

Service
Service
Service



Service Manual



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PHILIPS

TECHNICAL SPECIFICATIONS

General

Dimensions (W x H x D)

With boxes..... 178.0 x 65.0 x 139.0 mm

Without boxes..... 92.0 x 31.5 x 119.5 mm

Weight without battery..... 188 g

Output (CD-DA and MP3)

Output level 3 mW +1/-2 dB

Frequency response..... 16 Hz – 20 kHz +/- 3.0 dB (16 ohms)

S/N ratio (A-weight) >= 100 dB

THD (1 kHz, 0dB) <= 1 %

Channel crosstalk (1kHz, 0dB)..... >=30 dB

Power supply modes

Ext. DC-in socket..... 4.5 V nom. (2.8 – 5.0 V)

Battery..... 1.5 V nom. (0.9 – 1.6 V)

Current consumption (Ext. DC = 4.5 V, W/O earphone)

PLAY-mode CD ESP off..... 150 mA

PLAY-mode CD ESP on..... 150 mA

PLAY-mode MP3..... 230 mA

JUMP-mode CD ESP off..... 300 mA

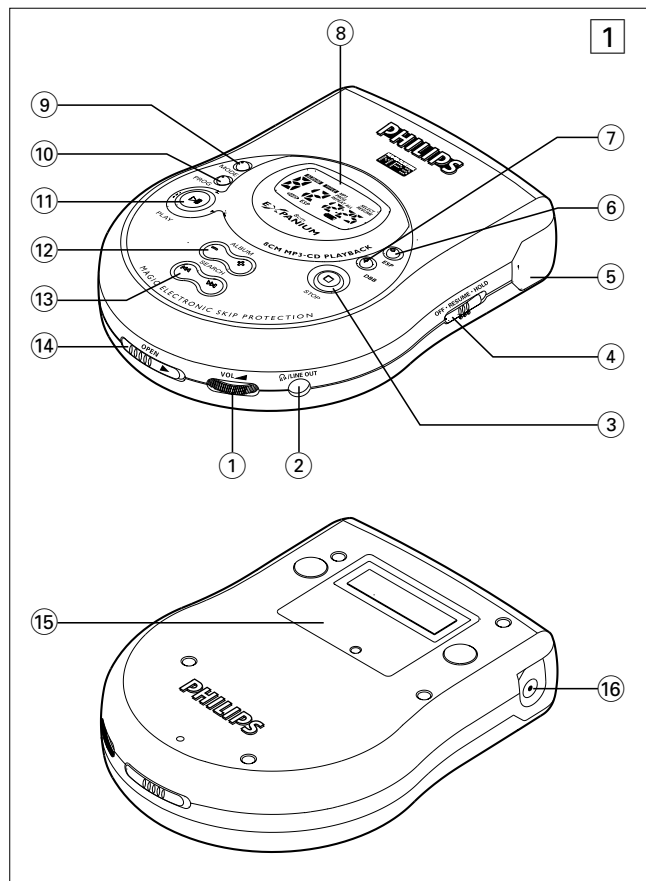
JUMP-mode CD ESP on..... 300 mA

JUMP-mode MP3..... 450 mA

Battery life time

Disc	Battery type	ESP on	ESP off
CD	LR6(AA)	6 h 30 m	6 h 30 m
MP3	LR6(AA)	3 h 00 m	6 h 00 m

INSTRUCTIONS FOR USE



CONTROLS (see figure 1)

- 1 VOLadjusts the volume
- 2 LINE OUT/3.5 mm line out to connect
 -the headphones
 -this set to the audio input of your stereo equipment
- 3stops playback, clears a programme and switches the set off
 y and old equipment.
- 4 OFF-RESUME-HOLD
 OFFswitches RESUME and HOLD off
 RESUMEstores the last position played
 HOLDlocks all buttons
- 5battery compartment
- 6 ESP**E**lectronic **S**kip **P**rotection prevents music interruptions
 caused by shocks or vibrations
- 7 DBB**D**ynamic **B**ass **B**oost, selects the bass enhancement
- 8display
- 9 MODEselects the different playing possibilities such as
SHUFFLE or **REPEAT**
- 10 PROGRAMprograms tracks and lets you review the programme
- 11switches the set on, starts playback and interrupts playback
- 12 +/-MP3-CD only: selects the next/previous album or skips
 forward/backward
- 13skips forward/backward and searches forward/backward
- 14 OPENopens the CD lid

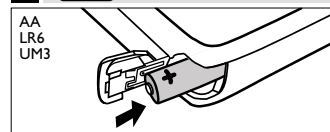
QUICK START

MISE EN SERVICE RAPIDE

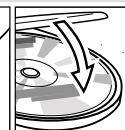
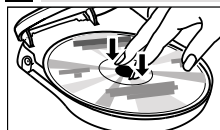
1 OPEN



2



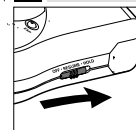
3 CD



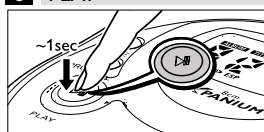
4



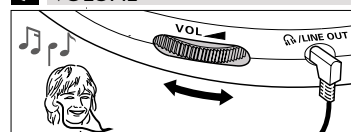
5 HOLD → OFF



6 PLAY



7 VOLUME



2

CONTROLS (see figure 1)

- 15type plate
- 16 4.5V DCto connect the external power supply

GENERAL INFORMATION

Maintenance

- Do not touch the lens (A) of the set.
- Do not expose the set, battery or discs to humidity, rain, sand or excessive heat (caused by heating equipment or direct sunlight).
- The lens may cloud over when the set is suddenly moved from cold to warm surroundings. Playing is not possible then. Leave the set in a warm environment until the moisture evaporates.
- Active mobile phones in the vicinity of this set may cause malfunctions.
- Avoid dropping the set as this may cause damage.
- Clean the set with a soft, lint-free cloth. Do not use any cleaning agents as they may have a corrosive effect.
- To clean a disc, wipe it in a straight line from the centre towards the edge using a soft, lint-free cloth. Cleaning agents may damage the disc.

Environmental information

- All redundant packing material has been omitted. We have done our utmost to make the packaging easily separable into three mono materials: cardboard (box), polystyrene foam (buffer) and polyethylene (bags, protective foam sheet).
- Your set consists of materials which can be recycled if disassembled by a specialized company. Please observe the local regulations regarding the disposal of packing materials, exhausted batter

INSTRUCTIONS FOR USE

GENERAL INFORMATION

MP3 music files

The music compression technology MP3 (MPEG Audio Layer 3) reduce the digital data of an audio CD significantly while maintaining CD-like sound quality. With MP3, for example, you can record up to 3 hours of CD-like music on a single CD-ROM. This set plays MP3 music files.

How to get music files

Either download legal music files from the Internet to your computer disk or buy pre-recorded music CD. For this, insert an audio CD into your computer's CD-ROM drive and convert the music using an appropriate encoder software. To achieve a good sound quality, a bit rate of 128 kbps or higher is recommended for MP3 music files.

Some encoder software offers an option to protect music files, i. e. the files can only be played on the computer which created them. If you burn such files on a CD-ROM, you cannot play them on this set. Make sure to deactivate the protection option in the encoder software before creating the music files. In this case you are responsible for adherence to all local or international copyrights.

How to organize music files

In order to easily handle the large number of music files on a CD-ROM, you can organize them in folders ("albums").

The tracks of an album will be played in alphabetical order. If you want to arrange them in a certain order, let the file names start with numbers.

For example:

001-ONEWORLD.MP3
002-FIRESTARTER.MP3
003-DEEPM.P3

GENERAL INFORMATION

Supported formats

This set supports:

- Disc format: ISO 9660, Joliet, Multisession, UDF, Enhanced Music CD, Mixed Mode CD
- Music file format: MP3

MP3 bit rate (data rate): 32–320 kbps and variable bit rate

-Total number of music files and albums: around 350
(with a typical file name length of 20 characters)

Note: The number of music files that can be played depends on the length of the file names. With short file names more files will be supported.

Visit the eXpAnium homepage

<http://www.expanium.philips.com>

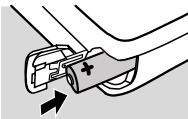
All trademarks used are owned by their respective owners.

POWER SUPPLY


Battery (not supplied)

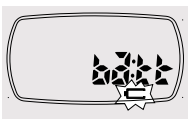
Inserting battery

- Open the battery compartment and insert 1 alkaline battery of type **AA (LR6, UM3)**.
- Remove battery if it is empty or if the set will not be used for a long time.



Indication of empty battery

- Replace the battery or connect the mains adapter as soon as  blinks and *b a t t e r y* is displayed.



Batteries contain chemical substances, so they should be disposed of properly.

GENERAL INFORMATION



This set will play all albums in alphabetical order. An album name includes all folders in which the album is located, e. g. the album VERDI in CLASSIC has the album name CLASSICVERDI.

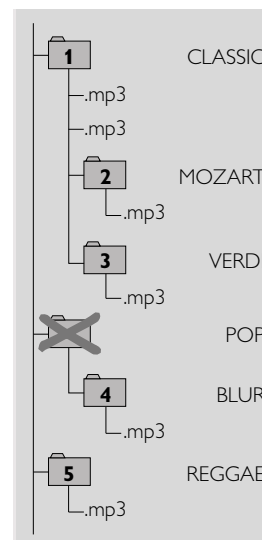
The albums in the illustration will be played in the following way:

ALBUM

CLASSIC	1
CLASSICMOZART	2
CLASSICVERDI	3
POPBLUR	4
REGGAE	5

In POP there are no MP3 files. POP is therefore skipped.

There may be an album  which will be played before all other albums. Album  contains all tracks which you did not put into an album.



How to make a CD-ROM with MP3

Record ("burn") the music files from your hard disc on a CD-ROM with your computer's CD burner.

Make sure that the file names of the MP3 files end with mp3 .

When burning your MP3-CDs, use either ISO 9660 disc format or UDF. CD burning software like "DirectCD" or others support the UDF format.


POWER SUPPLY/HEADPHONES

Average battery lifetime of 1 alkaline battery ,type AA (LR6, UM3):

Playback of	Audio disc	MP3-CD
ESP off (power-saving mode)	6 hours	5 hours
ESP on	6 hours	3 hours

Notes:

-Power-saving mode doubles your playtime.

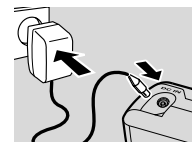
-20 seconds after pressing , the display switches off. After 90 seconds the set switches off automatically.

POWER SUPPLY

Mains adapter

Only use the AY 3170 mains adapter (4.5 V/300 mA direct current, positive pole to the center pin). Any other product may damage the set.

- 1 Make sure the local voltage corresponds to the adapter's voltage. If your mains adapter is equipped with a voltage selector, set this selector to the local mains voltage if necessary.





- 2 Connect the mains adapter to 4.5V DC on the set and to the wall outlet.

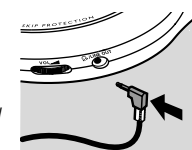
Note: Always disconnect the adapter if you are not using it.

HEADPHONES

Headphones (SBC HE205)

- Connect the supplied headphones to LINE OUT/.

Note: LINE OUT/ can also be used for connecting this set to your HiFi system. To adjust the sound and volume, use the controls on the connected audio equipment and on the CD player.



INSTRUCTIONS FOR USE

POWER SUPPLY/HEADPHONES

IMPORTANT!

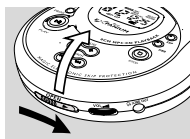
- **Hearing safety** : Do not play your headphones at a high volume. Hearing experts advise that continuous use at high volume can permanently damage your hearing.
- **Traffic safety** : Do not use headphones while driving a vehicle. It may create a hazard and it is illegal in many countries. Even if your headphones are an open-air type designed to let you hear outside sounds, do not turn up the volume so high that you cannot hear what is going on around you.

BASIC FUNCTIONS

Playing a disc

With this set you can play
 –all pre-recorded audio CDs
 –all finalized audio CDR(W)s
 –MP3-CDs (CD-ROMs with MP3)

- 1 Push the OPEN ► slider to open the CD lid.
- 2 Insert a disc, printed side up, by pressing gently on the disc's centre so that it fits onto the hub. Close the lid by pressing it down.

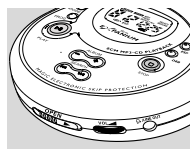


- 3 Press ►► to start playback.

→ CD RECD is displayed. Playback starts.

Audio disc: The current track number and the elapsed playing time are displayed.

MP3-CD: MP3 is shown. The current album number, track number and the elapsed playing time are displayed.



- 4 Press ■ to stop playback.
 - **Audio disc**: The total number of tracks and the total playing time of the disc are displayed.
 - **MP3-CD**: The total number of albums and tracks are displayed.

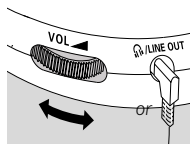
Note : If the total number of album is more than 9, the display will show "--"; if the total number of tracks is more than 99, the display will show "--".

BASIC FUNCTIONS

Volume and sound

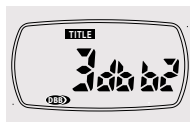
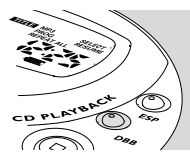
Volume adjustment

- Adjust the volume by using VOL ◀▶.



Sound adjustment

- 1 Press DBB for a moderate bass enhancement .
→ **DBB** is shown and *dbb 1* is displayed.
- 2 Press DBB again for a strong bass enhancement.
→ **DBB** is shown and *dbb 2* is displayed.
- 3 Press DBB again to switch the bass enhancement off.
→ **DBB** disappears.



REMOTE CONTROL (SUPPLIED OR OPTIONALLY AVAILABLE)

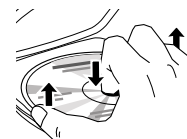
Use the AY 3767 or AY 3768 cord remote control. The buttons on the remote control have the same functions as the corresponding buttons on the set.

- 1 Press ■ twice to switch off the set.
- 2 Firmly connect the remote control to LINE OUT/4 on the set.
- 3 Adjust the volume VOL ◀▶ on the CD player and remote control.

BASIC FUNCTIONS

- 5 To remove the disc, hold it by its edge and press the hub gently while lifting the disc.

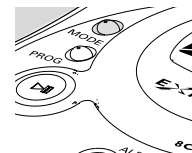
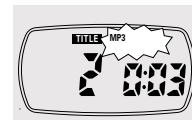
Note: After pressing ►► it may take some time until the first MP3 track is played.



Playing Enhanced Music CDs and Mixed Mode CDs

On Enhanced Music CDs and Mixed Mode CDs there are audio CD tracks as well as computer data (e. g. text files, pictures, MP3 files,...).

- 1 Insert the disc and press ►► to start playback.
→ CD RECD is displayed. Playback starts. All audio CD tracks will be played.
- 2 If there are MP3 and AAC files on the disc, **MP3** blinks. Keep MODE pressed for 2 seconds to select MP3 playback.
→ CD RECD is displayed. Playback starts with the first track of the first album. All MP3 will be played.
- 3 To return to audio CD playback, keep MODE pressed for 2 seconds.



Note: To protect your headphones and your Hi-Fi system from damage, you will hear no sound when a computer (data) file is played. Press ►► to skip to the next track.

Pause

- 1 Press ►► to interrupt playback.
→ The time where playback was interrupted will blink.
- 2 To resume playback press ►► again.

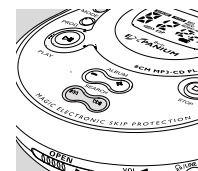


BASIC FUNCTIONS

Selecting and searching (on all discs)

Selecting a track during playback

- Briefly press ◀◀ or ▶▶ once or several times to skip to the beginning of the current, previous or subsequent track.
→ Playback continues with the selected track.



Searching for a passage during playback

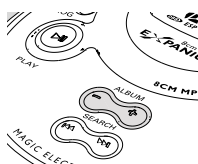
- 1 Keep ◀◀ or ▶▶ pressed to find a particular passage in a backward or forward direction.
→ Searching is started and playback continues at a low volume. After 2 seconds the search speeds up.
- 2 Release the button at the desired passage.
→ Normal playback continues.

Notes: During REPEAT, SHUFFLE, SHUFFLE ALL, MP3 or while playing a programme, searching is only possible within the current track.

Selecting an album (on MP3-CDs only)

Selecting an album during playback

- Briefly press - or + once or several times to skip to the first track of the current, previous or subsequent album.
→ The first track of the selected album is played.



Selecting a track during playback

- 1 Keep - or + pressed to skip quickly to previous or subsequent MP3 tracks.
→ Skipping starts and speeds up after 2 seconds.
- 2 Release the button at the desired track.
→ Playback continues with the selected track.

Note: To skip from track to track at low speed, use ◀◀ ▶▶.

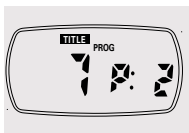
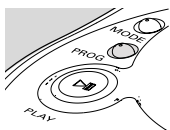
INSTRUCTIONS FOR USE

FEATURES

Programming track numbers

You can select up to 50 tracks and store them in the memory in a desired sequence. You can store any track more than once.

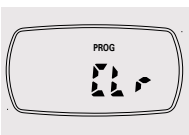
- 1 Select a track with ◀◀ or ▶▶.
- 2 Press PROGRAM to store the track.
→ PROGRAM is shown and P with the number of stored tracks is displayed.
- 3 Select and store all desired tracks in this way.
- 4 If necessary, press ■ to stop normal playback. Press ▶▶ to start playback of the programme.
→ Playback of the programme starts.



- To add additional tracks to your programme, press ■ to stop playing the programme and continue with step 1.
- You can review the programme by pressing PROGRAM for more than 3 seconds.
→ All stored tracks are displayed in sequence.

Clearing the programme

- 1 If necessary, press ■ to stop playback.
- 2 Press ■ to clear the programme.
→ L L is displayed, PROGRAM disappears and the programme is cleared.
- If you press PROGRAM and there is no track selected, SEL is displayed



Notes:

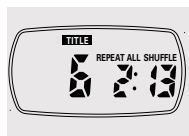
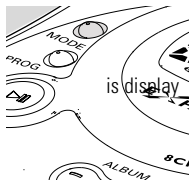
The programme will also be cleared if you interrupt the power supply or open the CD lid or if the set switches off automatically. After storing 50 tracks, FULL is displayed.

FEATURES

Selecting different playback possibilities-MODE

It is possible to play tracks in random order or to repeat a track, an album or an entire disc.

- 1 Press MODE repeatedly during playback to select either:
 - SHUFFLE (with MP3-CDs only): All tracks of the current album are played in random order until all of them have been played once.
 - SHUFFLE ALL: All tracks of the disc are played in random order until all of them have been played once.
 - SHUFFLE REPEAT (with MP3-CDs only): All tracks of the current album are played repeatedly in random order.
 - SHUFFLE REPEAT ALL: All tracks of the disc are played repeatedly in random order.
 - REPEAT:
 - Audio disc: The current track is played repeatedly.
 - MP3-CD: The current album is played repeatedly.
 - REPEAT ALL: The entire disc is played repeatedly.
- When playing a programme, you can select either:
 - SHUFFLE PROGRAM: All tracks of the programme are played in random order until all of them have been played once.
 - SHUFFLE REPEAT PROGRAM: All tracks of the programme are played repeatedly in random order.
 - REPEAT PROGRAM: All tracks of the programme are played repeatedly.
- 2 Playback starts in the chosen mode after 2 seconds.
- 3 To return to normal playback, press MODE repeatedly until the display indication disappears.

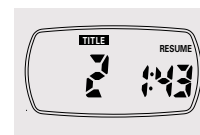
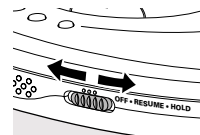


FEATURES

Storing the last position played-RESUME

You can store the last position played. When restarting, playback continues from where you have stopped.

- 1 Switch the slider to RESUME during playback to activate RESUME.
→ RESUME is shown.
- 2 Press ■ whenever you want to stop playback.
- 3 Press ▶▶ to resume playback.
→ Playback continues from where you have stopped.

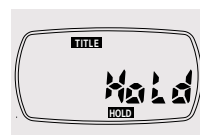


- To deactivate RESUME, switch the slider to OFF.
→ RESUME disappears.

Locking all buttons-HOLD

You can lock all buttons of the set. When you press any key, no action will be executed then.

- Switch the slider to HOLD to activate HOLD.
→ HOLD is shown and all buttons are locked. When pressing any key, HOLD is displayed.
- To deactivate HOLD, switch the slider to OFF.
→ HOLD disappears.

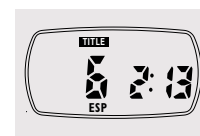


FEATURES

ESP-Electronic Skip Protection

With a conventional portable disc player the music may stop e.g. while you are jogging. The ELECTRONIC SKIP PROTECTION protects this set against loss of sound caused by light vibrations or shocks. Continuous playback is ensured. **ESP does not protect the set against damage caused by dropping !**

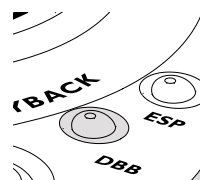
- Press ESP during playback to activate the skip protection.
→ ESP is shown and the protection is activated.
- To deactivate the skip protection, press ESP again.
→ ESP disappears and the protection is deactivated.



Beep sound

A beep sound accompanies various key operations. Keep DBB pressed for more than 2 seconds to select your beep option.

- If the beep sound has been activated :
→ bEEP is display
- If the beep sound has been deactivated :
→ no bEEP



INSTRUCTIONS FOR USE

TROUBLESHOOTING

WARNING: Under no circumstances should you try to repair the set yourself as this will invalidate the guarantee.

If a fault occurs, first check the points listed before taking the set for repair. If you are unable to solve a problem by following these hints, consult your dealer or service centre.

No power, or playback does not start

- Insert the battery correctly.
- Replace the battery.
- Connect the mains adapter securely.

HOLD indication and/or no reaction to controls

- Deactivate HOLD.

No sound or bad sound quality

- Press ►|| to resume playback.
- Adjust the volume.
- The track is a data file. Press ►► to skip to the next audio CD track.
- Check and clean the LINE OUT/4 connections.
- Keep this set away from active mobile phones or strong magnetic fields.

no CD indication

- Insert a disc, label upwards.
- Clean or replace the disc.
- Wait until the steamed up lens has cleared.

no CD 15% indication

- Make sure the inserted CDR(W) is finalized.

no CD indication

- Make sure you have inserted an audio disc or an MP3-CD.

