DL371S

service manual

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Chapter One About Maintenance

1.1 Safety precautions

1.1.1 Power supply

When maintenance personnel are repairing DVD players, he should pay special attention to the power board with 220V AC and 330V DC which will cause hurt and damage to persons!

1.1.2 Precautions for antistatic

Movement and friction will both bring static electricity which causes serious damages to integrated IC. Though static charge is little, when a limited quantity of electric charge is added to large-scaleintegrated IC, as the capacitance is very small in the meantime, now the integrated IC is very much easy to be struck through by static electricity or the performance will decrease. Thus static electricity prevention is of extraordinary importance. The following are several measures to prevent static electricity:

1. Use a piece of electric conduction metal with the length of about 2 metres to insert into the earth, and Fetch the lead wire from the top of the surplus metal and connect to the required static electricity device. The length and depth of the metal embedded under the earth should be determined according to the wettability of the local soil. For humid places, it may be shorter, and longer and deeper for dry places. If possible, it can be distributed and layed in terms of "#" shape.

2. On operating table-board, the antistatic table cushion should be covered and grounded.

3. All devices and equipments should be placed on the antistatic table cushion and grounded.

4. Maintenance personnel should wear antistatic wrist ring which should be grounded.

5. Places around the operating position should also be covered with electric conduction cushion or Painted with antistatic paint.

1.1.3 Precautions for laser head

1. Do not stare at laser head directly, for laser emission will occur when laser head is working, which will Hurt your eyes!

2. Do not use wiping water or alcohol to clean laser head, and you may use cotton swab.

1.1.4 About placement position

1. Never place DVD player in positions with high temperature and humidity.
2. Avoid placing near high magnetic fields, such as loudspeaker or magnet.
3. Positions for placement should be stable and secure.

1.2 Maintenance method

1.2.1 Visualized method

Directly view whether abnormalities of collision, lack of element, joint welding, shedding welding, rosin joint, copper foil turning up, lead wire disconnection and elements burning up among pins of elements appear. Check power supply of the machine and then use hands to touch the casing of part of elements and check whether they are hot to judge the trouble spot. You should pay more attention when using this method to check in high voltage parts.

1.2.2 Electric resistance method

Set the multimeter in resistance position and test whether the numerical value of resistance of each point in the circuit has difference from the normal value to judge the trouble spot. But in the circuit the tested numerical value of resistance is not accurate, and the tested numerical value of integrated IC's pins can only be used for reference, so the elements should be broken down for test.

1.2.3 Voltage method

Voltage method is relatively convenient, quick and accurate. Set the multimeter in voltage position and test power supply voltage of the player and voltage of a certain point to judge the trouble spot according to the tested voltage variation.

1.2.4 Current method

Set the multimeter in current position and test current of the player of a certain point to judge the trouble spot. But when testing in current method, the multimeter should be series connected in the circuit, which makes this method too trivial and troublesome, so it is less frequently used in reality.

1.2.5 Cutting method

Cutting method should be combined with electric resistance method and voltage method to use. This method is mainly used in phenomena of short circuit and current leakage of the circuit. When cutting the input terminal voltage of a certain level, if voltage of the player rises again, it means that the trouble lies in this level.

1.2.6 Element substitution method

When some elements cannot be judged good or bad, substitution method may de adopted directly.

1.2.7 Comparison method

A same good PC board is usually used to test the correct voltage and waveform. Compared these data with those tested through fault PC board, the cause of troubles may be found.

Through the above maintenance method, theoretical knowledge and maintenance experience, all difficulties and troubles will be readily solved.

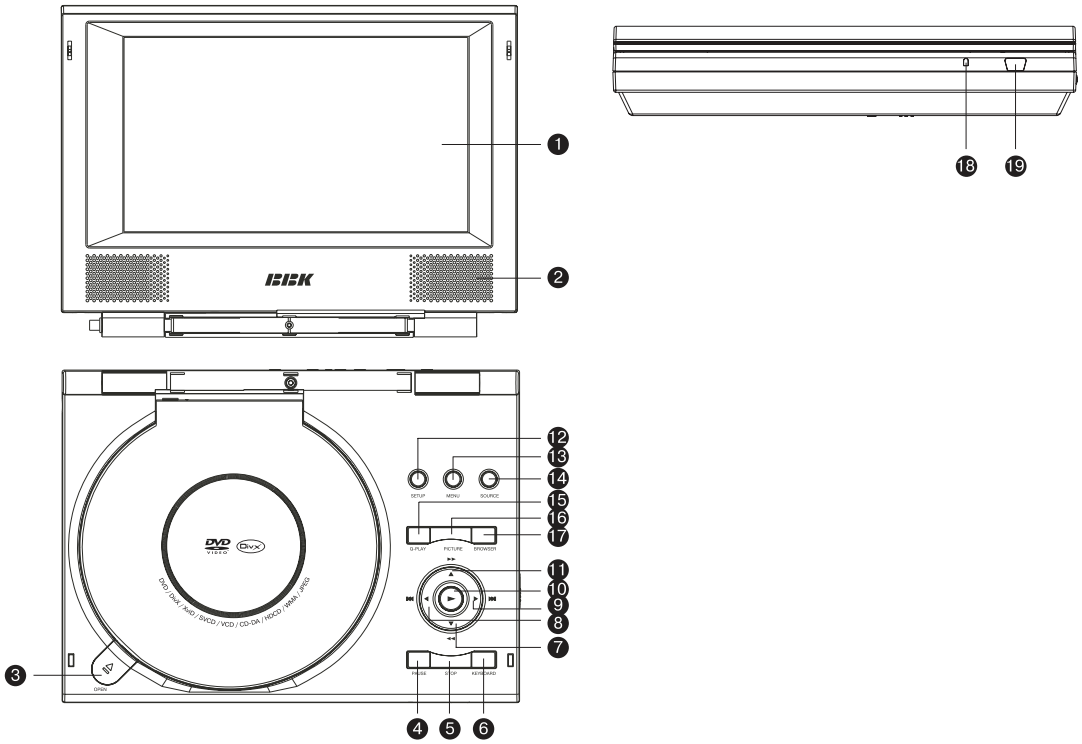
1.3 Required device for maintenance

- ◆ Digital oscillograph (≥100MHE)
- ◆ TV set
- ◆ SMD rework station
- ◆ Multimeter
- ◆ Soldering iron
- ◆ Pointed-month pincers
- ◆ Cutting nippers
- ◆ Forceps
- ◆ Electric screw driver
- ◆ Terminals connecting cord
- ◆ Headphone
- ◆ Microphone

ВВЕДЕНИЕ

Расположение и функции органов управления

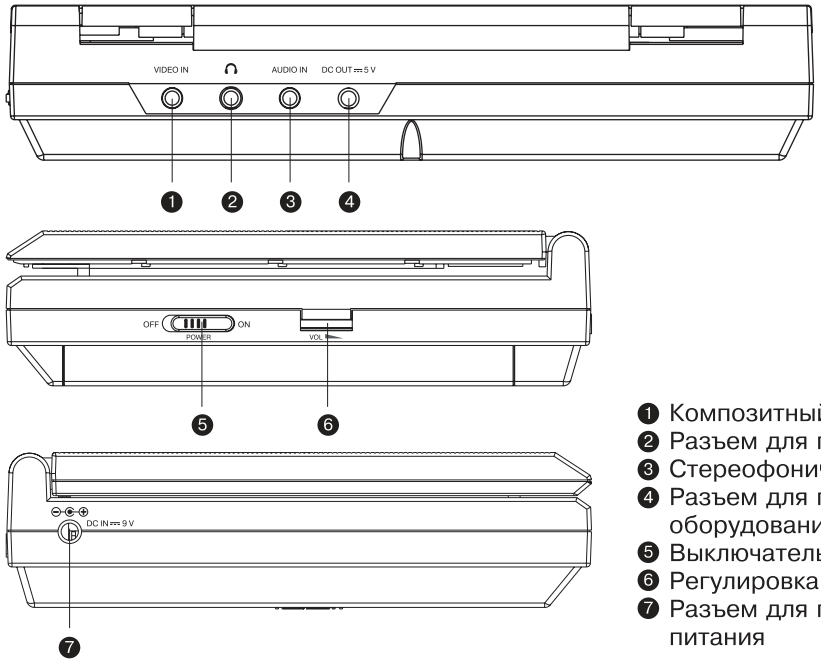
Общий вид передней панели портативного DVD–плеера



❶ **Широкоформатный цветной TFT–экран**
❷ **Встроенные громкоговорители**
❸ **Клавиша OPEN**
❹ **Клавиша PAUSE**
Пауза воспроизведения.
❺ **Клавиша STOP**
Остановка воспроизведения.
❻ **Клавиша KEYBOARD**
Переключение функций клавиш панели управления.
❼ **Клавиша REW/DOWN**
Ускоренное воспроизведение назад/Вниз.
❽ **Клавиша PREV/LEFT**
Воспроизведение с предыдущей метки/Влево.
❾ **Клавиша NEXT/RIGHT**
Воспроизведение с последующей метки/Вправо.
❿ **Клавиша PLAY**
Нормальное воспроизведение.
⓫ **Клавиша FWD/UP**
Ускоренное воспроизведение вперед/Вверх.
⓬ **Клавиша SETUP**
Переход в меню устройства.
⓭ **Клавиша MENU**
Переход в меню диска.
⓮ **Клавиша SOURCE**
Переключение режимов.
⓯ **Клавиша Q–PLAY**
Пропуск неперематываемых информационных блоков.
⓰ **Клавиша PICTURE**
Настройка изображения.
⓱ **Клавиша BROWSER**
⓲ **Индикатор рабочего режима**
⓳ **Датчик инфракрасных лучей**

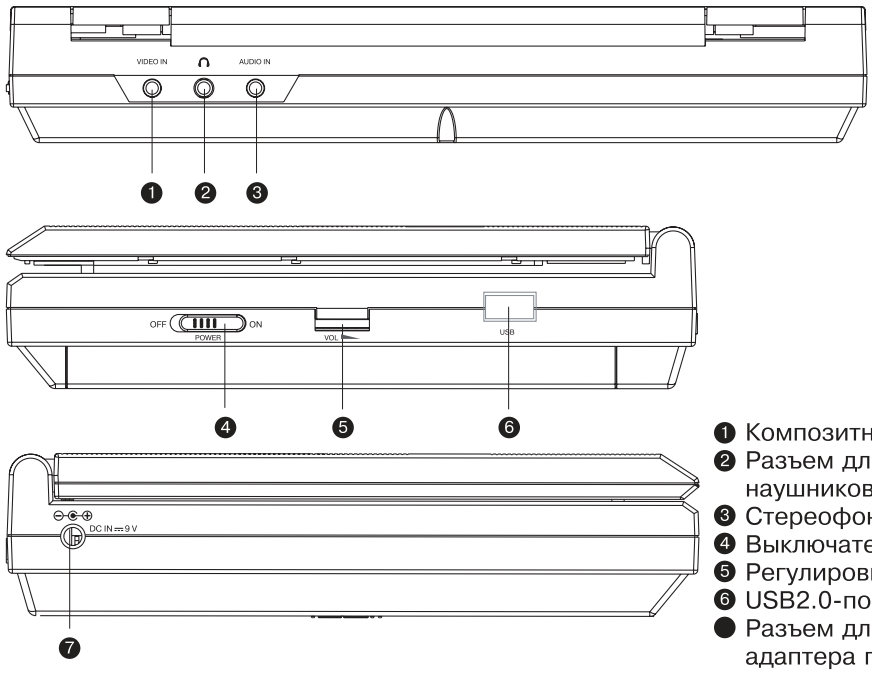
ВВЕДЕНИЕ

Общий вид боковых панелей портативного DVD–плеера DL371S



❶ Композитный видеовход
❷ Разъем для подключения наушников
❸ Стереофонический аудиовход
❹ Разъем для подключения внешнего оборудования
❺ Выключатель питания
❻ Регулировка громкости
❼ Разъем для подключения адаптера питания

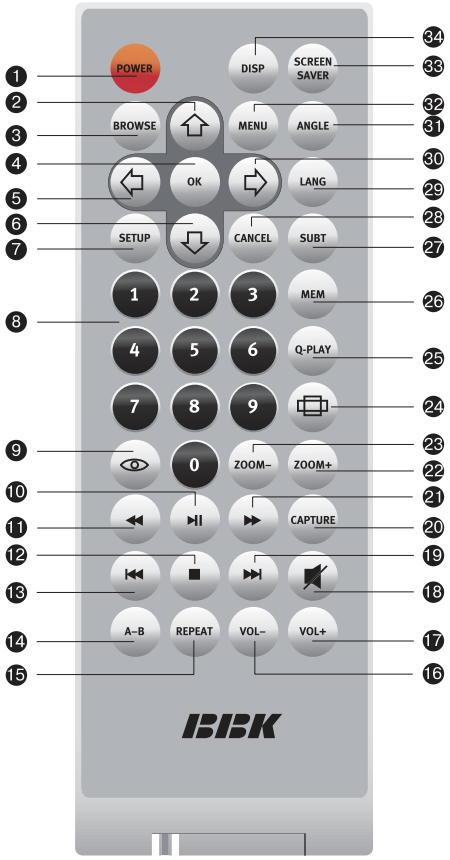
Общий вид боковых панелей портативного DVD–плеера DL381S



❶ Композитный видеовход
❷ Разъем для подключения наушников
❸ Стереофонический аудиовход
❹ Выключатель питания
❺ Регулировка громкости
❻ USB2.0-порт
● Разъем для подключения адаптера питания

ВВЕДЕНИЕ

Общий вид пульта дистанционного управления для модели DL371S



❶ **Клавиша POWER**
Клавиша включения/отключения дисплея.

❷ **Клавиша** ⇧
Вверх.

❸ **Клавиша BROWSE**
Включение/выключение функции «Browser».

❹ **Клавиша OK**

❺ **Клавиша** ⇦
Назад.

❻ **Клавиша** ⇩
Вниз.

❼ **Клавиша SETUP**
Функции режима SETUP.

❽ **Цифровые клавиши**

❾ **Клавиша**
Включение/выключение функции «Виртуальная панель управления».

❿ **Клавиша PLAY/PAUSE**
Нормальное воспроизведение/пауза.

⓫ **Клавиша** ◂◂
Ускоренное обратное воспроизведение.

⓬ **Клавиша** ■
Остановка воспроизведения.

⓭ **Клавиша** ⏮
Воспроизведение с предыдущей метки.

⓮ **Клавиша A-B**
Повтор выбранного участка.

⓯ **Клавиша REPEAT**
Повторное воспроизведение.

⓰ **Клавиша VOL-**
Уменьшение уровня громкости.

⓱ **Клавиша VOL+**
Увеличение уровня громкости.

⓲ **Клавиша**
Включение/выключение звука.

⓳ **Клавиша** ⏭
Воспроизведение с последующей метки.

⓴ **Клавиша CAPTURE**
Сохранение картинки в качестве заставки.

㉑ **Клавиша** ▸▸
Ускоренное воспроизведение вперед.

㉒ **Клавиша ZOOM+**
Увеличение изображения.

㉓ **Клавиша ZOOM-**
Уменьшение изображения.

㉔ **Клавиша**
Выбор параметров формата изображения.

㉕ **Клавиша Q-PLAY**
Активация функции «Q-Play».

㉖ **Клавиша MEM**
Запоминание места остановки на диске и переход в последствии к сохраненному месту остановки.

㉗ **Клавиша SUBT**
Включение/выключение субтитров.

㉘ **Клавиша CANCEL**
Возврат к предыдущему уровню/отмена текущего действия.

㉙ **Клавиша LANG**
Изменение языка дубляжа.

㉚ **Клавиша** ⇨
Вперед.

㉛ **Клавиша ANGLE**
Изменение ракурса камеры.

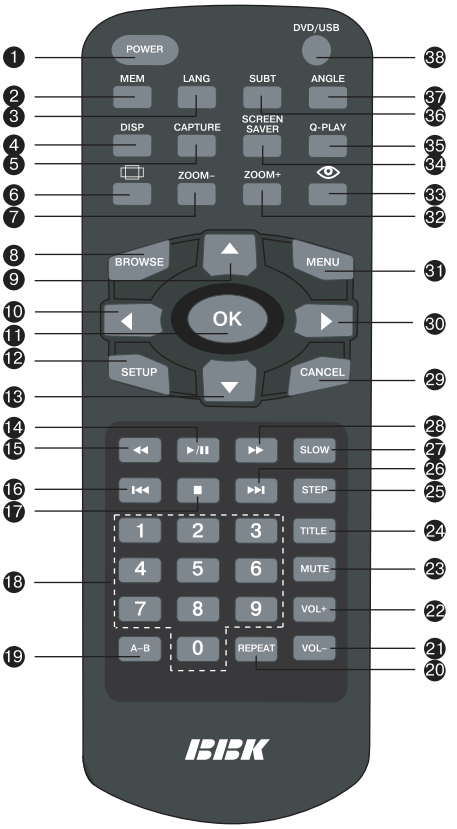
㉜ **Клавиша MENU**
Меню DVD-диска/режим PBC.

㉝ **Клавиша SCREEN SAVER**
Включение/выключение функции скринсэйвер.

㉞ **Клавиша DISP**
Отображение информации о диске.

ВВЕДЕНИЕ

Общий вид пульта дистанционного управления для модели DL381S

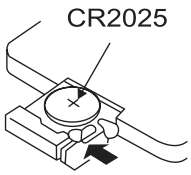


❶ **Клавиша POWER**
Клавиша включения/выключения дисплея.
❷ **Клавиша MEM**
Запоминание места остановки на диске и переход впоследствии к сохраненному месту остановки.
❸ **Клавиша LANG**
Изменение языка дубляжа.
❹ **Клавиша DISP**
Отображение информации о диске.
❺ **Клавиша CAPTURE**
Сохранение картинки в качестве заставки.
❻ **Клавиша**
Выбор параметров формата изображения.
❼ **Клавиша ZOOM-**
Уменьшение изображение.
❽ **Клавиша BROWSE**
Включение/выключение функции “Browser”.
❾ **Клавиша**
Вверх.
❿ **Клавиша**
Назад.
⓫ **Клавиша OK**
⓬ **Клавиша SETUP**
Функции режима SETUP.
⓭ **Клавиша**
Вниз.
⓮ **Клавиша**
Нормальное воспроизведение/пауза.
⓯ **Клавиша**
Ускоренное обратное воспроизведение.
⓰ **Клавиша**
Воспроизведение с предыдущей метки.
⓱ **Клавиша**
Остановка воспроизведения.
⓲ **Цифровые клавиши**
⓳ **Клавиша A-B**
Повтор выбранного участка.
⓴ **Клавиша REPEAT**
Повторное воспроизведение.
㉑ **Клавиша VOL-**
Уменьшение громкости.
㉒ **Клавиша VOL+**
Увеличение громкости.
㉓ **Клавиша MUTE**
Включение/выключение звука.
㉔ **Клавиша TITLE**
Меню разделов.
㉕ **Клавиша**
Воспроизведение с последующей метки.
㉖ **Клавиша STEP**
Покадровое воспроизведение.
㉗ **Клавиша SLOW**
Замедленное воспроизведение.
㉘ **Клавиша**
Ускоренное воспроизведение вперед.

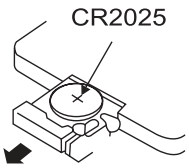
㉙ **Клавиша CANCEL**
Возврат к предыдущему уровню/отмена предыдущего действия.
㉚ **Клавиша**
Вперед.
㉛ **Клавиша MENU**
Меню DVD-диска/режим PBC.
㉜ **Клавиша ZOOM+**
Увеличение изображения.
㉝ **Клавиша**
Включение/выключение функции «Виртуальная панель управления».
㉞ **Клавиша SCREEN SAVER**
Включение/выключение функции скринсэйвер.
㉟ **Клавиша Q-PLAY**
Активация функции “Q-Play”.
㊱ **Клавиша SUBT**
Включение/выключение субтитров.
㊲ **Клавиша ANGLE**
Изменение ракурса камеры.
㊳ **Клавиша DVD/USB**
Клавиша переключение между диском и USB-портом.

ВВЕДЕНИЕ

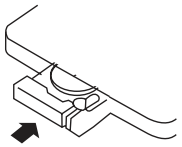
Установка батареек



❶ Откройте крышку на поверхности пульта дистанционного управления.



❷ Вставьте батарейку, соблюдая полярность.

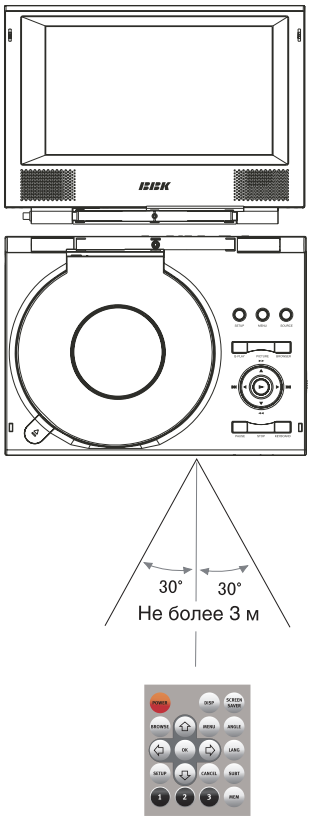


❸ Закройте крышку.

Выньте батарейку из пульта дистанционного управления, если не собираетесь им пользоваться в течение длительного периода времени.

Использование пульта дистанционного управления

При использовании пульта дистанционного управления убедитесь, что угол отклонения пульта от воображаемого перпендикуляра к датчику инфракрасных лучей на передней панели DVD–плеера не превышает 30 градусов и расстояние до DVD–плеера не превышает 3 метров.



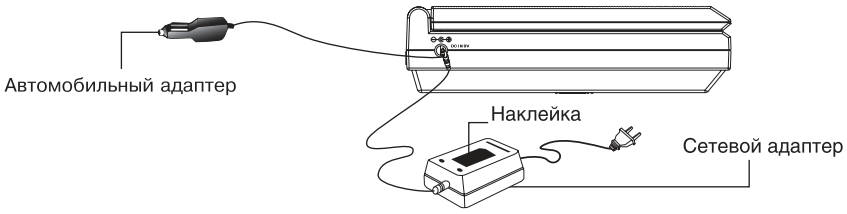
Предостережения

- Избегайте попадания прямых солнечных лучей на датчик инфракрасных лучей на передней панели DVD–плеера.
- Своевременно заменяйте батарейку в пульте дистанционного управления.
- Не роняйте пульт дистанционного управления и старайтесь оберегать его от воздействия влаги.

ВВЕДЕНИЕ

Подключение к адаптеру

В комплект поставки входят сетевой и автомобильный адаптеры. Сетевой адаптер используется для подключения DVD–плеера к электрической сети. Автомобильный адаптер оборудован разъемом для подключения к прикуривателю и позволяет использовать плеер в автомобиле.



ПРИМЕЧАНИЯ

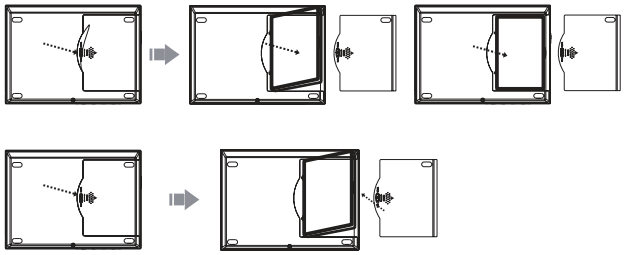
- Не включайте DVD–плеер во время вождения, это отвлекает внимание водителя и может стать причиной несчастного случая.
- Маркировка сетевого адаптера питания размещена на наклейке с нижней стороны адаптера, как показано на рисунке.

Использование аккумуляторной батареи

Данный DVD–плеер оснащен аккумуляторной батареей высокой емкости.

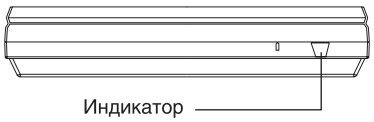
Установка и снятие аккумуляторной батареи

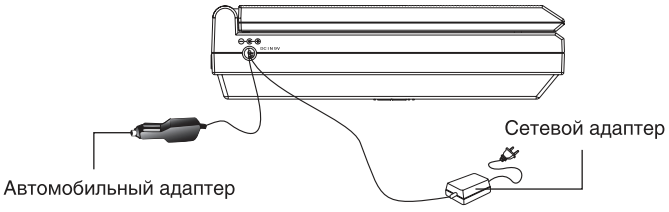
1. Откройте крышку отсека для батареек, расположенную на нижней панели DVD–плеера.
2. Вставьте батарею, соединив контакты батареи и DVD–плеера.
3. Закройте крышку.
4. Для того чтобы извлечь батарею, снимите крышку и потяните за выступ на батарее, как показано на рисунке.



Зарядка аккумуляторной батареи

1. Подключите адаптер питания.
2. В момент включения индикатор на DVD–плеере мигает оранжевым в течение 1 секунды.
3. В процессе зарядки индикатор непрерывно горит красный цветом.
4. Когда процесс зарядки завершится, индикатор непрерывно горит зеленым. Отключите питание.



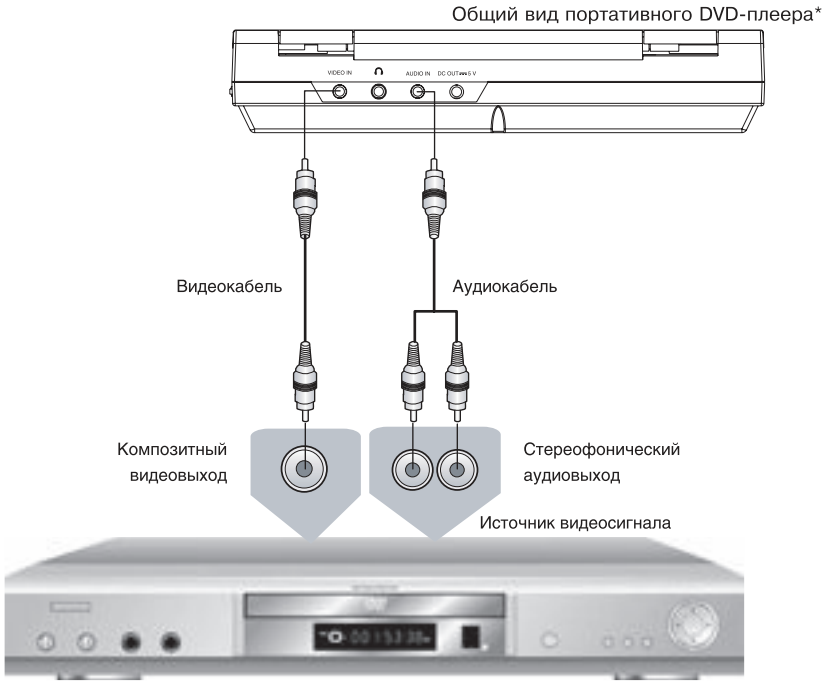


ПРИМЕЧАНИЯ

- Если индикация отличается от описанной, то возможно существуют проблемы в цепи питания. Обратитесь в сервисный центр для диагностики устройства.
- Если аккумуляторная батарея не используется в течение долгого времени, она может разрядиться и не обеспечивать нормальную работу DVD–плеера. В этом случае зарядите батарею вновь.

ПОДКЛЮЧЕНИЕ

Подключение внешнего источника сигнала



ПРИМЕЧАНИЕ

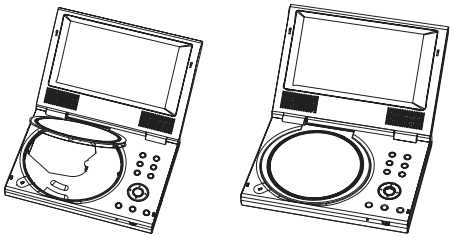
- Убедитесь в том, что поступающий сигнал соответствует системам цветности NTSC или PAL. Устройство может некорректно отображать видеосигнал некоторых источников, в зависимости от его особенностей.

* На рисунке изображена боковая панель модели DL371S

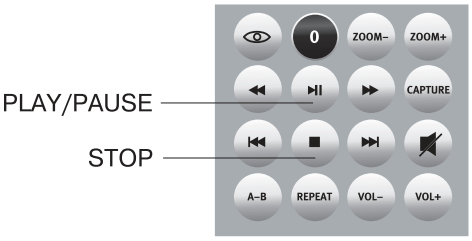
ОСНОВНЫЕ ОПЕРАЦИИ

Воспроизведение дисков

DVD Super VCD VCD MPEG-4 CD WMA



1. Подсоедините аккумулятор или адаптер к DVD–плееру.
2. Откройте откидной экран. Отрегулируйте угол наклона для наилучшего восприятия изображения.
3. Переведите выключатель питания в положение ON – загорится зеленый индикатор. При не полностью заряженном аккумуляторе – индикатор будет красным.
4. Нажмите клавишу OPEN, чтобы открыть отсек для диска, и вставьте диск лейблом вверх.
5. Закройте отсек для диска.
   После закрывания отсека начнется автоматическое распознавание диска.
   При проигрывании DVD–диска на экране появится меню. При проигрывании SVCD– или VCD2.0–диска на экране появится меню, и устройство перейдет в режим PBC. При проигрывании CD–, HDCD– или VCD1.1–диска воспроизведение начнется в порядке нумерации треков.



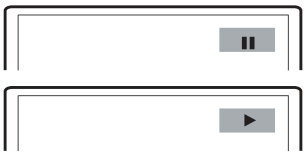
6. Нажмите клавишу PLAY , чтобы начать воспроизведение.
7. Нажмите клавишу STOP для остановки воспроизведения.
8. Нажмите клавишу OPEN, чтобы извлечь диск.
9. Для выключения DVD–плеера переведите выключатель питания в положение OFF.

ПРИМЕЧАНИЯ

- При проигрывании DVD–диска нажмите клавишу дважды для перехода в режим полной остановки воспроизведения.
- Отсоединяйте аккумулятор или адаптер, если не собираетесь пользоваться плеером длительное время.
- Изображение портативного DVD-плеера является схематичным.

Пауза/нормальное воспроизведение диска

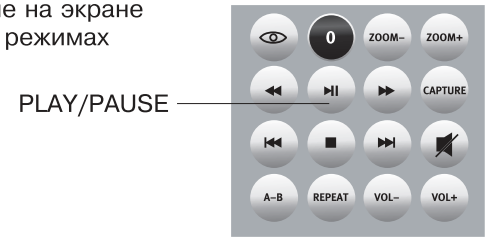
DVD Super VCD VCD MPEG-4 CD WMA



1. Нажмите клавишу PLAY/PAUSE в режиме воспроизведения, чтобы остановить воспроизведение.
2. Нажмите клавишу PLAY/PAUSE для нормального воспроизведения.

ПРИМЕЧАНИЕ

- Экран переходит в режим защиты, если изображение на экране не меняется в течение приблизительно 2–х минут (в режимах паузы, остановки, меню, отсутствия диска и т. д.).



ОСНОВНЫЕ ОПЕРАЦИИ

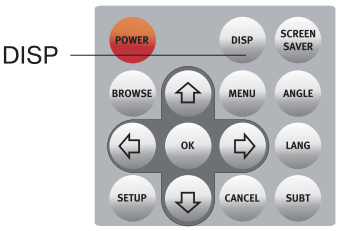
DISPLAY

DVD Super VCD VCD CD

Нажмите клавишу DISP.
Информация о диске появится на экране.
Последовательно нажимайте клавишу DISP, чтобы увидеть следующую информацию:

DVD–диск: Время X:XX:XX/X:XX:XX Раздел XX Эпизод XX

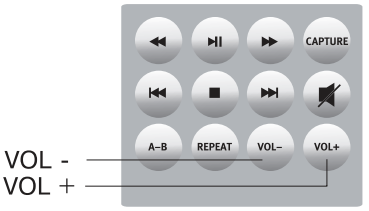
CD–, SVCD– или VCD–диск: Время XX:XX/XX:XX Трек XX/XX



Пауза/нормальное воспроизведение диска

DVD Super VCD VCD MPEG–4 CD WMA

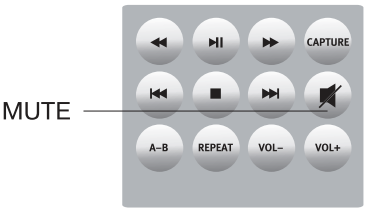
Нажмите клавишу VOL на пульте дистанционного управления данного устройства.
- Нажмите клавишу VOL+, чтобы увеличить звук.
- Нажмите клавишу VOL–, чтобы уменьшить звук.



Отключение звука

DVD Super VCD VCD MPEG–4 CD WMA

1. Отключение звука. Нажмите клавишу MUTE в режиме воспроизведения, чтобы выключить звук.
2. Включение звука. Нажмите клавишу MUTE еще раз для включения звука.



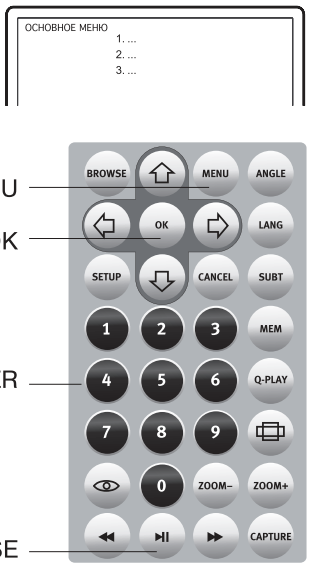
Меню проигрывания DVD–дисков

DVD

Некоторые DVD–диски имеют собственное меню.

