	BN91-00914A	ASSY CHASSIS-STZ;LS17MJS*,W/W+KOR	1	
.2	M0107	BN61-01102E	BRACKET-PCB;LS17MJS,SECC,T1.0	1	S.N.A
.2	M0014	BN94-00723Q	ASSY PCB MAIN-STZ;LS17MJS*,W/W+KOR	1	
...3	T0245	0202-001366	SOLDER-WIRE FLUX;-RS60S,D1.2,63Sn/37Pb,	0.01	S.N.A
...3	T0085	1201-001805	IC-AUDIO AMP;TDA7053A,DIP,16P,300MIL,DUA	1	
...3	CN102	3701-001173	CONNECTOR-DVI;24P,3R,FEMALE,ANGLE,AUF	1	
...3	CN101	3701-001219	CONNECTOR-DSUB;15P,3R,FEMALE,ANGLE,AUF	1	
...3	CN906	3711-004350	CONNECTOR-HEADER;BOX,7P,1R,2MM,ANGLE,SN	1	
...3	CN906	3711-004712	CONNECTOR-HEADER;BOX,9P,1R,2mm,STRAIGHT,	1	
...3	M0081	6003-000117	SCREW-TAPTITE;BH,+B,M3,L6,ZPC(YEL),SWRC	5	
...3	M0081	6003-000117	SCREW-TAPTITE;BH,+B,M3,L6,ZPC(YEL),SWRC	2	
...3	CIS9	BN39-00207J	WIRE HARNESS-SWITCH;MJ17/19,UL1617#22,UL	1	
...3	T0174	BN97-00580X	ASSY SMD;LS17MJS*	1	S.N.A
...4	CIS5	0202-001375	SOLDER-CREAM;RMA-20-21L,S63,-,Sn63/Pb36.	0.31	S.N.A

7 Electrical Parts List

Level	Loc. No.	Code No.	Description & Specification	Q'ty	SA/SNA
....4	D101	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200MA,SO	1	
....4	D102	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200MA,SO	1	
....4	D103	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200MA,SO	1	
....4	D104	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200MA,SO	1	
....4	D105	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200MA,SO	1	
....4	D106	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200MA,SO	1	
....4	D107	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200MA,SO	1	
....4	D108	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200MA,SO	1	
....4	D111	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200MA,SO	1	
....4	D112	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200MA,SO	1	
....4	D113	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200MA,SO	1	
....4	D600	0402-001614	DIODE-RECTIFIER;S1G,400V,1.0A,DO-214AC,T	1	
....4	D100	0403-001411	DIODE-ZENER;-5.49-5.73V,200MW,SOD-323,T	1	
....4	D109	0403-001411	DIODE-ZENER;-5.49-5.73V,200MW,SOD-323,T	1	
....4	D110	0403-001411	DIODE-ZENER;-5.49-5.73V,200MW,SOD-323,T	1	
....4	D114	0403-001411	DIODE-ZENER;-5.49-5.73V,200MW,SOD-323,T	1	
....4	D115	0403-001411	DIODE-ZENER;-5.49-5.73V,200MW,SOD-323,T	1	
....4	ZD100	0403-001411	DIODE-ZENER;-5.49-5.73V,200MW,SOD-323,T	1	
....4	ZD101	0403-001411	DIODE-ZENER;-5.49-5.73V,200MW,SOD-323,T	1	
....4	ZD102	0403-001411	DIODE-ZENER;-5.49-5.73V,200MW,SOD-323,T	1	
....4	ZD103	0403-001411	DIODE-ZENER;-5.49-5.73V,200MW,SOD-323,T	1	
....4	ZD104	0403-001411	DIODE-ZENER;-5.49-5.73V,200MW,SOD-323,T	1	
....4	ZD200	0403-001411	DIODE-ZENER;-5.49-5.73V,200MW,SOD-323,T	1	
....4	IC106	0406-001061	DIODE-TVS;MMQA5V6T3,5.32/5.6/5.88V,24W,S	1	
....4	IC107	0406-001061	DIODE-TVS;MMQA5V6T3,5.32/5.6/5.88V,24W,S	1	
