



## LCD Телевизор

Шасси **GBE19SE**  
**GBE19SE**

Модель **LE19R71B**  
**LE19R71W**

# РУКОВОДСТВО ПО ТЕХНИЧЕСКОМУ ОБСЛУЖИВАНИЮ

## PDP Телевизор



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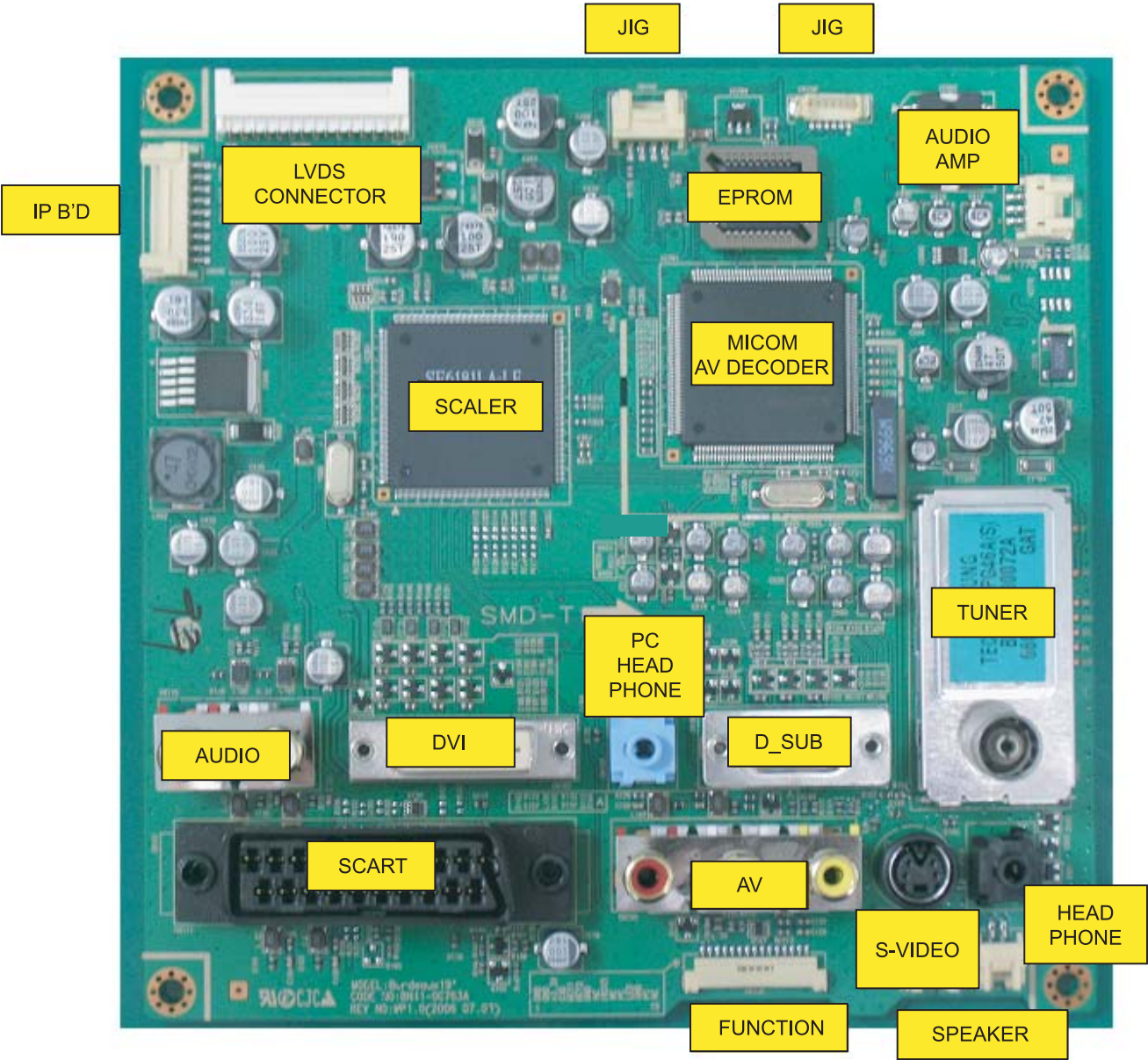
**SAMSUNG  
ELECTRONICS**

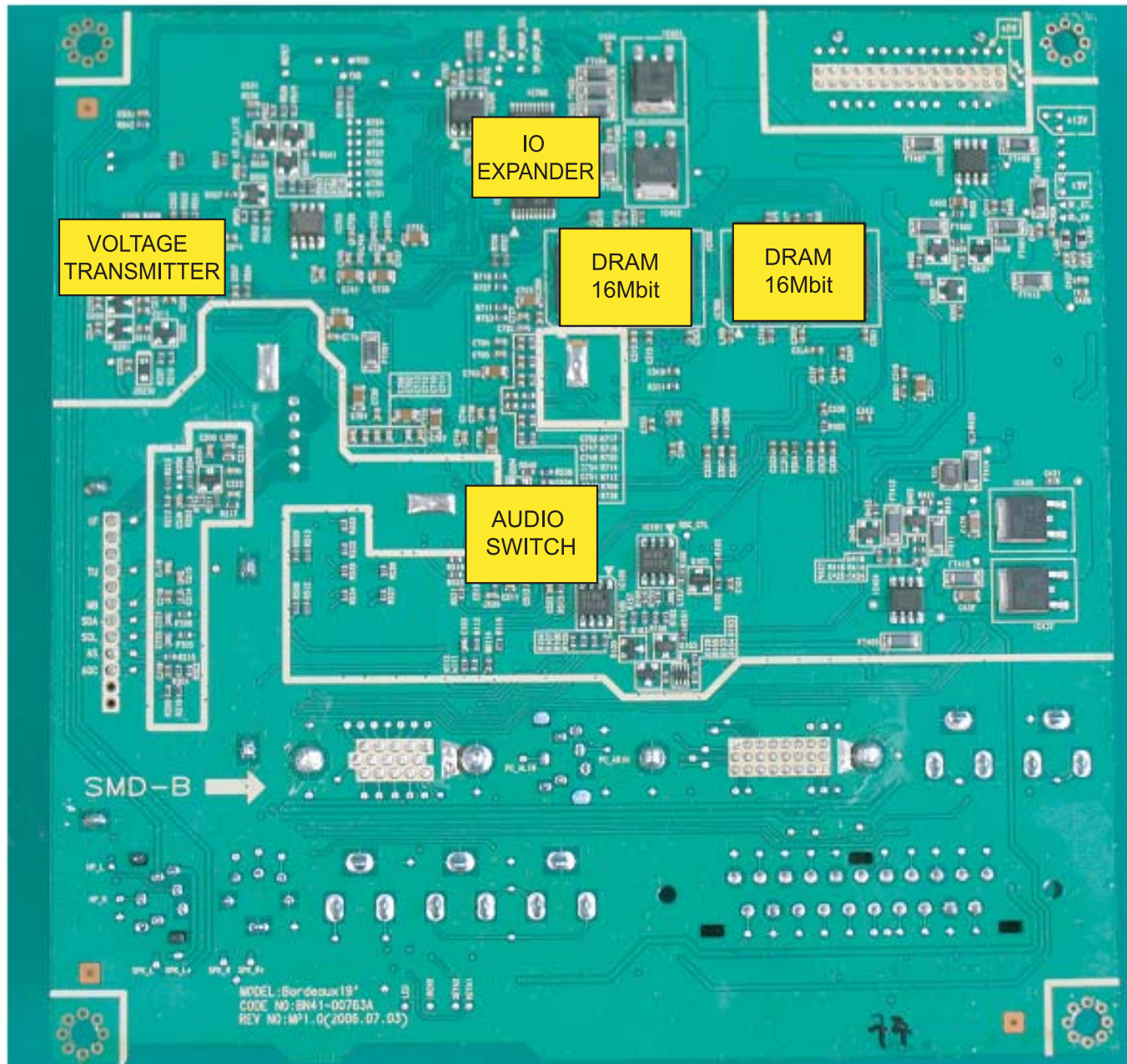


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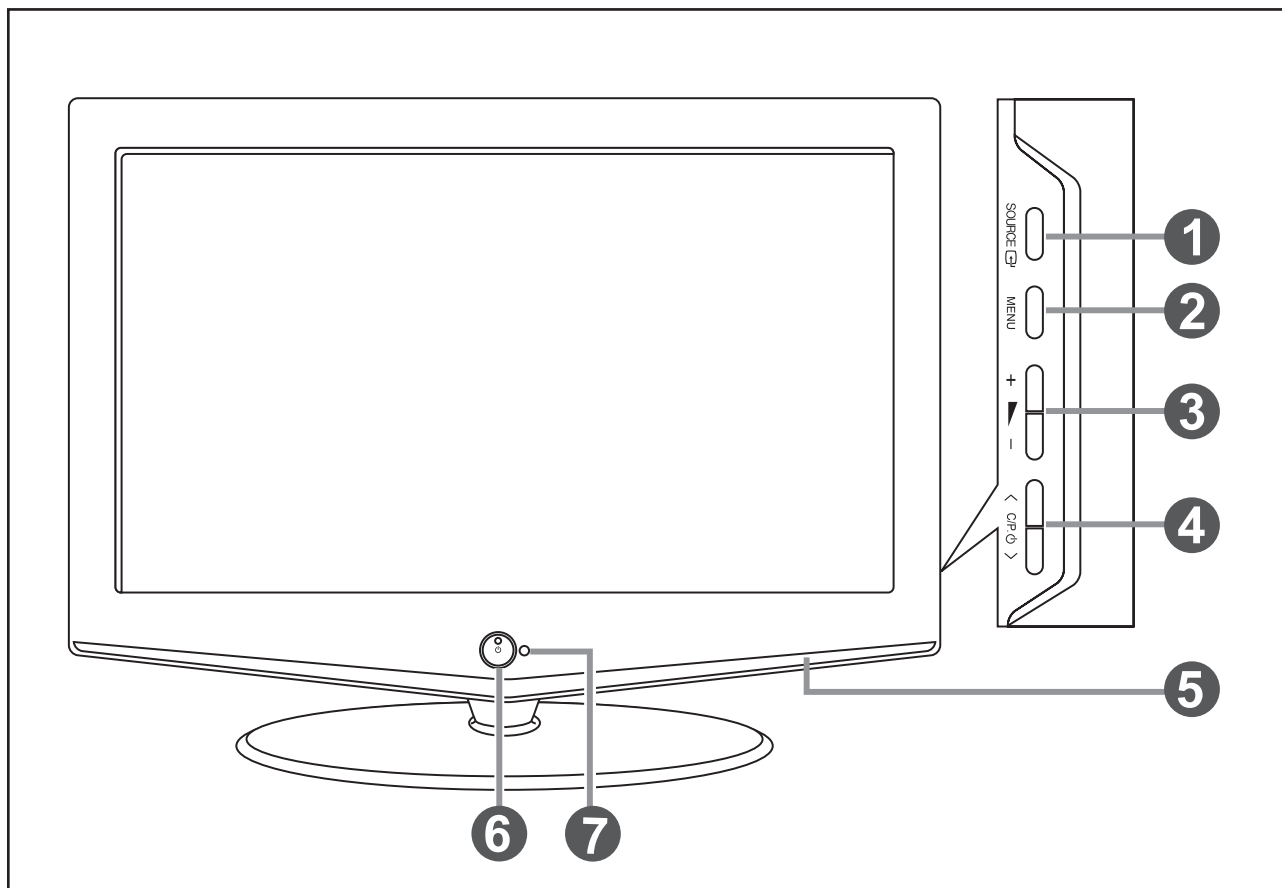
12 PCB Diagram






## 10 Инструкции по эксплуатации и монтажу

### 10-1 Передняя панель



#### 1. SOURCE

Переключение между возможными источниками входного сигнала (TV, Ext. (внешнее устройство), AV, S-Video, PC (персональный компьютер), DVI).




В режиме экранного меню данная клавиша используется так же, как и клавиша ENTER  на пульте дистанционного управления.

#### 2. MENU




Нажать данную клавишу для открытия экранного меню, отображающего возможные настройки телевизора.

#### 3. + -

Нажимать данные клавиши для увеличения либо уменьшения громкости звука.

В режиме экранного меню клавиши +  - используются так же, как и клавиши  и  на пульте дистанционного управления.

#### 4. C/P.

Нажимать данные клавиши для переключения между телевизионными каналами. В режиме экранного меню клавиши  используются так же, как и клавиши  и  на пульте дистанционного управления. (В отсутствие пульта дистанционного управления можно включить телевизор, используя клавиши Выбора каналов.)

#### 5. Динамик

#### 6. (Питание)

Эта клавиша используется для включения и выключения телевизора.

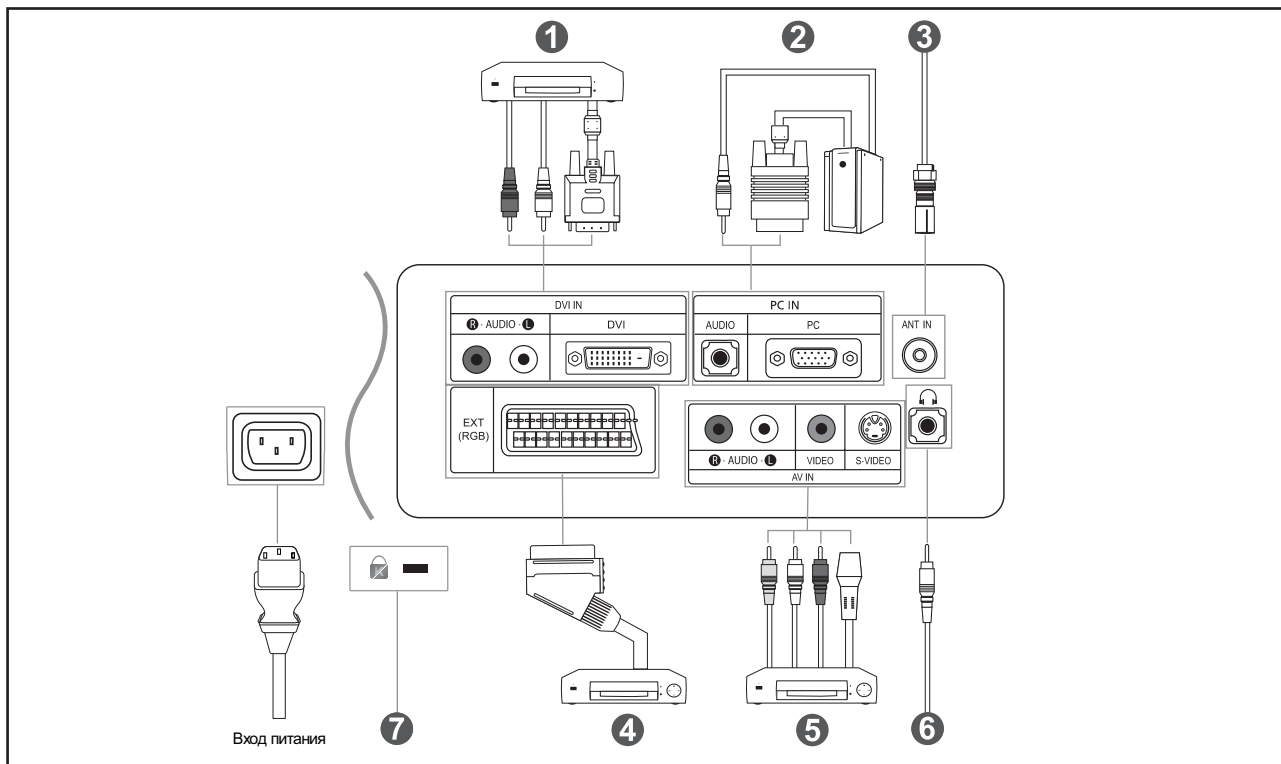
##### Индикатор питания

Индикатор питания мигает и гаснет при включении питания и горит в режиме ожидания.

#### 7. Датчик дистанционного управления

Пульт дистанционного управления необходимо направлять в эту точку на телевизоре.

## 10-2 Общий вид панели соединений



### 1. Подключение DVI

- Подключить DVI соединитель к соединителю DVD.
- Подключить стерео аудиокабель к разъему R-AUDIO-L на задней панели телевизора, при этом противоположные концы соответствующих выходных соединителей должны подключаться к аудио выходу звуковой карты DVD-плеера.
- DVI не поддерживает функции персонального компьютера.

### 2. Подключение компьютера

- Подключить кабель D-Sub (приобретается отдельно) к разъему PC(PC IN) на задней панели телевизора, при этом другой конец кабеля должен подключаться к видеокarte компьютера.
- Подключить стерео аудио кабель (приобретается отдельно) к разъему AUDIO (PC IN) на задней панели телевизора, при этом другой конец кабеля должен подключаться к разъему Audio Out звуковой платы компьютера.

### 3. Подключение эфирной антенны или сети кабельного телевидения

Для правильного отображения телевизионных каналов телевизор должен получать сигнал от одного из следующих источников:

- наружной эфирной антенны / сети кабельного телевидения / сети спутникового телевидения.

### 4. Подключение компьютерной приставки, видеомagniтофона или DVD-плеера.

- Подключить кабель SCART (приобретается отдельно) видеомagniтофона или DVD -плеера к соединителю SCART видеомagniтофона или DVD -плеера.
- Если требуется подключить компьютерную приставку к телевизору и видеомagniтофон (или DVD-плеер), необходимо подключить компьютерную приставку к видеомagniтофону (или DVD-плееру), а затем подключить видеомagniтофон (или DVD-плеер) к телевизору.

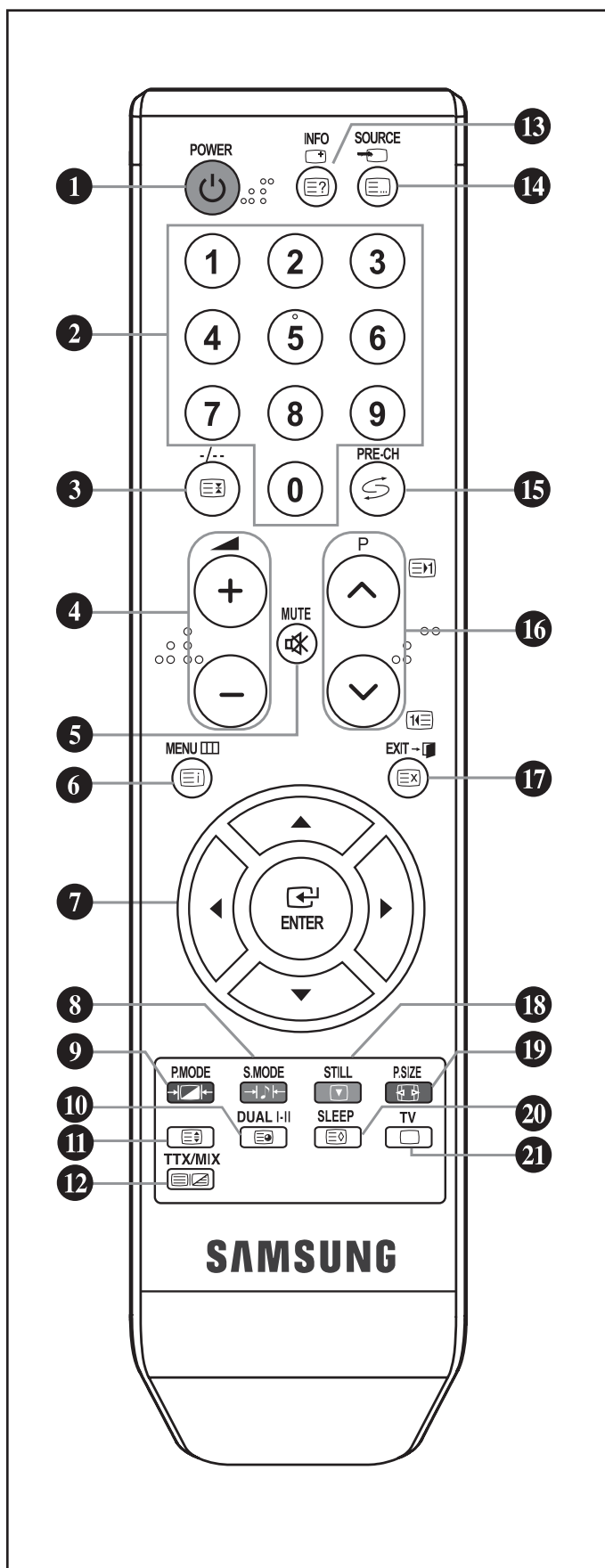
### 5. Подключение внешних аудио-видео устройств

- Подключить кабель RCA (приобретается отдельно) или S-VIDEO (приобретается отдельно) к соответствующему внешнему аудио-видео устройству, такому как видеомagniтофон, DVD-плеер или видеокамера.
- Подключить аудиокабели RCA (приобретается отдельно) к разъему R-AUDIO-L на задней панели телевизора, при этом другие концы кабеля должны подключаться к соответствующим соединителю аудиовыходов на аудио-видео устройстве.
- Наушники могут подключаться к выходу наушников (6) на задней панели телевизора. Когда наушники подключены, звук перестает поступать через встроенные динамики телевизора.

### 7. Замок Кенсингтона

- Замок Кенсингтона (приобретается отдельно) представляет собой устройство, применяемое для физической блокировки системы, при ее использовании в местах общего доступа.
- За инструкциями по использованию блокировочного устройства необходимо обращаться по месту приобретения телевизора.

### 10-3 Обзор пульта дистанционного управления



1. Кнопка режима ожидания телевизора
2. Цифровые клавиши для прямого выбора каналов
3. Кнопка выбора каналов с однозначным/двузначным номером
4. ⊕ : Кнопка увеличения громкости звука  
⊖ : Кнопка уменьшения громкости звука
5. Кнопка временного отключения звука
6. Кнопка отображения меню и подтверждения изменений
7. Кнопка управления перемещением по меню
8. Кнопка выбора режима звука
9. Кнопка выбора эффектов изображения
10. Кнопка выбора звуковых эффектов
13. Данная кнопка используется для просмотра информации текущего телевидения
14. Кнопка выбора доступных источников сигнала.
15. Кнопка перехода к предыдущему каналу
16. P ⊕ : Кнопка перехода к следующему каналу  
P ⊖ : Кнопка перехода к предыдущему каналу
17. Кнопка выхода из экранного меню
18. Кнопка остановки изображения
19. Кнопка выбора размера изображения
20. Кнопка автоматического отключения питания
21. Кнопка прямого выбора режима телевизора

#### Функции телетекста

3. Кнопка удержания страницы телетекста
6. Кнопка индекса телетекста
10. Кнопка подстраницы телетекста
11. Кнопка выбора размера телетекста
12. Кнопка вариантов просмотра телетекста, на весь экран или вместе с изображением телевидения.
13. Кнопка воспроизведения телетекста
14. Кнопка выбора режима телетекста (LIST/FLOF)
16. P ⊕ : Кнопка следующей страницы телетекста  
P ⊖ : Кнопка предыдущей страницы телетекста
17. Кнопка отмены телетекста
20. Кнопка сохранения телетекста
21. Кнопка выхода из режима телетекста
- 8, 9, 18, 19. Кнопка выбора тем телетекста

## **10-4 Информация и предостережения, относящиеся к монтажу**

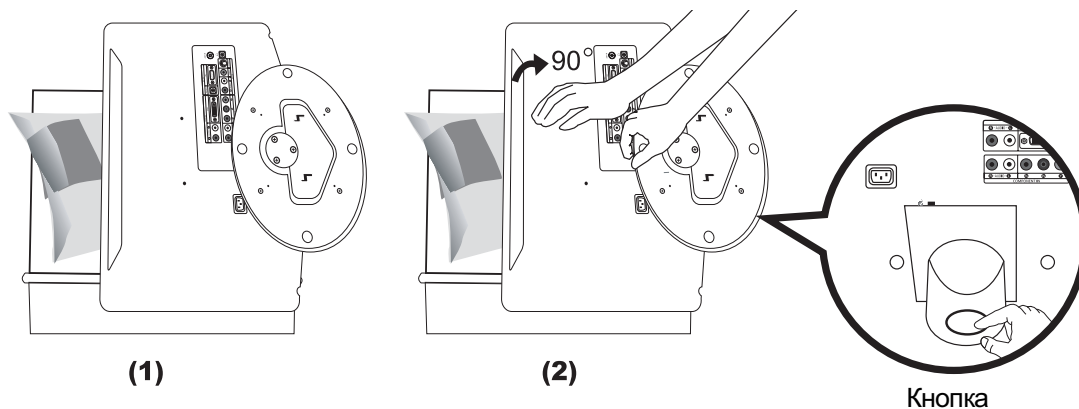
### **10-4-1 Использование замка Кенсингтона для защиты от воров**



Замок Кенсингтона представляет собой устройство, применяемое для физической блокировки системы, при ее использовании в местах общего доступа. Блокирующее устройство приобретается отдельно. Местонахождение замка Кенсингтона и метод блокировки могут отличаться от приведенного на рисунке в зависимости от производителя. За инструкциями по эксплуатации блокировочного устройства необходимо обращаться к прилагаемому руководству.

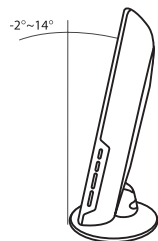
1. Вставить блокирующее устройство в гнездо Кенсингтона на жидкокристаллическом телевизоре (Рисунок 1), а затем повернуть его в направлении блокировки (Рисунок 2).
2. Подсоединить кабель замка Кенсингтона.
3. Закрепить замок Кенсингтона на стойке или тяжелом стационарном объекте.

## 10-5 Регулировка подставки

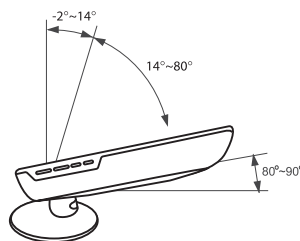


1. Положить телевизор на стол панелью вниз на кусок мягкой ткани или подушку как это показано на Рисунке (1).  
- Выровнять нижнюю часть телевизора относительно края стола.
2. Надавить на центр задней части телевизора.  
Отрегулировать подставку, как это показано на Рисунке (2), нажимая на кнопку, находящуюся на задней стороне подставки.
3. Поместить телевизор на стол, убедившись, что прибор установлен надежным образом.

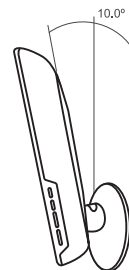
## 10-6 Регулировка угла наклона телевизора



(1) Регулировка угла наклона, когда телевизор находится на подставке



(2) Регулировка угла наклона при перемещении телевизора с подставки на стену (1 3, 3 1)



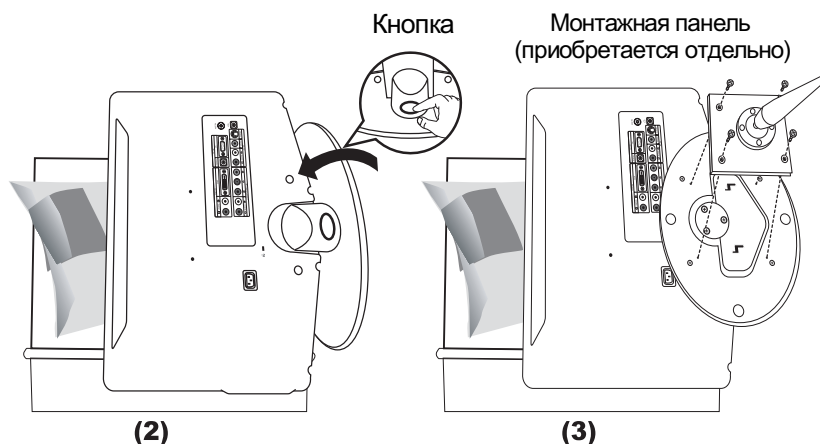
(3) Регулировка угла наклона, когда жидкокристаллический телевизор смонтирован на стене

**Примечание:** При регулировке подставки необходимо нажимать на кнопку, находящуюся на задней стороне подставки.

1. На рисунке (1) показана регулировка угла наклона ( $-2^{\circ} \sim 14^{\circ}$ ), когда жидкокристаллический телевизор находится на подставке.
2. На рисунке (2) показана регулировка угла наклона ( $14^{\circ} \sim 80^{\circ}$ ) при перемещении телевизора с подставки на стену.
3. На рисунке (3) показана регулировка угла наклона ( $0^{\circ} \sim 10^{\circ}$ ), когда жидкокристаллический телевизор смонтирован на стене.

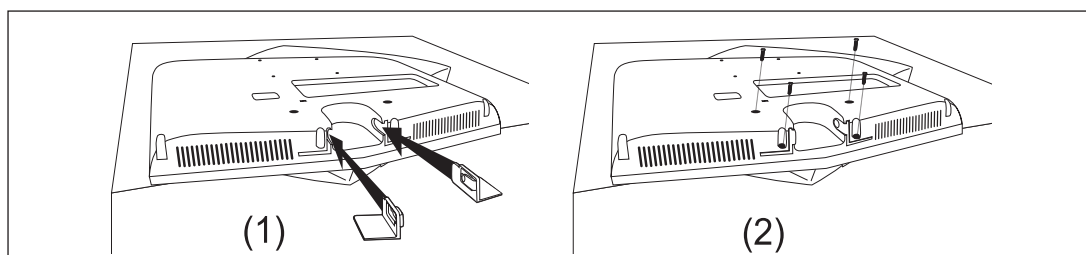
**Примечание:** При изменении угла наклона от 1 до 2 или от 3 до 2 слышен щелчок.

## 10-7 Установка монтажных приспособлений, соответствующих VESA



1. Положить телевизор на стол панелью вниз на кусок мягкой ткани или подушку.
2. Отрегулировать подставку, нажимая на кнопку, находящуюся на задней стороне подставки.
3. Выровнять промежуточную монтажную панель (не входит в объем поставки) относительно отверстий в нижней части подставки, а затем закрепить ее четырьмя винтами, прилагаемыми к штанге, настенному креплению или другим держателям (не входят в объем поставки).

## 10-8 Использование декоративных крышек



1. При монтаже телевизора на стене без использования подставки необходимо вставить декоративные крышки в отверстия, как это показано на рисунке (1).
2. После вставки декоративных крышек их необходимо зафиксировать с помощью 4 винтов, как это показано на рисунке (2).

# 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*).

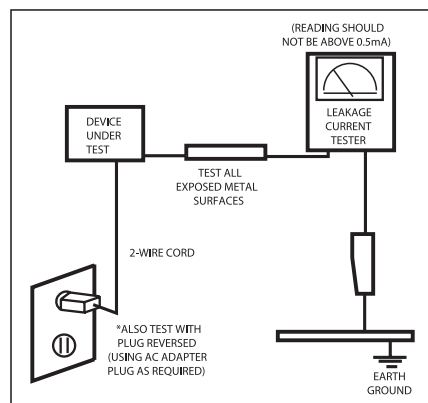


Figure 1-1. Leakage Current Test Circuit

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  $\triangle$  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 Precautions

### 1-2 Servicing Precautions

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**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 Static Electricity Precautions

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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.

## 1-4 Installation Precautions

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1. For safety reasons, more than two people are required for carrying the product.
2. Keep the power cord away from any heat emitting devices, as a melted covering may cause fire or electric shock.
3. Do not place the product in areas with poor ventilation such as a bookshelf or closet. The increased internal temperature may cause fire.
4. Bend the external antenna cable when connecting it to the product. This is a measure to protect it from being exposed to moisture. Otherwise, it may cause a fire or electric shock.
5. Make sure to turn the power off and unplug the power cord from the outlet before repositioning the product. Also check the antenna cable or the external connectors if they are fully unplugged. Damage to the cord may cause fire or electric shock.
6. Keep the antenna far away from any high-voltage cables and install it firmly. Contact with the high-voltage cable or the antenna falling over may cause fire or electric shock.
7. When installing the product, leave enough space (10cm) between the product and the wall for ventilation purposes. A rise in temperature within the product may cause fire.

1 Precautions

Memo

### 3 Регулировка и юстировка

В разделе описывается методика регулировки жидкокристаллического телевизора после замены ЭСППЗУ, главной платы или панели.

#### 3-1 Обновление программного обеспечения

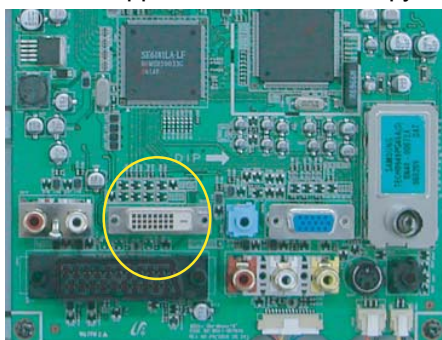
##### Замена микропроцессора

: Если произойдет что-либо из нижеперечисленного, необходимо заменить ЭСППЗУ.

- Пример 1) Когда на экране наличествует изображение, однако пульт дистанционного управления и функциональные клавиши не работают.
- Пример 2) Когда светодиод горит, но на экране отсутствует изображение.
- Пример 3) После массового производства, когда обновляется программная версия микропроцессора.

\* Замена микропроцессора должна выполняться с использованием действующего выпуска Сервисного руководства.

Методика работы требует внесения корректив согласно инструкциям Сервисного руководства.