1. Нажмите клавишу MENU, чтобы отобразить меню на экране. Произведите нужные действия в соответствии с подсказками на экране, выбирая соответствующие пункты с помощью цифровых клавиш.
2. С помощью клавиш направления выберите нужный трек, затем нажмите клавишу PLAY/PAUSE или OK.

ПРИМЕЧАНИЕ
- Нажмите клавишу MENU, чтобы вернуться в главное меню. Переходы между меню различаются для разных дисков.

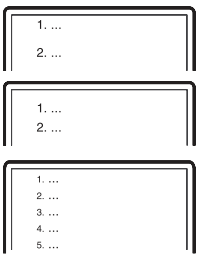


ОСНОВНЫЕ ОПЕРАЦИИ

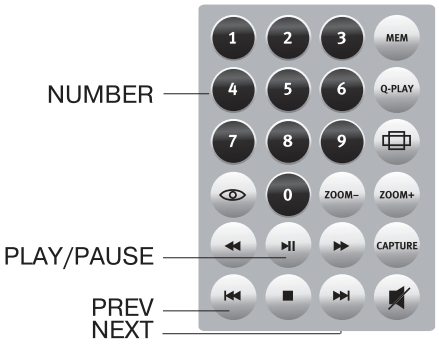
Функция PBC

Super VCD VCD

Воспользуйтесь функцией PBC при воспроизведении SVCD–, VCD2.0–дисков с функцией PBC.



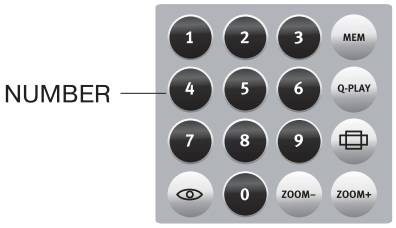
1. Главное меню на экране:
   Нажмите цифровую клавишу для выбора.
   Например, выберите главное меню 1.
   Изображение на экране:
2. На экране появится подменю после входа в главное меню 1.
3. Нажмите клавишу или , чтобы перейти к нужной странице.
4. Нажмите цифровую клавишу, чтобы выбрать пункт подменю.
   Например, нажмите клавишу 5, чтобы начать воспроизведение с 5–го трека.
5. Нажмите клавишу MENU, чтобы выключить функцию PBC и перейти в режим нормального воспроизведения.



Непосредственный выбор раздела или трека с помощью цифровых клавиш

DVD Super VCD VCD CD

1. Вставьте диск, после того как DVD–плеер начнет чтение, нажмите цифровую клавишу, чтобы выбрать раздел или трек. Переход между выбором раздела или трека осуществляется с помощью клавиш ВЛЕВО и ВПРАВО.
2. Для выбора номера раздела или трека наберите с помощью цифровых клавиш однозначное или двузначное число.

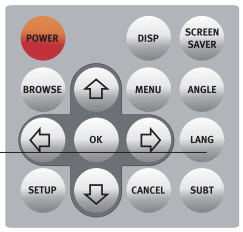


ПРИМЕЧАНИЕ

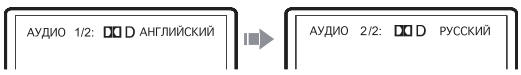
- При воспроизведении VCD– или VCD2.0–дисков эта функция доступна только при выключенном режиме PBC.

Выбор языка/аудиоканала

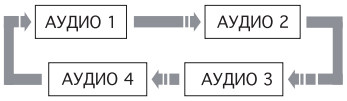
Нажмите клавишу LANG.
Вы можете выбрать желаемый язык при воспроизведении DVD– или SVCD–диска, записанного с поддержкой нескольких языков.



DVD-диск:



SVCD–диск



ОСНОВНЫЕ ОПЕРАЦИИ

Дубляж некоторых VCD– и SVCD–дисков выделяется в отдельный звуковой канал, что дает возможность при воспроизведении таких дисков выбирать звуковое сопровождение на языке, который Вы предпочитаете в моно– или стереорежиме.

VCD–, CD–диски:



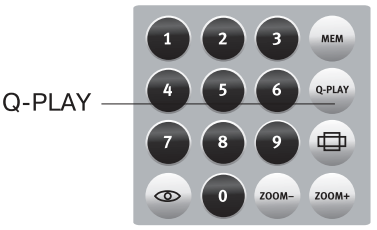
ПРИМЕЧАНИЯ

- Наличие языков зависит от записи конкретного диска.
- При воспроизведении DVD–Video дисков нажатие клавиши переключения языков может вызвать повторное воспроизведение текущего трека.

Функция Q-Play

DVD

Некоторые DVD–диски записаны с блоками "непропускаемой" рекламы или другой информации. Чтобы после загрузки диска перейти непосредственно к воспроизведению самого фильма, Вам необходимо воспользоваться функцией "Q–Play".



Нажмите клавишу Q–PLAY после загрузки DVD–диска, чтобы сразу перейти непосредственно к просмотру фильма.

ПРИМЕЧАНИЕ

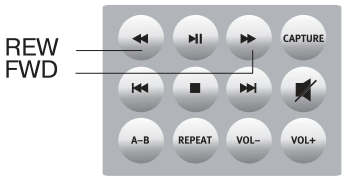
- При воспроизведении некоторых дисков, в связи с особенностью их записи данная функция может не работать.

ВОСПРОИЗВЕДЕНИЕ

Ускоренное воспроизведение

DVD Super VCD VCD MPEG–4 CD

Вы можете использовать ускоренное воспроизведение вперед и назад, чтобы найти нужный фрагмент в режиме воспроизведения.



1. Нажмите клавишу ▶▶, чтобы плеер начал ускоренное воспроизведение вперед. Каждое нажатие клавиши изменяет скорость воспроизведения DVD–, SVCD–, VCD–, MPEG–4–, CD–дисков.

2. Нажмите клавишу ◀◀ , чтобы плеер начал ускоренное воспроизведение назад. Каждое нажатие клавиши изменяет скорость воспроизведения DVD–, SVCD–, VCD–, MPEG–4–, CD–дисков.

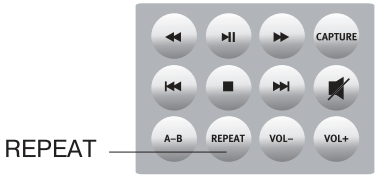
ПРИМЕЧАНИЕ

- Реальная скорость перемотки некоторых MPEG–4–дисков может не всегда соответствовать коэффициенту перемотки.

Повторное воспроизведение

DVD Super VCD VCD MPEG–4 CD WMA

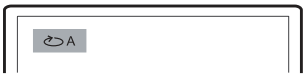
Функция повторного воспроизведения позволяет Вам повторять определенный раздел, главу, трек или диск. Нажмите клавишу REPEAT, чтобы выполнить повтор.



Повтор выбранного фрагмента

DVD Super VCD VCD MPEG–4 CD

1. Во время нормального воспроизведения нажмите клавишу A–B, чтобы выбрать точку A (начало выбираемого участка). Информация на экране:

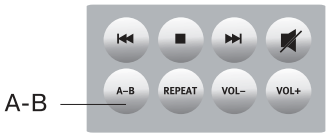


2. Повторным нажатием клавиши A–B выберите точку B (конец выбираемого участка). Информация на экране:



DVD–плеер автоматически вернется к точке A, чтобы повторно воспроизвести выбранный фрагмент (A–B).

3. Нажмите клавишу A–B еще раз, чтобы перейти в режим нормального воспроизведения.



ПРИМЕЧАНИЯ

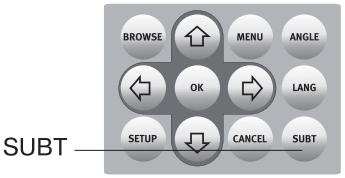
- Эта функция не доступна для некоторых дисков.
- Фрагмент может быть выбран только в пределах одного трека в режиме PBC.

ВОСПРОИЗВЕДЕНИЕ

Выбор субтитров

DVD

Нажмите клавишу SUBT. При воспроизведении DVD–дисков, записанных с субтитрами на разных языках, Вы можете выбрать язык субтитров. Каждое нажатие клавиши SUBT изменяет язык субтитров, как показано на рисунке: Количество доступных языков может достигать 32 для DVD–дисков, но при этом оно зависит от записи конкретного диска.

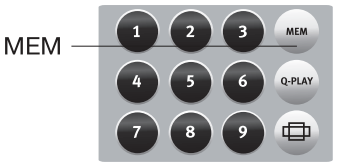


Сохранение последнего места остановки на диске

DVD

С помощью данной функции Вы можете сохранить последнее место остановки на диске, и затем, в последствии, начать воспроизведение с сохраненного момента.

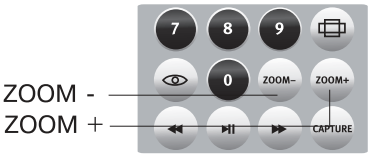
1. В режиме воспроизведения нажмите клавишу MEM в тот момент, когда Вы хотите приостановить просмотр этого диска.
2. После этого откройте отсек с диском или переведите аппарат в режим ожидания.
3. В начале следующего просмотра нажмите клавишу MEM для воспроизведения с сохраненного момента на диске.
4. Нажмите любую другую клавишу для воспроизведения с начала диска.



Увеличение/уменьшение изображения

DVD Super VCD VCD MPEG–4

В режиме воспроизведения нажмите клавишу ZOOM+. Изображение увеличено.
При нажатии на клавишу ZOOM– будет осуществляться возврат на предыдущий уровень масштабирования.



Виртуальная панель управления

Данная функция предназначена для более удобного управления DVD–плеером во время просмотра фильмов.

1. Нажмите клавишу 👁. На экране появится изображение панели управления, как показано на рисунке.

❶ Замедленное воспроизведение назад
❷ Нормальное воспроизведение
❸ Ускоренное воспроизведение назад
❹ Переход к предыдущему треку
❺ Стоп
❻ Переход к последующему треку
❼ Ускоренное воспроизведение вперед
❽ Замедленное воспроизведение вперед
❾ Пауза



2. Используя клавиши направления, выберите клавишу на виртуальном пульте управления и нажмите OK для подтверждения выбора.
3. Чтобы отключить виртуальную панель управления, нажмите клавишу 👁.
   Функция "Виртуальной панели управления" доступна исключительно при воспроизведении DVD–, SVCD– или VCD–дисков.

ВОСПРОИЗВЕДЕНИЕ

Работа с USB-устройствами*

Данный портативный DVD-плеер оснащенUSB-интерфейсом и поддерживает протокол «USB2.0». Плеер работает с устройствами класса «USB Mass Storage», то есть совместим с рядом устройств типа flash-карт, flash-плееров и т.д. так как некоторые устройства с USB-интерфейсом не поддерживают протокол «USB Bulk-Only», то такие устройства не совместимы с данным портативным DVD-плеером. Если подключаемое устройство совместимо с DVD-плеером, то с такого устройства можно воспроизводить все форматы, которые поддерживает данный портативный DVD-плеер.

Просмотр и воспроизведение содержимого подключенного устройства
1.Вставьте устройство в USB-порт плеера.
2.Нажмите клавишу SOURCE. Выберите пункт USB. Если устройство совместимо, то содержимое памяти устройства будет отображено в виде папки с файлами.
3.Работа с файлами и управление идентичны воспроизведению дисков с файлами JPEG, WMA и MPEG-4.

* Только для модели DL381S

ПРОЧЕЕ

Полезные примечания

- Чтобы продлить срок службы Вашего DVD–плеера, делайте паузы не менее 30 секунд между выключением и повторным включением DVD–плеера.
- Отключайте электропитание DVD–плеера после завершения работы.
- Некоторые функции DVD–плеера не могут быть применимы к некоторым дискам.
- Используйте источники питания номинального напряжения, иначе DVD–плеер не будет работать или будет поврежден.
- В случае случайных остановок DVD–плеера, пожалуйста, выключите электропитание и включите его снова.

Поиск неисправностей

Пожалуйста, проверьте возможные причины неисправности, прежде чем обращаться в сервис–центр.

Признак неисправности	Причина неисправности	Действия по устранению неисправности
Нет звука	1. Ненадежное подключение шнура аудио. 2. Диск загрязнен или поврежден. 3. Звук отключен клавишей MUTE.	1. Установите надежное соединение. 2. Почистите диск. 3. Нажмите клавишу MUTE.
Нет изображения	1. Ненадежное подключение шнура видео. 2. Не активирован вход внешнего видеосигнала.	1. Установите надежное соединение. 2. Нажмите клавишу SOURCE на корпусе аппарата.
Изображение черно–белое	1. Настройки изображения отрегулированы неправильно.	1. Отрегулируйте настройки изображения.
Диски не читаются	1. Диск не вставлен. 2. Диск вставлен неправильно. 3. Конденсат на лазерной головке DVD–плеера.	1. Вставьте диск. 2. Установите диск лейблом вверх. 3. Оставьте DVD–плеер без диска на один час включенным.
Не работает пульт ДУ	1. Неверное направление пульта ДУ на сенсорный экран DVD–плеера. 2. Расстояние до DVD–плеера превышает 8 метров. 3. Разряжены батарейки.	1. Используйте пульт ДУ в соответствии с инструкцией. 2. Сократите расстояние до DVD–плеера. 3. Замените обе батарейки.
Некоторые функции не работают	1. Диск записан некорректно. 2. Нажата неверная последовательность клавиш. 3. Статическое напряжение на поверхности корпуса DVD–плеера.	1. Подождите 5 – 10 секунд, и DVD–плеер автоматически возвратится в нормальное состояние. 2. Повторите операцию еще раз. 3. Выключите DVD–плеер на 1 – 2 минуты и включите его снова.
На экране очень много искажений	1. Заканчивается заряд аккумулятора.	1. Установите аккумулятор на зарядку или подключите адаптер.
Сбой при воспроизведении диска	1. Бракованный диск. 2. Нажата неправильная клавиша. 3. Статический разряд создает помехи электронике плеера.	1. Убедитесь, что диск в порядке. 2. Нажмите правильную клавишу. 3. Отключите плеер на 1–2 минуты и включите снова.

ПРОЧЕЕ

Технические характеристики

Модель	DL371S	DL381S
Совместимые форматы	DVD–Video, DivX 3.11, DivX 4, DivX 5, DivX Pro, XviD, Super VCS, VCD 1.0, 1.1, 2.0, CD–DA, HDCD, OGG, WMA,	
Типы носителей	CD–R, CD–RW, DVD–R, DVD+R, DVD–RW, DVD+RW	
Выходы	Выход для подключения наушников	
Входы	Аналоговый стереофонический аудиовход Композитный видеовход	
Потребляемая мощность	12 Вт	
Размеры ВхШхГ (мм)	205x149x39,5	250x175x41
Вес (кг)	0,735	0,89

- Мы постоянно улучшаем качество нашей продукции, поэтому дизайн, функциональное оснащение и технические характеристики изделия могут быть изменены без предварительного уведомления.
- Некоторые диски, записанные в любом из поддерживаемых форматов на любом из совместимых типов носителей, могут не воспроизводиться или воспроизводиться некорректно из–за особенностей их записи.

Chapter Three Principle or Servicing

Section One Principle of the Player

3.1.1 Block diagram of the player

DL371S is composed of decode circuit, servo circuit, audio circuit, video circuit and power circuit. The block diagram of the player is shown as in the following figure 3.1.1.1:

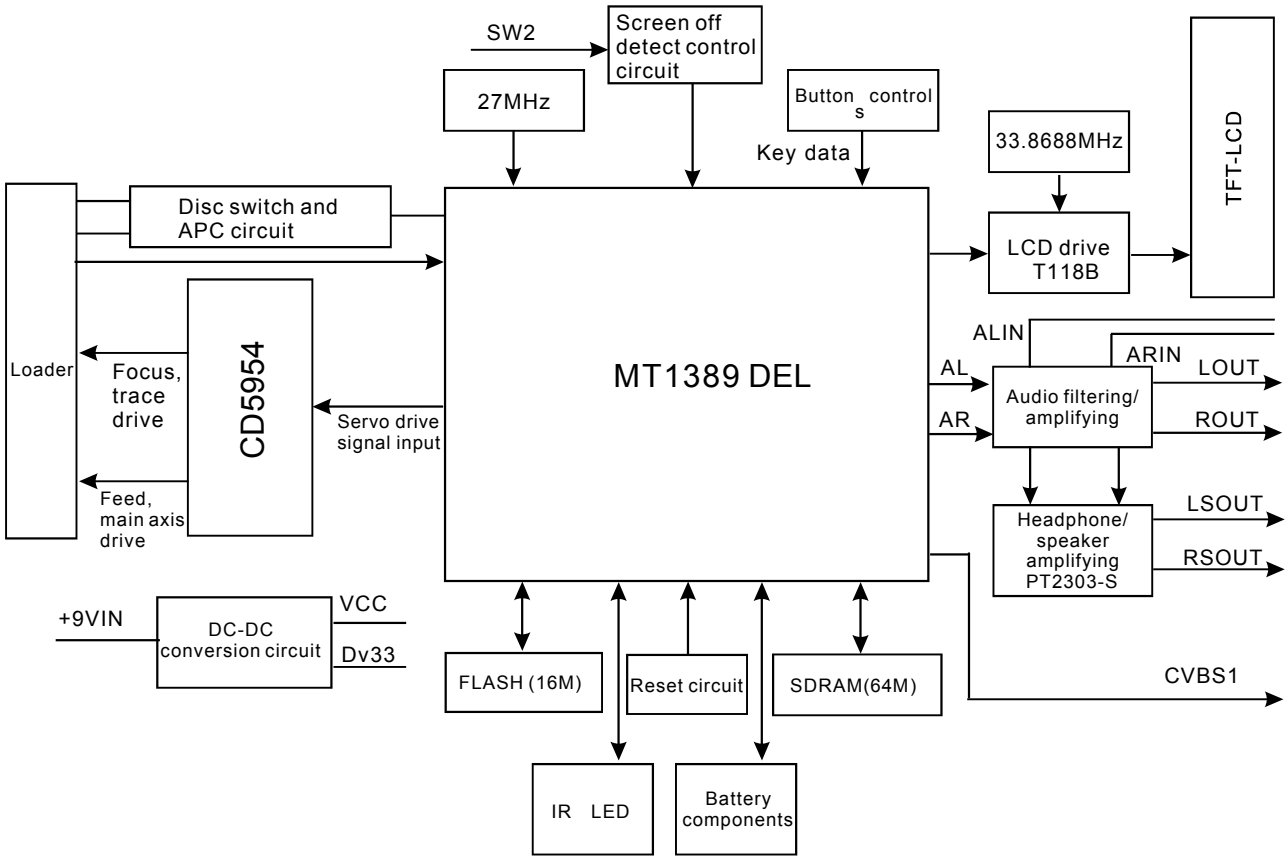


Figure 3.1.1.1 Block diagram of the player

3.1.2 PCB composition block diagram of the player

PCB composition diagram of the player is shown as in the following figure 3.1.2.1:

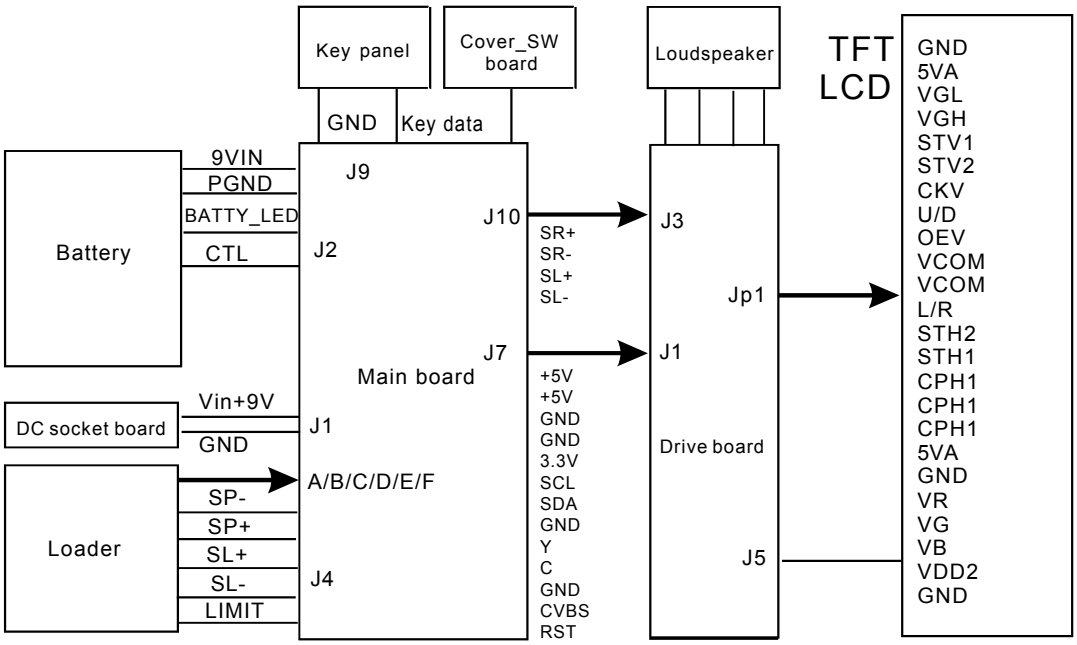


Figure 3.1.2.1 PCB composition figure of the player

3.1.3 Function introduction to IC of the player

Function introduction to IC of the player is shown as in the following figure:

PCB board	Location	IC model	Function
Drive board	U3	UTC3414	VCOM signal amplifying
	U1	T118B	Video coding LCD drive
Decode board	U8	JRC4558	Audio amplifying (operational amplifier)
	U3	LD 1117-1.8	Voltage regulating IC
	U6	HY57V641620ET	64M SDRAM
	U5	MT1389DE-L	Decode chip
	U4	CD5954	Servo drive
	U10	PT2303-S	Headphone amplifying
	U7	29LV160BE	16M FLASH
	U1 U2	TD1410	DC-DC conversion
	U11	SPM9435	Power control

Section Two Unit Circuit Principle

3.2.1 Servo processing circuit

1. DL371S adopts SANYO 850 loader and MTK decode solution (MT1389DEL+FLASH (16M)+SDRAM (64M)). The servo circuit is composed of front end signal processing, digital signal processing IC MT1389DEL and drive circuit CD5954, in which MT1389DE is also the main composition of decode circuit.

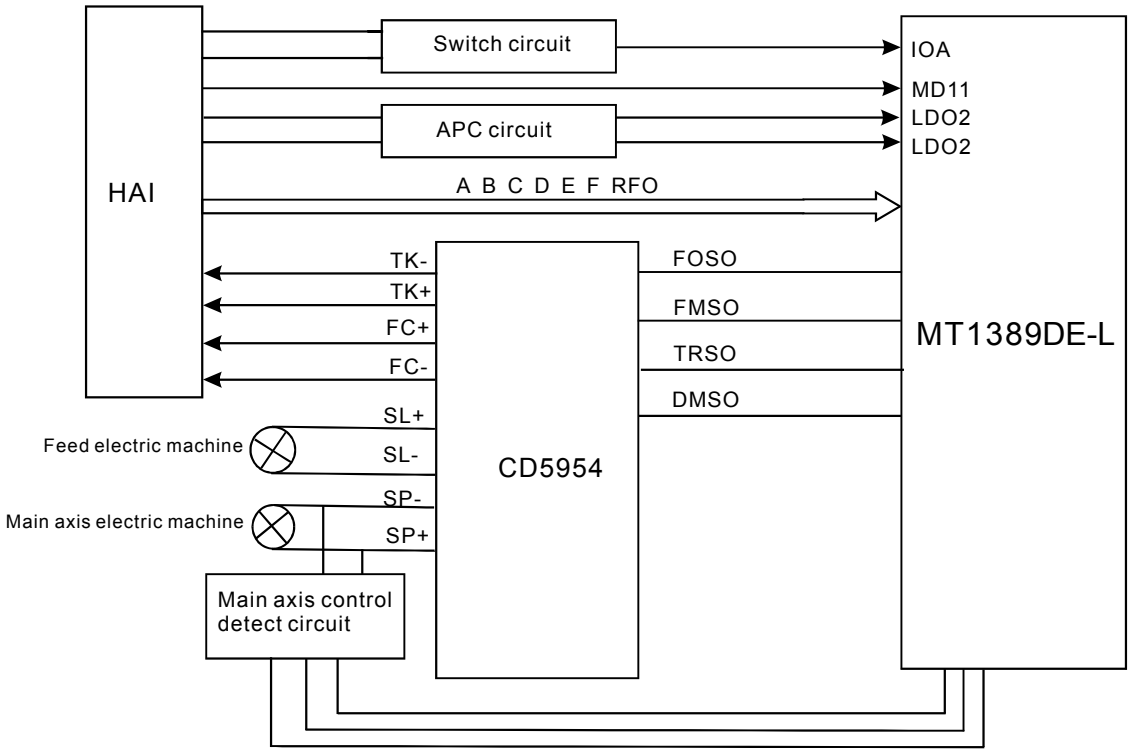


Figure 3.2.2.1 Servo processing circuit block diagram

2. Working principle: after power on or turning off door (door detect switch SW4), loader laser head begins to reset, focus and main axis begin to rotate, laser head begins to identify disc information to judge the disc is CD or DVD to facilitate to make the corresponding acts. At the same time, Mt1389 also adjusts laser output power through laser power control circuit. When loader reads disc information, after photoelectric conversion, A, B, C, D, E, F signals are formed to give to Mt1389 (DVD has A, B, C, D signals only) and Therefore signal and the input from pin 1~6, of MT1389. After MT1389 internal pre-amplifying processing, now signal are divided into two parts inside MT1389:

After being processed by digital servo signal circuit inside MT1389, one part of signal form corresponding servo control signals and output FOO, TRO, DMO, FMO digital servo control signals from pin 25, pin 24, pin 20, pin 21 of Mt1389 respectively, then change into analog servo control signal FOSO, TRSO, DMSO, FMSO through integration circuit composed by resistor capacitor, and send to driver circuit BA5954 for amplification to bring along focus coil, trace coil, main axis electric machine and feed electric machine after drive amplification. Among these, focus and trace servo are used to correct objective position accurately; feed servo is used to bring along laser head to make radial large-scale move which belongs to the preliminary adjustment to pick-up position; and main axis servo is used to control main axis electric machine to make it read signals in means of constant linear velocity and bring along disc to rotate. After processing of amplification by VGA voltage control amplifier and equalization frequency compensation inside MT1389, another part of signals are changed into digital signals through internal A/D converter. When loader is reading CD/VCD signals, these signals are conducted EFM demodulation inside MT1389, after CIRC (Cross-Interleaved Reed-Solomon Code) error correction is finished inside, it outputs to rear state for audio/video decoding; when loader is reading DVD signals, these signals are conducted ESM demodulation inside MT1389, and then sent to latter stage for decoding after finishing RSPC error correction inside. Compared with general DVD players, this machine has no disc in/out circuit and manual opening method is adopted. When pin 26 of MT1389E is high level, system recognises that the door has been opened, when it is low level, the machine recognizes that the door has been closed.

3. Loader signals introduction is shown as follows:

Pin	Name	Signal flow direction	DVD disc	CD disc	No disc	Function description
1	F-	Input loader	2.52	2.34	0.46	Focus error signal is added to two sides of pick-up focus coil
2	F+	Input loader	2.49	2.49	0.93	
3	T+	Input loader	2.53	2.51	0.94	Trace error signal is added to two sides of pick-up trace coil
4	T-	Input loader	2.58	2.51	0.93	
5	C	Input MT1389	2.2	2.25	2.04	Disc data signal
6	D	Input MT1389	2.2	3.2	2.04	Disc data signal
7	IOA	Input MT1389	0.01	3.2	3.21	Disc identification signal, CD is 3.3V, DVD is 0V
8	RF	Input MT1389	2.21	2.53	1.28	The sum of disc data signal
9	A	Input MT1389	2.17	2.22	2.04	Disc data signal
10	B	Input MT1389	2.19	2.27	2.04	Disc data signal
11	F	Input MT1389	2.07	2.44	2.03	Supplementary signal used in trace
12	GND	Ground	0.01	0.01	0	Grounding
13	V20	Input loader	2.04	2.06	2.03	Reference voltage

14	Vcc	Input loader	5.04	5.04	5.02	Supply voltage for loader
15	E	Input MT1389	2.06	2.45	2.03	Disc data signal
16	Blanking	haning in air	0.01	0	0	unused
17	VR-CD	Input loader	0.21	0.01	0	Through the handling inside loader, make sure MD11 is 180mV when reading CD
18	VR-DVD	Input loader	0.01	0.2	0	Through the handling inside loader, make sure MD11 is 180mV when reading DVD
19	LD-CD	Input loader	0.09	2.1	0	CD laser power control signal
20	MDII	Input MT1389	0.21	0.2	0	CD and DVD laser power monitoring signal
21	AVCC	Input loader	5.04	5.04	5.02	High frequency overlapping signal produces laser with different wave length inside loader
22	Blanking	unused	0.01	0.1	0	
23	LD-DVD	Input loader	2.21	0.1	0	DVD laser power control signal
24	GND	unused	0.01	0.01	0	Grounding

Note: 1. When reading DVD, there are only A, B, C, D signals.

2. When reading CD, there are A, B, C, D, E, F signals.

3. RFO=A+B+C+D.

4. Focus error signal=(A+C)-(B+D) Trace error signal=E-F.

3.2.2 CD/DVD switch circuit

1. CD/DVD switch circuit is shown as in the following figure 3.2.2.1:

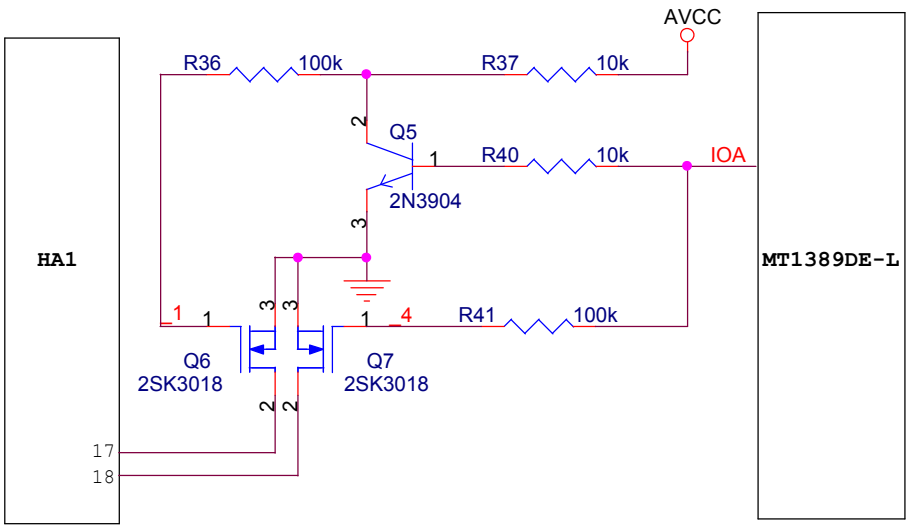


Figure 3.2.2.1 CD/DVD switch circuit

2. Working principle: after disc is loaded in machine, IOA port is defaulted high level to make Q7 saturation on and form loop with CD laser power control circuit on loader, at the same time IOA also reaches loader PD IC for switch, disc begins to rotate; when servo processing system recognises that the disc inside machine is not CD, IQA pin outputs low level to make Q7 cut off, Q6 on and form loop with DVD laser power control circuit on loader to carry out the action of reading DVD disc. After door is opened, IOA still keeps the state before door is opened. If machine cannot recognises which the disc is , IQA pin will switch always until no disc is read out or judged by system.

3.2.3 Laser power control circuit

1. Laser power control circuit is shown as in the following figure 3.2.3.1:

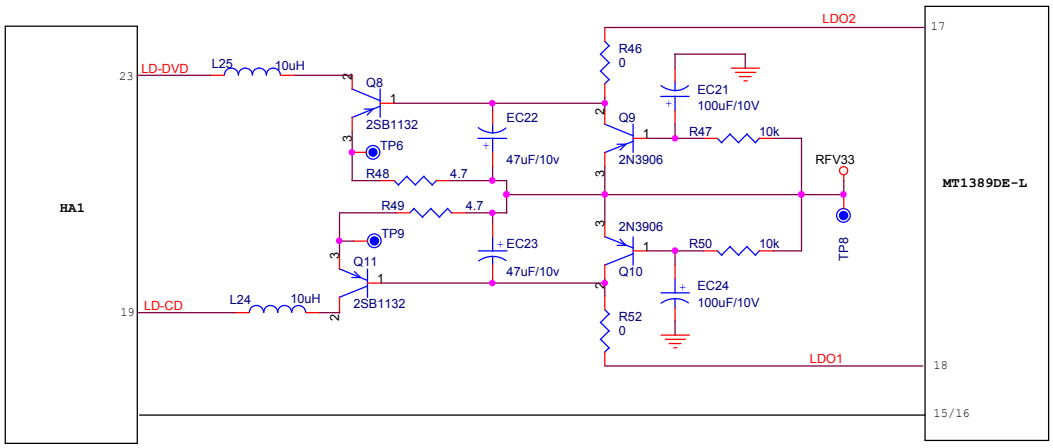


Figure 3.2.3.1 Laser power control circuit diagram

2. Working principle: pin 15/16 of MT1389 is laser power detect signal input pin, pin 21 is DVD laser power strong/weak detect signal input pin, pin 18 is VCD laser power drive control output pin, pin 17 is DVD laser power drive control output pin.

