

CD Mini System
FW380C

3 CD Changer Mini System

- 800 watts PMPO
- 2 x 25 watts RMS Stereo
- *Digital Sound Control* (optimal, jazz, rock, techno)
- *Dynamic Bass Boost*
- *2-way Bass Reflex Speaker System with Detachable Grilles*
- *40-track CD Random Program*
- *FM/MW Digital Tuner with 40 presets*
- *Dual Tape Deck*
- *One touch CD synchro recording*
- *Subwoofer Ready*
- *Karaoke Feature*
- *Easy set for radio*
- *Bedroom clock with wake-up*
- *24-key Remote Control*



800
watts PMPO



Let's make things better.



PHILIPS

CD Mini System FW380C

CD changer mini system

standard product information

amplifier

- 800 watts PMPO
- 2 x 25 watts RMS, $\pm 10\%$ THD, 6 Ohm, 1kHz
- Digital Sound Control (optimal, jazz, rock, techno)
- Dynamic Bass Boost

compact disc player

- motorized front loading 3 CD changer
- bit-check D/A converter
- 40-track CD random program
- play modes (repeat/shuffle/program)
- change 2 discs while playing 1

tuner

- FM/MW Digital Tuner with 40 presets
- easy set/auto store for radio

tape deck

- Dual Tape Deck
- high and normal speed dubbing
- CD synchro recording
- automatic recording level control
- electronic speed control

loudspeaker boxes

- 2-way Bass Reflex
- 5.25" woofer
- 2.5" tweeter
- detachable grilles
- hyper energy bass port for deep powerful bass reproduction

connections

- stereo headphones : 3.5mm stereo jack
- video/aux : cinch type sockets
- subwoofer out : cinch type sockets
- Karaoke mic : 3.5mm jack (/21, /21m)

general

- multicolor FTD display
- clock/timer
- wake-up with CD or tuner
- 24-key Remote Control
- functional back-lighting guide
- Karaoke Feature (/21, /21m)

	/21M	/21	/22	/30	/34
Asia Pacific	•	•			
Australia/NZ				•	
Middle East/S Africa					
Latam		•			
Europe					
E Europe					
Mexico		•			
tuner					
FM65.81-74MHz					
FM87.5-108MHz	•	•	•		
MW522-1602kHz	•	•	•		
LW153-279kHz					
FM75 Ohm clickfit	•	•	•		
mains supply					
120/230V 50-60Hz	•	•			
230V/50Hz				•	
general					
made in sticker	•	•			



Digital Sound Control

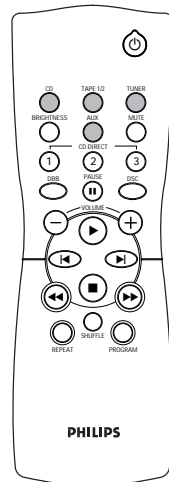
(optimal, jazz, rock, techno)

Digital Sound Control (or DSC) offers different sound settings tailored for specific musical styles.



Dynamic Bass Boost

Boosting bass response as much as 8 decibels (nearly 3 times more than normal). Dynamic Bass Boost yields full rich tonal quality at all volume levels.



EAN: 87 10101 35747 8 (/21)
 EAN: 87 10101 35748 5 (/21m)
 EAN: 87 10101 36296 0 (/30)

Product Dimensions:
 265mmW x 310mmH x 320mmD (center unit)
 210mmW x 310mmH x 240mmD (speakers)
 Package Dimensions:
 624mmW x 410mmH x 474mmD
 Product weight: 14 kg

Carton contains: CD Mini System, Multi-Function Remote Control, Batteries (2 x AA), Operating instructions, Warranty information, FM antenna, AM antenna

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SPECIFICATIONS

GENERAL:

Mains voltage : 110-127V/220-240V Switchable for /21/21M
120V for /37
220V for /33
220-230V for /22/34
230V for /25
230-240V for /30

Mains frequency : 50/60Hz
Power consumption : < 15W at Standby
< 44W at 1/8 rated power out

Clock accuracy : < 4 seconds per day
Dimension centre unit : 265 x 310 x 330mm

TUNER:

FM

Tuning range : 87.5-108MHz
65.81-74MHz for /34

Grid : 50kHz (& 30kHz for /34)
100kHz for /37

IF frequency : 10.7MHz \pm 25kHz

Aerial input : 75ohm coaxial
300ohm click fit for /37

Sensitivity at 26dB S/N : < 7 μ V
Selectivity at 600kHz bandwidth : > 50dB
Image rejection : > 25dB [> 75dB]
Distortion at RF=1mV, dev. 75kHz : < 3% [< 2%]
-3dB Limiting point : < 8 μ V
Crosstalk at RF=1mV, dev. 40kHz : > 18dB [> 26dB]

MW

Tuning range : 531-1602kHz
530-1700kHz for /21/37

Grid : 9kHz
10kHz for /21/37

IF frequency : 450kHz \pm 1kHz

Aerial input : Frame aerial

Sensitivity at 26dB S/N : < 4.0mV/M
Selectivity at 18kHz bandwidth : > 18dB
IF rejection : > 45dB
Image rejection : > 28dB
Distortion at RF=50mV, m=80% : < 5%

LW

Tuning range : 153-279kHz
Grid : 3kHz
IF frequency : 450kHz \pm 1kHz
Aerial input : Frame aerial
Sensitivity at 26dB S/N : [< 6.0mV/M]
Selectivity at 18kHz bandwidth : [> 22dB]
IF rejection : [> 40dB]
Image rejection : [> 35dB]
Distortion at RF=50mV, m=80% : [< 5%]

AMPLIFIER:

Output power ¹⁾ Left/Right : 2 x 25W @ 6 ohm \pm 1dB
Surround ²⁾ : 2 x 5W @ 6 ohm \pm 1dB

Frequency response within \pm 3dB : 50Hz-15kHz
Dynamic Bass Boost : DBB ON, DBB Off ³⁾