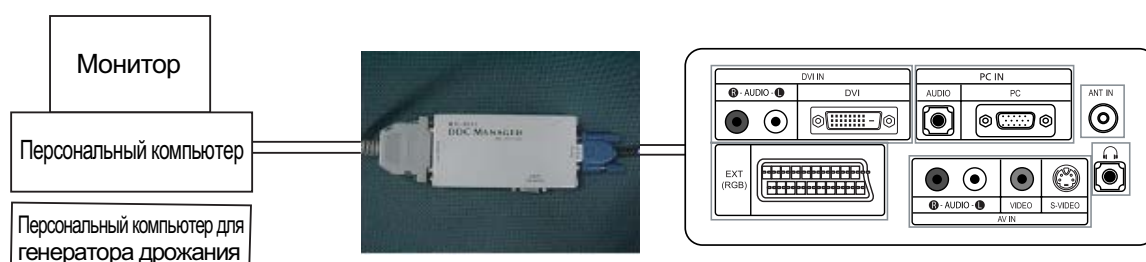
Как наглядно показано на рисунке, после разборки телевизора (информация приводится в разделе, относящемся к разборке прибора), следует извлечь микропроцессор из существующего гнезда IC706, а затем установить новый микропроцессор.

- Использовать соответствующее монтажное приспособление, либо любой острый инструмент, вставив его по углам для облегчения демонтажа. (Необходимо соблюдать осторожность! При каких-либо повреждениях гнезда после замены микропроцессора монитор не будет работать соответствующим образом.)
- При установке нового микропроцессора следует учитывать направление на контакт № 1 компонента IC, и прижать процессор с необходимым усилием.
- После замены, если ЭСППЗУ очищено, следует войти в режим заводских установок и выполнить настройку.

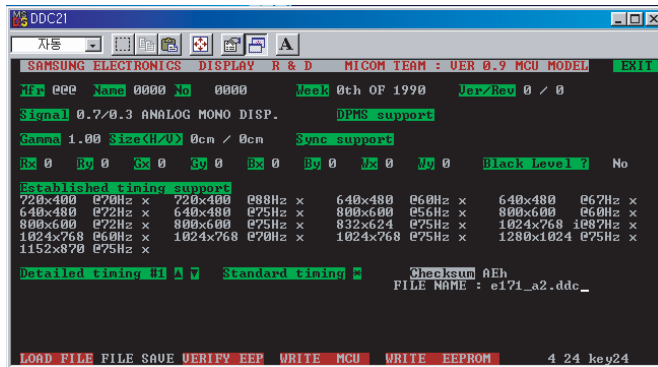
#### 3-2 Методика ввода данных EDID

Жидкокристаллический телевизор SAMSUNG поддерживает прямое цифровое управление посредством генератора дрожания.

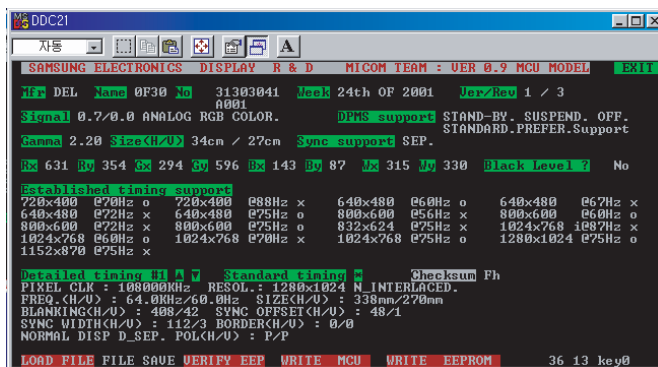
На рисунке приводится схема соединения между персональным компьютером и жидкокристаллическим телевизором.



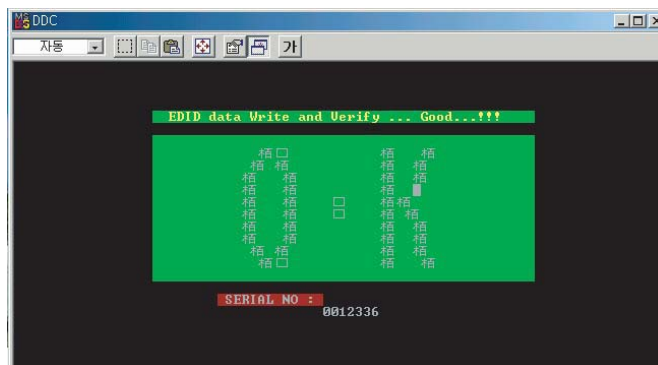
### 3-2-1 Методика ввода данных EDID (программа Dos)



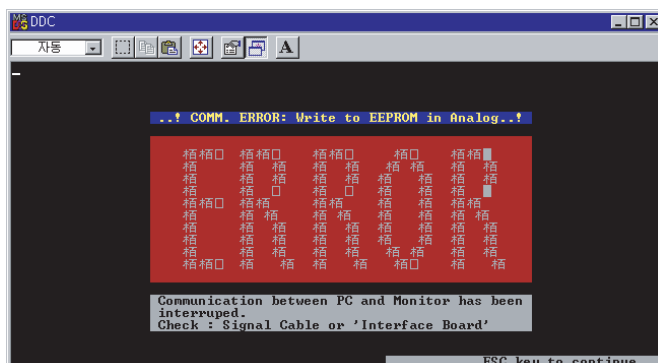
1. Выполнить команду "DDC21.exe"
2. Щелкнуть мышью по символу "LOAD FILE".
3. Ввести имя файла
  - "GBR-19HMA1-1.ddc"
  - "GBR-19HMD1-1.ddc"



4. Щелкнуть мышью по символу "WRITE EEPROM".

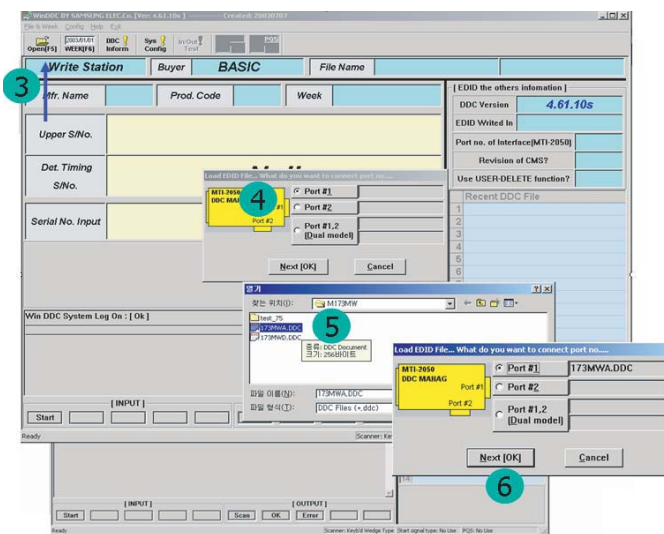


Подтвердить появляющееся сообщение "ОК"



Сообщение об ошибке  
: Проверить сигнальный кабель или интерфейсную плату.

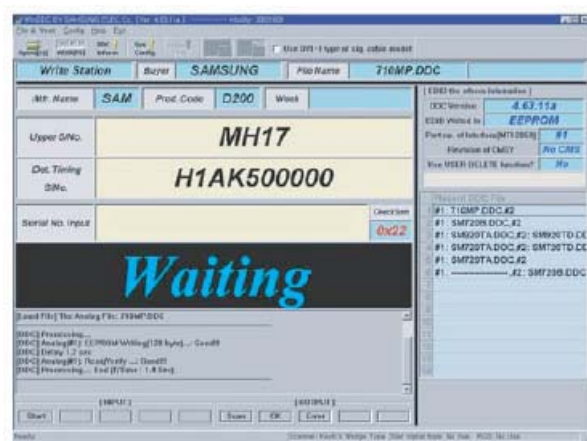
### 3-3 Методика ввода данных EDID (программа Windows)



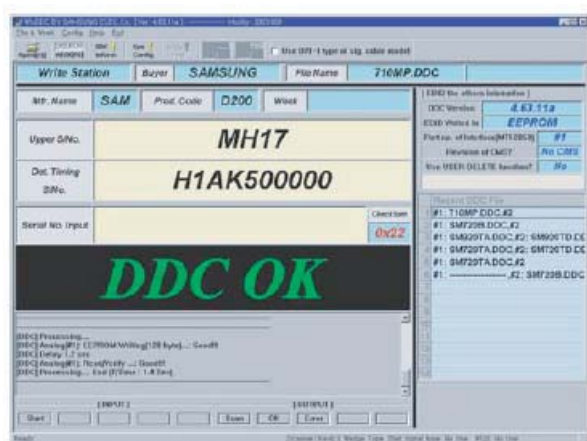
1. Привести в действие программу Winddc.exe на персональном компьютере.
2. Щелкнуть мышью по символу Windows.
3. Откроется файл.
4. Выбрать Port#1 (Порт №1)
5. Загрузить имя файла DDC (прямое цифровое управление).
6. Щелкнуть мышью по клавише Next (OK).

Аналоговый: GBR-19HMA1-1.ddc

Цифровой: GBR-19HMD1-1.ddc



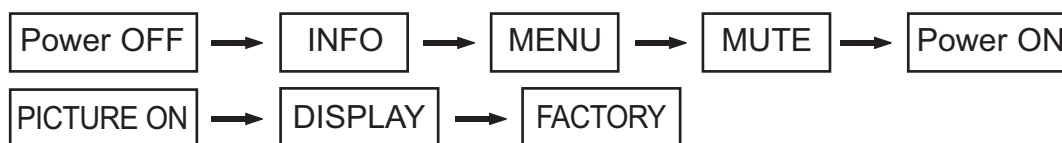
7. Выбрать клавишу ввода (на клавиатуре) после ввода серийного номера монитора



8. Убедиться в том, что на экране появляется сообщение "DDC OK".

### 3-4 Регулировки в заводском режиме

#### 3-4-1 Вход в заводской режим



#### 3-4-2 Меню сервисного режима



#### - Блок VCTI

Только для настройки качества изображения на стадии разработки.  
Запрещается изменять данное значение.



## - Блок MSTAR

Только для настройки качества изображения на стадии разработки.  
Запрещается изменять данное значение.

Service	
PC Auto Color	▶
VCTI Part	▶
MSTAR Part	▶
Adjust	▶
Pre-setting	▶
Options	▶
Checksum DD79	▶
Panel Information	▶
Reset	▶
Bus - Stop : off	
2006/07/10	
T-BORD19NUS - 1003	

MSTAR Part	
PAGE 1	▶
PAGE 2	▶
Spr. Spect.	▶
ADC Part	▶
De-Interlacer	▶
Custom color	▶
6 Color	▶

### Управление делителем частоты (SE6181)

Управление значением регистра каждого функционального блока делителя частоты, SE6181

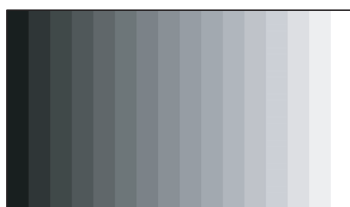
## - Регулировка

Только для настройки качества изображения на стадии разработки.  
Запрещается изменять данное значение.

Service	
PC Auto Color	▶
VCTI Part	▶
MSTAR Part	▶
Adjust	▶
Pre-setting	▶
Options	▶
Checksum DD79	▶
Panel Information	▶
Reset	▶
Bus - Stop : off	
2006/07/10	
T-BORD19NUS - 1003	

Adjust	
R Gain	114
G Gain	128
B Gain	132
R Offset	125
G Offset	128
B Offset	126
Sub Contrast	47
Sub Brightness	40
NVRAM Reset	▶

Предварительная настройка значения статуса заводских установок

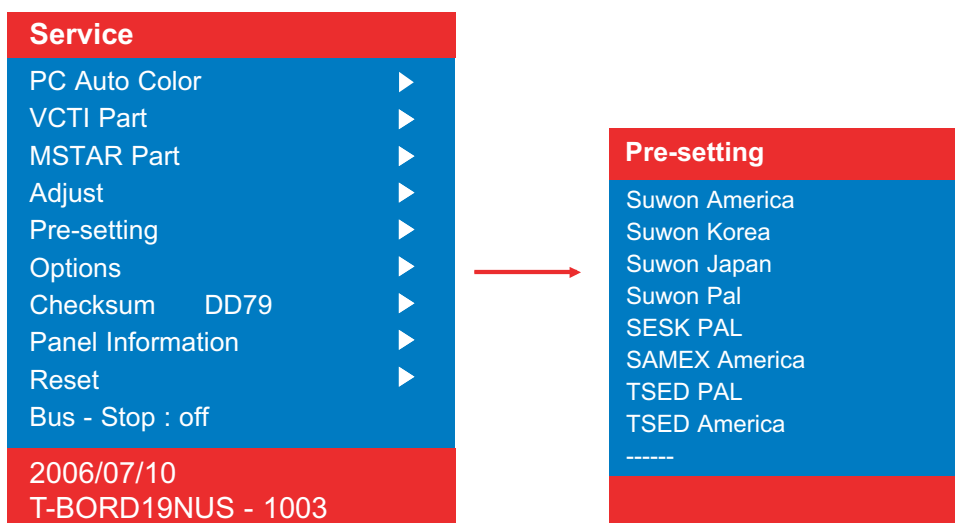
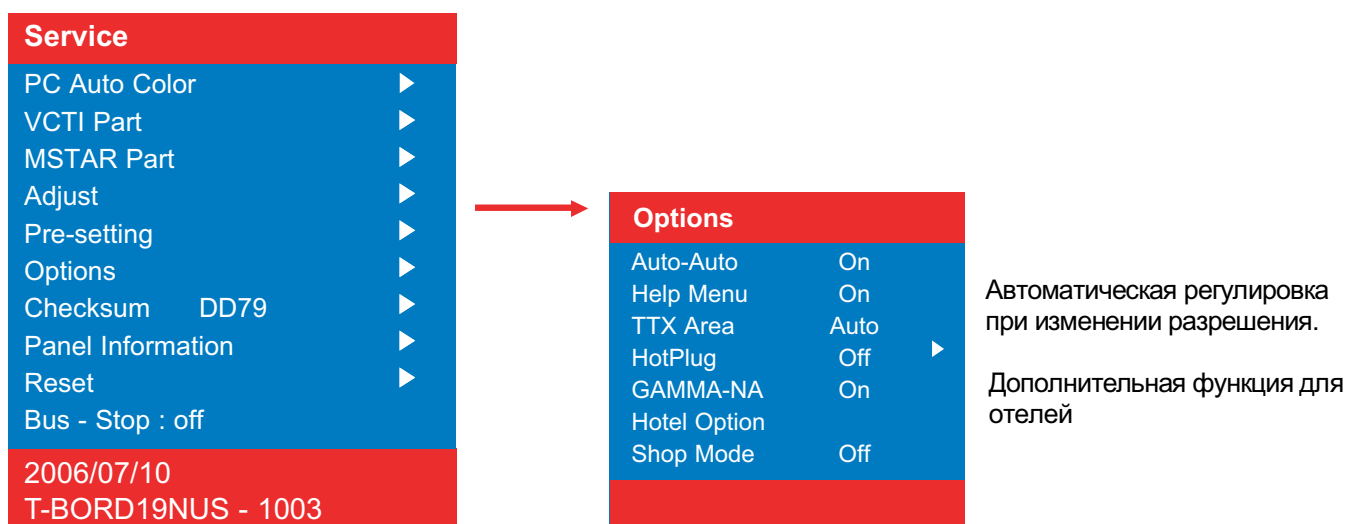


### Автоматическая регулировка цвета PC

▶ Аналоговый PC: 1024 x 768/60 Гц, испытательная таблица 16 Gray

**- Предварительная настройка**

Настройка канала для каждого завода-изготовителя

**- Опции**

**- Информация о панели**

Service	
PC Auto Color	▶
VCTI Part	▶
MSTAR Part	▶
Adjust	▶
Pre-setting	▶
Options	▶
Checksum DD79	▶
Panel Information	▶
Reset	▶
Bus - Stop : off	
2006/07/10	
T-BORD19NUS - 1003	

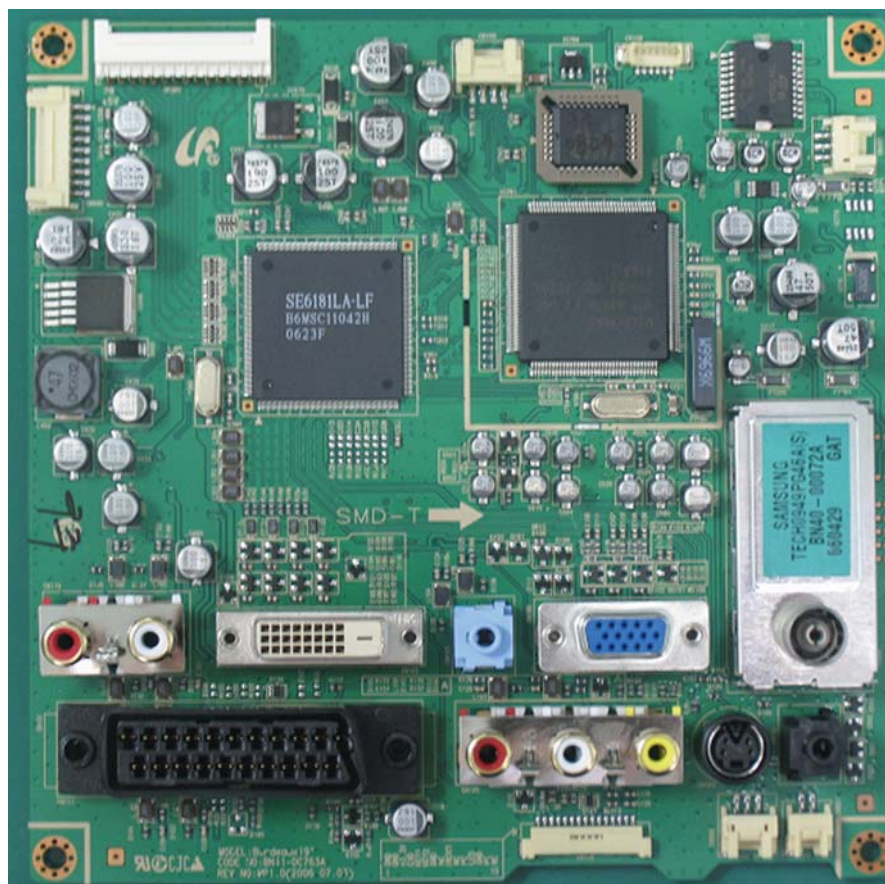


Panel Information	
Monitor	: 15Hr
Panel Cycle	: 18
Time Ch.No	
Panel	: 15Hr 0
Upper Lamp	: 15Hr 0
Lower Lamp	: 15Hr 0

## **Заметки**

## 13 Описание контуров

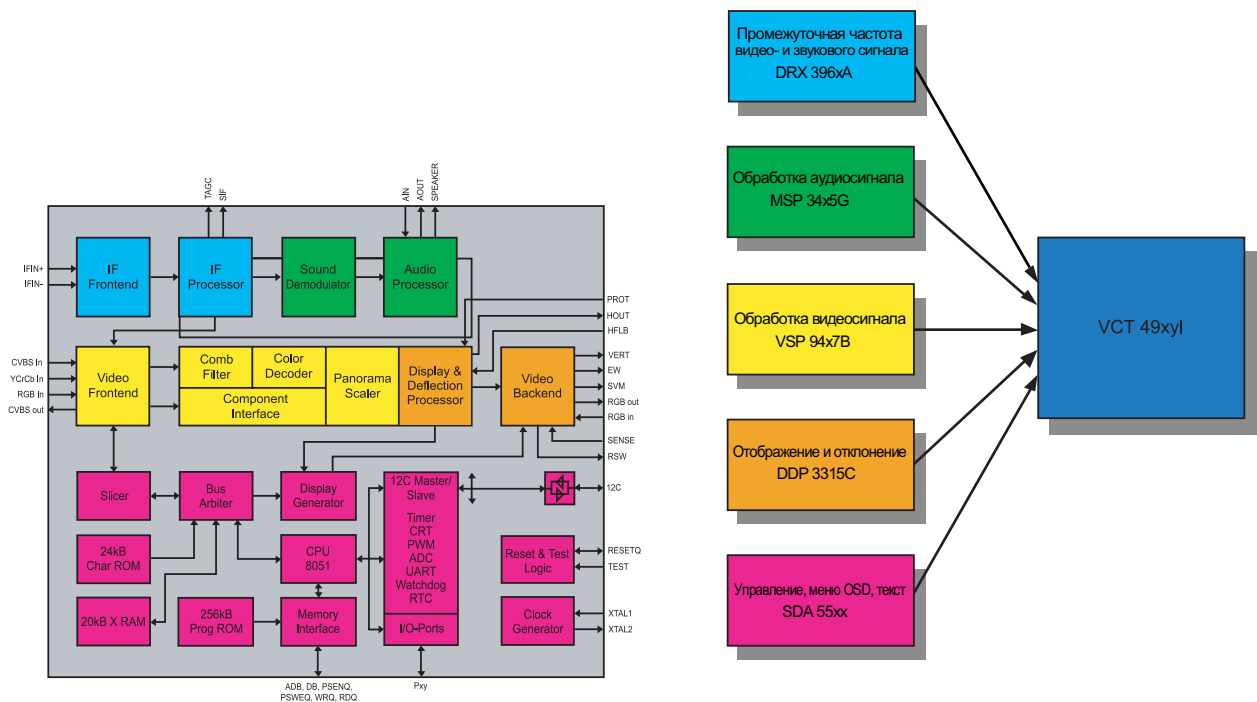
### 13-1 Описание блоков



№	Блок	Описание	Наименование
1	UCO III	Универсальный процессор сигналов (VSP)	TDA15021H
2	Делитель частоты	Контроллер жидкокристаллического экрана SXGA с аналоговым интерфейсом и двусторонним передатчиком TTL/LVDS	TSU396AWJ-LF
3	Тюнер	Входной сигнал антенны RF	TDQ-6FL
4	Вход D_sub	Входной соединитель D_sub	
5	Функциональный соединитель	Соединитель функциональных клавиш	
6	Соединитель динамиков	Соединитель блока динамиков, левого, правого	
7	Аудио гнездо	ГНЕЗДО НАУШНИКОВ	
8	Фильтр	Фильтр ПАВ видеосигнала	K7257M
		Фильтр ПАВ аудиосигнала	K9652M
9	Аудио интегральная схема IC	УПРАВЛЕНИЕ ГРОМКОСТЬЮ	TDA7496L
10	Соединитель платы IP	Подача питания	

## 13 Описание контуров

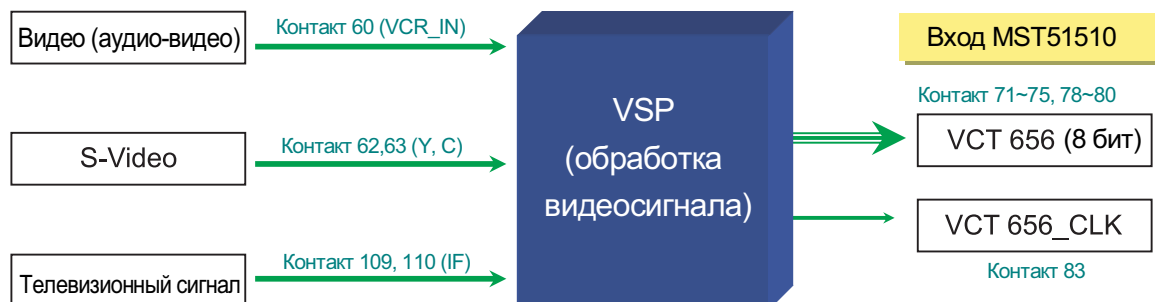
### 13-1-1 VCT49XYI (IC700)



### 13-1-2 Блок VSP

: CVBS, S-Video, RF(IF), SCART  
(RGB) Преобразование формата 656 во  
входной видеосигнал и передача его на MST51510

#### Вход внешнего видеосигнала



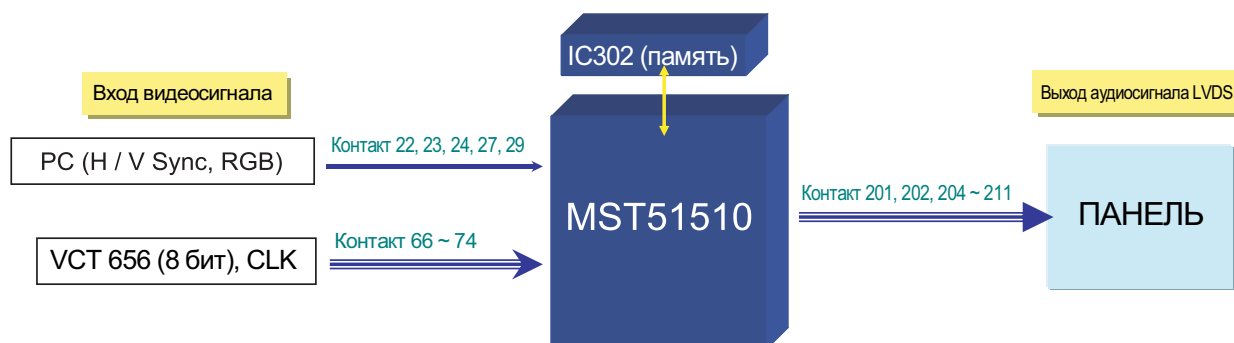
### 13-1-3 Блок MSP

: персональный компьютер, звук левый/правый, SCART,  
Прием входных аудиосигналов и передача  
их на усилитель.



### 13-1-4 SE6181(IC301)

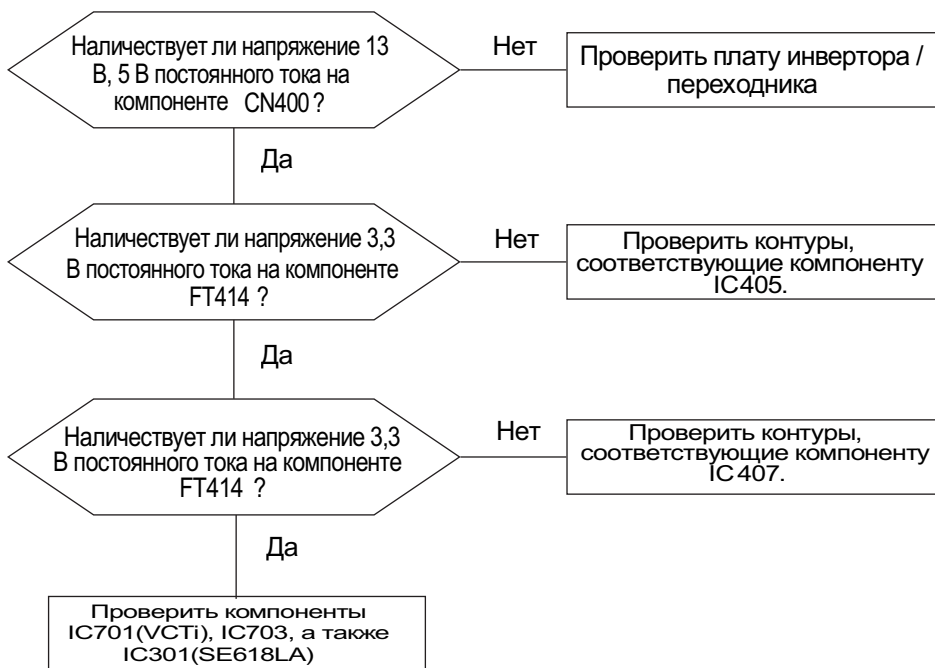
- Делитель частоты (MFM)
- Поддержка входа цифрового видеосигнала
- Внутренняя интегральная схема LVDS
- Поддержка режима картинка-в-картинке (PIP)
- механизм устройства управления экранным меню OSD



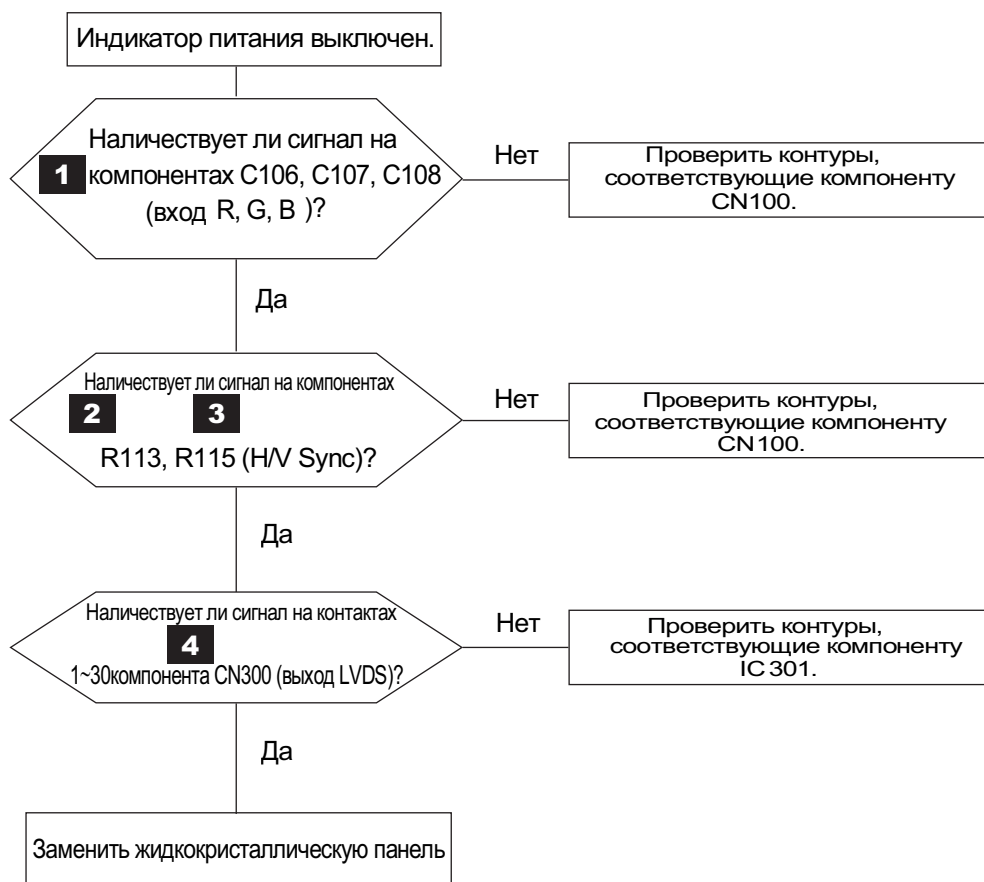
## **Заметки**

## 4 Выявление и устранение неисправностей

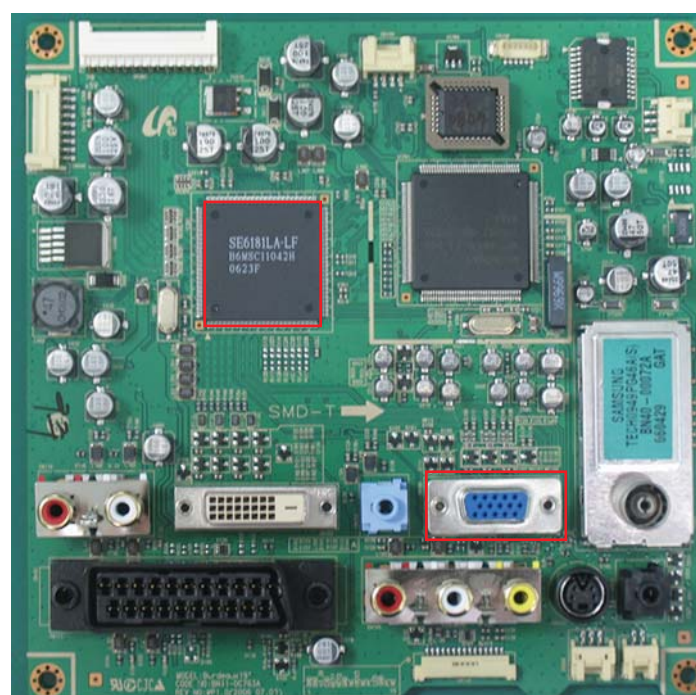
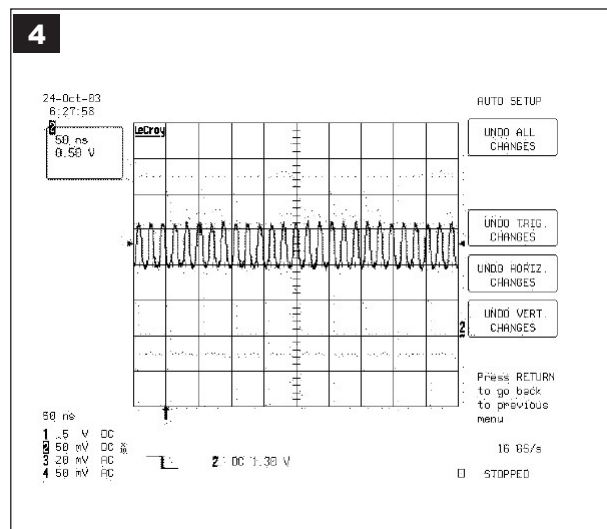
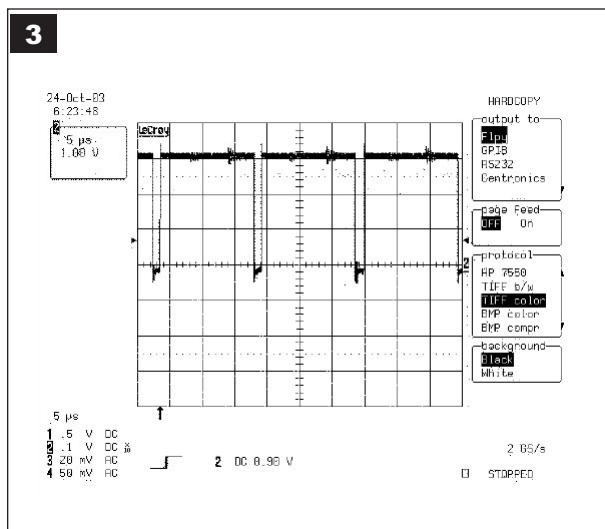
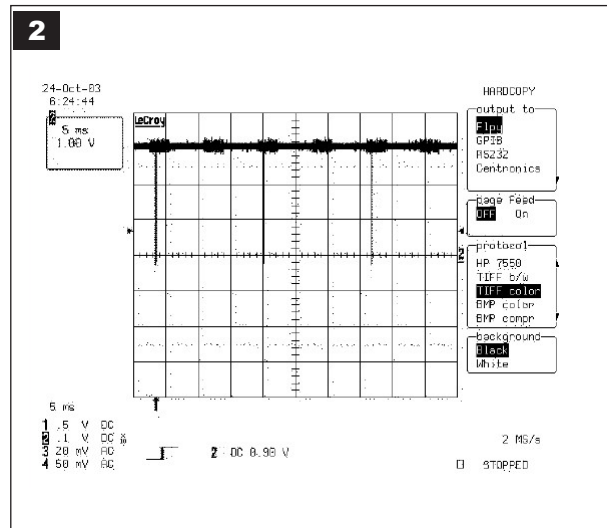
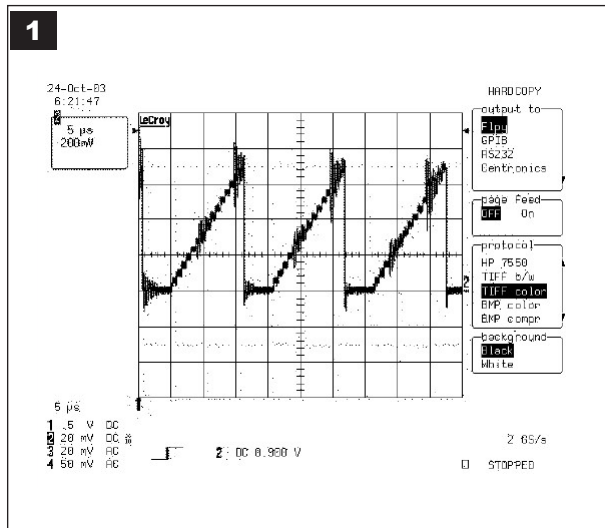
### 4-1 Отсутствие питания