TROUBLESHOOTING

Protect indication and music file is not played

- The music file is protected. Make sure the protection option in your encoder software is deactivated when creating a music file.
- In this case you are responsible for adherenceto all local or international copyrights.

SELECT indication

- Select tracks for programming before you play your program.

Music file is not played

- Wrong format used eg. VCD, word. Make sure the music file names end with mp3

Missing directories on MP3-CD

- Make sure the total number of files and albums on your MP3-CD does not exceed 350.
- Only albums with MP3 files are shown.

The disc skips tracks

- Clean or replace the disc
- Make sure REPEAT, REPEAT ALL, SHUFFLE, SHUFFLE ALL or PROGRAM is switched off.

Music is skipped or popping sound when playing an MP3 file

- If the problem persists, encode the audio track again and make a new CD-ROM.
- CD damaged or dirty. Replace or clean CD.

Music is interrupted and CDPS indication

- Switch ESP on.

CAUTION

Use of controls or adjustments or performance of procedures other than herein may result in hazardous radiation exposure or other unsafe operation.

SERVICE AIDS

Service Tool:

Universal Torx driver holder	4822 395 91019
Torx bit T10 150mm	4822 395 50456
Torx driver set T6-T20	4822 395 50145
Torx driver T10 extended	4822 395 50423

Compact Disc:

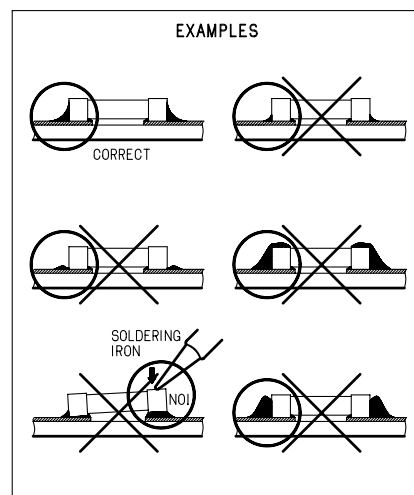
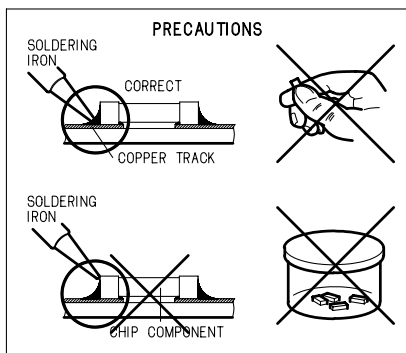
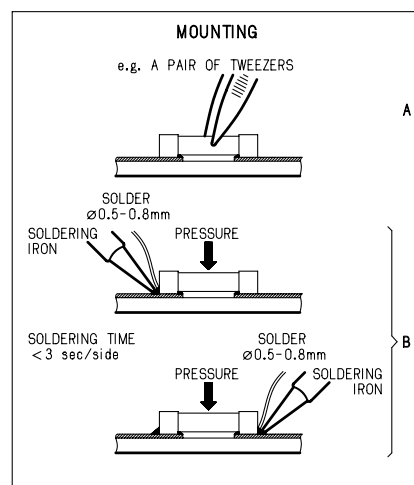
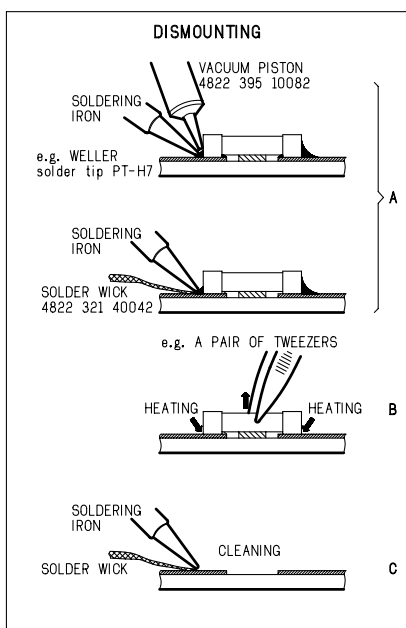
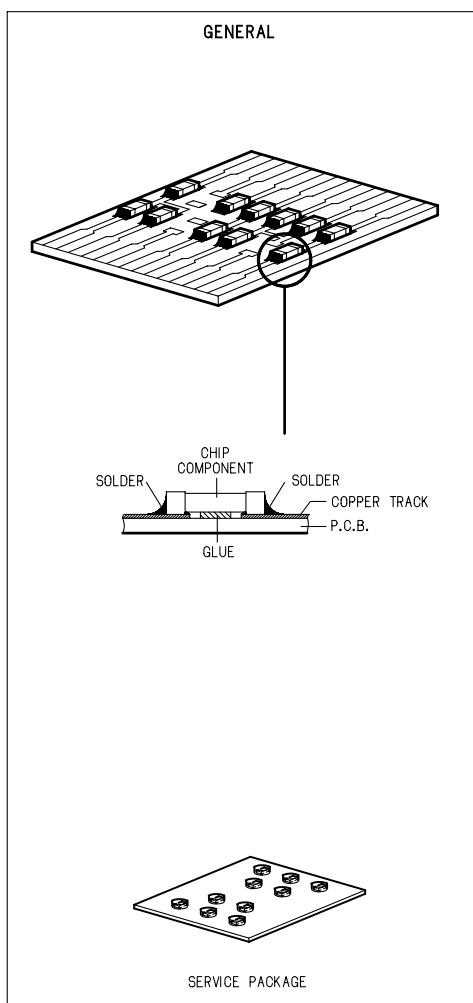
ECC_200_8cm.....	7104 099 32821
SUB8A_8cm	7104 099 32841
MP3_8cm.....	7104 099 32851
SKEW Disc_8cm.....	7104 099 28262
Music Disc_8cm	7104 099 28252

Audio Test Disc TCD783 (ABEX)

ESD Equipment:

Anti-static table mat-large 1200x650x1.25mm	4822 466 10953
Anti-static table mat-small 600x650x1.25mm	4822 466 10958
Anti-static wrist band	4822 395 10223
Connector box (1MW)	4822 320 11307
Extension cable (to connect wrist band to conn. box)	4822 320 11305
Connecting cable (to connect table mat to conn. box)	4822 320 11306
Earth cable (to connect product to conn. box)	4822 320 11308
Complete kit ESD3 (Combining all above products)	4822 320 10671
Wrist band tester	4822 344 13999

HANDLING CHIP COMPONENTS



SAFETY & WARNINGS

Ⓒ **WARNING**

All ICs and many other semiconductors are susceptible to electrostatic discharges (ESD). Careless handling during repair can reduce life drastically.

When repairing, make sure that you are connected with the same potential as the mass of the set via a wristband with resistance. Keep components and tools at this potential.

Ⓕ **ATTENTION**

Tous les IC et beaucoup d'autres semi-conducteurs sont sensibles aux décharges statiques (ESD). Leur longévité pourrait être considérablement écourtée par le fait qu'aucune précaution n'est prise à leur manipulation.

Lors de réparations, s'assurer de bien être relié au même potentiel que la masse de l'appareil et enfilez le bracelet serti d'une résistance de sécurité.

Veiller à ce que les composants ainsi que les outils que l'on utilise soient également à ce potentiel.

ESD



Ⓓ **WARNUNG**

Alle ICs und viele andere Halbleiter sind empfindlich gegenüber elektrostatischen Entladungen (ESD). Unvorsichtige Behandlung im Reparaturfall kann die Lebensdauer drastisch reduzieren.

Sorgen Sie dafür, daß Sie im Reparaturfall über ein Pulsarmband mit Widerstand mit dem Massepotential des Gerätes verbunden sind.

Halten Sie Bauteile und Hilfsmittel ebenfalls auf diesem Potential.

Ⓖ **WAARSCHUWING**

Alle IC's en vele andere halfgeleiders zijn gevoelig voor electrostatische ontladingen (ESD).

Onzorgvuldig behandelen tijdens reparatie kan de levensduur drastisch doen verminderen. Zorg ervoor dat u tijdens reparatie via een polsband met weerstand verbonden bent met hetzelfde potentiaal als de massa van het apparaat.

Houd componenten en hulpmiddelen ook op ditzelfde potentiaal.

Ⓘ **AVVERTIMENTO**

Tutti IC e parecchi semi-conduttori sono sensibili alle scariche statiche (ESD).

La loro longevità potrebbe essere fortemente ridatta in caso di non osservazione della più grande cauzione alla loro manipolazione. Durante le riparazioni occorre quindi essere collegato allo stesso potenziale che quello della massa dell'apparecchio tramite un braccialetto a resistenza.

Assicurarsi che i componenti e anche gli utensili con quali si lavora siano anche a questo potenziale.

Ⓒ **AVAILABLE ESD PROTECTION EQUIPMENT :**

anti-static table mat large 1200x650x1.25mm
small 600x650x1.25mm

anti-static wristband

connection box (3 press stud connections, 1MΩ)

extendible cable (2m, 2MΩ, to connect wristband to connection box)

connecting cable (3m, 2MΩ, to connect table mat to connection box)

earth cable (1MΩ, to connect any product to mat or to connection box)

KIT ESD3 (combining all 6 prior products - small table mat)

wristband tester

4822 466 10953

4822 466 10958

4822 395 10223

4822 320 11307

4822 320 11305

4822 320 11306

4822 320 11308

4822 310 10671

4822 344 13999

Ⓒ

Safety regulations require that the set be restored to its original condition and that parts which are identical with those specified be used.

Safety components are marked by the symbol

Ⓕ

Les normes de sécurité exigent que l'appareil soit remis à l'état d'origine et que soient utilisées les pièces de rechange identiques à celles spécifiées.

Les composants de sécurité sont marqués

SAFETY



Ⓓ

Bei jeder Reparatur sind die geltenden Sicherheitsvorschriften zu beachten. Der Originalzustand des Gerätes darf nicht verändert werden. Für Reparaturen sind Originalersatzteile zu verwenden.

Sicherheitsbauteile sind durch das Symbol

Ⓖ

Veiligheidsbepalingen vereisen, dat het apparaat in zijn oorspronkelijke toestand wordt teruggebracht en dat onderdelen, identiek aan de gespecificeerde, worden toegepast. De Veiligheidsonderdelen zijn aangeduid met het symbool

Ⓘ

Le norme di sicurezza estigono che l'apparecchio venga rimesso nelle condizioni originali e che siano utilizzati i pezzi di ricambio identici a quelli specificati.

Componenti di sicurezza sono marcati con

Ⓒ

DANGER: Invisible laser radiation when open.
AVOID DIRECT EXPOSURE TO BEAM.



Ⓔ **Varning !**

Osynlig laserstrålning när apparaten är öppnad och spärren är urkopplad. Betrakta ej strålen.

Ⓓ **Advarsel !**

Usynlig laserstrålning ved åbning når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

Ⓕ **Varoitus !**

Avatussa laitteessa ja suojalukituksen ohitettaessa olet alttiina näkymättömälle laserisäteilylle. Älä katso säteeseen !

Ⓒ

After servicing and before returning the set to customer perform a leakage current measurement test from all exposed metal parts to earth ground, to assure no shock hazard exists.

The leakage current must not exceed 0.5mA.

Ⓕ

"Pour votre sécurité, ces documents doivent être utilisés par des spécialistes agréés, seuls habilités à réparer votre appareil en panne".

SERVICE TEST PROGRAM

Introduction

Purpose: Used for maintenance or to allow the service department to control separately and in a special way the various parts or devices of the set.




Inputs

Keys:     MODE PROG

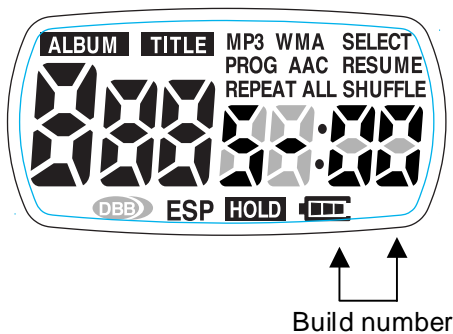
Condition: Door must be open in order to enter service mode.

Processes

Function	Key	Service mode
Display test	Next	○
Key test	Mode	○
CD test	Play	○
Exit	Stop	○

- Push  and  at same time and plug in the DC cord during the door is open.
- Push  to go back to normal mode while "Sxxx" is showing on the LCD.
- Indicate "Sxxx" on the LCD when it goes to Service Mode. (xxx is the Software build number.)

Outputs



Example of Service Mode Display

1. Display Test

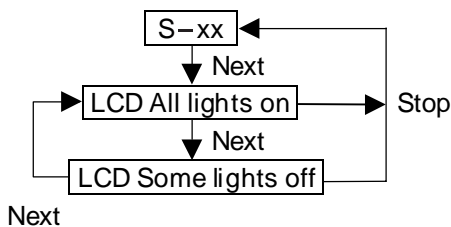
Introduction



Used for display test

Inputs

Keys:  

Processes



- Goes to next test by pushing 
- Goes back to previous test by pushing 

Outputs

See the Display column of Key test table.

2. Key Test

Key Commands	Display
Non	Min. --
Play	Min. 05
Next	Min. 06
Prev	Min. 07
Mode	Min. 03
Program	Min. 02
ALBUM +	Min. 09
ALBUM -	Min. 10
EXP	Min. 08
DBB	Min. 01
Play of Remote control	Min. 05 Sec. rc
Stop of Remote control	Min. 04 Sec. rc
Next of Remote control	Min. 06 Sec. rc
Prev. of Remote control	Min. 07 Sec. rc
Stop	Exit to "S-xx"

3. CDTest

Introduction

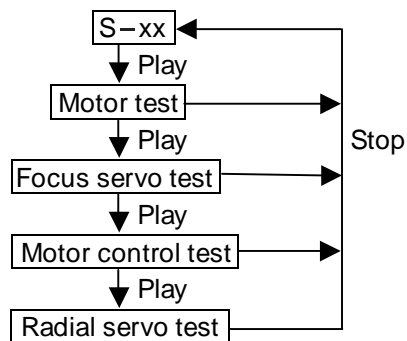
Tests the motor or servo. (Don't use MP3 disc.)



Inputs

Keys:



Processes



- Goes to next test by pushing 
- Goes back to previous test by pushing 

3-1. Motor Test

Key	Function	Display			
		Tr.	Min	Sec	
Next	Slide moves outside	Cd		Image of door SW (On=0, Off=1)	Image of CDM inner SW (On=0, Off=1)
Prev	Slide moves inside				
Mode	Disc motor turns clockwise				
Stop	Exit to main menu				
Play	Enter focus servo test				

3-2. Focus Servo Test

Key	Function	Display		
		Tr.	Min	Sec
Next	Slide moves outside	F (in focus) -F (seek focus)	0	1
Prev	Slide moves inside			
Mode	Disc motor turns clockwise		Flag ESP indicated CD-R/W setting	
DBB	Toggle between normal and CD-R/W		0	2
Stop	Exit to main menu			
Play	If focus point is found then enter motor control test			

3-3. Motor Control Test

Key	Function	Display		
		Tr.	Min	Sec
Next	Slide moves outside		d (speed correct)	F (in focus)
Prev	Slide moves inside		-d (out of speed)	-F (seek focus)
Stop	Exit to main menu	Flag ESP indicated CD-R/W setting		
Play	If speed correct and in focus then enter radial servo test			

3-4. Radial Servo Test

Key	Function	Display		
		Tr.	Min	Sec
Next	Jump 16 tracks outside (with sound)	r (on track)	d (speed correct)	F (in focus)
Prev	Jump 16 tracks inside (with sound)	-r (off track)	-d (out of speed)	-F (seek focus)
Stop	Exit to main menu	Flag ESP indicated CD-R/W setting		

FEATURES LIST

MP3 Decoder Characteristics

MPEG Versions

	Support [Y/N]
MPEG Version 1 (ISO/IEC 11172-3)	Y
MPEG Version 2 (ISO/IEC 13818-3)	N
MPEG Version 2.5 (Ext. for low Bitrates)	N

MPEG Layers

	Support [Y/N]
Layer I	N
Layer II	N
Layer III	Y

Sample rates [kHz]

			Support [Y/N]
MPEG 1	44.1		Y
MPEG 1	48		Y
MPEG 1	32		Y
MPEG 2	22.05		N
MPEG 2	24		N
MPEG 2	16		N
MPEG 2.5	11.025		N
MPEG 2.5	12		N
MPEG 2.5	8		N

File system

	Support [Y/N]	Remarks
ISO9660	Y	Mandatory
Joliet (Long Filename extension)	Y	Not shown on the Display
UDF (Packet Writing)	Y	
Multi-Session	Y	
Directory nesting (max. levels)	8 level	
Max. Nr. of Files	350	
Playlist Files (.m3u, .pls) handled as Dir. (Albums)	N	

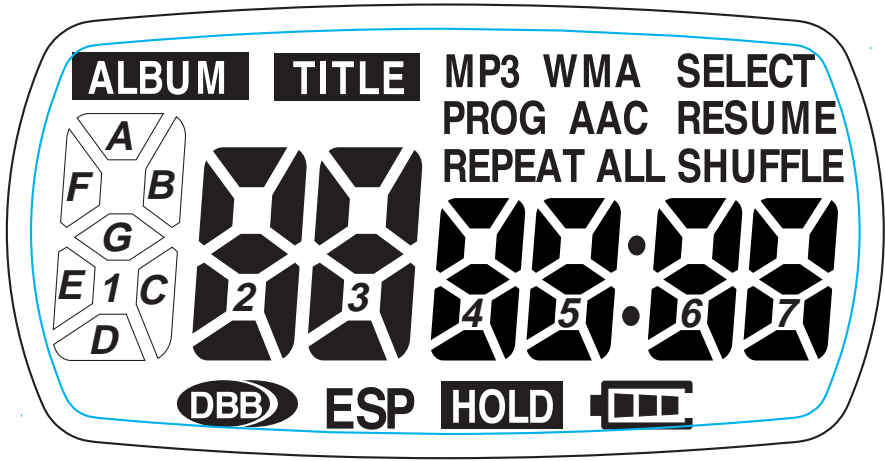
File Formats

	Support [Y/N]	Remarks
.mp3	Y	Mandatory
.wav (containing mp3 compressed Audio)	N	
.wav (uncompressed Audio)	N	
.wav (ADPCM compressed Audio)	N	
.WMA (Windows Media Audio)	N	
.AAC (Advanced Audio Coding)	Y	

Available function

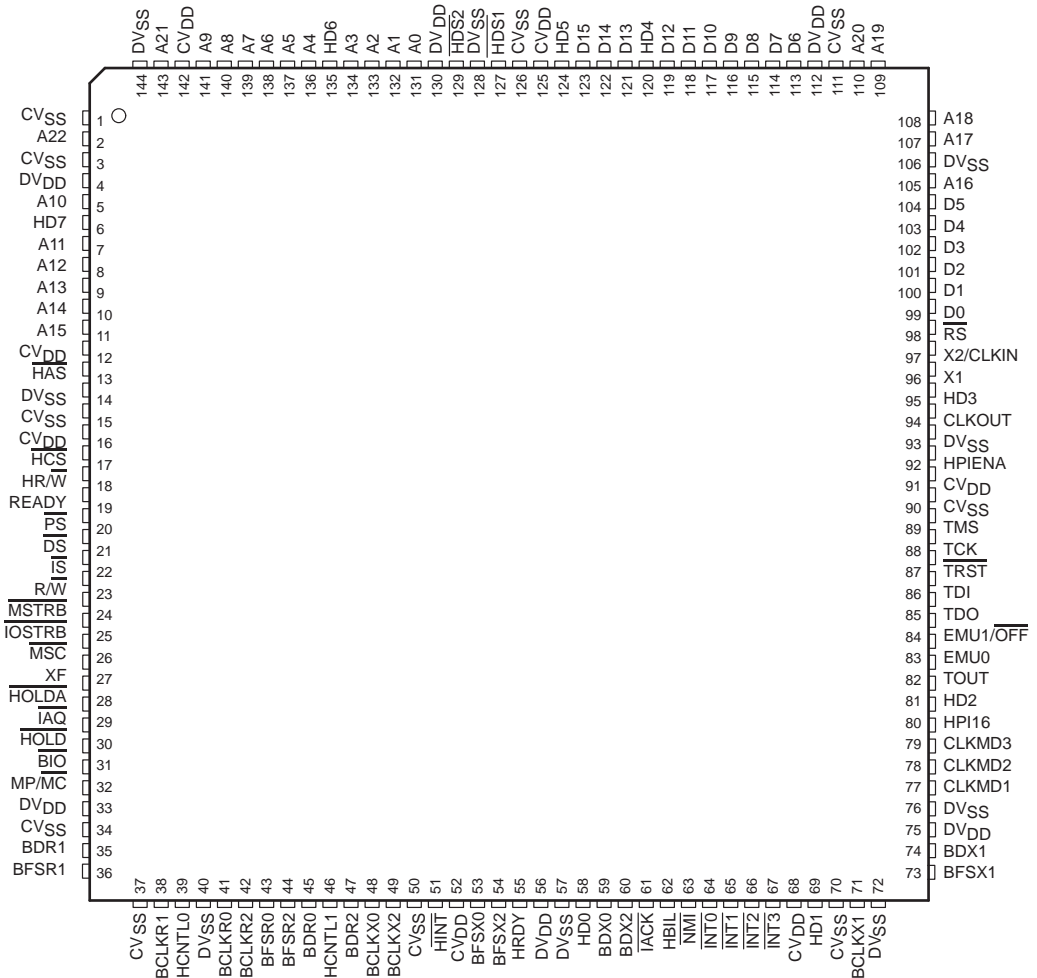
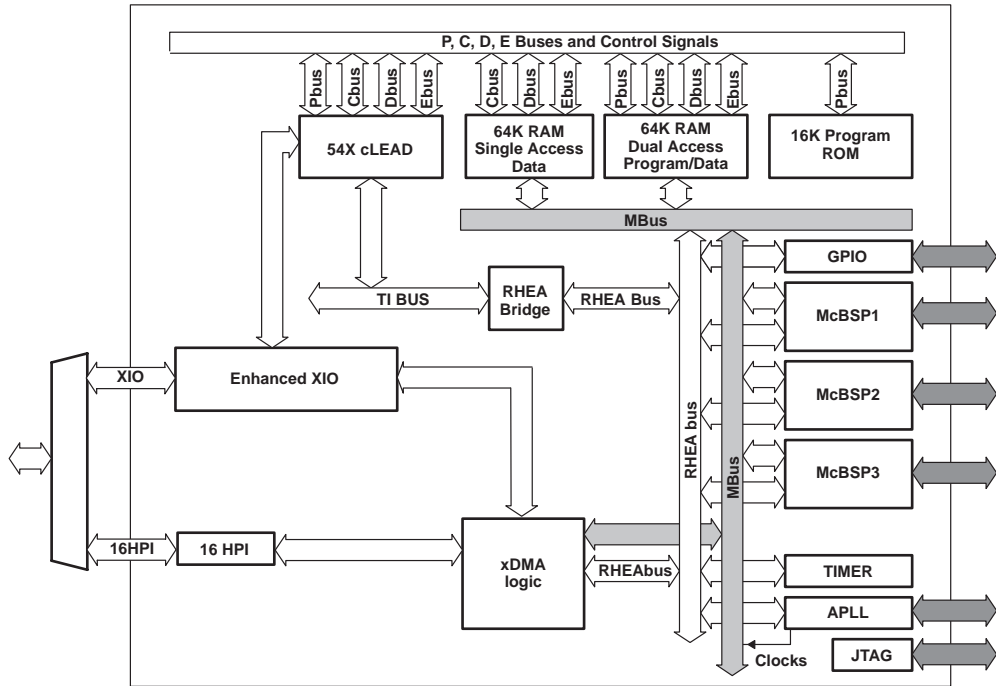
item CD type	Repeat	Repeat All	Shuffle	Shuffle Repeat All	Program	Music Search	MP3 Track Search	Album Search
CD mode	○	○	○	○	○	○	×	×
MP3 mode	○	○	○	○	○	○	○	○