Digital Sound Control : Jazz, Techno, Optimal, Rock ³⁾

Input sensitivity
Aux-in : 700mV \pm 3dB at 600ohm
Mic : 2.5mV \pm 3dB at 600ohm

Output sensitivity
Sub-woofer : 1.5V + 3dB at 22kohm
Headphone : 15mW at 32ohm

CASSETTE RECORDER:

Number of track : 2 x 2 stereo
Tape speed : 4.76 cm/sec \pm 2%
1.7 x 4.76 cm/sec

Wow and flutter : < 0.4% DIN
Fast-wind/rewind time C60 : 130 sec
Bias system : 75kHz \pm 5kHz
Rec/Pb frequency response within 8dB : 80Hz - 12.5kHz
Signal to noise ratio (type I) : > 48dBA

COMPACT DISC:

Measurement done at output conn. of the CDC module.
Frequency response within \pm 1.5dB: 20Hz - 20kHz
Output level (in Vrms) : 550mV \pm 2dB unloaded
Signal/Noise ratio (A-weighted) : > 80dBA
Distortion at 1kHz : < 0.5%
Channel difference at 1kHz : < 1dB
Channel separation at 1kHz : > 60dB
De-emphasis : 0 or 15/50 mS (Switched by subcode on the disc)

[...] Values indicated are for "Tuner 95 Board" only

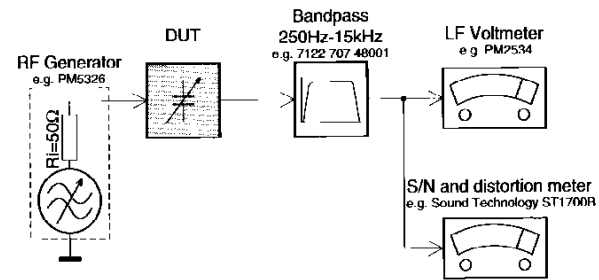
¹⁾ 1kHz, 10% THD

²⁾ Only for FW65C & FW386C

³⁾ Frequency response in each setting is software controlled.

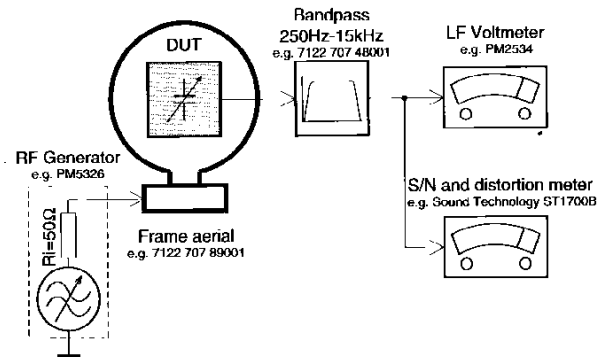
MEASUREMENT SETUP

Tuner FM



Use a bandpass filter to eliminate hum (50Hz, 100Hz) and disturbance from the pilotone (19kHz, 38kHz).

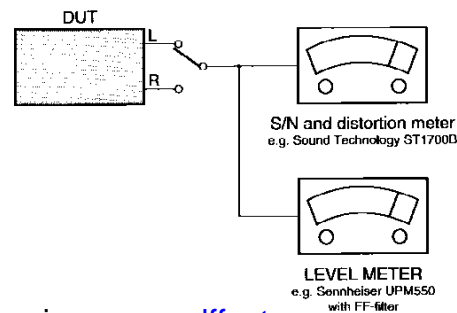
Tuner AM (MW, LW)



To avoid atmospheric interference all AM-measurements have to be carried out in a Faraday's cage.
Use a bandpass filter (or at least a high pass filter with 250Hz) to eliminate hum (50Hz, 100Hz).

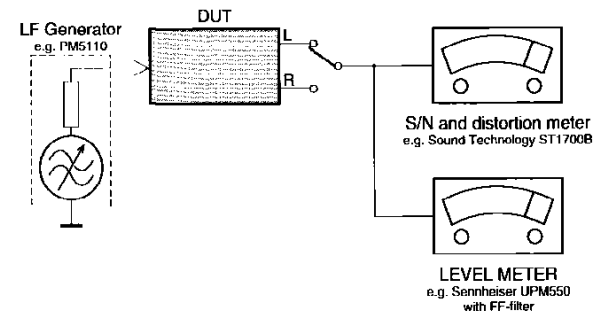
CD

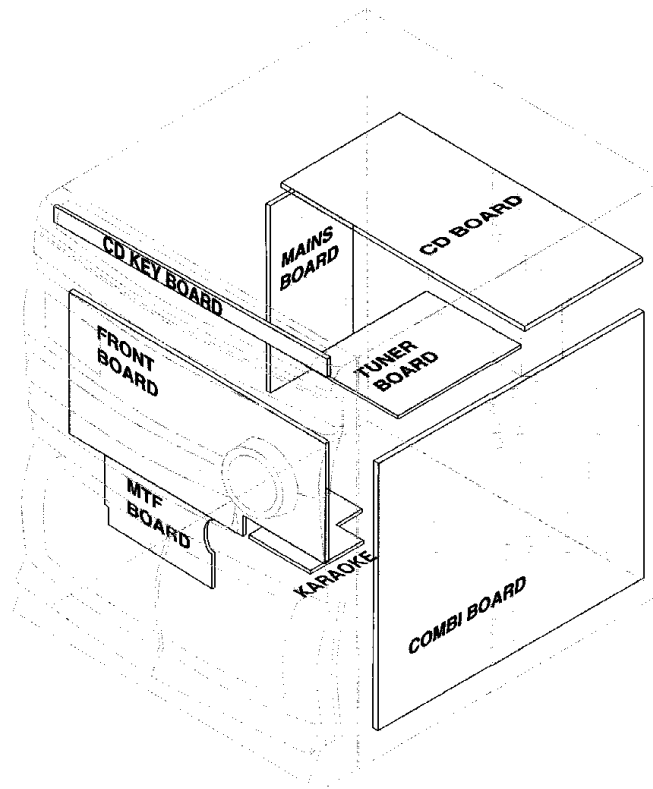
Use Audio Signal Disc SBC429 4822 397 30184
(replaces test disc 3)



Recorder

Use Universal Test Cassette Cr02 SBC419 4822 397 30069
or Universal Test Cassette Fe SBC420 4822 397 30071