When reading VCD disc, laser power becomes weak, voltage of MDII pin decreases; when voltage of MT1389 decreases, voltage of pin 19 of HAI 1 increases to reach the function of boost laser power; when laser power is too strong, voltage of MDII pin increases to make voltage of MT1389 increase and voltage of pin 19 of HA1 decrease to reach the purpose of lowering laser power to form a automatic power control circuit. When reading DVD disc, pin 16 is detect signal input pin, pin 17 is drive control output pin and the working principle is the same with that when playing VCD disc.

3.2.4 Main axis control circuit

1. Main axis control circuit is shown as in the following figure 3.2.4.1:

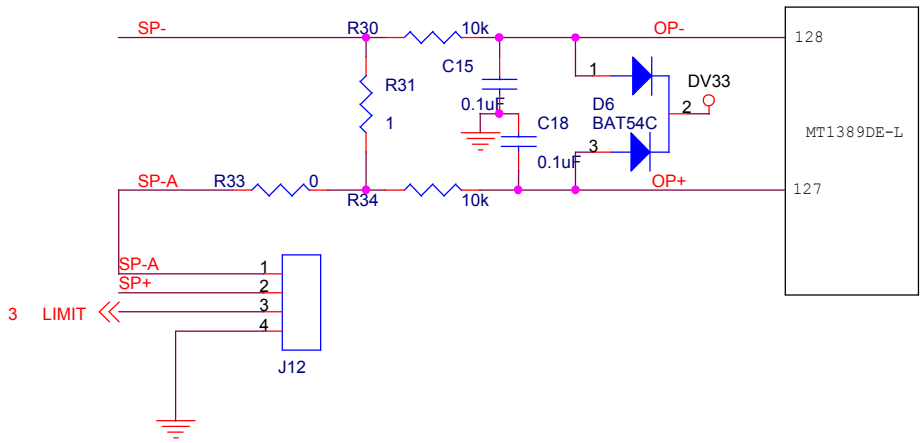


Figure 3.2.4.1 Main axis control circuit diagram

2. Working principle: MT1389E has a comparator composed of operational amplifier inside. When door is opened, disc is always rotating, so a braking signal is required to make main axis electric machine stop rotating immediately to realize the purpose that disc can stop rotating during a short period after door is opened. In the course of playing, if “OPEN” button is pressed, main axis drive signal disappears, but main axis electric machine is still in rotating state because of inertia function. The induced voltage achieved by induced electromotive force produced by electric machine running on sampling resistor, after sampling through resistor R30, R31, R34 input to pin 127, 128 of MT1389, after Mt1389 amplifying processing inside, and D/A conversion and relevant processing inside Mt1389, an instant electric machine reverse braking signal is outputted to make main axis electric machine speed down. This machine is manual open/close means, so disc is still rotating after door is opened but it will stop very soon.

3.2.5 DC-DC switch circuit

1. DC-DC switch circuit is shown as in the following figure 3.2.5.1:

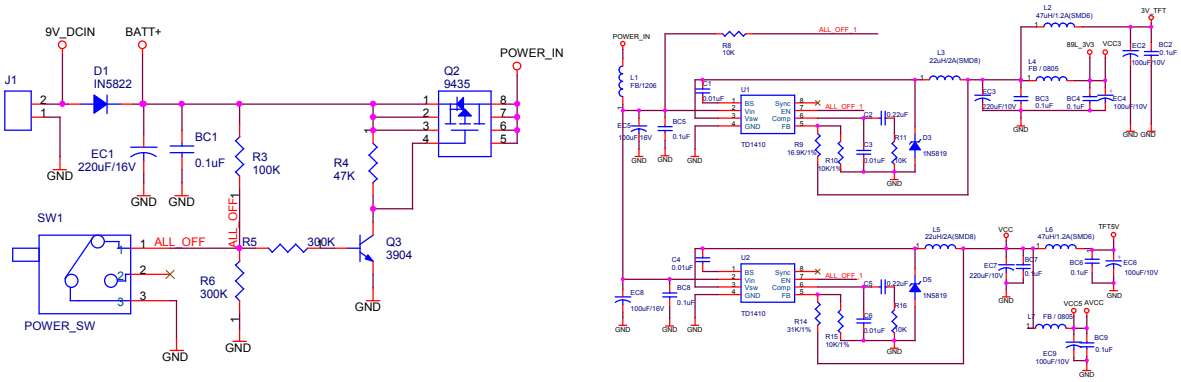


Figure 3.2.5.1 DC-DC switch circuit diagram

2. Working principle: when switch is closed, pin 4 of Q2(APM9435) is high level, Q2 is cut off, power-in has no power output, DC-DC circuit has no function, machine is in power off state, but after SW1 is disconnected, pin 4 is low level, DC-DC circuit begins to work. Take VCC for instance, we give explanation to voltage regulating of circuit: DC-DC circuit begins to oscillate, its working frequency is in 380khz, Sw pin outputs on/off signal. When VSW is high level, MOS pipe is on, +9V power reaches L5 EC7 through MOS pipe to save energy for inductor and charge capacitor, D5 freewheeling diode, when MOS pipe is cut off, L discharges energy and its induced electromotive force makes diode on, at the same time EC7 discharges the load with current direction unchanged to form a series connection switch voltage regulating circuit. When output voltage is on high side, it has the following changes: VCC increases —COMP increases VSW on/off frequency turns low —VCC decreases. When voltage is on low side, the course is opposite to that of increase. (VCC3 circuit principle is the same with that of VCC)

3.2.6 Audio output circuit

1. Audio output circuit block diagram is shown as in the following figure 3.2.7.1:

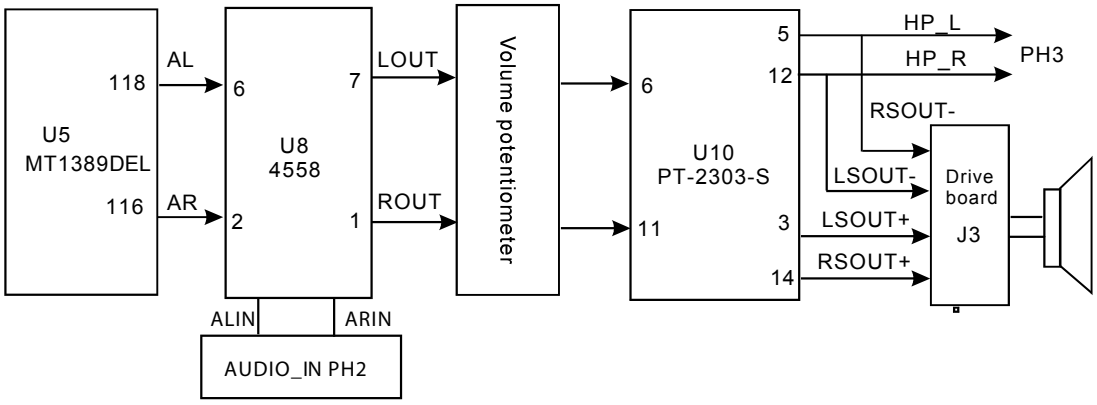


Figure 3.2.6.1 Audio output circuit block diagram

2. Working principle: signal read out by disc, through audio and video decoding, converse audio signal in MT1389DE built-in DAC circuit to analog audio signal and output left and right channel analog signals from pin 118, 116 of MT1389E, through EC33, EC29 coupled to pin 6, 2 of U8 and then output from pin 1, 7 of U8 through being filtering and amplifying by the active filter composed of U8 and send to audio output terminal and headphone amplifying output circuit.

(1) Headphone amplifying output circuit

As shown in the figure 3.2.7.2, after volume adjustment of the audio signals outputted from U8 through VRJ8 , input from pin 6, 11 of U10 respectively; audio signals after being amplified output from pin 5, 12 of U10 to headphone socket for perform converse between headphone and speaker.

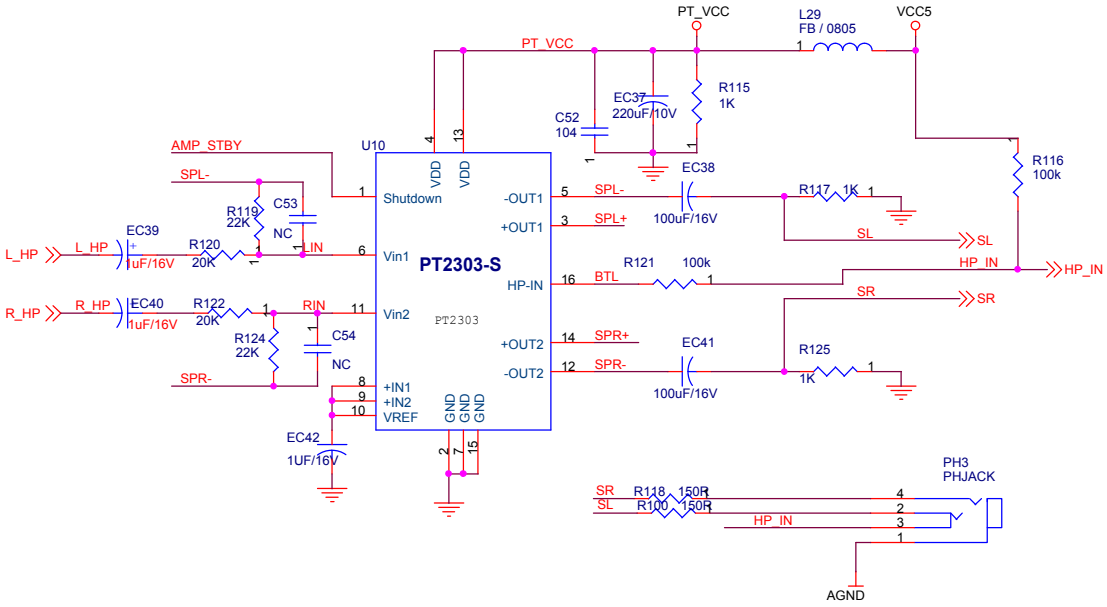


Figure 3.2.6.2 Headphone amplifying output circuit diagram

(2) Output mode switch in headphone and speaker

PT-2303S drive speaker adopts bridge connection. That drives headphone is single ending working mode and its switch between them is fulfilled by HP-IN pin. As shown in the figure 3.2.7.2, when headphone is inserted into a jack, a 4V~VDD voltage is added to HP-IN, which may cut off internal operational amplifying module Amp2A and Amp2B to make the load connected by bridge invalid. Now IC lies in single ending working mode and speaker has no sound output. When no headphone is connected to jack, partial pressure resistance of R116, R117 makes the voltage supplied to pin HP-IN (pin 16) close to 50mV, drive Amp2A and Amp2B are in working state to make 2303-S work in bridge mode and transmit to speaker through drive board to make speaker has sound output.

3.2.7 Screen off detect control circuit

1. Screen off detect control circuit is shown as in the following figure 3.2.7.1:

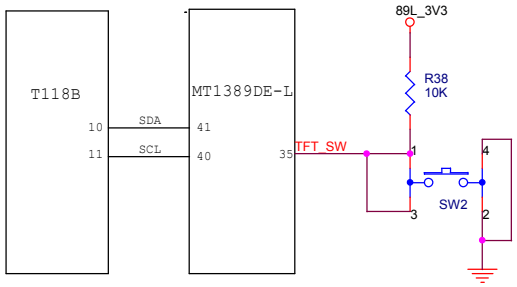


Figure 3.2.7.1 Screen off detect control circuit

2. Working principle: when switch is off, pin 35 of MT1389 detects level, pin 40/41 outputs control signal to make T118B has not voltage output; when switch is disconnected, voltage of T118B has output and lighten back lighe. (when switch is in panel position, screen close is off, screen open is disconnected).

3.2.8 Video coding and LCD－TFT drive circuit

1. Video coding and LCD－TFT drive circuit block diagram is shown as in the following figure 3.2.8.1:

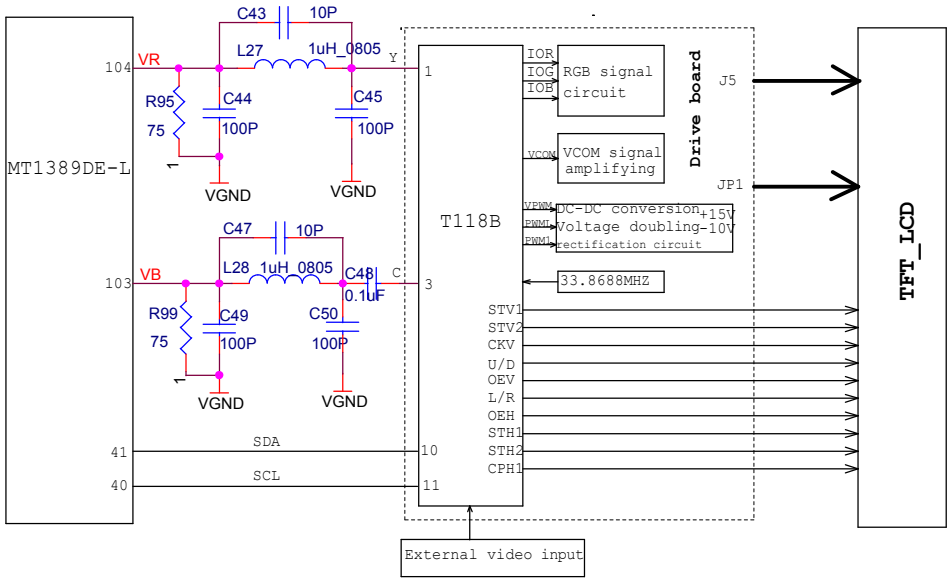


Figure 3.2.8.1 Video coding and LCD－TFT drive circuit block diagram

2. Working principle: decode chip outputs video (Y/C) signal though filt inputs to T118B for coding in the means of data in parallel (8 bit), and restore digital signal to 3 base colour signal through internal DAC circuit and are outputted by pin 40, 41, 42 and sent to a amplifying circuit composed of single triode. Shown as in the figure 3.2.9.2, converse small current signal of RGB into voltage output means to drive LCD screen to display.

VCOM signal amplifying circuit: VCOM, after U3 UTC3414 amplifying, outputs from pin 6, 7 to display screen and is used as the colourful filtering plate of display screen.

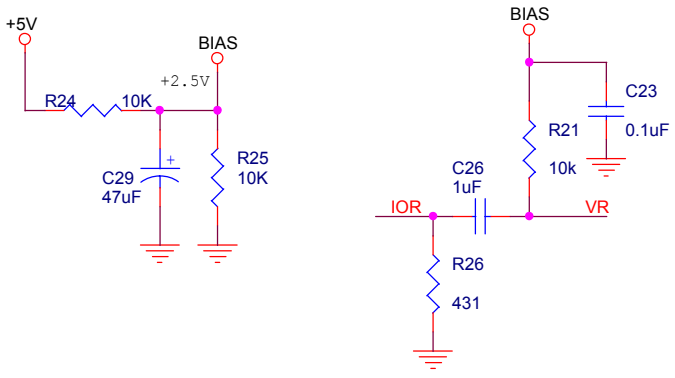


Figure 3.2.8.2 Amplifying circuit

3. Voltage doubling circuit

Working of display drive circuit requires high voltage, so +5V voltage is voltage doubled, shown as in the following figure 3.2.8.3:

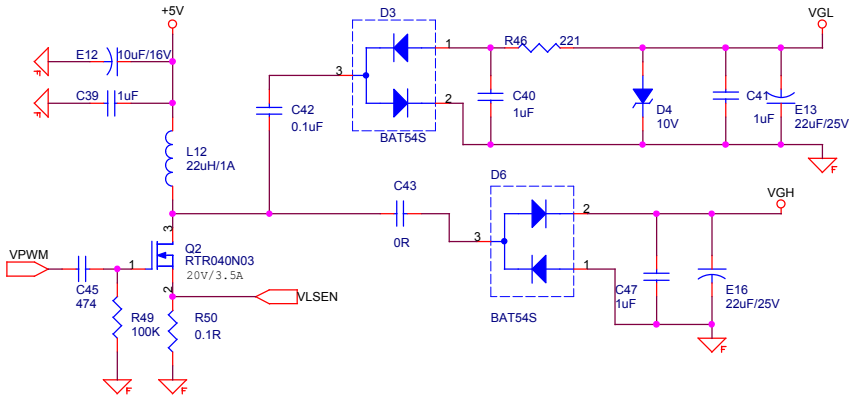


Figure 3.2.8.3 Voltage doubling rectification circuit

+5V power, through Q2, L12 is transmitted to the two groups of voltage doubling rectification circuit composed of D3,D6 to perform rectification to power sent from pin 53 of U1. When VPWM input is negative half circle, about -14V voltage is formed in pin 1 of D3, -10 VGL voltage outputted after D4 voltage regulating is provided to VCOM signal amplifying circuit and display screen. When VPWM input is positive half circle, the voltage doubling rectification circuit composed by D6, C47 and then output VGH(+15V) DC power to provide for display screen. +15V is outputted by JP1 to display screen.

4. Function introduction to display screen pin is shown as in the following table:

Pin	Symbol	I/O	description
1	GND	-	Ground
2	VCC	P	Power line for logic
3	VGL	P	Gate driver negative voltage
4	VGH	P	Gate driver positive voltage
5	STVR	I/O	Gate driver START PULSE 1
6	STVL	I/O	Gate driver START PULSE 2

7	CKV	I	Gate driver scanning clock
8	U/D	I	Up/Down scanning change
9	OEV	I	Gate driver output enable
10	Vcom	I	HORIZONTAL SYNCHRONIZATION SIGNAL(Voltage applied to color filter substrate)
11	Vcom	I	Voltage applied to color filter substrate
12	L/R	I	Right / Left scanning change
13	MOD	I	Sampling mode change (H: Simultaneous, L: Sequential)
14	OEH	I	LATCH PULSE FOR COLUMN DRIVER
15	STHL	I/O	Source scanning start signal 2
16	STHR	I/O	Source scanning start signal 1
17	CPH3	I	INPUT DATA CLOCK
18	CPH2	I	INPUT DATA CLOCK
19	CPH1	I	INPUT DATA CLOCK
20	Vcc	P	Power line for logic
21	GND	P	Ground
22	VR	I	Red video signal
23	VG	I	Green video signal
24	VB	I	Blue video signal
25	AVdd	P	Power
26	AVss	P	Ground

5. Scanning mode selection is shown as in the following table:

Scan control input setup		Start up pulse I/O state				Scan mode
U/D	L/R	STVR	STVL	STHR	STHL	
GND	Vcc	O	I	O	I	Up→down Left→right
Vcc	GND	I	O	I	O	Down→up Right→left
GND	GND	O	I	I	O	Up→down Right→left
Vcc	Vcc	I	O	O	I	Up→down Left→right

3.2.9 Charge circuit and protection circuit

1. Battery: Lithium-ion polymer chargeable battery always follows the method of constant current firstly and then constant voltage, and then charge in constant voltage state.

2. Lithium battery protection part (this PCB board will not be serviced inside battery components) is divided into three types: A) Over-voltage protection, that is charge protection; B) Under voltage protection, that is discharge protection; C) Current protection (short circuit protection included). The protection delay and delay time of the above 3 items are different, from 1 second to 0.1 second and to 10ms with delay adjustable. Two lithium batteries protection, no matte over voltage protection or under voltage protection, they are the relationship of “or”. Only one of the two cores has the condition, the protection is available, which requires that the two cores of a group of battery are balanced on the whole, or else the whole capacity will be severely damaged (when in over voltage protection, the core of high voltage causes over voltage protection firstly; when in under voltage protection, the core of low voltage causes protection firstly).

3. Working principle: when external power adapter is adopted to supply power, power arrives at 9V_DCIN pin through socket board and is divided into two ways: A) arrive at decode board directly through D1; B) if battery has installed, it will charge with 750MA. current at the same time.

3.2.10 Decode circuit

1. Decode circuit block diagram is shown as in the following figure 3.2.10.1:

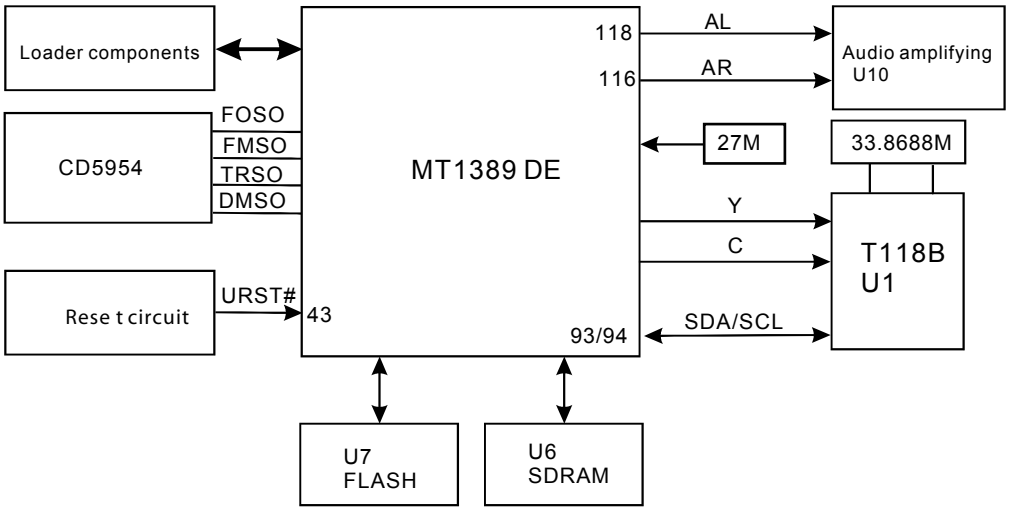


Figure 3.2.10.1 Decode circuit block diagram

2. Working principle:

(1) Power: MT1389 is with two groups of power supply: one group achieves 1.8V voltage after LM1117MP-1.8(U3) voltage regulating to supply for the logic circuit inside IC; the other group achieves 3.3V voltage after DC-DC conversion . At the same time, FLASH and SDRAM must also meet the requirements of power.

(2) System clock: clock signal is an important factor of machine's working, that whether there is clock signal or whether it is normal will affect the normal working of the player. This machine adopts external clock (27M) that inputs to pin 9, 10 of MT1389, clock is produced by Y1 and its peripheral circuit.

(3) Data communication

1) Communication of Mt1389 and SDRAM: the communication of MT1389 and SDRAM is mainly to temporarily save the large quantities of data after MT1389 decoding to prepare for saving at any time. Shown as in the figure, DMA0DMA10 is address signal, DQ0DQ15 is data signal, DCLK is synchronous clock, DCKE is enabled end, CS is chip selection signal, WE is write enabled signal, RAS and CAS are row and line gating signals.

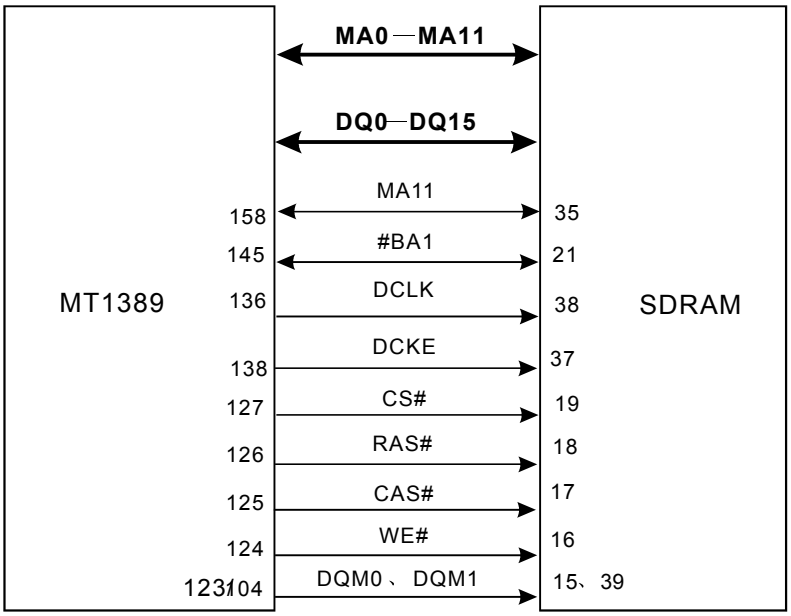


Figure 3.2.10.2 Communication block diagram of MT1389 and SDRAM

2) Communication of MT1389 and FLASH

The communication of Mt1389 and FLASH is mainly to call the program and working directions saved inside FLASH when power on. Shown as in the figure, CS is chip selection. DO is serial data output. DI is serial Data input, CK is serial clock.

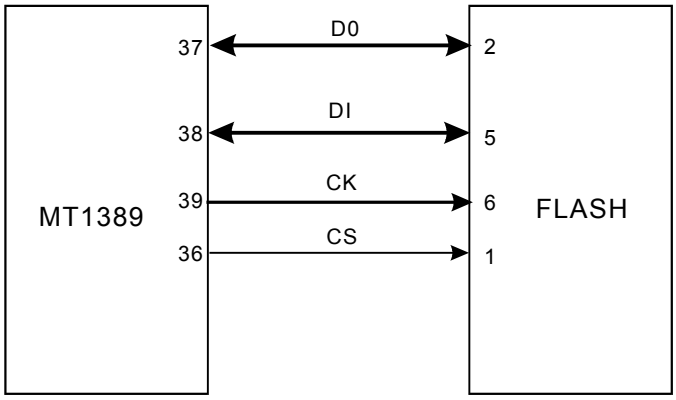


Figure 3.2.10.3 Communication block diagram of Mt1389 and FLASH

3. Audio, video output

(1) Video: MT1389 integrates video encoder inside, so analog video signals can output from Mt1389 inside directly;

Pin 104 output Y, and pin 103 output C.

(2) Audio: Mt1389 integrates D/A conversion inside, so analog audio signal output from MT1389 inside directly, and digital signal may also output directly and be conversed by the externally connected D/A conversion IC, which is also with optical output function. DL371S adopts analog audio output and the output signals are as follows:

◆ P119: ASL ◆ P118: AL

◆ P116: AR ◆ P115: ASR

This machine only uses two channels of AL and AR and no other channels.

3.2.11 Reset circuit

1. Reset circuit is shown as in the following figure 3.2.11.1:

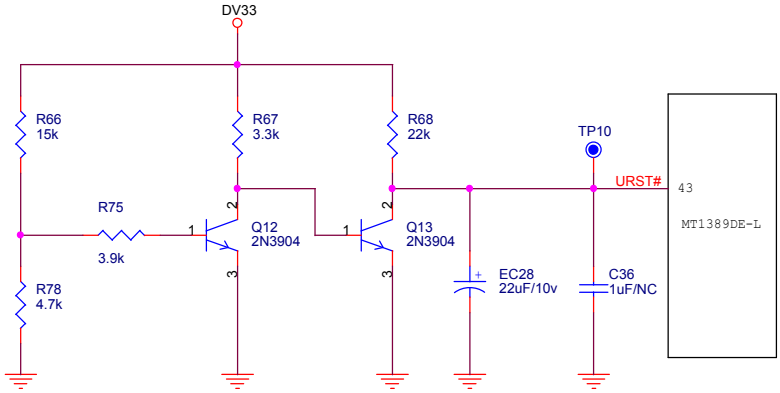


Figure 3.2.11.1 Reset circuit diagram

2. Working principle: after power on, DV33 charges TC28 through R68. Voltage on two ends of capacitor cannot change suddenly, so positive voltage of EC28 increases gradually and its increase time is related with R68/EC28. When machine is working normally, this voltage is the same with power voltage on the whole. After this circuit performs reset to decode chip pin 43, After machine power off, the electric charge saved in EC28 discharges through Q13 to ensure the reliable reset after power on next time.

3.2.12 Mute circuit

1. Mute circuit is shown as in the following figure 3.2.12.1:

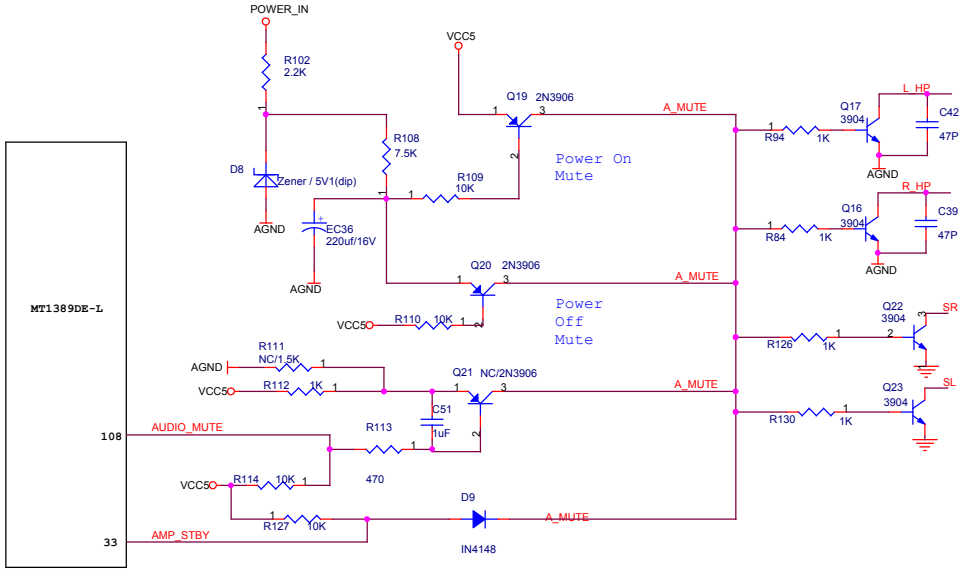
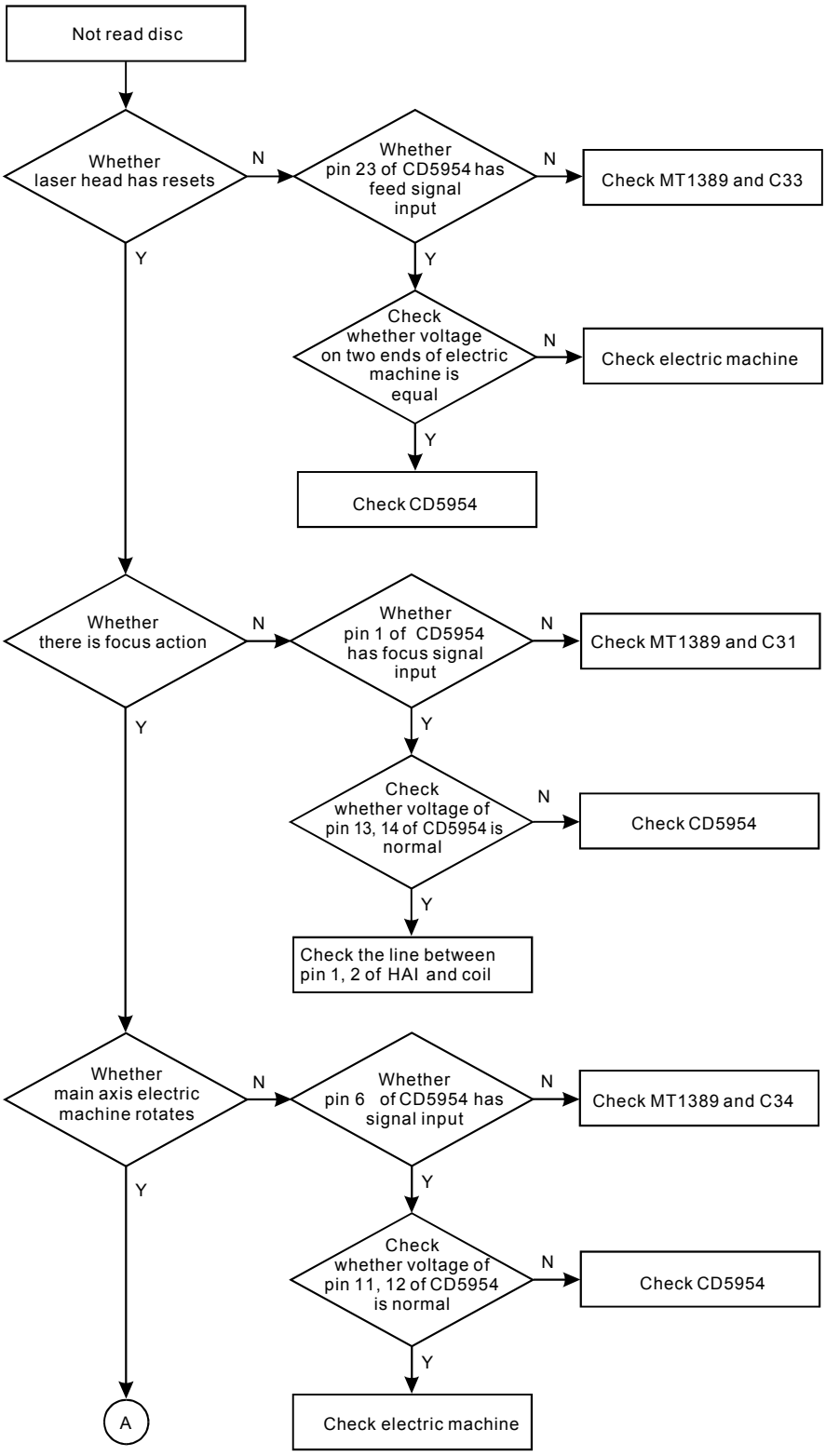


Figure 3.2.12.1 Mute circuit diagram

2. Working principle: after power on, +9V arrives at the base electrode of Q16, Q17, Q22, Q23 through CE of Q19 to make triode saturated on, audio signal output and headphone output are short circuited to ground to remove noise that produces when power on. After machine resets and begins to read disc, pin 33 of Mt1389 outputs a high level to make pin MUTE change from high level to low level, Q16, Q17, Q22, Q23 are cut off because the base electrode is low level , audio signal can output normally.