		COMMON 1 (1 PIN)	COMMON 2 (2 PIN)	COMMON 3 (3 PIN)	COMMON 4 (4 PIN)
SEGMENT 1	(5 PIN)	2A	2F	2E	2D
SEGMENT 2	(6 PIN)	1A	1F	1E	1D
SEGMENT 3	(7 PIN)	1B	1G	1C	DBB
SEGMENT 4	(8 PIN)	2B	2G	2C	> (DBB)
SEGMENT 5	(9 PIN)	3A	3F	3E	3D
SEGMENT 6	(10 PIN)	3B	3G	3C	ESP
SEGMENT 7	(11 PIN)		ALBUM	4F	4E
SEGMENT 8	(12 PIN)	TITLE	4A	4G	4D
SEGMENT 9	(13 PIN)	HOLD	REPEAT	4B	4C
SEGMENT 10	(14 PIN)	MP3	PROG	5F	5E
SEGMENT 11	(15 PIN)		5A	5G	5D
SEGMENT 12	(16 PIN)	Batt. (Frame)	ALL	5B	5C
SEGMENT 13	(17 PIN)	Batt. (Left)	:	6F	6E
SEGMENT 14	(18 PIN)	Batt. (Middle)	6A	6G	6D
SEGMENT 15	(19 PIN)	Batt. (Right)	AAC	6B	6C
SEGMENT 16	(20 PIN)	WMA	SHUFFLE	7F	7E
SEGMENT 17	(21 PIN)		7A	7G	7D
SEGMENT 18	(22 PIN)	SELECT	RESUME	7B	7C



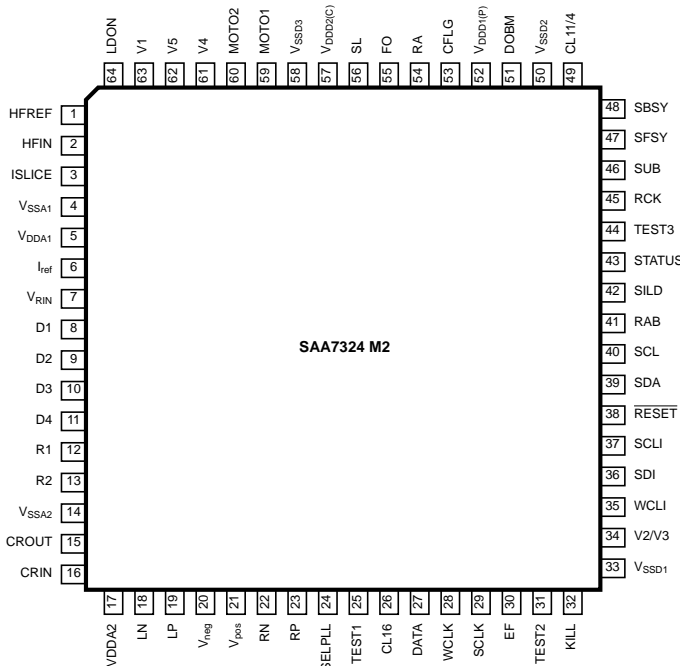
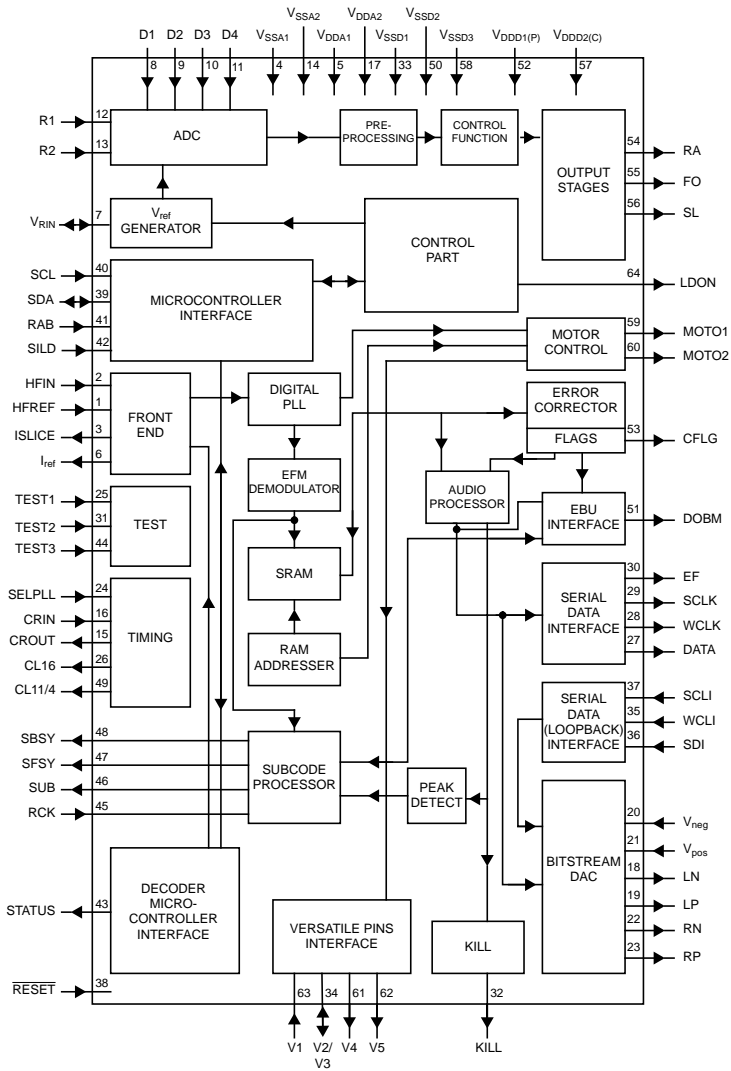
IC BLOCK DIAGRAMS

7480 : TMS320VC5416



NOTE A: DVDD is the power supply for the I/O pins while CVDD is the power supply for the core CPU. VSS is the ground for both the I/O pins and the core CPU.

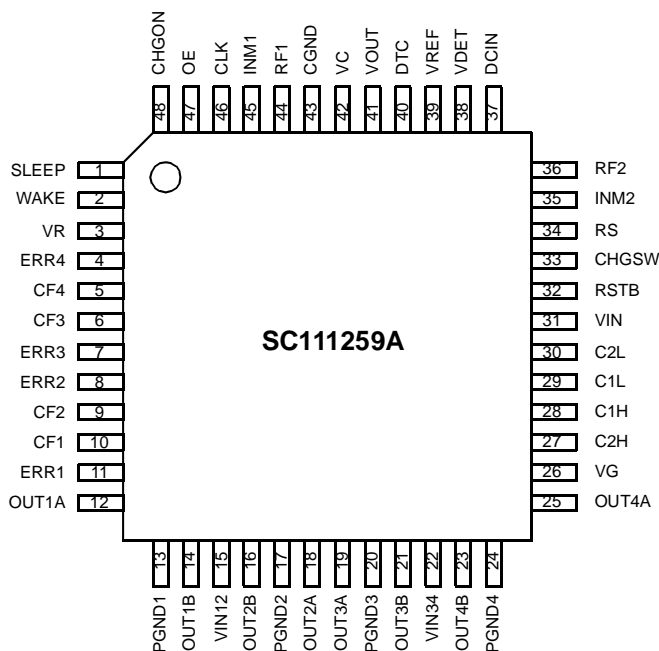
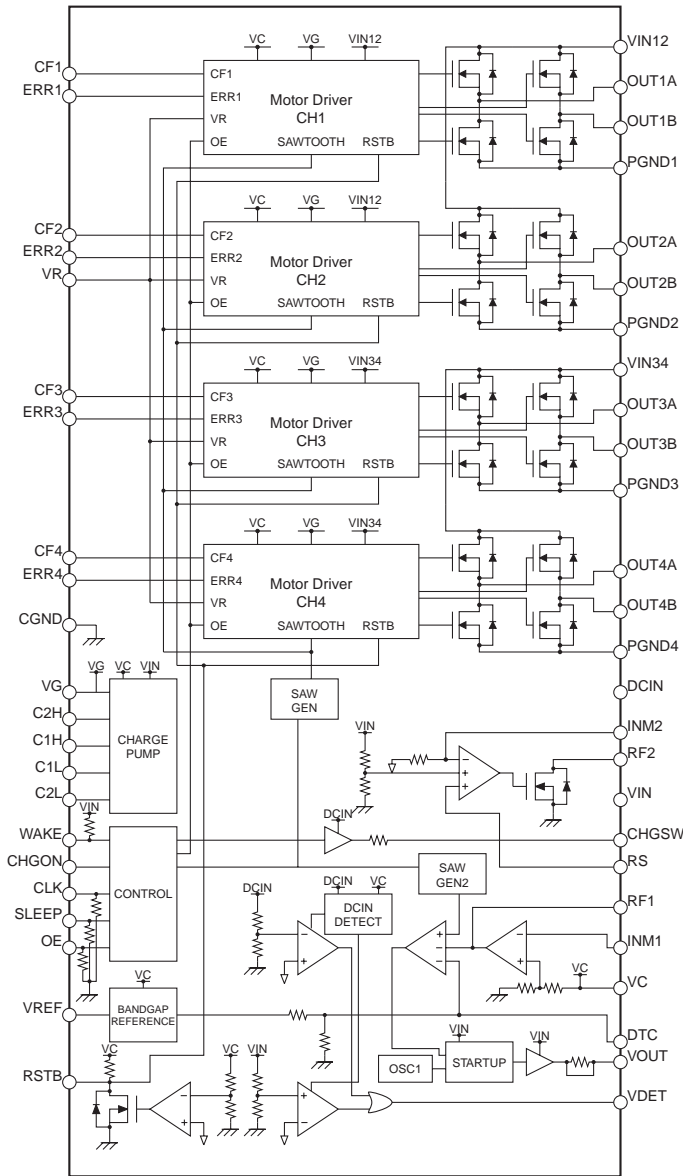
7850 : SAA7324H/M2B



SYMBOL	PIN	DESCRIPTION
HFREF	1	comparator common mode input
HFIN	2	comparator signal input
ISLICE	3	current feedback output from data slicer
VSSA1	4 ⁽¹⁾	analog ground 1
VDDA1	5 ⁽¹⁾	analog supply voltage 1
Iref	6	reference current output pin
Vrin	7	reference voltage for servo ADC's
D1	8	unipolar current input (central diode signal input)
D2	9	unipolar current input (central diode signal input)
D3	10	unipolar current input (central diode signal input)
D4	11	unipolar current input (central diode signal input)
R1	12	unipolar current input (satellite diode signal input)
R2	13	unipolar current input (satellite diode signal input)
VSSA2	14 ⁽¹⁾	analog ground 2
CROUT	15	crystal/resonator output
CRIN	16	crystal/resonator input
VDDA2	17 ⁽¹⁾	analog supply voltage 2
LN	18	DAC left channel differential output - negative
LP	19	DAC left channel differential output - positive
Vneg	20 ⁽¹⁾	DAC negative reference supply (equivalent to DAC V _{SS})
Vpos	21 ⁽¹⁾	DAC positive reference supply (equivalent to DAC V _{DD})
RN	22	DAC right channel differential output - negative
RP	23	DAC right channel differential output - positive
SELPLL	24	selects whether internal clock multiplier PLL is used
TEST1	25	test control input 1; this pin should be tied LOW
CL16	26	16.9344 MHz system clock output
DATA	27	serial d4(1)ata output (3-state)
WCLK	28	word clock output (3-state)
SCLK	29	serial bit clock output (3-state)
EF	30	C2 error flag output (3-state)
TEST2	31	test control input 2; this pin should be tied LOW
KILL	32	kill output (programmable; open-drain)
VSSD1	33 ⁽¹⁾	digital ground 2
V2/V3	34	versatile I/O: input versatile pin 2 or output versatile pin 3 (open-drain)
WCLI	35	word clock input (for data loopback to DAC)
SDI	36	serial data input (for data loopback to DAC)
SCLI	37	serial bit clock input (for data loopback to DAC)
RESET	38	power-on reset input (active LOW)
SDA	39	microcontroller interface data I/O line (open-drain output)
SCL	40	microcontroller interface clock line input
RAB	41	microcontroller interface R/W and load control line input (4-wire bus mode)
SILD	42	microcontroller interface R/W and load control line input (4-wire bus mode)
STATUS	43	servo interrupt request line/decoder status register output (open-drain)
TEST3	44	test control input 3; this pin should be tied LOW
RCK	45	subcode clock input
SUB	46	P-to-W subcode bits output (3-state)
SFSY	47	subcode frame sync output (3-state)
SBSY	48	subcode block sync output (3-state)
CL11/4	49	11.2896 MHz or 4.2336 MHz (for microcontroller) clock output
VSSD2	50 ⁽¹⁾	digital ground 3
DOBM	51	bi-phase mark output (externally buffered; 3-state)
VDD1(P)	52 ⁽¹⁾	digital supply voltage 2 for periphery
CFLG	53	correction flag output (open-drain)
RA	54	radial actuator output
FO	55	focus actuator output
SL	56	sledge control output
VDD2(C)	57 ⁽¹⁾	digital supply voltage 3 for core
VSSD3	58 ⁽¹⁾	digital ground 4
MOTO1	59	motor output 1; versatile (3-state)
MOTO2	60	motor output 2; versatile (3-state)
V4	61	versatile output pin 4
V5	62	versatile output pin 5
V1	63	versatile input pin 1
LDON	64	laser drive on output (open-drain)

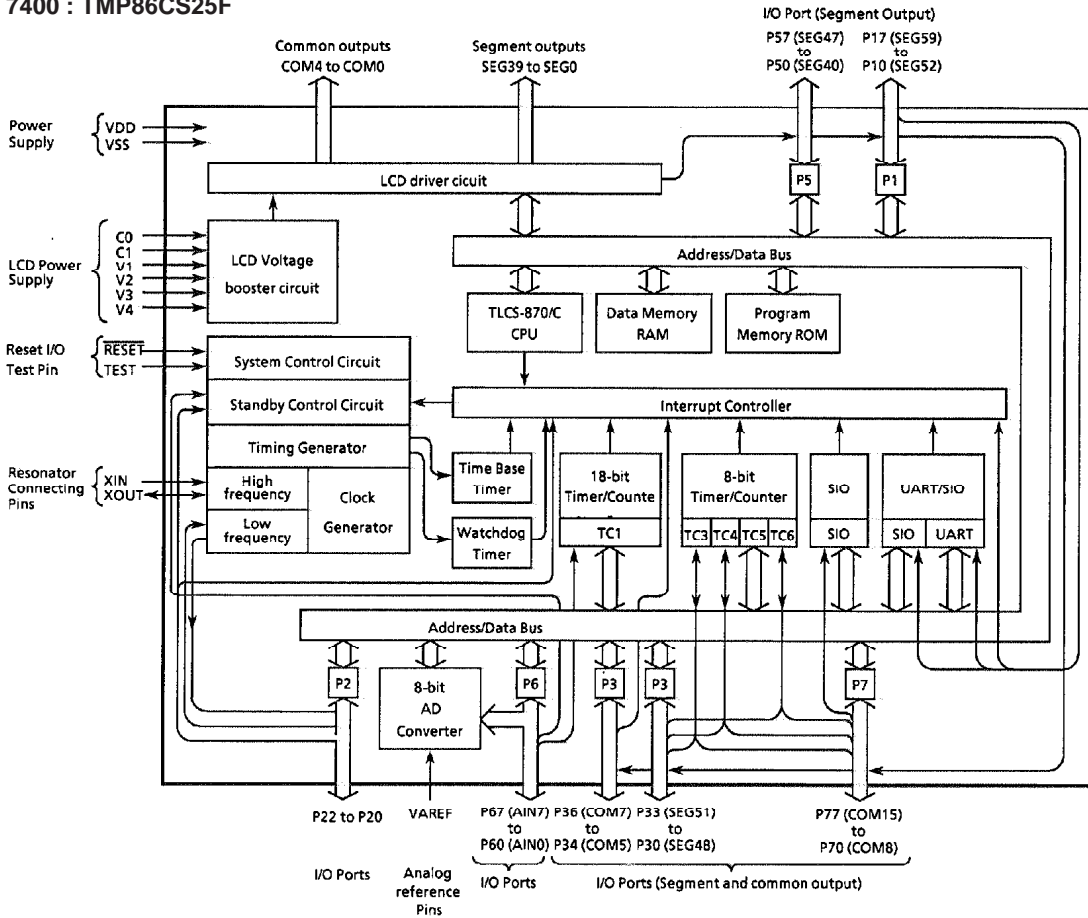
Note
 1. All supply pins must be connected to the same external power supply voltage

7250 : SC111259AFTA

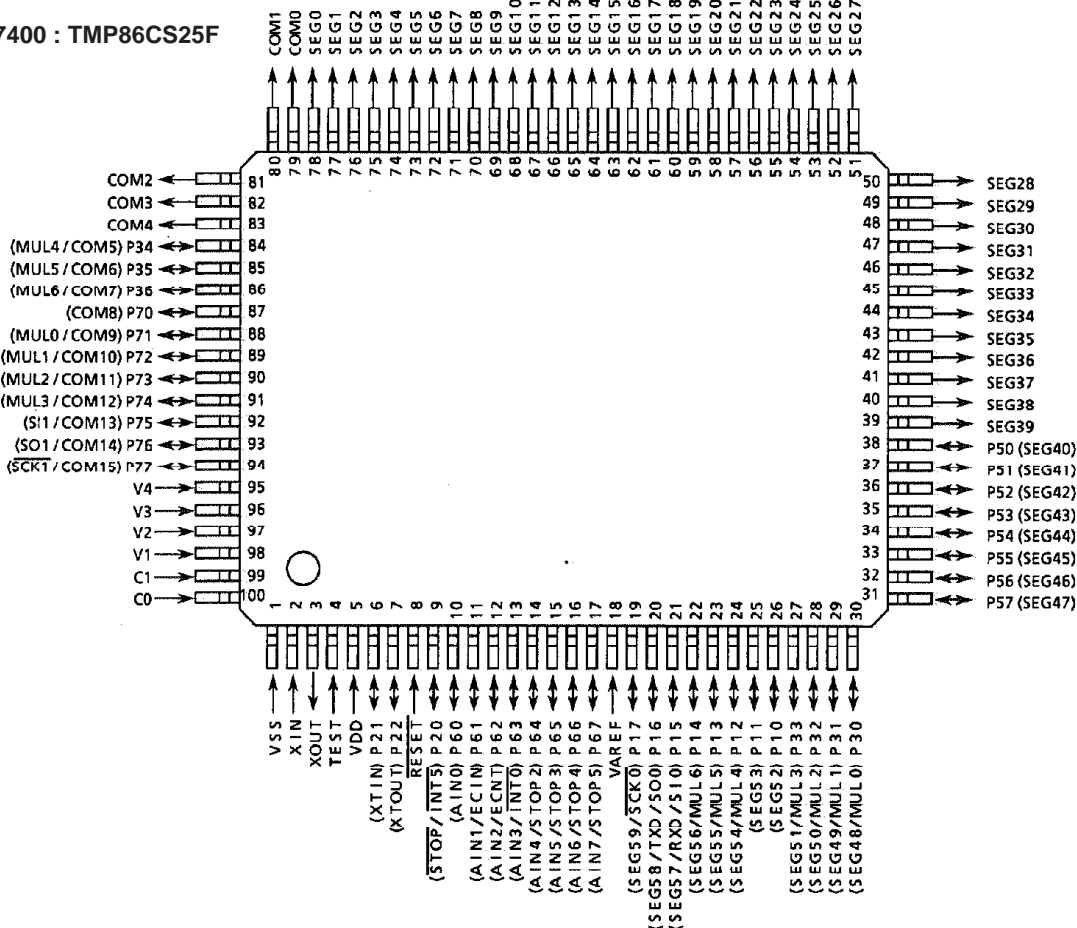


Pin#	Symbol	Pin Description
1	SLEEP	Sleep input
2	WAKE	Wake input
3	VR	Reference Voltage Input(Motor driver)
4	ERR4	Control signal input(CH4)
5	CF4	Phase correction capacitor connect (CH4)
6	CF3	Phase correction capacitor connect (CH3)
7	ERR3	Control signal input(CH3)
8	ERR2	Control signal input(CH2)
9	CF2	Phase correction capacitor connect (CH2)
10	CF1	Phase correction capacitor connect (CH1)
11	ERR1	Control signal input(CH1)
12	OUT1A	Positive drive output(CH1)
13	GND	H-bridge driver ground
14	OUT1B	Negative drive output(CH2)
15	VIN12	H-bridge driver voltage supply(CH1,CH2)
16	OUT2B	Negative drive output(CH2)
17	GND	H-bridge driver ground
18	OUT2A	Positive drive output(CH2)
19	OUT3A	Positive drive output(CH3)
20	GND	H-bridge driver ground
21	OUT3B	Negative drive output(CH3)
22	VIN34	H-bridge driver voltage supply(CH3,CH4)
23	OUT4B	Negative drive output(CH4)
24	GND	H-bridge driver ground
25	OUT4A	Positive drive output(CH4)
26	VG	Charge pump output
27	C2H	Charge pump capacitor connect
28	C1H	Charge pump capacitor connect
29	C1L	Charge pump capacitor connect
30	C2L	Charge pump capacitor connect
31	VIN	Battery voltage supply
32	RSTB	Reset block output
33	CHGSW	Transistor drive output for battery charger
34	RS	OP-Amp non-inverting input for battery charger
35	INM2	Error amplifier inverting input for battery charger
36	RF2	Error amplifier output for battery charger
37	DCIN	DC power supply from AC adaptor
38	VDET	DCIN over voltage and VIN low voltage detect putput
39	VREF	Voltage reference circuit output
40	DTC	Max duty control voltage input for power management
41	VOUT	PWM output for power management
42	VC	Power management power supply
43	CGND	Internal ground
44	RF1	OP-Amp output for power management
45	INM1	OP-Amp inverting input for power management
46	CLK	Clock input
47	OE	Output enable for motor driver
48	CHGON	Charge enable for battery charger