VERSION VARIATIONS:

Type /Versions:	FW380C			FW65C	FW386C
	/21	/21M	/37	/37	/37
Features & Board in used:					
Dolby B					
Incredible Surround					
Karaoke	x	x			
News					
RDS					
Rotary Encoder (volume control)	x	x	x	x	x
Voltage Selector	x	x			
Aux Input	x	x	x	x	x
Digital Output					
Headphone Socket	x	x	x	x	x
Line Output					
Subwoofer Output				x	x
Surround Output					
Matrix Surround Loudspeakers				x	x
Tuner board - ECO5 Sys	x	x	x	x	x
Tuner board - Tuner 95					

SERVICE AIDS

Service Tools:

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

Cassette:

SBC419 Test cassette CrO ₂	4822 397 30069
SBC420 Test cassette Fe	4822 397 30071
MTT150 Dolby level 200nWb/M	4822 397 30271

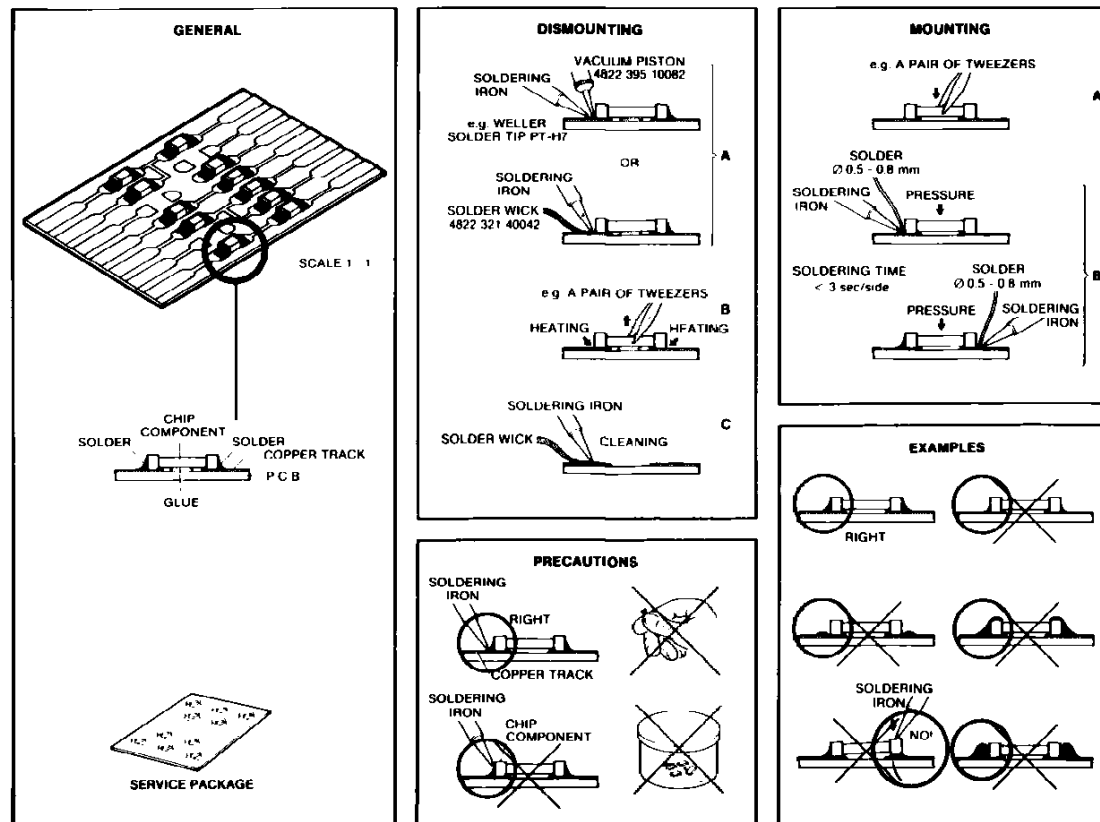
Compact Disc:

SBC426/426A Test disc 5 + 5A	4822 397 30096
SBC442 Audio Burn-in Test disc 1kHz	4822 397 30155
SBC429 Audio Signals disc	4822 397 30184
Dolby Pro-logic Test Disc	4822 395 10216

ESD Equipment:

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

HANDLING CHIP COMPONENTS



(GB) WARNING

All ICs and many other semi-conductors 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 wrist wrap with resistance. Keep components and tools also at this potential.

ESD



(NL) 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

(F) 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 enfiler le bracelet sert d'une résistance de sécurité.
Veiller à ce que les composants ainsi que les outils que l'on utilise soient également à ce potentiel.

(D) WARNUNG

Alle ICs und viele andere Halbleiter sind empfindlich gegenüber elektrostatischen Entladungen (ESD).
Unvorsichtige Behandlung im Reparaturfall kann die Lebensdauer drastisch reduzieren.
Veranlassen Sie, dass Sie im Reparaturfall über ein Pulsarmband mit Widerstand verbunden sind mit dem gleichen Potential wie die Masse des Gerätes.
Bauteile und Hilfsmittel auch auf dieses gleiche Potential halten.

(I) AVVERTIMENTO

Tutti IC e parecchi semi-conduttori sono sensibili alle scariche statiche (ESD). La loro longevità potrebbe essere fortemente ridotta 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.

(GB)

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

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

(NL)

Veiligheidsbepalingen vereisen, dat het apparaat bij reparatie in zijn oorspronkelijke toestand wordt teruggebracht en dat onderdelen, identiek aan de gespecificeerde, worden toegepast.

(F)

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

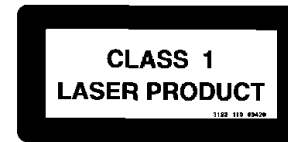
(D)

Bei jeder Reparatur sind die geltenden Sicherheitsvorschriften zu beachten. Der Originalzustand des Geräts darf nicht verändert werden; für Reparaturen sind Original-Ersatzteile zu verwenden.

(I)

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

"After servicing and before returning set to customer perform a leakage current measurement test from all exposed metal parts to earth ground to assure no shock hazard exist. The leakage current must not exceed 0.5mA."