3.3.1 Troubleshooting flow chart

1. Troubleshooting flow chart for “Not read disc” is shown as in the following figure 3.3.1.1:



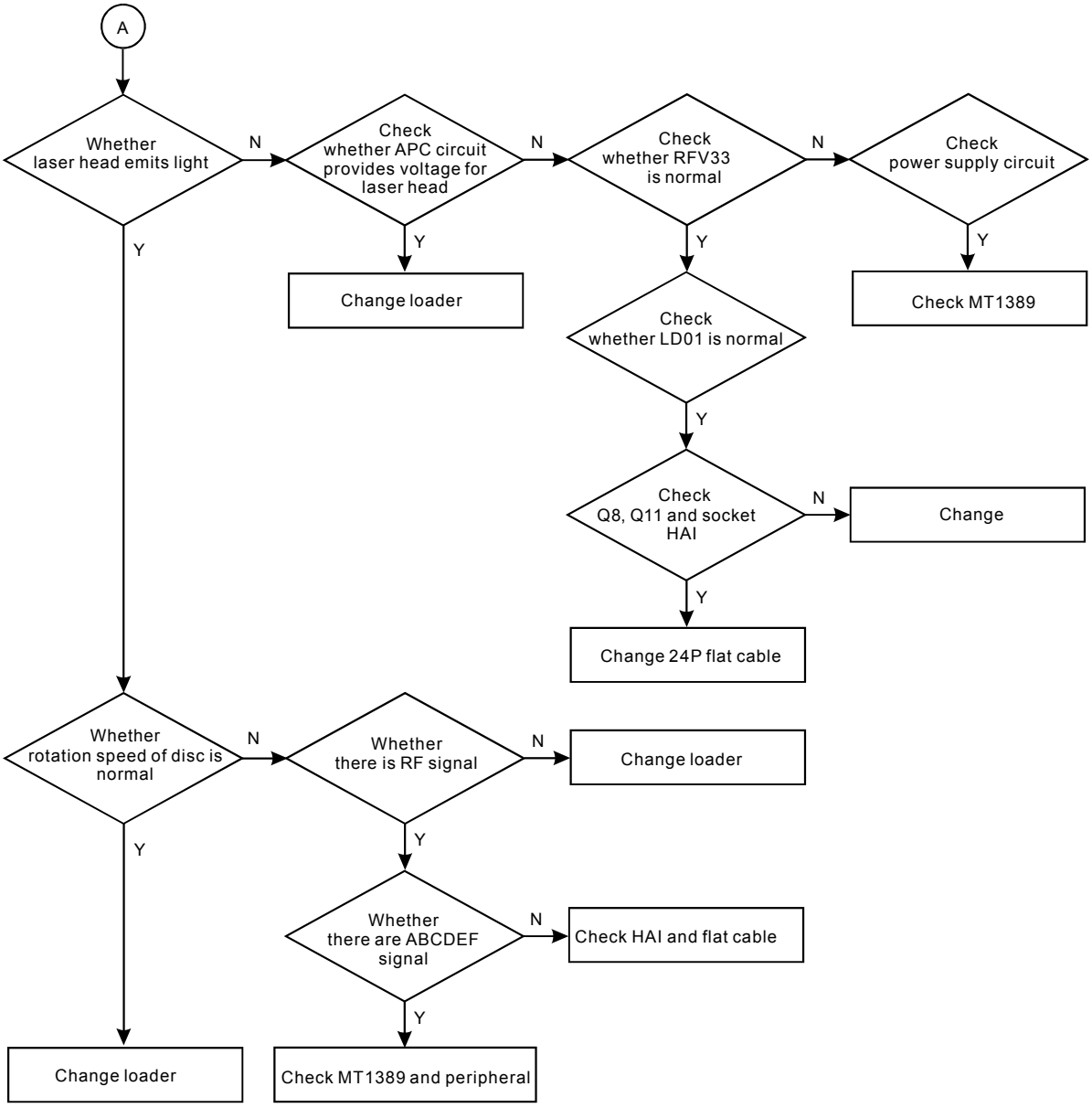
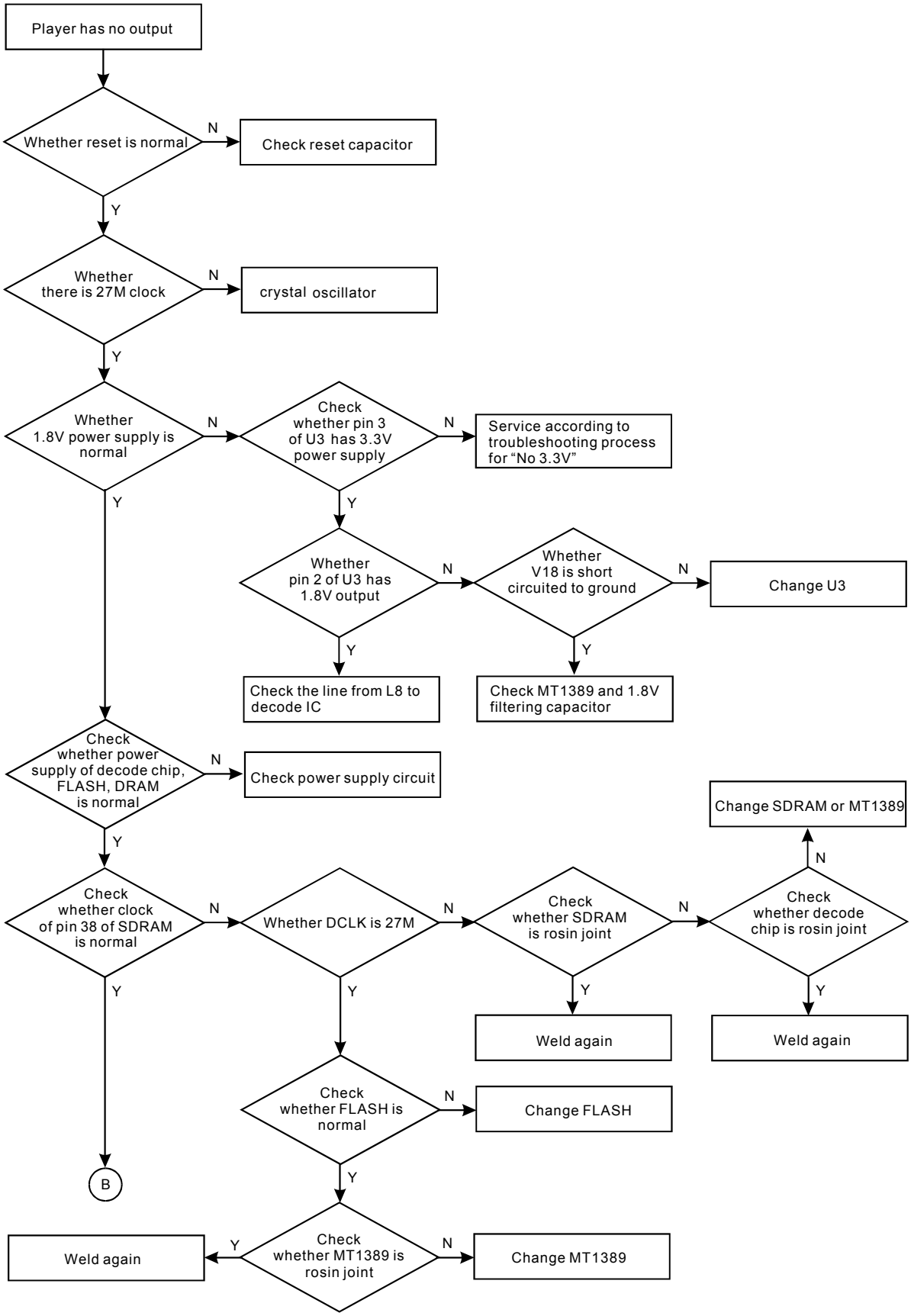


Figure 3.3.1.1 Troubleshooting flow chart for “Not read disc”

2. Troubleshooting flow chart for “Player has no output” is shown as in the following figure 3.3.1.2:



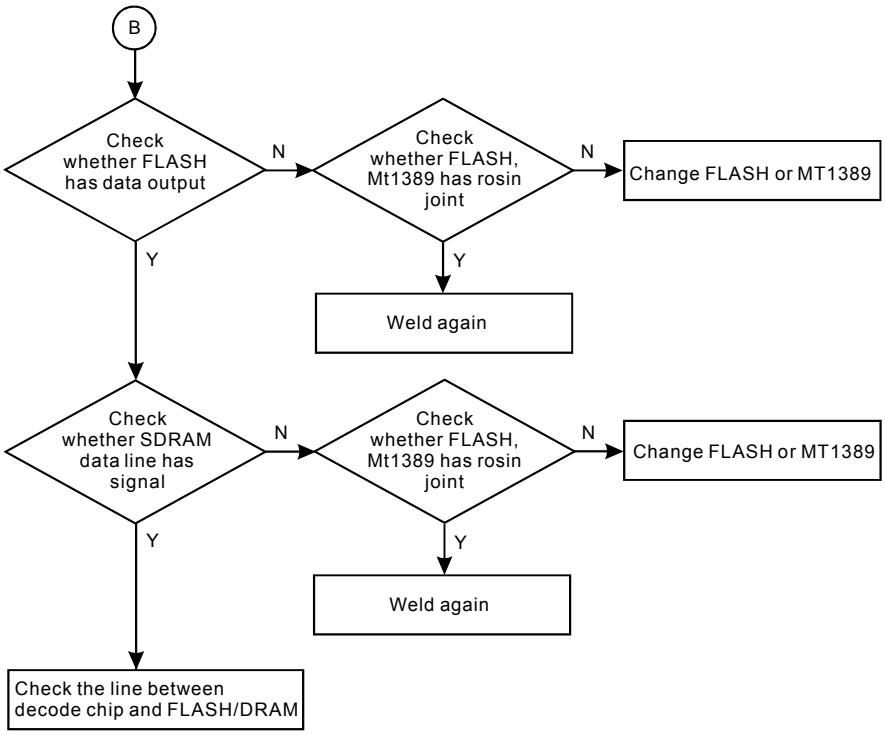


Figure 3.3.1.2 Troubleshooting flow chart for “Player has no output”

3. Troubleshooting flow chart for “No VCC voltage” is shown as in the following figure 3.3.1.3:

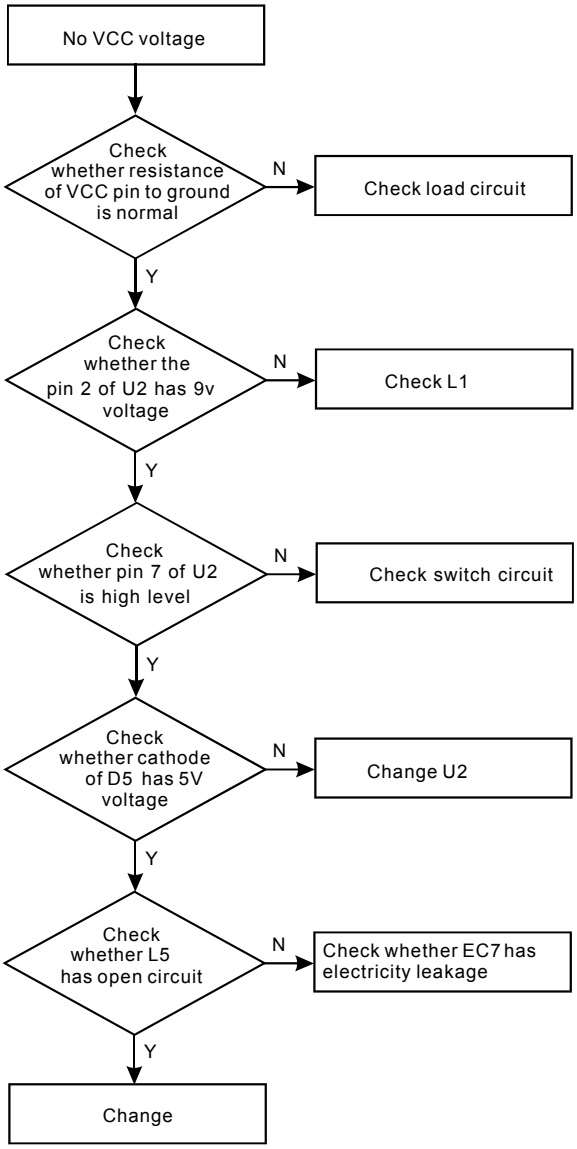


Figure 3.3.1.3 Troubleshooting flow chart for “No VCC voltage”

4. Troubleshooting flow chart for “No DV33V voltage” is shown as in the following figure 3.3.1.4:

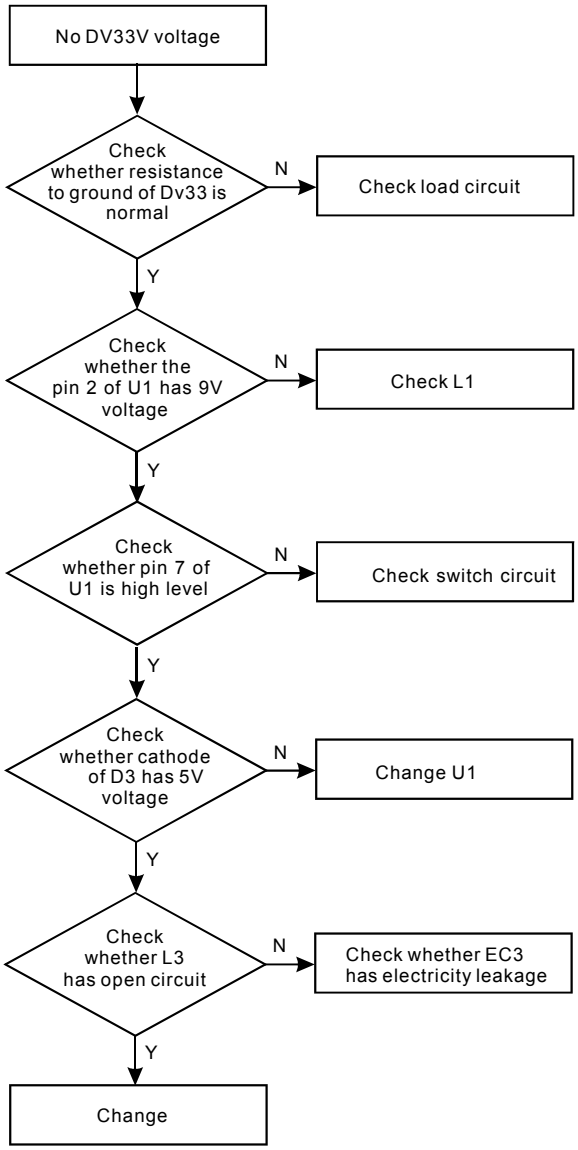


Figure 3.3.1.4 Troubleshooting flow chart for “No DV33V voltage”

5. Troubleshooting flow chart for “No VCC, DV33V voltage” is shown as in the following figure 3.3.1.5:

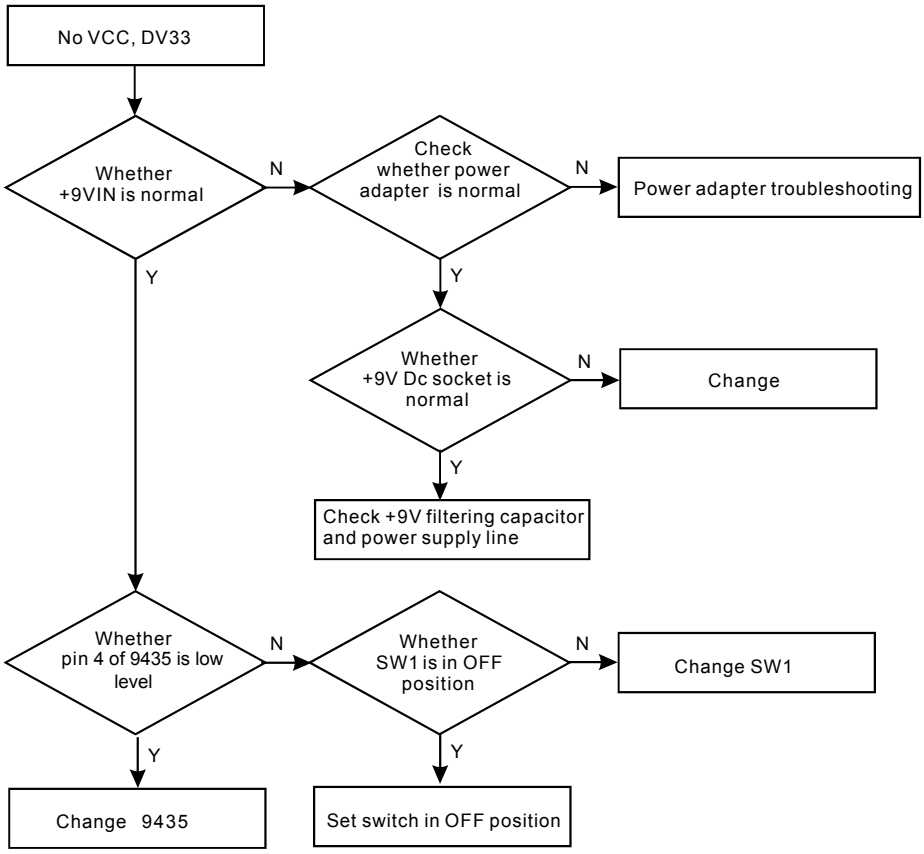


Figure 3.3.1.5 Troubleshooting flow chart for “No VCC, DV33V voltage”

6. Troubleshooting flow chart for “Audio has no output” is shown as in the following figure 3.3.1.6:

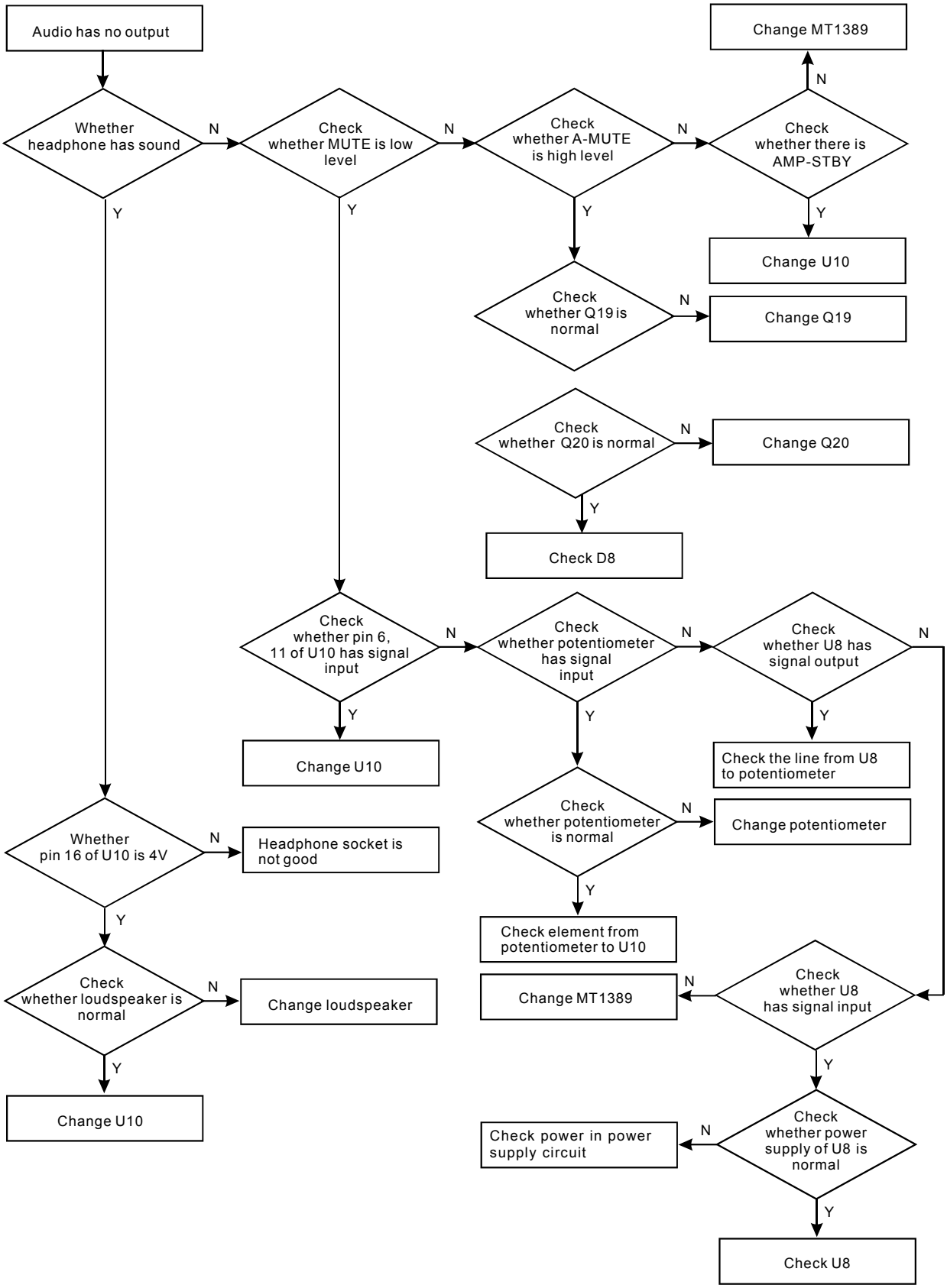
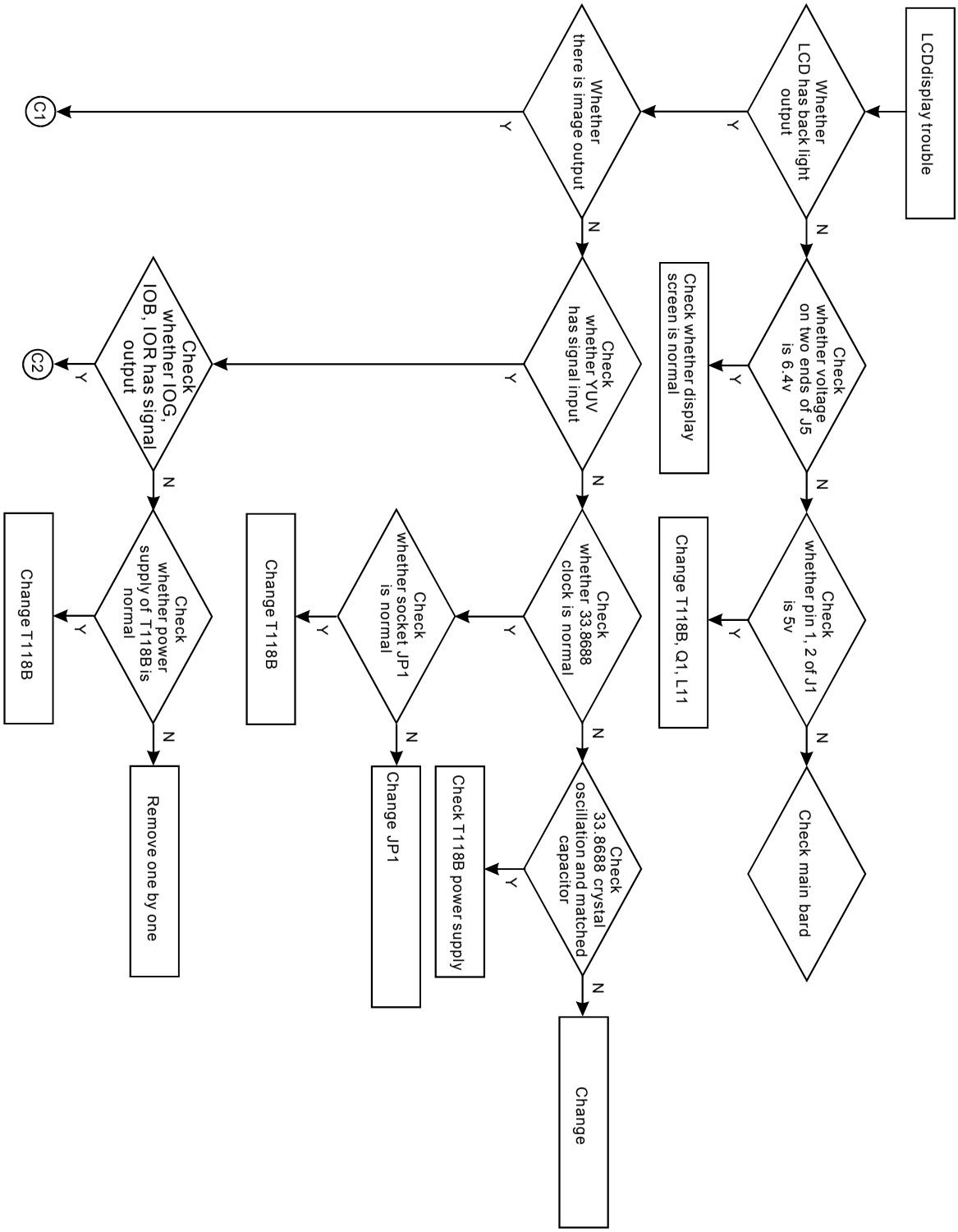


Figure 3.3.1.6 Troubleshooting flow chart for “No audio output”

7. Troubleshooting flow chart for “LCD display trouble” is shown as in the following figure 3.3.1.7:



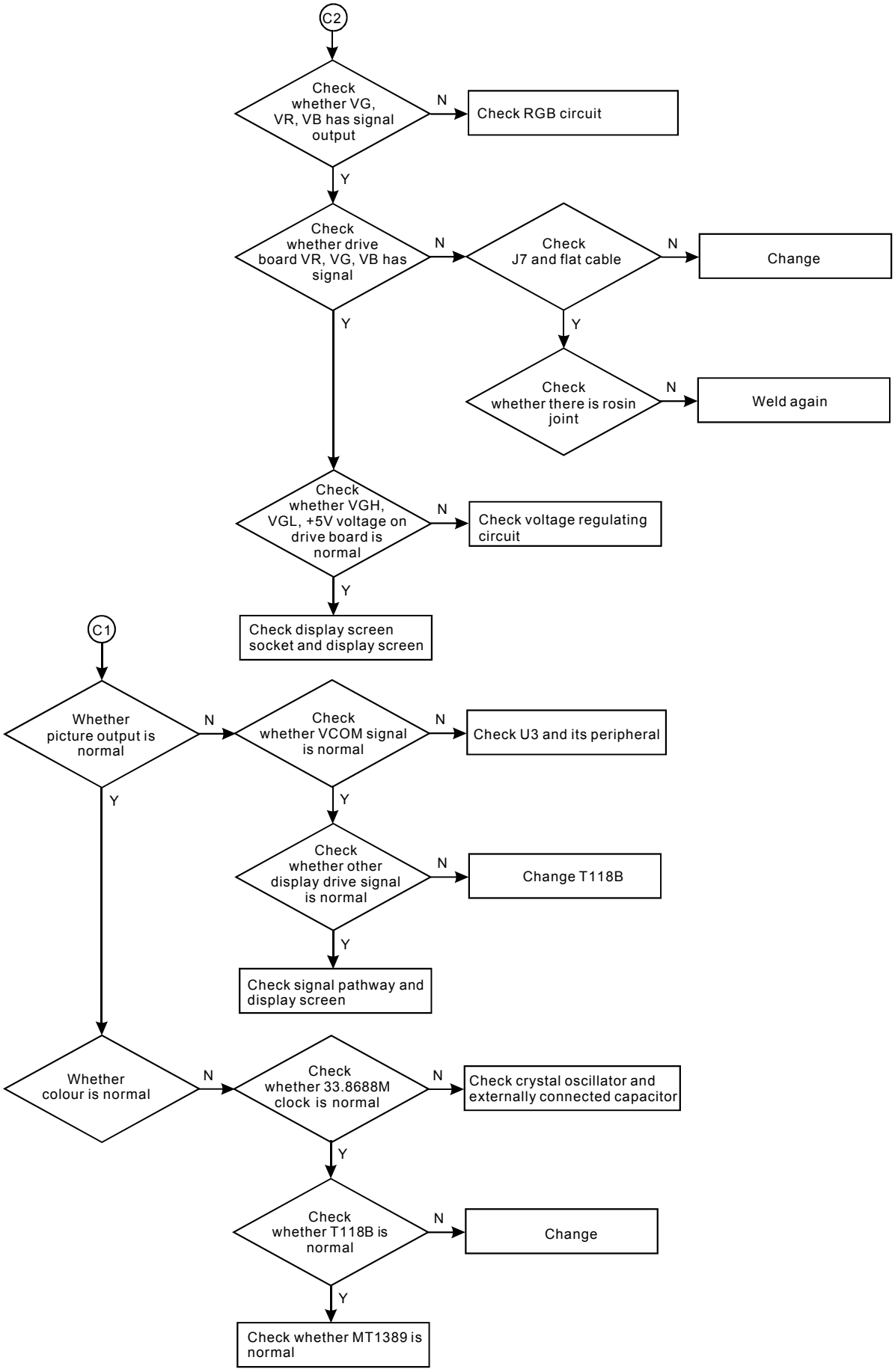


Figure 3.3.1.7 Troubleshooting flow chart for “LCD display trouble”

Section Four Servicing Parameters

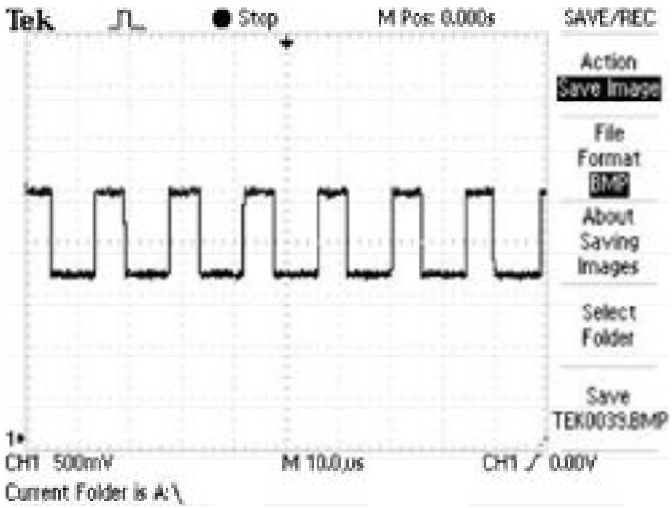
3.4.1 Signal waveform diagram

This section collects signal waveform diagram of audio, video and each unit circuit with the purpose to help servicing personnel to judge where trouble lies in accurately and quickly to improve servicing skills. For the difference of oscillograph's type, model and tuner, a certain difference may exist, so the servicing personnel are expected to pay more attention to check in daily operation.