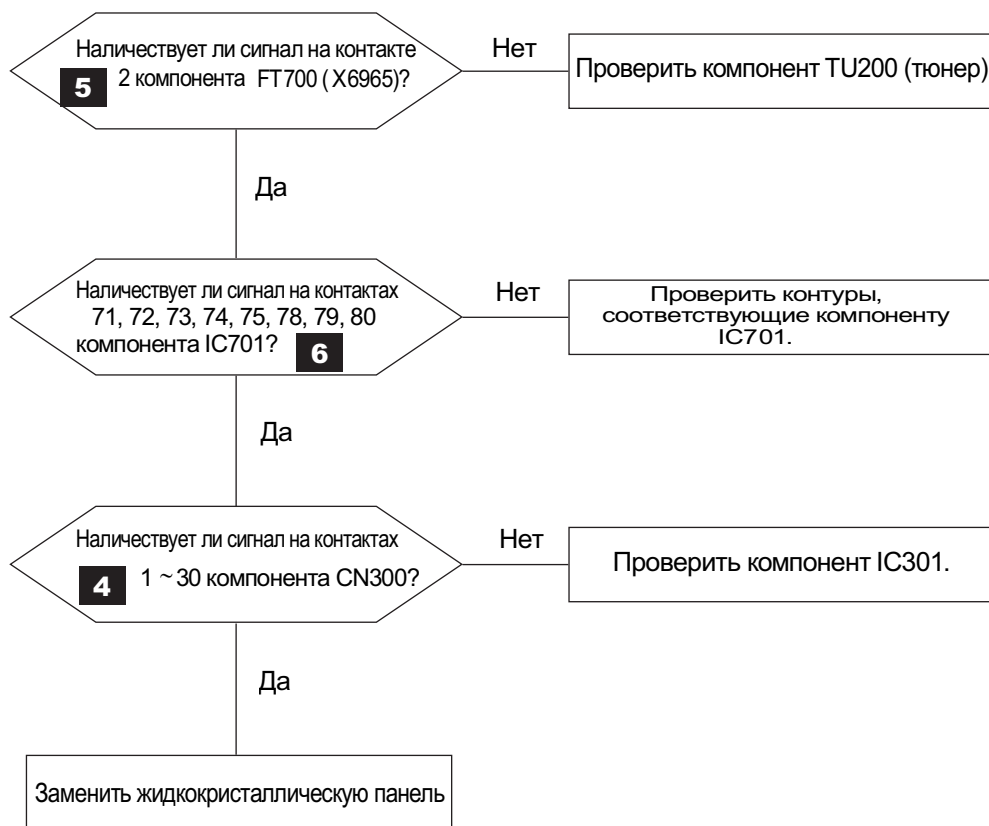
## 4-2 Отсутствие видеоизображения (РС)



# **ФОРМЫ СИГНАЛА**

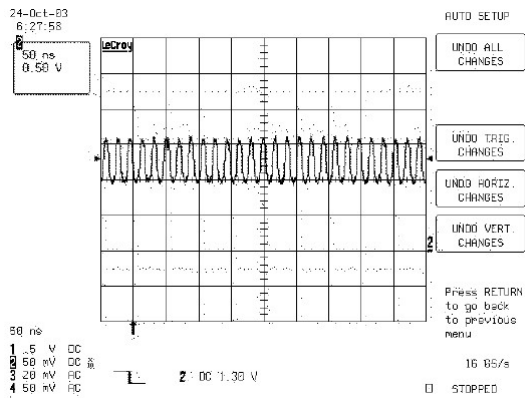


### 4-3 Отсутствие видеоизображения (телевизор)

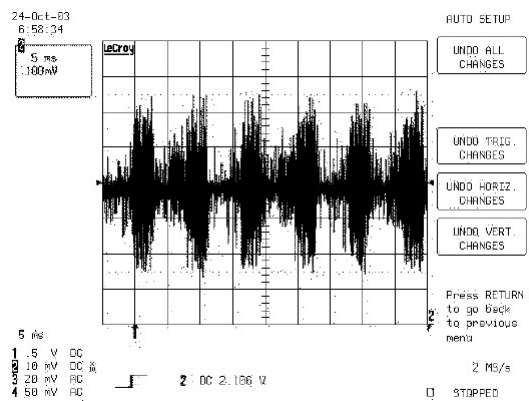


# **ФОРМЫ СИГНАЛА**

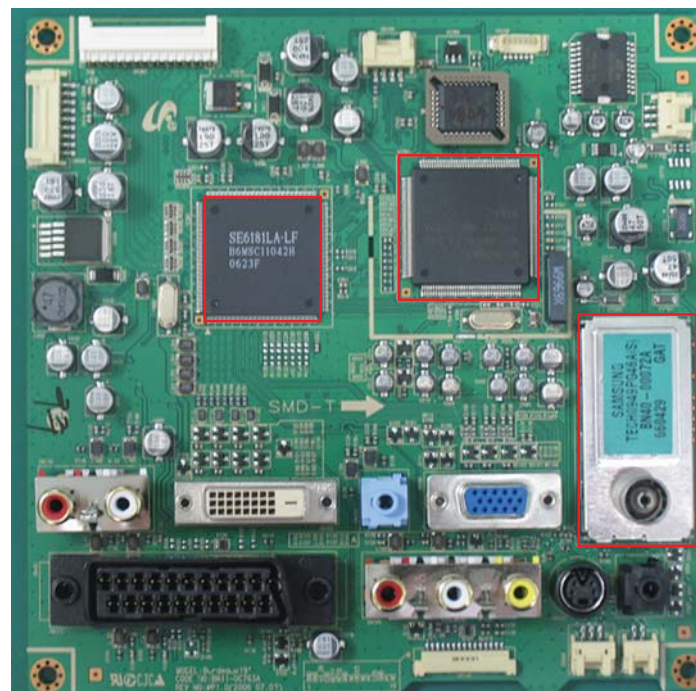
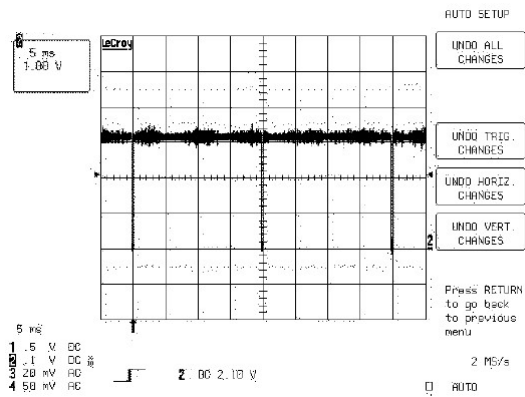
4



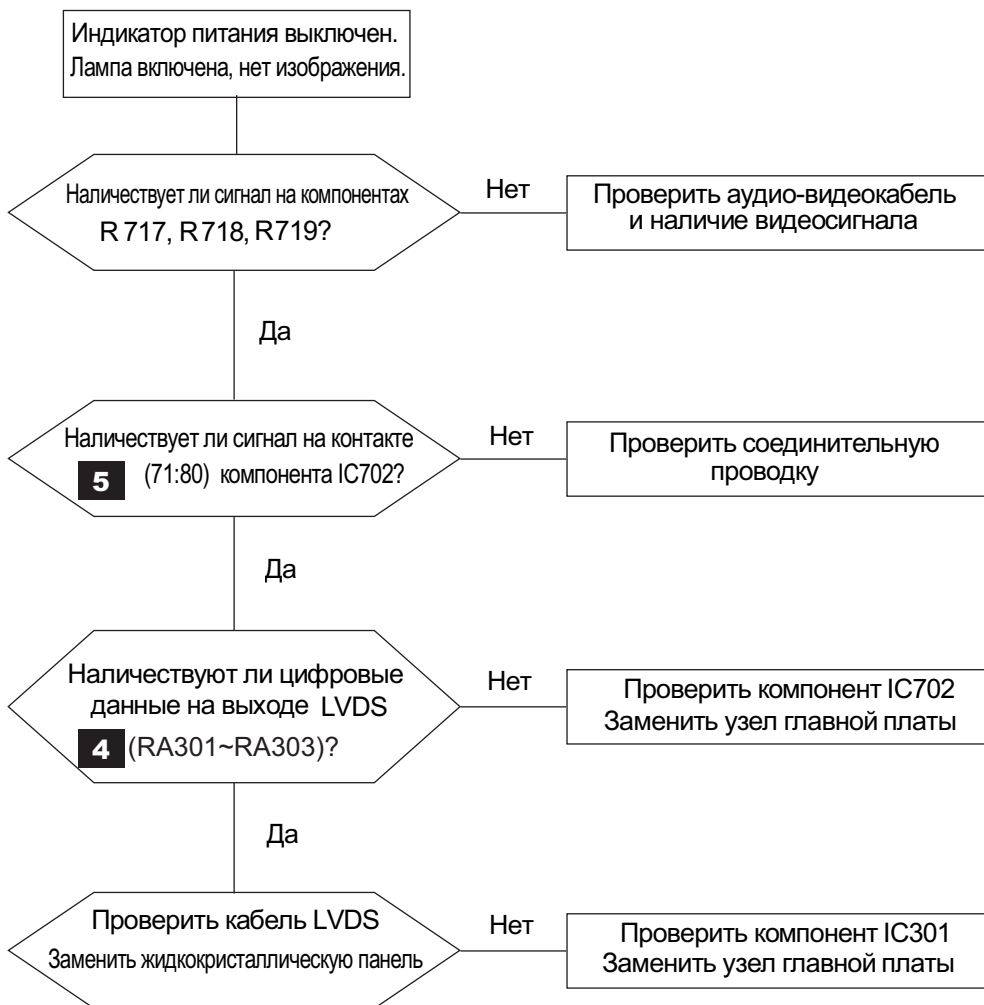
5



6

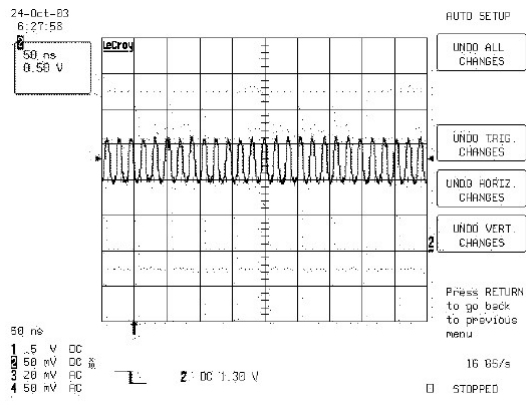


## 4-4 Отсутствие изображения (Video/S-VIDEO)

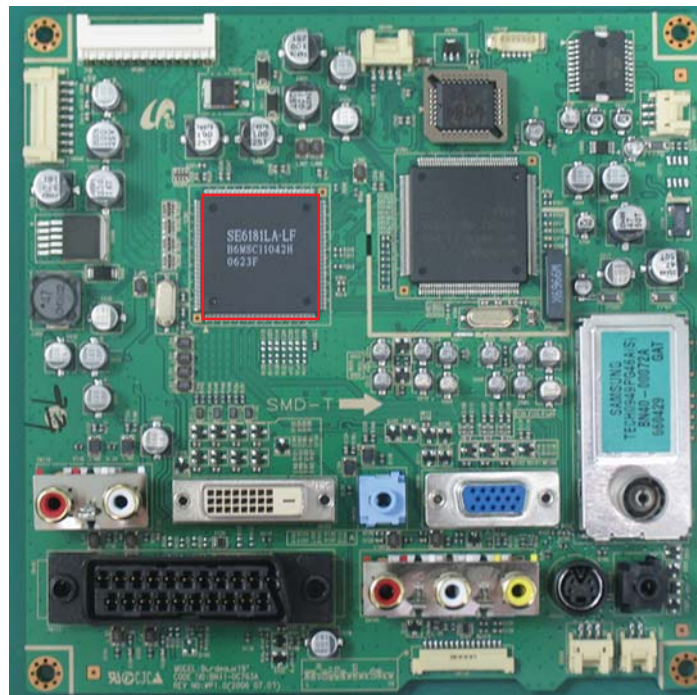
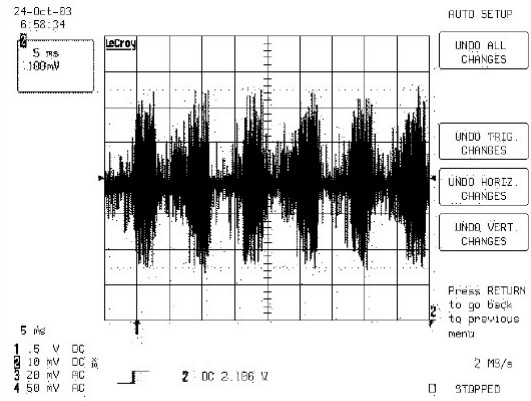


## ФОРМЫ СИГНАЛА

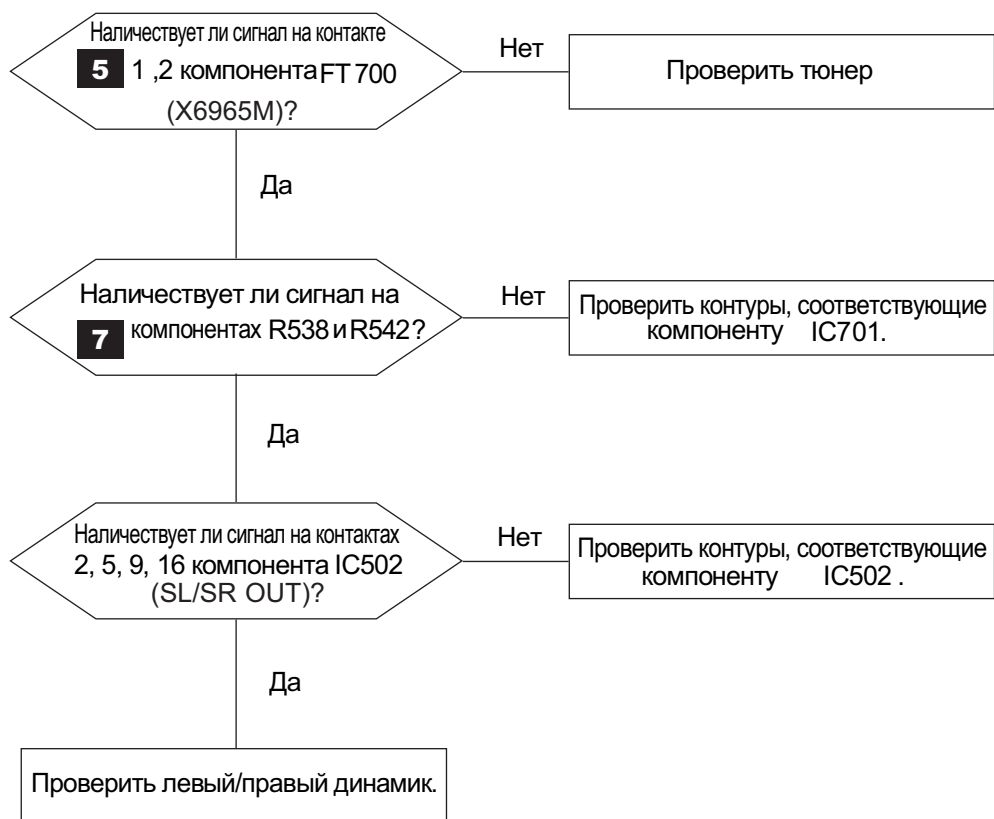
4



5

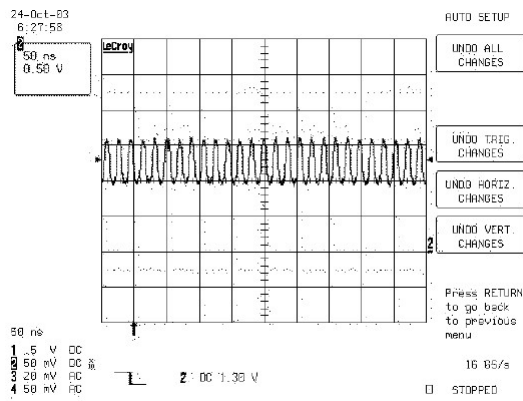


## 4-5 Отсутствие звука (телевизор)

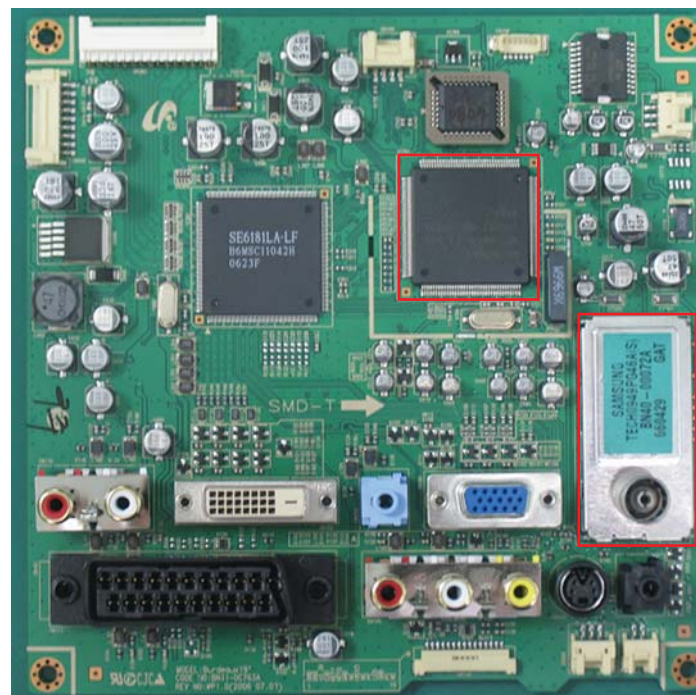
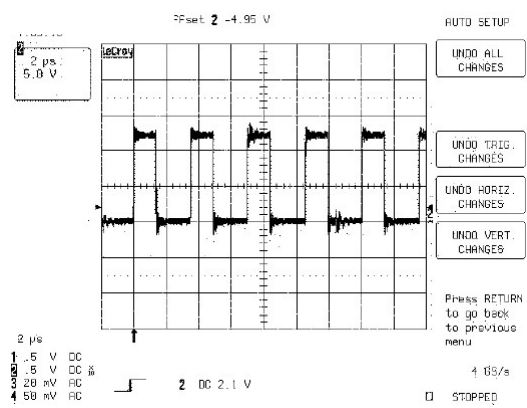


# **ФОРМЫ СИГНАЛА**

5



7

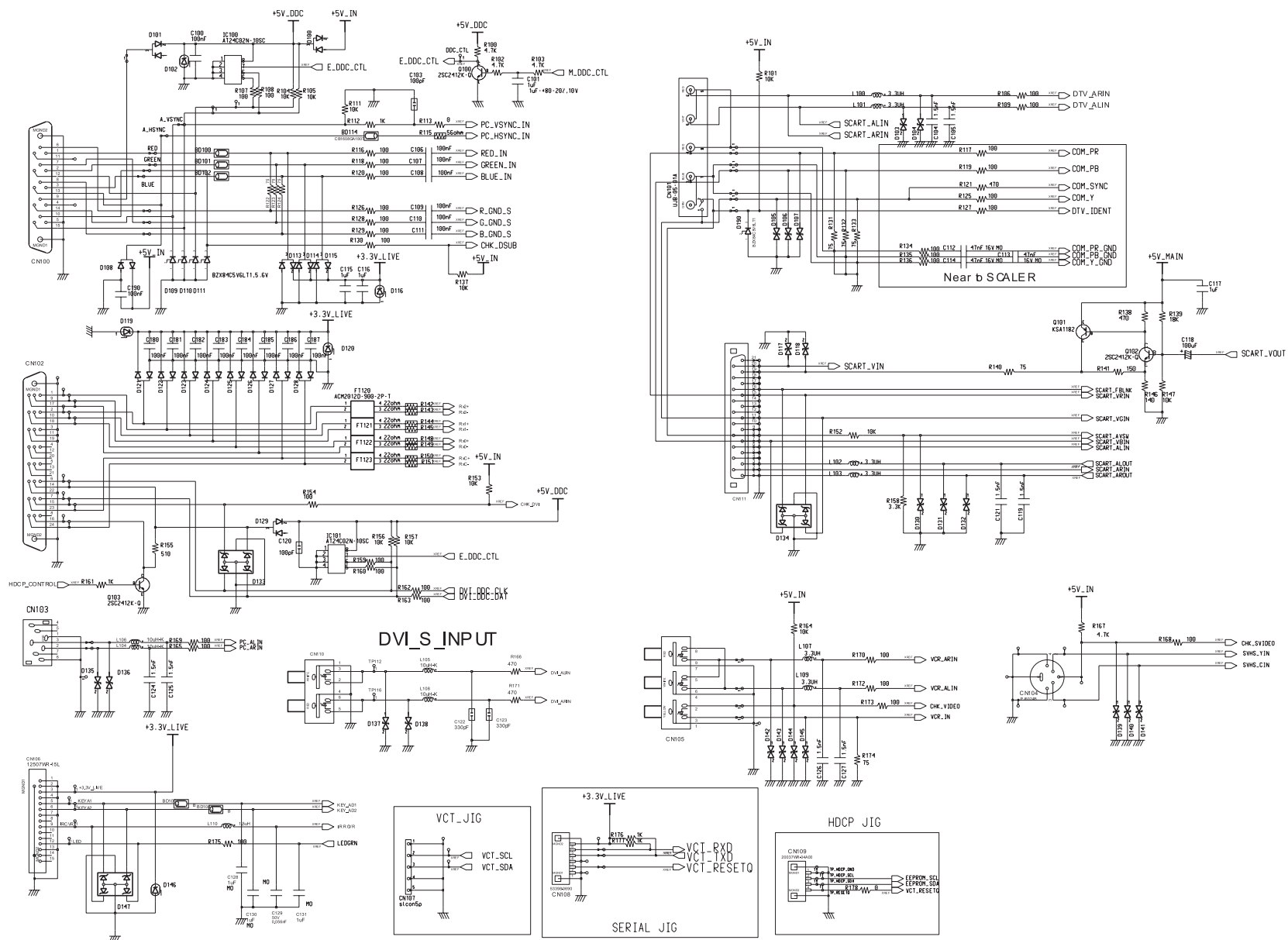


## **Заметки**

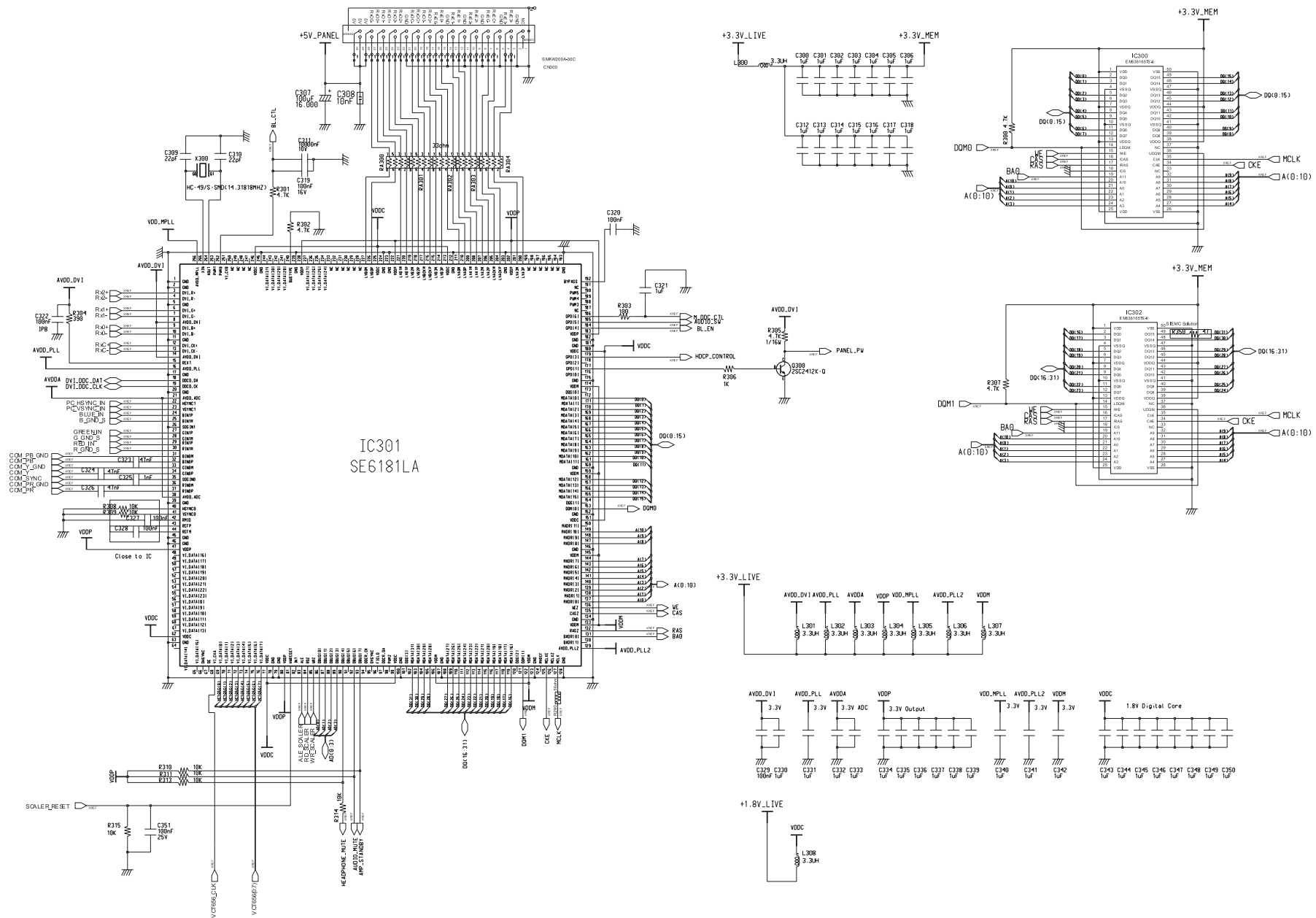
## 9 Schematic Diagrams

- This Document can not be used without Samsung's authorization.

### -Signal Input part



-Scaler & Memory part







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## 11 Disassembly and Reassembly

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This section of the service manual describes the disassembly and reassembly procedures for the TFT-LCD TV.

**⚠ WARNING:** This LCD TV contains electrostatically sensitive devices. Use caution when handling these components.

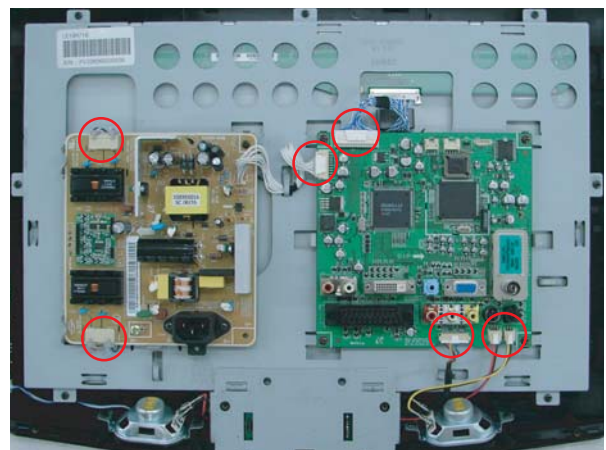
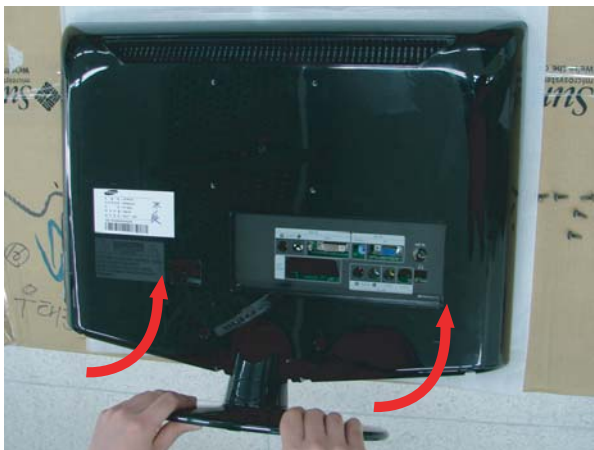
### 11-1 Disassembly

---

- ⚠ Cautions:**
1. Disconnect the monitor from the power source before disassembly.
  2. Follow these directions carefully; never use metal instruments to pry apart the cabinet.

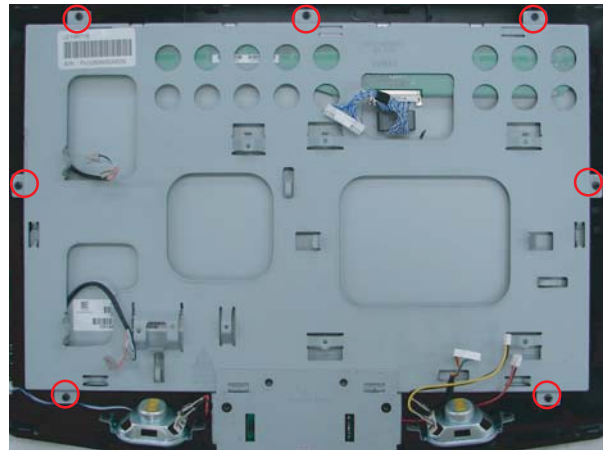
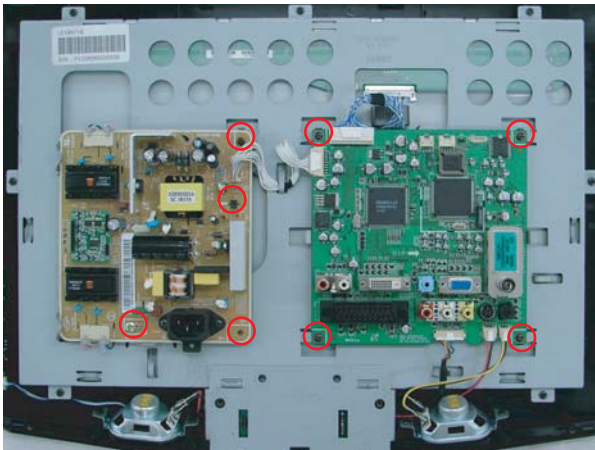


1. Place the face of the LCD TV downward on cushioned table.  
Remove screws from the rear- cover and the stand.

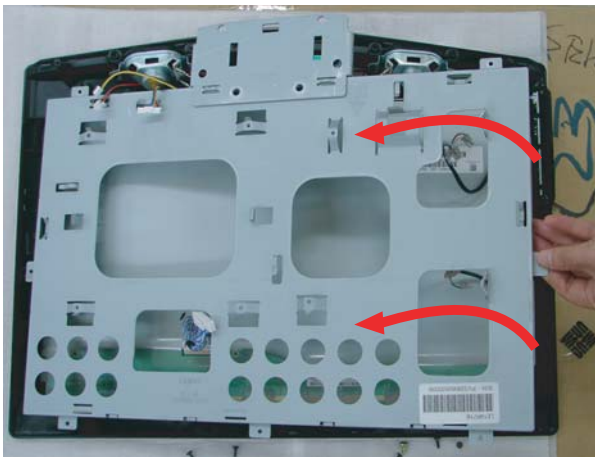


2. Lift up the rear-cover.  
Disconnect cables from the boards.

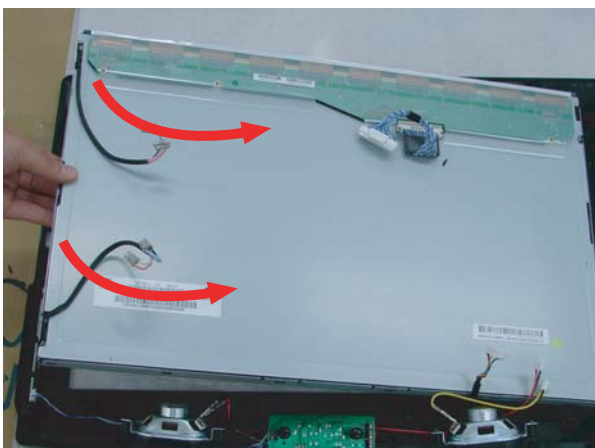
## 11 Disassembly and Reassembly



3. Remove screws from the boards and the shield cover.



4. Lift up the shield-cover.



5. Lift up the LCD panel.



## 11-2 Reassembly

---

-Reassembly procedures are in the reverse order of disassembly procedures.