(GB) Warning !

Invisible laser radiation when open.
Avoid direct exposure to beam.

(S) Varning !

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

(SF) Varoitus !

Avatussa laitteessa ja suoja-lukituksen ohitettaessa olet atittaina nakymattomalle laserisätöllylle. Älä katso säteeseen!

(DK) Advarse !

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

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GENERAL INFORMATION

General Information

- The type plate (which contains the serial number) is located at the rear of the system.
- Recording is permissible if copyright or other rights of third parties are not infringed.

Environmental Information

All unnecessary packaging 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 polythene (bags, protective foam sheet).

Your system consists of materials which can be recycled and reused if disassembled by a specialized company. Please observe the local regulations regarding the disposal of packaging materials, exhausted batteries and old equipment.

Accessories (Supplied)

- Remote control
- Batteries (2 x AA size) for remote control
- AM loop antenna
- FM wire antenna
- AC power cord

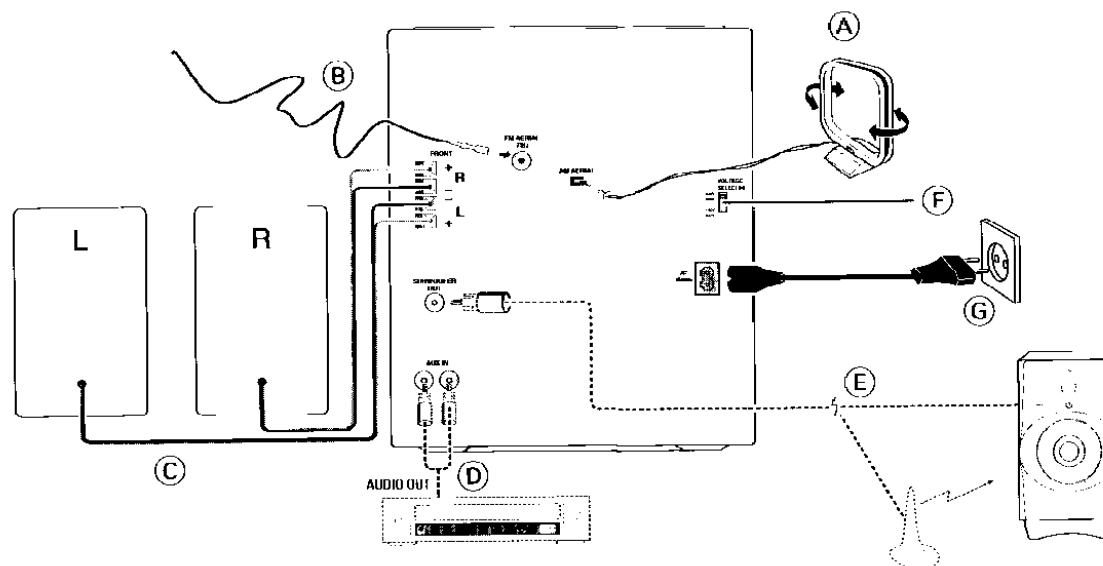
SAFETY INFORMATION

Safety Information

- Before operating the system, check that the operating voltage indicated on the typeplate (or the voltage indication beside the voltage selector) of your system is identical with the voltage of your local power supply. If not, please consult your dealer. The type plate is located at the rear of your system.
- When the system is switched on, do not move it around.
- Place the system on a solid base (e.g. a cabinet).
- Place the system in a location with adequate ventilation to prevent internal heat build up in your system.
- Do not expose the system to excessive moisture, rain, sand or heat sources.
- Under no circumstances should you repair the system yourself, as this will invalidate the warranty!
- If the system is brought directly from a cold to a warm location, or is placed in a very damp room, moisture may condense on the lens of the CD unit inside the system. Should this occur, the CD player will not operate normally. Leave the power on for about one hour with no disc in the system until normal playback is possible.
- Electrostatic discharge may cause unexpected problems. See whether these problems disappear if you unplug the AC power cord and plug it in again after a few seconds
- **To disconnect the system from the power supply completely, remove the AC power plug from the wall socket.**

PREPARATION

Rear Connections



(A) AM Loop Antenna Connection

Connect the supplied loop antenna to the AM AERIAL terminal. Place the AM loop antenna far away from the system and adjust its position for the best reception.

(B) FM Wire Antenna Connection

Connect the supplied FM wire antenna to the FM 75 Ω terminal. Adjust the position of the FM antenna for the best reception.

Outdoor Antenna

For better FM stereo reception connect an outdoor FM antenna to the FM AERIAL 75 Ω terminal using a 75 Ω coaxial wire.

(C) Speaker Connections

- Connect the right speaker to front terminal R, with the red wire to + and the black wire to -.
- Connect the left speaker to front terminal L, with the red wire to + and the black wire to -.
- Clip the stripped portion of the speaker wire as shown.



(D) Connecting other equipment to your system

You can connect the audio left and right OUT terminals of a TV, VCR, Laser Disc or DVD player to the AUX IN terminals at the rear of the system.

(E) Subwoofer Out Connection

You can connect either an optional active subwoofer or an optional wireless active subwoofer to the SUBWOOFER OUT terminal. The wireless system uses a radio frequency transmitter. The subwoofer reproduces just the low bass effect (e.g. explosions, the rumble of the spaceships, etc.). Be sure to follow the instructions supplied with the subwoofer unit.

Note:

– Availability of wireless transmitter and its peripherals are subjected to the approval of local authorities. Please check with respective local safety or approving authority.

(F) Adjusting the Operating Voltage

(not available for all version)

Before connecting the AC power cord to the wall outlet, make sure that the voltage selector at the rear of the system is set to the local power line voltage. If not, reset the selector before connecting to the wall outlet.

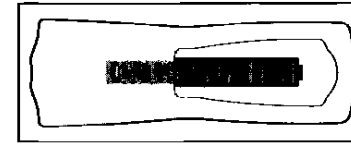
(G) AC Power Supply

After all other connections have been made, connect the AC power cord to the system and to the wall outlet.