....4	D500	0406-001163	DIODE-TVS;CDS3C05GTA,6.4V/-/-,-,SMD	1	
....4	D501	0406-001163	DIODE-TVS;CDS3C05GTA,6.4V/-/-,-,SMD	1	
....4	Q100	0501-002080	TR-SMALL SIGNAL;2SC2412K,NPN,200mW,SC-59	1	
....4	Q600	0501-002080	TR-SMALL SIGNAL;2SC2412K,NPN,200mW,SC-59	1	
....4	Q601	0501-002080	TR-SMALL SIGNAL;2SC2412K,NPN,200mW,SC-59	1	
....4	Q409	0505-001170	FET-SILICON;SI9933ADY-T1,P,-20V,3.4A,0.0	1	
....4	IC109	1003-001682	IC-LCD CONTROLLER;SE7888,PQFP,100PP,23.4	1	
....4	IC112	1103-000129	IC-EEPROM;24C02,256x8,SOP,8P,5x4mm,4.5/5	1	
....4	IC112	1103-001023	IC-EEPROM;24C08,1Kx8,SOP,8P,5x4mm,2.5/5.	1	
....4	IC062	1203-003209	IC-MULTI REG.;APL5522,SOP,8P,4.9x3.9mm,P	1	
....4	T0087	1203-003268	IC-POSIFIXED REG.;MC7806,D2PAK,3P,10.02	1	
....4	R200	2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	1	
....4	R227	2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	1	
....4	R502	2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	1	
....4	R503	2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	1	
....4	R110	2007-000071	R-CHIP;22ohm,5%,1/10W,TP,1608	1	
....4	R111	2007-000071	R-CHIP;22ohm,5%,1/10W,TP,1608	1	
....4	R112	2007-000071	R-CHIP;22ohm,5%,1/10W,TP,1608	1	
....4	R113	2007-000071	R-CHIP;22ohm,5%,1/10W,TP,1608	1	
....4	R114	2007-000071	R-CHIP;22ohm,5%,1/10W,TP,1608	1	
....4	R115	2007-000071	R-CHIP;22ohm,5%,1/10W,TP,1608	1	
....4	R116	2007-000071	R-CHIP;22ohm,5%,1/10W,TP,1608	1	
....4	R117	2007-000071	R-CHIP;22ohm,5%,1/10W,TP,1608	1	
....4	R128	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	
....4	R129	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	
....4	R220	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	
....4	R223	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	
....4	R224	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	
....4	R225	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	
....4	R226	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	
....4	R228	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	
....4	R229	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	
....4	R230	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	
....4	R231	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	
....4	R232	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	
....4	R234	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	
....4	R235	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	
....4	R236	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	
....4	R237	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	
....4	R239	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	
....4	R240	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	
....4	R242	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	