7400 : TMP86CS25F



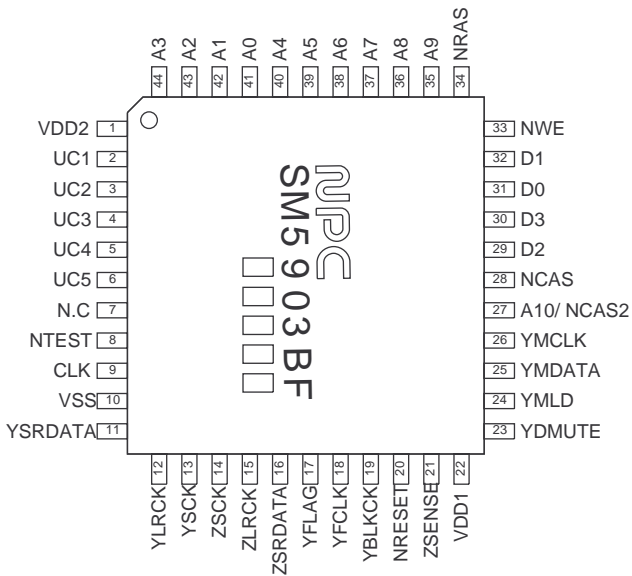
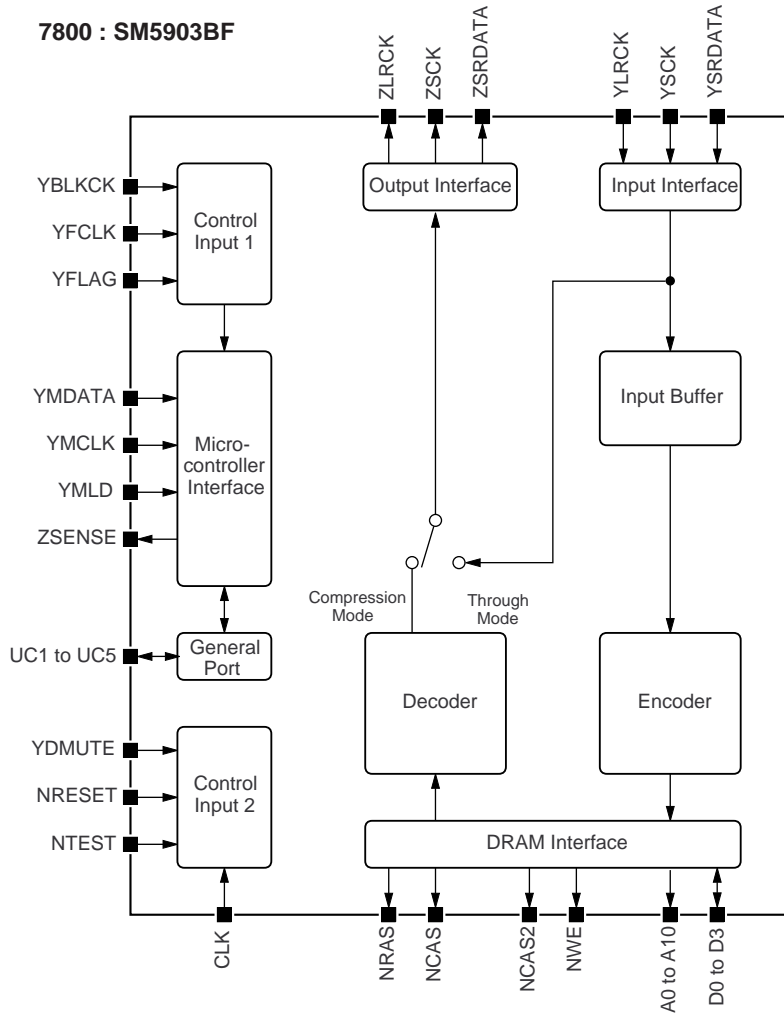
7400 : TMP86CS25F



7400 : TMP86CS25F

Pin	PORT	Signals	I/O	Description
1	VSS	GND		
2	XIN	4.233MHz X'tal		
3	XOUT			
4	TEST			TEST Pin
5	VDD	+UP		DC Supply
6	P21 (XTIN)	F435 monitor		
7	P22 (XTOUT)	MUTE	O	Headphone Mute
8	RESET	RESET	I	RESET of CPU
9	P20 (INT5/STOP)	DC_IN	I	DC Detect
10	P60 (AIN0)	+RCREF	I	Headphone Ref. supply
11	P61 (AIN1/ECIN)	SFSY	I	Frame Sync of Servo
12	P62 (AIN2/ECNT)	F433 monitor		
13	P63 (AIN3/INT0)	BATT_LEVEL	I	Battery level
14	P64 (AIN4/STOP2)	F432 monitor		
15	P65 (AIN5/STOP3)	RC	I	Headphone
16	P66 (AIN6/STOP4)	KEY2	I	Key input
17	P67 (AIN7/STOP5)	KEY1	I	Key input
18	VAREF	+AVDD		DC Supply (Analog)
19	P17 (SEG59/SCK0)	SCL	O	Serial signal to ESP/Servo
20	P16 (SEG58/TXD/SO0)	SDA1	O	Serial signal to ESP/Servo
21	P15 (SEG57/RXD/SI0)	SDA2	I	Serial signal to ESP/Servo
22	P14 (SEG56/MUL6)	SILD	O	Serial latch to Servo
23	P13 (SEG55/MUL5)	RAB	O	Read/Write of Servo
24	P12 (SEG54/MUL4)	TMS_IRQ	O	DSP Interrupt
25	P11 (SEG53)	YMLD	O	Serial latch to ESP
26	P10 (SEG52)	PORES	O	Servo RESET
27	P33 (SEG51/MUL3)	SLEEP	O	Driver Sleep mode
28	P32 (SEG50/MUL2)	DM_PWM	O	Disc Motor Drive
29	P31 (SEG49/MUL1)	S_MUTE	O	ESP MUTE
30	P30 (SEG48/MUL0)	BEEP	O	Headphone Beep
31	P57 (SEG47)	DOOR	I	Slide SW Input
32	P56 (SEG46)	HOLD	I	Slide SW Input
33	P55 (SEG45)	RESUME	I	Slide SW Input
34	P54 (SEG44)	NC		
35	P53 (SEG43)			
36	P52 (SEG42)	LF_POW	O	Headphone Power on
37	P51 (SEG41)	DBB_STEP	O	Headphone DBB step
38	P50 (SEG40)	DBB_ON	O	Headphone DBB on
39	SEG39	NC		
40	SEG38	NC		
41	SEG37	NC		
42	SEG36	NC		
43	SEG35	NC		
44	SEG34	NC		
45	SEG33	NC		
46	SEG32	NC		
47	SEG31	NC		
48	SEG30	NC		
49	SEG29	NC		
50	SEG28	NC		
51	SEG27	NC		
52	SEG26	NC		
53	SEG25	NC		
54	SEG24	NC		
55	SEG23	NC		
56	SEG22	NC		
57	SEG21	S21	O	Segment
58	SEG20	S20	O	Segment
59	SEG19	S19	O	Segment
60	SEG18	S18	O	Segment
61	SEG17	S17	O	Segment
62	SEG16	S16	O	Segment
63	SEG15	S15	O	Segment
64	SEG14	S14	O	Segment
65	SEG13	S13	O	Segment
66	SEG12	S12	O	Segment
67	SEG11	S11	O	Segment
68	SEG10	S10	O	Segment
69	SEG9	S9	O	Segment
70	SEG8	S8	O	Segment
71	SEG7	S7	O	Segment
72	SEG6	S6	O	Segment
73	SEG5	S5	O	Segment
74	SEG4	S4	O	Segment
75	SEG3	S3	O	Segment
76	SEG2	S2	O	Segment
77	SEG1	S1	O	Segment
78	SEG0	S0	O	Segment
79	COM0	C0	O	Common
80	COM1	C1	O	Common
81	COM2	C2	O	Common
82	COM3	C3	O	Common
83	COM4	NC		
84	P34 (COM5/MUL4)	NC		
85	P35 (COM6/MUL5)	NC		
86	P36 (COM7/MUL6)	NC		
87	P70 (COM8)	PWR_MGT	O	Driver Power Management
88	P71 (COM9/MUL0)	WAKE	O	Driver Wakeup mode
89	P72 (COM10/MUL1)	NPC_RESET	O	ESP RESET Output
90	P73 (COM11/MUL2)	TMS_SUP_ON	O	DSP supply control
91	P74 (COM12/MUL3)	TMS_RESET	O	DSP RESET Output
92	P75 (COM13/S11)	TMS_DATA1	I	Serial signal to DSP
93	P76 (COM14/SO1)	TMS_DATA2	O	Serial signal to DSP
94	P77 (COM15/SCK1)	TMS_CLK	O	Serial signal to DSP
95	V4	Volt4		LCD Power Supply
96	V3	Volt3		LCD Power Supply
97	V2	Volt2		LCD Power Supply
98	V1	Volt1		LCD Power Supply
99	C1	Cap1		
100	C0	Cap0		

7800 : SM5903BF



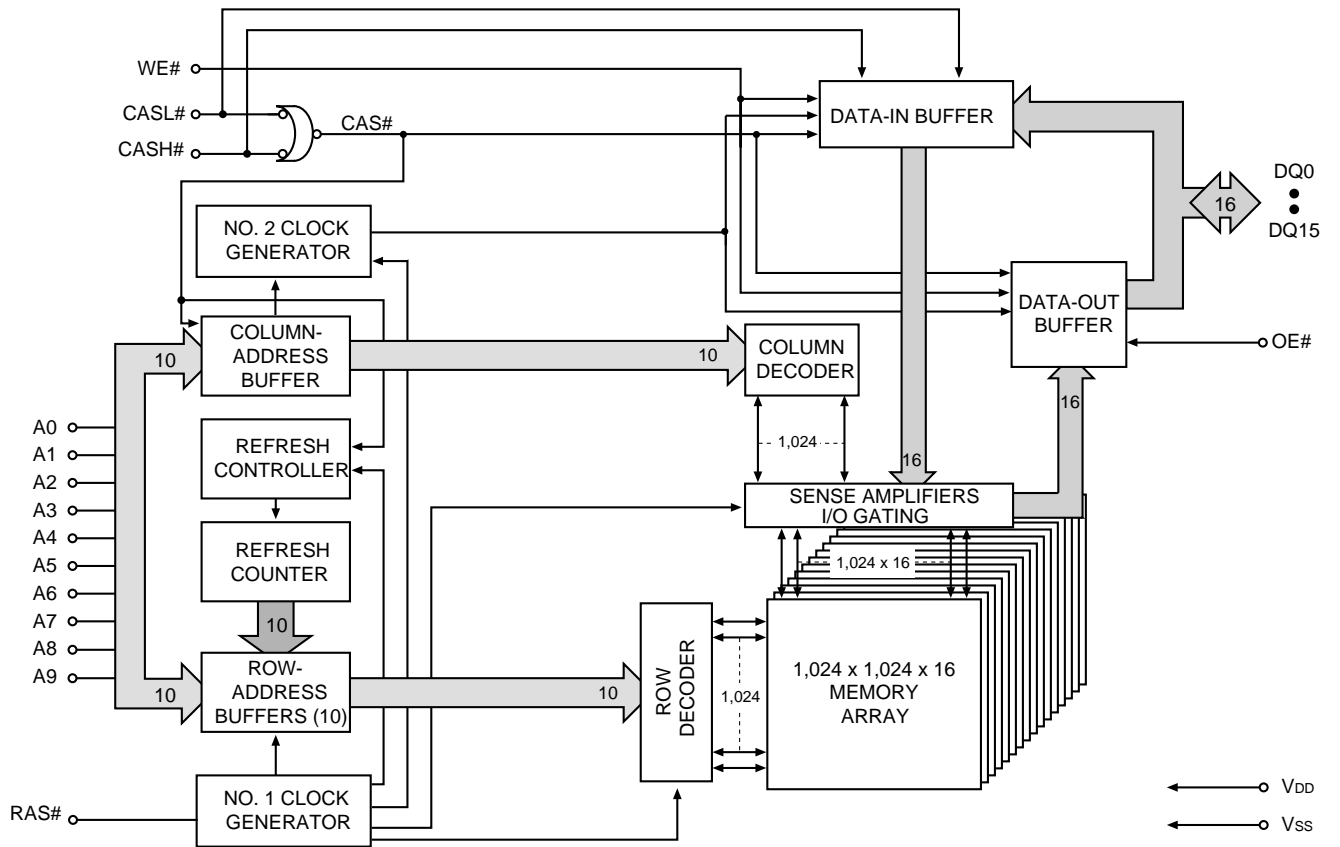
Pin number	Pin name	I/O	Function	Setting	
				H	L
1	VDD2	-	VDD supply pin		
2	UC1	Ip/O	Microcontroller interface extension I/O 1		
3	UC2	Ip/O	Microcontroller interface extension I/O 2		
4	UC3	Ip/O	Microcontroller interface extension I/O 3		
5	UC4	Ip/O	Microcontroller interface extension I/O 4		
6	UC5	Ip/O	Microcontroller interface extension I/O 5		
7	N.C	-			
8	NTEST	Ip	Test pin		Test
9	CLK	I	16.9344 MHz clock input		
10	VSS	-	Ground		
11	YSRDATA	I	Audio serial input data		
12	YLRCK	I	Audio serial input LR clock	Left channel	Right channel
13	YSCK	I	Audio serial input bit clock		
14	ZSCK	O	Audio serial output bit clock		
15	ZLRCK	O	Audio serial output LR clock	Left channel	Right channel
16	ZSRDATA	O	Audio serial output data		
17	YFLAG	I	Signal processor IC RAM overflow flag		Overflow
18	YFCLK	I	Crystal-controlled frame clock		
19	YBLKCK	I	Subcode block clock signal		
20	NRESET	I	System reset pin		Reset
21	ZSENSE	O	Microcontroller interface status output		
22	VDD1	-	VDD supply pin		
23	YDMUTE	I	Forced mute pin		Mute
24	YMLD	I	Microcontroller interface latch clock		
25	YMDATA	I	Microcontroller interface serial data		
26	YMCLK	I	Microcontroller interface shift clock		
27	A10 (NCAS2)	O	DRAM address 10 DRAM2 \overline{CAS} control (with 2 DRAMs)		
28	NCAS	O	DRAM \overline{CAS} control		
29	D2	I/O	DRAM data input/output 2		
30	D3	I/O	DRAM data input/output 3		
31	D0	I/O	DRAM data input/output 0		
32	D1	I/O	DRAM data input/output 1		
33	NWE	O	DRAM \overline{WE} control		
34	NRAS	O	DRAM \overline{RAS} control		
35	A9	O	DRAM address 9		
36	A8	O	DRAM address 8		
37	A7	O	DRAM address 7		
38	A6	O	DRAM address 6		
39	A5	O	DRAM address 5		
40	A4	O	DRAM address 4		
41	A0	O	DRAM address 0		
42	A1	O	DRAM address 1		
43	A2	O	DRAM address 2		
44	A3	O	DRAM address 3		

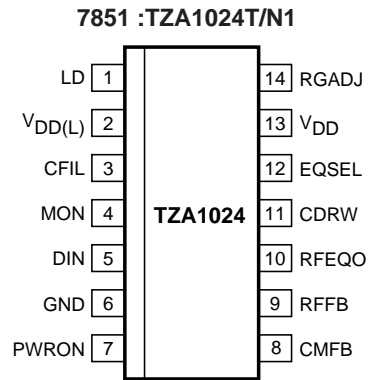
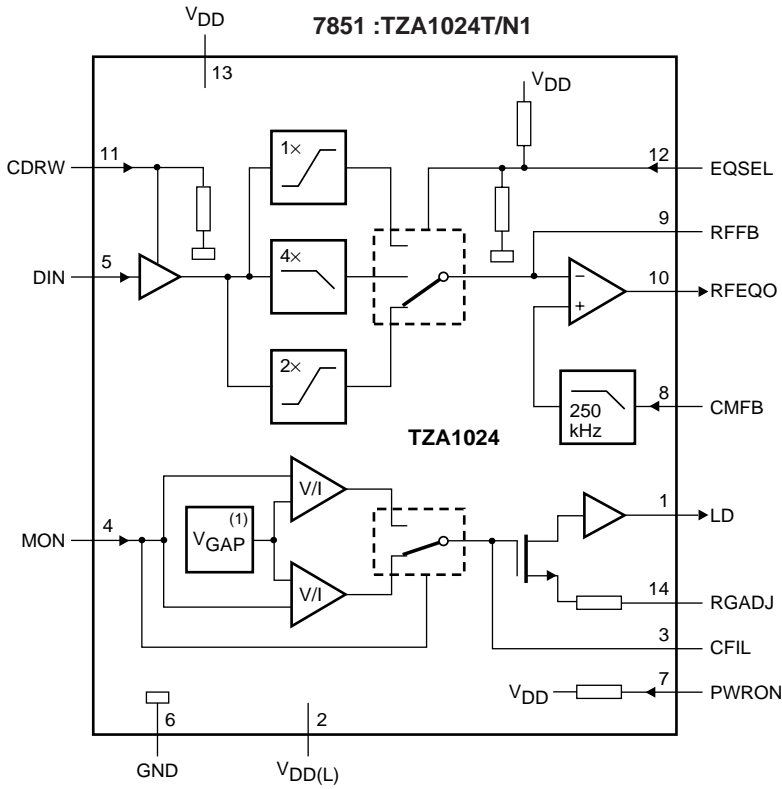
Ip : Input pin with pull-up resistor Ip/O : Input/Output pin (With pull-up resistor when in input mode)

7481 : MT4LC1M16E5TG-6

Vcc	1	42	Vss
DQ0	2	41	DQ15
DQ1	3	40	DQ14
DQ2	4	39	DQ13
DQ3	5	38	DQ12
Vcc	6	37	Vss
DQ4	7	36	DQ11
DQ5	8	35	DQ10
DQ6	9	34	DQ9
DQ7	10	33	DQ8
NC	11	32	NC
NC	12	31	CASL#
WE#	13	30	CASH#
RAS#	14	29	OE#
NC	15	28	A9
NC	16	27	A8
A0	17	26	A7
A1	18	25	A6
A2	19	24	A5
A3	20	23	A4
Vcc	21	22	Vss

NOTE:
The "#" symbol indicates signal is active LOW.

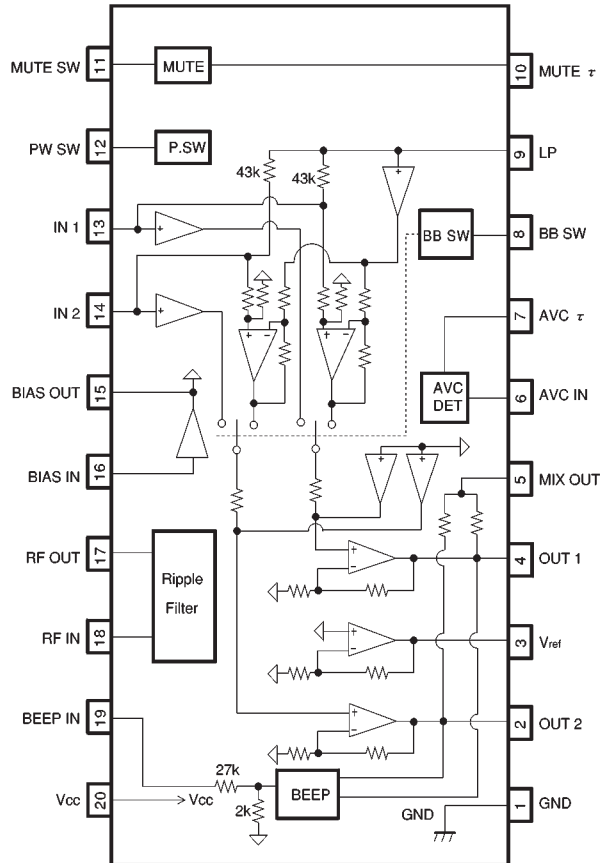




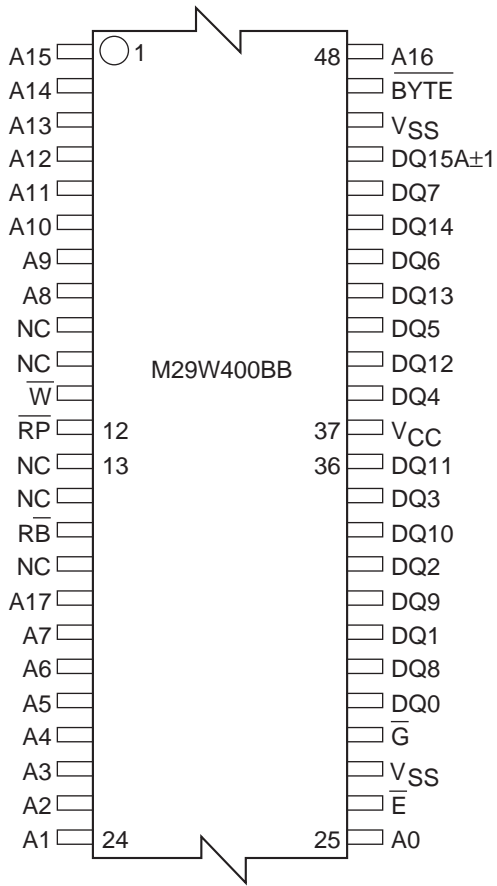
7851 :TZA1024T/N1

SYMBOL	PIN	DESCRIPTION
LD	1	current output to laser diode
V _{DD(L)}	2	laser supply voltage
CFIL	3	external filter capacitor
MON	4	laser monitor diode input
DIN	5	central diode input
GND	6	ground
PWRON	7	power-on select input
CMFB	8	common mode feedback voltage input
RFFB	9	external RF feedback resistor
RFEQO	10	RF amplifier output
CDRW	11	gain select input for CD-A/V, CD-R/W
EQSEL	12	equalizer/speed select input (n = 1, 2 or 4)
V _{DD}	13	supply voltage
RGADJ	14	external laser supply gain adjust resistor