PREPARATION

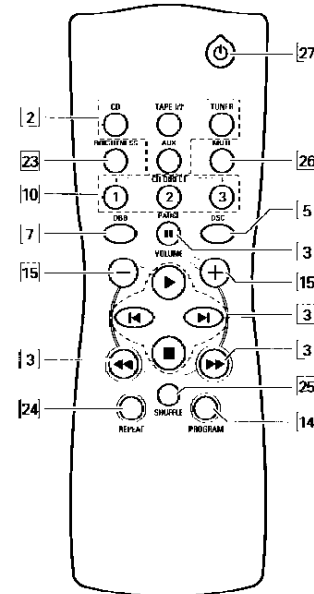
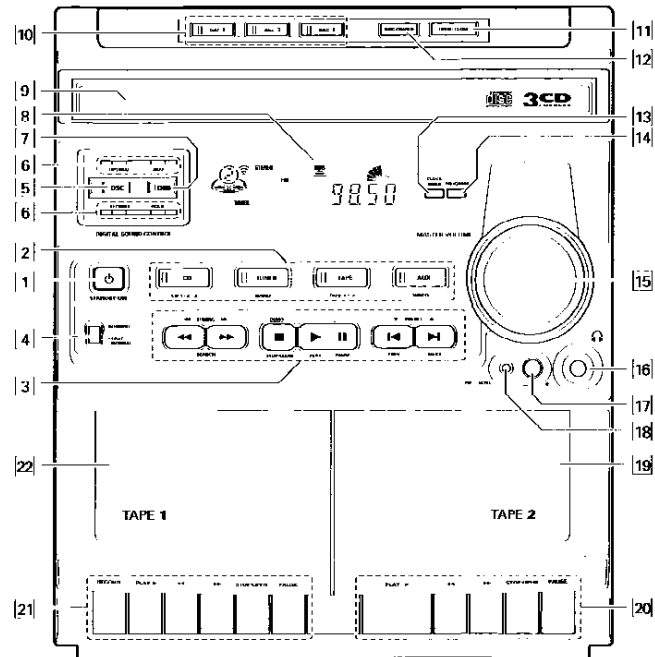
Inserting batteries into the Remote Control

- Insert the batteries (Type R06 or AA) into the remote control as shown in the battery compartment.



- To avoid damage from possible battery leakage, remove dead batteries or batteries that will not be used for a long time. For replacement, use type R06 or AA batteries.

CONTROLS



CONTROLS

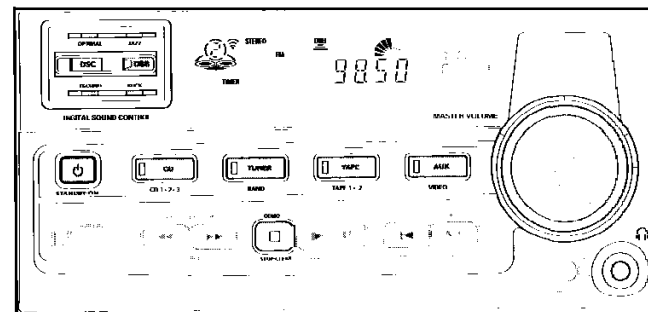
Controls on the system and remote control

- [1] **STANDBY-ON**
- to switch the system on or to standby mode
 - to store radio stations automatically by pressing and holding for 2 seconds.
- [2] **SOURCE** : to select the following.
- CD / (CD 1•2•3)**
- to select CD mode. When CD in stop mode; to select the disc tray 1, 2 or 3.
- TUNER / (BAND)**
- to select Tuner mode. When in tuner mode; to select the waveband, FM or MW.
- TAPE / (TAPE 1• 2)**
- to select Tape mode.
- AUX / (VIDEO)**
- to select sound from an external source (e.g. TV, Laser Disc, DVD or VCR player).
- [3] **MODE SELECTION**
- SEARCH ◀▶ (TUNING ◀▶▶)**
- for CD to search backward/forward
 - for TUNER to tune to a lower or higher radio frequency.
- STOP-CLEAR ■ (DEMO)**
- for CD to stop CD playback or clear a program.
 - for TUNER to stop programming.
 - DEMO to stop demonstration mode.
- PLAY ▶ / PAUSE II**
- for CD to start or interrupt playback.
- PREV ◀ / NEXT ▶ (PRESET ▼▲)**
- for CD to skip to the beginning of the current or previous/next track.
 - for TUNER to select a preset station in memory.
- [4] **DUBBING**
- to dub a tape in normal or fast speed.
- [5] **DIGITAL SOUND CONTROL (DSC)**
- to select the desired sound effect : OPTIMAL, JAZZ, ROCK or TECHN0.
- [6] **DIGITAL SOUND CONTROL DISPLAY PANEL**
- to view the selected DSC display.
- [7] **DYNAMIC BASS BOOST (DBB)**
- to switch on bass boost to enhance bass response or to switch off bass boost
- [8] **DISPLAY**
- to view the current setting of the system.
- [9] **CD CAROUSEL TRAY**
- to select a CD tray for playback.
- [10] **CD DIRECT PLAY (DISC 1/ DISC 2 / DISC 3)**
- to select a CD tray for playback.
- [11] **OPEN-CLOSE**
- to open or close the CD carousel tray.
- [12] **DISC CHANGE**
- to change CD(s).
- [13] **CLOCK-TIMER**
- to view clock, set clock or timer.
- [14] **PROGRAM**
- to program CD tracks in CD mode or preset radio stations in tuner mode.
- [15] **VOLUME**
- to adjust the volume level
- [16] **Headphones**
- to connect headphones.
- [17] **MIC LEVEL** (not available for version /30)
- to adjust the mixing level for karaoke or microphone recording.
- [18] **MIC** (not available for version /30)
- to connect microphones jack.
- [19] **TAPE DECK 2**
- [20] **TAPE DECK 2 OPERATION**
- PLAY ▶** to start playback.
- ◀◀** to rewind the tape.
- ▶▶** to fast forward the tape.
- STOP-OPEN** to stop playback or to open the tape door.
- PAUSE** to interrupt playback.
- [21] **TAPE DECK 1 OPERATION**
- RECORD** to start recording.
- PLAY ▶** to start playback.
- ◀◀** to rewind the tape.
- ▶▶** to fast forward the tape.
- STOP-OPEN** to stop playback/recording or to open the tape door.
- PAUSE** to interrupt playback or recording.
- [22] **TAPE DECK 1**
- [23] **BRIGHTNESS** (available in model FW620 only)
- to adjust the intensity of the display illumination.
- [24] **REPEAT**
- to repeat a CD track.
- [25] **SHUFFLE**
- to play all the available discs and their tracks in random order.
- [26] **MUTE**
- to switch off the sound temporarily.
- [27] **Standby**
- to switch the system to standby mode.