7 Electrical Parts List

Level	Loc. No.	Code No.	Description & Specification	Q'ty	SA/SNA
....4	R247	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	
....4	R221	2007-000077	R-CHIP;470ohm,5%,1/10W,TP,1608	1	
....4	R243	2007-000077	R-CHIP;470ohm,5%,1/10W,TP,1608	1	
....4	R124	2007-000078	R-CHIP;1Kohm,5%,1/10W,TP,1608	1	
....4	R125	2007-000078	R-CHIP;1Kohm,5%,1/10W,TP,1608	1	
....4	R241	2007-000078	R-CHIP;1Kohm,5%,1/10W,TP,1608	1	
....4	R402	2007-000078	R-CHIP;1Kohm,5%,1/10W,TP,1608	1	
....4	R233	2007-000083	R-CHIP;3Kohm,5%,1/10W,TP,1608	1	
....4	C202	2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	
....4	R122	2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	
....4	R132	2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	
....4	R204	2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	
....4	R205	2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	
....4	R206	2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	
....4	R207	2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	
....4	R208	2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	
....4	R209	2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	
....4	R210	2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	
....4	R211	2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	
....4	R212	2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	
....4	R216	2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	
....4	R217	2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	
....4	R219	2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	
....4	R238	2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	
....4	R245	2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	
....4	R603	2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	
....4	R248	2007-000087	R-CHIP;6.8Kohm,5%,1/10W,TP,1608	1	
....4	R249	2007-000087	R-CHIP;6.8Kohm,5%,1/10W,TP,1608	1	
....4	R123	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	
....4	R131	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	
....4	R202	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	
....4	R203	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	
....4	R213	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	
....4	R214	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	
....4	R222	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	
....4	R244	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	
....4	R400	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	
....4	R401	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	
....4	R600	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	
....4	R604	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	
....4	R126	2007-000092	R-CHIP;15Kohm,5%,1/10W,TP,1608	1	
....4	R127	2007-000092	R-CHIP;15Kohm,5%,1/10W,TP,1608	1	
....4	R601	2007-000092	R-CHIP;15Kohm,5%,1/10W,TP,1608	1	
....4	R602	2007-000102	R-CHIP;100Kohm,5%,1/10W,TP,1608	1	
....4	R134	2007-000113	R-CHIP;33ohm,5%,1/10W,TP,1608	1	
....4	R135	2007-000113	R-CHIP;33ohm,5%,1/10W,TP,1608	1	
....4	R136	2007-000113	R-CHIP;33ohm,5%,1/10W,TP,1608	1	
....4	R137	2007-000113	R-CHIP;33ohm,5%,1/10W,TP,1608	1	
....4	R138	2007-000113	R-CHIP;33ohm,5%,1/10W,TP,1608	1	
....4	R139	2007-000113	R-CHIP;33ohm,5%,1/10W,TP,1608	1	
....4	R106	2007-000821	R-CHIP;390ohm,1%,1/10W,TP,1608	1	
....4	R403	2007-000821	R-CHIP;390ohm,1%,1/10W,TP,1608	1	
....4	R500	2007-000965	R-CHIP;5.1Kohm,5%,1/10W,TP,1608	1	
....4	R501	2007-000965	R-CHIP;5.1Kohm,5%,1/10W,TP,1608	1	
....4	R130	2007-001002	R-CHIP;510ohm,5%,1/10W,TP,1608	1	
....4	R504	2007-001010	R-CHIP;51Kohm,5%,1/10W,TP,1608	1	
....4	R505	2007-001010	R-CHIP;51Kohm,5%,1/10W,TP,1608	1	
....4	BD100	2007-001164	R-CHIP;75ohm,1%,1/10W,TP,1608	1	
....4	BD101	2007-001164	R-CHIP;75ohm,1%,1/10W,TP,1608	1	
....4	BD102	2007-001164	R-CHIP;75ohm,1%,1/10W,TP,1608	1	
....4	BD103	2007-001164	R-CHIP;75ohm,1%,1/10W,TP,1608	1	
....4	BD104	2007-001164	R-CHIP;75ohm,1%,1/10W,TP,1608	1	
....4	BD105	2007-001164	R-CHIP;75ohm,1%,1/10W,TP,1608	1	
....4	R107	2007-001164	R-CHIP;75ohm,1%,1/10W,TP,1608	1	
....4	R108	2007-001164	R-CHIP;75ohm,1%,1/10W,TP,1608	1	
....4	R109	2007-001164	R-CHIP;75ohm,1%,1/10W,TP,1608	1	
....4	R118	2007-001164	R-CHIP;75ohm,1%,1/10W,TP,1608	1	