## Memo

---

## 2 Product Specifications

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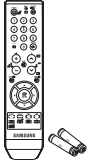
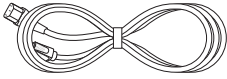
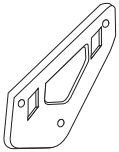
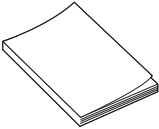
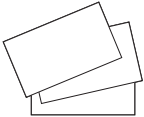
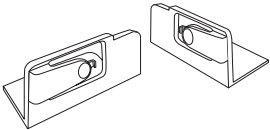

### 2-1 Fashion Feature

- PC Input : Analog RGB
- Video signal Input : Tuner, Scart, S-Video, CVBS , DVI
- Brightness : 300cd/m<sup>2</sup>
- Contrast Ratio : 800:1
- Response time : 5ms

## 2-2 LE19R71B / LE19R71W Specifications

Item	Description
LCD Panel	TFT-LCD panel, RGB vertical stripe, normaly white, 19-Inch viewable, 0.2835mm pixel pitch
Scanning Frequency	30 kHz ~ 81 kHz(Automatic)
Display Colours	16.2 M
Maximum Resolution	Horizontal:1440 Pixels Vertical : 900
Input Video Signal	Analog, 0.7 Vp-p $\pm$ 1% positive at 75 $\Omega$ , internally terminated, DVI
Input Sync Signal	Type: Seperate H/V automatic synchronization without external switch of sync type, Composite Level: TTL level
Maximum Pixel Clock rate	140 MHz
Active Display Horizontal/Vertical	408.24(H) x 255.15(V)
AC power voltage & Frequency	AC 100 ~ 240 Volts ( $\pm$ 10%), 60/ 50 Hz $\pm$ 3 Hz
Power Consumption	45 W (max)
Dimensions Set (W x H x D)	485.0 X 200.0 X 407.8 mm_With Stand 485.0 X 58.0 X 369.0 mm_Without Stand
Weight (Set/Package)	7.6/5.6 kg
TV / Video	Colour system : PAL  Sound system : M/N
Antena Input	75 $\Omega$ , Coaxial Cable
Environmental Considerations	Operating Temperature : 50°F ~ 104°F (10°C ~ 40°C) Operating Humidity : 10 % ~ 80 % Storage Temperature : -4°F ~ 113°F (-20°C ~ 45°C) Storage Humidity : 5 % ~ 95 %
<ul style="list-style-type: none"> <li>• Designs and specifications are subject to change without prior notice.</li> </ul>	

## 2-3 Option Specification

Item	Item Name	CODE.NO	Remark
	Remote Control & Batteries (AAA x 2)	BH68-00376L	
	Power Cord	BH68-70438A	
	Wall Mount kit	BN59-00480D	
	Owner's Instructions	BN39-00244B	
	Warranty Card / Registration Card/ Safety Guide Manual	BN39-00061B	
	Decoration Cover	3903-000042	
	Cleaning Cloth	BN59-00545B	

## Memo

## 6 Electrical Parts List

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

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

### 6-1 LE19R71BX Parts List

Level	Loc. No.	Code No.	Description & Specification	Q'ty	SA/SNA
0		LE19R71BX/BWT	LE19R71B,Q22A/19R70-GBE,19,LCD-TV,RUSSIA	0	
0.1	M0001	BN90-00984B	ASSY COVER FRONT;LE19R71BX/XEC,EO,CMO,-,	1	S.N.A
..2	T0175	BN96-03731A	ASSY SPEAKER P;16#Ø,Bordeaux, 19,Left,3W	1	S.A
..2	T0175	BN96-03732A	ASSY SPEAKER P;16#Ø,Bordeaux, 19,Right,3	1	S.A
..2	T0003	BN96-03960A	ASSY COVER P-FRONT;19R71,EO,ABS+PMMA,HB,	1	S.A
...3	M0081	6003-001003	SCREW-TAPTITE;BH,+,B,M4,L12,ZPC(BLK),SWR	2	S.N.A
...3	M0081	6003-001003	SCREW-TAPTITE;BH,+,B,M4,L12,ZPC(BLK),SWR	2	S.N.A
...3	T0060	BN61-01655A	SPRING ETC;STS-304 SUS,D8,L12,T0.5	1	S.N.A
...3	M0112	BN63-02721A	COVER-FRONT;19R7,ABS+PMMA,T3.0,HB,BK23,b	1	S.N.A
...3	T0059	BN64-00366A	INDICATOR LED;ROME-I,PC,CLEAR,ALL MODEL	1	S.N.A
...3	T0061	BN64-00453A	WINDOW-REMOCON;32R71,PC,V0,VIOLET,DIFFUS	1	S.N.A
...3	T0054	BN64-00477A	KNOB-DECORATION;SONOMA26,32,40,ABS,HB,GR	1	S.N.A
...3	M0145	BN96-03404A	ASSY BOARD P-FUNCTION&KNOB;Bordeaux,CT50	1	S.A
....4	T0022	BN64-00442A	KNOB CONTROL;26,32,40R71,PC,BLK,ACRYL CL	1	S.N.A
....4	M0145	BN96-03045A	ASSY BOARD P-FUNCTION;BORDEAUX,FUNCTION	1	S.A
...3	T0714	BN96-03956A	ASSY BOARD P-IR&POWER;Bordeaux19,SJ06-01	1	S.A
...3	CCM1	BN63-02183D	COVER-SHEET;Rhcm,PE Vinyl,T0.05,680mm,20	0.6	S.N.A
...3	T0023	BN64-00537A	KNOB POWER;19R7,PC,T2.0,VIOLET	1	S.N.A
...3	T0069	AA60-00171F	SPACER-FELT;50L2,FELT,350,T0.5,5	2	S.N.A
...3		BN63-01608A	FELT-VIBRATION;MH17FS,FELT,T0.5,5,250,BL	2	S.N.A
...3		BN96-04316A	ASSY COVER P-DECORATION;19R71,-,HIPS,HB,	1	S.N.A
....4	M0279	BN63-01474F	FELT;VENICE 20",FELT,T0.35,10,50	2	S.N.A
....4	T0056	BN63-02704A	COVER-DECORATION;19R7,HIPS,T2.0,-,-,HB,-	1	S.N.A
...3	T0069	BN60-00027C	SPACER-FELT;19R7,FELT,90,T0.35,10	1	S.N.A
0.1	M0002	BN90-00985B	ASSY COVER REAR;LE19R71BX/XEC,EO	1	S.N.A
..2	M0081	6003-001003	SCREW-TAPTITE;BH,+,B,M4,L12,ZPC(BLK),SWR	6	S.N.A
..2	M0013	BN96-03864B	ASSY COVER P-REAR;19R71,EO,ABS+PMMA,HB,B	1	S.A
...3	M0006	BN63-02703B	COVER-REAR;19R71,EO,ABS+PMMA,HB,BK23,H/G	1	S.N.A
...3	T0071	BN64-00517A	INLAY-TERMINAL;19R71,EO(BLACK),PS SHEET,	1	S.N.A
...3	T0064	BN65-00002A	CLAMPER CORE;BORDEAUX,PP,V0,BLK	1	S.N.A
...3	CCM1	BN63-02183D	COVER-SHEET;Rhcm,PE Vinyl,T0.05,680mm,20	0.6	S.N.A
...3	T0152	BN96-04317A	ASSY BRACKET P-VESA;19R71,SECC,T1.0	2	S.N.A
....4	T0069	BN60-00027C	SPACER-FELT;19R7,FELT,90,T0.35,10	1	S.N.A
....4	M0113	BN61-02621A	BRACKET-VESA;19R7,SECC,T1.0	1	S.N.A
...3	M0279	BN63-01075A	FELT;MU15UO,FELT,0.5,10,110	1	S.N.A
0.1	M0216	BN90-00986A	ASSY STAND;19R71	1	S.N.A
..2	M0003	BN96-03865A	ASSY STAND P;19R71,-,ABS+PMMA,HB,BK23,H/	1	S.A
...3	M0081	6003-001001	SCREW-TAPTITE;FH,+,B,M3,L8,ZPC(BLK),SWRC	4	S.N.A
...3	M0081	6003-001003	SCREW-TAPTITE;BH,+,B,M4,L12,ZPC(BLK),SWR	3	S.N.A
...3	M0081	6003-001003	SCREW-TAPTITE;BH,+,B,M4,L12,ZPC(BLK),SWR	2	S.N.A
...3	M0081	6003-001003	SCREW-TAPTITE;BH,+,B,M4,L12,ZPC(BLK),SWR	1	S.N.A
...3		BN61-02600A	BRACKET-STAND BOTTOM;19R7,SECC,T1.0	1	S.N.A
...3	T0004	BN63-02705A	COVER-STAND BASE;19R7,ABS+PMMA,T2.5,-,-,	1	S.N.A
...3		BN63-02706A	COVER-STAND FRONT;19R7,ABS+PMMA,T2.5,-,-	1	S.N.A
...3		BN63-02707A	COVER-STAND REAR;19R7,ABS+PMMA,T2.5,-,-	1	S.N.A
...3		BN64-00511A	KNOB-LOCKING;19R7,ABS+PMMA,T2.0,-,-,HB,B	1	S.N.A
...3	T0132	BN73-00077A	RUBBER FOOT;MATISSE,BUMPON, 13.5,T2.0,6	4	S.N.A
...3	T0054	BN96-03866A	ASSY HINGE P;19R71,SECC,T2.0	1	S.N.A
...3	CCM1	BN63-02183A	COVER-SHEET;ROME,PE Vinyl,T0.05,100mm,20	0.1	S.N.A
...3	CCM1	BN63-02183C	COVER-SHEET;Rhcm,PE Vinyl,T0.05,200mm,20	0.6	S.N.A
...3	CCM1	BN63-02183C	COVER-SHEET;Rhcm,PE Vinyl,T0.05,200mm,20	0.2	S.N.A
...3	CCM1	BN63-02183C	COVER-SHEET;Rhcm,PE Vinyl,T0.05,200mm,20	0.2	S.N.A
0.1		BN91-01094B	ASSY SHIELD-CTN;LE19R71BX/XEC,EO	1	S.N.A

## 6 Electrical Parts List

Level	Loc. No.	Code No.	Description & Specification	Q'ty	SA/SNA
..2	M0081	6003-000275	SCREW-TAPTITE;BH,+,-,B,M3,L10,ZPC(BLK),S	7	S.N.A
..2	M0081	6003-000275	SCREW-TAPTITE;BH,+,-,B,M3,L10,ZPC(BLK),S	1	S.N.A
..2	M0081	6003-000275	SCREW-TAPTITE;BH,+,-,B,M3,L10,ZPC(BLK),S	3	S.N.A
..2	M0081	6003-000275	SCREW-TAPTITE;BH,+,-,B,M3,L10,ZPC(BLK),S	4	S.N.A
..2	M0081	6003-001439	SCREW-TAPTITE;BH,+,-,S,M4,L8,ZPC(YEL)	1	S.N.A
..2	M0174	BN44-00147A	IP BOARD;SIP-W19A,Bordeaux,3.2 ~4.8mA,6.	1	S.A
..2	M0412	BN96-03959B	ASSY BRACKET P-PCB;BORDEAUX19,SECC	1	S.N.A
...3	T0514	BN61-02599A	BRACKET-SUPPORT;19R7,SECC,T2.0	1	S.N.A
...3	M0107	BN61-02604B	BRACKET-PCB;19R7(CMO),SECC,T0.8	1	S.N.A
...3	M0162	6502-001067	CABLE CLAMP;DAFC-1300,ID2.2,T5.2,NYLIN6/	1	S.N.A
...3	M0131	AA63-01187A	GASKET;BE40TS,Conductive Fabric,7 mm,13	1	S.N.A
..2	M2893	BN39-00682C	LEAD CONNECTOR-LVDS;BORDEAUX 19",UL1571#	1	S.A
..2	T0179	BN63-02901A	SHIELD-TUNER;19R7,SPTT,T0.3	1	S.N.A
0.1	M0017	BN91-01125B	ASSY CHASSIS-CTN;LE19R71BX/XEC	1	S.A
..2		BN94-01036C	ASSY PCB MAIN-CTN;LE19R71BX/XEC,CMO PAN	1	S.N.A
...3	SUB05	0202-001477	SOLDER-CREAM;LST309-M,-,D20-45\$,96.5Sn/	0.684	S.N.A
...3	T0245	0202-001492	SOLDER-WIRE FLUX;HSE-02 LFM48 SR-34 S,-,	0.003	S.N.A
...3	FT700	2904-001179	FILTER-SAW;36.125MHz,-,32.65-39.6MHz/0.5	1	S.A
...3	CN102	3701-001292	CONNECTOR-DVI;24P,3R,FEMALE,STRAIGHT,AU1	1	S.A
...3	CN100	3701-001294	CONNECTOR-DSUB;15P,3R,FEMALE,STRAIGHT,AU	1	S.A
...3	CN300	3711-005884	HEADER-BOARD TO BOARD;BOX,30P,2R,2mm,ANG	1	S.A
...3	CN111	3722-000498	JACK-SCART;21P,-,SN,BLK,NO	1	S.A
...3	JA330	3722-001061	JACK-PHONE;1P,3.6PI,AG,BLK,N	1	S.A
...3	JA332	3722-001734	JACK-VHS;4P,SN,BLK,STRAIGHT	1	S.A
...3	JA333	3722-001903	JACK-PIN;2P,-,AU,WHT/RED,-	1	S.A
...3	JA333	3722-002063	JACK-PIN;3P,AU,YEL/WHT/RED,STRAIGHT	1	S.A
...3	JA330	3722-002176	JACK-PHONE;7P/4C,-,SN,L-BLU,-	1	S.A
...3	T0562	6046-001013	STAND OFF;M3,L5,Ni PLT,SUM24L,#4-40	4	S.N.A
...3	M0131	AA63-01304A	GASKET;TORINO,Conductive Fabric,1mm,14mm	1	S.N.A
...3	CIS3	BN40-00072A	TUNER;TECH0949PG46A(S),TECH0949PG46A(S),	1	S.A
...3	M0131	BN63-00209A	GASKET;RS24NS,CONDUCTIVE FAB,4mm,10mm,30	1	S.N.A
...3	M0107	BN63-02176A	SHIELD-COVER;MGM,SPTT,0.5	1	S.N.A
...3	MAIN	BN97-01097B	ASSY MICOM-STN;T-BORD19PEU-1000,BE19SE,2	1	S.A
....4	IC902	1102-001129	IC-EPROM;M27W401,512KX8BIT,PLCC,32P,11.3	1	S.N.A
...3	T0174	BN97-01098C	ASSY SMD;LE19R71BX/XEC,BE19SE	1	S.N.A
....4	D100	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200mA,SO	1	S.A
....4	D101	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200mA,SO	1	S.A
....4	D108	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200mA,SO	1	S.A
....4	D113	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200mA,SO	1	S.A
....4	D114	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200mA,SO	1	S.A
....4	D115	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200mA,SO	1	S.A
....4	D121	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200mA,SO	1	S.A
....4	D122	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200mA,SO	1	S.A
....4	D123	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200mA,SO	1	S.A
....4	D124	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200mA,SO	1	S.A
....4	D125	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200mA,SO	1	S.A
....4	D126	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200mA,SO	1	S.A
....4	D127	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200mA,SO	1	S.A
....4	D128	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200mA,SO	1	S.A
....4	D129	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200mA,SO	1	S.A
....4	D200	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200mA,SO	1	S.A
....4	D201	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200mA,SO	1	S.A
....4	D202	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200mA,SO	1	S.A
....4	D400	0402-000553	DIODE-SCHOTTKY;SS24/B240,40V,2000mA,DO-2	1	S.A
....4	D410	0402-001614	DIODE-RECTIFIER;S1G,400V,1A,DO-214AC,TP	1	S.A
....4	D411	0402-001614	DIODE-RECTIFIER;S1G,400V,1A,DO-214AC,TP	1	S.A
....4	D109	0403-000258	DIODE-ZENER;BZX84C5V6,5.2-6V,225mW,SOT-2	1	S.A
....4	D110	0403-000258	DIODE-ZENER;BZX84C5V6,5.2-6V,225mW,SOT-2	1	S.A
....4	D111	0403-000258	DIODE-ZENER;BZX84C5V6,5.2-6V,225mW,SOT-2	1	S.A
....4	D112	0403-000258	DIODE-ZENER;BZX84C5V6,5.2-6V,225mW,SOT-2	1	S.A
....4	D102	0403-000579	DIODE-ZENER;BZX84C5V1,4.8-5.4V,200mW,SOT	1	S.A

Level	Loc. No.	Code No.	Description & Specification	Q'ty	SA/SNA
....4	D116	0403-000579	DIODE-ZENER;BZX84C5V1,4.8-5.4V,200mW,SOT	1	S.A
....4	D119	0403-000579	DIODE-ZENER;BZX84C5V1,4.8-5.4V,200mW,SOT	1	S.A
....4	D120	0403-000579	DIODE-ZENER;BZX84C5V1,4.8-5.4V,200mW,SOT	1	S.A
....4	D146	0403-000579	DIODE-ZENER;BZX84C5V1,4.8-5.4V,200mW,SOT	1	S.A
....4	D500	0403-001052	DIODE-ZENER;RD8.2MB,7.7-8.7V,200mW,SOT-2	1	S.A
....4	D501	0403-001052	DIODE-ZENER;RD8.2MB,7.7-8.7V,200mW,SOT-2	1	S.A
....4	D502	0403-001052	DIODE-ZENER;RD8.2MB,7.7-8.7V,200mW,SOT-2	1	S.A
....4	D503	0403-001052	DIODE-ZENER;RD8.2MB,7.7-8.7V,200mW,SOT-2	1	S.A
....4	ZD200	0403-001382	DIODE-ZENER;UDZ33B,32.15-33.79V,200mW,SO	1	S.A
....4	D133	0403-001435	DIODE-ZENER;QZX363C5V6,5.32-5.88V,200MW,	1	S.A
....4	D134	0403-001435	DIODE-ZENER;QZX363C5V6,5.32-5.88V,200MW,	1	S.A
....4	D147	0403-001435	DIODE-ZENER;QZX363C5V6,5.32-5.88V,200MW,	1	S.A
....4	D103	0406-001163	DIODE-TVS;CDS3C05GTA,6.4V/-/-,SMD	1	S.A
....4	D104	0406-001163	DIODE-TVS;CDS3C05GTA,6.4V/-/-,SMD	1	S.A
....4	D117	0406-001163	DIODE-TVS;CDS3C05GTA,6.4V/-/-,SMD	1	S.A
....4	D118	0406-001163	DIODE-TVS;CDS3C05GTA,6.4V/-/-,SMD	1	S.A
....4	D130	0406-001163	DIODE-TVS;CDS3C05GTA,6.4V/-/-,SMD	1	S.A
....4	D131	0406-001163	DIODE-TVS;CDS3C05GTA,6.4V/-/-,SMD	1	S.A
....4	D132	0406-001163	DIODE-TVS;CDS3C05GTA,6.4V/-/-,SMD	1	S.A
....4	D135	0406-001163	DIODE-TVS;CDS3C05GTA,6.4V/-/-,SMD	1	S.A
....4	D136	0406-001163	DIODE-TVS;CDS3C05GTA,6.4V/-/-,SMD	1	S.A
....4	D137	0406-001163	DIODE-TVS;CDS3C05GTA,6.4V/-/-,SMD	1	S.A
....4	D138	0406-001163	DIODE-TVS;CDS3C05GTA,6.4V/-/-,SMD	1	S.A
....4	D139	0406-001163	DIODE-TVS;CDS3C05GTA,6.4V/-/-,SMD	1	S.A
....4	D140	0406-001163	DIODE-TVS;CDS3C05GTA,6.4V/-/-,SMD	1	S.A
....4	D141	0406-001163	DIODE-TVS;CDS3C05GTA,6.4V/-/-,SMD	1	S.A
....4	D142	0406-001163	DIODE-TVS;CDS3C05GTA,6.4V/-/-,SMD	1	S.A
....4	D143	0406-001163	DIODE-TVS;CDS3C05GTA,6.4V/-/-,SMD	1	S.A
....4	D144	0406-001163	DIODE-TVS;CDS3C05GTA,6.4V/-/-,SMD	1	S.A
....4	D145	0406-001163	DIODE-TVS;CDS3C05GTA,6.4V/-/-,SMD	1	S.A
....4	Q101	0501-000280	TR-SMALL SIGNAL;KSA1182,PNP,150MW,SOT-23	1	S.A
....4	Q200	0501-000342	TR-SMALL SIGNAL;KSC1623-Y,NPN,200mW,SOT-	1	S.A
....4	Q100	0501-002080	TR-SMALL SIGNAL;2SC2412K,NPN,200mW,SC-59	1	S.A
....4	Q102	0501-002080	TR-SMALL SIGNAL;2SC2412K,NPN,200mW,SC-59	1	S.A
....4	Q103	0501-002080	TR-SMALL SIGNAL;2SC2412K,NPN,200mW,SC-59	1	S.A
....4	Q300	0501-002080	TR-SMALL SIGNAL;2SC2412K,NPN,200mW,SC-59	1	S.A
....4	Q400	0501-002080	TR-SMALL SIGNAL;2SC2412K,NPN,200mW,SC-59	1	S.A
....4	Q401	0501-002080	TR-SMALL SIGNAL;2SC2412K,NPN,200mW,SC-59	1	S.A
....4	Q402	0501-002080	TR-SMALL SIGNAL;2SC2412K,NPN,200mW,SC-59	1	S.A
....4	Q404	0501-002080	TR-SMALL SIGNAL;2SC2412K,NPN,200mW,SC-59	1	S.A
....4	Q500	0501-002080	TR-SMALL SIGNAL;2SC2412K,NPN,200mW,SC-59	1	S.A
....4	Q501	0501-002080	TR-SMALL SIGNAL;2SC2412K,NPN,200mW,SC-59	1	S.A
....4	Q502	0501-002080	TR-SMALL SIGNAL;2SC2412K,NPN,200mW,SC-59	1	S.A
....4	Q503	0501-002080	TR-SMALL SIGNAL;2SC2412K,NPN,200mW,SC-59	1	S.A
....4	Q504	0501-002080	TR-SMALL SIGNAL;2SC2412K,NPN,200mW,SC-59	1	S.A
....4	Q505	0501-002080	TR-SMALL SIGNAL;2SC2412K,NPN,200mW,SC-59	1	S.A
....4	Q506	0501-002080	TR-SMALL SIGNAL;2SC2412K,NPN,200mW,SC-59	1	S.A
....4	Q409	0505-000110	FET-SILICON;2N7002,N,60V,115mA,7.5ohm,0.	1	S.A
....4	Q409	0505-000110	FET-SILICON;2N7002,N,60V,115mA,7.5ohm,0.	1	S.A
....4	Q409	0505-001170	FET-SILICON;SI9933ADY-T1,P,-20V,3.4A,0.0	1	S.A
....4	Q409	0505-001170	FET-SILICON;SI9933ADY-T1,P,-20V,3.4A,0.0	1	S.A
....4	IC104	0801-002404	IC-CMOS LOGIC;74VHC4066,ANALOG SWITCH,SO	1	S.A
....4	IC104	0801-002709	IC-CMOS LOGIC;74HC373,D FLIP-FLOP,TSSOP,	1	S.A
....4	IC104	0801-002899	IC-CMOS LOGIC;CD4069UBC,INVERTER,SOIC,14	1	S.A
....4	IC104	0802-001025	IC-CMOS LOGIC;74LCX374,D FILP-FLOP,TSSOP	1	S.A
....4	IC112	1103-000129	IC-EEPROM;24C02,2Kbit,256x8Bit,SOP,8P,5x	1	S.A
....4	IC112	1103-000129	IC-EEPROM;24C02,2Kbit,256x8Bit,SOP,8P,5x	1	S.A
....4	IC112	1103-001279	IC-EEPROM;24C32,32Kbit,4Kx8Bit,SOP,8P,5x	1	S.A
....4	IC113	1105-001284	IC-DRAM;636165,-,16Mbit,1Mx16Bit,TSOP,50	1	S.A
....4	IC113	1105-001284	IC-DRAM;636165,-,16Mbit,1Mx16Bit,TSOP,50	1	S.A
....4	T0085	1201-001980	IC-AUDIO AMP;TDA7266D,SO,20P,16X11.1MM,-	1	S.A
....4	T0085	1201-002136	IC-AUDIO AMP;LM4810,MSOP,8P,3x3mm,DUAL,-	1	S.A

## 6 Electrical Parts List

Level	Loc. No.	Code No.	Description & Specification	Q'ty	SA/SNA
....4	IC704	1203-001212	IC-VOL. DETECTOR;7029,SOT-89,3P,-,PLASTI	1	SA
....4	T0087	1203-001488	IC-POSIFIXED REG.;7805,TO-252,3P,-,PLAS	1	SA
....4	IC703	1203-001559	IC-RESET;DS1834A,SOIC,8P,150MIL,PLASTIC,	1	SA
....4	T0087	1203-001816	IC-POSIFIXED REG.;78M08,TO-252,3P,-,PLA	1	SA
....4	IC406	1203-002796	IC-DC/DC CONVERTER;AP1501-33K5A,TO-263-5	1	SA
....4	T0087	1203-003696	IC-POSIFIXED REG.;NCP1117DT18T5G,DPAK,3	1	SA
....4	T0087	1203-003696	IC-POSIFIXED REG.;NCP1117DT18T5G,DPAK,3	1	SA
....4	T0087	1203-004169	IC-POSIFIXED REG.;G78D12A,TO-252,3P,6.7	1	SA
....4	IC109	1205-002738	IC-LCD CONTROLLER;SE6181LA-LF,LQFP,256P,	1	SA
....4	R112	2007-000043	R-CHIP;1Kohm,1%,1/10W,TP,1608	1	SA
....4	R161	2007-000043	R-CHIP;1Kohm,1%,1/10W,TP,1608	1	SA
....4	R176	2007-000043	R-CHIP;1Kohm,1%,1/10W,TP,1608	1	SA
....4	R177	2007-000043	R-CHIP;1Kohm,1%,1/10W,TP,1608	1	SA
....4	R706	2007-000043	R-CHIP;1Kohm,1%,1/10W,TP,1608	1	SA
....4	R113	2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	1	SA
....4	R178	2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	1	SA
....4	R201	2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	1	SA
....4	R202	2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	1	SA
....4	R212	2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	1	SA
....4	R215	2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	1	SA
....4	R142	2007-000071	R-CHIP;22ohm,5%,1/10W,TP,1608	1	SA
....4	R143	2007-000071	R-CHIP;22ohm,5%,1/10W,TP,1608	1	SA
....4	R144	2007-000071	R-CHIP;22ohm,5%,1/10W,TP,1608	1	SA
....4	R145	2007-000071	R-CHIP;22ohm,5%,1/10W,TP,1608	1	SA
....4	R148	2007-000071	R-CHIP;22ohm,5%,1/10W,TP,1608	1	SA
....4	R149	2007-000071	R-CHIP;22ohm,5%,1/10W,TP,1608	1	SA
....4	R150	2007-000071	R-CHIP;22ohm,5%,1/10W,TP,1608	1	SA
....4	R151	2007-000071	R-CHIP;22ohm,5%,1/10W,TP,1608	1	SA
....4	R350	2007-000072	R-CHIP;47ohm,5%,1/10W,TP,1608	1	SA
....4	R504	2007-000072	R-CHIP;47ohm,5%,1/10W,TP,1608	1	SA
....4	R505	2007-000072	R-CHIP;47ohm,5%,1/10W,TP,1608	1	SA
....4	R106	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	SA
....4	R107	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	SA
....4	R108	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	SA
....4	R109	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	SA
....4	R116	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	SA
....4	R118	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	SA
....4	R120	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	SA
....4	R126	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	SA
....4	R128	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	SA
....4	R129	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	SA
....4	R130	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	SA
....4	R154	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	SA
....4	R159	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	SA
....4	R160	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	SA
....4	R162	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	SA
....4	R163	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	SA
....4	R165	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	SA
....4	R168	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	SA
....4	R169	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	SA
....4	R170	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	SA
....4	R172	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	SA
....4	R173	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	SA
....4	R175	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	SA
....4	R205	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	SA
....4	R208	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	SA
....4	R303	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	SA
....4	R507	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	SA
....4	R510	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	SA
....4	R511	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	SA
....4	R514	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	SA
....4	R515	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	SA

Level	Loc. No.	Code No.	Description & Specification	Q'ty	SA/SNA
....4	R519	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R520	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R521	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R522	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R524	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R525	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R527	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R528	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R532	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R533	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R534	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R535	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R704	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R705	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R709	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R710	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R711	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R712	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R714	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R717	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R718	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R719	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R720	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R734	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R742	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R508	2007-000075	R-CHIP;220ohm,5%,1/10W,TP,1608	1	S.A
....4	R509	2007-000075	R-CHIP;220ohm,5%,1/10W,TP,1608	1	S.A
....4	R138	2007-000077	R-CHIP;470ohm,5%,1/10W,TP,1608	1	S.A
....4	R166	2007-000077	R-CHIP;470ohm,5%,1/10W,TP,1608	1	S.A
....4	R171	2007-000077	R-CHIP;470ohm,5%,1/10W,TP,1608	1	S.A
....4	R713	2007-000077	R-CHIP;470ohm,5%,1/10W,TP,1608	1	S.A
....4	R306	2007-000078	R-CHIP;1Kohm,5%,1/10W,TP,1608	1	S.A
....4	R530	2007-000078	R-CHIP;1Kohm,5%,1/10W,TP,1608	1	S.A
....4	R538	2007-000078	R-CHIP;1Kohm,5%,1/10W,TP,1608	1	S.A
....4	R542	2007-000078	R-CHIP;1Kohm,5%,1/10W,TP,1608	1	S.A
....4	R703	2007-000078	R-CHIP;1Kohm,5%,1/10W,TP,1608	1	S.A
....4	R732	2007-000078	R-CHIP;1Kohm,5%,1/10W,TP,1608	1	S.A
....4	R733	2007-000078	R-CHIP;1Kohm,5%,1/10W,TP,1608	1	S.A
....4	R158	2007-000082	R-CHIP;3.3Kohm,5%,1/10W,TP,1608	1	S.A
....4	R100	2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	S.A
....4	R102	2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	S.A
....4	R103	2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	S.A
....4	R207	2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	S.A
....4	R300	2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	S.A
....4	R301	2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	S.A
....4	R302	2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	S.A
....4	R305	2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	S.A
....4	R307	2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	S.A
....4	R420	2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	S.A
....4	R506	2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	S.A
....4	R526	2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	S.A
....4	R529	2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	S.A
....4	R536	2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	S.A
....4	R537	2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	S.A
....4	R540	2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	S.A
....4	R715	2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	S.A
....4	R716	2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	S.A
....4	R700	2007-000087	R-CHIP;6.8Kohm,5%,1/10W,TP,1608	1	S.A
....4	R701	2007-000087	R-CHIP;6.8Kohm,5%,1/10W,TP,1608	1	S.A
....4	R702	2007-000087	R-CHIP;6.8Kohm,5%,1/10W,TP,1608	1	S.A
....4	R104	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R105	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A

## 6 Electrical Parts List

Level	Loc. No.	Code No.	Description & Specification	Q'ty	SA/SNA
....4	R111	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R137	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R147	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R152	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R153	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R156	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R157	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R164	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R209	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R308	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R309	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R310	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R311	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R313	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R314	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R315	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R405	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R406	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R407	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R418	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R421	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R422	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R423	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R502	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R503	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R518	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R523	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R539	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R541	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R543	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R721	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R722	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R723	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R500	2007-000097	R-CHIP;47Kohm,5%,1/10W,TP,1608	1	S.A
....4	R501	2007-000097	R-CHIP;47Kohm,5%,1/10W,TP,1608	1	S.A
....4	R531	2007-000097	R-CHIP;47Kohm,5%,1/10W,TP,1608	1	S.A
....4	R512	2007-000098	R-CHIP;56Kohm,5%,1/10W,TP,1608	1	S.A
....4	R513	2007-000098	R-CHIP;56Kohm,5%,1/10W,TP,1608	1	S.A
....4	R210	2007-000102	R-CHIP;100Kohm,5%,1/10W,TP,1608	1	S.A
....4	R216	2007-000102	R-CHIP;100Kohm,5%,1/10W,TP,1608	1	S.A
....4	R402	2007-000102	R-CHIP;100Kohm,5%,1/10W,TP,1608	1	S.A
....4	R403	2007-000102	R-CHIP;100Kohm,5%,1/10W,TP,1608	1	S.A
....4	R404	2007-000102	R-CHIP;100Kohm,5%,1/10W,TP,1608	1	S.A
....4	R414	2007-000102	R-CHIP;100Kohm,5%,1/10W,TP,1608	1	S.A
....4	R416	2007-000102	R-CHIP;100Kohm,5%,1/10W,TP,1608	1	S.A
....4	R304	2007-000118	R-CHIP;390ohm,5%,1/10W,TP,1608	1	S.A
....4	R203	2007-000234	R-CHIP;1.3Kohm,5%,1/10W,TP,1608	1	S.A
....4	R141	2007-000402	R-CHIP;150ohm,5%,1/10W,TP,1608	1	S.A
....4	R204	2007-000402	R-CHIP;150ohm,5%,1/10W,TP,1608	1	S.A
....4	R139	2007-000458	R-CHIP;18Kohm,5%,1/10W,TP,1608	1	S.A
....4	R211	2007-000659	R-CHIP;27ohm,5%,1/10W,TP,1608	1	S.A
....4	R167	2007-000869	R-CHIP;4.7Kohm,1%,1/10W,TP,1608	1	S.A
....4	R516	2007-000869	R-CHIP;4.7Kohm,1%,1/10W,TP,1608	1	S.A
....4	R517	2007-000869	R-CHIP;4.7Kohm,1%,1/10W,TP,1608	1	S.A
....4	R707	2007-000869	R-CHIP;4.7Kohm,1%,1/10W,TP,1608	1	S.A
....4	R708	2007-000869	R-CHIP;4.7Kohm,1%,1/10W,TP,1608	1	S.A
....4	R790	2007-000869	R-CHIP;4.7Kohm,1%,1/10W,TP,1608	1	S.A
....4	R791	2007-000869	R-CHIP;4.7Kohm,1%,1/10W,TP,1608	1	S.A
....4	R217	2007-000882	R-CHIP;4.7ohm,5%,1/10W,TP,1608	1	S.A
....4	R155	2007-001002	R-CHIP;510ohm,5%,1/10W,TP,1608	1	S.A
....4	R214	2007-001002	R-CHIP;510ohm,5%,1/10W,TP,1608	1	S.A
....4	R115	2007-001044	R-CHIP;56ohm,5%,1/10W,TP,1608	1	S.A