Notes for remote control:

- First select the source you wish to control by pressing one of the source select keys on the remote control (e.g. CD, TUNER, TAPE 1/2 or AUX).
- Then select the desired function (PLAY, NEXT, etc.).

OPERATING THE SYSTEM



Important:

Before you begin operating the system, complete the preparation procedures.

Demonstration mode

The system has a demonstration mode that shows the various features offered by the system. Whenever the system is switched on from the wall socket, the demonstration mode will start automatically.

Notes:

- During demonstration mode, if you press any source (or standby-on) button, the system will switch to the respective (or standby) mode
- When the system is switched to standby mode, 5 seconds later, the demonstration mode will resume.

To cancel demonstration mode

- Press and hold **STOP-CLEAR ■ (DEMO)** (on the system only) for **3 seconds** to stop the demonstration.
 - The demonstration mode will be switched off.
 - The system will switch to standby mode.

Easy Set

EASY SET allows you to store all available radio stations in a particular band (FM or MW) automatically.

- Press and hold **STANDBY-ON** (on the system only) for 2 seconds, when the system is in standby or demonstration mode.
 - "TUNER SET" will be displayed and followed by "TUNER"
 - EASY SET will start with the last active band.
 - All available radio stations with sufficient signal strength will be stored or until 40 presets are filled.

Notes:

- When EASY SET is used, all previously stored stations will be erased.
- The last preset station will appear on the display when EASY SET is completed.

Switching the system ON

- Press **STANDBY-ON** (on the system only), **CD**, **TUNER**, **TAPE** or **AUX**.

You can also switch on the system by pressing any one of the CD DIRECT PLAY button.

Switching the system to standby mode

- Press **STANDBY-ON** again.
 - The system will switch to standby mode.

Selecting the Source

- Press the respective source selection button: **CD**, **TUNER**, **TAPE** or **AUX**.
→ The display indicates the selected source.

Note:


For an external source, make sure that you have connected the audio left and right OUT terminals of the external equipment (TV, VCR, Laser Disc or DVD player) to the AUX IN terminals.

Sound Control

Volume Adjustment

Adjust **VOLUME** to increase or decrease the sound level.

For Personal Listening

Connect the headphones plug to the  socket at the front of the system. The speakers will be muted.

Digital Sound Control (DSC)

The DSC feature enables you to enjoy special sound effects that have preset equalizer settings, providing the best music reproduction.

- Press **DIGITAL SOUND CONTROL (DSC)** to select **OPTIMAL**, **JAZZ**, **ROCK** or **TECHNO**.
→ The Digital Sound Control display panel will light up respectively.
• "OPTIMAL", "JAZZ", "ROCK" or "TECHNO" will be displayed.

Automatic DSC-DBB selection

The best setting for the DBB is automatically generated for the respective DSC selection. You can manually select the DBB setting that best suits your listening environment.

DSC Selection	DBB Character
Optimal	On
Jazz	Off
Rock	Off
Techno	On

Dynamic Bass Boost (DBB)

The DBB mode enhances the bass response.

- Press **DBB** to switch on bass response.
→ The DBB button lights up
→ "DBB OFF" will be displayed.



To switch off DBB

- Press **DBB** again.
→ The DBB button light is switched off.
→ "DBB OFF" will be displayed.

Note:

Some CDs or tapes might be recorded in high modulation. It may cause a distortion at high volume. If this occurs, switch off DBB or reduce the volume.

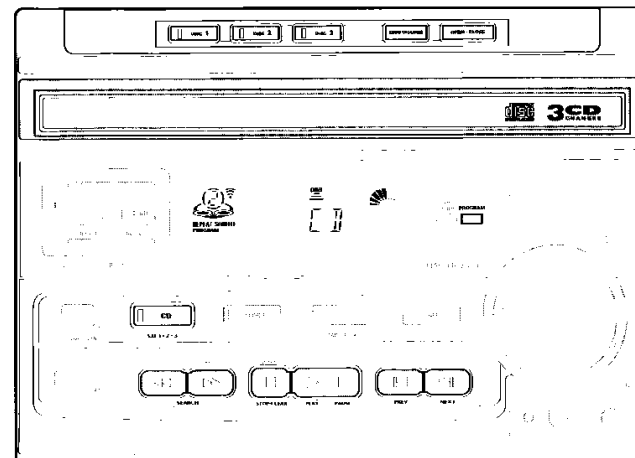
OPERATING THE SYSTEM

Mute (only on remote control)

This feature allows you to temporarily switch off the sound of the system without switching off the system when you require a moment of silence.

- Press **MUTE** on the remote control to switch off the sound.
• "MUTE" will be displayed.
- Press **MUTE** again on the remote control or increase the **VOLUME** level to switch on the sound.

CD



Warning!

- This system is designed for conventional CDs. Do not use any accessories like disc stabilizer rings or CD treatment sheets, etc., which may damage the CD mechanism.
- Do not load more than one disc into each tray.
- When the CD changer is loaded with CD(s), do not turn over or shake the system. This may jam the changer.

You can load up to three discs in the CD changer for continuous playback without interruption.

Loading the CD Changer





- Press **CD** to select CD mode.
- Press **OPEN-CLOSE**.
→ The CD compartment slides out.
- Load a CD with the printed side up in the right tray.
• You can load another disc in the left tray.
- To load the third disc, press the **DISC CHANGE** button.
→ The CD changer carousel will rotate until the empty tray is at the right hand side and is ready for loading.
→ Playback will always start with the disc in the outer right disc tray.
- Press **OPEN-CLOSE** to close the CD compartment.
• The total number of tracks and playing time of the last selected disc appear on the display.