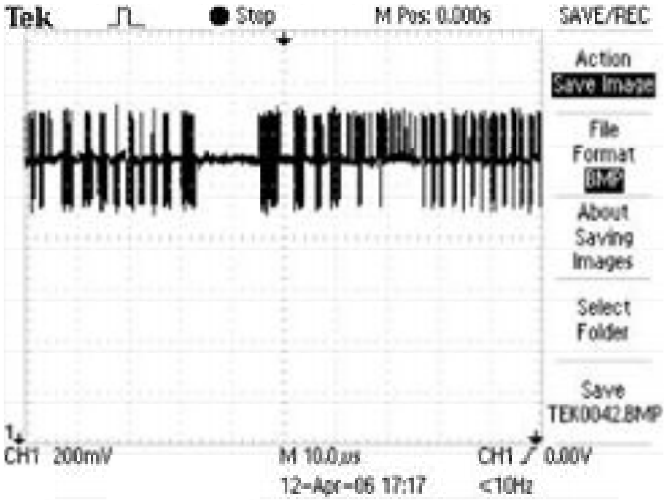
1. Waveform diagram of pin 7 CKV of JP1



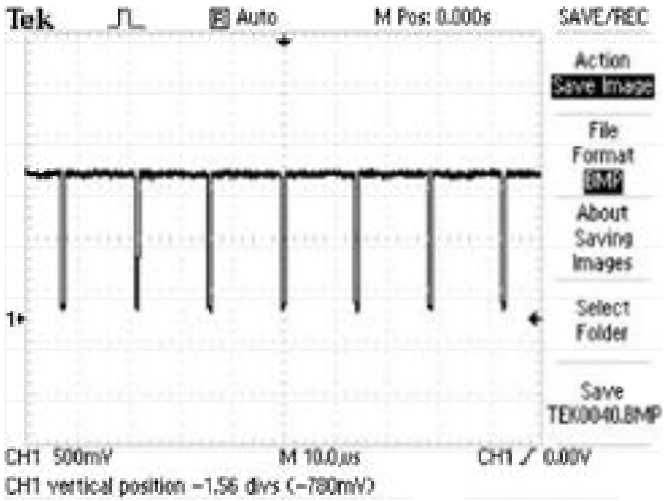
2. Waveform diagram of main axis drive DMO outputted by decode chip



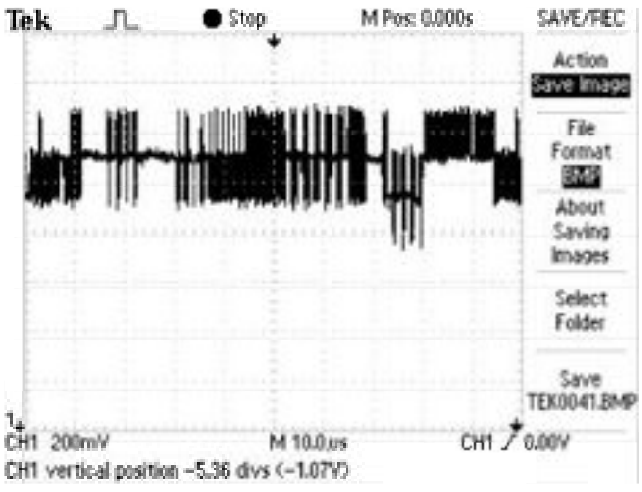
3. Waveform diagram of FO outputted by decode chip



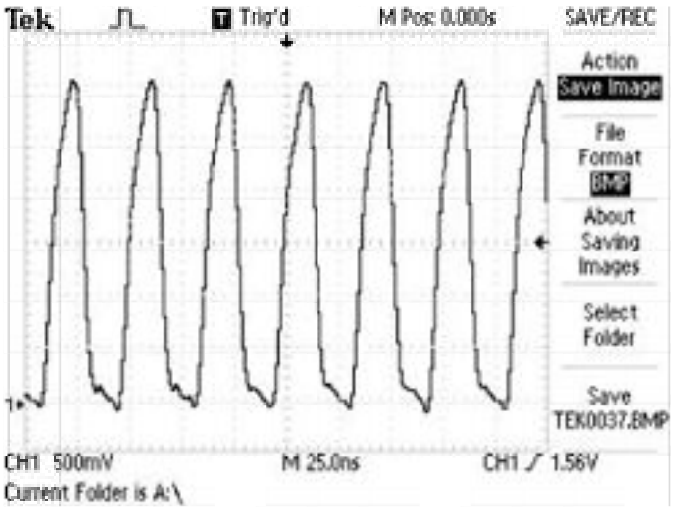
4. Waveform diagram of FM outputted by decode chip



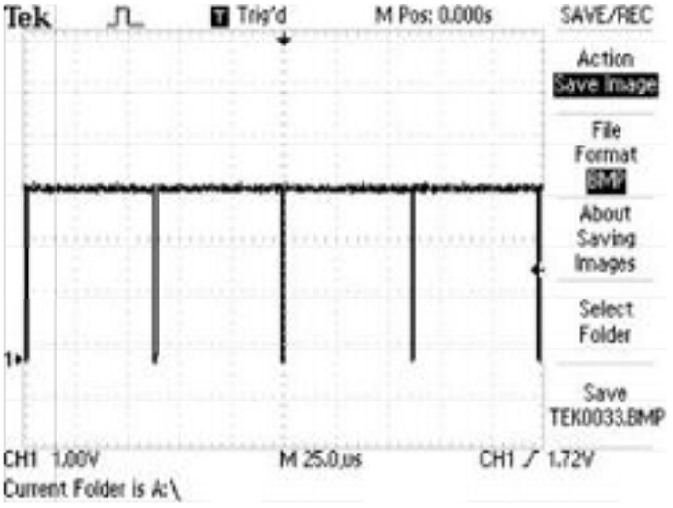
5. Waveform diagram of TR outputted by decode chip



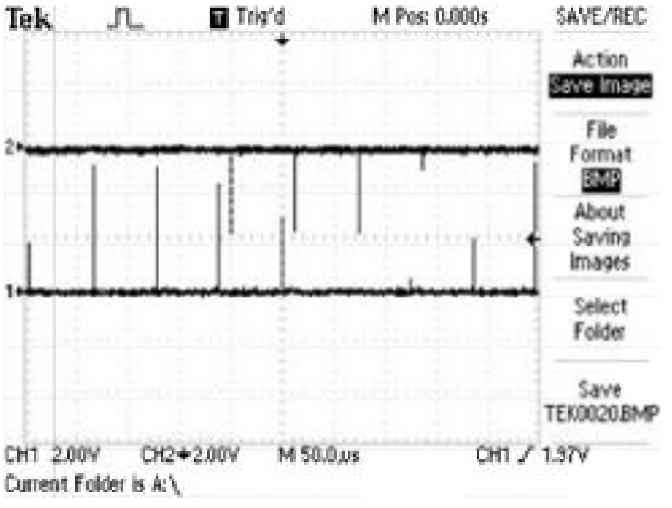
6. Waveform diagram of CLK of pin 66 of MT1389



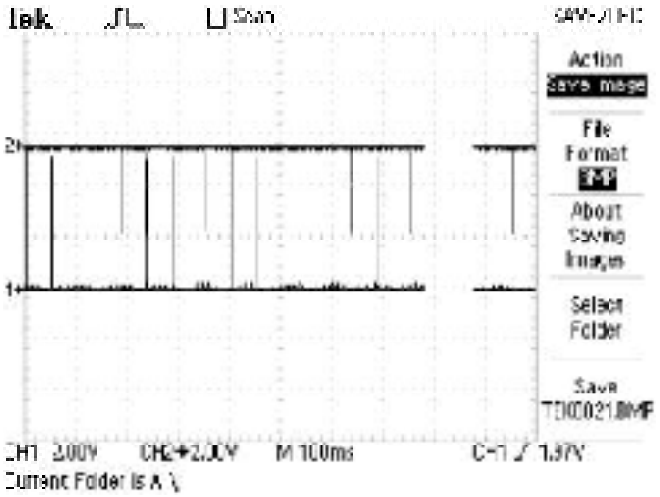
7. Waveform diagram of OEH of pin 14 of JP1



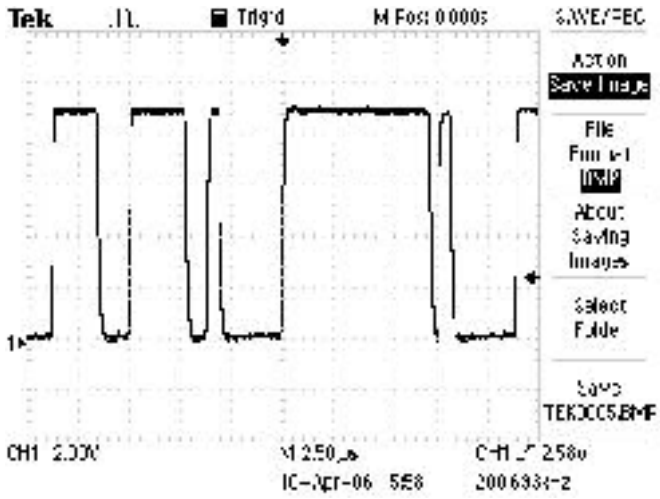
8 . Waveform diagram of STHL, STHRof pin 15, 16 of JP1



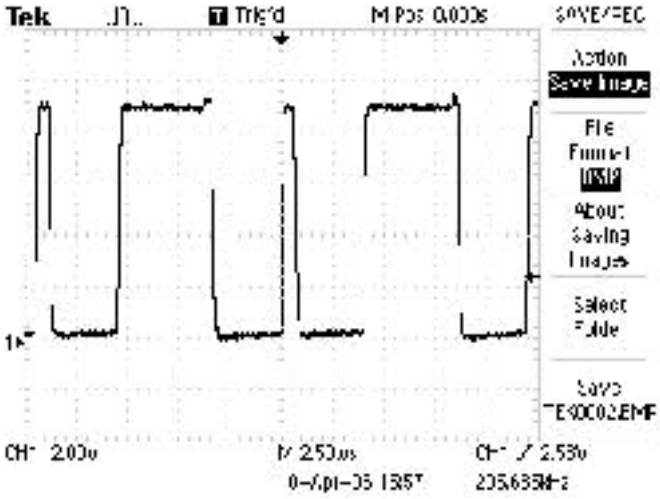
9. Waveform diagram of pin 5, 6 STVR ,STVL of JP1



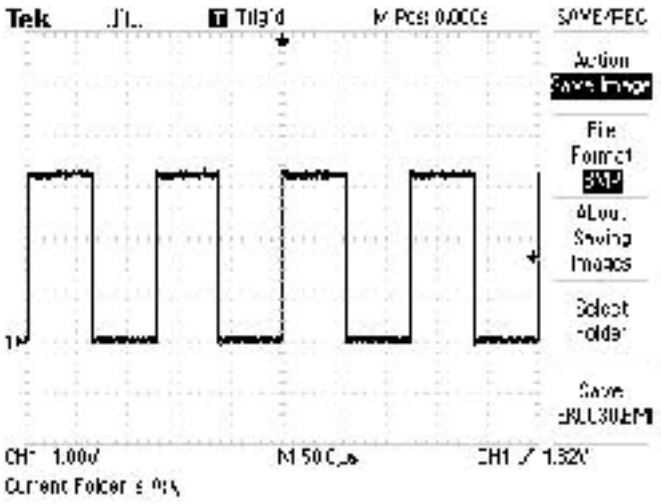
10. Waveform diagram of pin 3 VSW of U1 TD1410



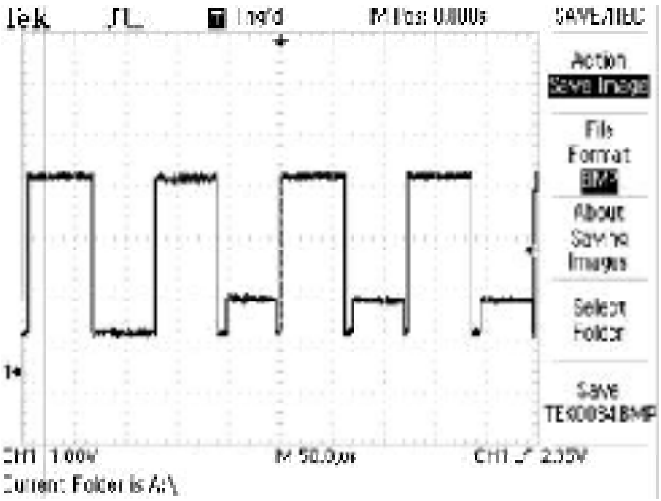
11. Waveform diagram of pin 3 VSW of U2 TD1410



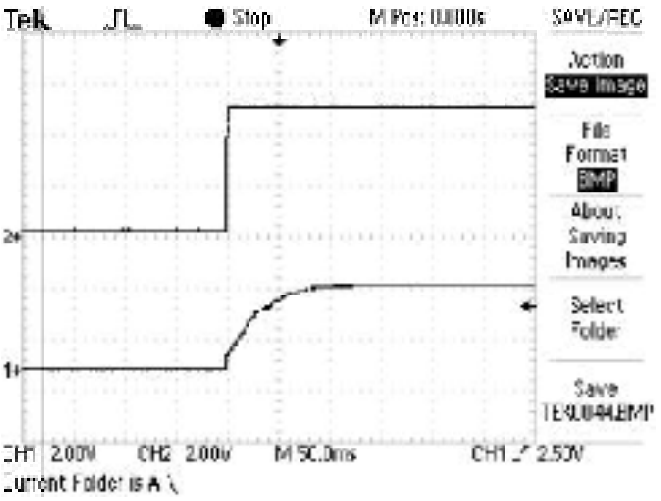
12. Waveform diagram of pin 10, 11 VCOMO of JP1



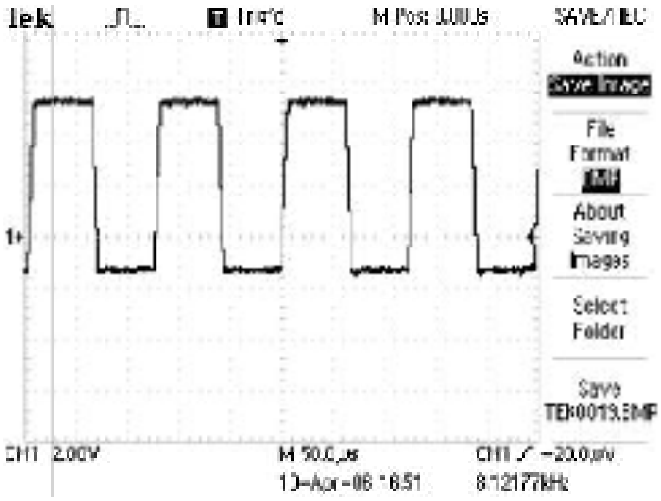
13. Waveform diagram of pin 22 VR of JP1



14. URST waveform diagram



15. Waveform diagram of pin 6 U3 VCOM



Section Five Function Introduction to IC

3.5.1 function introduction to MT1389DE

1 General Description

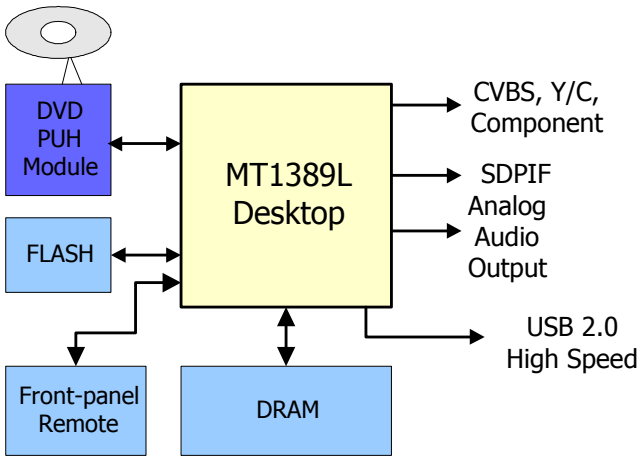
MediaTek MT1389L is a cost-effective DVD system-on-chip (SOC) which incorporates advanced features like MPEG-4 video decoder, high quality TV encoder and state-of-art de-interlace processing. The MT1389L enables consumer electronics manufacturers to build high quality, USB2.0, MS/SD/MMC reader, feature-rich DVD players, portable DVD players or any other home entertainment audio/video devices.

World-Leading Technology: Based on MediaTek's world-leading DVD player SOC architecture, the MT1389L is the New generation of the DVD player SOC. It integrates the MediaTek 3rd generation front-end digital RF amplifier and the Servo/MPEG AV decoder.

Rich Feature for High Valued Product: To enrich the feature of DVD player, the MT1389 equips a simplified MPEG-4 advanced simple profile (ASP) video decoder to fully support the DivX[1] Home Theater profile. It makes the MT1389-based DVD player be capable of playback MPEG-4 content which become more and more popular.

Incredible Audio/Video Quality: The progressive scan of the MT1389L utilized advanced motion-adaptive de-interlace algorithm to achieve the best movie/video playback. It also supports a 3:2 pull down algorithm to give the best film effect. The 108MHz/12-bit video DAC provides users a whole new viewing experience. Built-in 6ch audio DACs and 2ch audio ADCs could give the variable function solutions.

High Performance Memory Storage Device: As the core of Portable DVD players need more capability to support current multimedia contents. The MT1389L provides the interface for the 3-in-1 card reader, which supports Memory-Stick, Secure Digital Memory Card, and MultiMediaCard, to connect with the mainstream digital camera FLASH cards. For the USB application, we adopt **USB2.0 High speed** specification to reach rich-contents transference. **USB 2.0 High speed** will support for high-speed devices. **USB 2.0 High Speed** is suitable for high-performance devices such as high-density storage devices. In addition, **USB 2.0 High Speed** supports old USB 1.0/1.1 software and peripherals, offering impressive and even better compatibility to customers



DVD Player System Diagram Using MT1389L

Key Features

RF/Servo/MPEG Integration
DivX Home Theater Level MPEG4 ASP Video decoder
Support Nero-Digital
Support DivX Ultra
High Performance Audio Processor
Progressive Scan
108MHz/12-bit, 4 CH TV Encoder
Internal 6CH Audio DAC
Internal 2CH Audio ADC
USB2.0 High Speed (Host/Device)
3-in-1 MS/SD/MMC reader

Applications

Standard DVD Players

2 Key Features

- RF/Servo/MPEG Integration
- Embedded 6ch Audio DAC
- Embedded 2ch Audio ADC for Karaoke
- High Performance Audio Processor
- High Performance Progressive Video Processor
- Support Nero-Digital
- Support DivX Ultra
- High Quality 108MHz/12-bit, 4 CH TV Encoder
- USB 2.0 High-Speed

3 Applications

- Standard DVD Players
- DVD Players Home Theater Application
- Portable DVD Players
- TV/DVD Combo Systems

4 General Feature lists

Super Integration DVD player single chip

- High performance analog RF amplifier
- Servo controller and data channel processing
- MPEG-1/MPEG-2/JPEG video
- Dolby AC-3/DTS Decoder
- Unified memory architecture
- Versatile video scaling & quality enhancement
- OSD & Sub-picture
- Built-in clock generator
- Built-in high quality TV encoder
- Built-in progressive video processor
- Audio effect post-processor
- Built-in 5.1-ch Audio DAC
- Built-in 2-ch Audio ADC for Karaoke
- USB 2.0 High-Speed
- MS/SD/MMC 3-in-1 card reader

Speed Performance on Servo/Channel Decoding

- DVD-ROM up to 4XS
- CD-ROM up to 24XS

Channel Data Processor

- Digital data slicer for small jitter capability
- Built-in high performance data PLL for channel data demodulation
- EFM/EFM+ data demodulation
- Enhanced channel data frame sync protection & DVD-ROM sector sync protection

Servo Control and Spindle Motor Control

- Programmable frequency error gain and phase error gain of spindle PLL to control spindle motor on CLV and CAV mode
- Built-in ADCs and DACs for digital servo control
- Provide 2 general PWM
- Tray control can be PWM output or digital output

Embedded Micro controller

- Built-in 8032 micro controller
- Built-in internal 373 and 8-bit programmable lower address port
- 1024-bytes on-chip RAM
- Up to 2M bytes FLASH-programming interface
- Supports 5/3.3-Volt. FLASH interface
- Supports power-down mode
- Supports additional serial port

DVD-ROM/CD-ROM Decoding Logic

- High-speed ECC logic capable of correcting one error per each P-codeword or Q-codeword
- Automatic sector Mode and Form detection
- Automatic sector Header verification
- Decoder Error Notification Interrupt that signals various decoder errors
- Provide error correction acceleration

Buffer Memory Controller

- Supports 16Mb/32Mb/64Mb SDRAM
- Supports 16-bit SDRAM data bus
- Provides the self-refresh mode SDRAM
- Block-based sector addressing

Video Decode

- Decodes MPEG1 video and MPEG2 main level, main profile video (720/480 and 720x576)
- Decodes MPEG-4 Advanced Simple Profile
- Support DivX 3.11/4.x/5.x Home Theater Profile
- Support Nero-Digital
- Support DivX Ultra
- Smooth digest view function with I, P and B picture decoding
- Baseline, extended-sequential and progressive JPEG image decoding
- Support CD-G titles

Video/OSD/SPU/HLI Processor

- Arbitrary ratio vertical/horizontal scaling of video, from 0.25X to 256X
- 65535/256/16/4/2-color bitmap format OSD,
- 256/16 color RLC format OSD
- Automatic scrolling of OSD image

Audio Effect Processing

- Dolby Digital (AC-3)/EX decoding
- DTS/DTS-ES decoding
- MPEG-1 layer 1/layer 2 audio decoding

- High Definition Compatible Digital (HDCD)
- Windows Media Audio (WMA)
- Dolby ProLogic II
- Concurrent multi-channel and downmix out
- IEC 60958/61937 output
  - PCM / bit stream / mute mode
  - Custom IEC latency up to 2 frames
- Pink noise and white noise generator
- Karaoke functions
  - Microphone echo
  - Microphone tone control
  - Vocal mute/vocal assistant
  - Key shift up to +/- 8 keys
  - Chorus/Flanger/Harmony/Reverb
- Channel equalizer
- 3D surround processing include virtual surround and speaker separation

■ **TV Encoder**

- Four 108MHz/12bit DACs
- Support NTSC, PAL-BDGHINM, PAL-60
- Support 525p, 625p progressive TV format
- Automatically turn off unconnected channels
- Support PC monitor (VGA)
- Support Macrovision 7.1 L1, Macrovision 525P and 625P
- CGMS-A/WSS
- Closed Caption

■ **Progressive Scan Video**

- Automatic detect film or video source
- 3:2 pull down source detection
- Advanced Motion adaptive de-interlace
- Minimum external memory requirement

■ External Interface

- USB2.0 High Speed (Host/Device)
- Memory-Stick, Secure Digital Memory Card, and MultiMediaCard Interface

■ **Outline**

- 128-pin LQFP package
- 3.3/1.8-Volt. Dual operating voltages

5 Pin Definitions

Abbreviations:

- SR: Slew Rate
- PU: Pull Up
- PD: Pull Down
- SMT: Schmitt Trigger
- 4mA~16mA: Output buffer driving strength.

Pin	Main	Alt.	Type	Description
Analog Interface (66)				
125	RFIP		Analog Input	AC coupled DVD RF signal input RFIP
126	RFIN	OPOUT	Analog Input	AC coupled DVD RF signal input RFIN
127	RFG	OPINP	Analog Input	Main beam, RF AC input path
128	RFH	OPINN	Analog Input	Main beam, RF AC input path
1	RFA		Analog Input	RF main beam input A
2	RFB		Analog Input	RF main beam input B
3	RFC		Analog Input	RF main beam input C
4	RFD		Analog Input	RF main beam input D
5	RFE		Analog Input	RF sub beam input E
6	RFF		Analog Input	RF sub beam input E
7	AVDD18_2		Analog power	Analog 1.8V power
8	AVDD33_1		Analog Power	Analog 3.3V power
9	XTALI		Input	27MHz crystal input
10	XTALO		Output	27MHz crystal output
11	AGND33		Analog Ground	Analog Ground
12	V20		Analog output	Reference voltage 2.0V
13	V14		Analog output	Reference voltage 1.4V
14	REXT		Analog Input	Current reference input. It generates reference current for RF path. Connect an external 15K resistor to this pin and AVSS
15	MDI1		Analog Input	Laser power monitor input

Pin	Main	Alt.	Type	Description
16	MDI2		Analog Input	Laser power monitor input
17	LDO1		Analog Output	Laser driver output
18	LDO2		Analog Output	Laser driver output
19	AVDD33_2		Analog Power	Analog 3.3V power
20	DMO		Analog Output	Disk motor control output. PWM output
21	FMO		Analog Output	Feed motor control. PWM output
22	TRAY_OPEN		Analog Output	Tray PWM output/Tray open output
23	TRAY_CLOSE		Analog Output	Tray PWM output/Tray close output
24	TRO		Analog Output	Tracking servo output. PDM output of tracking servo compensator
25	FOO		Analog Output	Focus servo output. PDM output of focus servo compensator
26	FG	GPIO2	Analog	1) Motor Hall sensor input 2) GPIO
27	USB_DP		Analog Inout	USB port DPLUS analog pin
28	USB_DM		Analog Inout	USB port DMINUS analog pin
29	VDD33_USB		USB Power	USB Power pin 3.3V
30	VSS33_USB		USB Ground	USB ground pin
31	PAD_VRT		Analog Inout	USB generating reference current
32	VDD18_USB		USB Power	USB Power pin 1.8V
95	DACVDDC		Power	3.3V power pin for video DAC circuitry
96	VREF		Analog	Bandgap reference voltage
97	FS		Analog	Full scale adjustment (suggest to use 560 ohm)
98	DACVSSC		Ground	Ground pin for video DAC circuitry
99	CVBS		Analog	Analog composite output
100	DACVDDB		Power	3.3V power pin for video DAC circuitry
101	DACVDDA		Power	3.3V power pin for video DAC circuitry
102	Y/G		Analog	Green, Y, SY, or CVBS
103	B/CB/PB		Analog	Blue, CB/PB, or SC

Pin	Main	Alt.	Type	Description
104	R/CR/PR		Analog	Red, CR/PR, CVBS, or SY
105	AADVSS		Ground	Ground pin for 2ch audio ADC circuitry
106	AKIN2		Analog	1) Audio ADC input 2 2) MS_CLK set B 3) MCDATA 4) Audio Mute 5) HSYN/VSYN output 6) C5 7) GPIO
107	ADVCM		Analog	1) 2ch audio ADC reference voltageC 2) C6 3) GPIO
108	AKIN1		Analog	1) Audio ADC input 1 2) MS_D0 set B 3) Audio Mute 4) HSYN/VSYN output 5) C7 6) GPIO
109	AADVDD		Power	3.3V power pin for 2ch audio ADC circuitry
110	APLLVDD3		Power	3.3V Power pin for audio clock circuitry
111	APLLCAP		Analog InOut	APLL external capacitance connection
112	ADACVSS2		Ground	Ground pin for audio DAC circuitry
113	ADACVSS1		Ground	Ground pin for audio DAC circuitry
114	ARF / LFE	GPIO	Analog Output	1) Audio DAC sub-woofer channel output 2) While internal audio DAC not used: a. ACLK b. GPIO
115	ARS	GPIO	Analog Output	1) Audio DAC right Surround channel output 2) While internal audio DAC not used: a. ABCK b. GPIO

Pin	Main	Alt.	Type	Description
116	AR	GPIO	Analog Output	1) Audio DAC right channel output 2) While internal audio DAC not used: a. SDATA2 b. GPIO c. RXD2
117	AVCM		Analog	Audio DAC reference voltage
118	AL	GPIO	Analog Output	1) Audio DAC left channel output 2) While internal audio DAC not used: a. SDATA1 b. GPIO c. RXD1
119	ALS	GPIO	Analog Output	1) Audio DAC left Surround channel output 2) While internal audio DAC not used: a. ALRCK b. GPIO
120	ALF /CENTER	GPIO	Analog Output	1) Audio DAC center channel output 2) While internal audio DAC not used: a. ASDATA0 b. GPIO
121	ADACVDD1		Analog Power	3.3V power pin for audio DAC circuitry
122	ADACVDD2		Analog Power	3.3V power pin for audio DAC circuitry
123	AVDD18_1		Analog Power	Analog 1.8V power
124	AGND18		Analog Ground	Analog Ground
General Power/Ground (7)				
54, 90	DVDD18		Power	1.8V power pin for internal digital circuitry
79	DVSS18		Ground	1.8V Ground pin for internal digital circuitry
50, 68,84	DVDD33		Power	3.3V power pin for internal digital circuitry
60	DVSS		Ground	3.3V Ground pin for internal digital circuitry
Micro Controller , Flash Interface and GPIO(12)				
33	GPIO3	INT#	InOut 8mA, SR PD, SMT	1) General purpose IO 3 2) Microcontroller external interrupt 1
34	GPIO4		InOut 4mA, PD	General purpose IO 4

Pin	Main	Alt.	Type	Description
35	GPIO6		InOut 4mA, PD	General purpose IO 6
36	SF_CS_		InOut 8mA, SR PU, SMT	Serial Flash Chip Select
37	SF_DO		InOut 8mA, SR PD, SMT	Serial Flash Dout
38	SF_DI		InOut 8mA, SR PU, SMT	Serial Flash Din
39	SF_CK		InOut 8mA, SR PD, SMT	Serial Flash Clock
40	UP1_6	SCL	InOut 4mA, SR PU, SMT	1) Microcontroller port 1-6 2) I^2C clock pin
41	UP1_7	SDA	InOut 4mA, SR PU, SMT	1) Microcontroller port 1-7 2) I^2C data pin
42	ICE		Input PD, SMT	Microcontroller ICE mode enable
43	PRST#		Input PU, SMT	Power on reset input, active low
44	IR		Input SMT	IR control signal input
Dram Interface (37) (Sorted by position)				
45	RD0		InOut, 4mA	DRAM data 0

Pin	Main	Alt.	Type	Description
46	RD1		InOut 4mA	DRAM data 1
47	RD2		InOut 4mA	DRAM data 2
48	RD3		InOut 4mA	DRAM data 3
49	RD4		InOut 4mA	DRAM data 4
51	RD5		InOut 4mA	DRAM data 5
52	RD6		InOut 4mA	DRAM data 6
53	RD7		InOut 4mA	DRAM data 7
55	DQM0		InOut 4mA, PD	Data mask 0
56	RD15		InOut 4mA	DRAM data 15
57	RD14		InOut 4mA	DRAM data 14
58	RD13		InOut 4mA	DRAM data 13
59	RD12		InOut 4mA	DRAM data 12
61	RD11		InOut 4mA	DRAM data 11
62	RD10		InOut 4mA	DRAM data 10
63	RD9		InOut 4mA	DRAM data 9
64	RD8		InOut 4mA	DRAM data 8

Pin	Main	Alt.	Type	Description
65	DQM1		InOut 4mA, PD	Data mask 1
66	RCLK		InOut 4mA, PD	Dram clock
67	RA11		InOut 4mA, PD	DRAM address bit 11
69	RA9		InOut 4mA, PD	DRAM address 9
70	RA8		InOut 4mA, PD	DRAM address 8
71	RA7		InOut 4mA, PD	DRAM address 7
72	RA6		InOut 4mA, PD	DRAM address 6
73	RA5		InOut 4mA, PD	DRAM address 5
74	RA4		InOut 4mA, PD	DRAM address 4
75	RWE#		Output 4mA, PD	DRAM Write enable, active low
76	CAS#		Output 4mA, PD	DRAM column address strobe, active low
77	RAS#		Output 4mA, PD	DRAM row address strobe, active low
78	BA0		InOut 4mA, PD	DRAM bank address 0
80	BA1		InOut 4mA, PD	DRAM bank address 1
81	RA10		InOut 4mA, PD	DRAM address 10

Pin	Main	Alt.	Type	Description
82	RA0		InOut 4mA, PD	DRAM address 0
83	RA1		InOut 4mA, PD	DRAM address 1
85	RA2		InOut 4mA, PD	DRAM address 2
86	RA3		InOut 4mA, PD	DRAM address 3
87	GPIO7	CKE	InOut 4mA, PD	1) GPIO 7 2) Dram Clock Enable 3) MS_CLK set A 4) Audio Mute 5) HSYN/VSYN input 6) C0
GPIO (6)				
88	GPIO8		InOut 4mA, PD	1) GPIO8 2) MS_BS set A 3) SD_CLK set A 4) ASDATA2 5) ACLK 6) Audio Mute 7) HSYN/VSYN input 8) C1
89	GPIO9		InOut 4mA, PU	1) GPIO9 2) MS_D0 set A 3) SD_CMD set A 4) ASDATA1 5) ABCK 6) C2 7) RXD1

Pin	Main	Alt.	Type	Description
91	GPIO10		InOut 4mA, PD	1) GPIO10 2) SD_CLK set B 3) SD_D0 set A 4) ASDATA0 5) ALRCK 6) HSYN/VSYN output 7) C3 8) TXD1
92	GPIO11		InOut 4mA, PD	1) GPIO11 2) SD_CMD set B 3) MS_BS set B 4) Audio Mute 5) HSYN/VSYN output 6) C4
93	SPDIF	GPIO12	InOut 2mA, PD	1) SPDIF output 2) GPIO12
94	GPIO13		InOut 4mA, PD	1) GPIO13 2) SD_D0 set B 3) ALRCK 4) Audio Mute 5) YUVCLK

Note:

1. The Main column is the main function, Alt. means alternative function.
2. The multi-function GPIO pins are set to green characters.

3.5.2 function introduction to T118B

1. General Description

The T118B is a highly integrated All-in-one Visual Processor that provides major cost saving solution for the portable applications. T118B has built-in high performance dual ADCs (support YCbCr), TCON, Triple DACs, Scaling Machine with sophisticated upscaling and downscaling algorithms. The Innovative integrated “Frame-Buffer-Less” De-interlacer can significantly reduce system cost. The T118B also integrates On Screen Display engine with 3K-words of font RAM and built-in 1K-words of font ROM. The device can interface to an external micro-controller through 2-wire serial bus interface.

2. Applications

1. 1.8-inch to 10-inch portable DVD or in-car TV
2. Progressive CRT TV

3 Pin Description

Table 1-1 Pin Description

Symbol	Pin #	Type	Description
Power Supplies			
VDD18	8,26	PWR	+1.8V digital core power supply
VDD33	22,36	PWR	+3.3V digital output power supply,
VD5A	38	PWR	+5.0V analog power supply
VD33ADC1 VD33ADC2	63	PWR	+3.3V analog power supply for ADC
VD33DAC VD33PWM	47	PWR	+3.3V analog power supply for DAC
GND	7,21,27,37	GND	Digital ground
VS18PLL	48	GND	Analog ground for PLL
VS33ADC1 VS33ADC2	64	GND	Analog ground for ADC
VS33DAC	39	GND	Analog ground for DAC
VS33PWM	62	GND	Analog ground for backlight inverter
Output Interface Signals			
RSET	43	AO	DAC reference current adjustment
VBFG	44	AO	Voltage reference output
IOR	42	AO	Channel R current output
IOG	41	AO	Channel G current output
IOB	40	AO	Channel B current output
CPH1	25	DO	Output data clock
CPH2/sD0	28	DO	Output data clock/the bit 0 of serial interfaced panel
CPH3/sD1	29	DO	Output data clock/the bit 1 of serial interfaced panel
VSO/STH1	23	DO	Vertical synchronization output signal.
HSO/POL	20	DO	Horizontal synchronization output signal.
DEN/STH2	24	DO	Horizontal data enable
Timing Controller Interface Signals			
UD	19	DO	Vertical Up/Down control
RL	18	DO	Horizontal Right/Left control
Q1H/sD2	30	DO	Source Driver Q1H/the bit 2 of serial interfaced panel
LP/sD3	31	DO	Latch pulse for source driver/the bit 3 of serial interfaced panel
GCLK/sD4	32	DO	Gate driver clock/the bit 4 of serial interfaced panel
GOE/sD5	33	DO	Gate driver output enable/the bit 5 of serial interfaced panel
STV1/sD6	34	DO	Gate Driver start pulse/the bit 6 of serial interfaced panel
STV2/sD7	35	DO	Gate Driver start pulse/the bit 7 of serial interfaced panel
VCOMAMP	45	DO	Analog VCOM amplitude
VCOMDC	46	DO	Analog VCOM DC offset
2-wire serial bus Interface Signals			
SCL	11	DI	2-wire serial bus clock. Power down does not affect SCL.
SDA/IICA3	10	I/O	2-wire serial bus data. Power down does not affect SDA.
Configuration interface Signals			
CPUINT	12	I/O	Internal Interrupt.
RSTB	9	DI	Whole chip reset. (Internal Pull-up)

Symbol	Pin #	Type	Description
ADC Interface			
AY1	1	AI	Analog input 1 of input channel 2
AY0	2	AI	Analog input 0 of input channel 2
ACR1	3	AI	Analog input 1 of input channel 1
ACR0	4	AI	Analog input 0 of input channel 1
ACB1	5	AI	Analog input 1 of input channel 3
ACB0	6	AI	Analog input 0 of input channel 3
PLL Reference Clock			
XTALI	13	DI	Output PLL reference clock input
XTALO	14	DO	Output PLL reference clock output
XCLK2MC	15	DO	Buffered XTALI for external microprocessor.
Power Management Interface Signals			
PWM1	16	DO	Pulse Width Modulation for volume/backlight control.
PWM2	17	DO	Pulse Width Modulation for volume/backlight control.
VEA	49	AO	Error amplifier output
CSS	50	AO	Soft start pin
VFB	51	AI	Feedback of Lamp current
CEXT	52	AO	Switching frequency of DC-DC converter
VPWM	53	AO	PWM output, connect to external N-channel power MOSFET
VEAL	54	AO	Error Amplifier output
VFBL	55	AI	Feedback of Lamp current
VPWML	56	AO	PWM output, drive NMOSFET switch
CSSL	57	AO	Soft start pin
CEXTL	58	AO	Switching frequency of Inverter
VIsenL	59	AI	Current sense
VIsen	60	AI	Current sense
NC	61	N/A	

Chapter Four Disassembly and Assembly Process

In order to know the structure of DVD player DK1005S easily, visibly and quickly, now each key link of the disassembly and assembly process of the player is presented in means of pictures to prevent users from incorrect operating and damaging elements. This player is divided into: the unit, loader, loader components, control panel components, decode control components, power board components, AV board components, MIC board components and remote controller. You are suggested to operate according to illustrations strictly.