Level	Loc. No.	Code No.	Description & Specification	Q'ty	SA/SNA
....4	R290	2007-001044	R-CHIP;56ohm,5%,1/10W,TP,1608	1	S.A
....4	R213	2007-001134	R-CHIP;68ohm,5%,1/10W,TP,1608	1	S.A
....4	R122	2007-001164	R-CHIP;75ohm,1%,1/10W,TP,1608	1	S.A
....4	R123	2007-001164	R-CHIP;75ohm,1%,1/10W,TP,1608	1	S.A
....4	R124	2007-001164	R-CHIP;75ohm,1%,1/10W,TP,1608	1	S.A
....4	R140	2007-001167	R-CHIP;75ohm,5%,1/10W,TP,1608	1	S.A
....4	R174	2007-001167	R-CHIP;75ohm,5%,1/10W,TP,1608	1	S.A
....4	R735	2007-001167	R-CHIP;75ohm,5%,1/10W,TP,1608	1	S.A
....4	R736	2007-001167	R-CHIP;75ohm,5%,1/10W,TP,1608	1	S.A
....4	R737	2007-001167	R-CHIP;75ohm,5%,1/10W,TP,1608	1	S.A
....4	R738	2007-001167	R-CHIP;75ohm,5%,1/10W,TP,1608	1	S.A
....4	R739	2007-001167	R-CHIP;75ohm,5%,1/10W,TP,1608	1	S.A
....4	R740	2007-001167	R-CHIP;75ohm,5%,1/10W,TP,1608	1	S.A
....4	R741	2007-001167	R-CHIP;75ohm,5%,1/10W,TP,1608	1	S.A
....4	R200	2007-001179	R-CHIP;8.2Kohm,5%,1/10W,TP,1608	1	S.A
....4	R146	2007-007852	R-CHIP;140ohm,1%,1/10W,TP,1608	1	S.A
....4	RA300	2011-000881	R-NET;33ohm,5%,1/16W,L,CHIP,8P,TP,3.2x1.	1	S.A
....4	RA301	2011-000881	R-NET;33ohm,5%,1/16W,L,CHIP,8P,TP,3.2x1.	1	S.A
....4	RA302	2011-000881	R-NET;33ohm,5%,1/16W,L,CHIP,8P,TP,3.2x1.	1	S.A
....4	RA303	2011-000881	R-NET;33ohm,5%,1/16W,L,CHIP,8P,TP,3.2x1.	1	S.A
....4	RA304	2011-000881	R-NET;33ohm,5%,1/16W,L,CHIP,8P,TP,3.2x1.	1	S.A
....4	C104	2203-000140	C-CER,CHIP;1.5nF,10%,50V,X7R,1608	1	S.A
....4	C105	2203-000140	C-CER,CHIP;1.5nF,10%,50V,X7R,1608	1	S.A
....4	C119	2203-000140	C-CER,CHIP;1.5nF,10%,50V,X7R,1608	1	S.A
....4	C121	2203-000140	C-CER,CHIP;1.5nF,10%,50V,X7R,1608	1	S.A
....4	C124	2203-000140	C-CER,CHIP;1.5nF,10%,50V,X7R,1608	1	S.A
....4	C125	2203-000140	C-CER,CHIP;1.5nF,10%,50V,X7R,1608	1	S.A
....4	C126	2203-000140	C-CER,CHIP;1.5nF,10%,50V,X7R,1608	1	S.A
....4	C127	2203-000140	C-CER,CHIP;1.5nF,10%,50V,X7R,1608	1	S.A
....4	C519	2203-000140	C-CER,CHIP;1.5nF,10%,50V,X7R,1608	1	S.A
....4	C520	2203-000140	C-CER,CHIP;1.5nF,10%,50V,X7R,1608	1	S.A
....4	C522	2203-000140	C-CER,CHIP;1.5nF,10%,50V,X7R,1608	1	S.A
....4	C523	2203-000140	C-CER,CHIP;1.5nF,10%,50V,X7R,1608	1	S.A
....4	C531	2203-000140	C-CER,CHIP;1.5nF,10%,50V,X7R,1608	1	S.A
....4	C532	2203-000140	C-CER,CHIP;1.5nF,10%,50V,X7R,1608	1	S.A
....4	C705	2203-000140	C-CER,CHIP;1.5nF,10%,50V,X7R,1608	1	S.A
....4	C711	2203-000140	C-CER,CHIP;1.5nF,10%,50V,X7R,1608	1	S.A
....4	C719	2203-000140	C-CER,CHIP;1.5nF,10%,50V,X7R,1608	1	S.A
....4	C727	2203-000140	C-CER,CHIP;1.5nF,10%,50V,X7R,1608	1	S.A
....4	C734	2203-000140	C-CER,CHIP;1.5nF,10%,50V,X7R,1608	1	S.A
....4	C737	2203-000140	C-CER,CHIP;1.5nF,10%,50V,X7R,1608	1	S.A
....4	C740	2203-000140	C-CER,CHIP;1.5nF,10%,50V,X7R,1608	1	S.A
....4	C745	2203-000140	C-CER,CHIP;1.5nF,10%,50V,X7R,1608	1	S.A
....4	C106	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C107	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C108	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C109	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C110	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C111	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C180	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C181	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C182	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C183	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C184	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C185	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C186	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C187	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C190	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C202	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C203	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C204	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C205	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A

## 6 Electrical Parts List

Level	Loc. No.	Code No.	Description & Specification	Q'ty	SA/SNA
....4	C210	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C211	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C212	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C216	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C320	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C329	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C351	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C403	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C406	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C407	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C413	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C414	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C426	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C501	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C507	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C508	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C512	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C714	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C720	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C721	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C725	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C742	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C747	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C748	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C749	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C751	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C752	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C753	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C754	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C755	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C757	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C103	2203-000236	C-CER,CHIP;0.1nF,5%,50V,C0G,1608	1	S.A
....4	C120	2203-000236	C-CER,CHIP;0.1nF,5%,50V,C0G,1608	1	S.A
....4	C220	2203-000236	C-CER,CHIP;0.1nF,5%,50V,C0G,1608	1	S.A
....4	C221	2203-000236	C-CER,CHIP;0.1nF,5%,50V,C0G,1608	1	S.A
....4	C200	2203-000257	C-CER,CHIP;10nF,10%,50V,X7R,1608	1	S.A
....4	C206	2203-000257	C-CER,CHIP;10nF,10%,50V,X7R,1608	1	S.A
....4	C213	2203-000257	C-CER,CHIP;10nF,10%,50V,X7R,1608	1	S.A
....4	C222	2203-000257	C-CER,CHIP;10nF,10%,50V,X7R,1608	1	S.A
....4	C308	2203-000257	C-CER,CHIP;10nF,10%,50V,X7R,1608	1	S.A
....4	C427	2203-000257	C-CER,CHIP;10nF,10%,50V,X7R,1608	1	S.A
....4	C209	2203-000440	C-CER,CHIP;1nF,10%,50V,X7R,1608	1	S.A
....4	C215	2203-000440	C-CER,CHIP;1nF,10%,50V,X7R,1608	1	S.A
....4	C706	2203-000440	C-CER,CHIP;1nF,10%,50V,X7R,1608	1	S.A
....4	C713	2203-000440	C-CER,CHIP;1nF,10%,50V,X7R,1608	1	S.A
....4	C715	2203-000440	C-CER,CHIP;1nF,10%,50V,X7R,1608	1	S.A
....4	C717	2203-000440	C-CER,CHIP;1nF,10%,50V,X7R,1608	1	S.A
....4	C746	2203-000440	C-CER,CHIP;1nF,10%,50V,X7R,1608	1	S.A
....4	C309	2203-000626	C-CER,CHIP;0.022nF,5%,50V,C0G,1608	1	S.A
....4	C310	2203-000626	C-CER,CHIP;0.022nF,5%,50V,C0G,1608	1	S.A
....4	C728	2203-000626	C-CER,CHIP;0.022nF,5%,50V,C0G,1608	1	S.A
....4	C731	2203-000626	C-CER,CHIP;0.022nF,5%,50V,C0G,1608	1	S.A
....4	C122	2203-000783	C-CER,CHIP;0.33nF,5%,50V,C0G,1608	1	S.A
....4	C123	2203-000783	C-CER,CHIP;0.33nF,5%,50V,C0G,1608	1	S.A
....4	C533	2203-000783	C-CER,CHIP;0.33nF,5%,50V,C0G,1608	1	S.A
....4	C534	2203-000783	C-CER,CHIP;0.33nF,5%,50V,C0G,1608	1	S.A
....4	C129	2203-001071	C-CER,CHIP;0.056nF,5%,50V,C0G,1608	1	S.A
....4	C704	2203-001656	C-CER,CHIP;0.47nF,5%,50V,NP0,1608	1	S.A
....4	C710	2203-001656	C-CER,CHIP;0.47nF,5%,50V,NP0,1608	1	S.A
....4	C712	2203-001656	C-CER,CHIP;0.47nF,5%,50V,NP0,1608	1	S.A
....4	C718	2203-001656	C-CER,CHIP;0.47nF,5%,50V,NP0,1608	1	S.A
....4	C726	2203-001656	C-CER,CHIP;0.47nF,5%,50V,NP0,1608	1	S.A

Level	Loc. No.	Code No.	Description & Specification	Q'ty	SA/SNA
....4	C733	2203-001656	C-CER,CHIP;0.47nF,5%,50V,NP0,1608	1	S.A
....4	C736	2203-001656	C-CER,CHIP;0.47nF,5%,50V,NP0,1608	1	S.A
....4	C739	2203-001656	C-CER,CHIP;0.47nF,5%,50V,NP0,1608	1	S.A
....4	C744	2203-001656	C-CER,CHIP;0.47nF,5%,50V,NP0,1608	1	S.A
....4	C402	2203-002793	C-CER,CHIP;1000nF,+80-20%,25V,Y5V,2012	1	S.A
....4	C511	2203-002793	C-CER,CHIP;1000nF,+80-20%,25V,Y5V,2012	1	S.A
....4	C100	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C319	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C322	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C327	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C328	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C400	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C401	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C404	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C431	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C465	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C702	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C730	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C101	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	S.A
....4	C115	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	S.A
....4	C116	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	S.A
....4	C117	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	S.A
....4	C128	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	S.A
....4	C130	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	S.A
....4	C131	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	S.A
....4	C214	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	S.A
....4	C219	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	S.A
....4	C300	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	S.A
....4	C301	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	S.A
....4	C302	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	S.A
....4	C303	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	S.A
....4	C304	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	S.A
....4	C305	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	S.A
....4	C306	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	S.A
....4	C312	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	S.A
....4	C313	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	S.A
....4	C314	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	S.A
....4	C315	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	S.A
....4	C316	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	S.A
....4	C317	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	S.A
....4	C318	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	S.A
....4	C321	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	S.A
....4	C330	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	S.A
....4	C331	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	S.A
....4	C332	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	S.A
....4	C333	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	S.A
....4	C334	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	S.A
....4	C335	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	S.A
....4	C336	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	S.A
....4	C337	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	S.A
....4	C338	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	S.A
....4	C339	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	S.A
....4	C340	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	S.A
....4	C341	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	S.A
....4	C342	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	S.A
....4	C343	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	S.A
....4	C344	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	S.A
....4	C345	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	S.A
....4	C346	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	S.A
....4	C347	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	S.A
....4	C348	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	S.A
....4	C349	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	S.A

## 6 Electrical Parts List

Level	Loc. No.	Code No.	Description & Specification	Q'ty	SA/SNA
....4	C350	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	SA
....4	C411	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	SA
....4	C424	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	SA
....4	C425	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	SA
....4	C502	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	SA
....4	C503	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	SA
....4	C529	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	SA
....4	C700	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	SA
....4	C722	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	SA
....4	C743	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	SA
....4	C750	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	SA
....4	C218	2203-005249	C-CER,CHIP;100nF,10%,50V,X7R,1608	1	SA
....4	C311	2203-005437	C-CER,CHIP;10000nF,+80-20%,10V,Y5V,3216	1	SA
....4	C428	2203-005437	C-CER,CHIP;10000nF,+80-20%,10V,Y5V,3216	1	SA
....4	C436	2203-005437	C-CER,CHIP;10000nF,+80-20%,10V,Y5V,3216	1	SA
....4	C500	2203-005437	C-CER,CHIP;10000nF,+80-20%,10V,Y5V,3216	1	SA
....4	C701	2203-005437	C-CER,CHIP;10000nF,+80-20%,10V,Y5V,3216	1	SA
....4	C703	2203-005437	C-CER,CHIP;10000nF,+80-20%,10V,Y5V,3216	1	SA
....4	C707	2203-005437	C-CER,CHIP;10000nF,+80-20%,10V,Y5V,3216	1	SA
....4	C708	2203-005437	C-CER,CHIP;10000nF,+80-20%,10V,Y5V,3216	1	SA
....4	C716	2203-005437	C-CER,CHIP;10000nF,+80-20%,10V,Y5V,3216	1	SA
....4	C723	2203-005437	C-CER,CHIP;10000nF,+80-20%,10V,Y5V,3216	1	SA
....4	C729	2203-005437	C-CER,CHIP;10000nF,+80-20%,10V,Y5V,3216	1	SA
....4	C732	2203-005437	C-CER,CHIP;10000nF,+80-20%,10V,Y5V,3216	1	SA
....4	C735	2203-005437	C-CER,CHIP;10000nF,+80-20%,10V,Y5V,3216	1	SA
....4	C738	2203-005437	C-CER,CHIP;10000nF,+80-20%,10V,Y5V,3216	1	SA
....4	C741	2203-005437	C-CER,CHIP;10000nF,+80-20%,10V,Y5V,3216	1	SA
....4	C756	2203-005437	C-CER,CHIP;10000nF,+80-20%,10V,Y5V,3216	1	SA
....4	C412	2402-001044	C-AL,SMD;100UF,20%,25V,GP,TP,8.3X8.3X6.3	1	SA
....4	C207	2402-001080	C-AL,SMD;47uF,20%,50V,WT,TP,8x10mm	1	SA
....4	C208	2402-001080	C-AL,SMD;47uF,20%,50V,WT,TP,8x10mm	1	SA
....4	C408	2402-001081	C-AL,SMD;100uF,20%,25V,WT,TP,8.3x8.3x10	1	SA
....4	C451	2402-001081	C-AL,SMD;100uF,20%,25V,WT,TP,8.3x8.3x10	1	SA
....4	C490	2402-001081	C-AL,SMD;100uF,20%,25V,WT,TP,8.3x8.3x10	1	SA
....4	C491	2402-001081	C-AL,SMD;100uF,20%,25V,WT,TP,8.3x8.3x10	1	SA
....4	C307	2402-001086	C-AL,SMD;100UF,20%,16V,WT,TP,6.6X6.6X5.3	1	SA
....4	C409	2402-001086	C-AL,SMD;100UF,20%,16V,WT,TP,6.6X6.6X5.3	1	SA
....4	C433	2402-001086	C-AL,SMD;100UF,20%,16V,WT,TP,6.6X6.6X5.3	1	SA
....4	C437	2402-001086	C-AL,SMD;100UF,20%,16V,WT,TP,6.6X6.6X5.3	1	SA
....4	C118	2402-001128	C-AL,SMD;100uF,20%,16V,-,TP,6.3X5.7mm	1	SA
....4	C217	2402-001128	C-AL,SMD;100uF,20%,16V,-,TP,6.3X5.7mm	1	SA
....4	C410	2402-001128	C-AL,SMD;100uF,20%,16V,-,TP,6.3X5.7mm	1	SA
....4	C430	2402-001128	C-AL,SMD;100uF,20%,16V,-,TP,6.3X5.7mm	1	SA
....4	C432	2402-001128	C-AL,SMD;100uF,20%,16V,-,TP,6.3X5.7mm	1	SA
....4	C480	2402-001128	C-AL,SMD;100uF,20%,16V,-,TP,6.3X5.7mm	1	SA
....4	C504	2402-001128	C-AL,SMD;100uF,20%,16V,-,TP,6.3X5.7mm	1	SA
....4	C505	2402-001128	C-AL,SMD;100uF,20%,16V,-,TP,6.3X5.7mm	1	SA
....4	C506	2402-001158	C-AL,SMD;1UF,20%,50V,WT,TP,4X5.2MM	1	SA
....4	C517	2402-001159	C-AL,SMD;3.3UF,20%,50V,WT,TP,4X5.2MM	1	SA
....4	C518	2402-001159	C-AL,SMD;3.3UF,20%,50V,WT,TP,4X5.2MM	1	SA
....4	C405	2402-001160	C-AL,SMD;330UF,20%,16V,WT,TP,1008	1	SA
....4	C429	2402-001160	C-AL,SMD;330UF,20%,16V,WT,TP,1008	1	SA
....4	C513	2402-001165	C-AL,SMD;4.7UF,20%,35V,WT,TP,4X5.8MM	1	SA
....4	C514	2402-001165	C-AL,SMD;4.7UF,20%,35V,WT,TP,4X5.8MM	1	SA
....4	C515	2402-001165	C-AL,SMD;4.7UF,20%,35V,WT,TP,4X5.8MM	1	SA
....4	C516	2402-001165	C-AL,SMD;4.7UF,20%,35V,WT,TP,4X5.8MM	1	SA
....4	C521	2402-001165	C-AL,SMD;4.7UF,20%,35V,WT,TP,4X5.8MM	1	SA
....4	C524	2402-001165	C-AL,SMD;4.7UF,20%,35V,WT,TP,4X5.8MM	1	SA
....4	C525	2402-001165	C-AL,SMD;4.7UF,20%,35V,WT,TP,4X5.8MM	1	SA
....4	C526	2402-001165	C-AL,SMD;4.7UF,20%,35V,WT,TP,4X5.8MM	1	SA
....4	C527	2402-001165	C-AL,SMD;4.7UF,20%,35V,WT,TP,4X5.8MM	1	SA
....4	C528	2402-001165	C-AL,SMD;4.7UF,20%,35V,WT,TP,4X5.8MM	1	SA

Level	Loc. No.	Code No.	Description & Specification	Q'ty	SA/SNA
....4	C724	2402-001165	C-AL,SMD;4.7UF,20%,35V,WT,TP,4X5.8MM	1	S.A
....4	C201	2402-001178	C-AL,SMD;10uF,20%,16V,WT,TP,4.3x4.3x5.8m	1	S.A
....4	C530	2402-001178	C-AL,SMD;10uF,20%,16V,WT,TP,4.3x4.3x5.8m	1	S.A
....4	C509	2402-001183	C-AL,SMD;22UF,20%,16V,WT,TP,5.3X5.3X6MM	1	S.A
....4	C510	2402-001183	C-AL,SMD;22UF,20%,16V,WT,TP,5.3X5.3X6MM	1	S.A
....4	C709	2402-001222	C-AL,SMD;3.3UF,20%,50V,HR,TP,4.3X4.3X5.8	1	S.A
....4	T0052	2703-000222	INDUCTOR-SMD;560nH,10%,2012	1	S.A
....4	T0052	2703-000398	INDUCTOR-SMD;10uH,10%,3225	1	S.A
....4	T0052	2703-000398	INDUCTOR-SMD;10uH,10%,3225	1	S.A
....4	T0052	2703-000398	INDUCTOR-SMD;10uH,10%,3225	1	S.A
....4	T0052	2703-000398	INDUCTOR-SMD;10uH,10%,3225	1	S.A
....4	T0052	2703-001334	INDUCTOR-SMD;1.5uH,10%,2012	1	S.A
....4	T0052	2703-001334	INDUCTOR-SMD;1.5uH,10%,2012	1	S.A
....4	T0052	2703-001334	INDUCTOR-SMD;1.5uH,10%,2012	1	S.A
....4	T0052	2703-001778	INDUCTOR-SMD;3.3uH,20%,3225	1	S.A
....4	T0052	2703-001778	INDUCTOR-SMD;3.3uH,20%,3225	1	S.A
....4	T0052	2703-001778	INDUCTOR-SMD;3.3uH,20%,3225	1	S.A
....4	T0052	2703-001778	INDUCTOR-SMD;3.3uH,20%,3225	1	S.A
....4	T0052	2703-001778	INDUCTOR-SMD;3.3uH,20%,3225	1	S.A
....4	T0052	2703-001778	INDUCTOR-SMD;3.3uH,20%,3225	1	S.A
....4	T0052	2703-001778	INDUCTOR-SMD;3.3uH,20%,3225	1	S.A
....4	T0052	2703-001778	INDUCTOR-SMD;3.3uH,20%,3225	1	S.A
....4	T0052	2703-001778	INDUCTOR-SMD;3.3uH,20%,3225	1	S.A
....4	T0052	2703-001778	INDUCTOR-SMD;3.3uH,20%,3225	1	S.A
....4	T0052	2703-001778	INDUCTOR-SMD;3.3uH,20%,3225	1	S.A
....4	T0052	2703-001778	INDUCTOR-SMD;3.3uH,20%,3225	1	S.A
....4	T0052	2703-001778	INDUCTOR-SMD;3.3uH,20%,3225	1	S.A
....4	T0052	2703-001778	INDUCTOR-SMD;3.3uH,20%,3225	1	S.A
....4	T0052	2703-001778	INDUCTOR-SMD;3.3uH,20%,3225	1	S.A
....4	X300	2801-003667	CRYSTAL-SMD;14.31818MHz,30ppm,28-AAN,16,	1	S.A
....4	X700	2801-004004	CRYSTAL-SMD;20.25MHz,20ppm,28-AAN,13pF,2	1	S.A
....4	F103	2901-001302	FILTER-EMI SMD;20V,0.3A,-,-,2.0x1.2x1.3m	1	S.A
....4	F103	2901-001302	FILTER-EMI SMD;20V,0.3A,-,-,2.0x1.2x1.3m	1	S.A
....4	F103	2901-001302	FILTER-EMI SMD;20V,0.3A,-,-,2.0x1.2x1.3m	1	S.A
....4	F103	2901-001302	FILTER-EMI SMD;20V,0.3A,-,-,2.0x1.2x1.3m	1	S.A
....4	T0568	3301-001145	BEAD-SMD;60ohm,4516,TP,70ohm/45MHz,82ohm	1	S.N.A
....4	T0568	3301-001145	BEAD-SMD;60ohm,4516,TP,70ohm/45MHz,82ohm	1	S.N.A
....4	T0568	3301-001145	BEAD-SMD;60ohm,4516,TP,70ohm/45MHz,82ohm	1	S.N.A
....4	T0568	3301-001145	BEAD-SMD;60ohm,4516,TP,70ohm/45MHz,82ohm	1	S.N.A
....4	T0568	3301-001145	BEAD-SMD;60ohm,4516,TP,70ohm/45MHz,82ohm	1	S.N.A
....4	T0568	3301-001145	BEAD-SMD;60ohm,4516,TP,70ohm/45MHz,82ohm	1	S.N.A
....4	T0568	3301-001145	BEAD-SMD;60ohm,4516,TP,70ohm/45MHz,82ohm	1	S.N.A
....4	T0568	3301-001145	BEAD-SMD;60ohm,4516,TP,70ohm/45MHz,82ohm	1	S.N.A
....4	T0568	3301-001145	BEAD-SMD;60ohm,4516,TP,70ohm/45MHz,82ohm	1	S.N.A
....4	T0568	3301-001145	BEAD-SMD;60ohm,4516,TP,70ohm/45MHz,82ohm	1	S.N.A
....4	T0568	3301-001145	BEAD-SMD;60ohm,4516,TP,70ohm/45MHz,82ohm	1	S.N.A
....4	T0568	3301-001145	BEAD-SMD;60ohm,4516,TP,70ohm/45MHz,82ohm	1	S.N.A
....4	T0568	3301-001145	BEAD-SMD;60ohm,4516,TP,70ohm/45MHz,82ohm	1	S.N.A
....4	T0568	3301-001145	BEAD-SMD;60ohm,4516,TP,70ohm/45MHz,82ohm	1	S.N.A
....4	T0568	3301-001145	BEAD-SMD;60ohm,4516,TP,70ohm/45MHz,82ohm	1	S.N.A
....4	T0568	3301-001145	BEAD-SMD;60ohm,4516,TP,70ohm/45MHz,82ohm	1	S.N.A
....4	T0568	3301-001145	BEAD-SMD;60ohm,4516,TP,70ohm/45MHz,82ohm	1	S.N.A
....4	T0568	3301-001145	BEAD-SMD;60ohm,4516,TP,70ohm/45MHz,82ohm	1	S.N.A
....4	T0568	3301-001145	BEAD-SMD;60ohm,4516,TP,70ohm/45MHz,82ohm	1	S.N.A
....4	T0568	3301-001236	BEAD-SMD;60ohm,1608,-,-,-	1	S.N.A
....4	T0568	3301-001236	BEAD-SMD;60ohm,1608,-,-,-	1	S.N.A
....4	T0568	3301-001236	BEAD-SMD;60ohm,1608,-,-,-	1	S.N.A
....4	T0568	3301-001236	BEAD-SMD;60ohm,1608,-,-,-	1	S.N.A
....4	T0568	3301-001236	BEAD-SMD;60ohm,1608,-,-,-	1	S.N.A
....4	T0568	3301-001793	BEAD-SMD;18ohm,1608,-,TP,11.8ohm/37.6MHz	1	S.A
....4	IC705_SOCK	3704-000249	SOCKET-IC;32P,PLCC,SN,1.27mm	1	S.A
....4	CN330	3711-003057	HEADER-BOARD TO CABLE;BOX,6P,1R,1.25MM,S	1	S.A
....4	CN330	3711-005291	HEADER-BOARD TO CABLE;BOX,2P,1R,2MM,SMD-	1	S.A

## 6 Electrical Parts List

Level	Loc. No.	Code No.	Description & Specification	Q'ty	SA/SNA
....4	CN330	3711-005292	HEADER-BOARD TO CABLE;BOX,3P,1R,2MM,SMD-	1	S.A
....4	CN330	3711-005292	HEADER-BOARD TO CABLE;BOX,3P,1R,2MM,SMD-	1	S.A
....4	CN330	3711-005477	HEADER-BOARD TO CABLE;BOX,4P,1R,2mm,SMD-	1	S.A
....4	CN330	3711-005497	HEADER-BOARD TO CABLE;BOX,15P,1R,1.25MM,	1	S.A
....4	CN330	3711-005503	HEADER-BOARD TO CABLE;BOX,9P,1R,2mm,SMD-	1	S.A
....4	T0119	BN09-00018A	IC MICOM;VCT49X3R-XX-F2,144P,8.7,20.25,P	1	S.N.A
....4	L402	BN27-00002A	COIL-CHOKE(SMD);47uH,47uH,20%,12*12*8mm,	1	S.A
....4	T0077	BN41-00802A	PCB MAIN;BORDEAUX 19,FR-4,4,1.0,1.6,160*	1	S.N.A
0.1	M0003	BN92-01897G	ASSY BOX;LE19R71BX/BWT	1	S.N.A
..2	T0130	BN69-01444B	BOX-00,SET;19R71,SY-01,A,YEL,A1,EUROPE	1.02	S.N.A
..2	T0081	BN96-02895A	ASSY MISC P-HANDLE PACKING;ALL MODEL,BN6	1	S.N.A
...3	M0103	BN66-00007A	LEVER-TOP;ALL MODEL,LDPE,WHITE	1	S.N.A
...3	M0102	BN66-00008A	LEVER-BOTTOM;ALL MODEL,LDPE,WHITE	1	S.N.A
0.1	M0113	BN92-01898A	ASSY P/MATERIAL;19R71	1	S.N.A
..2	T0376	6902-000061	BAG AIR;LDPE,T0.2,L1000,W500,TRP,,,	0.006	S.N.A
..2	T0376	6902-000379	BAG AIR;LDPE,T0.2,W1000,L1800,TRP,-,-	0.002	S.N.A
..2	T0081	6902-000604	BAG WRAPPING;LDPE,T0.02,W500,L10000,TRP,	1.6	S.N.A
..2	M0081	6902-000609	BAG ROLL;LDPE,T0.05,W2400,L1000,TRP,-,-	0.032	S.N.A
..2	T0524	6902-000758	BAG PE;HDPE/HDPE/NITRON(DOUBLE),T0.015/T	1	S.N.A
0.1	M0045	BN92-01939B	ASSY ACCESSORY;LE19R71BX/BWT	1	S.N.A
..2	T0074	BN59-00559A	REMOCON;Bordeaux 19, BLACK,TM85,SAMSUNG	1	S.A
..2	M0045	BN96-03961B	ASSY ACCESSORY;LE19R71BX/XEC	1	S.N.A
...3	T0268	3903-000042	CBF-POWER CORD;DT,EU,FP3/YES,IEC320 C13/	1	S.A
...3	T0524	6902-000110	BAG PE;LDPE,T0.05,W250,L400,TRP,28,2	1	S.N.A
...3	ACCESSORY	BN63-02715C	COVER-DECORATION LEFT;19R71,EO,ABS+PMMA,	1	S.N.A
...3	ACCESSORY	BN63-02716C	COVER-DECORATION RIGHT;19R71,EO,ABS+PMMA	1	S.N.A
..2	UNIT/ACCES	BN96-03961H	ASSY ACCESSORY-I/B;LE19R71BX/BWT	1	S.N.A
...3	T0524	6902-000110	BAG PE;LDPE,T0.05,W250,L400,TRP,28,2	1	S.N.A
...3	ACCESSORY	AA68-03242E	MANUAL FLYER-01,SAFETY GUIDE;All Model,S	1	S.N.A
...3	ACCESSORY	AA68-03278B	MANUAL FLYER-01,WARRANTY CARD;CIS All mo	1	S.N.A
...3	ACCESSORY	AA68-03576A	MANUAL FLYER-01,REGISTRATION C;BWT,RU,RU	1	S.N.A
...3	T0511	BN68-01074E	MANUAL USERS;LE19R71B,SAMSUNG,3Langs,CIS	1	S.N.A
...3	ACCESSORY	BN63-01798A	CLOTH-CLEAN;RE40**,CLOTH,310,320,RHCM	1	S.N.A
..2	M0523	BN96-03969A	ASSY BRACKET P-WALL;BORDEAUX 19",SECC	1	S.N.A
...3	CIS	6902-000128	BAG ZIPPER;LDPE,T0.05,W200,L150,TRP,8,2-	1	S.N.A
...3	T0101	BN61-01162A	BRACKET-WALL;VE15,SECC,2.0	1	S.N.A
...3	M0132	BN96-01272A	ASSY MISC P-SCREW;VE15UO	1	S.N.A
...3		BN68-00850E	MANUAL FLYER-WALL POSITION;COMM,SAMSUNG,	1	S.N.A
...3		BN68-00850F	MANUAL FLYER-WALL MOUNT;COMM,SAMSUNG,Eng	1	S.N.A
..2	ACCESSORY	BP68-00597A	MANUAL FLYER-01,W/C;COMM,SAMSUNG,RUS,RUS	1	S.N.A
0.1		BN91-00963E	ASSY LCD-CTN;BE19SE	1	S.N.A
..2	M0215	BN07-00330A	LCD-PANEL;M190A1-L02,Haydn,6BIT FRC,427.	1	S.A
0.1		BN92-02133B	ASSY LABEL-BLACK;LE19R71BX/XEC	1	S.N.A