CD Direct Play

You can play a CD directly by pressing the **DISC 1**, **DISC 2** or **DISC 3** button. The CD player will stop at the end of playback of the selected disc.

When the button is lighted, it indicates that there is a disc loaded in the disc tray.

Playing a CD

- Press **PLAY**  to start playback.
• The disc tray, track number and elapsed playing time of the current track appear on the display.
- To interrupt playback, press **PAUSE** .
• The playing time flashes.
- To resume playback, press **PLAY**  again.
- To stop playback, press **STOP-CLEAR** .

Note.

- All the available discs will play once, then stop. When the CD has stopped playing, the system will switch to the standby mode after 15 minutes if no button is pressed

Disc Change

You can change the outer 2 discs while the third inner disc is at the stop or playing mode.

- 1 Press **DISC CHANGE**
 - The CD compartment slides out.
- 2 Replaced the discs in the left and right disc trays.
- If you press **DISC CHANGE** again during playback, the CD will stop playing.
 - The CD carousel tray will rotate until the inner tray is at the right hand side and is ready for changing.
- 3 Press **OPEN-CLOSE** to close the CD compartment.

Selecting a desired track

Selecting a desired track at the stop mode

- 1 Press **PREV** ◀ or **NEXT** ▶ until the desired track appears on the display.
- 2 Press **PLAY** ▶ to start playback.
 - The selected track number and elapsed playing time appear on the display.

Selecting a desired track during playback

- 1 Press **PREV** ◀ or **NEXT** ▶ until the desired track appears on the display.
 - The selected track number and elapsed playing time appear on the display.
 - If you press **PREV** ◀ once it will skip to the beginning of the current track and play the track again.

CD

Shuffle (only on remote control)

It will play all the available discs and their tracks in random order. Shuffle may also be used when tracks are programmed.

To shuffle all the discs and tracks

- 1 Press **SHUFFLE**.
 - "SHUFFLE" will be displayed.
 - The SHUFFLE flag, the disc and the track selected at random appear on the display.
- The discs and the tracks will now be played in random order until you press **STOP-CLEAR** ■.
- If you press **REPEAT** during shuffling, the current track will be played repeatedly.
 - The REPEAT and SHUFFLE flags will be displayed.
- 2 Press **SHUFFLE** again to resume normal playback.
 - The SHUFFLE flag disappears from the display.

Repeat (only on remote control)

It will play the current track repeatedly.

- 1 Press **REPEAT** during CD playback.
 - "REPEAT" will be displayed.
 - The REPEAT flag appears on the display.
 - The track will now be played repeatedly until you press **STOP-CLEAR** ■.
- 2 Press **REPEAT** again to resume normal playback.
 - The REPEAT flag disappears from the display.

Searching for a particular passage during playback

- Press and hold ◀◀ or ▶▶ until the desired passage is located.
 - The volume will be reduced.
- Play returns to normal when ◀◀ or ▶▶ is released.

Programming Tracks

Programming tracks of a loaded CD is possible in the stop mode. The display will indicate the total tracks stored in the program. Up to 40 tracks can be stored in the memory in any order. When 40 tracks are stored and you attempt to store another track, the display will show "PROGRAM FULL".

- 1 Load the desired discs in the disc trays.
- 2 Press **PROGRAM** to start programming.
 - The PROGRAM flag starts flashing.
- 3 Press the **CD** (CD 1 • 2 • 3) button to select the disc.
- 4 Press **PREV** ◀ or **NEXT** ▶ to select the desired track.
- 5 Press **PROGRAM** to store the track.
- Press steps 3 to 5 to store other discs and tracks.
- 6 Press **STOP-CLEAR** ■ once to end programming mode.
 - The total number of tracks programmed and total playing time appear on the display.

Notes:

- If the total playing time is more than "99:59" or if one of the programmed tracks has a number greater than 30, then "----" appears in the display instead of the total playing time.
- During programming, if no button is pressed within 20 seconds, the system will exit program mode automatically.

Playing the program

- 1 Press **PLAY** ▶ to start program playback.
 - "PROGRAM" appears on the display.
 - The track number and elapsed playing time of the current track will appear on the display.
 - If you press **REPEAT** during program playback, the current track will be played repeatedly.
 - The REPEAT and PROGRAM flags will be displayed.
- 2 Press **STOP-CLEAR** ■ to stop program playback.

Note:

- If you press any of the CD DIRECT PLAY buttons, the system will play the selected disc or track and the stored program will be ignored temporarily. The PROGRAM flag will also temporarily disappear from the display and then reappear when the playback for the selected disc ends.

Reviewing the program

Reviewing of the program is only possible in the stop mode.

- Press **PREV** ◀ or **NEXT** ▶ repeatedly to review the programmed tracks.
- Press **STOP-CLEAR** ■ to exit review mode.

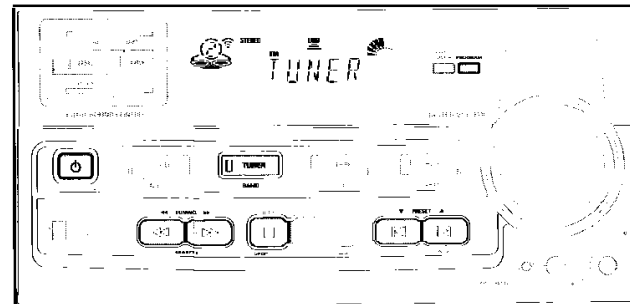
Erasing the program (in the stop mode)

- Press **STOP-CLEAR** ■ on the system.
 - "PROGRAM FULL" will be displayed.

Note:

- The program will be erased when the system is disconnected from the power supply. If the CD carousel is opened, the tracks belonging to the outer two trays will be erased and the display will show "FULL".

TUNER



Easy Set

EASY SET allows you to store all available radio stations in a particular band (FM or MW) automatically.