7350 : BA3574BFS



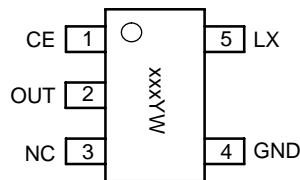
7482 : M29W400BB70N6T



7482 : M29W400BB70N6T

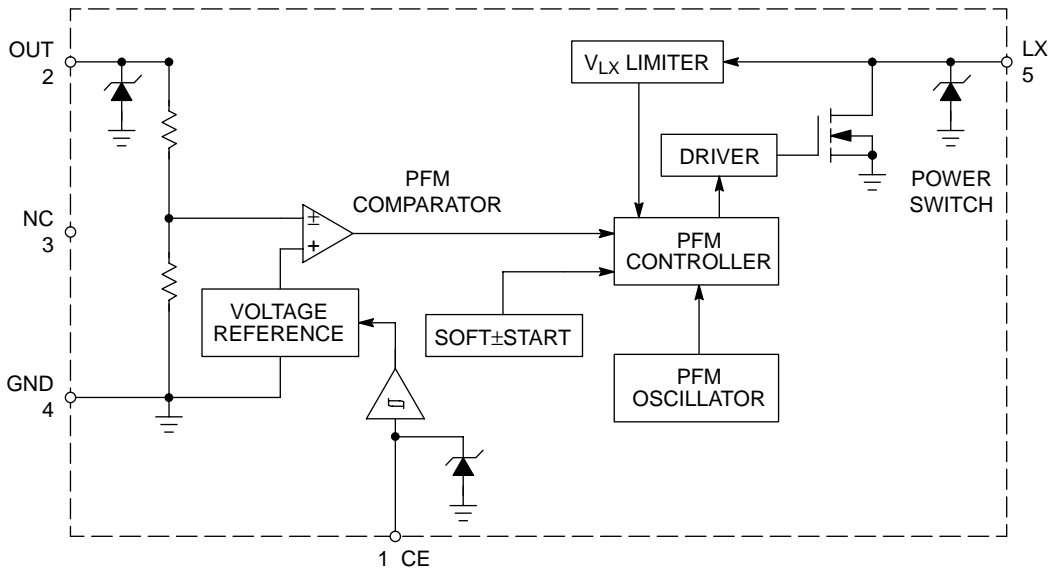
A0-A17	Address Inputs
DQ0-DQ7	Data Inputs/Outputs
DQ8-DQ1	Data Inputs/Outputs
DQ15A±1	Data Input/Output or Address Input
\bar{E}	Chip Enable
\bar{G}	Output Enable
\bar{W}	Write Enable
\bar{RP}	Reset/Block Temporary Unprotect
\bar{RB}	Ready/Busy Output
\bar{BYTE}	Byte/Word Organization Select
Vcc	Supply voltage
Vss	Ground
NC	Not Connected Internally

7258,7259 : NCP1402SN

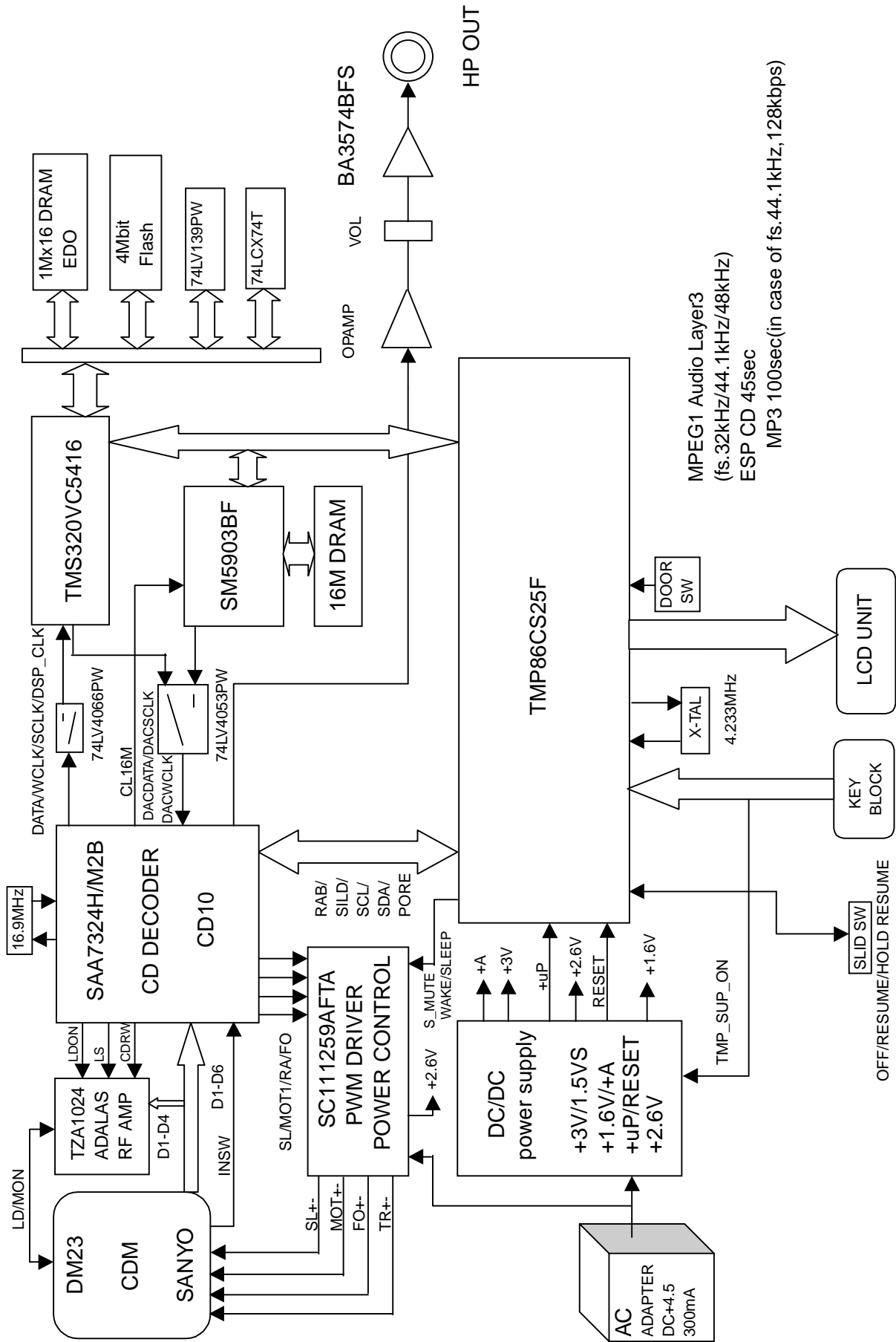


xxx = Marking
 Y = Year
 W = Work Week

7258,7259 : NCP1402SN

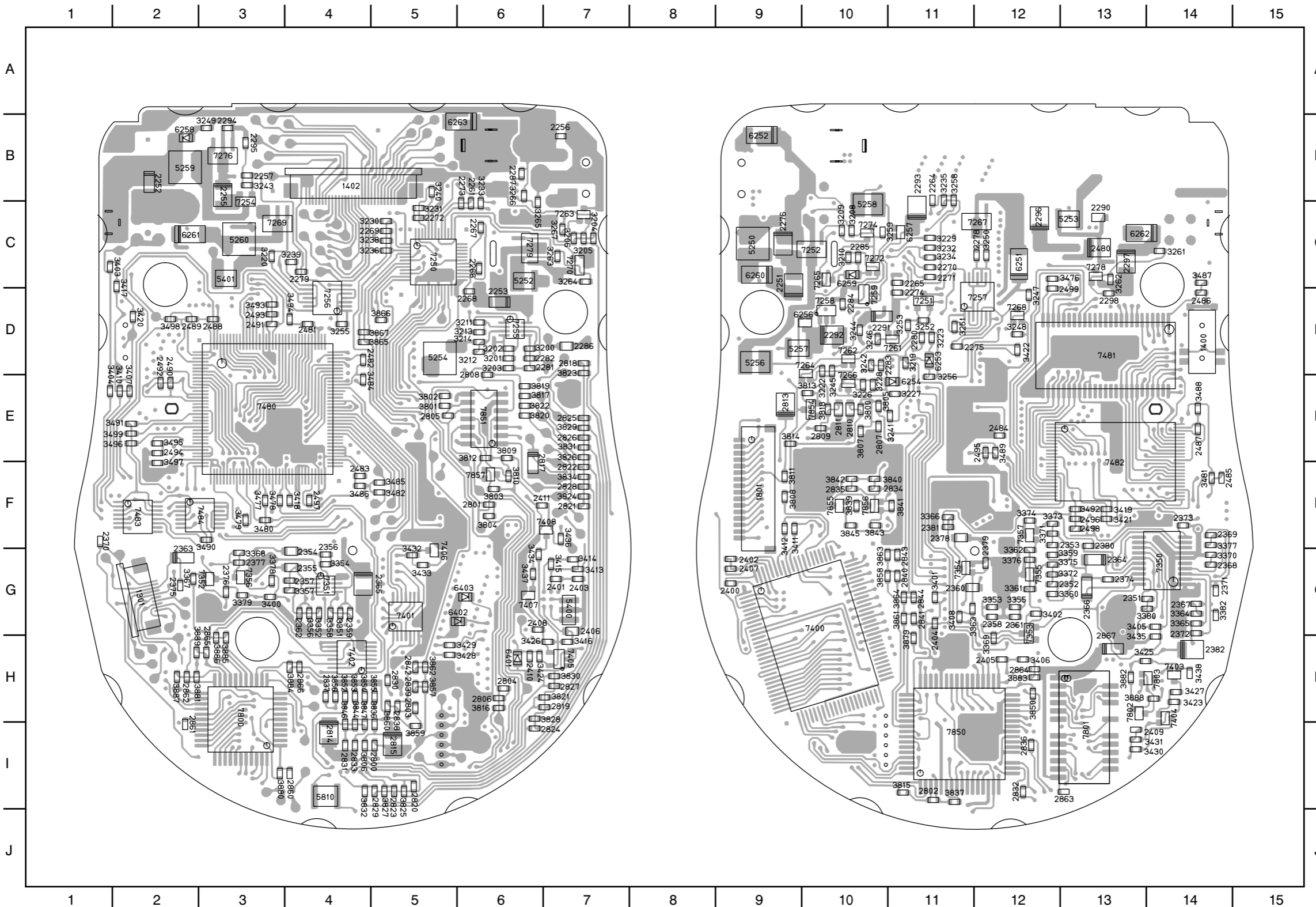


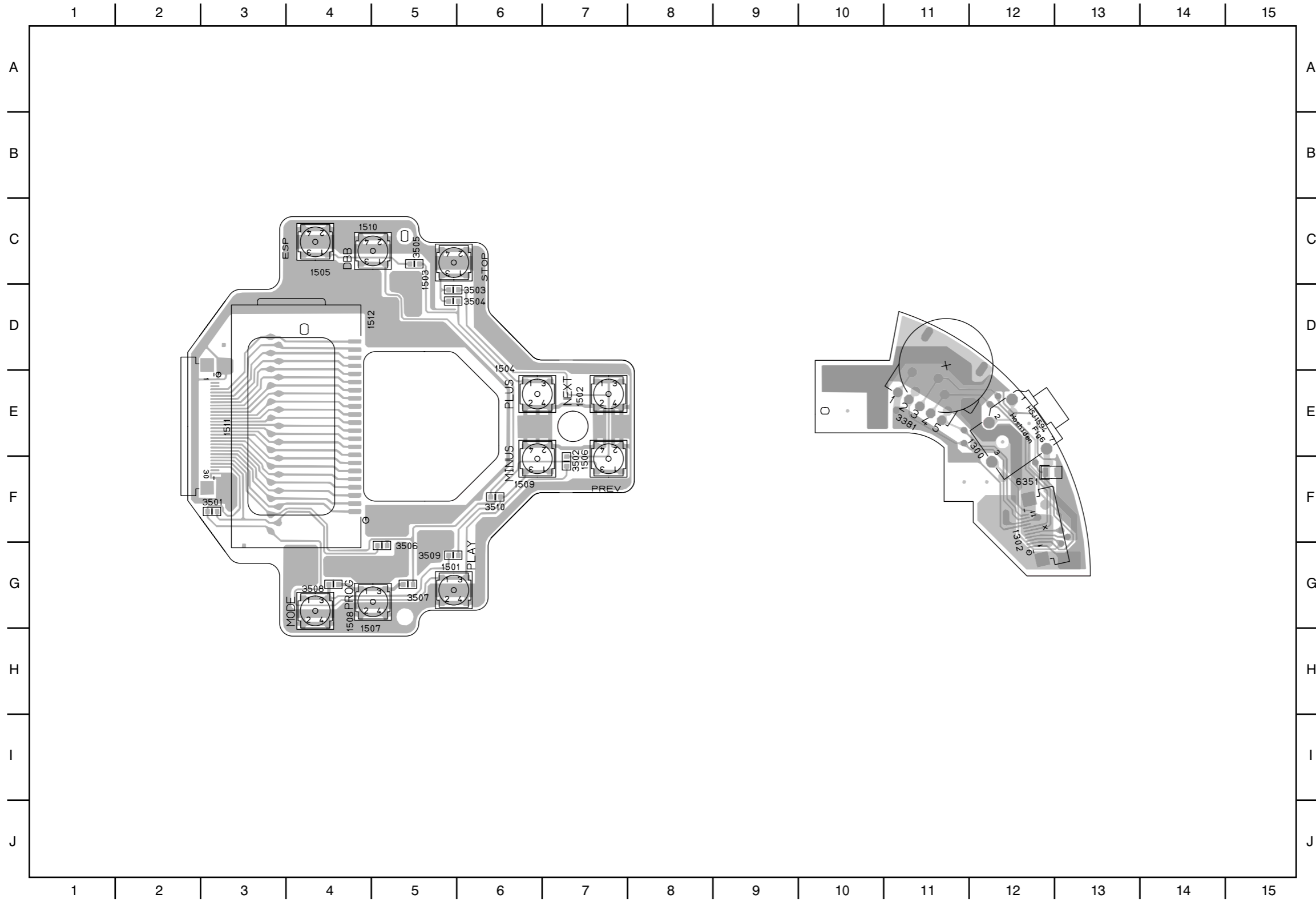
BLOCK DIAGRAM



PRINTED CIRCUIT DIAGRAM

1301 G2	2271 C11	2292 D10	2362 G4	2380 F13	2483 F4	2801 F6	2821 F7	2839 H5	3204 C7	3230 C5	3250 C12	3354 G4	3372 G13	3408 G11	3427 H14	3482 F5	3801 E5	3819 E6	3840 F10	3961 G11	5250 C9	6258 B2	7261 D11	7353 G12	7484 F3
1400 D14	2272 C5	2293 B11	2363 G2	2381 F11	2484 E12	2802 I11	2822 F7	2840 G11	3205 C7	3231 C5	3251 D11	3355 G12	3373 F12	3410 E2	3428 H6	3484 E4	3802 E5	3820 E6	3841 F11	3962 H5	5252 C6	6259 C10	7262 D11	7354 G11	7800 H3
1402 B4	2273 B6	2294 B3	2364 G13	2382 H14	2485 F14	2803 H5	2823 I5	2841 G11	3206 C7	3232 C11	3252 D11	3356 G4	3374 F12	3411 F9	3429 H6	3485 F5	3803 F6	3821 H7	3842 F10	3963 G10	5253 C13	6260 C9	7263 C7	7355 G12	7801 I3
1801 F9	2274 D11	2295 B3	2365 G5	2400 G9	2486 D14	2804 H6	2824 I6	2842 H5	3208 C10	3233 B6	3253 D11	3357 G4	3375 G13	3412 F9	3430 I13	3486 F4	3804 F6	3822 E6	3843 F10	3964 G11	5254 D5	6261 C2	7264 D10	7356 G3	7802 H13
2251 C9	2275 D11	2296 C12	2366 G13	2401 G7	2487 E14	2805 E5	2825 E7	2843 G11	3209 C10	3234 C11	3254 D4	3358 G4	3376 G12	3413 G7	3431 I13	3487 C14	3805 E10	3823 D7	3844 H4	3965 D5	5256 D9	6262 C13	7265 C10	7357 F12	7803 H14
2252 B2	2276 C9	2297 C13	2367 G14	2402 G9	2488 D3	2806 H6	2826 E7	2844 G11	3210 C10	3235 B11	3255 E11	3359 G13	3377 F14	3414 G7	3432 G5	3488 E14	3806 I4	3824 F7	3845 F10	3966 D5	5257 D9	6263 B5	7266 E10	7400 G10	7850 I11
2253 D6	2278 C12	2298 D13	2368 G14	2403 G7	2489 D2	2807 E10	2827 H7	2846 G11	3211 D6	3236 C5	3256 B11	3360 G13	3378 G3	3415 G7	3433 G5	3489 F12	3807 E10	3825 I5	3846 H4	3967 D5	5258 C10	6401 H6	7267 C11	7401 G5	7851 E6
2255 B3	2279 C4	2351 G13	2369 F14	2404 G11	2490 D2	2808 E6	2828 F7	2861 I2	3212 D6	3238 C5	3259 C10	3361 G12	3379 G3	3416 H7	3434 G6	3490 F3	3808 F9	3826 E7	3847 H4	3879 H11	5259 B2	6402 G5	7268 D12	7402 H4	7854 E10
2256 B7	2280 D11	2352 G13	2370 F1	2405 H12	2491 D3	2809 E10	2829 I5	2862 H2	3213 D6	3239 C4	3261 C14	3362 G12	3380 G13	3417 C2	3435 H13	3491 E2	3809 E6	3827 I5	3850 H12	3880 I3	5260 C3	6403 G6	7269 C3	7403 H4	7855 F10
2257 B3	2281 D6	2353 F13	2371 G14	2406 G7	2492 D2	2810 E10	2830 H5	2863 I3	3214 D6	3240 B5	3262 C13	3363 G11	3382 G14	3418 F4	3436 F7	3492 F3	3810 F6	3828 H6	3852 H4	3881 H2	5400 G7	7250 C5	7270 C7	7404 H14	7856 F10
2261 B6	2282 D6	2354 G4	2372 G14	2407 G9	2493 D3	2811 E10	2831 I4	2864 H12	3219 D11	3241 E11	3263 C7	3364 G14	3400 G3	3419 F13	3437 G6	3493 D3	3811 F9	3829 E7	3853 H4	3882 H13	5401 C3	7251 D11	7272 C10	7405 H7	7857 F6
2264 B11	2283 D10	2355 G4	2373 F14	2408 G6	2494 E2	2813 E9	2832 I2	2865 H3	3220 C3	3242 D10	3264 C7	3365 G14	3401 G11	3420 D2	3438 H14	3494 D4	3812 E6	3830 H7	3854 H4	3883 H12	5810 I4	7252 C10	7274 C10	7406 G5	
2265 C11	2284 D10	2356 G4	2374 G13	2409 I3	2495 E12	2814 I4	2833 I4	2866 H4	3222 E10	3243 B3	3265 C6	3366 F11	3402 G12	3421 F13	3476 C13	3495 E2	3813 E10	3831 E7	3855 H5	3884 H4	6251 C12	7254 B3	7276 B3	7407 G6	
2266 C6	2285 C10	2357 G4	2375 G2	2410 H6	2496 F13	2815 I5	2834 F10	2867 H13	3223 D11	3244 D10	3266 B6	3367 G2	3403 C2	3422 D12	3477 F3	3496 E2	3814 E9	3832 I4	3856 H4	3885 H3	6252 B9	7255 D6	7278 C13	7408 F6	
2267 C6	2286 D7	2358 G12	2376 G3	2411 F6	2497 F4	2817 E6	2835 F10	2868 D6	3226 E10	3245 E10	3267 C7	3368 G3	3404 E2	3423 H14	3478 F3	3497 F2	3815 I11	3834 F7	3857 H5	3886 H3	6253 D11	7256 D4	7279 C6	7480 E3	
2268 D6	2287 B6	2359 G4	2377 G3	2480 C13	2498 F13	2818 D7	2836 I2	2869 I2	3227 E11	3246 D10	3268 I1	3369 H12	3405 G13	3424 H6	3479 F3	3498 D2	3816 H6	3836 H5	3858 G10	3887 H2	6254 E11	7257 D11	7350 G14	7481 D13	
2269 C5	2290 C13	2360 G11	2378 F11	2481 D4	2499 D13	2819 H7	2837 H4	2869 D6	3228 E10	3247 D12	3269 G4	3370 G14	3406 H12	3425 H13	3480 F3	3499 E2	3817 E6	3837 I11	3859 I5	3888 H13	6256 D10	7258 D10	7351 G4	7482 F13	
2270 C11	2291 D10	2361 G12	2379 G12	2482 D4	2800 I5	2820 I5	2838 H5	2869 D6	3229 C11	3248 D12	3269 G4	3371 F12	3407 E2	3426 H6	3481 F14	3800 E10	3818 E10	3839 F10	3860 H5	3889 H2	6257 C11	7259 D10	7352 G3	7483 F2	