## 6-2 LE19R71WX Parts List

Level	Loc. No.	Code No.	Description & Specification	Q'ty	SA/SNA
0		LE19R71WX/BWT	LE19R71W,Q22A/19R70-GBE,19,LCD-TV,RUSSIA	0	
0.1	M0001	BN90-00984D	ASSY COVER FRONT;19R71,EO(WHITE),ABS+PMM	1	S.N.A
..2	T0175	BN96-03731A	ASSY SPEAKER P;16#Ø,Bordeaux, 19,Left,3W	1	S.A
..2	T0175	BN96-03732A	ASSY SPEAKER P;16#Ø,Bordeaux, 19,Right,3	1	S.A
..2	T0003	BN96-03960B	ASSY COVER P-FRONT;19R71,EO(WHITE),ABS+P	1	S.A
...3	M0081	6003-001003	SCREW-TAPTITE;BH,+,B,M4,L12,ZPC(BLK),SWR	2	S.N.A
...3	M0081	6003-001003	SCREW-TAPTITE;BH,+,B,M4,L12,ZPC(BLK),SWR	2	S.N.A
...3	T0069	AA60-00171F	SPACER-FELT;50L2,FELT,350,T0.5,5	2	S.N.A
...3	T0060	BN61-01655A	SPRING ETC;STS-304 SUS,D8,L12,T0.5	1	S.N.A
...3		BN63-01608A	FELT-VIBRATION;MH17FS,FELT,T0.5,5,250,BL	2	S.N.A
...3	CCM1	BN63-02183D	COVER-SHEET;Rhom,PE Vinyl,T0.05,680mm,20	0.6	S.N.A
...3	M0112	BN63-02721B	COVER-FRONT;19R71,EO(WHITE),ABS+PMMA,HB,	1	S.N.A
...3	T0059	BN64-00366A	INDICATOR LED;ROME-I,PC,CLEAR,ALL MODEL	1	S.N.A
...3	T0238	BN64-00453B	WINDOW REMOCON;32R71,PC,CLEAR,V0	1	S.N.A
...3	T0054	BN64-00477A	KNOB-DECORATION;SONOMA26,32,40,ABS,HB,GR	1	S.N.A
...3	T0023	BN64-00509B	KNOB POWER;19R71,PC+ACRYL,WHITE	1	S.N.A
...3	M0145	BN96-03403A	ASSY BOARD P-FUNCTION&KNOB;Bordeaux,CT50	1	S.A
....4	T0022	BN64-00442B	KNOB CONTROL;26,32,40R71,PC,WHITE,ACRYL	1	S.N.A
....4	M0145	BN96-03045A	ASSY BOARD P-FUNCTION;BORDEAUX,FUNCTION	1	S.A
...3	T0714	BN96-03956A	ASSY BOARD P-IR&POWER;Bordeaux19,SJ06-01	1	S.A
...3		BN96-04316C	ASSY COVER P-DECORATION;19R71,HIPS,HB,GR	1	S.N.A
....4	M0279	BN63-01474F	FELT;VENICE 20",FELT,T0.35,10,50	2	S.N.A
....4	T0056	BN63-02704C	COVER-DECORATION;19R71,HIPS,HB,GR503,RED	1	S.N.A
...3	T0069	BN60-00027C	SPACER-FELT;19R7,FELT,90,T0.35,10	1	S.N.A
0.1	M0002	BN90-00985D	ASSY COVER REAR;19R71,EO(WHITE),ABS+PMMA	1	S.N.A
..2	M0081	6003-001323	SCREW-TAPTITE;BH,+,B,M4,L12,NL PLT,SWRCH	6	S.A
..2	M0013	BN96-03864F	ASSY COVER P-REAR;19R71,EO(WHITE),ABS+PM	1	S.A
...3	CCM1	BN63-02183D	COVER-SHEET;Rhom,PE Vinyl,T0.05,680mm,20	0.6	S.N.A
...3	M0006	BN63-02703D	COVER-REAR;19R71,EO(WHITE),ABS+PMMA,HB,W	1	S.N.A
...3	T0071	BN64-00517B	INLAY-TERMINAL;19R71,EO(WHITE),PS,SHEET,	1	S.N.A
...3	T0064	BN65-00002B	CLAMPER CORE;BORDEAUX,PP,V0,WHITE	1	S.N.A
...3	T0152	BN96-04317A	ASSY BRACKET P-VESA;19R71,SECC,T1.0	2	S.N.A
....4	T0069	BN60-00027C	SPACER-FELT;19R7,FELT,90,T0.35,10	1	S.N.A
....4	M0113	BN61-02621A	BRACKET-VESA;19R7,SECC,T1.0	1	S.N.A
...3	M0279	BN63-01075A	FELT;MU15UO,FELT,0.5,10,110	1	S.N.A
0.1	M0216	BN90-00986B	ASSY STAND;19R71(WHITE)	1	S.N.A
..2	M0013	BN96-03865B	ASSY STAND P-BASE;19R71(WHITE),-,ABS+PMM	1	S.A
...3	M0081	6003-001001	SCREW-TAPTITE;FH,+,B,M3,L8,ZPC(BLK),SWRC	4	S.N.A
...3	M0081	6003-001003	SCREW-TAPTITE;BH,+,B,M4,L12,ZPC(BLK),SWR	3	S.N.A
...3	M0081	6003-001003	SCREW-TAPTITE;BH,+,B,M4,L12,ZPC(BLK),SWR	2	S.N.A
...3	M0081	6003-001003	SCREW-TAPTITE;BH,+,B,M4,L12,ZPC(BLK),SWR	1	S.N.A
...3		BN61-02600A	BRACKET-STAND BOTTOM;19R7,SECC,T1.0	1	S.N.A
...3	CCM1	BN63-02183A	COVER-SHEET;ROME,PE Vinyl,T0.05,100mm,20	0.1	S.N.A
...3	CCM1	BN63-02183C	COVER-SHEET;Rhom,PE Vinyl,T0.05,200mm,20	0.6	S.N.A
...3	CCM1	BN63-02183C	COVER-SHEET;Rhom,PE Vinyl,T0.05,200mm,20	0.2	S.N.A
...3	CCM1	BN63-02183C	COVER-SHEET;Rhom,PE Vinyl,T0.05,200mm,20	0.2	S.N.A
...3	T0004	BN63-02705B	COVER-STAND BASE;19R71(WHITE),ABS+PMMA,-	1	S.N.A
...3		BN63-02706B	COVER-STAND FRONT;19R71(WHITE),ABS+PMMA,	1	S.N.A
...3		BN63-02707B	COVER-STAND REAR;19R71(WHITE),ABS+PMMA,-	1	S.N.A
...3		BN64-00511B	KNOB-LOCKING;19R71(WHITE),ABS+PMMA,-,-	1	S.N.A
...3	T0132	BN73-00077A	RUBBER FOOT;MATISSE,BUMPON,*13.5,T2.0,6	4	S.N.A
...3	T0054	BN96-03866A	ASSY HINGE P;19R71,SECC,T2.0	1	S.N.A
0.1		BN91-00963E	ASSY LCD-CTN;BE19SE	1	S.N.A
..2	M0215	BN07-00330A	LCD-PANEL;M190A1-L02,Haydn,6BIT FRC,427.	1	S.A
0.1		BN91-01094B	ASSY SHIELD-CTN;LE19R71BX/XEC,EO	1	S.N.A
..2	M0081	6003-000275	SCREW-TAPTITE;BH,+,B,M3,L10,ZPC(BLK),S	7	S.N.A
..2	M0081	6003-000275	SCREW-TAPTITE;BH,+,B,M3,L10,ZPC(BLK),S	1	S.N.A
..2	M0081	6003-000275	SCREW-TAPTITE;BH,+,B,M3,L10,ZPC(BLK),S	3	S.N.A
..2	M0081	6003-000275	SCREW-TAPTITE;BH,+,B,M3,L10,ZPC(BLK),S	4	S.N.A
..2	M0081	6003-001439	SCREW-TAPTITE;BH,+,S,M4,L8,ZPC(YEL)	1	S.N.A
..2	M0174	BN44-00147A	IP BOARD;SIP-W19A,Bordeaux,3.2 ~4.8mA,6.	1	S.A
..2	M0412	BN96-03959B	ASSY BRACKET P-PCB;BORDEAUX19,SECC	1	S.N.A
...3	T0514	BN61-02599A	BRACKET-SUPPORT;19R7,SECC,T2.0	1	S.N.A
...3	M0107	BN61-02604B	BRACKET-PCB;19R7(CMO),SECC,T0.8	1	S.N.A
...3	M0162	6502-001067	CABLE CLAMP;DAFC-1300,ID2.2,T5.2,NYLIN6/	1	S.N.A
...3	M0131	AA63-01187A	GASKET;BE40TS,Conductive Fabric,7 mm,13	1	S.N.A
..2	M2893	BN39-00682C	LEAD CONNECTOR-LVDS;BORDEAUX 19",UL1571#	1	S.A
..2	T0179	BN63-02901A	SHIELD-TUNER;19R7,SPTT,T0.3	1	S.N.A

## 6 Electrical Parts List

Level	Loc. No.	Code No.	Description & Specification	Q'ty	SA/SNA
0.1	M0017	BN91-01125B	ASSY CHASSIS-CTN;LE19R71BX/XEC	1	S.A
..2		BN94-01036C	ASSY PCB MAIN-CTN;LE19R71BX/XEC,CMO PAN	1	S.N.A
...3	SUB05	0202-001477	SOLDER-CREAM;LST309-M,-,D20-45g,-,96.5Sn/	0.684	S.N.A
...3	T0245	0202-001492	SOLDER-WIRE FLUX;HSE-02 LFM48 SR-34 S,-,	0.003	S.N.A
...3	FT700	2904-001179	FILTER-SAW;36.125MHz,-,32.65-39.6MHz/0.5	1	S.A
...3	CN102	3701-001292	CONNECTOR-DVI;24P,3R,FEMALE,STRAIGHT,AU1	1	S.A
...3	CN100	3701-001294	CONNECTOR-DSUB;15P,3R,FEMALE,STRAIGHT,AU	1	S.A
...3	CN300	3711-005884	HEADER-BOARD TO BOARD;BOX,30P,2R,2mm,ANG	1	S.A
...3	CN111	3722-000498	JACK-SCART;21P,-,SN,BLK,NO	1	S.A
...3	JA330	3722-001061	JACK-PHONE;1P,3.6PI,AG,BLK,N	1	S.A
...3	JA332	3722-001734	JACK-VHS;4P,SN,BLK,STRAIGHT	1	S.A
...3	JA333	3722-001903	JACK-PIN;2P,-,AU,WHT/RED,-	1	S.A
...3	JA333	3722-002063	JACK-PIN;3P,AU,YEL/WHT/RED,STRAIGHT	1	S.A
...3	JA330	3722-002176	JACK-PHONE;7P/4C,-,SN,L-BLU,-	1	S.A
...3	T0562	6046-001013	STAND OFF;M3,L5,Ni PLT,SUM24L,#4-40	4	S.N.A
...3	M0131	AA63-01304A	GASKET;TORINO,Conductive Fabric,1mm,14mm	1	S.N.A
...3	CIS3	BN40-00072A	TUNER;TECH0949PG46A(S),TECH0949PG46A(S),	1	S.A
...3	M0131	BN63-00209A	GASKET;RS24NS,CONDUCTIVE FAB,4mm,10mm,30	1	S.N.A
...3	M0107	BN63-02176A	SHIELD-COVER;MGM,SPT,0.5	1	S.N.A
...3	MAIN	BN97-01097B	ASSY MICOM-STN;T-BORD19PEU-1000,BE19SE,2	1	S.A
....4	IC902	1102-001129	IC-EPROM;M27W401,512KX8BIT,PLCC,32P,11.3	1	S.N.A
...3	T0174	BN97-01098C	ASSY SMD;LE19R71BX/XEC,BE19SE	1	S.N.A
....4	D100	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200mA,SO	1	S.A
....4	D101	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200mA,SO	1	S.A
....4	D108	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200mA,SO	1	S.A
....4	D113	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200mA,SO	1	S.A
....4	D114	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200mA,SO	1	S.A
....4	D115	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200mA,SO	1	S.A
....4	D121	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200mA,SO	1	S.A
....4	D122	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200mA,SO	1	S.A
....4	D123	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200mA,SO	1	S.A
....4	D124	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200mA,SO	1	S.A
....4	D125	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200mA,SO	1	S.A
....4	D126	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200mA,SO	1	S.A
....4	D127	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200mA,SO	1	S.A
....4	D128	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200mA,SO	1	S.A
....4	D129	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200mA,SO	1	S.A
....4	D200	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200mA,SO	1	S.A
....4	D201	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200mA,SO	1	S.A
....4	D202	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200mA,SO	1	S.A
....4	D400	0402-000553	DIODE-SCHOTTKY;SS24/B240,40V,2000mA,DO-2	1	S.A
....4	D410	0402-001614	DIODE-RECTIFIER;S1G,400V,1A,DO-214AC,TP	1	S.A
....4	D411	0402-001614	DIODE-RECTIFIER;S1G,400V,1A,DO-214AC,TP	1	S.A
....4	D109	0403-000258	DIODE-ZENER;BZX84C5V6,5.2-6V,225mW,SOT-2	1	S.A
....4	D110	0403-000258	DIODE-ZENER;BZX84C5V6,5.2-6V,225mW,SOT-2	1	S.A
....4	D111	0403-000258	DIODE-ZENER;BZX84C5V6,5.2-6V,225mW,SOT-2	1	S.A
....4	D112	0403-000258	DIODE-ZENER;BZX84C5V6,5.2-6V,225mW,SOT-2	1	S.A
....4	D102	0403-000579	DIODE-ZENER;BZX84C5V1,4.8-5.4V,200mW,SOT	1	S.A
....4	D116	0403-000579	DIODE-ZENER;BZX84C5V1,4.8-5.4V,200mW,SOT	1	S.A
....4	D119	0403-000579	DIODE-ZENER;BZX84C5V1,4.8-5.4V,200mW,SOT	1	S.A
....4	D120	0403-000579	DIODE-ZENER;BZX84C5V1,4.8-5.4V,200mW,SOT	1	S.A
....4	D146	0403-000579	DIODE-ZENER;BZX84C5V1,4.8-5.4V,200mW,SOT	1	S.A
....4	D500	0403-001052	DIODE-ZENER;RD8.2MB,7.7-8.7V,200mW,SOT-2	1	S.A
....4	D501	0403-001052	DIODE-ZENER;RD8.2MB,7.7-8.7V,200mW,SOT-2	1	S.A
....4	D502	0403-001052	DIODE-ZENER;RD8.2MB,7.7-8.7V,200mW,SOT-2	1	S.A
....4	D503	0403-001052	DIODE-ZENER;RD8.2MB,7.7-8.7V,200mW,SOT-2	1	S.A
....4	ZD200	0403-001382	DIODE-ZENER;UDZ33B,32.15-33.79V,200mW,SO	1	S.A
....4	D133	0403-001435	DIODE-ZENER;QZX363C5V6,5.32-5.88V,200MW,	1	S.A
....4	D134	0403-001435	DIODE-ZENER;QZX363C5V6,5.32-5.88V,200MW,	1	S.A
....4	D147	0403-001435	DIODE-ZENER;QZX363C5V6,5.32-5.88V,200MW,	1	S.A
....4	D103	0406-001163	DIODE-TVS;CDS3C05GTA,6.4V/-,-,SMD	1	S.A
....4	D104	0406-001163	DIODE-TVS;CDS3C05GTA,6.4V/-,-,SMD	1	S.A
....4	D117	0406-001163	DIODE-TVS;CDS3C05GTA,6.4V/-,-,SMD	1	S.A
....4	D118	0406-001163	DIODE-TVS;CDS3C05GTA,6.4V/-,-,SMD	1	S.A
....4	D130	0406-001163	DIODE-TVS;CDS3C05GTA,6.4V/-,-,SMD	1	S.A
....4	D131	0406-001163	DIODE-TVS;CDS3C05GTA,6.4V/-,-,SMD	1	S.A
....4	D132	0406-001163	DIODE-TVS;CDS3C05GTA,6.4V/-,-,SMD	1	S.A
....4	D135	0406-001163	DIODE-TVS;CDS3C05GTA,6.4V/-,-,SMD	1	S.A
....4	D136	0406-001163	DIODE-TVS;CDS3C05GTA,6.4V/-,-,SMD	1	S.A
....4	D137	0406-001163	DIODE-TVS;CDS3C05GTA,6.4V/-,-,SMD	1	S.A
....4	D138	0406-001163	DIODE-TVS;CDS3C05GTA,6.4V/-,-,SMD	1	S.A
....4	D139	0406-001163	DIODE-TVS;CDS3C05GTA,6.4V/-,-,SMD	1	S.A

Level	Loc. No.	Code No.	Description & Specification	Q'ty	SA/SNA
....4	D140	0406-001163	DIODE-TVS;CDS3C05GTA,6.4V/-/-,SMD	1	S.A
....4	D141	0406-001163	DIODE-TVS;CDS3C05GTA,6.4V/-/-,SMD	1	S.A
....4	D142	0406-001163	DIODE-TVS;CDS3C05GTA,6.4V/-/-,SMD	1	S.A
....4	D143	0406-001163	DIODE-TVS;CDS3C05GTA,6.4V/-/-,SMD	1	S.A
....4	D144	0406-001163	DIODE-TVS;CDS3C05GTA,6.4V/-/-,SMD	1	S.A
....4	D145	0406-001163	DIODE-TVS;CDS3C05GTA,6.4V/-/-,SMD	1	S.A
....4	Q101	0501-000280	TR-SMALL SIGNAL;KSA1182,NPN,150mW,SOT-23	1	S.A
....4	Q200	0501-000342	TR-SMALL SIGNAL;KSC1623-Y,NPN,200mW,SOT-	1	S.A
....4	Q100	0501-002080	TR-SMALL SIGNAL;2SC2412K,NPN,200mW,SC-59	1	S.A
....4	Q102	0501-002080	TR-SMALL SIGNAL;2SC2412K,NPN,200mW,SC-59	1	S.A
....4	Q103	0501-002080	TR-SMALL SIGNAL;2SC2412K,NPN,200mW,SC-59	1	S.A
....4	Q300	0501-002080	TR-SMALL SIGNAL;2SC2412K,NPN,200mW,SC-59	1	S.A
....4	Q400	0501-002080	TR-SMALL SIGNAL;2SC2412K,NPN,200mW,SC-59	1	S.A
....4	Q401	0501-002080	TR-SMALL SIGNAL;2SC2412K,NPN,200mW,SC-59	1	S.A
....4	Q402	0501-002080	TR-SMALL SIGNAL;2SC2412K,NPN,200mW,SC-59	1	S.A
....4	Q404	0501-002080	TR-SMALL SIGNAL;2SC2412K,NPN,200mW,SC-59	1	S.A
....4	Q500	0501-002080	TR-SMALL SIGNAL;2SC2412K,NPN,200mW,SC-59	1	S.A
....4	Q501	0501-002080	TR-SMALL SIGNAL;2SC2412K,NPN,200mW,SC-59	1	S.A
....4	Q502	0501-002080	TR-SMALL SIGNAL;2SC2412K,NPN,200mW,SC-59	1	S.A
....4	Q503	0501-002080	TR-SMALL SIGNAL;2SC2412K,NPN,200mW,SC-59	1	S.A
....4	Q504	0501-002080	TR-SMALL SIGNAL;2SC2412K,NPN,200mW,SC-59	1	S.A
....4	Q505	0501-002080	TR-SMALL SIGNAL;2SC2412K,NPN,200mW,SC-59	1	S.A
....4	Q506	0501-002080	TR-SMALL SIGNAL;2SC2412K,NPN,200mW,SC-59	1	S.A
....4	Q409	0505-000110	FET-SILICON;2N7002,N,60V,115mA,7.5ohm,0.	1	S.A
....4	Q409	0505-000110	FET-SILICON;2N7002,N,60V,115mA,7.5ohm,0.	1	S.A
....4	Q409	0505-001170	FET-SILICON;SI9933ADY-T1,P,-20V,3.4A,0.0	1	S.A
....4	Q409	0505-001170	FET-SILICON;SI9933ADY-T1,P,-20V,3.4A,0.0	1	S.A
....4	IC104	0801-002404	IC-CMOS LOGIC;74VHC4066,ANALOG SWITCH,SO	1	S.A
....4	IC104	0801-002709	IC-CMOS LOGIC;74HC373,D FLIP-FLOP,TSSOP,	1	S.A
....4	IC104	0801-002899	IC-CMOS LOGIC;CD4069UBC,INVERTER,SOIC,14	1	S.A
....4	IC104	0802-001025	IC-CMOS LOGIC;74LCX374,D FLIP-FLOP,TSSOP	1	S.A
....4	IC112	1103-000129	IC-EEPROM;24C02,2Kbit,256x8Bit,SOP,8P,5x	1	S.A
....4	IC112	1103-000129	IC-EEPROM;24C02,2Kbit,256x8Bit,SOP,8P,5x	1	S.A
....4	IC112	1103-001279	IC-EEPROM;24C32,32Kbit,4Kx8Bit,SOP,8P,5x	1	S.A
....4	IC113	1105-001284	IC-DRAM;636165,-,16Mbit,1Mx16Bit,TSOP,50	1	S.A
....4	IC113	1105-001284	IC-DRAM;636165,-,16Mbit,1Mx16Bit,TSOP,50	1	S.A
....4	T0085	1201-001980	IC-AUDIO AMP;TDA7266D,SO,20P,16X11.1MM,-	1	S.A
....4	T0085	1201-002136	IC-AUDIO AMP;LM4810,MSOP,8P,3x3mm,DUAL,-	1	S.A
....4	IC704	1203-001212	IC-VOL. DETECTOR;7029,SOT-89,3P,-,PLASTI	1	S.A
....4	T0087	1203-001488	IC-POSI.FIXED REG.;7805,TO-252,3P,-,PLAS	1	S.A
....4	IC703	1203-001559	IC-RESET;DS1834A,SOIC,8P,150MIL,PLASTIC,	1	S.A
....4	T0087	1203-001816	IC-POSI.FIXED REG.;78M08,TO-252,3P,-,PLA	1	S.A
....4	IC406	1203-002796	IC-DC/DC CONVERTER;AP1501-33K5A,TO-263-5	1	S.A
....4	T0087	1203-003696	IC-POSI.FIXED REG.;NCP1117DT18T5G,DPAK,3	1	S.A
....4	T0087	1203-003696	IC-POSI.FIXED REG.;NCP1117DT18T5G,DPAK,3	1	S.A
....4	T0087	1203-004169	IC-POSI.FIXED REG.;G78D12A,TO-252,3P,6.7	1	S.A
....4	IC109	1205-002738	IC-LCD CONTROLLER;SE6181LA-LF,LQFP,256P,	1	S.A
....4	R112	2007-000043	R-CHIP;1Kohm,1%,1/10W,TP,1608	1	S.A
....4	R161	2007-000043	R-CHIP;1Kohm,1%,1/10W,TP,1608	1	S.A
....4	R176	2007-000043	R-CHIP;1Kohm,1%,1/10W,TP,1608	1	S.A
....4	R177	2007-000043	R-CHIP;1Kohm,1%,1/10W,TP,1608	1	S.A
....4	R706	2007-000043	R-CHIP;1Kohm,1%,1/10W,TP,1608	1	S.A
....4	R113	2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R178	2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R201	2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R202	2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R212	2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R215	2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R142	2007-000071	R-CHIP;22ohm,5%,1/10W,TP,1608	1	S.A
....4	R143	2007-000071	R-CHIP;22ohm,5%,1/10W,TP,1608	1	S.A
....4	R144	2007-000071	R-CHIP;22ohm,5%,1/10W,TP,1608	1	S.A
....4	R145	2007-000071	R-CHIP;22ohm,5%,1/10W,TP,1608	1	S.A
....4	R148	2007-000071	R-CHIP;22ohm,5%,1/10W,TP,1608	1	S.A
....4	R149	2007-000071	R-CHIP;22ohm,5%,1/10W,TP,1608	1	S.A
....4	R150	2007-000071	R-CHIP;22ohm,5%,1/10W,TP,1608	1	S.A
....4	R151	2007-000071	R-CHIP;22ohm,5%,1/10W,TP,1608	1	S.A
....4	R350	2007-000072	R-CHIP;47ohm,5%,1/10W,TP,1608	1	S.A
....4	R504	2007-000072	R-CHIP;47ohm,5%,1/10W,TP,1608	1	S.A
....4	R505	2007-000072	R-CHIP;47ohm,5%,1/10W,TP,1608	1	S.A
....4	R106	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R107	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R108	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R109	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A

## 6 Electrical Parts List

[illegible]

Level	Loc. No.	Code No.	Description & Specification	Q'ty	SA/SNA
....4	R305	2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	S.A
....4	R307	2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	S.A
....4	R420	2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	S.A
....4	R506	2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	S.A
....4	R526	2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	S.A
....4	R529	2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	S.A
....4	R536	2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	S.A
....4	R537	2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	S.A
....4	R540	2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	S.A
....4	R715	2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	S.A
....4	R716	2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	S.A
....4	R700	2007-000087	R-CHIP;6.8Kohm,5%,1/10W,TP,1608	1	S.A
....4	R701	2007-000087	R-CHIP;6.8Kohm,5%,1/10W,TP,1608	1	S.A
....4	R702	2007-000087	R-CHIP;6.8Kohm,5%,1/10W,TP,1608	1	S.A
....4	R104	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R105	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R111	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R137	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R147	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R152	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R153	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R156	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R157	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R164	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R209	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R308	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R309	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R310	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R311	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R313	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R314	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R315	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R405	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R406	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R407	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R418	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R421	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R422	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R423	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R502	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R503	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R518	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R523	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R539	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R541	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R543	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R721	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R722	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R723	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R500	2007-000097	R-CHIP;47Kohm,5%,1/10W,TP,1608	1	S.A
....4	R501	2007-000097	R-CHIP;47Kohm,5%,1/10W,TP,1608	1	S.A
....4	R531	2007-000097	R-CHIP;47Kohm,5%,1/10W,TP,1608	1	S.A
....4	R512	2007-000098	R-CHIP;56Kohm,5%,1/10W,TP,1608	1	S.A
....4	R513	2007-000098	R-CHIP;56Kohm,5%,1/10W,TP,1608	1	S.A
....4	R210	2007-000102	R-CHIP;100Kohm,5%,1/10W,TP,1608	1	S.A
....4	R216	2007-000102	R-CHIP;100Kohm,5%,1/10W,TP,1608	1	S.A
....4	R402	2007-000102	R-CHIP;100Kohm,5%,1/10W,TP,1608	1	S.A
....4	R403	2007-000102	R-CHIP;100Kohm,5%,1/10W,TP,1608	1	S.A
....4	R404	2007-000102	R-CHIP;100Kohm,5%,1/10W,TP,1608	1	S.A
....4	R414	2007-000102	R-CHIP;100Kohm,5%,1/10W,TP,1608	1	S.A
....4	R416	2007-000102	R-CHIP;100Kohm,5%,1/10W,TP,1608	1	S.A
....4	R304	2007-000118	R-CHIP;390ohm,5%,1/10W,TP,1608	1	S.A
....4	R203	2007-000234	R-CHIP;1.3Kohm,5%,1/10W,TP,1608	1	S.A
....4	R141	2007-000402	R-CHIP;150ohm,5%,1/10W,TP,1608	1	S.A
....4	R204	2007-000402	R-CHIP;150ohm,5%,1/10W,TP,1608	1	S.A
....4	R139	2007-000458	R-CHIP;18Kohm,5%,1/10W,TP,1608	1	S.A
....4	R211	2007-000659	R-CHIP;27ohm,5%,1/10W,TP,1608	1	S.A
....4	R167	2007-000869	R-CHIP;4.7Kohm,1%,1/10W,TP,1608	1	S.A
....4	R516	2007-000869	R-CHIP;4.7Kohm,1%,1/10W,TP,1608	1	S.A
....4	R517	2007-000869	R-CHIP;4.7Kohm,1%,1/10W,TP,1608	1	S.A
....4	R707	2007-000869	R-CHIP;4.7Kohm,1%,1/10W,TP,1608	1	S.A
....4	R708	2007-000869	R-CHIP;4.7Kohm,1%,1/10W,TP,1608	1	S.A
....4	R790	2007-000869	R-CHIP;4.7Kohm,1%,1/10W,TP,1608	1	S.A

## 6 Electrical Parts List

Level	Loc. No.	Code No.	Description & Specification	Q'ty	SA/SNA
....4	R791	2007-000869	R-CHIP;4.7Kohm,1%,1/10W,TP,1608	1	S.A
....4	R217	2007-000882	R-CHIP;4.7ohm,5%,1/10W,TP,1608	1	S.A
....4	R155	2007-001002	R-CHIP;510ohm,5%,1/10W,TP,1608	1	S.A
....4	R214	2007-001002	R-CHIP;510ohm,5%,1/10W,TP,1608	1	S.A
....4	R115	2007-001044	R-CHIP;56ohm,5%,1/10W,TP,1608	1	S.A
....4	R290	2007-001044	R-CHIP;56ohm,5%,1/10W,TP,1608	1	S.A
....4	R213	2007-001134	R-CHIP;68ohm,5%,1/10W,TP,1608	1	S.A
....4	R122	2007-001164	R-CHIP;75ohm,1%,1/10W,TP,1608	1	S.A
....4	R123	2007-001164	R-CHIP;75ohm,1%,1/10W,TP,1608	1	S.A
....4	R124	2007-001164	R-CHIP;75ohm,1%,1/10W,TP,1608	1	S.A
....4	R140	2007-001167	R-CHIP;75ohm,5%,1/10W,TP,1608	1	S.A
....4	R174	2007-001167	R-CHIP;75ohm,5%,1/10W,TP,1608	1	S.A
....4	R735	2007-001167	R-CHIP;75ohm,5%,1/10W,TP,1608	1	S.A
....4	R736	2007-001167	R-CHIP;75ohm,5%,1/10W,TP,1608	1	S.A
....4	R737	2007-001167	R-CHIP;75ohm,5%,1/10W,TP,1608	1	S.A
....4	R738	2007-001167	R-CHIP;75ohm,5%,1/10W,TP,1608	1	S.A
....4	R739	2007-001167	R-CHIP;75ohm,5%,1/10W,TP,1608	1	S.A
....4	R740	2007-001167	R-CHIP;75ohm,5%,1/10W,TP,1608	1	S.A
....4	R741	2007-001167	R-CHIP;75ohm,5%,1/10W,TP,1608	1	S.A
....4	R200	2007-001179	R-CHIP;8.2Kohm,5%,1/10W,TP,1608	1	S.A
....4	R146	2007-007852	R-CHIP;140ohm,1%,1/10W,TP,1608	1	S.A
....4	RA300	2011-000881	R-NET;33ohm,5%,1/16W,L,CHIP,8P,TP,3.2x1.	1	S.A
....4	RA301	2011-000881	R-NET;33ohm,5%,1/16W,L,CHIP,8P,TP,3.2x1.	1	S.A
....4	RA302	2011-000881	R-NET;33ohm,5%,1/16W,L,CHIP,8P,TP,3.2x1.	1	S.A
....4	RA303	2011-000881	R-NET;33ohm,5%,1/16W,L,CHIP,8P,TP,3.2x1.	1	S.A
....4	RA304	2011-000881	R-NET;33ohm,5%,1/16W,L,CHIP,8P,TP,3.2x1.	1	S.A
....4	C104	2203-000140	C-CER,CHIP;1.5nF,10%,50V,X7R,1608	1	S.A
....4	C105	2203-000140	C-CER,CHIP;1.5nF,10%,50V,X7R,1608	1	S.A
....4	C119	2203-000140	C-CER,CHIP;1.5nF,10%,50V,X7R,1608	1	S.A
....4	C121	2203-000140	C-CER,CHIP;1.5nF,10%,50V,X7R,1608	1	S.A
....4	C124	2203-000140	C-CER,CHIP;1.5nF,10%,50V,X7R,1608	1	S.A
....4	C125	2203-000140	C-CER,CHIP;1.5nF,10%,50V,X7R,1608	1	S.A
....4	C126	2203-000140	C-CER,CHIP;1.5nF,10%,50V,X7R,1608	1	S.A
....4	C127	2203-000140	C-CER,CHIP;1.5nF,10%,50V,X7R,1608	1	S.A
....4	C519	2203-000140	C-CER,CHIP;1.5nF,10%,50V,X7R,1608	1	S.A
....4	C520	2203-000140	C-CER,CHIP;1.5nF,10%,50V,X7R,1608	1	S.A
....4	C522	2203-000140	C-CER,CHIP;1.5nF,10%,50V,X7R,1608	1	S.A
....4	C523	2203-000140	C-CER,CHIP;1.5nF,10%,50V,X7R,1608	1	S.A
....4	C531	2203-000140	C-CER,CHIP;1.5nF,10%,50V,X7R,1608	1	S.A
....4	C532	2203-000140	C-CER,CHIP;1.5nF,10%,50V,X7R,1608	1	S.A
....4	C705	2203-000140	C-CER,CHIP;1.5nF,10%,50V,X7R,1608	1	S.A
....4	C711	2203-000140	C-CER,CHIP;1.5nF,10%,50V,X7R,1608	1	S.A
....4	C719	2203-000140	C-CER,CHIP;1.5nF,10%,50V,X7R,1608	1	S.A
....4	C727	2203-000140	C-CER,CHIP;1.5nF,10%,50V,X7R,1608	1	S.A
....4	C734	2203-000140	C-CER,CHIP;1.5nF,10%,50V,X7R,1608	1	S.A
....4	C737	2203-000140	C-CER,CHIP;1.5nF,10%,50V,X7R,1608	1	S.A
....4	C740	2203-000140	C-CER,CHIP;1.5nF,10%,50V,X7R,1608	1	S.A
....4	C745	2203-000140	C-CER,CHIP;1.5nF,10%,50V,X7R,1608	1	S.A
....4	C106	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C107	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C108	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C109	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C110	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C111	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C180	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C181	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C182	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C183	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C184	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C185	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C186	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C187	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C190	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C202	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C203	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C204	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C205	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C210	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C211	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C212	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C216	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C320	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C329	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A