7 Electrical Parts List

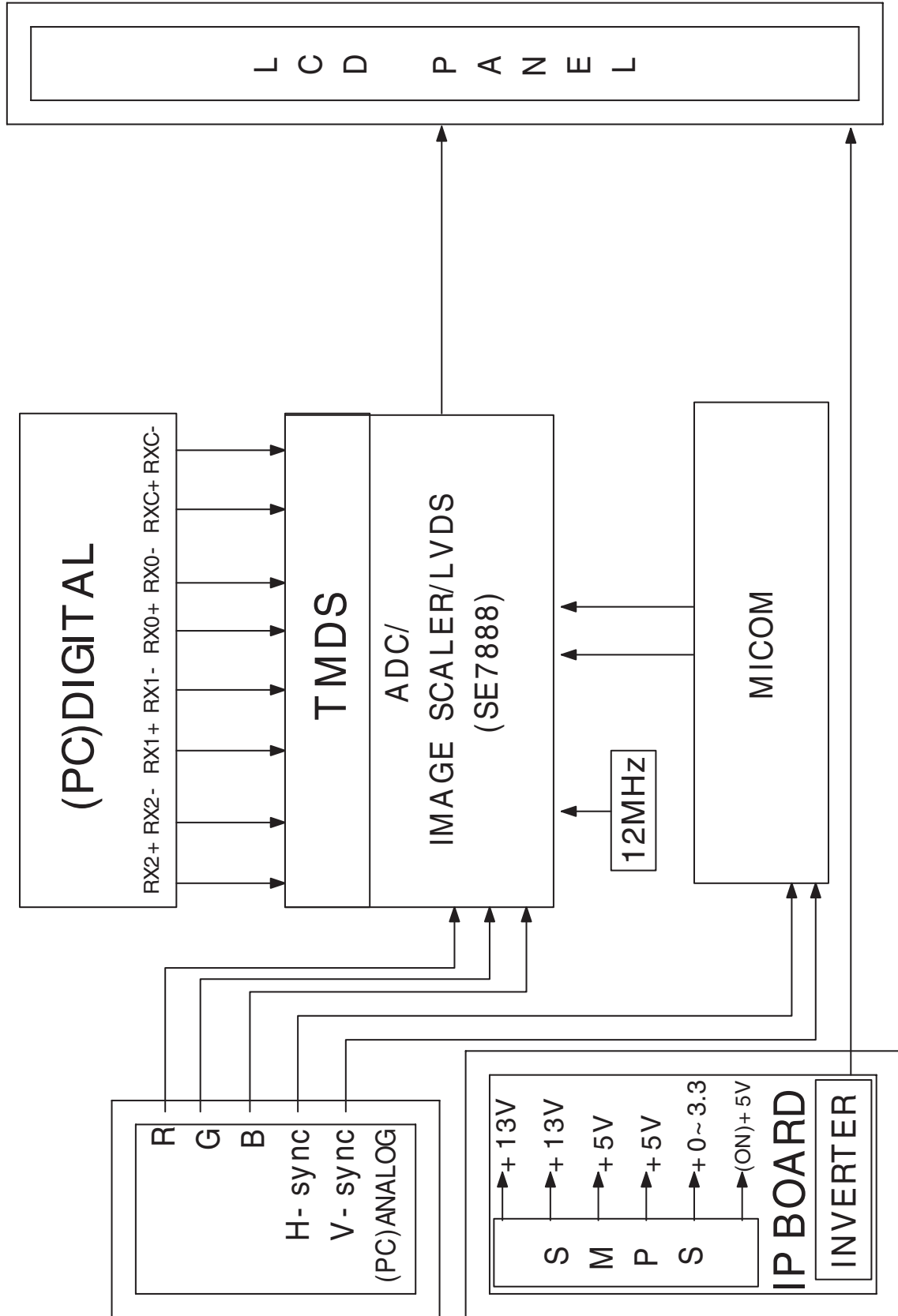
Level	Loc. No.	Code No.	Description & Specification	Q'ty	SA/SNA
....4	R120	2007-001164	R-CHIP;75ohm,1%,1/10W,TP,1608	1	
....4	C224	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	
....4	C501	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	
....4	C602	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	
....4	C116	2203-000236	C-CER,CHIP;0.1nF,5%,50V,C0G,1608	1	
....4	C106	2203-000257	C-CER,CHIP;10nF,10%,50V,X7R,1608	1	
....4	C221	2203-000257	C-CER,CHIP;10nF,10%,50V,X7R,1608	1	
....4	C222	2203-000257	C-CER,CHIP;10nF,10%,50V,X7R,1608	1	
....4	C417	2203-000257	C-CER,CHIP;10nF,10%,50V,X7R,1608	1	
....4	C204	2203-000426	C-CER,CHIP;0.018nF,5%,50V,C0G,1608	1	
....4	C416	2203-000426	C-CER,CHIP;0.018nF,5%,50V,C0G,1608	1	
....4	C418	2203-000426	C-CER,CHIP;0.018nF,5%,50V,C0G,1608	1	
....4	C117	2203-000998	C-CER,CHIP;0.047nF,5%,50V,C0G,1608	1	
....4	C111	2203-001402	C-CER,CHIP;220nF,+80-20%,16V,Y5V,TP,1608	1	
....4	C113	2203-001402	C-CER,CHIP;220nF,+80-20%,16V,Y5V,TP,1608	1	
....4	C119	2203-001402	C-CER,CHIP;220nF,+80-20%,16V,Y5V,TP,1608	1	
....4	C120	2203-001402	C-CER,CHIP;220nF,+80-20%,16V,Y5V,TP,1608	1	
....4	C123	2203-001402	C-CER,CHIP;220nF,+80-20%,16V,Y5V,TP,1608	1	
....4	C125	2203-001402	C-CER,CHIP;220nF,+80-20%,16V,Y5V,TP,1608	1	
....4	C127	2203-001402	C-CER,CHIP;220nF,+80-20%,16V,Y5V,TP,1608	1	
....4	C128	2203-001402	C-CER,CHIP;220nF,+80-20%,16V,Y5V,TP,1608	1	
....4	C100	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	
....4	C101	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	
....4	C102	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	
....4	C103	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	
....4	C104	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	
....4	C105	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	
....4	C110	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	
....4	C112	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	
....4	C114	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	
....4	C126	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	
....4	C200	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	
....4	C203	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	
....4	C220	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	
....4	C400	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	
....4	C402	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	
....4	C403	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	
....4	C404	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	
....4	C405	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	
....4	C406	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	
....4	C407	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	
....4	C408	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	
....4	C409	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	
....4	C410	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	
....4	C411	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	
....4	C412	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	
....4	C413	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	
....4	C414	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	
....4	C415	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	
....4	C419	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	
....4	C420	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	
....4	C421	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	
....4	C423	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	
....4	C424	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	
....4	C604	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	
....4	C605	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	
....4	C608	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	
....4	C610	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	
....4	C206	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	
....4	C208	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	
....4	C502	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	
....4	C503	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	
....4	C600	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	
....4	C603	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	
....4	C606	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	
....4	C201	2203-005437	C-CER,CHIP;10000nF,+80-20%,10V,Y5V,TP,32	1	
....4	C205	2203-005437	C-CER,CHIP;10000nF,+80-20%,10V,Y5V,TP,32	1	