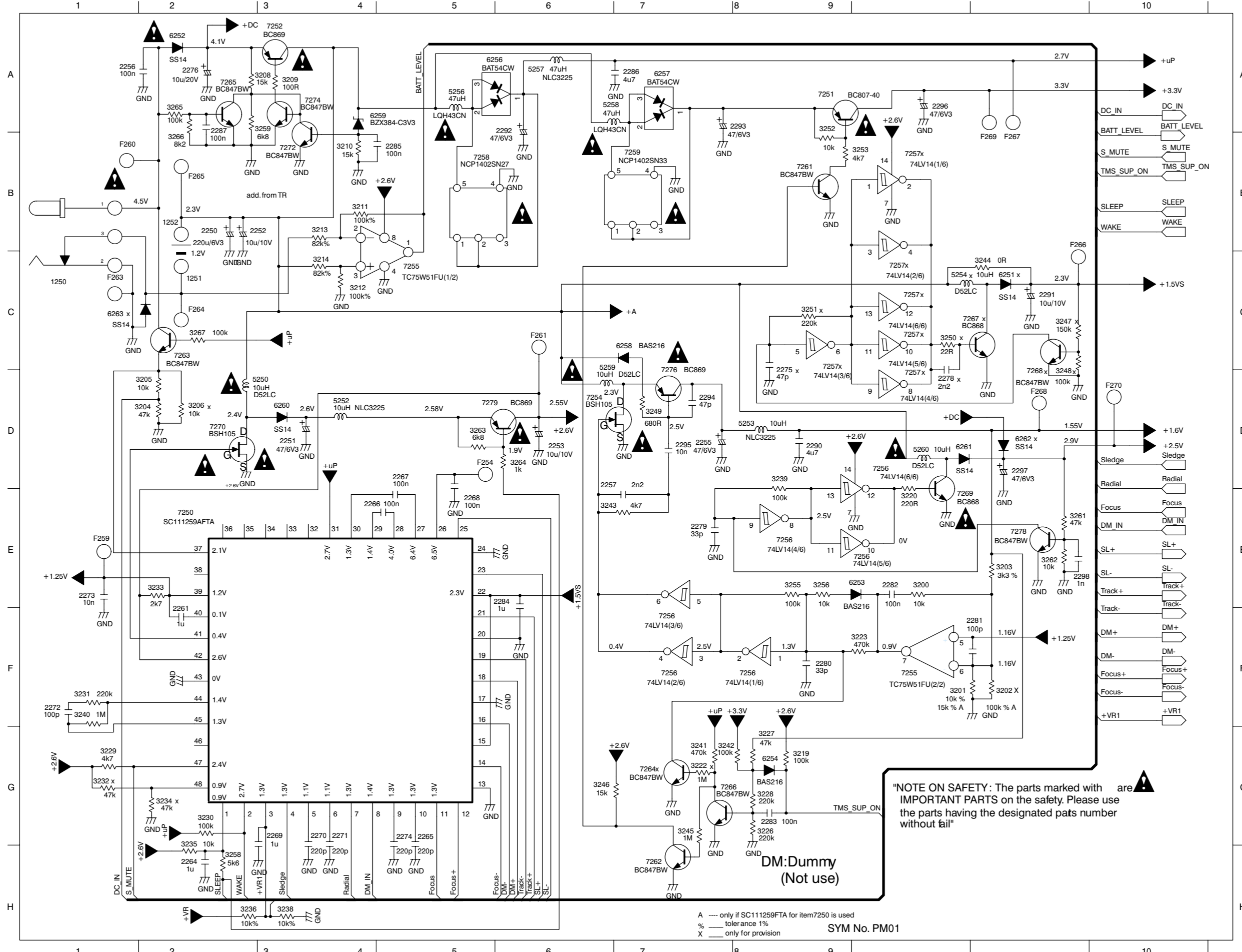




- 1300 E12
- 1302 F12
- 1501 G5
- 1502 E7
- 1503 C5
- 1504 E6
- 1505 C4
- 1506 E7
- 1507 G4
- 1508 G4
- 1509 F6
- 1510 C4
- 1511 E3
- 1512 D4
- 3501 F3
- 3502 F7
- 3503 D6
- 3504 D6
- 3505 C5
- 3506 G5
- 3507 G5
- 3508 G4
- 3509 G5
- 3510 F6
- 3381 E11
- 6351 F12

CIRCUIT DIAGRAM

Power Block



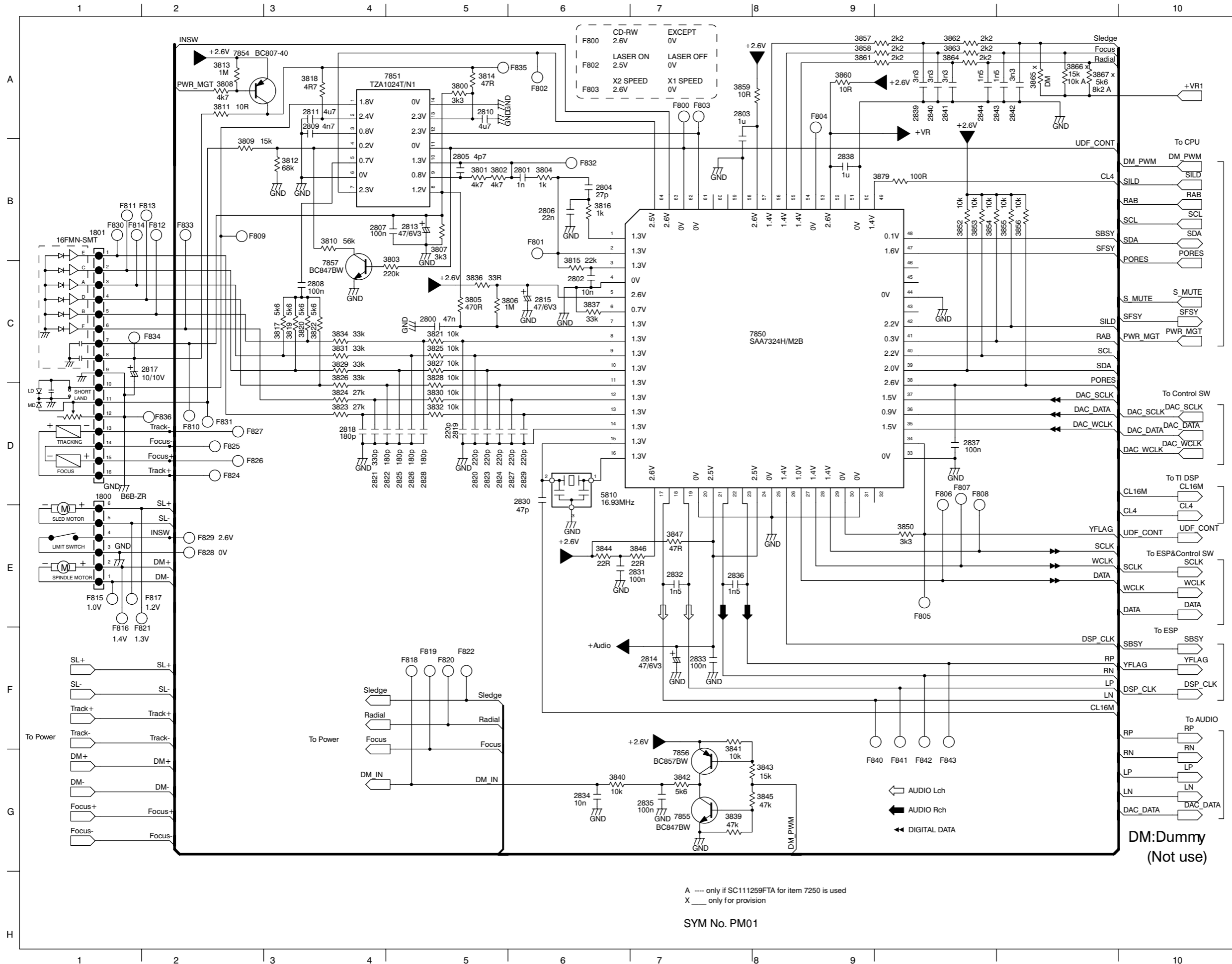
1250	C1	5250	D2
1251	C2	5252	D3
1252	B2	5253	D7
2250	B2	5254	C8
2251	D3	5256	A4
2252	B2	5257	A5
2253	D5	5258	A5
2255	D6	5259	C5
2256	A1	5260	D8
2257	E5	6251	C9
2261	F2	6252	A2
2264	H2	6253	E8
2265	G4	6254	G7
2266	E4	6256	A4
2267	D4	6257	A6
2268	E4	6258	C6
2269	G3	6259	A3
2270	G3	6260	D3
2271	G3	6261	D8
2272	F1	6262	D9
2273	E1	6263	C1
2274	G4	7250	E2
2275	C7	7251	A7
2276	A2	7252	A3
2278	D8	7254	D5
2279	E6	7255 1/2	C4
2280	F7	7255 2/2	F8
2281	F9	7256 1/6	F7
2282	E8	7256 2/6	F6
2283	G7	7256 3/6	F6
2284	E4	7256 4/6	E7
2285	B4	7256 5/6	E8
2286	A6	7256 6/6	D8
2287	A2	7257 1/6	B8
2290	D7	7257 2/6	C8
2291	C9	7257 3/6	C7
2292	A5	7257 4/6	D8
2293	A6	7257 5/6	C8
2294	D6	7257 6/6	C8
2295	D6	7258	B4
2296	A8	7259	B6
2297	D9	7261	B7
2298	E9	7262	H6
3200	E8	7263	C2
3201	F8	7264	G6
3202	F9	7265	A2
3203	E9	7266	G6
3204	D2	7267	C8
3205	D2	7268	C9
3206	D2	7269	E8
3208	A2	7270	D2
3209	A3	7272	B3
3210	B3	7274	A3
3211	B3	7276	D6
3212	C3	7278	E9
3213	B3	7279	D4
3214	C3	F254	D4
3219	G7	F259	E1
3220	E8	F260	B1
3222	G6	F261	C5
3223	F8	F263	C1
3226	G7	F264	C2
3227	G7	F265	B2
3228	G7	F266	B9
3229	G1	F267	B9
3230	G2	F268	D9
3231	F1	F269	B9
3232	E1	F270	D10
3234	G2		
3235	H2		
3236	H2		
3238	H3		
3239	D7		
3240	F1		
3241	G6		
3242	G6		
3243	E5		
3244	C9		
3245	G6		
3246	G5		
3247	C9		
3248	C9		
3249	D6		
3250	C8		
3251	C7		
3252	A7		
3253	B8		
3255	E7		
3256	E7		
3258	H2		
3259	A2		
3261	E9		
3262	E9		
3263	D4		
3264	D5		
3265	A2		
3266	B2		
3267	C2		

"NOTE ON SAFETY: The parts marked with are IMPORTANT PARTS on the safety. Please use the parts having the designated parts number without fail"

A --- only if SC111259FTA for item7250 is used
 % --- tolerance 1%
 X --- only for provision
 SYM No. PM01

DM:Dummy
(Not use)

CD Block



1800	D1	F800	A6
1801	B1	F801	B5
2800	C4	F802	A5
2801	B5	F803	A6
2802	C5	F804	A7
2803	A6	F805	E8
2804	B5	F806	D8
2805	B4	F807	D8
2806	B5	F808	D8
2807	B3	F809	B2
2808	C3	F810	D2
2809	A3	F811	B1
2810	A4	F812	B2
2811	A3	F813	B1
2813	B4	F814	B1
2814	F6	F815	E1
2815	C5	F816	F1
2817	C2	F817	E2
2818	D3	F818	F4
2819	D4	F819	F4
2820	D4	F820	F4
2821	D3	F821	F2
2822	D4	F822	F4
2823	D4	F823	D2
2824	D4	F824	D2
2825	D4	F825	D2
2826	D4	F827	D2
2827	D5	F828	E2
2828	D4	F829	E2
2829	D5	F830	B1
2830	D5	F831	D2
2831	E6	F832	B5
2832	E6	F833	B2
2833	F6	F834	C2
2834	G5	F835	A5
2835	G6	F836	D2
2836	E6	F840	G7
2837	D8	F841	G8
2838	B7	F842	G8
2839	A8	F843	G8

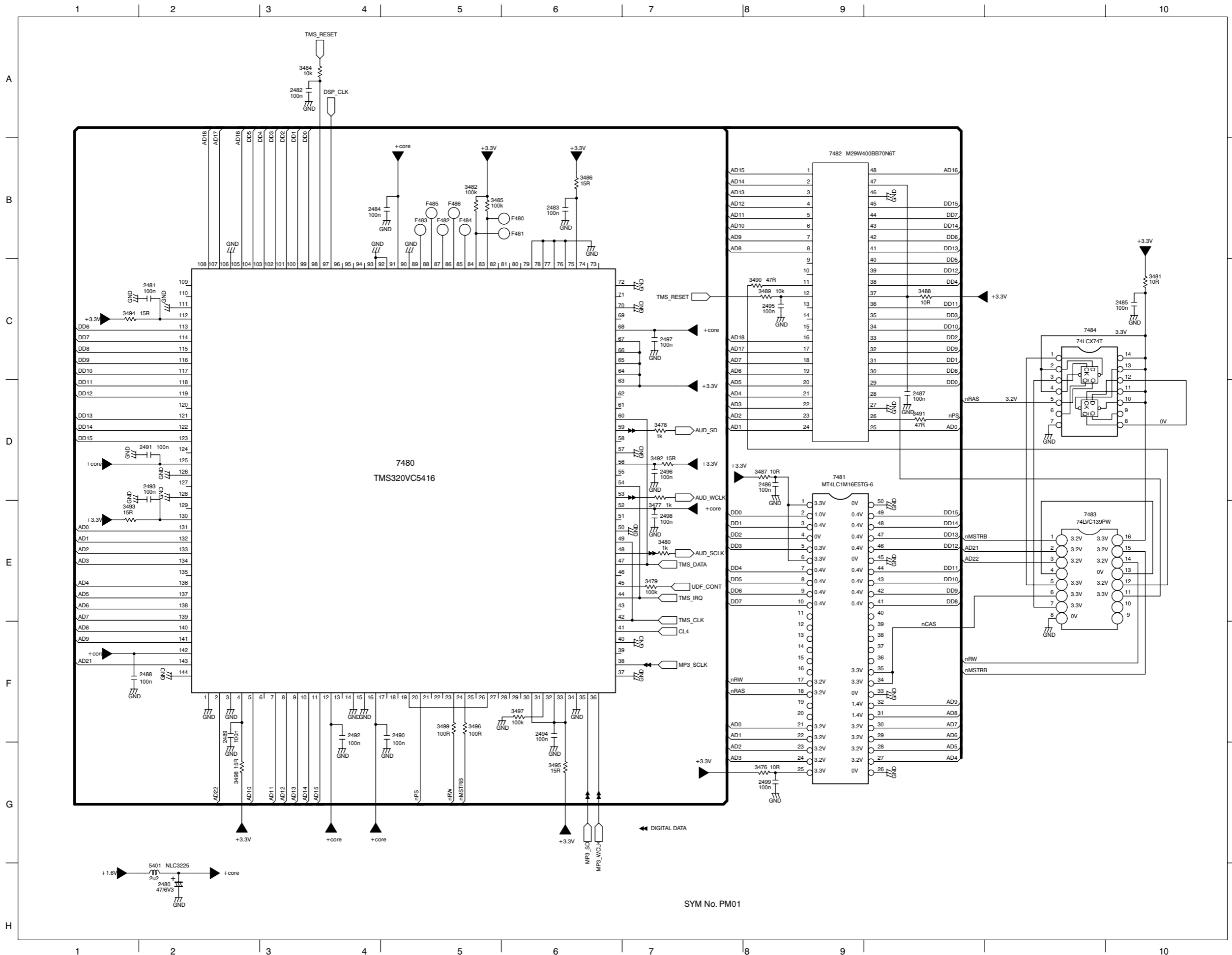
A ---- only if SC111259FTA for item 7250 is used
 X ___ only for provision

SYM No. PM01

DM: Dummy
(Not use)

◀ AUDIO Lch
 ▶ AUDIO Rch
 ◀◀ DIGITAL DATA

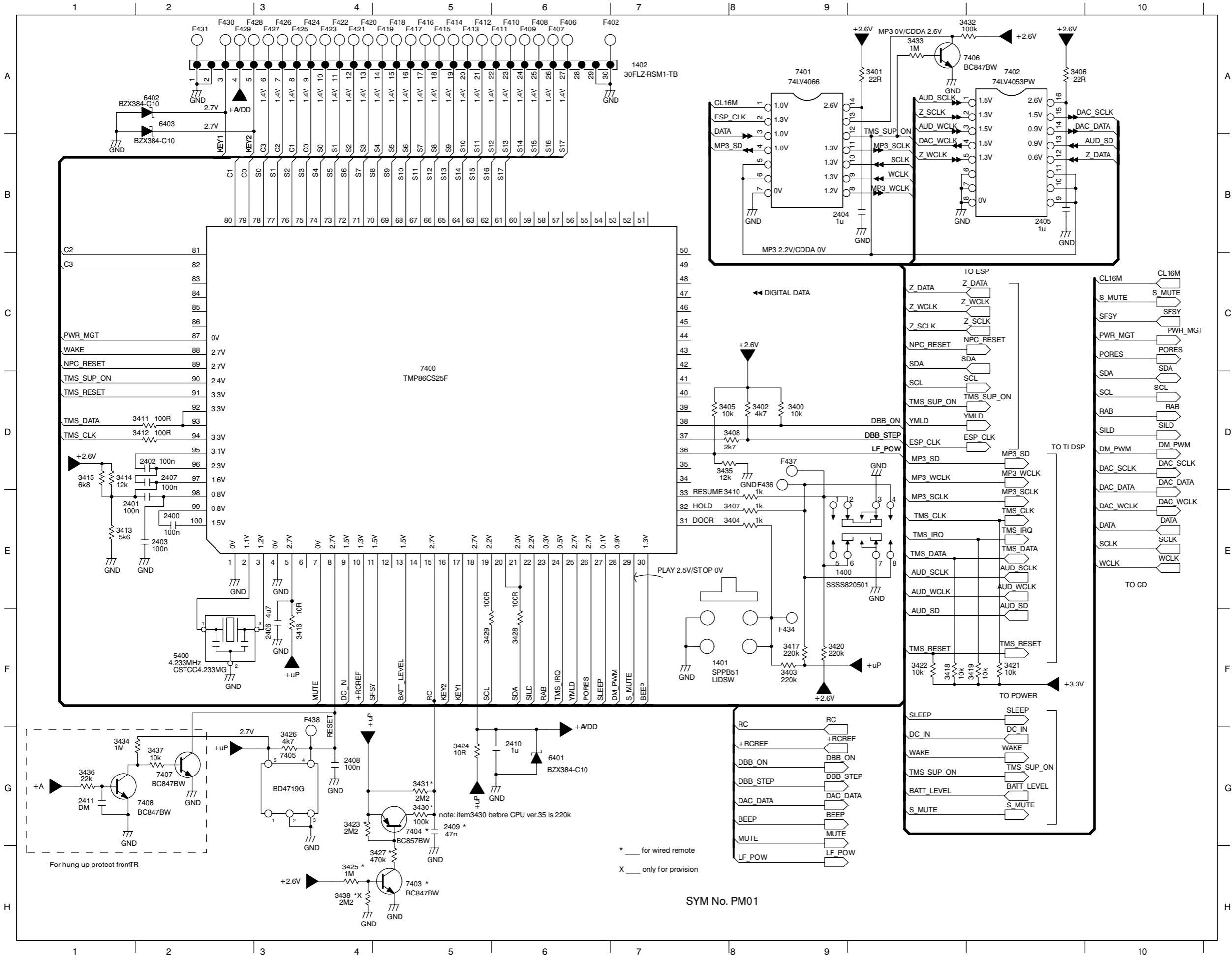
CD-ROM Block



- 2480 H2
- 2481 C2
- 2482 A3
- 2483 B5
- 2484 B3
- 2485 C10
- 2486 D7
- 2487 D8
- 2488 F1
- 2489 F2
- 2490 F4
- 2491 D2
- 2492 F3
- 2493 D2
- 2494 F5
- 2495 C7
- 2496 D6
- 2497 C6
- 2498 E6
- 2499 G7
- 3476 G7
- 3477 E6
- 3478 D6
- 3479 E6
- 3480 E6
- 3481 C10
- 3482 B4
- 3484 A3
- 3485 B4
- 3486 B5
- 3487 D7
- 3488 C8
- 3489 C7
- 3490 D8
- 3491 D8
- 3492 D6
- 3493 E1
- 3494 C1
- 3495 G5
- 3496 F4
- 3497 F5
- 5401 H2
- 7480 D4
- 7481 D7
- 7482 B7
- 7483 E9
- 7484 C9
- F480 B5
- F481 B5
- F482 B4
- F483 B4
- F484 B4
- F485 B4
- F486 B4