The assembly and disassembly process is as follows:



1. Open battery case cover and use electric screwdriver to take out screws.



2. Take out all screws.



3. Take apart bottom board: loader flat cable is stuck on bottom board, so when taking apart bottom board, you should separate loader flat cable from bottom board and then you may take the bottom board (pay attention not to pull flat cable by force).



4. Take apart bottom cover.



5. Change loader: take out 24P loader flat cable and pay attention to the clasp on flat cable socket.



6. Take out loader and change new loader. The assembly process is opposite to disassembly process. After assembly is ok, open the protection point on laser head.



7. Use electric screwdriver to unfix screws of decode board. Remove the flat cable from drive board to decode board (when removing display screen components, this two flat cable may not be removed).



8. Take out panel flat cable and then you may take out decode board.



9. Take down display screen components: firstly take down decode board with the method the same as above. The two flat cable of drive board may not be removed, but should be loosed. Take out PVC plate.



10. Panel servicing: you may take down panel directly for servicing.



11. Take down display components: open the display screen.



12. Take out rotary axis bracket.



13. Take out screws in rotary axis.



14. Separate display screen components from machine.



15. Use electric screwdriver to unfix screws at the powerpart of display screen components.



16. Take out screws.



17. Exert strength on upper display cover backwards and take out the upper display cover.



18. The assembly process of display screen components is adverse to that of disassembly process.



19. PVC plate must be added to decode board assembly to prevent short circuit of the decode board.



20. Insert panel flat cable. Pay attention that the switch is pointed to the position and forcible assembly is avoided.



21. Fix decode board screws.



22. Well weld flat cable to prevent the misplaced welding. Well arrange flat cable inside machine to prevent them locking the loader.



23. Assemble power switch and cover the bottom cover.Pay attention that the bottom cover must be well assorted with panel.



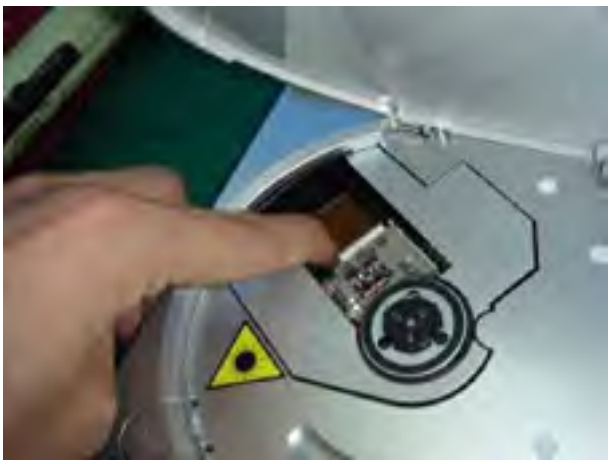
24. Use electric screwdriver to fix screws. Pay attention the length of screws before fixing.



25. Check whether the machine is fully and properly assembled with all elements.



26. Open the door of the machine and you may see the double-faced adhesive tape. Use hand to press the flat cable on bottom board to prevent it falling off.

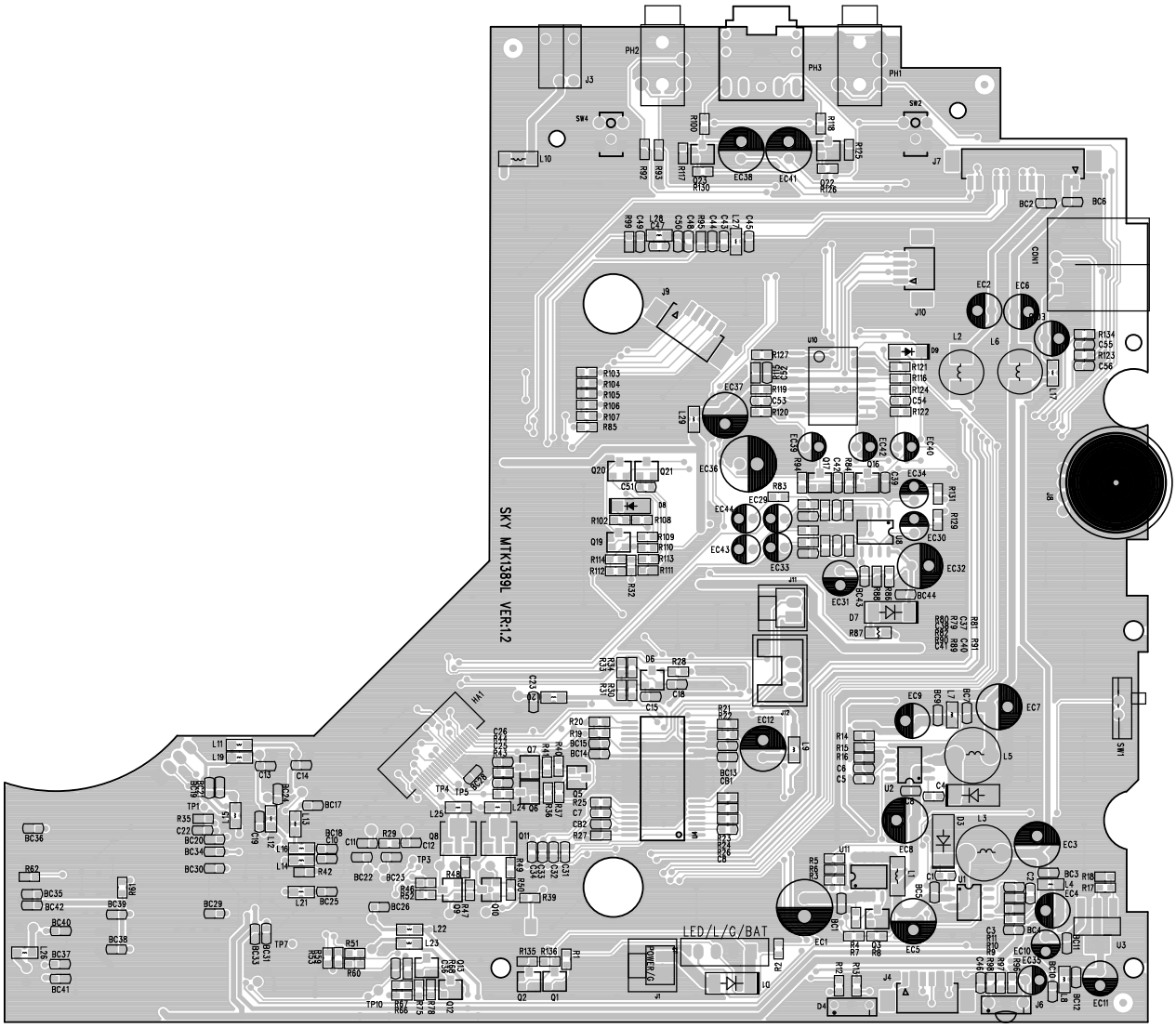


27. Power on, test and assembly finishes.

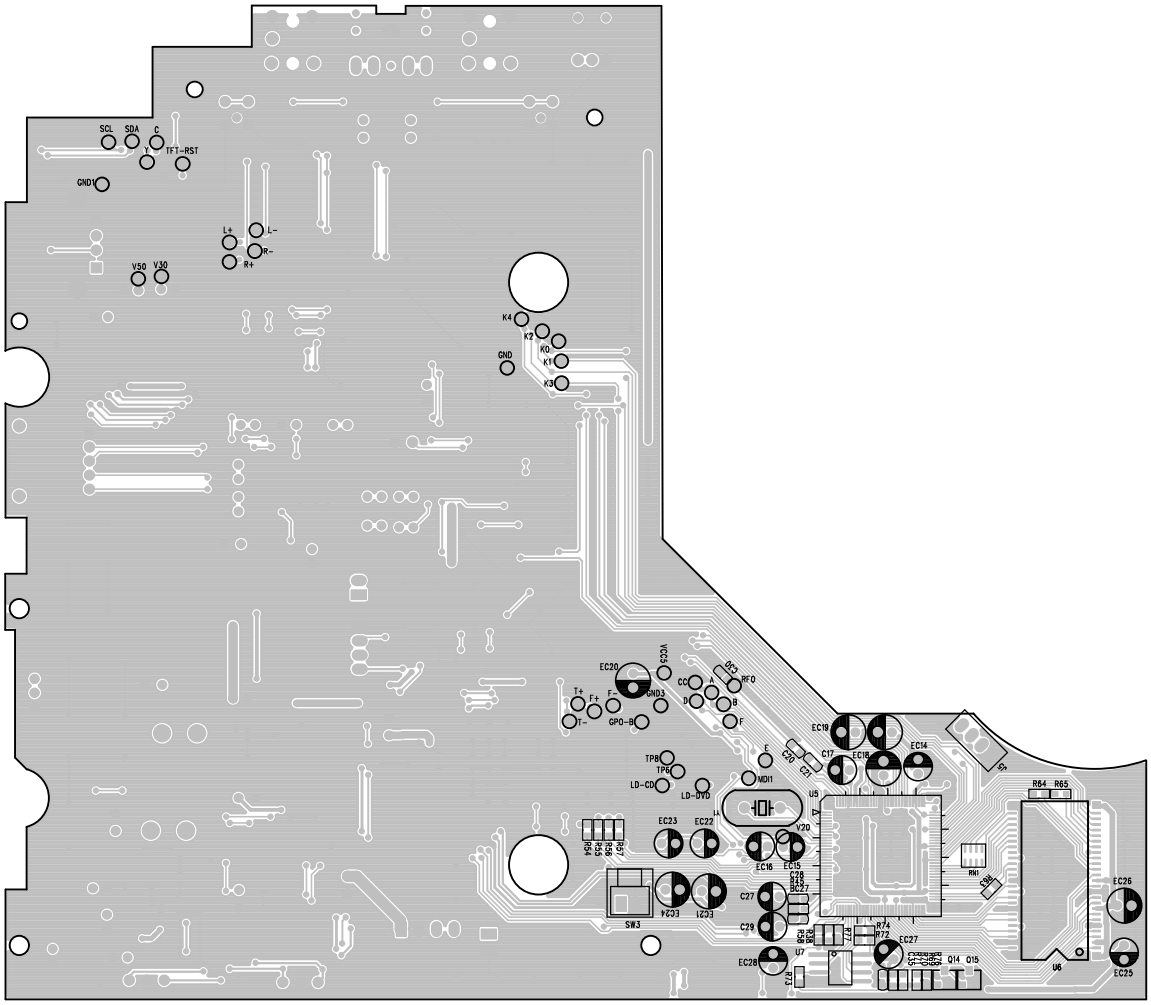
Chapter Cinque
PCB board & Circuit diagram