7 Electrical Parts List

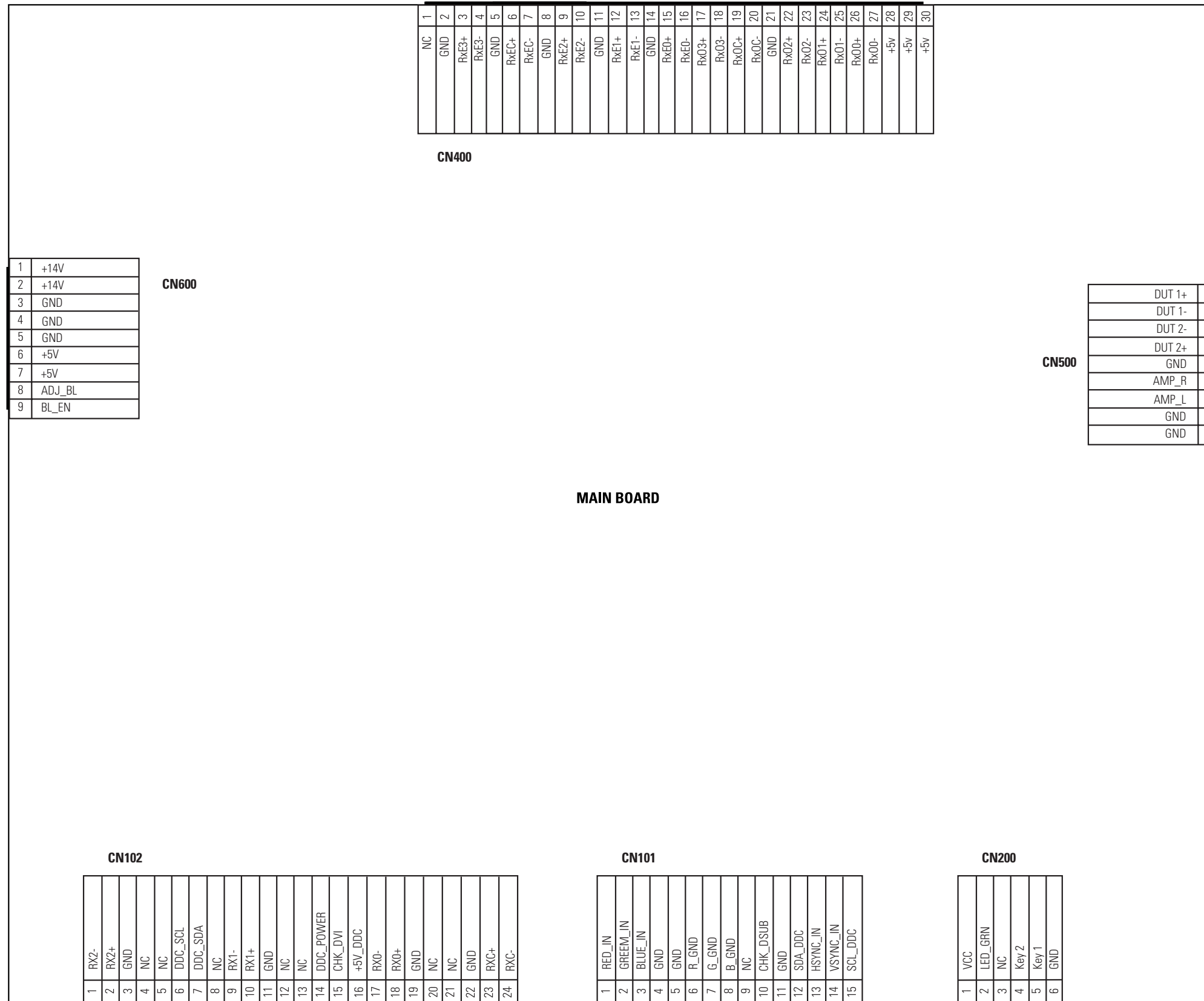
Level	Loc. No.	Code No.	Description & Specification	Q'ty	SA/SNA
....4	C422	2402-000108	C-AL,SMD;10uF,20%,16V,WT,TP,4.3x4.3x5.4	1	
....4	C607	2402-001042	C-AL,SMD;100uF,20%,16V,GP,TP,6.6x6.6x5.4	1	
....4	C609	2402-001042	C-AL,SMD;100uF,20%,16V,GP,TP,6.6x6.6x5.4	1	
....4	C611	2402-001042	C-AL,SMD;100uF,20%,16V,GP,TP,6.6x6.6x5.4	1	
....4	C612	2402-001042	C-AL,SMD;100uF,20%,16V,GP,TP,6.6x6.6x5.4	1	
....4	C601	2402-001044	C-AL,SMD;100UF,20%,25V,GP,TP,8.3X8.3X6.3	1	
....4	C500	2402-001086	C-AL,SMD;100UF,20%,16V,WT,TP,6.6X6.6X5.3	1	
....4	C401	2409-001051	C-ORGANIC;82UF,20%,6.3V,WT,TP,6.3*5.9MM,	1	
....4	T0052	2703-001334	INDUCTOR-SMD;1.5uH,10%,2012	1	
....4	T0052	2703-001334	INDUCTOR-SMD;1.5uH,10%,2012	1	
....4	T0052	2703-001334	INDUCTOR-SMD;1.5uH,10%,2012	1	
....4	X400	2801-003773	CRYSTAL-SMD;12MHZ,30PPM,28-AAN,20PF,500H	1	
....4	T0568	3301-000314	BEAD-SMD;120ohm,1.6x0.8x0.8mm,150mA,.,.,4	1	S.N.A
....4	T0568	3301-000314	BEAD-SMD;120ohm,1.6x0.8x0.8mm,150mA,.,.,4	1	S.N.A
....4	T0568	3301-001145	BEAD-SMD;60OHM,4516,6000,TP,70OHM/45MHZ,	1	S.N.A
....4	CN906	3711-005470	CONNECTOR-HEADER;BOX,30P,1R,1.25mm,SMD-A	1	
....4	CN906	3711-005543	CONNECTOR-HEADER;BOX,6P,1R,1.25mm,SMD-A,	1	
....4	T0077	BN41-00412E	PCB MAIN;MATISSE/GOYA2,STH,2L,MP1.4,1.6T	1	S.N.A
....4	M0018	BN97-00579Z	ASSY MICOM;LS17MJS*,WW+KOR	1	
....5	IC520	0903-001347	IC-MICROCONTROLLER;NT68F63GL,8BIT,PLCC,4	1	S.N.A
..2	M0174	BN44-00113B	IP BOARD;*SSIT-17-MT(B),MATISSE,1.5MA-3.	1	
0.1	M0019	BN92-00329Y	ASSY LABEL;MJ/GS,WW	1	S.N.A
0.1	M0113	BN92-01380T	ASSY P/MATERIAL;LS17MJSKS/EDC	1	S.N.A
..2	T0376	6902-000061	BAG AIR;LDPE,TO.2,L1000,W500,TRP,.,.,	0.004	S.N.A
..2	T0376	6902-000379	BAG AIR;LDPE,TO.2,W1000,L1800,TRP,-,-	0.001	S.N.A
..2	T0524	6902-000520	BAG PE;HDPE/NITRON(DOUBLE),TO.015/TO.5(D	1	S.N.A