SYM No. PM01

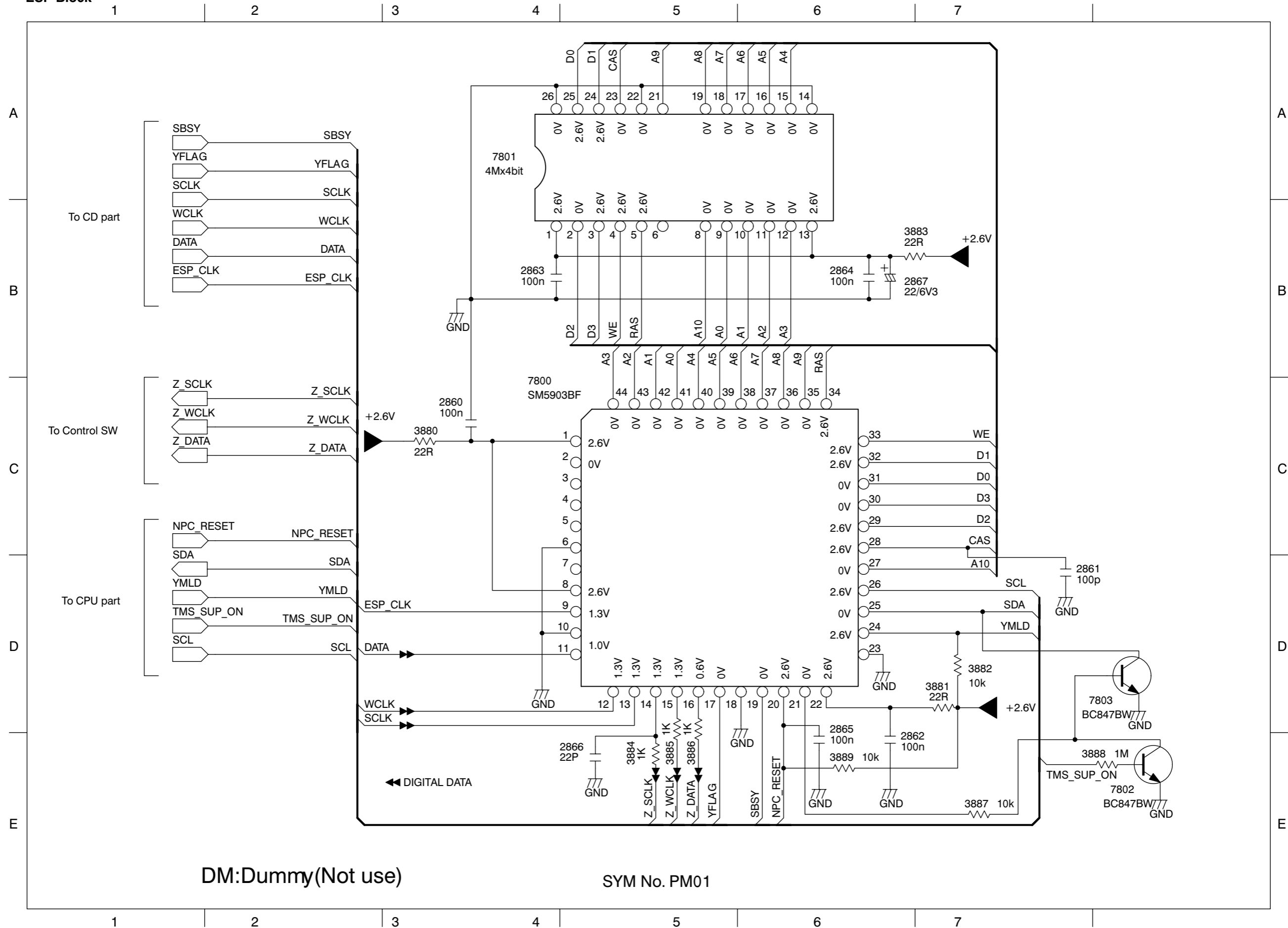
CPU Block



- 1400 E7
- 1401 F6
- 1402 A6
- 2400 E2
- 2401 E1
- 2402 D2
- 2403 E2
- 2404 B7
- 2405 B9
- 2406 F3
- 2407 D2
- 2408 G3
- 2409 G4
- 2410 G5
- 2411 G1
- 3400 D7
- 3401 A8
- 3402 D7
- 3403 F7
- 3404 E7
- 3405 D6
- 3406 A9
- 3407 E7
- 3408 D6
- 3410 E7
- 3411 D1
- 3412 D1
- 3413 E1
- 3414 D1
- 3415 D1
- 3416 F3
- 3417 F7
- 3418 F8
- 3419 F7
- 3420 F7
- 3421 F9
- 3422 F8
- 3423 G3
- 3424 G4
- 3425 H3
- 3426 G3
- 3427 H4
- 3428 F5
- 3429 F5
- 3430 G4
- 3431 G4
- 3432 A8
- 3433 A8
- 3434 G1
- 3435 D6
- 3436 G1
- 3437 G2
- 3438 H3
- 5400 F2
- 6401 G5
- 6402 A2
- 6403 A2
- 7400 C4
- 7401 A7
- 7402 A9
- 7403 H4
- 7404 G4
- 7405 G3
- 7406 A8
- 7407 G2
- 7408 G2
- F402 A5
- F406 A5
- F407 A5
- F408 A5
- F409 A5
- F410 A5
- F411 A5
- F412 A4
- F413 A4
- F414 A4
- F415 A4
- F417 A4
- F418 A4
- F419 A4
- F420 A3
- F421 A3
- F422 A3
- F423 A3
- F424 A3
- F425 A3
- F426 A3
- F427 A3
- F428 A2
- F429 A2
- F430 A2
- F431 A2
- F434 F7
- F436 D7
- F437 D7
- F438 F3

* ___ for wired remote
 X ___ only for provision

ESP Block

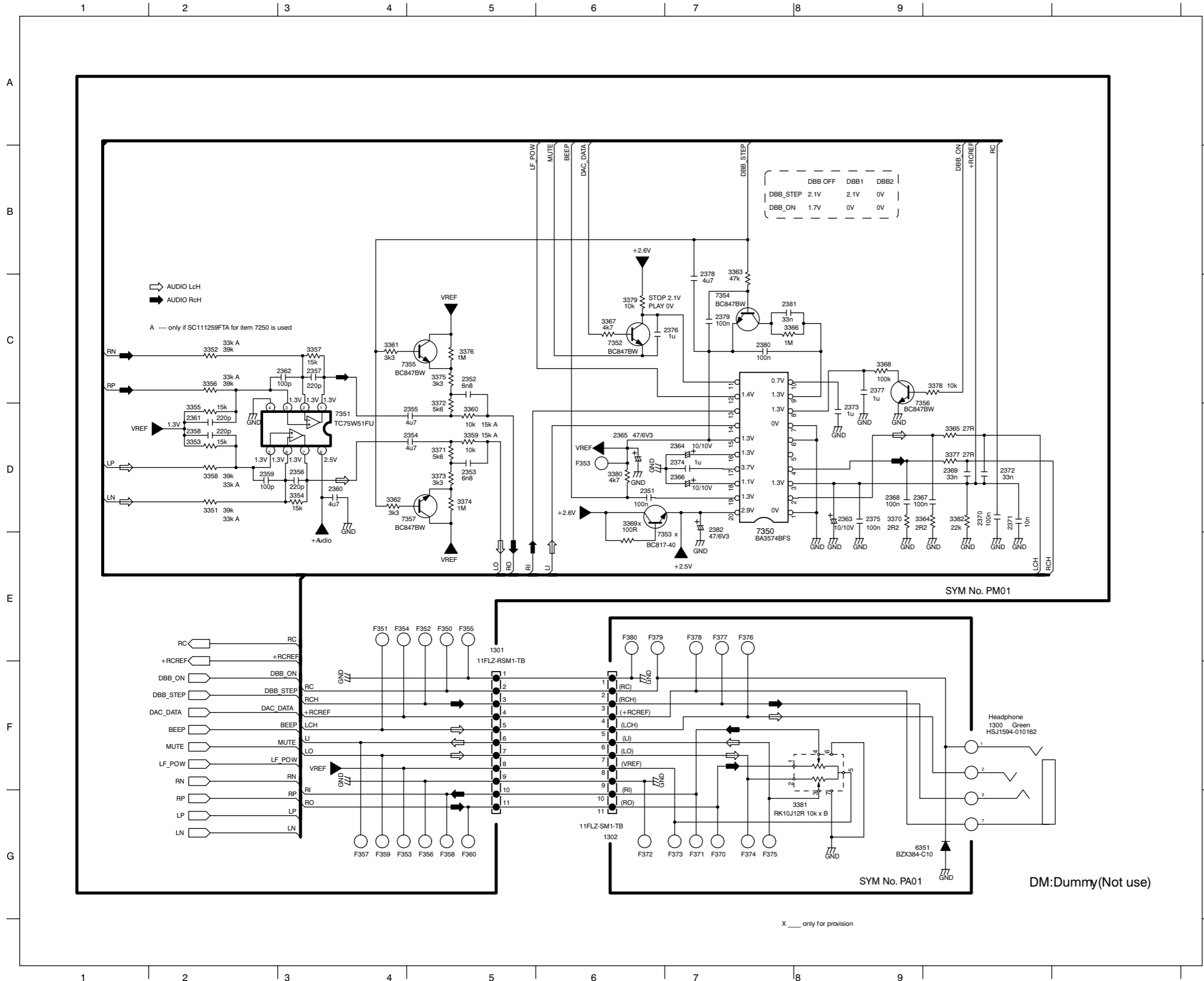


- 2860 C3
- 2861 D6
- 2862 E5
- 2863 B3
- 2864 B5
- 2865 E5
- 2866 E4
- 2867 B5
- 3880 C3
- 3881 D6
- 3882 D6
- 3883 B5
- 3884 E4
- 3885 E4
- 3886 E4
- 3887 E6
- 3888 E7
- 3889 E5
- 7800 C4
- 7801 A3
- 7802 E7
- 7803 D7

DM:Dummy(Not use)

SYM No. PM01

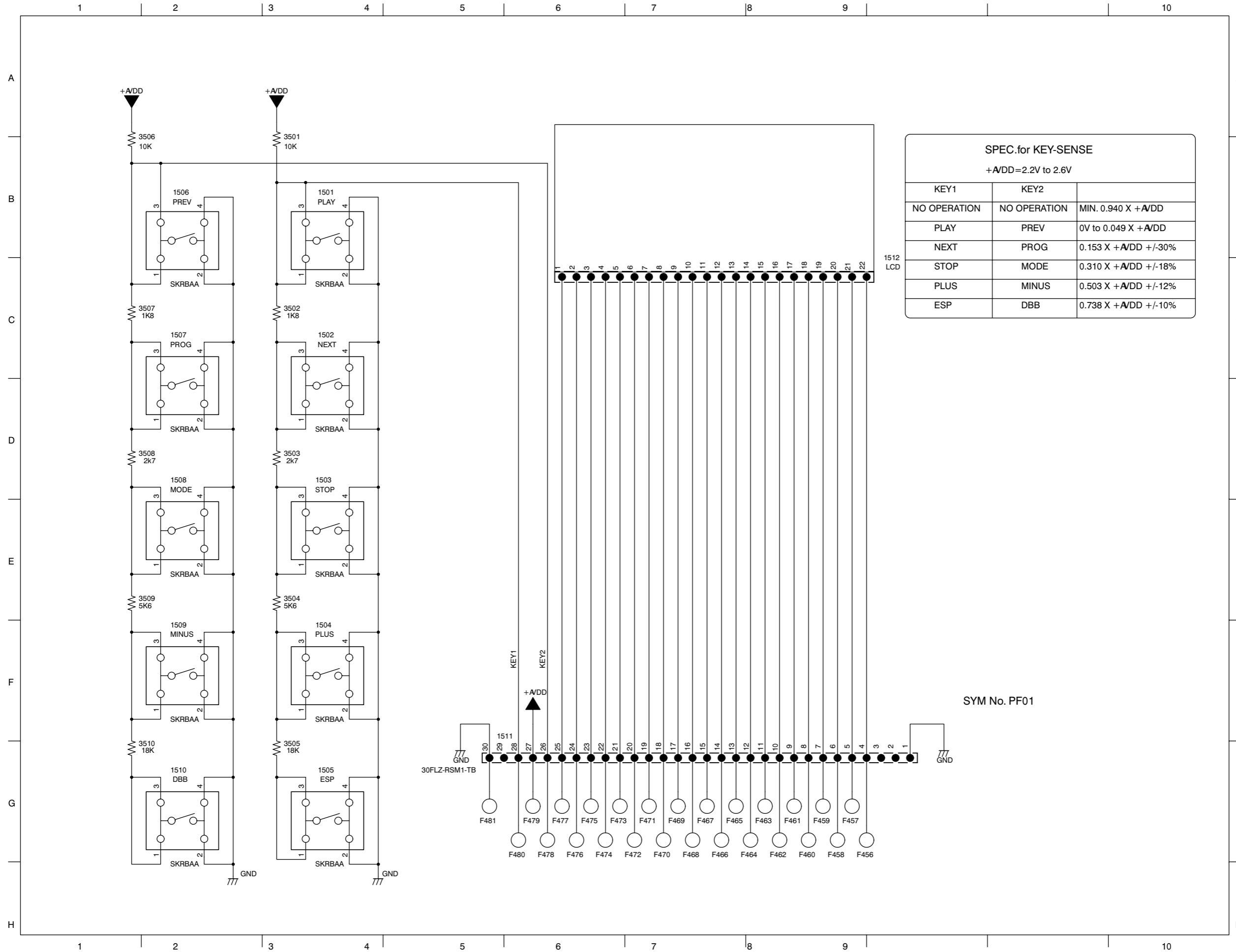
AUDIO Block



- 1300 F8
- 1301 F4
- 1302 G5
- 2351 D5
- 2352 C4
- 2353 D4
- 2354 D4
- 2355 D4
- 2356 D3
- 2357 C3
- 2358 D2
- 2359 D2
- 2360 D3
- 2361 D2
- 2362 C3
- 2363 D7
- 2364 D6
- 2365 D5
- 2366 D6
- 2367 D8
- 2368 D7
- 2369 D8
- 2370 D8
- 2371 D8
- 2372 D8
- 2373 D7
- 2374 D6
- 2375 D7
- 2376 C5
- 2377 C7
- 2378 C6
- 2379 C6
- 2380 C6
- 2381 C6
- 2382 D6
- 3351 D2
- 3352 C2
- 3353 D2
- 3354 D3
- 3355 D2
- 3356 C2
- 3357 C3
- 3358 D2
- 3359 D4
- 3360 D4
- 3361 C3
- 3362 D3
- 3363 C6
- 3364 D8
- 3365 D8
- 3366 C5
- 3367 C6
- 3368 C7
- 3369 E5
- 3370 D7
- 3371 D4
- 3372 D4
- 3373 D4
- 3374 D4
- 3375 C4
- 3376 C4
- 3377 D8
- 3378 C8
- 3379 C5
- 3380 D5
- 3381 G7
- 3382 D8
- 6351 G8
- 7350 D6
- 7351 D3
- 7352 C5
- 7353 D5
- 7354 C6
- 7355 C4
- 7356 C7
- 7357 D4
- F350 E4
- F351 E3
- F352 E4
- F353 D5
- F353 G3
- F354 E3
- F355 E4
- F356 G4
- F357 G3
- F358 G4
- F359 G3
- F360 G4
- F370 G6
- F371 G6
- F372 G5
- F373 G6
- F374 G6
- F375 G6
- F376 E6
- F377 E6
- F378 E6
- F379 E5

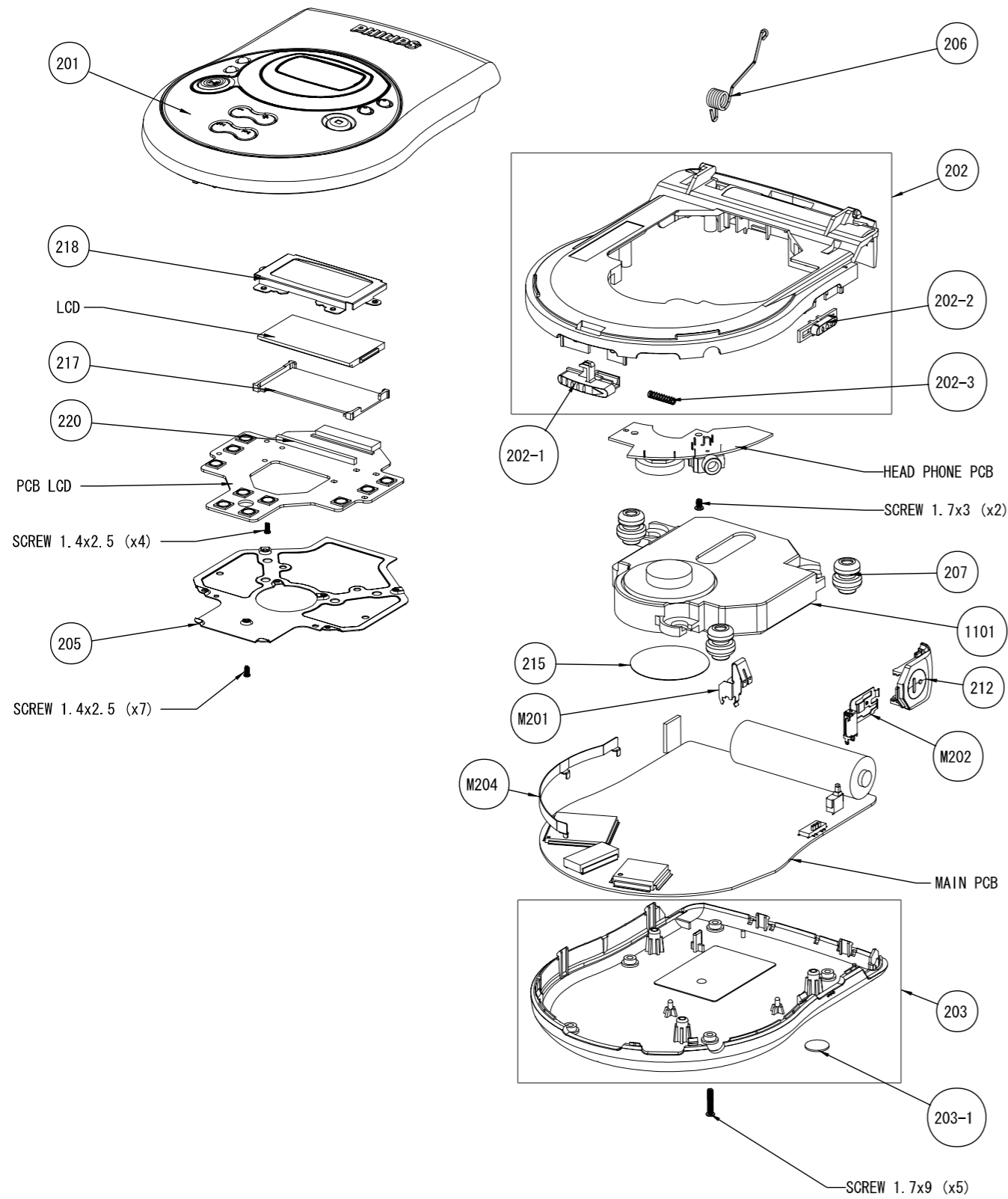
X ___ only for provision

Display Block



- 1501 B3
- 1502 C3
- 1503 D3
- 1504 F3
- 1505 G3
- 1506 B2
- 1507 C2
- 1508 D2
- 1509 F2
- 1510 G2
- 1511 G5
- 1512 C8
- 3501 B3
- 3502 C3
- 3503 D3
- 3504 E3
- 3505 G3
- 3506 B1
- 3507 C1
- 3508 D1
- 3509 E1
- 3510 G1
- F456 G7
- F457 G7
- F458 G7
- F459 G7
- F460 G7
- F461 G7
- F462 G7
- F463 G7
- F464 G7
- F465 G6
- F466 G6
- F467 G6
- F468 G6
- F469 G6
- F470 G6
- F471 G6
- F472 G6
- F473 G5
- F474 G5
- F475 G5
- F476 G5
- F477 G5
- F478 G5
- F479 G5
- F480 G5
- F481 G4

EXPLODED VIEWS



MECHANICAL PARTS LIST

201	3140 117 63730	CD DOOR ASSY - EXP411
202	3140 117 61670	CABINET ASSY
203	/00/01 3140 117 63900	BOTTOM ASSY - EXP411/00
203	/17 3140 117 63740	BOTTOM ASSY - EXP411/17
203-1	4822 462 41819	RUBBER
205	3140 111 21950	BASE PLATE (PCB COVER)
206	3140 111 01090	SPRING TOP CASE (DOOR SPRING)
207	3103 304 69590	SUSPENSION
212	3140 114 39560	BATTERY LID
215	3140 113 22990	TAPE (DM23 MOTOR)
217	3140 114 39570	HOLDER-LCD
218	3140 111 21960	COVER-LCD
220	3140 113 22830	LCD CONTACTOR ZEBRASTRIP
M201	3140 111 21970	BATTERY CONTACTOR-MINUS
M202	3140 117 61690	CONTACTOR PLUS ASSY
M204	3140 111 22050	PLATE ESD
1101	3103 309 05370	CD DM23LNPH DRIVE ASSY

ACCESSORIES

		/00	/01	/17
4822 219 10617	AC/DC ADAPTOR AY3170/00	X		
4822 219 10449	AC/DC ADAPTOR AY3170/02		X	
4822 219 10616	AC/DC ADAPTOR AY3170/17			X
9082 100 00616	HEADPHONE HE205/77S	X	X	
9082 100 00615	HEADPHONE HE205/77			X
3140 118 50980	REMOTE CONTROL AY3768	X	X	

ELECTRICAL PARTSLIST - MAIN BOARD

- MISCELLANEOUS -

1250	8240 005 55800	DC SUPPLY SOCKET
1301	2422 025 17393	CONNECTOR 11P FPC
1400	8240 009 50030	SWITCH-SLIDE 1P 3POS
1401	4822 276 12889	SWITCH SPPB51
1800	2422 025 12272	CONNECTOR V 6P

1801	4822 267 11027	CONNECTOR 16P
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- CAPACITORS -

2250	4822 124 12052	220µF 20% 6,3V
2251	2022 009 00656	47µF 20% 6,3V
2252	2020 004 90283	10µF 20% F93 10V
2253	2020 004 90283	10µF 20% F93 10V
2255	2022 009 00656	47µF 20% 6,3V
2256	4822 126 14305	100nF 10% X7R 16V
2257	4822 126 14238	2,2nF 10% X7R 50V
2261	3198 017 41050	1µF 20% Y5V 10V
2264	3198 017 41050	1µF 20% Y5V 10V
2265	4822 126 13883	220pF 5% 50V
2266	4822 126 14305	100nF 10% X7R 16V
2267	4822 126 14305	100nF 10% X7R 16V
2268	4822 126 14305	100nF 10% X7R 16V
2269	3198 017 41050	1µF 20% Y5V 10V
2270	4822 126 13883	220pF 5% 50V
2271	4822 126 13883	220pF 5% 50V
2272	4822 122 31765	100pF 2% NP0 63V
2273	5322 126 11583	10nF 10% X7R 50V
2274	4822 126 13883	220pF 5% 50V
2276	3198 032 55130	10µF 20% 20V
2279	2222 867 15339	33pF 5% NP0 50V
2280	2222 867 15339	33pF 5% NP0 50V
2281	4822 122 31765	100pF 2% NP0 63V
2282	4822 126 14305	100nF 10% X7R 16V
2283	4822 126 14305	100nF 10% X7R 16V
2284	3198 017 41050	1µF 20% Y5V 10V
2285	4822 126 14305	100nF 10% X7R 16V
2286	2020 552 96305	4,7µF +80-20% Y5V 10V
2287	4822 126 14305	100nF 10% X7R 16V
2290	2020 552 96305	4,7µF +80-20% Y5V 10V
2291	2020 004 90283	10µF 20% F93 10V
2292	2022 009 00656	47µF 20% 6,3V
2293	2022 009 00656	47µF 20% 6,3V
2294	4822 122 33777	47pF 5% NP0 63V
2295	5322 126 11583	10nF 10% X7R 50V
2296	2022 009 00656	47µF 20% 6,3V
2297	2022 009 00656	47µF 20% 6,3V
2298	4822 126 14305	100nF 10% X7R 16V
2351	4822 126 14305	100nF 10% X7R 16V
2352	5322 126 11582	6,8nF10% X7R 63V