Section One PCB board

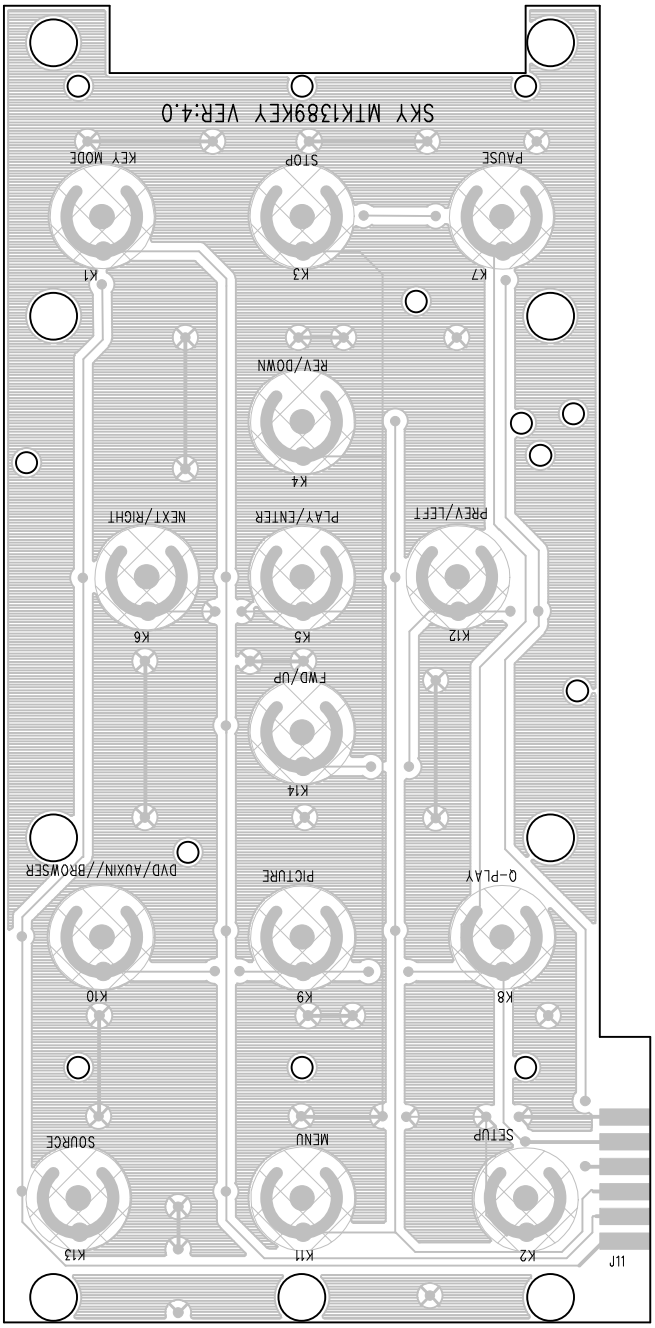
5.1.1 Bottom layer of DECODE Board



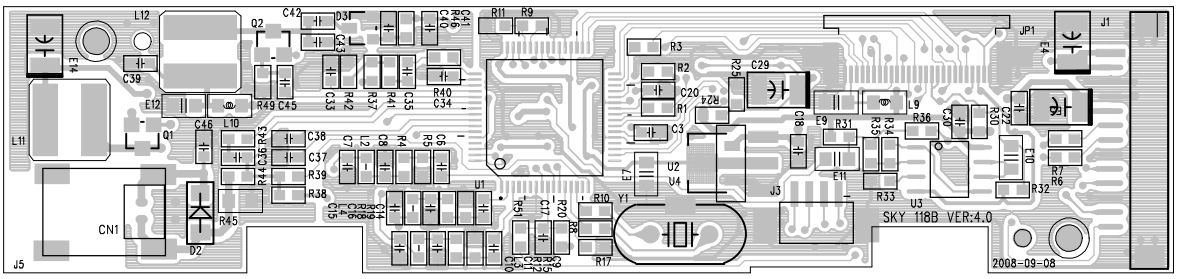
5.1.2 Bottom layer of DECODE Board



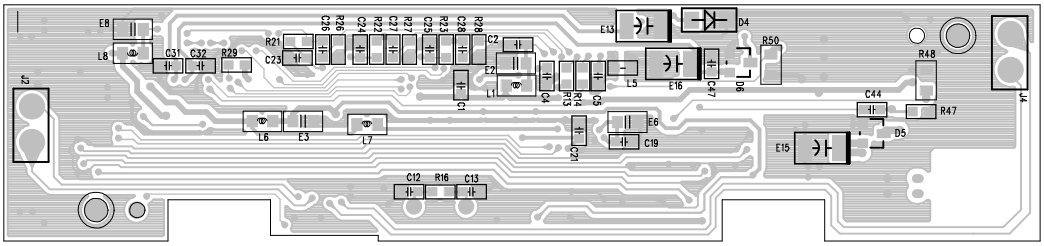
5.1.3 Surface layer of KEY SCAN Board



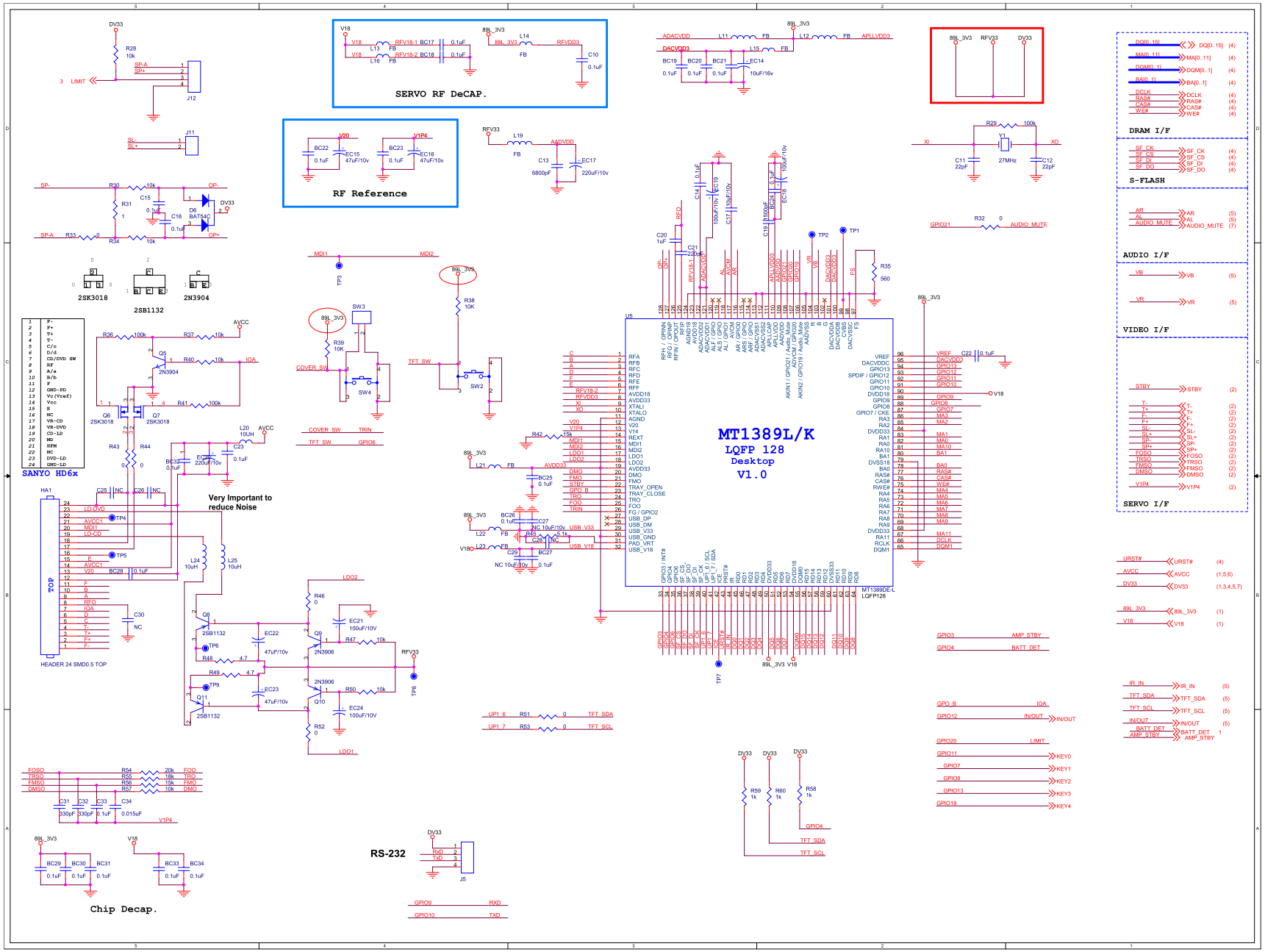
5.1.4 Surface layer of Drive Board

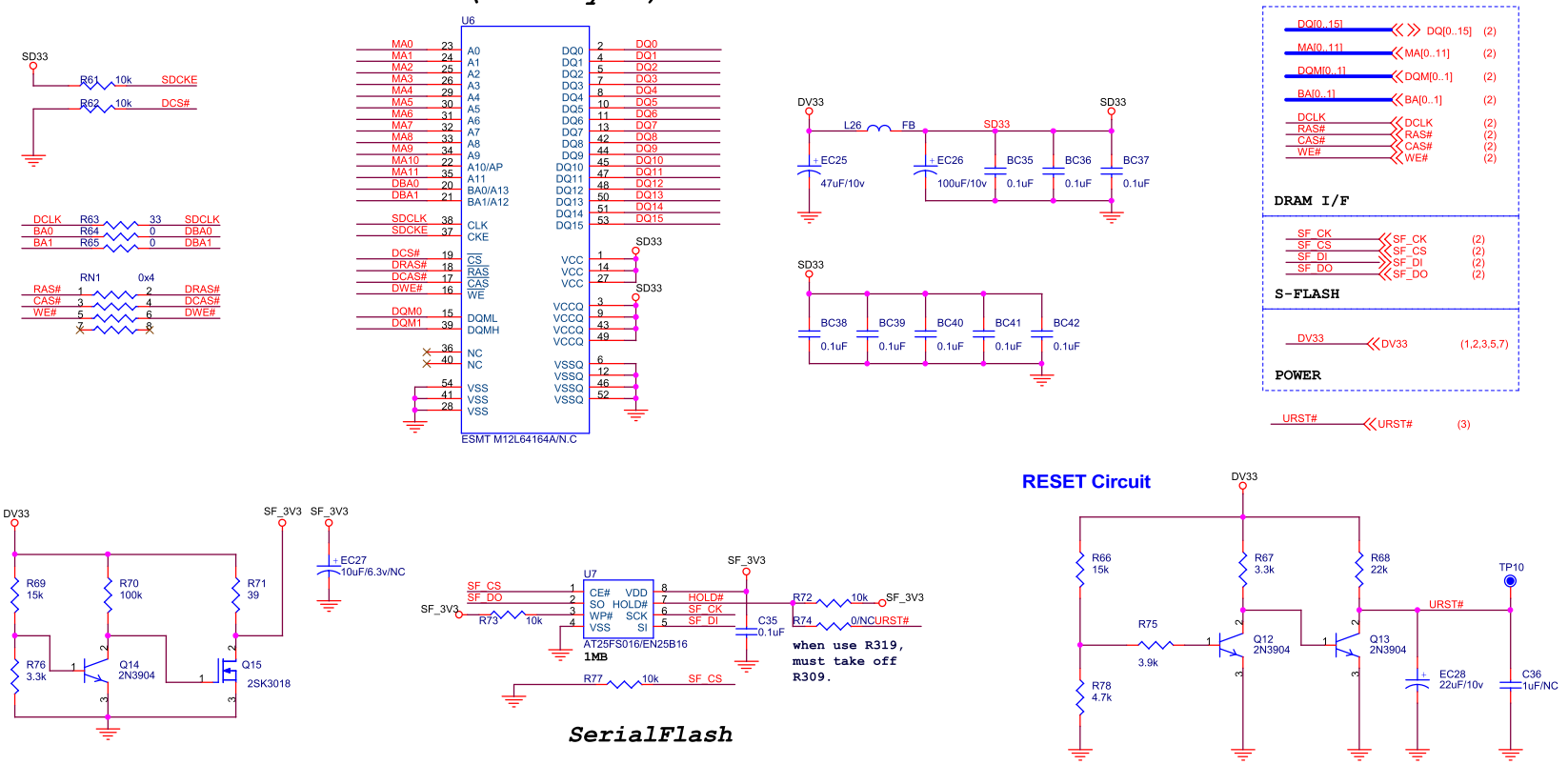


5.1.5 Bottom layer of Drive Board

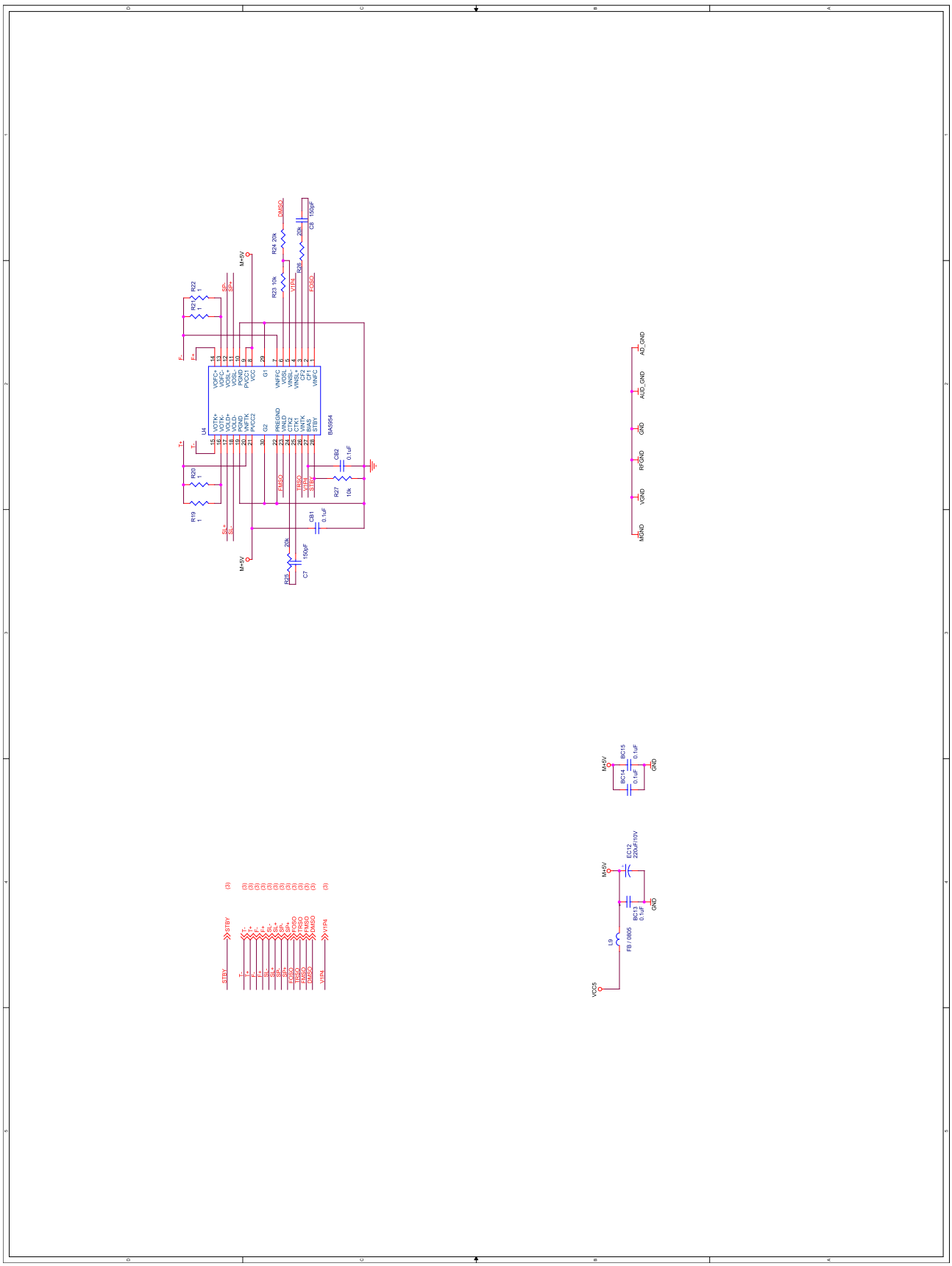


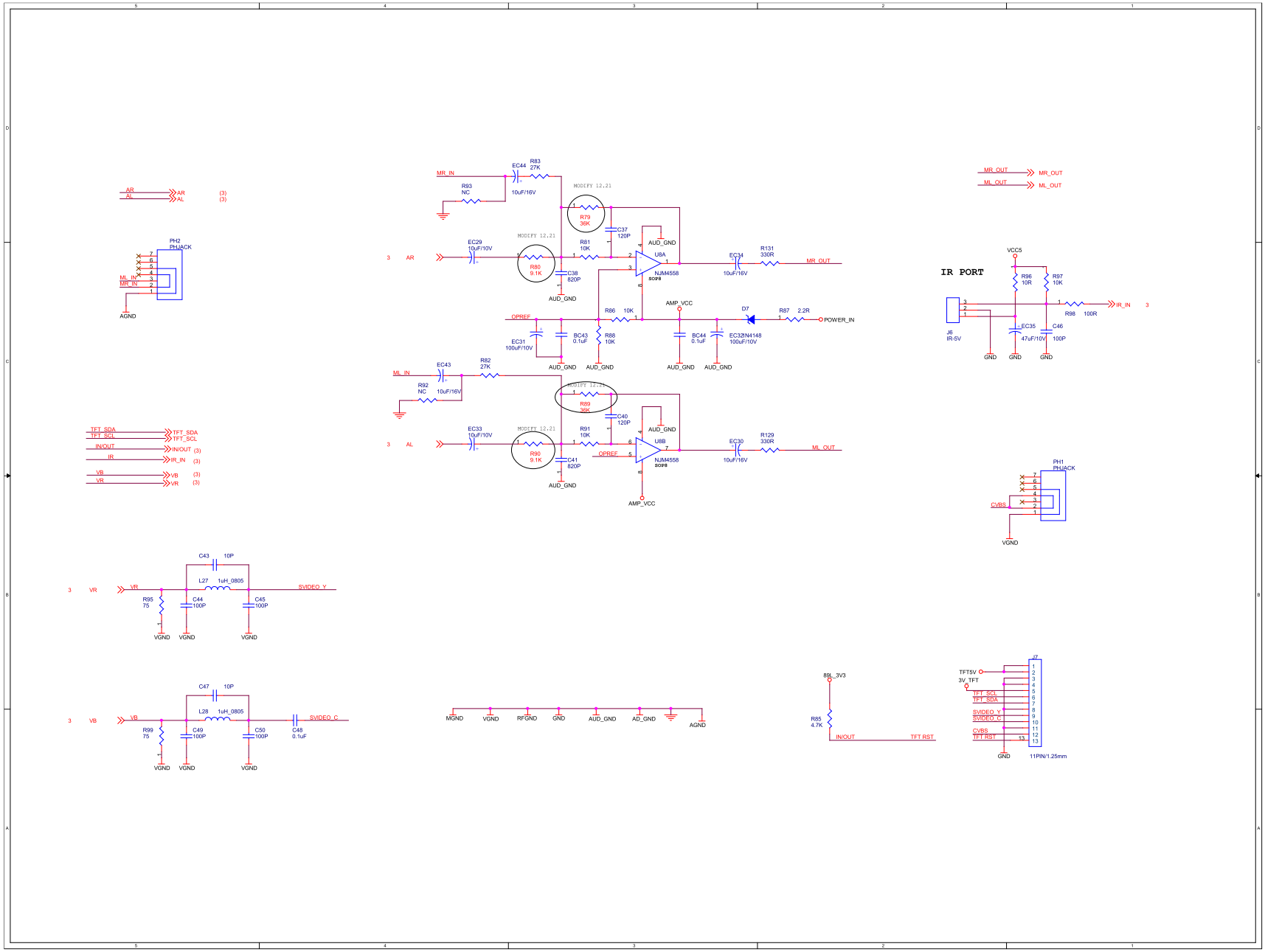
5.2.1 DECODE Board 1

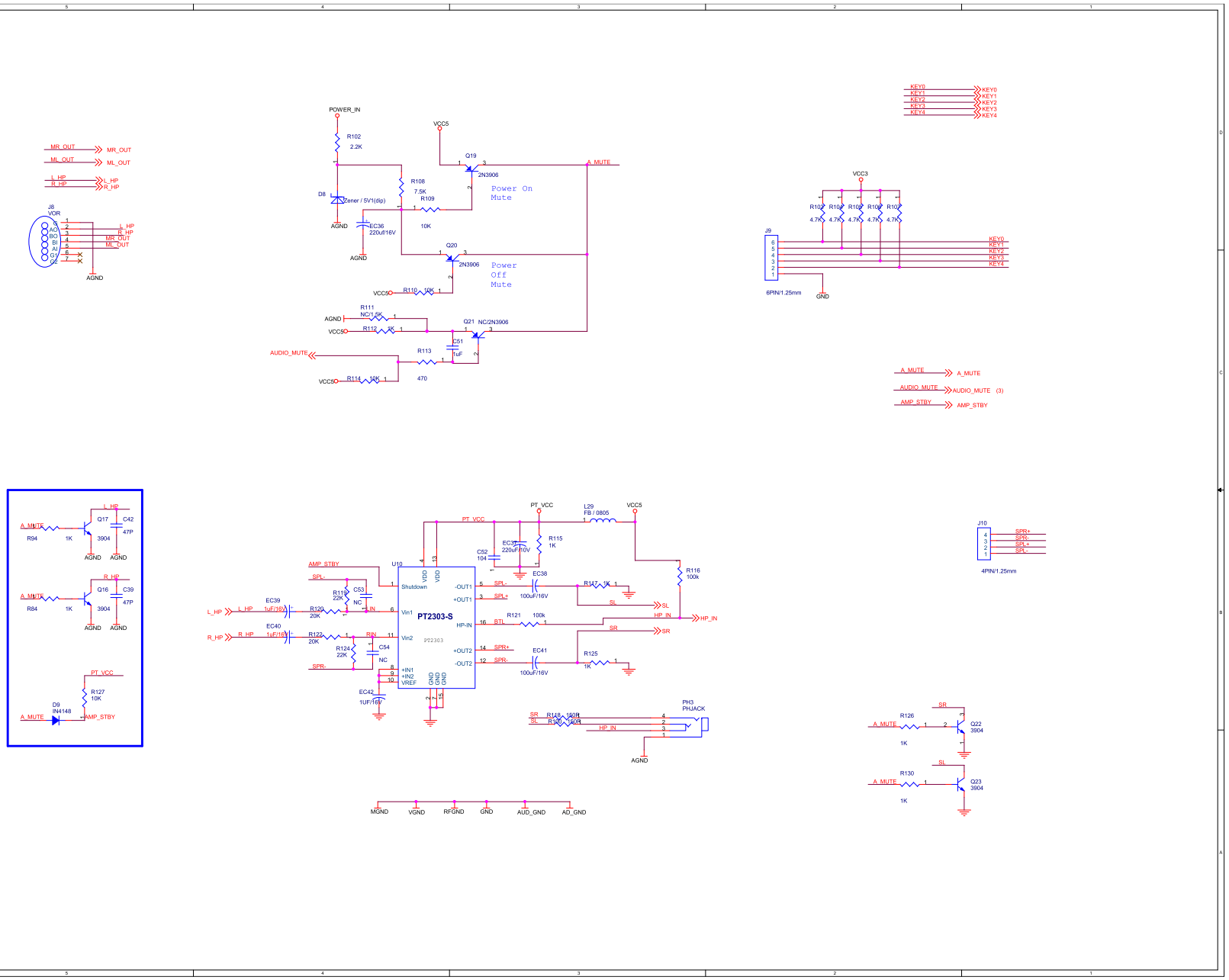


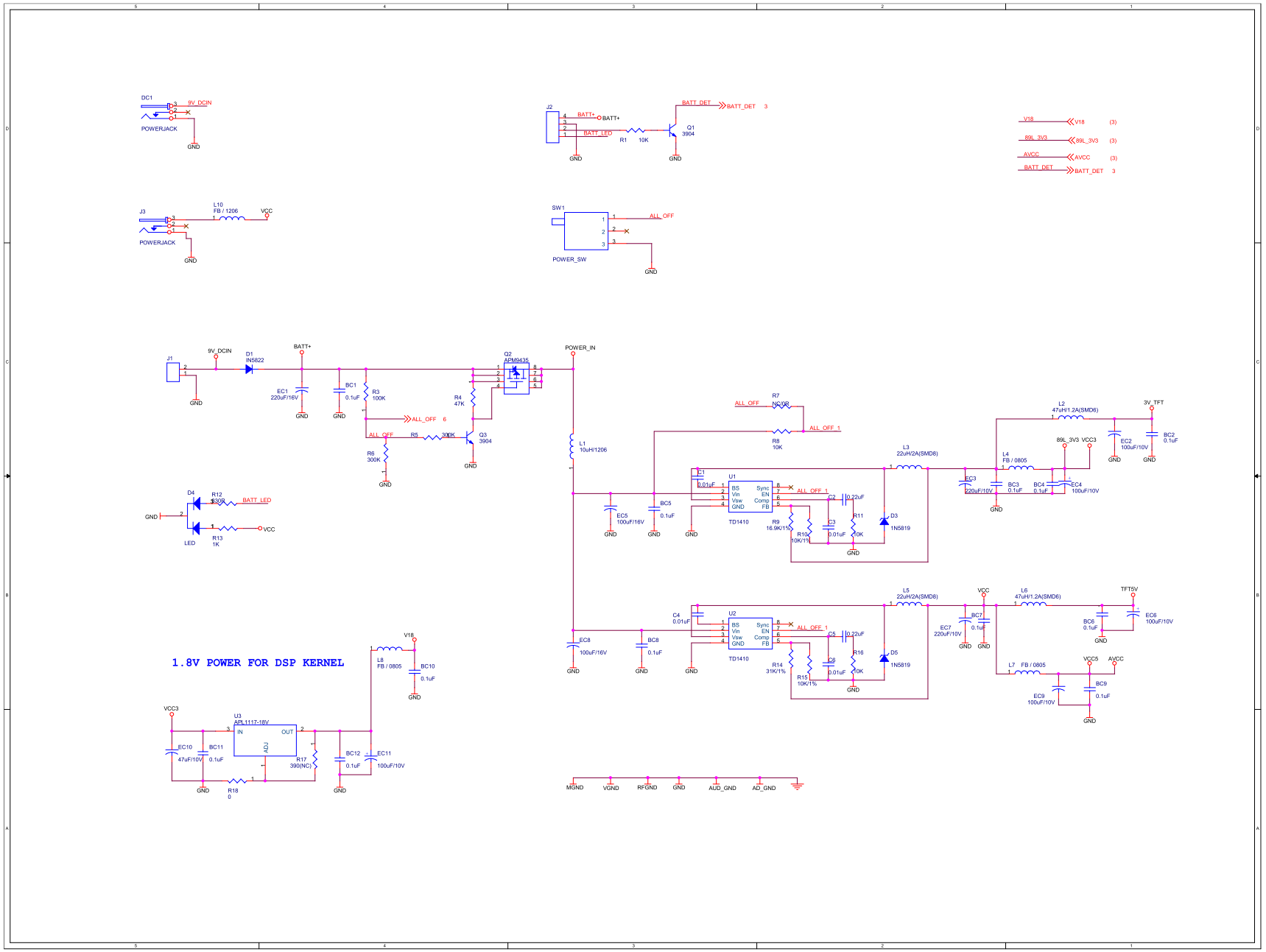

SDRAM (Dual Layout)
U6
ESMT M12L64164A/N.C
SD33
R61 10k SDCKE
R62 10k DCS#
DCLK R63 33 SDCLK
BA0 R64 0 DBA0
BA1 R65 0 DBA1
RN1 0x4
RAS# DRAS#
CAS# DCAS#
WE# DWE#
DV33
L26 FB
EC25 47uF/10v
EC26 100uF/10v
BC35 0.1uF
BC36 0.1uF
BC37 0.1uF
BC38 0.1uF
BC39 0.1uF
BC40 0.1uF
BC41 0.1uF
BC42 0.1uF
DQ[0..15] (2)
MA[0..11] (2)
DQM[0..1] (2)
BA[0..1] (2)
DCLK (2)
RAS# (2)
CAS# (2)
WE# (2)
DRAM I/F
SF_CK (2)
SF_CS (2)
SF_DI (2)
SF_DO (2)
S-FLASH
DV33 (1,2,3,5,7)
POWER
URST# (3)
SF_3V3
EC27 10uF/6.3v/NC
R69 15k
R70 100k
R71 39
R76 3.3k
Q14 2N3904
Q15 2SK3018
U7
AT25FS016/EN25B16
1MB
R72 10k
R73 10k
R74 0/NC
R77 10k
when use R319, must take off R309.
SerialFlash
RESET Circuit
R66 15k
R67 3.3k
R68 22k
R75 3.9k
R78 4.7k
Q12 2N3904
Q13 2N3904
TP10
EC28 22uF/10v
C36 1uF/NC

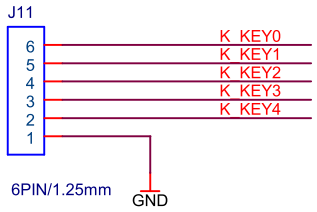
5.2.3 DECODE Board 3

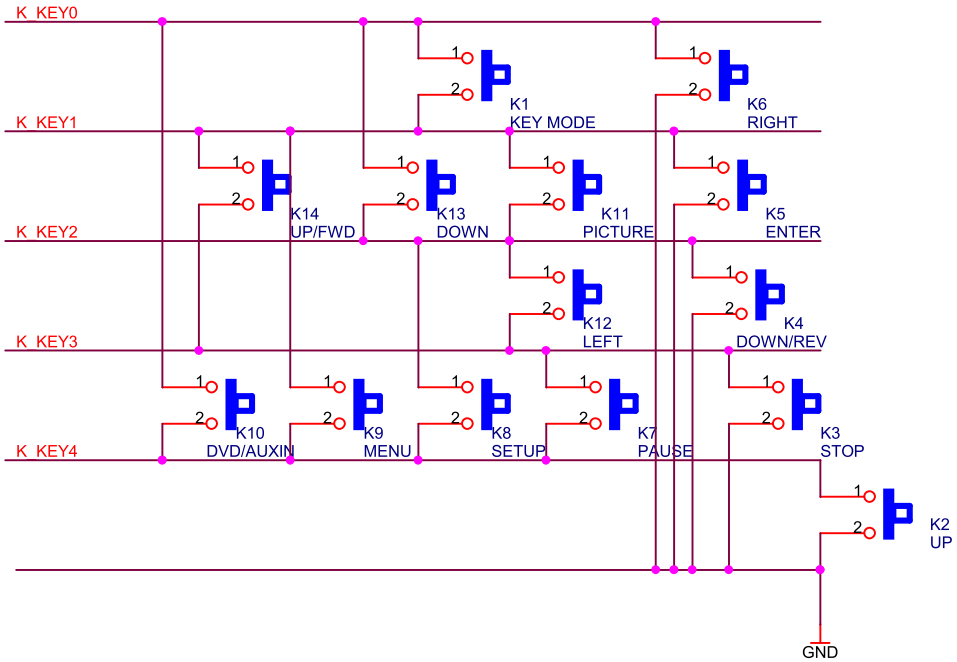


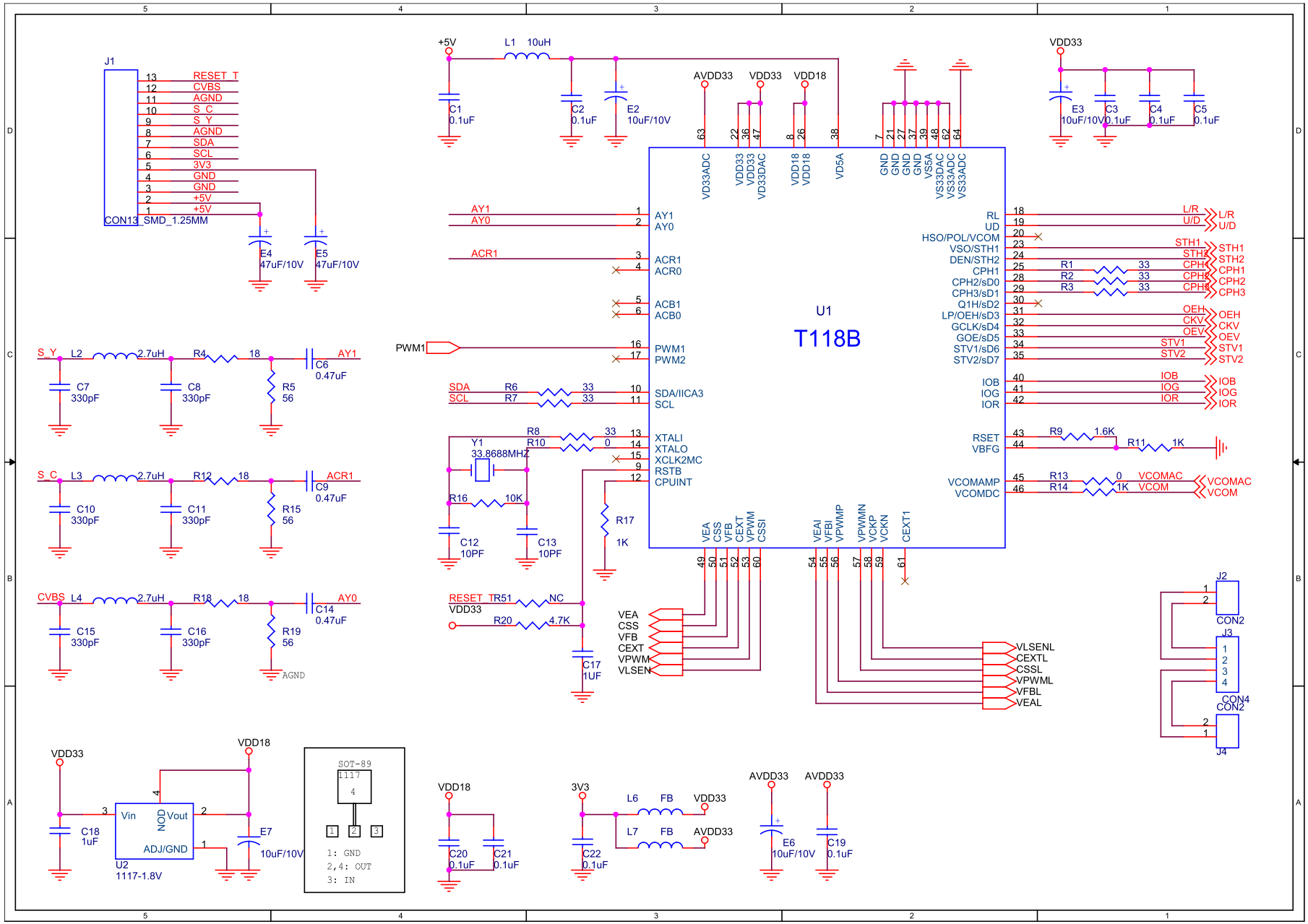

AR
AL
PH2
PHJACK
ML_IN
MR_IN
AGND
MR_IN
R93
NC
EC44
R83
27K
10uF/16V
MODIFY 12.21
R79
36K
C37
120P
EC29
10uF/10V
R80
9.1K
R81
10K
C38
820P
AUD_GND
U8A
NJM4558
EC34
10uF/16V
R131
330R
MR_OUT
OPREF
R86
10K
AMP_VCC
D7
R87
2.2R
POWER_IN
EC31
100uF/10V
BC43
0.1uF
R88
10K
BC44
0.1uF
EC32
1N4148
100uF/10V
ML_IN
EC43
R82
27K
R92
NC
R89
36K
C40
120P
EC33
10uF/10V
R90
9.1K
R91
10K
C41
820P
U8B
NJM4558
EC30
10uF/16V
R129
330R
ML_OUT
MR_OUT
ML_OUT
IR PORT
VCC5
R96
10R
R97
10K
R98
100R
IR_IN
J6
IR-5V
EC35
47uF/10V
C46
100P
GND
TFT_SDA
TFT_SCL
IN/OUT
IR_IN
VB
VR
PH1
PHJACK
CVBS
VGND
C43
10P
L27
1uH_0805
R95
75
C44
100P
C45
100P
SVIDEO_Y
C47
10P
L28
1uH_0805
R99
75
C49
100P
C50
100P
C48
0.1uF
SVIDEO_C
MGND
RFGND
AD_GND
88L_3V3
R85
4.7K
TFT5V
3V_TFT
J7
11PIN/1.25mm

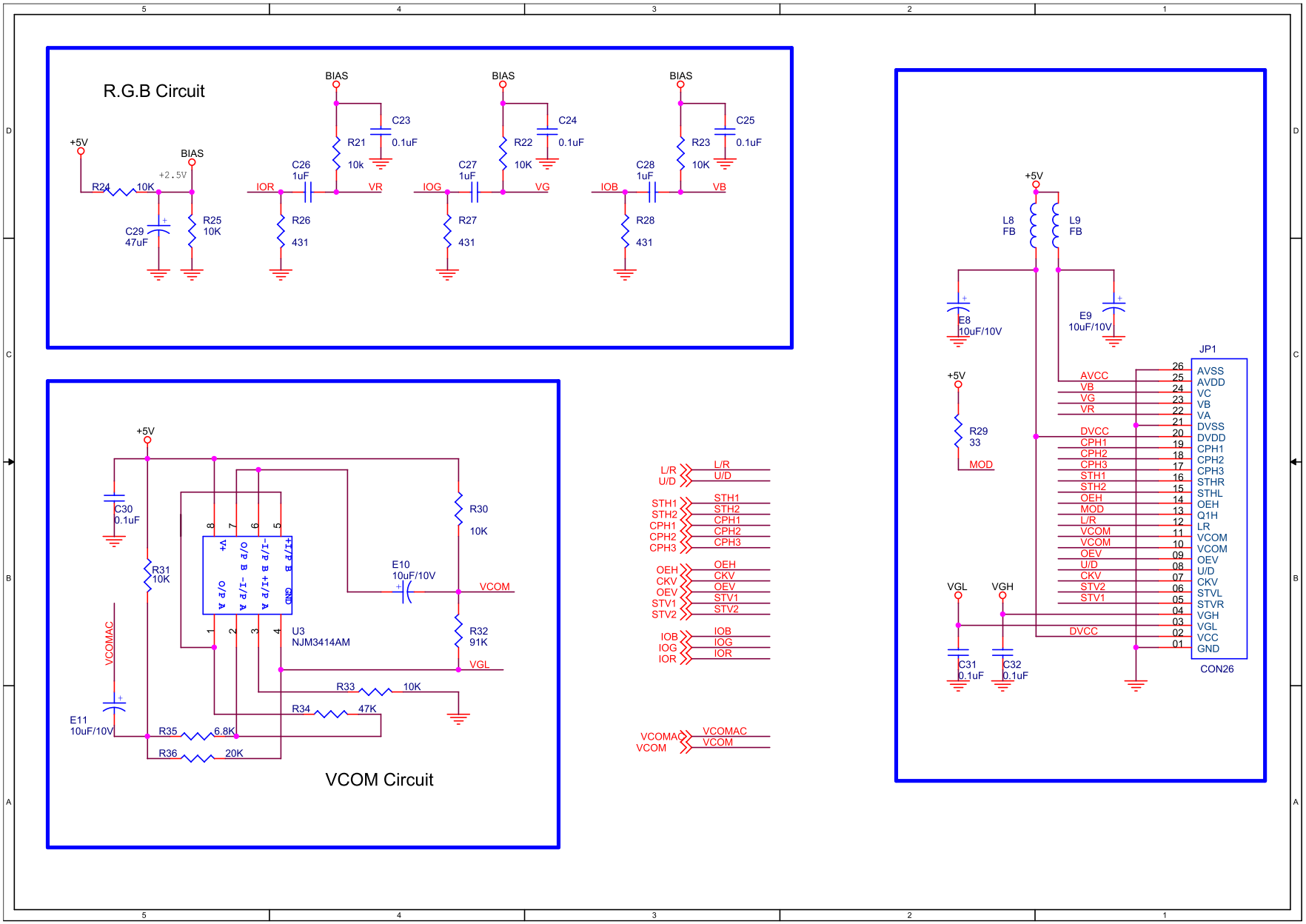

MR_OUT
ML_OUT
L_HP
R_HP
J8
VOR
AGND
POWER_IN
R102
2.2K
VCC5
Q19
2N3906
A_MUTE
Power On
Mute
R108
7.5K
R109
10K
D8
Zener / 5V1(dip)
EC36
220uF/16V
Q20
2N3906
Power
Off
Mute
R110
10K
R111
NC/1.5K
R112
1K
Q21 NC/2N3906
C51
1uF
R113
470
R114
10K
AUDIO_MUTE
KEY0
KEY1
KEY2
KEY3
KEY4
VCC3
R101
R102
R103
R104
R105
4.7K
J9
6PIN/1.25mm
GND
A_MUTE
AUDIO_MUTE
AUDIO_MUTE (3)
AMP_STBY
Q17
3904
C42
47P
R94
1K
Q16
C39
R84
R127
10K
D9
IN4148
PT_VCC
L29
FB / 0805
VCC5
EC37
220uF/10V
C52
104
R115
1K
EC38
100uF/16V
R116
100k
U10
PT2303-S
Shutdown
Vin1
Vin2
HP-IN
-OUT1
+OUT1
+OUT2
-OUT2
SPL-
SPL+
SPR+
SPR-
EC39
1uF/16V
EC40
1uF/16V
R119
22K
R120
20K
R122
20K
R124
22K
C53
NC
C54
NC
EC42
1UF/16V
R121
100k
R117
1K
R125
1K
EC41
100uF/16V
HP_IN
SR
SL
R118
R123
PH3
PHJACK
J10
4PIN/1.25mm
R126
R130
Q22
Q23
MGND
VGND
RFGND
GND
AUD_GND
AD_GND

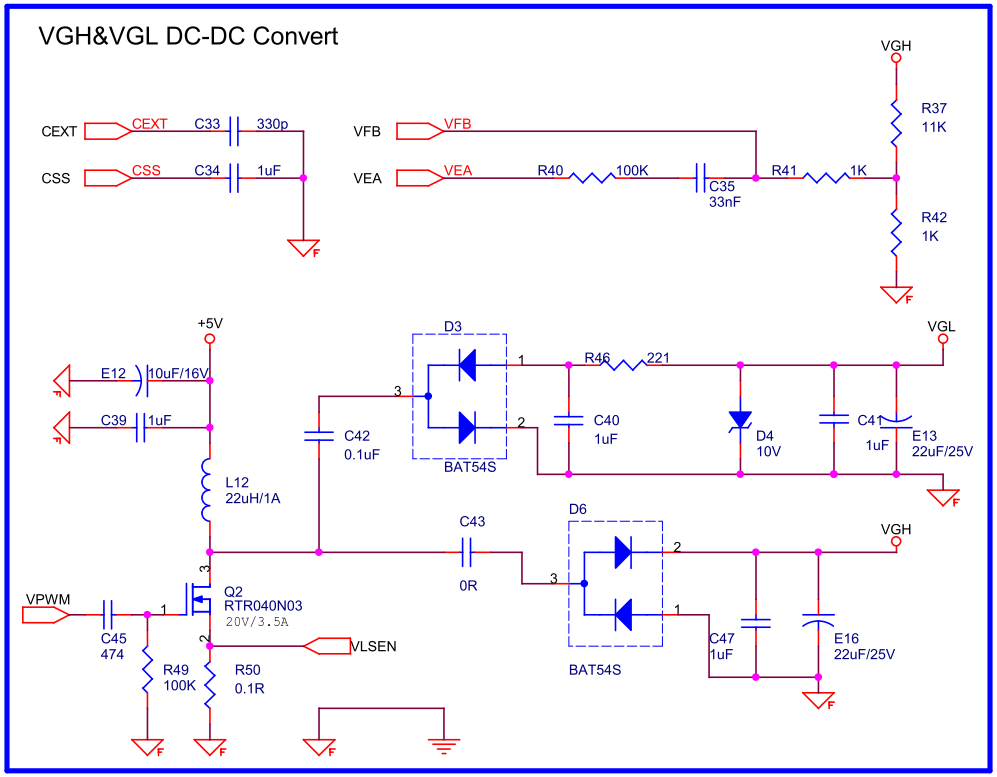

DC1
9V_DCIN
POWERJACK
GND
J2
BATT+
BATT_DET
BATT_DET 3
BATT_LED
R1 10K
Q1
3904
V18
V18 (3)
89L_3V3
89L_3V3 (3)
AVCC
AVCC (3)
BATT_DET
BATT_DET 3
J3
L10
FB / 1206
VCC
POWERJACK
SW1
ALL_OFF
POWER_SW
J1
9V_DCIN
D1
IN5822
BATT+
EC1
220uF/16V
BC1
0.1uF
R3
100K
R4
47K
Q2
APM9435
POWER_IN
ALL_OFF 6
ALL_OFF
R5 300K
R6
300K
Q3
3904
L1
10uH/1206
R7
NC/0R
ALL_OFF
ALL_OFF_1
R8
10K
L2
47uH/1.2A(SMD6)
3V_TFT
L3
22uH/2A(SMD8)
L4
FB / 0805
89L_3V3
VCC3
EC2
100uF/10V
BC2
0.1uF
EC3
220uF/10V
BC3
0.1uF
BC4
0.1uF
EC4
100uF/10V
C1
0.01uF
U1
BS
Vin
Vsw
GND
Sync
EN
Comp
FB
TD1410
C2
0.22uF
R11
10K
D3
1N5819
R9
16.9K/1%
R10
10K/1%
C3
0.01uF
EC5
100uF/16V
BC5
0.1uF
D4
R12
330R
BATT_LED
LED
R13
1K
VCC
1.8V POWER FOR DSP KERNEL
V18
L8
FB / 0805
BC10
0.1uF
VCC3
U3
APL1117-18V
IN
OUT
ADJ
EC10
47uF/10V
BC11
0.1uF
R17
390(NC)
R18
0
BC12
0.1uF
EC11
100uF/10V
C4
0.01uF
U2
L5
22uH/2A(SMD6)
VCC
L6
47uH/1.2A(SMD6)
TFTSV
C5
0.22uF
R16
10K
D5
1N5819
R14
31K/1%
R15
10K/1%
C8
0.01uF
EC8
100uF/16V
BC8
0.1uF
EC7
220uF/10V
BC7
0.1uF
BC6
0.1uF
EC6
100uF/10V
L7
FB / 0805
VCC5
AVCC
EC9
100uF/10V
BC9
0.1uF
MGND
VGND
RFGND
GND
AUD_GND
AD_GND

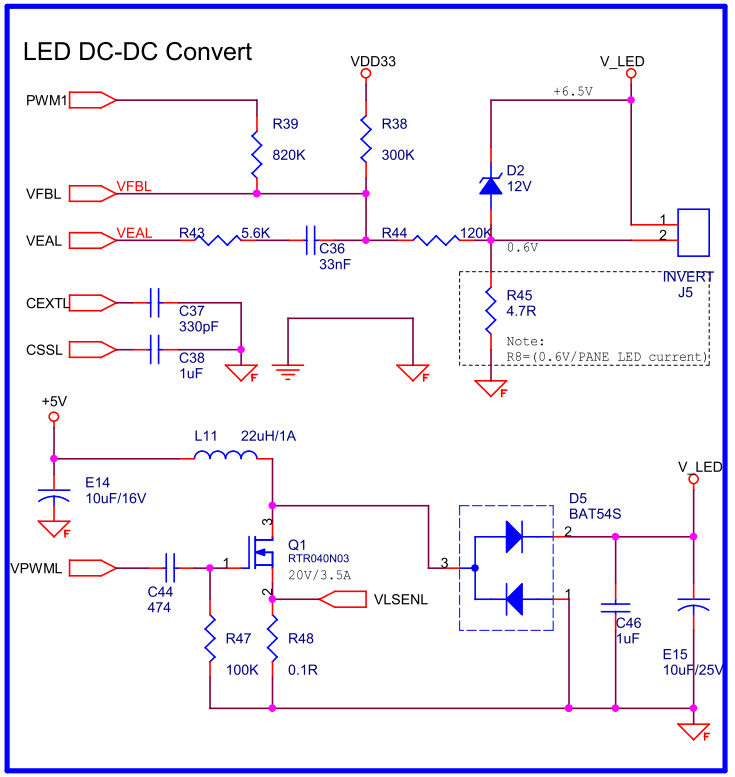

J11
6
5
4
3
2
1
K_KEY0
K_KEY1
K_KEY2
K_KEY3
K_KEY4
6PIN/1.25mm
GND


K_KEY0
K_KEY1
K_KEY2
K_KEY3
K_KEY4
K1
KEY MODE
K6
RIGHT
K14
UP/FWD
K13
DOWN
K11
PICTURE
K5
ENTER
K12
LEFT
K4
DOWN/REV
K10
DVD/AUXIN
K9
MENU
K8
SETUP
K7
PAUSE
K3
STOP
K2
UP
GND


U1
T118B
J1
CON13_SMD_1.25MM
RESET_T
CVBS
AGND
S_C
S_Y
SDA
SCL
3V3
GND
+5V
L1 10uH
VDD33
VDD18
AVDD33
U2
1117-1.8V
SOT-89
1: GND
2,4: OUT
3: IN
PWM1
Y1
33.8688MHZ
RESET_TR51
VEA
CSS
VFB
CEXT
VPWM
VLSEN
VLSENL
CEXTL
CSSL
VPWML
VFBL
VEAL
L/R
U/D
STH1
STH2
CPH1
CPH2
CPH3
OEH
CKV
OEV
STV1
STV2
IOB
IOG
IOR
VCOMAC
VCOM
CON2
CON4
J2
J3
J4


R.G.B Circuit
+5V
BIAS
+2.5V
R24
10K
C29
47uF
R25
10K
C26
1uF
IOR
R21
10k
C23
0.1uF
VR
R26
431
C27
1uF
IOG
R22
10K
C24
0.1uF
VG
R27
431
C28
1uF
IOB
R23
10K
C25
0.1uF
VB
R28
431
VCOM Circuit
C30
0.1uF
R31
10K
VCOMAC
E11
10uF/10V
R35
6.8K
R36
20K
U3
NJM3414AM
R30
10K
E10
10uF/10V
VCOM
R32
91K
VGL
R33
10K
R34
47K
L/R
U/D
STH1
STH2
CPH1
CPH2
CPH3
OEH
CKV
OEV
STV1
STV2
IOB
IOG
IOR
VCOMAC
VCOM
L8
FB
L9
FB
E8
10uF/10V
E9
10uF/10V
R29
33
MOD
JP1
AVCC
VB
VG
VR
DVCC
CPH1
CPH2
CPH3
STH1
STH2
OEH
MOD
L/R
VCOM
VCOM
OEV
U/D
CKV
STV2
STV1
DVCC
VGL
VGH
C31
0.1uF
C32
0.1uF
AVSS
AVDD
VC
VB
VA
DVSS
DVDD
CPH1
CPH2
CPH3
STHR
STHL
OEH
Q1H
LR
VCOM
VCOM
OEV
U/D
CKV
STVL
STVR
VGH
VGL
VCC
GND
CON26


VGH&VGL DC-DC Convert
CEXT
CEXT
C33
330p
CSS
CSS
C34
1uF
VFB
VFB
VEA
VEA
R40
100K
C35
33nF
R41
1K
VGH
R37
11K
R42
1K
+5V
E12
10uF/16V
C39
1uF
L12
22uH/1A
C42
0.1uF
D3
BAT54S
R46
221
C40
1uF
D4
10V
C41
1uF
VGL
E13
22uF/25V
C43
0R
D6
BAT54S
C47
1uF
E16
22uF/25V
VGH
VPWM
Q2
RTR040N03
20V/3.5A
C45
474
R49
100K
R50
0.1R
VLSEN


LED DC-DC Convert
PWM1
R39
820K
VDD33
R38
300K
V_LED
+6.5V
D2
12V
VFBL
VFBL
VEAL
VEAL
R43
5.6K
C36
33nF
R44
120K
0.6V
INVERT
J5
R45
4.7R
Note:
R8=(0.6V/PANE LED current)
CEXTL
C37
330pF
CSSL
C38
1uF
+5V
L11
22uH/1A
E14
10uF/16V
VPWML
C44
474
Q1
RTR040N03
20V/3.5A
VLSENL
R47
100K
R48
0.1R
D5
BAT54S
C46
1uF
V_LED
E15
10uF/25V

Chapter six BOM List

PORTABLE DVD PLAYER DL371S（RU MTK1389DE-L+SANYO HD85)						
SERIAL NUMBER	MATERIAL CODE	MATERIAL NAME	SPECIFICATIONS	UNIT	QUANTITY	LOCATION
1	800-371S02-2	CABLE COMPONENTS		PCS	1	
2	800-371S03-2	PLASTIC COMPONENTS		PCS	1	
3	801-371S03-0	HARDWARE COMPONENTS		PCS	1	
4	802-371S03-0	PACKAGE MATERIAL&ACCESSORIES		PCS	1	
5	830-140100-0	LOADER COMPONENTS		PCS	1	
6	821-371S00-1	DECODER BOARD		PCS	1	
7	832-371S01-1	DRIVEN BOARD		PCS	1	
8	832-371S22-1	3IN1 BOARD		PCS	1	

BOM list Ver. No. : 371S V1.1

1.DL371S CABLES COMPONENTS						800-371S02-2
SERIAL NUMBER	MATERIAL CODE	MATERIAL NAME	SPECIFICATIONS	UNIT	QUANTITY	LOCATION
1.1	191-047180-51	FLAT CABLE	4PIN A/2.54mm B/2.0mm L=180mm	PCS	1	
1.2	191-027190-51	FLAT CABLE	2PIN A/2.54mm B/2.0mm L=190mm	PCS	1	
1.3	191-027110-21	FLAT CABLE	2PIN 2.0mm L=110mm	PCS	1	
1.4	191-135090-10	FLAT CABLE	13PIN 1.25mm L=90mm	PCS	1	MAIN BOARD TO DRIVEN BOARD
1.5	191-042150-10	FLAT CABLE	4PIN 1.25mm L=150mm	PCS	1	MAIN BOARD TO DRIVEN BOARD
1.6	191-067070-71	FLAT CABLE	6PIN A/2.0mm B/1.25mm L=70mm	PCS	1	MAIN BOARD TO LED BOARD
1.7	197-241550-0	FLEX FLAT CABLE	24PIN 0.5mm L=155mm	PCS	1	OPTICAL LENS CABLE