..2	P/M	6902-000604	BAG WRAPPING;LDPE,TO.02,W500,L1000,TRP,	0.88	S.N.A
..2	M0081	6902-000609	BAG ROLL;LDPE,TO.05,W2400,L1000,TRP,-,-	0.1	S.N.A
0.1	M0045	BN92-01504U	ASSY ACCESSORY;LS17MJSKS/EDC	1	S.N.A
..2	M0013	BN96-01461A	ASSY STAND P-BASE;MATISSE15*/17",ABS HB,	1	
...3	M0081	6003-000142	SCREW-TAPTITE;FH,+,B,M3,L8,ZPC(BLK),SWRC	6	S.N.A
...3	T0524	6902-000389	BAG PE;HDPE/NITRON/HDPE,TO.02/TO.5/TO.02	1	S.N.A
...3	M0111	BN63-01489A	COVER-STAND;MJ17,ABS HB,BK07	1	S.N.A
...3	STAND/BASE	BN63-01490A	COVER-STAND BASE;MJ17,ABS HB,BK07	1	S.N.A
...3	CIS3	BN68-00473W	MANUAL INSTALL;Goya2 Stand Guide,SyncMas	1	S.N.A
...3	M0126	BN73-00077A	RUBBER-FOOT;MATISSE,BUMPON,##13.5,T2.0,6	4	S.N.A
...3	CIS4	BN61-01435A	HOLDER-STAND;CH,+,M4,L10(4),ZPC(WHT),SWR	1	S.N.A
..2	M0045	BN96-02328N	ASSY ACCESSORY;LS17MJSTS/EDC	1	
...3	T0268	3903-000042	CBF-POWER CORD;DT,EU,FP3/YES,IEC320 C13/	1	
...3	T0524	6902-000110	BAG PE;LDPE,TO.05,L356,W240,TRP,28,2,PE	1	S.N.A
...3	ACCESSORY	BH68-70438A	CARD-11,BLOC WARRANTY;TFT LCD,BASIC,EU,M	1	S.N.A
...3	ACCESSORY	BH68-70448A	CARD-01;TFT LCD,SRU,RUSSIA,S/W,120,W210*	1	S.N.A
...3	T0128	BN39-00061A	CBF SIGNAL-STEREO,;1P,UL2851#28,2000MM,B	1	
...3	M0215	BN96-01171Y	ASSY MANUAL P-IB+QSG;MJ17MS,713TM,SyncMa	1	S.N.A
....4	QSG	BH68-00376L	MANUAL-04;LCDQUICK SETUP GUIDE,SYNCMAS	1	S.N.A
....4	IB	BN59-00420Y	S/W DRIVER-02;IB;MJ17MS,713BM,WW,SYNCA	1	S.N.A
....4	M/T	BN68-00847B	MANUAL-02,QSG;MagicTune paper,SyncMaster	1	S.N.A
...3	T0059	BN68-00907A	MANUAL-CARD;WEEE,SAMSUNG,18 Lang,Europe,	1	S.N.A
0.1	M0003	BN92-01510M	ASSY BOX;LS17MJSKS/EDC	1	S.N.A
..2	M0120	BH75-10529A	UNIT-HANDLE PACKING;LXA410TLMU,PE,-,WHIT	1	S.N.A
...3	M0103	BN72-60001A	LEVER-TOP;LSD210TL,PE-LD,WHITE,TFT_LCD	1	S.N.A
...3	M0102	BN72-60002A	LEVER-BOTTOM;LSD210TL,PE-LD,WHITE,TFT-LC	1	S.N.A
..2	BOX	BN69-01104A	BOX-02,SET;S/M713BM(LS17MJS),CB-SW4,YEL,	1.02	S.N.A