Level	Loc. No.	Code No.	Description & Specification	Q'ty	SA/SNA
....4	C351	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C403	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C406	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C407	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C413	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C414	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C426	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C501	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C507	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C508	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C512	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C714	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C720	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C721	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C725	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C742	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C747	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C748	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C749	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C751	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C752	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C753	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C754	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C755	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C757	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C103	2203-000236	C-CER,CHIP;0.1nF,5%,50V,C0G,1608	1	S.A
....4	C120	2203-000236	C-CER,CHIP;0.1nF,5%,50V,C0G,1608	1	S.A
....4	C220	2203-000236	C-CER,CHIP;0.1nF,5%,50V,C0G,1608	1	S.A
....4	C221	2203-000236	C-CER,CHIP;0.1nF,5%,50V,C0G,1608	1	S.A
....4	C200	2203-000257	C-CER,CHIP;10nF,10%,50V,X7R,1608	1	S.A
....4	C206	2203-000257	C-CER,CHIP;10nF,10%,50V,X7R,1608	1	S.A
....4	C213	2203-000257	C-CER,CHIP;10nF,10%,50V,X7R,1608	1	S.A
....4	C222	2203-000257	C-CER,CHIP;10nF,10%,50V,X7R,1608	1	S.A
....4	C308	2203-000257	C-CER,CHIP;10nF,10%,50V,X7R,1608	1	S.A
....4	C427	2203-000257	C-CER,CHIP;10nF,10%,50V,X7R,1608	1	S.A
....4	C209	2203-000440	C-CER,CHIP;1nF,10%,50V,X7R,1608	1	S.A
....4	C215	2203-000440	C-CER,CHIP;1nF,10%,50V,X7R,1608	1	S.A
....4	C706	2203-000440	C-CER,CHIP;1nF,10%,50V,X7R,1608	1	S.A
....4	C713	2203-000440	C-CER,CHIP;1nF,10%,50V,X7R,1608	1	S.A
....4	C715	2203-000440	C-CER,CHIP;1nF,10%,50V,X7R,1608	1	S.A
....4	C717	2203-000440	C-CER,CHIP;1nF,10%,50V,X7R,1608	1	S.A
....4	C746	2203-000440	C-CER,CHIP;1nF,10%,50V,X7R,1608	1	S.A
....4	C309	2203-000626	C-CER,CHIP;0.022nF,5%,50V,C0G,1608	1	S.A
....4	C310	2203-000626	C-CER,CHIP;0.022nF,5%,50V,C0G,1608	1	S.A
....4	C728	2203-000626	C-CER,CHIP;0.022nF,5%,50V,C0G,1608	1	S.A
....4	C731	2203-000626	C-CER,CHIP;0.022nF,5%,50V,C0G,1608	1	S.A
....4	C122	2203-000783	C-CER,CHIP;0.33nF,5%,50V,C0G,1608	1	S.A
....4	C123	2203-000783	C-CER,CHIP;0.33nF,5%,50V,C0G,1608	1	S.A
....4	C533	2203-000783	C-CER,CHIP;0.33nF,5%,50V,C0G,1608	1	S.A
....4	C534	2203-000783	C-CER,CHIP;0.33nF,5%,50V,C0G,1608	1	S.A
....4	C129	2203-001071	C-CER,CHIP;0.056nF,5%,50V,C0G,1608	1	S.A
....4	C704	2203-001656	C-CER,CHIP;0.47nF,5%,50V,NP0,1608	1	S.A
....4	C710	2203-001656	C-CER,CHIP;0.47nF,5%,50V,NP0,1608	1	S.A
....4	C712	2203-001656	C-CER,CHIP;0.47nF,5%,50V,NP0,1608	1	S.A
....4	C718	2203-001656	C-CER,CHIP;0.47nF,5%,50V,NP0,1608	1	S.A
....4	C726	2203-001656	C-CER,CHIP;0.47nF,5%,50V,NP0,1608	1	S.A
....4	C733	2203-001656	C-CER,CHIP;0.47nF,5%,50V,NP0,1608	1	S.A
....4	C736	2203-001656	C-CER,CHIP;0.47nF,5%,50V,NP0,1608	1	S.A
....4	C739	2203-001656	C-CER,CHIP;0.47nF,5%,50V,NP0,1608	1	S.A
....4	C744	2203-001656	C-CER,CHIP;0.47nF,5%,50V,NP0,1608	1	S.A
....4	C402	2203-002793	C-CER,CHIP;1000nF,+80-20%,25V,Y5V,2012	1	S.A
....4	C511	2203-002793	C-CER,CHIP;1000nF,+80-20%,25V,Y5V,2012	1	S.A
....4	C100	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C319	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C322	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C327	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C328	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C400	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C401	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C404	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C431	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C465	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C702	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A

## 6 Electrical Parts List

[illegible]

Level	Loc. No.	Code No.	Description & Specification	Q'ty	SA/SNA
....4	C412	2402-001044	C-AL,SMD;100UF,20%,25V,GP,TP,8.3X8.3X6.3	1	S.A
....4	C207	2402-001080	C-AL,SMD;47uF,20%,50V,WT,TP,8x10mm	1	S.A
....4	C208	2402-001080	C-AL,SMD;47uF,20%,50V,WT,TP,8x10mm	1	S.A
....4	C408	2402-001081	C-AL,SMD;100uF,20%,25V,WT,TP,8.3x8.3x10	1	S.A
....4	C451	2402-001081	C-AL,SMD;100uF,20%,25V,WT,TP,8.3x8.3x10	1	S.A
....4	C490	2402-001081	C-AL,SMD;100uF,20%,25V,WT,TP,8.3x8.3x10	1	S.A
....4	C491	2402-001081	C-AL,SMD;100uF,20%,25V,WT,TP,8.3x8.3x10	1	S.A
....4	C307	2402-001086	C-AL,SMD;100UF,20%,16V,WT,TP,6.6X6.6X5.3	1	S.A
....4	C409	2402-001086	C-AL,SMD;100UF,20%,16V,WT,TP,6.6X6.6X5.3	1	S.A
....4	C433	2402-001086	C-AL,SMD;100UF,20%,16V,WT,TP,6.6X6.6X5.3	1	S.A
....4	C437	2402-001086	C-AL,SMD;100UF,20%,16V,WT,TP,6.6X6.6X5.3	1	S.A
....4	C118	2402-001128	C-AL,SMD;100uF,20%,16V,-,TP,6.3X5.7mm	1	S.A
....4	C217	2402-001128	C-AL,SMD;100uF,20%,16V,-,TP,6.3X5.7mm	1	S.A
....4	C410	2402-001128	C-AL,SMD;100uF,20%,16V,-,TP,6.3X5.7mm	1	S.A
....4	C430	2402-001128	C-AL,SMD;100uF,20%,16V,-,TP,6.3X5.7mm	1	S.A
....4	C432	2402-001128	C-AL,SMD;100uF,20%,16V,-,TP,6.3X5.7mm	1	S.A
....4	C480	2402-001128	C-AL,SMD;100uF,20%,16V,-,TP,6.3X5.7mm	1	S.A
....4	C504	2402-001128	C-AL,SMD;100uF,20%,16V,-,TP,6.3X5.7mm	1	S.A
....4	C505	2402-001128	C-AL,SMD;100uF,20%,16V,-,TP,6.3X5.7mm	1	S.A
....4	C506	2402-001158	C-AL,SMD;1UF,20%,50V,WT,TP,4X5.2MM	1	S.A
....4	C517	2402-001159	C-AL,SMD;3.3UF,20%,50V,WT,TP,4X5.2MM	1	S.A
....4	C518	2402-001159	C-AL,SMD;3.3UF,20%,50V,WT,TP,4X5.2MM	1	S.A
....4	C405	2402-001160	C-AL,SMD;330UF,20%,16V,WT,TP,1008	1	S.A
....4	C429	2402-001160	C-AL,SMD;330UF,20%,16V,WT,TP,1008	1	S.A
....4	C513	2402-001165	C-AL,SMD;4.7UF,20%,35V,WT,TP,4X5.8MM	1	S.A
....4	C514	2402-001165	C-AL,SMD;4.7UF,20%,35V,WT,TP,4X5.8MM	1	S.A
....4	C515	2402-001165	C-AL,SMD;4.7UF,20%,35V,WT,TP,4X5.8MM	1	S.A
....4	C516	2402-001165	C-AL,SMD;4.7UF,20%,35V,WT,TP,4X5.8MM	1	S.A
....4	C521	2402-001165	C-AL,SMD;4.7UF,20%,35V,WT,TP,4X5.8MM	1	S.A
....4	C524	2402-001165	C-AL,SMD;4.7UF,20%,35V,WT,TP,4X5.8MM	1	S.A
....4	C525	2402-001165	C-AL,SMD;4.7UF,20%,35V,WT,TP,4X5.8MM	1	S.A
....4	C526	2402-001165	C-AL,SMD;4.7UF,20%,35V,WT,TP,4X5.8MM	1	S.A
....4	C527	2402-001165	C-AL,SMD;4.7UF,20%,35V,WT,TP,4X5.8MM	1	S.A
....4	C528	2402-001165	C-AL,SMD;4.7UF,20%,35V,WT,TP,4X5.8MM	1	S.A
....4	C724	2402-001165	C-AL,SMD;4.7UF,20%,35V,WT,TP,4X5.8MM	1	S.A
....4	C201	2402-001178	C-AL,SMD;10uF,20%,16V,WT,TP,4.3x4.3x5.8m	1	S.A
....4	C530	2402-001178	C-AL,SMD;10uF,20%,16V,WT,TP,4.3x4.3x5.8m	1	S.A
....4	C509	2402-001183	C-AL,SMD;22UF,20%,16V,WT,TP,5.3X5.3X6MM	1	S.A
....4	C510	2402-001183	C-AL,SMD;22UF,20%,16V,WT,TP,5.3X5.3X6MM	1	S.A
....4	C709	2402-001222	C-AL,SMD;3.3UF,20%,50V,HR,TP,4.3X4.3X5.8	1	S.A
....4	T0052	2703-000222	INDUCTOR-SMD;560nH,10%,2012	1	S.A
....4	T0052	2703-000398	INDUCTOR-SMD;10uH,10%,3225	1	S.A
....4	T0052	2703-000398	INDUCTOR-SMD;10uH,10%,3225	1	S.A
....4	T0052	2703-000398	INDUCTOR-SMD;10uH,10%,3225	1	S.A
....4	T0052	2703-000398	INDUCTOR-SMD;10uH,10%,3225	1	S.A
....4	T0052	2703-001334	INDUCTOR-SMD;1.5uH,10%,2012	1	S.A
....4	T0052	2703-001334	INDUCTOR-SMD;1.5uH,10%,2012	1	S.A
....4	T0052	2703-001334	INDUCTOR-SMD;1.5uH,10%,2012	1	S.A
....4	T0052	2703-001778	INDUCTOR-SMD;3.3uH,20%,3225	1	S.A
....4	T0052	2703-001778	INDUCTOR-SMD;3.3uH,20%,3225	1	S.A
....4	T0052	2703-001778	INDUCTOR-SMD;3.3uH,20%,3225	1	S.A
....4	T0052	2703-001778	INDUCTOR-SMD;3.3uH,20%,3225	1	S.A
....4	T0052	2703-001778	INDUCTOR-SMD;3.3uH,20%,3225	1	S.A
....4	T0052	2703-001778	INDUCTOR-SMD;3.3uH,20%,3225	1	S.A
....4	T0052	2703-001778	INDUCTOR-SMD;3.3uH,20%,3225	1	S.A
....4	T0052	2703-001778	INDUCTOR-SMD;3.3uH,20%,3225	1	S.A
....4	T0052	2703-001778	INDUCTOR-SMD;3.3uH,20%,3225	1	S.A
....4	T0052	2703-001778	INDUCTOR-SMD;3.3uH,20%,3225	1	S.A
....4	T0052	2703-001778	INDUCTOR-SMD;3.3uH,20%,3225	1	S.A
....4	X300	2801-003667	CRYSTAL-SMD;14.31818MHz,30ppm,28-AAN,16,	1	S.A
....4	X700	2801-004004	CRYSTAL-SMD;20.25MHz,20ppm,28-AAN,13pF,2	1	S.A
....4	F103	2901-001302	FILTER-EMI SMD;20V,0.3A,-,-,2.0x1.2x1.3m	1	S.A
....4	F103	2901-001302	FILTER-EMI SMD;20V,0.3A,-,-,2.0x1.2x1.3m	1	S.A
....4	F103	2901-001302	FILTER-EMI SMD;20V,0.3A,-,-,2.0x1.2x1.3m	1	S.A
....4	F103	2901-001302	FILTER-EMI SMD;20V,0.3A,-,-,2.0x1.2x1.3m	1	S.A
....4	T0568	3301-001145	BEAD-SMD;60ohm,4516,TP,70ohm/45MHz,82ohm	1	S.N.A
....4	T0568	3301-001145	BEAD-SMD;60ohm,4516,TP,70ohm/45MHz,82ohm	1	S.N.A
....4	T0568	3301-001145	BEAD-SMD;60ohm,4516,TP,70ohm/45MHz,82ohm	1	S.N.A
....4	T0568	3301-001145	BEAD-SMD;60ohm,4516,TP,70ohm/45MHz,82ohm	1	S.N.A

## 6 Electrical Parts List

Level	Loc. No.	Code No.	Description & Specification	Q'ty	SA/SNA
....4	T0568	3301-001145	BEAD-SMD;60ohm,4516,TP,70ohm/45MHz,82ohm	1	S.N.A
....4	T0568	3301-001145	BEAD-SMD;60ohm,4516,TP,70ohm/45MHz,82ohm	1	S.N.A
....4	T0568	3301-001145	BEAD-SMD;60ohm,4516,TP,70ohm/45MHz,82ohm	1	S.N.A
....4	T0568	3301-001145	BEAD-SMD;60ohm,4516,TP,70ohm/45MHz,82ohm	1	S.N.A
....4	T0568	3301-001145	BEAD-SMD;60ohm,4516,TP,70ohm/45MHz,82ohm	1	S.N.A
....4	T0568	3301-001145	BEAD-SMD;60ohm,4516,TP,70ohm/45MHz,82ohm	1	S.N.A
....4	T0568	3301-001145	BEAD-SMD;60ohm,4516,TP,70ohm/45MHz,82ohm	1	S.N.A
....4	T0568	3301-001145	BEAD-SMD;60ohm,4516,TP,70ohm/45MHz,82ohm	1	S.N.A
....4	T0568	3301-001145	BEAD-SMD;60ohm,4516,TP,70ohm/45MHz,82ohm	1	S.N.A
....4	T0568	3301-001145	BEAD-SMD;60ohm,4516,TP,70ohm/45MHz,82ohm	1	S.N.A
....4	T0568	3301-001145	BEAD-SMD;60ohm,4516,TP,70ohm/45MHz,82ohm	1	S.N.A
....4	T0568	3301-001145	BEAD-SMD;60ohm,4516,TP,70ohm/45MHz,82ohm	1	S.N.A
....4	T0568	3301-001145	BEAD-SMD;60ohm,4516,TP,70ohm/45MHz,82ohm	1	S.N.A
....4	T0568	3301-001145	BEAD-SMD;60ohm,4516,TP,70ohm/45MHz,82ohm	1	S.N.A
....4	T0568	3301-001236	BEAD-SMD;60ohm,1608,-,-,-	1	S.N.A
....4	T0568	3301-001236	BEAD-SMD;60ohm,1608,-,-,-	1	S.N.A
....4	T0568	3301-001236	BEAD-SMD;60ohm,1608,-,-,-	1	S.N.A
....4	T0568	3301-001236	BEAD-SMD;60ohm,1608,-,-,-	1	S.N.A
....4	T0568	3301-001236	BEAD-SMD;60ohm,1608,-,-,-	1	S.N.A
....4	T0568	3301-001793	BEAD-SMD;18ohm,1608,-,TP,11.8ohm/37.6MHz	1	S.A
....4	IC705_SOCKET	3704-000249	SOCKET-IC;32P,PLCC,SN,1.27mm	1	S.A
....4	CN330	3711-003057	HEADER-BOARD TO CABLE;BOX,6P,1R,1.25MM,S	1	S.A
....4	CN330	3711-005291	HEADER-BOARD TO CABLE;BOX,2P,1R,2MM,SMD	1	S.A
....4	CN330	3711-005292	HEADER-BOARD TO CABLE;BOX,3P,1R,2MM,SMD	1	S.A
....4	CN330	3711-005292	HEADER-BOARD TO CABLE;BOX,3P,1R,2MM,SMD	1	S.A
....4	CN330	3711-005477	HEADER-BOARD TO CABLE;BOX,4P,1R,2mm,SMD	1	S.A
....4	CN330	3711-005497	HEADER-BOARD TO CABLE;BOX,15P,1R,1.25MM,	1	S.A
....4	CN330	3711-005503	HEADER-BOARD TO CABLE;BOX,9P,1R,2mm,SMD	1	S.A
....4	T0119	BN09-00018A	IC MICOM;VCT49X3R-XX-F2,144P,8.7,20.25,P	1	S.N.A
....4	L402	BN27-00002A	COIL-CHOKE(SMD);47uH,47uH,20%,12*12*8mm,	1	S.A
....4	T0077	BN41-00802A	PCB MAIN;BORDEAUX 19,FR-4,4,1.0,1.6,160*	1	S.N.A
0.1	M0003	BN92-01897G	ASSY BOX;LE19R71BX/BWT	1	S.N.A
..2	T0130	BN69-01444B	BOX-00,SET;19R71,SY-01,A,YEL,A1,EUROPE	1.02	S.N.A
..2	T0081	BN96-02895A	ASSY MISC P-HANDLE PACKING;ALL MODEL,BN6	1	S.N.A
...3	M0103	BN66-00007A	LEVER-TOP;ALL MODEL,LDPE,WHITE	1	S.N.A
...3	M0102	BN66-00008A	LEVER-BOTTOM;ALL MODEL,LDPE,WHITE	1	S.N.A
0.1	M0113	BN92-01898A	ASSY P/MATERIAL;19R71	1	S.N.A
..2	T0376	6902-000061	BAG AIR;LDPE,T0.2,L1000,W500,TRP,,,	0.006	S.N.A
..2	T0376	6902-000379	BAG AIR;LDPE,T0.2,W1000,L1800,TRP,-,-	0.002	S.N.A
..2	T0081	6902-000604	BAG WRAPPING;LDPE,T0.02,W500,L10000,TRP,	1.6	S.N.A
..2	M0081	6902-000609	BAG ROLL;LDPE,T0.05,W2400,L1000,TRP,-,-	0.032	S.N.A
..2	T0524	6902-000758	BAG PE;HDPE/HDPE/NITRON(DOUBLE),T0.015/T	1	S.N.A
0.1	M0045	BN92-01939L	ASSY ACCESSORY;LE19R71WX/BWT	1	S.N.A
..2	UNIT/ACCESSORY	BN96-03961H	ASSY ACCESSORY-I/B;LE19R71BX/BWT	1	S.N.A
...3	T0524	6902-000110	BAG PE;LDPE,T0.05,W250,L400,TRP,28,2	1	S.N.A
...3	ACCESSORY	AA68-03242E	MANUAL FLYER-01,SAFETY GUIDE;All Model,S	1	S.N.A
...3	ACCESSORY	AA68-03278B	MANUAL FLYER-01,WARRANTY CARD;CIS All mo	1	S.N.A
...3	ACCESSORY	AA68-03576A	MANUAL FLYER-01,REGISTRATION C;BWT,RU,RU	1	S.N.A
...3	T0511	BN68-01074E	MANUAL USERS;LE19R71B,SAMSUNG,3Langs,CIS	1	S.N.A
...3	ACCESSORY	BN63-01798A	CLOTH-CLEAN;RE40**,CLOTH,310,320,RHCM	1	S.N.A
..2	M0045	BN96-03961L	ASSY ACCESSORY;LE19R71WX/BWT	1	S.A
...3	T0268	3903-000042	CBF-POWER CORD;DT,EU,FP3/YES,IEC320 C13/	1	S.A
...3	T0524	6902-000110	BAG PE;LDPE,T0.05,W250,L400,TRP,28,2	1	S.N.A
...3	ACCESSORY	BN63-02715D	COVER-DECORATION LEFT;19R71,EQ(WHITE),AB	1	S.N.A
...3	ACCESSORY	BN63-02716D	COVER-DECORATION RIGHT;19R71,EQ(WHITE),A	1	S.N.A
..2	M0523	BN96-03969A	ASSY BRACKET P-WALL;BORDEAUX 19",SECC	1	S.N.A
...3	CIS	6902-000128	BAG ZIPPER;LDPE,T0.05,W200,L150,TRP,8,2-	1	S.N.A
...3	T0101	BN61-01162A	BRACKET-WALL;VE15,SECC,2.0	1	S.N.A
...3	M0132	BN96-01272A	ASSY MISC P-SCREW;VE15UO	1	S.N.A
...3		BN68-00850E	MANUAL FLYER-WALL POSITION;COMM,SAMSUNG,	1	S.N.A
...3		BN68-00850F	MANUAL FLYER-WALL MOUNT;COMM,SAMSUNG,Eng	1	S.N.A
..2	ACCESSORY	BP68-00597A	MANUAL FLYER-01,W/C;COMM,SAMSUNG,RUS,RUS	1	S.N.A
..2	T0074	BN59-00589A	REMOCON;Bordeaux 19, white,TM85,SAMSUNG	1	S.A
0.1		BN92-02133A	ASSY LABEL-WHITE;LE19R71BX/XEC	1	S.N.A

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## 14 Reference Information

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### 14-1 Technical Terms

#### - TFT-LCD

##### **(Thin film Transistor Liquid Crystal Display)**

ADC(Analog to Digital Converter)

This is a circuit that converts from analog signal to digital signals.

#### - PLL(Phase Locked Loop)

During progressing ADC, Device makes clock synchronizing HSYNC with Video clock

#### - Inverter

Device that supply Power to LCD panel lamp.  
this device generate about 1,500~2,000V.

#### - AC Adapter

Device that converts AC(90V~240V) to DC  
(+12V or 14V)

#### - SMPS(Switching Mode Power Supply)

Switching Mode Power supply. This design technology is used to step up/down the input power by switching on/off

#### - FRC(Frame Rate Controller)

Technology that change image frame quantity displayed on screen for one second.

Actually TFT-LCD panel require 60 pcs of frame for one second.

so, this technology is needed to convert input image to 60 pcs regardless input frame quantity.

#### - Image Scaler

Technology that convert various input resolution to other resolution.(ex. 640\* 480 to 1024\*768)

#### - Auto Configuration(Auto adjustment)

This is an algorithm to adjust monitor to optimum condition by pushing one key.

#### - OSD(On Screen Display)

On screen display. customer can control the screen easily with this.

#### - Image Lock

This means "Fineness adjustment" in LCD Monitor, the features are "Fine" and "Coarse"

#### - FINE

"Fine" adjustment is used to adjust visibility by control phase difference.

#### - COARSE

This is a adjustment by tuning with Video colck and PLL clock.

#### - DVI (Digital Visual Interface)

This provides a high speed digital connection for visual data types that is display technology independent. this interface is primarily focused at providing a connection between a computer and its display device.

#### - L.V.D.S.(Low Voltage Differential Signaling)

a kind of transmission method for Digital.It can be used from Main PBA to Panel.

#### - T.M.D.S

##### **(Transition minimized Differential Signaling)**

a kind of transmission method for Digital.

It can be used from Video card to Main PBA.

#### - DDC(Display data channel)

It is a communication method between Host Computer and related equipment.

It can make it Plug and Play between PC and Monitor.

#### - EDID

Extended Display Identification Data PC can recognize the monitor information as Product data, Product name, Display mode, Serial number and Signal source, etc through DDC Line communicating with PC and Monitor.

**- Dot Pitch**

The image on a monitor is composed of red, green and blue dots. The closer the dots, the higher the resolution. The distance between two dots of the same color is called the 'Dot Pitch'. Unit: mm

**- Vertical Frequency**

The screen must be redrawn several times per second in order to create and display an image for the user. The frequency of this repetition per second is called Vertical Frequency or Refresh Rate. Unit: Hz

**Example:** If the same light repeats itself 60 times per second, this is regarded as 60 Hz.

**- Horizontal Frequency**

The time to scan one line connecting the right edge to the left edge of the screen horizontally is called Horizontal Cycle. The inverse number of the Horizontal Cycle is called Horizontal Frequency. Unit: kHz

**- Interlace and Non-Interlace Methods**

Showing the horizontal lines of the screen from the top to the bottom in order is called the Non-Interlace method while showing odd lines and then even lines in turn is called the Interlace method. The Non-Interlace method is used for the majority of monitors to ensure a clear image. The Interlace method is the same as that used in TVs.

**- Plug & Play**

This is a function that provides the best quality screen for the user by allowing the computer and the monitor to exchange information automatically. This monitor follows the international standard VESA DDC for the Plug & Play function.

**- Resolution**

The number of horizontal and vertical dots used to compose the screen image is called 'resolution'. This number shows the accuracy of the display. High resolution is good for performing multiple tasks as more image information can be shown on the screen.

**Example:** If the resolution is 1280 x 1024, this means the screen is composed of 1280 horizontal dots (horizontal resolution) and 1024 vertical lines (vertical resolution).

**- DVD**

A type of digital disk technology that takes up only the benefits of CD and LD, to implement a high resolution/quality, which enables the user to enjoy clearer images.

**- DTV**

Broadcasting (Digital TV Broadcasting)  
An enhanced broadcasting technology to process digital video signals using a set-top box, which implements a high resolution and clearer digital images on the screen.

**- A2**

This system uses two carriers to transmit voice data. Countries such as South Korea and Germany use this system.

**- BTSC**

Broadcast Television System Committee  
The stereo broadcasting system that is used in most of the countries that have adopted the NTSC system, including the United States, Canada, Chile, Venezuela and Taiwan. It also refers to the organization that has been organized to promote its development and management.

**- EIAJ**

Electronic Industries Association of Japan.

**- RF Cable**

A round signal cable generally used for TV antennas.

**- Satellite Broadcasting**

Broadcasting service provided via satellite. Enables high picture quality and clear sound throughout the country regardless of the location of the viewer.

**- Sound Balance**

Balances the levels of the sound coming from each speaker in televisions with two speakers.

**- Cable TV**

Whereas the terrestrial broadcasting is delivered via frequency signals through the air, cable broadcasting is transmitted via a cable network. In order to view cable TV, one must purchase a cable receiver and hook it up to the cable network.

**- CATV**

"CATV" refers to the broadcasting service offered at hotels, schools and other buildings through their own broadcasting system, apart from VHF or UHF broadcasting by terrestrial broadcasters. The CATV programs may include movies, entertainment and educational programs. (Different from cable TV.)  
CATV can be viewed only within the area in which the CATV service is offered.

**- S-Video**

Short for "Super Video." S-Video allows up to 800 lines of horizontal resolution, enabling high-quality video.

**- VHF/UHF**

VHF indicates TV channels 2 to 13, and UHF indicates channels 14 through 69.

**- Channel Fine Tuning**

This feature allows the viewer to fine-tune the TV channel to obtain the best viewing conditions. The Samsung LCD TV has both automatic and manual channel fine-tuning features to enable the viewer to adjust their desired settings.

**- External Device Input**

External device input refers to video input from such external video device as VCR, camcorder and DVD player, separate from a TV broadcast.

**- LNA (Low Noise Amplifier)**

This derives from artificial satellite technology that amplifies weak signals even in poor reception areas for sharper images.

**- Antenna Converter**

A connection part that is used to link a wide antenna cable (feeder cable) to the TV.

**- English Caption (= Caption Setting)**

A kind of language selection feature that provides English subtitles (caption) or character information services from broadcasting services (ex: AFKN) or video tapes (marked CC), and which are especially useful for studying English.

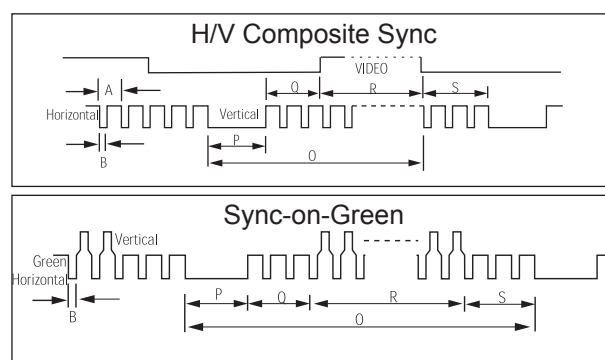
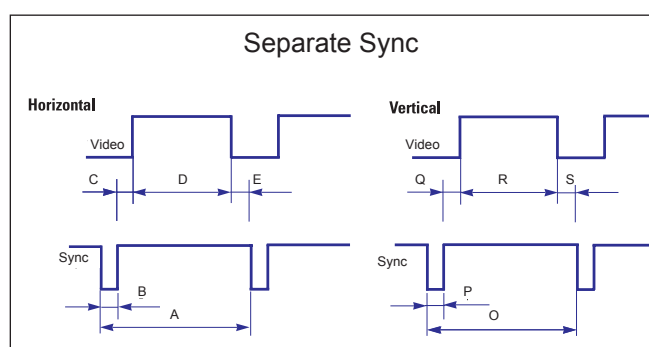
## 14-2 Pin Assignments

<div> <div>Sync Type</div> <div>Pin No.</div> </div>	15-Pin Signal Cable Connector	
	Separate	Composite
1	Red	Red
2	Green	Green
3	Blue	Blue
4	GND	GND
5	GND (DDC Return)	GND (DDC Return)
6	GND-Red	GND-Red
7	GND-Green	GND-Green
8	GND-Blue	GND-Blue
9	DDC +5V	DDC +5V
10	CHK D_SUB	CHK D_SUB
11	GND	GND
12	DDC Data	DDC Data
13	Horizontal sync	H/V-Sync
14	Vertical sync	Not Used
15	DDC Clock	DDC Clock

## 14-3 Timing Chart

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

Mode  Timing	IBM		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	1024/60Hz 1024 x 768	1024/75Hz 1024 x 768	1280/60Hz 1280x1024	1280/75Hz 1280x1024 (Analog Only)	1440/60Hz 1440x900	1440/75Hz 1440x900	
fH (kHz)	31.469	31.469	37.500	35.879	46.875	48.363	60.023	63.981	79.976	55.935	75.000	
A μsec	31.777	31.778	26.667	26.400	21.333	20.677	16.660	11.852	12.504	17.878	14.157	
B μsec	3.813	3.813	2.032	3.200	1.616	2.092	1.219	1.037	1.067	1.427	1.112	
C μsec	1.589	1.589	3.810	2.200	3.232	2.462	2.235	2.296	1.837	2.178	1.814	
D μsec	26.058	26.058	20.317	20.000	16.162	15.754	13.003	9.259	9.481	13.521	10.530	
E μsec	0.318	0.318	0.508	1.000	0.323	0.369	0.203	0.444	0.119	0.751	0.702	
fV (Hz)	70.087	59.940	75.000	60.317	75.000	60.004	75.029	60.020	75.025	59.887	75.000	
O msec	14.268	16.683	13.333	16.579	13.333	16.666	13.328	60.020	13.329	16.698	13.336	
P msec	0.064	0.064	0.080	0.106	0.064	0.124	0.050	0.047	0.038	0.107	0.085	
Q msec	0.858	0.794	0.427	0.607	0.448	0.600	0.466	0.594	0.475	0.447	0.467	
R msec	13.155	15.761	12.800	15.840	12.800	15.880	12.795	15.630	12.804	16.090	12.741	
S msec	0.191	0.064	0.027	0.026	0.021	0.062	0.017	0.016	0.013	0.054	0.042	
Clock Freq. (MHz)	28.322	25.175	31.500	40.000	49.500	75.000	78.750	108.000	135.000	106.500	136.750	
Polarity												
H.Sync	Negative	Negative	Negative	Positive	Positive	Negative	Positive	Positive	Positive	Negative	Negative	
V.Sync	Positive	Negative	Negative	Positive	Positive	Negative	Positive	Positive	Positive	Positive	Positive	
Remark	Separate	Separate	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

## 14-4 Preset Timing Modes

-If the signal transferred from the computer is the same as the following Preset Timing Modes, the screen will be adjusted automatically. However, if the signal differs, the screen may go blank while the power LED is on. Refer to the video card manual and adjust the screen as follows.