2.DL371S PLASTIC COMPONENTS						800-371S03-2
SERIAL NO.	MATERIAL CODE	MATERIAL NAME	SPECIFICATIONS	UNIT	QUANTITY	LOCATION
2.1	200-371S00-03	FRONT COVER OF PANEL CASE	DL-371S SILVER+GREY	PCS	1	
2.2	201-371S00-01	BACK COVER OF PANEL CASE	DL-371S SILVER	PCS	1	
2.3	224-371S00-03	MIDDLE COVER OF UNIT	DL-371S SILVER	PCS	1	
2.4	206-371S00-03	CD DOOR	DL-371S SILVER	PCS	1	MIDDLE CASE
2.5	203-371S00-03	BOTTOM COVER OF UNIT	DL-371S GREY	PCS	1	
2.6	234-371S10-01	FUNCTION KEY	DL-371S	PCS	1	MIDDLE CASE
2.7	234-371S30-01	FUNCTION KEY	DL-371S	PCS	1	MIDDLE CASE
2.8	234-371S20-01	FUNCTION KEY	DL-371S	PCS	1	MIDDLE CASE
2.9	234-371S40-01	FUNCTION KEY	DL-371S	PCS	1	MIDDLE CASE
2.10	244-371S00-01	CD DOOR OPEN BUTTON	DL-371S SILVER	PCS	1	MIDDLE CASE
2.11	290-371S10-0	DISPLAY PANEL LOCKER	DL-371S SILVER	PCS	2	MIDDLE CASE
2.12	290-371S20-0	CD DOOR LOCKER	DL-371S SILVER	PCS	1	MIDDLE CASE
2.13	273-371S30-01	DISC DOOR AXIS PRESSING FILM	DL-371S	PCS	1	MIDDLE CASE

2.14	273-371S40-01	DISC DOOR SPRING PRESSING FILM	DL-371S	PCS	1	MIDDLE CASE
2.15	284-371S10-0	ENERGY-SAVING SWITCH-PILLOR	DL-371S SILVER	PCS	1	MIDDLE CASE
2.16	268-371S00-0	ENERGY-SAVING SWITCH COVER	DL-371S	PCS	1	MIDDLE CASE
2.17	242-371S10-01	POWER ON/OFF SWITCH	DL-371S SILVER	PCS	1	MIDDLE CASE
2.18	270-371S00-01	BATTERY COVER	DL-371S GREY	PCS	1	BOTTOM CASE
2.19	271-371S10-01	BATTERY CASE TOP COVER	DL-371S	PCS	1	
2.20	271-371S10-01	BATTERY CASE BOTTOM COVER	DL-371S	PCS	1	
2.21	252-371S20-0	INDICATOR MIRROR	DL-371S TRANSPARENT	PCS	1	MIDDLE CASE
2.22	252-371S13-0	RECEIVING MIRROR	DL-371S PURPLE BLACK	PCS	1	MIDDLE CASE
2.23	273-371S10-01	SHAFT PROTECTING COVER	DL-371S SILVER	PCS	1	

3.DL371S HARDWARE COMPONENTS **801-371S03-0**

SERIAL NUMBER	MATERIAL CODE	MATERIAL NAME	SPECIFICATIONS	UNIT	QUANTITY	LOCATION
3.1	826-0700AA-0	TFT PANEL SET	7" TFT LED	PCS	1	
3.2	166-880210-54	SPEAKER	20*27MM 202741NP-08-N 7.44MM L=30MM	PCS	2	
3.3	325-371S01-0	SPRING	DL-371S 13MM 5MM L=9.3mm 0.75MM 4.5MM	PCS	1	CD DOOR
3.4	326-371S02-0	SPRING	DL-371S H=12mm(10 rounds)	PCS	2	TFT PANEL BACK CASE
3.5	326-371S01-0	SPRING	DL-371S H=16mm (12 rounds)	PCS	1	MIDDLE CD DOOR LOCK
3.6	310-371S01-0	CD DOOR AXIS	Φ2.5*25MM	PCS	1	
3.7	367-171504-1	SELF-TAPPING SCREW	KB1.7*4	PCS	5	AXIS AND DISPLAY BOTTOM CASE,BATTERY AND BOTTOM CASE
3.8	367-171505-1	SELF-TAPPING SCREW	KB1.7*5	PCS	10	DISPLAY CASE,AXIS AND DISPLAY FRONT CASE, DISC DOOR AXIS AND MIDDLE CASE
3.9	368-201503-1	SELF-TAPPING SCREW	5.0PWB2.0*3	PCS	9	BUTTON BOARD AND MIDDLE CASE
3.10	364-20010A-1	SELF-TAPPING SCREW	PB2*3.5	PCS	4	AXIS AND MIDDLE CASE
3.11	364-200105-1	SELF-TAPPING SCREW	PB2*5	PCS	16	MIDDLE CASE AND BOTTOM CASE, DRIVER BOARD AND DISPLAY CASE, POWER INTERFACE BOARD AND MIDDLE CASE, CD DOOR TO SWITCH BOARD AND MIDDLE CASE, MAIN BOARD AND MIDDLE CASE
3.12	361-200110-0	SELF-TAPPING SCREW	PA2*10	PCS	8	MIDLE CASE AXIS AND CASE, MIDDLE CASE AND BOTTOM
3.13	835-DL371S-0	SHAFT COMPONETNTS	DL-371S 1.5KGF-CM	SET	1	
3.14	534-371S01-0	DUST-PROOF NET	BLACK 80*36MM	PCS	1	BOTTOM CASE
3.15	511-371S01-00	RUBBER PAD	DL-371S 14.3*6.5*2MM	PCS	4	BOTTOM CASE AND BATTERY DOOR
3.16	510-045010-11	RUBBER PAD	WHITE Φ4.5MM H=1.0MM	PCS	2	PANEL FRONT CASE
3.17	531-371S01-0	BLACK CHARPIE	BLACK Φ5mm*0.3mm	PCS	5	IN DISC
3.18	550-300180-0	ADHESIVE TAPE	24M/R W=18MM	M	0.00417	
3.19	550-500150-0	VINEGAR ADHESIVE PLASTER	43M/R W=15MM	M	0.00233	
3.20	558-100000-0	LUBRICATION		G	0.00020	
3.21	552-500001-0	YELLOW GLUE	YELLOW 3.5K/BOTTLE	G	0.00029	POWER CABLE AND CD DOOR AXIS
3.22	832-371S04-1	FUNCTION KEYS PCB BOARD	DL-371S/DL-381S 96*23*1.2MM	SET	1	MIDDLE CASE

4.DL371S PACKAGE MATERIAL & ACCESSORIES **802-371S03-0**

SERIAL NUMBER	MATERIAL CODE	MATERIAL NAME	SPECIFICATIONS	UNIT	QUANTITY	LOCATION
4.1	254-371S00-01	DECORATIVE MIRROR	DL-371S 52.8*44.3*0.3MM	PCS	1	PANEL BACK CASE
4.2	604-371S03-08	CARTON BOX	DL-371S 648*450*257(H)MM	PCS	0.16667	
4.3	603-371S01-08	ACCESSORY BOX	DL-371S 308*60*228(H)MM	PCS	1	
4.4	603-371S02-08	ACCESSORY BOX	DL-371S 308*76*228(H)MM	PCS	1	COLOR BOX
4.5	602-371S03-08	GIFT BOX	DL-371S 314*143*237(H)MM	PCS	1	COLOR BOX
4.6	607-0BOX01-0	GIFT BOX HANDEL		SET	1	CARTON
4.7	600-371S00-00	PAPER PALLET	DL-371S	PCS	1	
4.8	605-371S00-0	CARRY BAG	DL-371S 213*175*50MM	PCS	1	COLOR BOX
4.9	560-370S00-00	EPE FOAM	308(L)*228(W)*3(H)mm	PCS	1	
4.10	847-371S01-0	LI-ION BATTERY SEMI-FINISHED PRODUCT	SB-DL371S 7.4V 2600MAH 110*75MM	PCS	1	

4.11	803-0SKY03-0	POWER ADAPTOR	DC9V/3.0A	PCS	1	
4.12	833-371S11-0	CAR ADAPTOR	L=1200MM Φ4.0MM	PCS	1	
4.13	618-323500-0	EARPHONE	32Ω 2MW Φ3.5MM L1500MM	PCS	1	ACCESSORY BOX
4.14	619-562110-1	VIDEO CABLE	Φ3.5MM L1000MM	PCS	1	ACCESSORY BOX
4.15	619-562110-0	AUDIO CABLE	Φ3.5MM L1000MM	PCS	1	ACCESSORY BOX
4.16	828-471005-0	REMOTE CONTROL	KM-988 3V CR2025	PCS	1	ACCESSORY BOX
4.17	630-371S03-08	USER MANUAL	DL-371S	PCS	1	COLOR BOX
4.18	631-371S49-01	WARRANTY CARD	DL-371S 080825	PCS	1	COLOR BOX
4.19	643-PT0061-08	SERIAL NO. STICKER	DL-371S 24*4MM	PCS	4	
4.20	643-410061-08	SERIAL NO. STICKER	DV-371S 32*10MM	PCS	1	
4.21	643-110061-08	SERIAL NO. STICKER	DL-371S 50MM*10MM	PCS	1	
4.22	643-310061-08	SERIAL NO. STICKER	DL-71S	PCS	1	
4.23	648-LEAR02-B	ANTI-OPENNING STICKER		PCS	0.3334	CARTON UPSIDE AND DOWNSIDE PER PCS
4.24	648-0RBK12-0	COLLOR STICKER	Φ5MM SILVER	PCS	0.3334	CARTON BOX
4.25	648-LEAR00-0	SUN STICKER		PCS	1	IN CD STORAGE
4.26	648-LEAR02-6	FRAGILE STICKER	25*10MM	PCS	1	
4.27	648-LOAD02-0	FRAGILE STICKER	Φ5MM	PCS	1	STICK UNDER THE LOADER
4.28	648-371S28-0	UNIT VERSION NO. STICKER	DL-371S 15*6MM	PCS	2	PLAYER AND COLOR BOX
4.29	648-371S28-1	MAIN BOARD VERSION NO. STICKER	DL-371S 10*6MM	PCS	1	
4.30	648-371S28-2	DRIVER BOARD VERSION NO.STICKER	DL-371S/DL-381S 10*6MM	PCS	1	
4.31	648-371S28-3	BUTTON BOARD VERSION NO. STICKER	DL-371S/DL-381S 10*6MM	PCS	1	
4.32	650-371S01-3	ADVERTISING PAPER		PCS	1	
4.33	650-371S01-4	ADVERTISING PAPER		PCS	1	
4.34	650-371S01-5	ADVERTISING PAPER		PCS	1	
4.35	633-371S02-1	CIS PAPER		PCS	1	
4.36	612-P90003-0	DISC PROTECTION PAPER	120-120MM 200P	PCS	1	IN CD STORAGE
4.37	601-371S01-08	PLASTIC BAG	260*200MM	PCS	1	
4.38	601-371S02-08	PLASTIC BAG		PCS	1	
4.39	601-371S03-08	PLASTIC BAG	150*150MM	PCS	1	

5. DL371S LOADER COMPONENTS 830-140100-0

SERIAL NUMBER	MATERIAL CODE	MATERIAL NAME	SPECIFICATIONS	UNIT	QUANTITY	LOCATION
5	830-140100-0	DL371S LOADER	ASAPM-23 +SF-HD85	SET	1	
5.1	829-810601-1	PLASTIC FRAME OF LOADER	ASAPM-23	PCS	1	LOADER
5.2	830-040003-3	OPTICAL LENS	SANYO SF-HD85	PCS	1	LOADER
5.3	150-0300C5-0	OPEN/CLOSE MOTOR	RF-300C-11440 D/V:5V	PCS	1	LOADER
5.4	150-300FA6-0	SPINDAL MOTOR	RF-300FA-12350 D/V:5.9V	PCS	1	LOADER
5.5	150-300FA6-1	TRACKING MOTOR	RF-300FA-1D390 D/V:5.9V	PCS	1	LOADER

6. DL371S DECODER BOARD COMPONENTS 821-371S00-1

SERIAL NUMBER	MATERIAL CODE	MATERIAL NAME	SPECIFICATIONS	UNIT	QUANTITY	LOCATION
6	821-371S00-1	DL371S DECODER BOARD	1389DE-L (VER. NO.:7.0)	SET	1	
6.1	143-011020-0	ENEGY-SAFING SWITCH	8.5MM	PCS	1	SW2
6.2	127-105042-0	CAPACITOR	1uF/16V ±20% 4*5mm	PCS	3	EC39,EC40,EC42
6.3	127-106042-2	CAPACITOR	10uF/16V ±20% 4*5mm	PCS	9	C17,EC29,EC30,EC33,EC34,EC14,EC27,EC 43,EC44
6.4	127-227042-1	CAPACITOR	220uF/16V ±20% 8*5mm -40+1	PCS	2	EC36,EC1
6.5	127-226032-2	CAPACITOR	22uF/10V ±20% 4*5mm	PCS	1	EC28
6.6	127-476032-0	CAPACITOR	47uF/10V ±20% 4*5mm	PCS	7	EC10,EC15,EC16,EC22,EC23,EC25,EC35
6.7	127-107032-0	CAPACITOR	100uF 10V ±20% 5*5mm	PCS	12	EC2,EC4,EC6,EC9,EC11,EC18,EC20,EC21,EC24,EC26,EC31,EC19
6.8	127-107042-2	CAPACITOR	100uF/16V ±20% 6.3*5mm	PCS	5	EC5,EC8,EC32,EC38,EC41
6.9	127-227032-1	CAPACITOR	220uF/10V ±20% 6.3*5mm	PCS	5	EC3,EC7,EC12,EC17,EC37
6.10	130-053004-3	LED LIGHT-EMITTING DIODE	φ3	PCS	1	D4

6.11	136-60B638-0	RECEIVE HEAD	BRM-B638T VCC:2.7V-6.0V 5*6*8H	PCS	1	J6
6.12	162-060122-1	DC SOCKET	DC003 φ1.0MM Φ3.8MM	PCS	1	J3
6.13	041-011420-0	SWITCH	SL-010	PCS	1	SW1
6.14	161-6360C2-0	VIDEO INTERFACE	PJ329 φ3.6 BLACK 5PIN	PCS	2	PH1,PH2(PH1 YELLOW)
6.15	161-2360B2-3	ERA SOCKET	PJ-302Aφ3.6 SILVER LOOP (5PIN)	PCS	1	PH3
6.16	111-503B30-1	POTENTIOMETER	VAR B50K (2*16)	PCS	1	J8
6.17	160-002210-0	PIN SOCKET	PH-2AW 2PIN 2.0MM	PCS	2	J11,SW3
6.18	160-002310-0	PIN SOCKET	XH-2AW 2PIN 2.5MM	PCS	1	J1
6.19	160-004210-0	PIN SOCKET	PH-4AW 4PIN 2.0MM	PCS	1	J12
6.20	160-004310-0	PIN SOCKET	XH-4AW 4PIN 2.5MM	PCS	1	J2
6.21	105-220253-0	WIRE WOUND CHIP INDUCTORS	20uH 2A/8*5MM	PCS	2	L3,L5
6.22	137-270000-30	CRYSTAL OSCILLATOR	27MHZ	PCS	1	Y1
6.23	060-113120-0	SMD INTERFACE	SMD: 13PIN 1.25MM	PCS	1	J7
6.24	060-106120-0	SMD SOCKET	SMD: 6PIN 1.25MM	PCS	1	J9
6.25	060-104120-0	SMD SOCKET	SMD 4PIN 1.25MM	PCS	1	J10
6.26	060-124051-0	FPC SOCKET	FPC 24PIN 0.5MM	PCS	1	HA1
6.27	023-105052-10	CHIP CAPACITOR	1UF 25V ±20% 0603	PCS	2	C51,C20
6.28	023-105051-11	CHIP CAPACITOR	1UF/NC	PCS	1	C36
6.29	023-104052-10	CHIP CAPACITOR	0.1UF 25V ±20% 0603	PCS	54	CB1,CB2,BC1,BC2,BC3,BC4,BC5,BC6,BC7,BC8,BC9,C10,BC10,BC11,BC12,BC13,C14,BC14,C15,BC15,BC17,C18,BC18,BC19,BC20,BC21,C22,BC22,C23,BC23,BC24,BC25,BC26,BC27,BC28,BC29,BC30,BC31,C33,BC33,BC34,C35,BC35,BC
6.30	023-153051-10	CHIP CAPACITOR	0.015UF 25V ±10% 0603	PCS	1	C34
6.31	023-682051-10	CHIP CAPACITOR	6800PF 25V ±10% 0603	PCS	1	C13
6.32	023-152051-10	CHIP CAPACITOR	1500PF 25V ±10% 0603	PCS	1	C19
6.33	023-821051-10	CHIP CAPACITOR	820PF 25V ±10% 0603	PCS	2	C38,C41
6.34	023-331051-10	CHIP CAPACITOR	330PF 25V ±10% 0603	PCS	2	C31,C32
6.35	023-221051-10	CHIP CAPACITOR	220PF 25V ±10% 0603	PCS	1	C21
6.36	023-151051-10	CHIP CAPACITOR	150PF 25V ±10% 0603	PCS	2	C7,C8
6.37	023-121051-10	CHIP CAPACITOR	120PF 25V ±10% 0603	PCS	2	C37,C40
6.38	023-101051-10	CHIP CAPACITOR	100PF 25V ±10% 0603	PCS	5	C44,C45,C46,C49,C50
6.39	023-470051-10	CHIP CAPACITOR	47PF 25V ±10% 0603	PCS	2	C42,C39
6.40	023-220051-10	CHIP CAPACITOR	22PF 25V ±10% 0603	PCS	2	C12,C11
6.41	023-100051-10	CHIP CAPACITOR	10PF 25V ±10% 0603	PCS	2	C43,C47
6.42	030-06T54C-0	DIODE ARRAY	BAT54C/SOT23 P(NN)P	PCS	1	D6
6.43	030-005819-9	DIODE	1N5819 SMA	PCS	3	D3,D5,D7
6.44	030-005822-9	DIODE	IN5822/SMA	PCS	1	D1
6.45	030-040051-3	DIODE	ZD5V1 /1206	PCS	1	D8
6.46	030-004148-0	DIODE	ASS4148BD/1206	PCS	1	D9
6.47	085-100R25-3	CHIP BEAD	FB100/1206	PCS	2	L1,L10
6.48	008-470100-9	INDUCTANCE	47uH 1.2A SMD6 ±10%	PCS	2	L6,L2
6.49	085-100R25-2	CHIP BEAD	FB100/0805	PCS	16	L4,L7,L8,L9,L29,L11,L12,L13,L14,L15,L16,L19,L21,L22,L23,L26
6.50	005-109100-1	INDUCTANCE	1uH 0805 ±10%	PCS	2	L28,L27
6.51	005-100100-1	INDUCTANCE	10uH 0805 ±10%	PCS	3	L24,L25,L20
6.52	031-2N3904-0	TRIODE	2N3904 (SOT-23) 1W PNP SMD	PCS	10	Q1,Q3,Q16,Q17,Q23,Q5,Q12,Q13,Q14
6.53	031-2N3906-0	TRIODE	2N3906(SOT-23) 1W PNP SMD	PCS	4	Q9,Q10,Q19,Q20
6.54	031-003018-0	TRIODE	2SK3018(SOT-23) SMD	PCS	3	Q6,Q7,Q15
6.55	031-001132-0	TRIODE	2SB1132/SOT-23	PCS	2	Q8,Q11

6.56	017-000115-10	CHIP RESISTOR ARRAY	0R*4 0603 1/10W ±5%	PCS	1	RN1
6.57	013-000005-10	CHIP RESISTOR	0Ω 0603 1/10W ±5% "SMD"	PCS	11	R18,R32,R33,R43,R44,R46,R51,R52,R53,R64,R65
6.58	013-109005-10	CHIP RESISTOR	1Ω 0603 1/10W ±5% "SMD"	PCS	5	R19,R20,R21,R22,R31
6.59	013-229005-20	CHIP RESISTOR	2.2Ω 0805 1/8W ±5% "SMD"	PCS	1	R87
6.60	013-479005-10	CHIP RESISTOR	4.7Ω 0603 1/10W ±5% "SMD"	PCS	2	R49,R48
6.61	013-100005-10	CHIP RESISTOR	10Ω 0603 1/10W ±5% "SMD"	PCS	1	R96
6.62	013-330005-10	CHIP RESISTOR	33Ω 0603 1/10W ±5% "SMD"	PCS	1	R63
6.63	013-390005-10	CHIP RESISTOR	39Ω 0603 1/10W ±5% "SMD"	PCS	1	R71
6.64	013-750005-10	CHIP RESISTOR	75Ω 0603 1/10W ±5% "SMD"	PCS	2	R99,R95
6.65	013-101005-10	CHIP RESISTOR	100Ω 0603 1/10W ±5% "SMD"	PCS	1	R98
6.66	013-151005-10	CHIP RESISTOR	150Ω 0603 1/10W ±5% "SMD"	PCS	2	R100,R118
6.67	013-331005-10	CHIP RESISTOR	330Ω 0603 1/10W ±5% "SMD"	PCS	3	R12,R129,R131
6.68	013-471005-10	CHIP RESISTOR	470Ω 0603 1/10W ±5% "SMD"	PCS	1	R113
6.69	013-561005-10	CHIP RESISTOR	560Ω 0603 1/10W ±5% "SMD"	PCS	1	R35
6.70	013-102005-10	CHIP RESISTOR	1K 0603 1/10W ±5% "SMD"	PCS	12	R58,R59,R60,R84,R94,R112,R115,R117,R125, R126,R130,R13
6.71	013-152005-10	CHIP RESISTOR	1.5K 0603 1/10W ±5% "SMD"	PCS	1	R111
6.72	013-222005-10	CHIP RESISTOR	2.2K 0603 1/10W ±5% "SMD"	PCS	1	R102
6.73	013-332005-10	CHIP RESISTOR	3.3K 0603 1/10W ±5% "SMD"	PCS	2	R67,R76
6.74	013-392005-10	CHIP RESISTOR	3.9K 0603 1/10W ±5% "SMD"	PCS	1	R75
6.75	013-472005-10	CHIP RESISTOR	4.7K 0603 1/10W ±5% "SMD"	PCS	7	R78,R103,R104,R105,R106,R107,R85
6.76	013-512005-10	CHIP RESISTOR	5.1K 0603 1/10W ±5% "SMD"	PCS	1	R45
6.77	013-752005-10	CHIP RESISTOR	7.5K 0603 1/10W ±5% "SMD"	PCS	1	R108
6.78	013-912005-10	CHIP RESISTOR	9.1K 0603 1/10W ±5% "SMD"	PCS	2	R80,R90
6.79	013-103005-10	CHIP RESISTOR	10K 0603 1/10W ±5% "SMD"	PCS	30	R1,R8,R11,R16,R23,R27,R28,R30,R34,R37,R38,R39,R40,R47,R50,R57,R61,R62,R72,R73,R77,R81,R86,R97,R88,R91,R109,R110,R114,R127
6.80	013-103001-10	CHIP RESISTOR	10K 0603 1/10W ±1% "SMD"	PCS	2	R10,R15
6.81	013-153005-10	CHIP RESISTOR	15K 0603 1/10W ±5% "SMD"	PCS	4	R42,R56,R66,R69
6.82	013-163001-19	CHIP RESISTOR	16.9K 0603 1/10W ±1% "SMD"	PCS	1	R9
6.83	013-183005-10	CHIP RESISTOR	18K 0603 1/10W ±5% "SMD"	PCS	1	R55
6.84	013-203005-10	CHIP RESISTOR	20K 0603 1/10W ±5% "SMD"	PCS	6	R24,R25,R26,R54,R120,R122
6.85	013-223005-10	CHIP RESISTOR	22K 0603 1/10W ±5% "SMD"	PCS	3	R68,R119,R124
6.86	013-273005-10	CHIP RESISTOR	27K 0603 1/10W ±5% "SMD"	PCS	2	R82,R83
6.87	013-313001-10	CHIP RESISTOR	31K 0603 1/10W ±1% "SMD"	PCS	1	R14
6.88	013-363005-10	CHIP RESISTOR	36K 0603 1/10W ±5% "SMD"	PCS	2	R79,R89
6.89	013-473005-10	CHIP RESISTOR	47K 0603 1/10W ±5% "SMD"	PCS	1	R4
6.90	013-104005-10	CHIP RESISTOR	100K 0603 1/10W ±5% "SMD"	PCS	7	R3,R29,R36,R41,R70,R121,R116
6.91	013-304005-10	CHIP RESISTOR	300K 0603 1/10W ±5% "SMD"	PCS	2	R5,R6
6.92	033-001410-0	IC	TD1410 SOP-8	PCS	2	U1,U2
6.93	033-001117-2	IC	1117-1.8V/SOT-89 SOT-223	PCS	1	U3
6.94	033-CD5954-0	IC	CD5954 SMD 30PIN	PCS	1	U4
6.95	033-1389DE-1	IC	MT1389DE-L/SMD LQFP-128	PCS	1	U5
6.96	033-641620-2	IC	IC : HY57V641620ETP	PCS	1	U6
6.97	033-025F16-0	IC	AT25FS160/EN25F16 B16/SOP8	PCS	1	U7
6.98	033-004558-0	IC	NJM4558 / SOP-8	PCS	1	U8
6.99	033-PT2303-0	IC	PT2303/SOP16	PCS	1	U10
6.100	033-001526-0	IC	RCR1526SQ SOP-8	PCS	1	U11
6.101	190-371S02-02	PCB	DL371S 162.5*151.7MM VER1.2 1.0MM	PCS	1	

7. DL371S DRIVEN BOARD COMPONENTS

832-371S01-1

SERIAL NUMBER	MATERIAL CODE	MATERIAL NAME	SPECIFICATIONS	UNIT	QUANTITY	LOCATION
7	832-371S01-1	DL371S DRIVEN BOARD	SKY118B VER.3.0	SET	1	
7.1	137-338688-30	CRYSTAL OSCILLATOR	33.8688MHZ	PCS	1	Y1
7.2	060-102393-0	CHIP HIGH VOLTAGE SOCKET	SMD: BH-3.5B 2PIN :3.96MM	PCS	1	J5
7.3	060-113120-0	SMD INTERFACE	SMD: 13PIN 1.25MM	PCS	1	J1
7.4	060-104120-0	SMD SOCKET	SMD: 4PIN 1.25MM	PCS	1	J3
7.5	060-126052-0	FPC SOCKET	FPC 26PIN 0.5MM	PCS	1	JP1
7.6	023-104052-10	CHIP CAPACITOR	0.1UF 25V ±20% 0603	PCS	16	C1,C2,C3,C4,C5,C19,C20,C21,C22,C23,C24,C25,C30,C31,C32,C42
7.7	023-474051-10	CHIP CAPACITOR	0.47UF 25V ±10% 0603	PCS	3	C6,C9,C14
7.8	023-331051-10	CHIP CAPACITOR	330PF 25V ±10% 0603	PCS	8	C7,C8,C10,C11,C15,C16,C37,C33
7.9	023-100051-10	CHIP CAPACITOR	10PF 25V ±10% 0603	PCS	2	C12,C13
7.10	023-105052-10	CHIP CAPACITOR	1UF 25V ±20% 0603	PCS	12	C17,C18,C26,C27,C28,C34,C38,C39,C40, C41, C46,C47
7.11	023-333051-10	CHIP CAPACITOR	33nF 25V ±10% 0603	PCS	2	C35,C36
7.12	023-473051-10	CHIP CAPACITOR	0.047UF 25V ±10% 0603	PCS	2	C44,C45
7.13	030-040120-3	DIODE	ZD12V /1206	PCS	1	D2
7.14	030-06T54S-0	DIODE ARRAY	BAT54S/SOT23 P(NP)N	PCS	3	D3,D5,D6
7.15	030-040100-3	DIODE	ZD10V /1206	PCS	1	D4
7.16	023-106032-20	CHIP CAPACITOR	10UF 10V ±20% 0805	PCS	8	E2,E3,E6,E7,E8,E9,E10,E11
7.17	024-476101-0	CHIP CAPACITOR	47uF/10V/B CIZE ±10%	PCS	3	E4,E5,C29
7.18	023-106041-20	CHIP CAPACITOR	10UF 16V ±10% 0805	PCS	1	E12
7.19	023-106041-40	CHIP CAPACITOR	10UF 16V ±10% 1210	PCS	1	E15
7.20	023-226041-40	CHIP CAPACITOR	22UF 16V ±10% 1210	PCS	3	E13,E14,E16
7.21	008-100101-0	INDUCTANCE	10uH 0805 ±10%	PCS	1	L1
7.22	008-279101-0	INDUCTANCE	2.7uH 0805 ±10%	PCS	3	L2,L3,L4
7.23	085-600R25-2	CHIP BEAD	FB600/0805	PCS	5	L6,L7,L8,L9，L10
7.24	008-220100-2	CHIP RESISTOR	22uH 1Aφ5.8*3.5MM	PCS	2	L11,L12
7.25	034-040N03-0	FIELD EFFECT TRANSISTOR	RTR040N03/SOT-23	PCS	2	Q1,Q2
7.26	013-330005-10	CHIP RESISTOR	33Ω 0603 1/10W ±5% "SMD"	PCS	7	R1,R2,R3,R6,R7,R8,R29
7.27	013-180005-10	CHIP RESISTOR	18Ω 0603 1/10W ±5% "SMD"	PCS	3	R4,R12,R18
7.28	013-560005-10	CHIP RESISTOR	56Ω 0603 1/10W ±5% "SMD"	PCS	3	R5,R15,R19
7.29	013-162005-10	CHIP RESISTOR	1.6K 0603 1/10W ±5% "SMD"	PCS	1	R9
7.30	013-000005-10	CHIP RESISTOR	0Ω 0603 1/10W ±5% "SMD"	PCS	4	R10,R13,L5,C43,
7.31	013-102005-10	CHIP RESISTOR	1K 0603 1/10W ±5% "SMD"	PCS	5	R11,R14,R17,R41,R42
7.32	013-472005-10	CHIP RESISTOR	4.7K 0603 1/10W ±5% "SMD"	PCS	1	R20
7.33	013-103005-10	CHIP RESISTOR	10K 0603 1/10W ±5% "SMD"	PCS	9	R16,R21,R22,R23,R24,R25,R30,R31,R33
7.34	013-431005-10	CHIP RESISTOR	430Ω 0603 1/10W ±5% "SMD"	PCS	3	R26,R27,R28
7.35	013-913005-10	CHIP RESISTOR	91K 0603 1/10W ±5% "SMD"	PCS	1	R32
7.36	013-473005-10	CHIP RESISTOR	47K 0603 1/10W ±5% "SMD"	PCS	1	R34
7.37	013-682005-10	CHIP RESISTOR	6.8K 0603 1/10W ±5% "SMD"	PCS	1	R35
7.38	013-203005-10	CHIP RESISTOR	20K 0603 1/10W ±5% "SMD"	PCS	1	R36
7.39	013-113005-10	CHIP RESISTOR	11K 0603 1/10W ±5% "SMD"	PCS	1	R37
7.40	013-304005-10	CHIP RESISTOR	300K 0603 1/10W ±5% "SMD"	PCS	1	R38

7.41	013-824005-10	CHIP RESISTOR	820K 0603 1/10W ±5% "SMD"	PCS	1	R39
7.42	013-104005-10	CHIP RESISTOR	100K 0603 1/10W ±5% "SMD"	PCS	3	R40,R47,R49
7.43	013-562005-10	CHIP RESISTOR	5.6K 0603 1/10W ±5% "SMD"	PCS	1	R43
7.44	013-124005-10	CHIP RESISTOR	120K 0603 1/10W ±5% "SMD"	PCS	1	R44
7.45	013-479005-10	CHIP RESISTOR	4.7Ω 0603 1/10W ±5% "SMD"	PCS	1	R45
7.46	013-221005-10	CHIP RESISTOR	220Ω 0603 1/10W ±5% "SMD"	PCS	1	R46
7.47	013-108005-20	CHIP RESISTOR	0.1Ω 0805 1/8W ±5% "SMD"	PCS	2	R48,R50
7.48	033-0T118B-0	IC	T118B/LQFP-64	PCS	1	U1
7.49	033-001117-2	IC	1117-1.8V/SOT-89 OR SOT-223	PCS	1	U2
7.50	033-003414-0	IC	NJM3414/ SOP-8	PCS	1	U3
7.51	190-118B33-02	PCB	SKY118B PCB 106*23mm 1.0mm	PCS	1	

8. DL371S 3IN1 BOARD COMPONENTS

832-371S22-1

SERIAL NUMBER	MATERIAL CODE	MATERIAL NAME	SPECIFICATIONS	UNIT	QUANTITY	LOCATION
8	832-371S22-1	DL371S 3IN1 BOARD		SET	1	
8.1	162-060121-0	DC PLUG SOCKET	DC-016-1.65 Φ4.5MM	PCS	1	DC1
8.2	143-011020-0	CD DOOR OPER/CLOSE SWITCH	8.5MM	PCS	1	SW4
8.3	062-110422-0	BATTERY PLUG SOCKET	WS4125-401	PCS	1	BAE1
8.4	190-371S23-01	PCB	30.4*35.3mm THICK=1.0mm	PCS	1	