- CAPACITORS -

2353	5322 126 11582	6,8nF10% X7R 63V
2354	2020 552 96305	4,7µF +80-20% Y5V 10V
2355	2020 552 96305	4,7µF +80-20% Y5V 10V
2356	4822 126 13883	220pF 5% 50V
2357	4822 126 13883	220pF 5% 50V
2358	4822 126 13883	220pF 5% 50V
2359	4822 122 31765	100pF 2% NP0 63V
2360	2020 552 96305	4,7µF +80-20% Y5V 10V
2361	4822 126 13883	220pF 5% 50V
2362	4822 122 31765	100pF 2% NP0 63V
2363	2020 004 90283	10µF 20% F93 10V
2364	2020 004 90283	10µF 20% F93 10V
2365	2022 009 00656	47µF 20% 6,3V
2366	2020 004 90283	10µF 20% F93 10V
2367	4822 126 14305	100nF 10% X7R 16V
2368	4822 126 14305	100nF 10% X7R 16V
2369	4822 126 14549	33nF 10% X7R 16V
2370	5322 126 11583	10nF 10% X7R 50V
2371	5322 126 11583	10nF 10% X7R 50V
2372	4822 126 14549	33nF 10% X7R 16V
2373	3198 017 41050	1µF 20% Y5V 10V
2374	3198 017 41050	1µF 20% Y5V 10V
2375	4822 126 14305	100nF 10% X7R 16V
2376	3198 017 41050	1µF 20% Y5V 10V
2377	3198 017 41050	1µF 20% Y5V 10V
2378	2020 552 96305	4,7µF +80-20% Y5V 10V
2379	4822 126 14305	100nF 10% X7R 16V
2380	4822 126 14305	100nF 10% X7R 16V
2381	4822 126 14549	33nF 10% X7R 16V
2382	2022 009 00656	47µF 20% 6,3V
2400	4822 126 14305	100nF 10% X7R 16V
2401	4822 126 14305	100nF 10% X7R 16V
2402	4822 126 14305	100nF 10% X7R 16V
2403	4822 126 14305	100nF 10% X7R 16V
2404	3198 017 41050	1µF 20% Y5V 10V
2405	3198 017 41050	1µF 20% Y5V 10V
2406	2020 552 96305	4,7µF +80-20% Y5V 10V
2407	4822 126 14305	100nF 10% X7R 16V
2408	4822 126 14305	100nF 10% X7R 16V
2409	5322 126 11578	1nF 10% X7R 50V
2410	3198 017 41050	1µF 20% Y5V 10V
2480	2022 009 00656	47µF 20% 6,3V
2481	4822 126 14305	100nF 10% X7R 16V
2482	4822 126 14305	100nF 10% X7R 16V
2483	4822 126 14305	100nF 10% X7R 16V
2484	4822 126 14305	100nF 10% X7R 16V
2485	4822 126 14305	100nF 10% X7R 16V
2486	4822 126 14305	100nF 10% X7R 16V
2487	4822 126 14305	100nF 10% X7R 16V
2488	4822 126 14305	100nF 10% X7R 16V

ELECTRICAL PARTSLIST - MAIN BOARD**- CAPACITORS -**

2489	4822 126 14305	100nF 10% X7R 16V
2490	4822 126 14305	100nF 10% X7R 16V
2491	4822 126 14305	100nF 10% X7R 16V
2492	4822 126 14305	100nF 10% X7R 16V
2493	4822 126 14305	100nF 10% X7R 16V

2494	4822 126 14305	100nF 10% X7R 16V
2495	4822 126 14305	100nF 10% X7R 16V
2496	4822 126 14305	100nF 10% X7R 16V
2497	4822 126 14305	100nF 10% X7R 16V
2498	4822 126 14305	100nF 10% X7R 16V

2499	4822 126 14305	100nF 10% X7R 16V
2800	3198 024 44730	47nF 10% Y5V 50V
2801	5322 126 11578	1nF 10% X7R 50V
2802	5322 126 11583	10nF 10% X7R 50V
2803	3198 017 41050	1µF 20% Y5V 10V

2804	4822 126 11669	27pF 5% 50V
2805	4822 126 13887	4,7pF 1% 50V
2806	3198 017 42230	22nF 10% Y5V 50V
2807	4822 126 14305	100nF 10% X7R 16V
2808	4822 126 14305	100nF 10% X7R 16V

2809	4822 126 13193	4,7nF 10% X7R 63V
2810	2020 552 96305	4,7µF +80-20% Y5V 10V
2811	2020 552 96305	4,7µF +80-20% Y5V 10V
2813	2022 009 00656	47µF 20% 6,3V
2814	2022 009 00656	47µF 20% 6,3V

2815	2022 009 00656	47µF 20% 6,3V
2817	2020 004 90283	10µF 20% F93 10V
2818	4822 126 14508	180pF 5% NP0 50V
2819	4822 126 13883	220pF 5% 50V
2820	4822 126 13883	220pF 5% 50V

2821	4822 126 14241	330pF 5% NP0 50V
2822	4822 126 14508	180pF 5% NP0 50V
2823	4822 126 13883	220pF 5% 50V
2824	4822 126 13883	220pF 5% 50V
2825	4822 126 14508	180pF 5% NP0 50V

2826	4822 126 14508	180pF 5% NP0 50V
2827	4822 126 13883	220pF 5% 50V
2828	4822 126 14508	180pF 5% NP0 50V
2829	4822 126 13883	220pF 5% 50V
2830	4822 122 33777	47pF 5% NP0 63V

2831	4822 126 14305	100nF 10% X7R 16V
2832	4822 126 14247	1,5nF 10% X7R 50V
2833	4822 126 14305	100nF 10% X7R 16V
2834	5322 126 11583	10nF 10% X7R 50V
2835	4822 126 14305	100nF 10% X7R 16V

2836	4822 126 14247	1,5nF 10% X7R 50V
2837	4822 126 14305	100nF 10% X7R 16V
2838	3198 017 41050	1µF 20% Y5V 10V
2839	5322 126 11579	3,3nF 10% X7R 63V
2840	5322 126 11579	3,3nF 10% X7R 63V

- CAPACITORS -

2841	5322 126 11579	3,3nF 10% X7R 63V
2842	5322 126 11579	3,3nF 10% X7R 63V
2843	4822 126 14247	1,5nF 10% X7R 50V
2844	4822 126 14247	1,5nF 10% X7R 50V
2860	4822 126 14305	100nF 10% X7R 16V

2861	4822 122 31765	100pF 2% NP0 63V
2862	4822 126 14305	100nF 10% X7R 16V
2863	4822 126 14305	100nF 10% X7R 16V
2864	4822 126 14305	100nF 10% X7R 16V
2865	4822 126 14305	100nF 10% X7R 16V

2866	4822 122 33761	22pF 5% NP0 50V
2867	4822 124 11946	22µF 20% 16V

- RESISTORS -

3200	4822 051 30103	10K 5% 0,062W
3201	4822 117 12706	10K 1% 0,063W
3203	5322 117 13048	3,3K 1% 0,063W
3204	4822 117 12925	47K 1% 0,063W
3205	4822 051 30103	10K 5% 0,062W

3208	4822 051 30153	15K 5% 0,062W
3209	4822 051 30101	100R 5% 0,062W
3210	4822 051 30153	15K 5% 0,062W
3211	5322 117 13019	100K 1% 0,063W
3212	5322 117 13019	100K 1% 0,063W

3213	2322 704 68203	82K 1% RC22H
3214	2322 704 68203	82K 1% RC22H
3219	4822 117 13632	100K 1% 0,62W
3220	4822 051 30221	220R 5% 0,062W
3223	4822 051 30474	470K 5% 0,062W

3226	4822 117 12891	220K 1% ERJ3E
3227	4822 117 12925	47K 1% 0,063W
3228	4822 117 12891	220K 1% ERJ3E
3229	4822 051 30472	4,7K 5% 0,062W
3230	4822 117 13632	100K 1% 0,62W

3231	4822 117 12891	220K 1% ERJ3E
3233	4822 051 30272	2,7K 5% 0,062W
3235	4822 051 30103	10K 5% 0,062W
3236	4822 117 12706	10K 1% 0,063W
3238	4822 117 12706	10K 1% 0,063W

3239	4822 117 13632	100K 1% 0,62W
3240	4822 051 30105	1M 5% 0,062W
3241	4822 051 30474	470K 5% 0,062W
3242	4822 117 13632	100K 1% 0,62W
3243	4822 051 30472	4,7K 5% 0,062W

3244	4822 051 30008	0R JUMPER
3245	4822 051 30105	1M 5% 0,062W
3246	4822 051 30153	15K 5% 0,062W
3249	4822 051 30681	680R 5% 0,062W
3252	4822 051 30103	10K 5% 0,062W

ELECTRICAL PARTSLIST - MAIN BOARD

- RESISTORS -

3253	4822 051 30472	4,7K 5% 0,062W
3255	4822 117 13632	100K 1% 0,62W
3256	4822 051 30103	10K 5% 0,062W
3258	4822 051 30562	5,6K 5% 0,063W
3259	4822 051 30682	6,8K 5% 0,062W
3261	4822 117 12925	47K 1% 0,063W
3262	4822 051 30103	10K 5% 0,062W
3263	4822 051 30682	6,8K 5% 0,062W
3264	4822 051 30102	1K 5% 0,062W
3265	4822 117 13632	100K 1% 0,62W
3266	4822 117 12902	8,2K 1% 0,063W
3267	4822 117 13632	100K 1% 0,62W
3351	4822 051 30393	39K 5% 0,062W
3352	4822 051 30393	39K 5% 0,062W
3353	4822 051 30153	15K 5% 0,062W
3354	4822 051 30153	15K 5% 0,062W
3355	4822 051 30153	15K 5% 0,062W
3356	4822 051 30393	39K 5% 0,062W
3357	4822 051 30153	15K 5% 0,062W
3358	4822 051 30393	39K 5% 0,062W
3359	4822 051 30103	10K 5% 0,062W
3360	4822 051 30103	10K 5% 0,062W
3361	4822 051 30332	3,3K 5% 0,062W
3362	4822 051 30332	3,3K 5% 0,062W
3363	4822 117 12925	47K 1% 0,063W
3364	4822 117 13613	2,2R 5%
3365	2322 702 60279	27R 5% RC21
3366	4822 051 30105	1M 5% 0,062W
3367	4822 051 30472	4,7K 5% 0,062W
3368	4822 117 13632	100K 1% 0,62W
3370	4822 117 13613	2,2R 5%
3371	4822 051 30562	5,6K 5% 0,063W
3372	4822 051 30562	5,6K 5% 0,063W
3373	4822 051 30332	3,3K 5% 0,062W
3374	4822 051 30105	1M 5% 0,062W
3375	4822 051 30332	3,3K 5% 0,062W
3376	4822 051 30105	1M 5% 0,062W
3377	2322 702 60279	27R 5% RC21
3378	4822 051 30103	10K 5% 0,062W
3379	4822 051 30103	10K 5% 0,062W
3380	4822 051 30472	4,7K 5% 0,062W
3382	4822 051 30223	22K 5% 0,062W
3400	4822 051 30103	10K 5% 0,062W
3401	4822 117 12139	22R 5% 0,062W
3402	4822 051 30472	4,7K 5% 0,062W
3403	4822 117 12891	220K 1% ERJ3E
3404	4822 051 30102	1K 5% 0,062W
3405	4822 051 30103	10K 5% 0,062W
3406	4822 117 12139	22R 5% 0,062W
3407	4822 051 30102	1K 5% 0,062W

- RESISTORS -

3408	4822 051 30272	2,7K 5% 0,062W
3410	4822 051 30102	1K 5% 0,062W
3411	4822 051 30101	100R 5% 0,062W
3412	4822 051 30101	100R 5% 0,062W
3413	4822 051 30562	5,6K 5% 0,063W
3414	4822 051 30123	12K 5% 0,062W
3415	4822 051 30682	6,8K 5% 0,062W
3416	4822 051 30109	10R 5% 0,062W
3417	4822 117 12891	220K 1% ERJ3E
3418	4822 051 30103	10K 5% 0,062W
3419	4822 051 30103	10K 5% 0,062W
3420	4822 117 12891	220K 1% ERJ3E
3421	4822 051 30103	10K 5% 0,062W
3422	4822 051 30103	10K 5% 0,062W
3423	3198 021 32250	2,2M 5%
3424	4822 051 30109	10R 5% 0,062W
3425	4822 051 30105	1M 5% 0,062W
3426	4822 051 30472	4,7K 5% 0,062W
3427	4822 051 30474	470K 5% 0,062W
3428	4822 051 30101	100R 5% 0,062W
3429	4822 051 30101	100R 5% 0,062W
3430	4822 117 13632	100K 1% 0,62W
3431	3198 021 32250	2,2M 5%
3432	4822 117 13632	100K 1% 0,62W
3433	4822 051 30105	1M 5% 0,062W
3434	4822 051 30105	1M 5% 0,062W
3435	4822 051 30123	12K 5% 0,062W
3436	4822 051 30223	22K 5% 0,062W
3437	4822 051 30103	10K 5% 0,062W
3476	4822 051 30109	10R 5% 0,062W
3477	4822 051 30102	1K 5% 0,062W
3478	4822 051 30102	1K 5% 0,062W
3479	4822 117 13632	100K 1% 0,62W
3480	4822 051 30102	1K 5% 0,062W
3481	4822 051 30109	10R 5% 0,062W
3482	4822 117 13632	100K 1% 0,62W
3484	4822 051 30103	10K 5% 0,062W
3485	4822 117 13632	100K 1% 0,62W
3486	4822 117 12971	15R 5% 0,62W
3487	4822 051 30109	10R 5% 0,062W
3488	4822 051 30109	10R 5% 0,062W
3489	4822 051 30103	10K 5% 0,062W
3490	4822 051 30479	47R 5% 0,062W
3491	4822 051 30479	47R 5% 0,062W
3492	4822 117 12971	15R 5% 0,62W
3493	4822 117 12971	15R 5% 0,62W
3494	4822 117 12971	15R 5% 0,62W
3495	4822 117 12971	15R 5% 0,62W
3496	4822 051 30101	100R 5% 0,062W
3497	4822 117 13632	100K 1% 0,62W

ELECTRICAL PARTSLIST - MAIN BOARD**- RESISTORS -**

3498	4822 117 12971	15R 5% 0,62W
3499	4822 051 30101	100R 5% 0,062W
3800	4822 051 30332	3,3K 5% 0,062W
3801	4822 051 30472	4,7K 5% 0,062W
3802	4822 051 30472	4,7K 5% 0,062W
3803	4822 117 12891	220K 1% ERJ3E
3804	4822 051 30102	1K 5% 0,062W
3805	4822 051 30471	470R 5% 0,062W
3806	4822 051 30105	1M 5% 0,062W
3807	4822 051 30332	3,3K 5% 0,062W
3808	4822 051 30472	4,7K 5% 0,062W
3809	4822 051 30153	15K 5% 0,062W
3810	4822 051 30563	56K 5% 0,062W
3811	4822 051 30109	10R 5% 0,062W
3812	4822 051 30683	68K 5% 0,062W
3813	4822 051 30105	1M 5% 0,062W
3814	4822 051 30479	47R 5% 0,062W
3815	4822 051 30223	22K 5% 0,062W
3816	4822 051 30102	1K 5% 0,062W
3817	4822 051 30562	5,6K 5% 0,063W
3818	4822 117 13608	4,7R 5% 0,0016W
3819	4822 051 30562	5,6K 5% 0,063W
3820	4822 051 30562	5,6K 5% 0,063W
3821	4822 051 30103	10K 5% 0,062W
3822	4822 051 30562	5,6K 5% 0,063W
3823	4822 051 30273	27K 5% 0,062W
3824	4822 051 30273	27K 5% 0,062W
3825	4822 051 30103	10K 5% 0,062W
3826	4822 051 30333	33K 5% 0,062W
3827	4822 051 30103	10K 5% 0,062W
3828	4822 051 30103	10K 5% 0,062W
3829	4822 051 30333	33K 5% 0,062W
3830	4822 051 30103	10K 5% 0,062W
3831	4822 051 30333	33K 5% 0,062W
3832	4822 051 30103	10K 5% 0,062W
3834	4822 051 30333	33K 5% 0,062W
3836	4822 051 30339	33R 5% 0,062W
3837	4822 051 30333	33K 5% 0,062W
3839	4822 117 12925	47K 1% 0,063W
3840	4822 051 30103	10K 5% 0,062W
3841	4822 051 30103	10K 5% 0,062W
3842	4822 051 30562	5,6K 5% 0,063W
3843	4822 051 30153	15K 5% 0,062W
3844	4822 117 12139	22R 5% 0,062W
3845	4822 117 12925	47K 1% 0,063W
3846	4822 117 12139	22R 5% 0,062W
3847	4822 051 30479	47R 5% 0,062W
3850	4822 051 30332	3,3K 5% 0,062W
3852	4822 051 30103	10K 5% 0,062W
3853	4822 051 30103	10K 5% 0,062W

- RESISTORS -

3854	4822 051 30103	10K 5% 0,062W
3855	4822 051 30103	10K 5% 0,062W
3856	4822 051 30103	10K 5% 0,062W
3857	4822 051 30222	2,2K 5% 0,062W
3858	4822 051 30222	2,2K 5% 0,062W
3859	4822 051 30109	10R 5% 0,062W
3860	4822 051 30109	10R 5% 0,062W
3861	4822 051 30222	2,2K 5% 0,062W
3862	4822 051 30222	2,2K 5% 0,062W
3863	4822 051 30222	2,2K 5% 0,062W
3864	4822 051 30222	2,2K 5% 0,062W
3879	4822 051 30101	100R 5% 0,062W
3880	4822 117 12139	22R 5% 0,062W
3881	4822 117 12139	22R 5% 0,062W
3882	4822 051 30103	10K 5% 0,062W
3883	4822 117 12139	22R 5% 0,062W
3884	4822 051 30102	1K 5% 0,062W
3885	4822 051 30102	1K 5% 0,062W
3886	4822 051 30102	1K 5% 0,062W
3887	4822 051 30103	10K 5% 0,062W
3888	4822 051 30105	1M 5% 0,062W
3889	4822 051 30103	10K 5% 0,062W

- COILS & FILTERS -

5250	8240 005 55840	10μH 20%
5252	4822 157 70778	10μH 10%
5253	4822 157 70778	10μH 10%
5256	2422 536 00379	47μH 10%
5257	2411 531 15141	47μH 10%
5258	2422 536 00379	47μH 10%
5259	8240 005 55840	10μH 20%
5260	8240 005 55840	10μH 20%
5400	2422 540 98536	RES CER 4,23MHZ
5401	2422 536 00358	2,2μH 20%
5810	4822 242 10989	CSTCV16.93MXJ0C3

ELECTRICAL PARTSLIST - MAIN BOARD

- DIODES -

6252	9322 128 70685	SS14
6253	4822 130 11397	BAS316
6254	4822 130 11397	BAS316
6256	9340 289 00115	BAT54CW
6257	9340 289 00115	BAT54CW

6258	4822 130 11397	BAS316
6259	4822 130 10838	UDZ3.3B
6260	9322 128 70685	SS14
6261	9322 128 70685	SS14
6262	9322 128 70685	SS14

6401	4822 130 11551	UDZS10B
6402	4822 130 11551	UDZS10B
6403	4822 130 11551	UDZS10B

- IC & TRANSISTORS -

7250	9322 171 12671	SC111259AFTA
7251	5322 130 60123	BC807-40
7252	4822 130 60142	BC869
7254	4822 130 11549	BSH105
7255	9322 142 72685	TC75W51FU

7256	4822 209 17289	74LV14PW
7258	9322 173 26685	NCP1402SN27
7259	9322 176 16685	NCP1402SN33
7261	3198 010 42310	BC847BW
7262	3198 010 42310	BC847BW

7263	3198 010 42310	BC847BW
7265	3198 010 42310	BC847BW
7266	3198 010 42310	BC847BW
7269	5322 130 61569	BC868
7270	4822 130 11549	BSH105

7272	3198 010 42310	BC847BW
7274	3198 010 42310	BC847BW
7276	4822 130 60142	BC869
7278	3198 010 42310	BC847BW
7279	4822 130 60142	BC869

7350	4822 209 16083	BA3574BFS
7351	9322 142 72685	TC75W51FU
7352	3198 010 42310	BC847BW
7354	3198 010 42310	BC847BW
7355	3198 010 42310	BC847BW

7356	3198 010 42310	BC847BW
7357	3198 010 42310	BC847BW
7400	3140 110 51251	MCU TMP86CS25F
7401	9351 750 10118	74LV4066PW
7402	9351 749 70118	74LV4053PW

7403	3198 010 42310	BC847BW
7404	5322 130 42756	BC857C
7405	9322 171 23685	BD4719G
7406	3198 010 42310	BC847BW
7407	3198 010 42310	BC847BW

- IC & TRANSISTORS -

7408	3198 010 42310	BC847BW
7480	9322 170 91671	TMS320DA150PGE160
7481	9322 142 92668	MT4LC1M16E5TG-6
7482	8203 303 86131	M29W400BB70N6T
7483	9351 960 10118	74LVC139PW

7484	9322 158 50668	74LCX74T
7800	9322 142 87671	SM5903BF
7801	9322 138 26668	MSM51V17405D-60TS-K
7802	3198 010 42310	BC847BW
7803	3198 010 42310	BC847BW

7850	9352 641 80557	SAA7324H/M2B
7851	4822 209 17286	TZA1024T/N1
7854	5322 130 60123	BC807-40
7855	3198 010 42310	BC847BW
7856	5322 130 42756	BC857C

7857	3198 010 42310	BC847BW
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Note: Only these parts mentioned in the list are normal service parts.

ELECTRICAL PARTSLIST - DISPLAY BOARD**- MISCELLANEOUS -**

1300	8240 005 52310	HEADPHOE SOCKET
1302	2422 025 17394	CONNECTOR 11P FPC
1501	2422 128 03013	SWITCH-TACT
1502	2422 128 03013	SWITCH-TACT
1503	2422 128 03013	SWITCH-TACT
1504	2422 128 03013	SWITCH-TACT
1505	2422 128 03013	SWITCH-TACT
1506	2422 128 03013	SWITCH-TACT
1507	2422 128 03013	SWITCH-TACT
1508	2422 128 03013	SWITCH-TACT
1509	2422 128 03013	SWITCH-TACT
1510	2422 128 03013	SWITCH-TACT
1512	3140 110 51410	LCD PANEL

- RESISTORS -

3381	8240 009 50040	POTM CAR LIN 10KBX2
3501	4822 051 30103	10K 5% 0,062W
3502	4822 117 12903	1,8K 1% 0,063W
3503	4822 051 30272	2,7K 5% 0,062W
3504	4822 051 30562	5,6K 5% 0,063W
3505	4822 051 30183	18K 5% 0,062W
3506	4822 051 30103	10K 5% 0,062W
3507	4822 117 12903	1,8K 1% 0,063W
3508	4822 051 30272	2,7K 5% 0,062W
3509	4822 051 30562	5,6K 5% 0,063W
3510	4822 051 30183	18K 5% 0,062W

- DIODES -

6351	4822 130 11551	UDZS10B
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Note: Only these parts mentioned in the list are normal service parts.