Table 1. Preset Timing

Display Mode	Horizontal Frequency (kHz)	Vertical Frequency (Hz)	Pixel Clock (MHz)	Sync Polarity (H/V)
MAC, 640 x 480	35.000	66.667	30.240	-/-
MAC, 832 x 624	49.726	74.551	57.284	-/-
MAC, 1152 x 870	68.681	75.062	100.000	-/-
IBM, 640 x 350	31.469	70.086	25.175	+/-
IBM, 640 x 480	31.469	59.940	25.175	-/-
IBM, 720 x 400	31.469	70.087	28.322	-/+
VESA, 640 x 480	37.500	75.000	31.500	-/-
VESA, 640 x 480	37.861	72.809	31.500	-/-
VESA, 800 x 600	35.156	56.250	36.000	+, -/+, -
VESA, 800 x 600	37.879	60.317	40.000	+/+
VESA, 800 x 600	48.077	72.188	50.000	+/+
VESA, 800 x 600	46.875	75.000	49.500	+/+
VESA, 1024 x 768	48.363	60.004	65.000	-/-
VESA, 1024 x 768	56.476	70.069	75.000	-/-
VESA, 1024 x 768	60.023	75.029	78.750	+/+
VESA, 1280 X 960	60.000	60.000	108.00	+/+
VESA, 1280 X 1024	63.981	60.020	108.00	+/+
VESA, 1280 X 1024	79.976	75.025	135.00	+/+
VESA, 1440 x 900	55.935	59.887	106.5	-/+

### Horizontal Frequency

The time to scan one line connecting the right edge to the left edge of the screen horizontally is called Horizontal Cycle and the inverse number of the Horizontal Cycle is called Horizontal Frequency. Unit: kHz

### Vertical Frequency

Like a fluorescent lamp, the screen has to repeat the same image many times per second to display an image to the user. The frequency of this repetition is called Vertical Frequency or Refresh Rate. Unit: Hz

## 14-5 Panel Description

Maker	VENDOR P/N	PANEL_CODE	PANEL_ABB	STICKER_CODE	Remarks
SEC	LT140X1-002	BN07-00004A	SA	BN68-00239H	-
SEC	LT150XS-L01	BN07-00009A	SB		-
SEC	LT150XS-L01-B	BN07-00022A	SC		-
SEC	LTM150XS-L02	BN07-00005A	SD		-
SEC	LT181E2-132	BN07-00001A	SE		-
SEC	LT150XS-T01	BN07-00010A	SF		-
SEC	LTM181E3-132	BN07-00019A	SG		-
SEC	LT170E2-131	BN07-10001D	SH		-
SEC	LT181E2-131	BN07-10001E	SJ		-
SEC	LTM170E4-L01	BN07-00018A	SK		-
SEC	LTM240W1-L01	BN07-00015A	SL		-
SEC	LTM213U3-L01	BN07-00016A	SM		-
SEC	LTM150XH-L01	BN07-00026A	SN		-
SEC	LTM150XH-L03	BN07-00027A	SP		-
SEC	LTM150XS-L01	BN07-00032A	SQ		DELL(ZPD)
SEC	LTM181E4-L01	BN07-00034A	SR		PVA
SEC	LTM170EH-L01	BN07-00036A	SS		TN
SEC	LTM170E5-L01	BN07-00037A	SU		PVA
SEC	LTM150XH-L11	BN07-00041A	SV		-
SEC	LTM213U4-L01	BN07-00039A	SW		PVA
SEC	LTM150XH-L01(ZPD)	BN07-00045A	SX		ZPD
SEC	LTM150XH-L04	BN07-00046A	SY		New panel with high brightness
SEC	LTM170W1-L01	BN07-00047A	SZ		Panel for TV
SEC	LTM150XH-L06	BN07-00053A	EA		Panel for TV/ High luminance for 450cd _ SONY&EOS Team Panel for TV
SEC	LTM153W1-L01	BN07-00054A	EB		Use NIKE MODEL
SEC	LTM170EH-L05	BN07-00055A	EC		Panel EOS proj. for high brightness of 17" EH-L05
SEC	LTM170E5-L03	BN07-00056A	ED		Dell 1702FP pro. E4. EH mechanical Compatible
SEC	LTM190E1-L01	BN07-00057A	EE		DELL 1900 FP
SEC	LTM181E5-L01	BN07-00061A	EF		18" narrow bezel GH18PS
SEC	LTM150XP-L01	BN07-00065A	EG		AMLCD PVA PANEL
SEC	LTM240W1-L02	BN07-00062A	EH		Panel for 15" Wide TV
SEC	LTM170EU-L01	BN07-00071A	EJ		Slim design, TN
SEC	LTM170E5-L04	BN07-00072A	EK		E5-L04 6 bits FRC... for IBM
SEC	LTA220W1-L01	BN07-00074A	EL		Panel for 22" TV
SEC	LTM170E6-L02	BN07-00075A	EM		AMLCD Narrow & slim design 17" PVA mode
SEC	LTM170W1-L01	BN07-00082A	EN		LTM170W1-L01 ZPD panel
SEC	LTM170EH-L01	BN07-00080A	EP		LTM170EH-L01 ZPD panel
SEC	LTM170E5-L01	BN07-00081A	EQ		LTM170E5-L01 ZPD panel
SEC	LTM170EH-L05	BN07-00083A	ER		LTM170EH-L05 ZPD panel
SEC	LTM170E5-L03	BN07-00084A	ES		LTM170E5-L03 ZPD panel
SEC	LTM170EU-L01	BN07-00085A	ET		LTM170EU-L01 ZPD panel
SEC	LTM170E5-L04	BN07-00086A	EU		LTM170E5-L04 ZPD panel
SEC	LTM170E6-L02	BN07-00087A	EV		LTM170E6-L02 ZPD panel
SEC	LTM150XH-L06	BN07-00091A	EW		Color coordinates change for LCD TV
SEC	LTM153W1-L01	BN07-00092A	EX		AMLCD WIDE 15",9/10
SEC	LTM170W1-L01	BN07-00100A	EY		Color Coordinates change code management
SEC	LTM170EH-L05	BN07-00097A	EZ		LTM170E5-L05 Color Coordinates Change Panel Code

## 14 Reference Information

Maker	VENDOR P/N	PANEL_CODE	PANEL_ABB	STICKER_CODE	Remarks
SEC	LTA400W1-L01	BN07-00109A	S1		PANEL of AMLCD 40" TV
SEC	LTM153W1-L01	BN07-00110A	S2		Color coordinates change 0.280/0.290, 10000k & ZPD Panel
SEC	LTM150XH-L06	BN07-00111A	S3		Color coordinates change 0.280/0.290, 10000k & ZPD Panel
SEC	LTM170W1-L01	BN07-00112A	S4		Color coordinates change 0.280/0.290, 10000k & ZPD Panel
SEC	LTM170EH-L05	BN07-00113A	S5		Color coordinates change 0.280/0.290, 10000k & ZPD Panel
SEC	LTM220W1-L01	BN07-00114A	S6		ZPD Panel for AMLCD 22" TV
SEC	LTM150XH-L06	BN07-00117A	S7		ZPD Panel code
SEC	LTM153W1-L01	BN07-00118A	S8		ZPD Panel code
SEC	LTM170WP-L01	BN07-00119A	S9		PVA Panel for NIKE
SEC	LTM213U4-L01	BN07-00039A	E1		21.3" NARROW
SEC	LTA260W1-L01	BN07-00121A	E2		VENUS
SEC	LTA220W1-L01	BN07-00074B	E3		"Panel B-level panel code for 22"" TV Panel "
SEC	LTA320W1-L01	BN07-00108A	E4		"Panel for AMLCD 32"" TV"
SEC	LTM213U4-L01	BN07-00124A	E5		NARROW BEZEL 21 " PANEL
SEC	LTM170E6-L04	BN07-00129A	E6		"HIGHLAND 17"" LOW PANEL (Panel only for TCO03)"
SEC	LTM190E1-L01	BN07-00088A	E7		LTM190E1-L01 ZPD panel
SEC	M150X4-L06	BN07-00137A	E8		15" Narrow & Slim panel
SEC	LTA170V1	BN07-00139A	E9		"17"" Panel for Muse 4:3 VGA TV"
SEC	LTM190E1-L02	BN07-00128A	E10		"New Panel from AMLCDI, Specification : 6bit Driver IC"
SEC	LTM170EX-L01	BN07-00143A	E11		"Development new Panel from AMLCD"
SEC	LTM170E8-L01	BN07-00144A	E12		"Development new Panel from AMLCD"
SEC	LTM170E6-L04	BN07-00129B	E13		"ZPD panel for AMLCD (Panel only for TCO03)"
SEC	LTA320W1-L02	BN07-00108B	E14		"Creat B-level Panel code for AMLCD 32"" TV"
SEC	LTM190E1-L03	BN07-00151A	E15		"Development new 19"" Panel form AMLCD (Panel only for TCO03)"
SEC	LTM240W1-L03	BN07-00134A	E16		"AMLCD 24"" panel development"
SEC	LTM190E1-L02	BN07-00128B	E17		"New Panel from AMLCD, Specification : 6bit Driver IC(ZPD)"
SEC	LTM190E4-L01	BN07-00145A	E18		"AMLCD 24"" new panel development"
SEC	LTM170E8-L01	BN07-00158A	E19		"ZPD code derivation"
SEC	LTM170EX-L01	BN07-00159A	E20		"ZPD code derivation"
SEC	LTM190E1-L03	BN07-00151B	E21		"Creat new panel code for AMLCD 19"" (Panel only for TCO03)"
SEC	LTA460H1-L01	BN07-00157A	E22		"creat panel code for AMLCD 46"" TV "
SEC	LTM170EU-L11	BN07-00160A	E23		"creat new panel code for AMLCD 17"" (Panel only for TCO03)"
SEC	LTM240W1-L03	BN07-00134B	E24		"24"" panel ZPD code derivation"
SEC	LTM190E4-L01	BN07-00145B	E25		"AMLCD 19"" ZPD Panel code derivation"
SEC	LTM240W1-L03	BN07-00134B	E26		"24"" panel ZPD code derivation"
SEC	LTM150XO-L01	BN07-00164A	E27		"AMLCD 15"" XO-L01 new panel development"
SEC	LTM150XO-L01	BN07-00164B	E28		"AMLCD 15"" XO-L01 ZPD code derivation"
SEC	LTM170EU-L11	BN07-00160B	E29		"AMLCD 17"" NEW panel code derivation"
SEC	LTA320W2-L01	BN07-00172A	SPZ		AMLCD 32" NEW panel
SEC	LTM213U4-L01	BN07-00124B	SPZ		21.3" Narrow PANEL ZPD Panel derivation
SEC	LTM170EU-L11	BN07-00189A	STH		AMLCD EU-L11 Pb free panel code derivation
SEC	LTM170EU-L11	BN07-00189B	STZ		AMLCD EU-L11 Pb free panel ZPD code derivation
SEC	LTM240W1-L04	BN07-00188A	SPH		24" A-DCC new panel development
SEC	LTM240W1-L04	BN07-00188B	SPZ		24" A-DCC panel ZPD code derivation
SEC	LTM190EX-L01	BN07-00191A	STH		AMLCD 19" TN new Panel
SEC	LTM190EX-L02	BN07-00191B	STZ		AMLCD 19" TN new Panel ZPD derivation
SEC	LTA230W1-L02	BN07-00184A	SPZ		AMLCD 23" 16:9 new Panel

Maker	VENDOR P/N	PANEL_CODE	PANEL_ABB	STICKER_CODE	Remarks
SEC	LTA260W2-L01	BN07-00185A	SPZ		AMLCD 26" 16:9 new Panel
SEC	LTM240M1-L01	BN07-00195A	SPH		24" panel with high brightness development
SEC	LTA400W2-L01	BN07-00186A	SPZ		AMLCD 40" 16:9 new Panel
SEC	LTM150XO-L01	BN07-00197A	STH		AMLCD 15" XO-L01 Pb free panel code
SEC	LTM150XO-L01	BN07-00197B	STZ		AMLCD 15" XO-L01 Pb free panel ZPD code
SEC	LTM170EU-L21	BN07-00202A	STZ		AMLCD EU-L21 ZPD new code derivation
SEC	LTA460W2-L03	BN07-00187A	SPZ		BEETOVEN 46"ZPD new panel
SEC	LTM240M1-L01	BN07-00195B	SPZ		24" igh brightness panel ZPD code derivation
SEC	M170EX-L21	BN07-00206A	STZ		AMLCD LTM170EX-L21 ZPD new code derivation
SEC	LTA460H3-L01	BN07-00200A	SPZ		AMLCD 46" LED BLU panel
SEC	LTM170EU-L15	BN07-00214A	STZ		AMLCD EU-L15 TV high brightness ZPD new code derivation
SEC	LTM170E8-L21	BN07-00218A	SPZ		AMLCD LTM170E8-L21 PVA ZPD new code derivation
SEC	LTM190EX-L21	BN07-00222A	STZ		DISPLAY LCD
SEC	LTM201U1-L01	BN07-00190B	SPZ		AMLCD 20.1" Normal panel ZPD code derivation
SEC	LTM190E4-L21	BN07-00223A	SPZ		HAYDN 17" PZD code PANEL derivation
SEC	LTA570H1-L01	BN07-00196A	SPZ		AMLCD 57" new panel development
SEC	LTM150XO-L21	BN07-00229A	STZ		AMLCD 15" XO-L21 8ms panel code
SEC	LTA260W2-L11	BN07-00239A	SPZ		AMLCD 26" 16:9 7Line new Panel
SEC	LTA400WS-LH1	BN07-00245A	SPZ		AMLCD 40" 16:9 SPVA 90% new Panel
SEC	LTM213U6-L01	BN07-00231A	SPZ		AMLCD 21.3" PVA new Panel Code
SEC	LTA320WS-LH2	BN07-00244A	SPZ		AMLCD 32" 16:9 SPVA 90% new Panel
SEC	LTA400WS-LH1	BN07-00245A	SPZ		AMLCD 40" 16:9 SPVA 90% new Panel
CPT	CLAA150XG09	BN07-00141A	PA		"CPT 15"" Monitor new panel development"
CPT	CLAA170EA02	BN07-00148A	PB		"17"" CPT NEW development panel"
CPT	CLAA170EA02	BN07-00148B	PC		"17"" CPT ZPD panel code derivation"
CPT	CLAA150XG09	BN07-00141B	PTZ		"CPT 15"" panel ZPD code derivation (GOYA-PJT)"
CPT	CLAA150XP01	BN07-00173A	PTH		CPT 15" PSWG code derivation
CPT	CLAA150XP01	BN07-00173B	PTZ		CPT 15" PSWG panel ZPD code
CPT	CLAA170EA07	BN07-00174A	PTH		"CPT 17"" PSWG panel code derivation
CPT	CLAA170EA07	BN07-00174B	PTZ		CPT 17"" PSWG type new Panel code""
CPT	CLAA170EA07	BN07-00174B	PTZ		CPT 17" PSWG type new Panel code
CPT	CLAA170EA07Q	BN07-00220A	PTZ		CPT 17" PSWG R/T 8msec code derivation
CPT	CLAA170EA07Q	BN07-00220B	PTH		CPT 17" PSWG R/T 8msec HPD code derivation
CPT	CLAA150XP01F	BN07-00236A	PTZ		CPT 15" PSWG panel ZPD & Lead free code derivation
TOSHIBA	LTM15C419(A)	BN07-00002A	TA		-
TOSHIBA	LTM15C423(B)	BN07-00006A	TB		-
TOSHIBA	LTM18C161	BN07-00008A	TC		-
TOSHIBA	LTM15C443	BN07-00031A	TD		-
TOSHIBA	LTM15C458	BN07-00043A	TE		-
TOSHIBA	LTM15C458S	BN07-00077A	TF		"TSB 15"" high brightness Panel"
TOSHIBA	LTM15C458	BN07-00078A	TG		Toshiba ZPD panel
TOSHIBA	LTM15C458S	BN07-00099A	TH		TSB LTM15C458S ( ZPD )
HANNSTAR	HSD150MX41A(A)	BN07-00020A	NA		"TTL type"
HANNSTAR	HSD150MX12	BN07-00030A	NB		"TTL type"
HANNSTAR	HSD170ME13	BN07-00180A	NTH		Hannstar 17" TN new panel development
HANNSTAR	HSD170ME13	BN07-00180B	NTZ		Hannstar 17" TN new panel development ZPD code derivation
HANNSTAR	HSD190ME12	BN07-00210A	NTZ		Hannstar 19" TN new panel development

## 14 Reference Information

Maker	VENDOR P/N	PANEL_CODE	PANEL_ABB	STICKER_CODE	Remarks
HANNSTAR	HSD150MX17-A	BN07-00226A	NTZ		Hannstar 15" slim panel ZPD code derivation
TORISAN	TM150XG-22L03(A)	BN07-00021A	RA		-
TORISAN	TM150XG-26L06	BN07-00042A	RB		-
TORISAN	TM181SX-76N01	BN07-00048A	RC		-
TORISAN	TM150XG-26L06	BN07-00059A	RD		15" XGA TN MODE(ZPD)
TORISAN	TM290WX-71N31	BN07-00063A	RE		"RS24NS (TORISAN 29"" NEW PANEL)"
TORISAN	TM396WX-71N31	BN07-00064A	RF		"RS24NS (TORISAN 40"" NEW PANEL)"
TORISAN	TM150XG-26L09	BN07-00073A	RG		"Panel for 15"" TV"
TORISAN	TM150XG-26L10	BN07-00089A	RH		"L10(change except D/I/C) ZPD"
TORISAN	TM150XG-26L10	BN07-00090A	RJ		L10 NORMAL
TORISAN	TM190SX-70N01	BN07-00098A	RK		Torisan 19" Panel
TORISAN	TM181SX-76N01	BN07-00106A	RL		ZPD Panel code
TORISAN	TM190SX-70N01	BN07-00107A	RM		ZPD Panel code
TORISAN	TM290WX-71N31	BN07-00115A	RN		"Color Coordinates change panel for TORISAN 29"" TV"
TORISAN	TM396WX-71N31	BN07-00116A	RP,Q		"Color Coordinates change panel for TORISAN 40"" TV"
TORISAN	TM220WX-71N31	BN07-00125A	RR		"Development TORISAN 22"" TV PANEL (ZPD)"
TORISAN	TM220WX-71N31	BN07-00127A	RS		"Development TORISAN 22"" TV PANEL (HPD)"
TORISAN	TM396WX-71N32A	BN07-00150A	RT		120V inverter Exclusive panel
TORISAN	TM190SX-70N02	BN07-00154A	RMH		Torisan 6bit panel code Derivation
TORISAN	TM190SX-70N02	BN07-00154B	RMZ		Torisan 6bit panel code Derivation
TORISAN	TM150XG-A01	BN07-00162A	RTH		Torisan 15" Narrow & Slim panel development
TORISAN	TM150XG-A01	BN07-00162B	RTZ		Torisan 15" N&S panel ZPD code Derivation
SHARP	LQ181E1DG11(A)	BN07-10001C	PA		-
SHARP	LQ150X1LW71	BN07-00067A	PB		SHARP 15" PVA PANEL
SHARP	LQ370T3LZ41	BN07-00216A	FAZ		Rome2
HITACHI	TX38D12VC0CAA(A)	BN07-00003A	HA		-
HITACHI	TX43DVCOCAB	BN07-00060A	HB		17" SXGA PVA MODE
HITACHI	TX43D15VC0CAB	BN07-00101A	HC		ZPD Panel
HITACHI	TX51D11VC0CAB	BN07-00122A	HD		20.1" NARROW
HITACHI	TX54D11VC0CAB	BN07-00123A	HE		21.3" NARROW
HITACHI	TX80D12VC0CAB	BN07-00169A	HIZ		"Development new panel for Hitachi 32"" TV (ZPD)"
HITACHI	TX54D11VC0CAB	BN07-00123B	HIZ		Hitachi 21.3"ZPD panel
IBM	ITSX94S	BN07-00017A	IA		-
UNIPAC	UM170E0	BN07-00028A	UA		Loaded by cisdba
HYUNDAI	HT15X13	BN07-00035A	DA		-
HYUNDAI	HT17E11-200	BN07-00049A	DB		TN MODE
HYUNDAI	HT17E11-300	BN07-00093A	DC		HT17E11-300 ZPD panel
HYUNDAI	HT17E11-400	BN07-00094A	DD		HT17E11-400 normal panel
HYUNDAI	HT17E11-400	BN07-00095A	DE		HT17E11-400 ZPD panel code
HYUNDAI	HT17E12	BN07-00096A	DF		HT17E12 ( Narrow & slim Design )
HYUNDAI	HT17E12	BN07-00105A	DG		ZPD Panel code
HYUNDAI	HT15X15-D00	BN07-00146A	DH		"Development for Ares 15"" Hydis TV"
HYUNDAI	HT15X15-D01	BN07-00146B	DJ		"Derivation panel HPD for Ares 15"" Hydis TV "
HYUNDAI	HT17E13-100	BN07-00167A	DTH		"PINEHURST-2(IBM) PJT 17"" HYDIS PANEL Derivation"
HYUNDAI	HT17E13-100	BN07-00167B	DTZ		"PINEHURST-2(IBM) Hydis 17"" ZPD code Derivation"
ACER	L170E3	BN07-00044A	AA		TN(ADT)
ACER	M170EN05	BN07-00076A	AB		AU 17" Panel ( Narrow & slim design )

Maker	VENDOR P/N	PANEL_CODE	PANEL_ABB	STICKER_CODE	Remarks
ACER	M170EN05	BN07-00102A	AC		ZPD Panel code
ACER	M190EN02	BN07-00170A	AMH		"AU Monitor 19"" new panel development (P19-1S)"
ACER	M190EN02	BN07-00170B	AMZ		"AU 19"" ZPD code derivation (ZPD)"
ACER	M170EN06	BN07-00171A	ATH		"AU Monitor 17"" New panel development "
ACER	T260XW01	BN07-00163A	AMZ		"AU 26"" new panel development (NF26EO)"
ACER	A201SN01	BN07-00177A	ATZ		"AU TV panel 20.1"" TN SVGA new panel development"
ACER	M170EN06	BN07-00171B	ATZ		AU Monitor 17" ZPD code derivation
ACER	T315XW01	BN07-00194A	AMZ		AU 32" new
ACER	M170EG01	BN07-00192A	ATH		AU TN PSWG type new Panel code
ACER	M170EG01	BN07-00192B	ATZ		AU TN PSWG type NEW panel code derivation
ACER	M190EN04	BN07-00203A	ATH		AU Monitor 19" ZPD new Panel code
ACER	T260XW02	BN07-00208A	AMZ		AUO 26" ZPD panel
ACER	M170EG01 V8	BN07-00221A	ATZ		AU TN PSWG type new Panel (8msec) ZPD code derivation
ACER	T260XW02	BN07-00233A	AMZ		AUO 26" Panel new (Cosmetic spec down grade)
ACER	T315XW01	BN07-00234A	AMZ		AUO 32" Grade new (Cosmetic spec down grade)
ACER	M190EN03	BN07-00224A	AMZ		AU Monitor 19" MVA new code derivation
ACER	T315XW01	BN07-00237A	AMZ		LCD TV VE project new
ACER	T315XW01	BN07-00238A	AMZ		LCD TV VE project new
ACER	M201UN02 V3	BN07-00168A	AMZ		
CHIMEI	M170E3-L01	BN07-00050A	CA		TN PANEL
CHIMEI	M150X3-L01	BN07-00051A	CB		COMPATIBLE
CHIMEI	M170E4-L01	BN07-00052A	CC		MVA PANEL
CHIMEI	M150X2-L01	BN07-00066A	CD		CHIMEI 15" PVA PANEL
CHIMEI	M150X3-L01	BN07-00079A	CE		Chimei ZPD panel
CHIMEI	M170E3-L01	BN07-00103A	CF		ZPD Panel code
CHIMEI	M170E4-L01	BN07-00104A	CG		ZPD Panel code
CHIMEI	V296W1-L01	BN07-00120A	CH		MVA
CHIMEI	M170E6-L02	BN07-00126A	CJ		HIGHLAND 17" LOW PANEL
CHIMEI	M190E2-L01	BN07-00131A	CK		GH19AS,BS CHIMEI PANEL
CHIMEI	M150X4-L06	BN07-00137A	CL		15" Narrow & Slim panel
CHIMEI	M170E6-L01	BN07-00133A	CM		"2003-03-11 vendor change"
CHIMEI	M170E6-L01	BN07-00133B	CN		ZPD derivation panel
CHIMEI	V201V1-T01	BN07-00135A	CP		CHIMEI 20.1" panel development
CHIMEI	M170E6-L02	BN07-00126B	CQ		"HIGHLAND 17"" LOW PANEL ZPD derivation panel"
CHIMEI	M170E6-L05	BN07-00152A	CR		"CMO 17"" new panel development code"
CHIMEI	M170E6-L05	BN07-00152B	CS		"CMO 17"" ZPD panel code derivation"
CHIMEI	M150X4-L06	BN07-00137B	CT		Chimei 15" Narrow & Slim panel ZPD derivation
CHIMEI	M170E5-L05	BN07-00165A	CTH		CMO 17" new panel development code (GOYA2-PJT)
CHIMEI	M170E5-L05	BN07-00165B	CTZ		CMO 17" ZPD panel(GOYA2-PJT)
CHIMEI	V230W1-L02	BN07-00209A	CMZ		CMO 23" development
CHIMEI	V320B1-L01	BN07-00207A	CMZ		CMO 32" development
CHIMEI	V270W1-L01	BN07-00136A	CMZ		CHI MEI 27" panel development
NEC	SVA150XG04TB	BN07-00225A	BTZ		SVA NEC 15" panel ZPD code

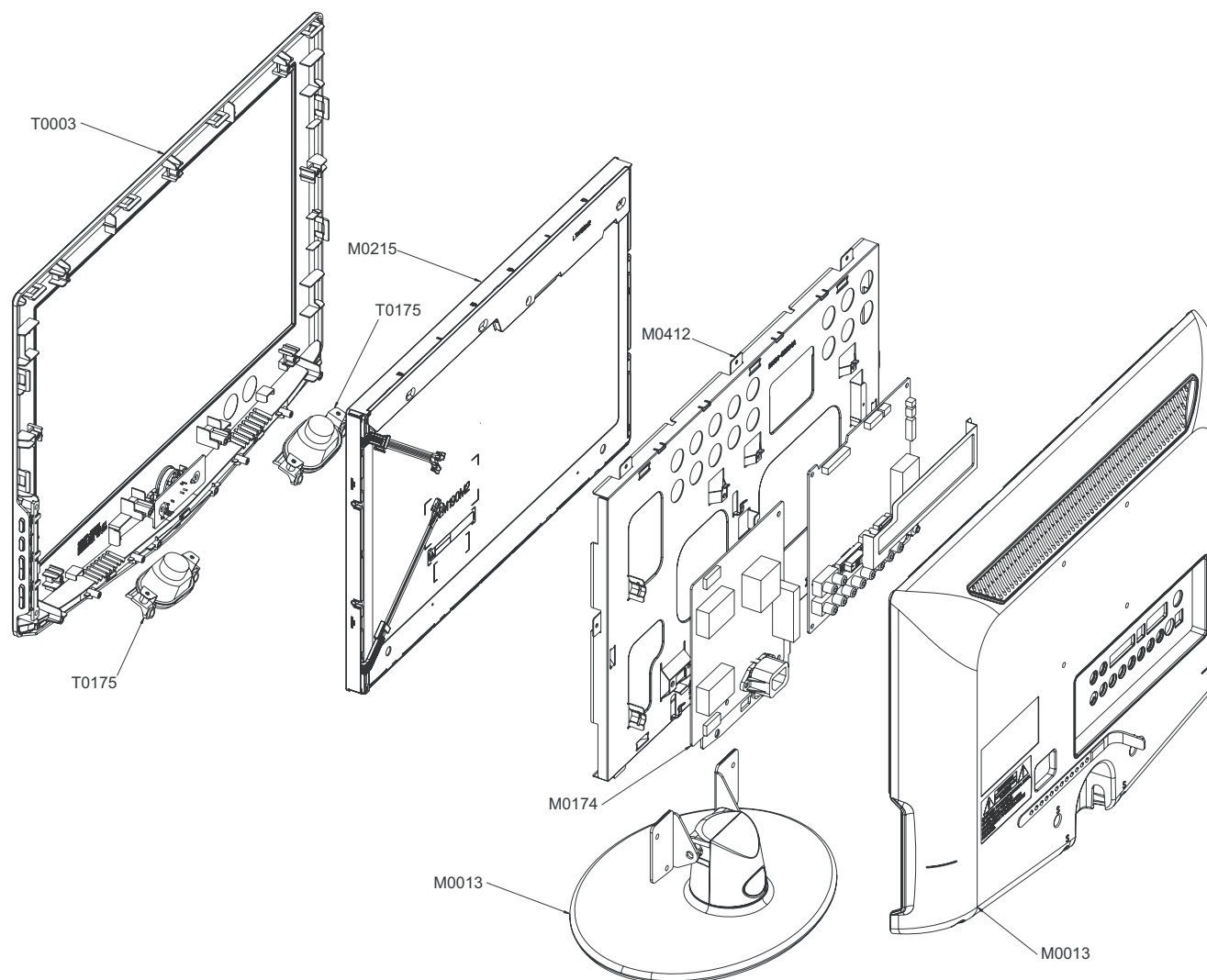
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## 5 Exploded View and Parts List

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

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

### 5-1 LE19R71B / LE19R71W Exploded View



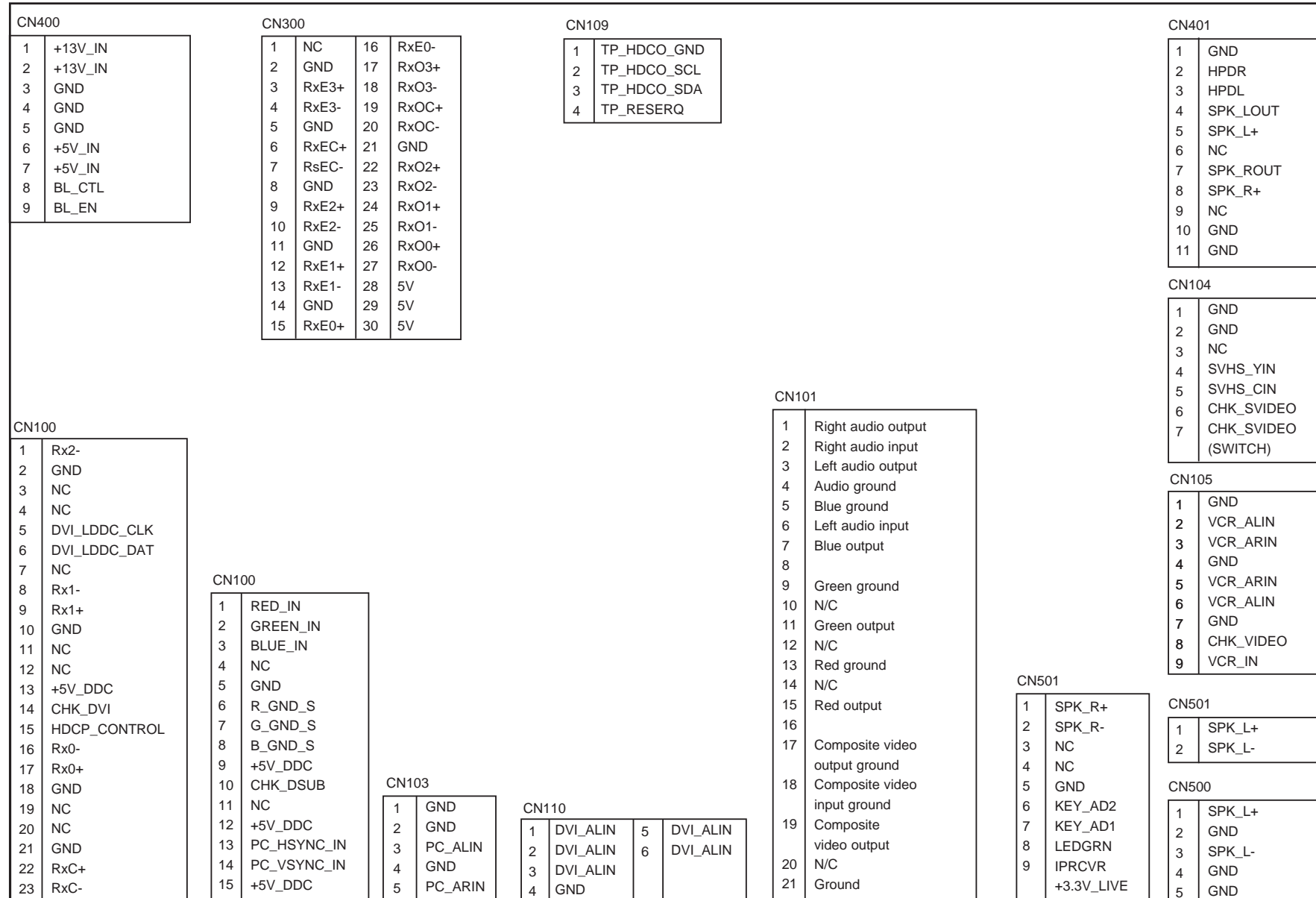
## 5-3 LE19R71B Parts List

Location.No	CODE-NO	SPECIFICATION & DESCRIPTION	Q'TY	REMARK
T0003	BN96-03960A	ASSY COVER P-FRONT;19R71,EO,ABS+PMMA,HB,	1	S.A
M0215	BN07-00330A	LCD-PANEL;M190A1-L02,Haydn,6BIT FRC,427.	1	S.A
T0175	BN96-03731A	ASSY SPEAKER P;16 $\varnothing$ ,Bordeuax, 19,Left,3W	1	S.A
T0175	BN96-03732A	ASSY SPEAKER P;16 $\varnothing$ ,Bordeuax, 19,Right,3	1	S.A
M0174	BN44-00147A	IP BOARD;SIP-W19A,Bordeaux,3.2 ~4.8mA,6.	1	S.A
M0013	BN96-03864B	ASSY COVER P-REAR;19R71,EO,ABS+PMMA,HB,B	1	S.A

## 5-4 LE19R71W Parts List

Location.No	CODE-NO	SPECIFICATION & DESCRIPTION	Q'TY	REMARK
T0003	BN96-03960B	ASSY COVER P-FRONT;19R71,EO(WHITE),ABS+P	1	S.A
M0215	BN07-00330A	LCD-PANEL;M190A1-L02,Haydn,6BIT FRC,427.	1	S.A
T0175	BN96-03731A	ASSY SPEAKER P;16 $\varnothing$ ,Bordeuax, 19,Left,3W	1	S.A
T0175	BN96-03732A	ASSY SPEAKER P;16 $\varnothing$ ,Bordeuax, 19,Right,3	1	S.A
M0174	BN44-00147A	IP BOARD;SIP-W19A,Bordeaux,3.2 ~4.8mA,6.	1	S.A
M0013	BN96-03864F	ASSY COVER P-REAR;19R71,EO(WHITE),ABS+PM	1	S.A
M0013	BN96-03865B	ASSY STAND P-BASE;19R71(WHITE),-,ABS+PMM	1	S.A

## 8 Wiring Diagram



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12 PCB Diagram