8 Block Diagram

8-1DIGITAL Block Diagram

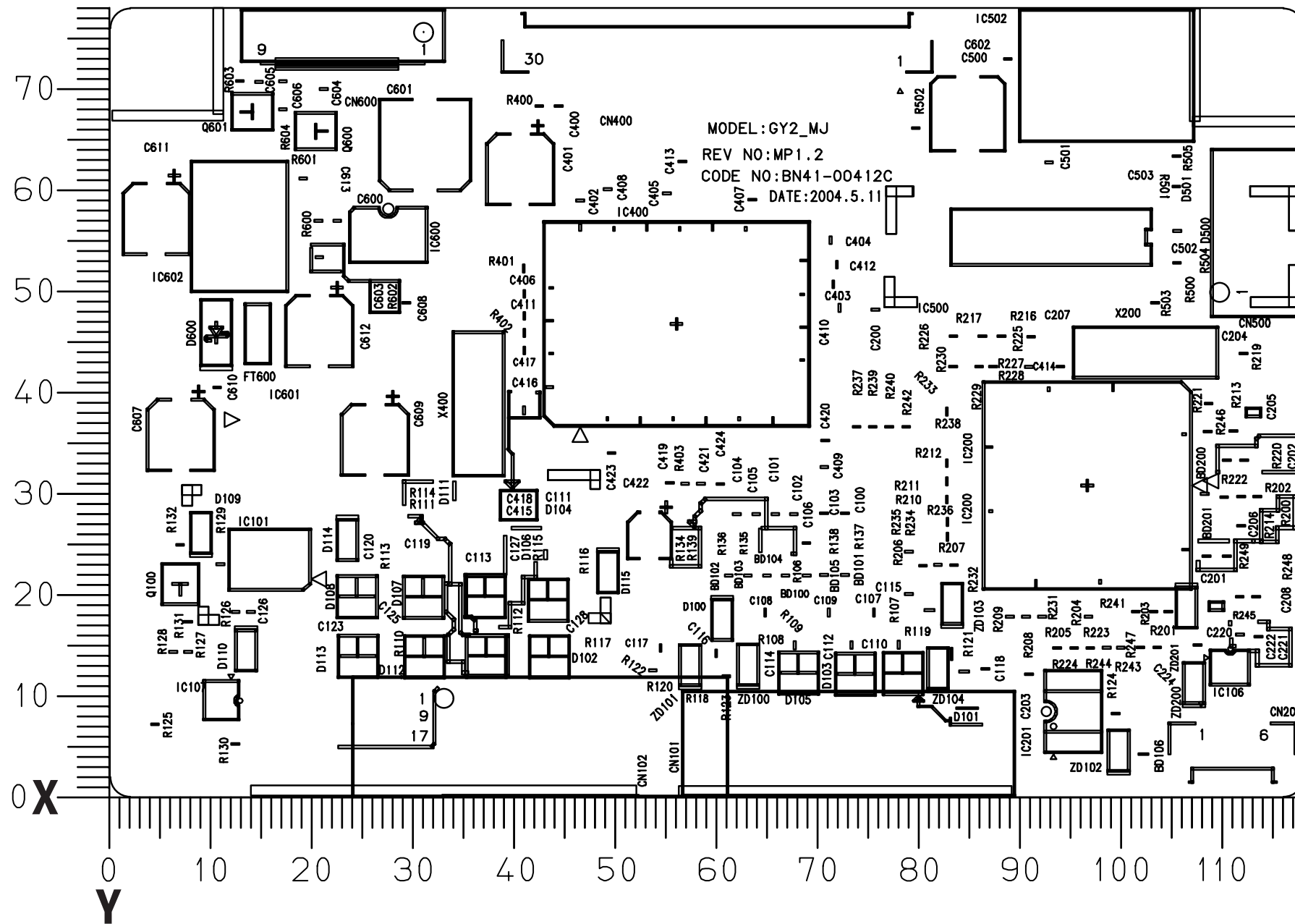


9 Wiring Diagram



10 PCB Layout

10-1 PCB Layout Top



Loc. No.	Description	X	Y
DIODE			
D100	DIODE-ZENER	60.5	17.6
D101	DIODE-SWITCHING	78.3	12.3
D102	DIODE-SWITCHING	43.4	14.0
D103	DIODE-SWITCHING	73.6	12.2
D104	DIODE-SWITCHING	43.3	19.6
D105	DIODE-SWITCHING	68.0	12.4
D106	DIODE-SWITCHING	37.1	19.9
D107	DIODE-SWITCHING	31.0	19.9
D108	DIODE-SWITCHING	24.4	19.9
D109	DIODE-ZENER	9.0	26.2
D110	DIODE-ZENER	13.5	14.6
D111	DIODE-SWITCHING	37.2	14.0
D112	DIODE-SWITCHING	31.1	14.0
D113	DIODE-SWITCHING	24.5	14.0
D114	DIODE-ZENER	23.5	25.5
D115	DIODE-ZENER	49.2	22.3
D500	DIODE-TVS	107.2	56.1
D501	DIODE-TVS	107.5	60.5
D600	DIODE-RECTIFIER	10.5	46.1
ZD100	DIODE-ZENER	63.1	13.2
ZD101	DIODE-ZENER	57.3	13.1
ZD102	DIODE-ZENER	99.7	4.7
ZD103	DIODE-ZENER	83.3	19.2
ZD104	DIODE-ZENER	81.8	12.8
ZD200	DIODE-ZENER	107.1	11.3
ZD201	DIODE-ZENER	106.4	18.8
IC			
IC101	IC-EEPROM	15.8	23.6
IC106	DIODE-TVS	110.7	12.9
IC107	DIODE-TVS	11.0	9.6
IC200	IC-MICROCONTROLLER	96.6	30.9
IC201	IC-EEPROM	95.2	8.5
IC400	IC-LCD CONTROLLER	56.0	46.9
IC500	IC-AUDIO AMP	101.9	59.8
IC502	IC-POS.FIXED REG.	98.5	71.5
IC600	FET-SILICON	27.5	55.8
IC601	IC-MULTI REG.	17.4	35.5
IC602	IC-POS.FIXED REG.	12.8	56.5
TRANSISTOR			
Q100	TR-SMALL SIGNAL	7.0	21.1
Q600	TR-SMALL SIGNAL	20.3	66.0
Q601	TR-SMALL SIGNAL	14.1	67.9

11 Schematic Diagrams