- Press and hold **STANDBY-ON** (on the system only) for 2 seconds; when the system is in standby or demonstration mode.
 - "EASY SET" will be displayed and followed by "TUNER".
 - EASY SET will start with the last active band.
 - All available radio stations with sufficient signal strength will be stored or until 40 presets are filled.

Notes:

- When EASY SET is used, all previously stored radio stations will be erased.
- The last preset radio station will appear on the display when EASY SET is completed.

Tuning to radio stations

- 1 Press **TUNER** to select TUNER mode.
 - "TUNE" will be displayed.
 - A few seconds later, the current frequency or the radio station name if available will be displayed.
- 2 Press **TUNER** (BAND) again to select the desired waveband : FM or MW.
- 3 Press **TUNING** ◀◀ or ▶▶ for more than one second, then release.
 - The display will show "SEARCH" until a radio station with sufficient signal strength is found.
 - Repeat this procedure until the desired station is reached.
 - To tune to a weak station, briefly press **TUNING** ◀◀ or ▶▶ until the display shows the desired frequency and/or when the best reception has been obtained.

TUNER

Storing Preset Stations

You can store up to 40 radio stations in the memory. When a preset radio station is selected, the preset number appears next to the frequency on the display.

Automatic programming

- 1 Press **TUNER**.
 - 2 Press **TUNER (BAND)** again to select the desired waveband: FM or MW.
 - 3 Press **PROGRAM** for more than one second.
 - PROGRAM flag starts flashing and "PRTY" will be displayed.
 - Every available station for the selected waveband will be stored automatically. The frequency and preset number will be displayed briefly.
 - The system will stop searching when all the available radio stations are stored or when the memory for 40 preset radio stations is used.
 - The system will remain tuned to the last stored preset radio station.
- Repeat the above procedure to store other preset radio stations for the other waveband. Remember to select the next available preset number before proceeding. If not, some of the preset radio stations may be erased.

Notes:

- You can cancel the automatic programming by pressing **PROGRAM** or **STOP•CLEAR** ■ on the system only.
- If you want to reserve a section of preset numbers, for example preset numbers 1 to 9, select preset 10 before starting automatic programming; now only the preset numbers 10 to 40 will be programmed.

Manual programming

- 1 Press **TUNER**.
 - 2 Press **TUNER (BAND)** to select the desired waveband: FM or MW.
 - 3 Press **PROGRAM** for less than one second.
 - PROGRAM flag, the frequency and preset number start flashing.
 - The next available preset number will be displayed for selection.
 - 4 Press **TUNING** ◀◀ or ▶▶ to tune to the desired frequency.
 - If you wish to store the radio station to another preset number, press **PRESET** ▼ or ▲ to select the desired preset number.
 - 5 Press **PROGRAM** again.
 - PROGRAM flag will stop flashing, and the radio station will be stored.
- Repeat the above procedure to store other preset radio stations.

Notes:

- When 40 radio stations are stored and you attempt to store another radio station, the display will show "PROGRAM FULL". If you want to change an existing preset number, repeat steps 4 and 5.
- You can cancel manual programming by pressing **STOP•CLEAR** ■ on the system only.
- During programming, if no button is pressed within 20 seconds, the system will exit program mode automatically.

Tuning to Preset Radio Stations

- Press **PRESET** ▼ or ▲ to select the desired preset number.
 - The preset number, frequency and waveband appear on the display

Changing the MW tuning grid

(not available for all version)

The frequency step can be changed if necessary. In North and South America, the frequency step between adjacent channels in the MW band is 10 kHz. In other parts of the world, it is 9 kHz. The frequency step preset in the factory is 9 kHz.

For MW Band

To change from 9 kHz to 10 kHz or vice versa

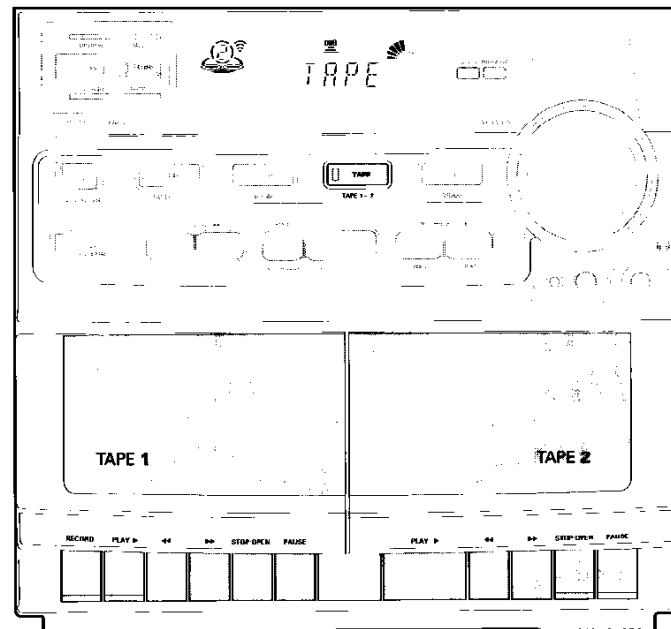
Changing of tuning grid will erase all previously stored preset stations.

- 1 Disconnect the system from the AC power supply (pull out the AC power cord).
- 2 Press and hold **TUNER** and **TUNING** ▶▶ while reconnecting the system to the AC power supply.
 - Display will show "GRID 9" or "GRID 10".

Notes:

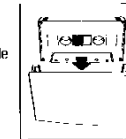
- GRID 9 indicates that the tuning grid is in step of 9 kHz in MW band. GRID 10 indicates that the tuning grid is in step of 10 kHz in MW band.
- FM tuning grid will also be changed from 50 kHz to 100 kHz or vice versa. All preset stations will also be erased.

TAPE



Loading a tape

- Press **STOP•OPEN**.
- The tape deck door opens.
- Load the tape with the open side downward and the full spool to the left.
- Close the tape deck door.



Tape Playback

- 1 Press **TAPE (TAPE 1•2)** to select TAPE mode.
 - "TAPC" will be displayed.
- 2 Load the tape into the selected tape deck.
- 3 Press **PLAY** ▶ to start playback.
 - To interrupt playback, press **PAUSE**.
 - To resume playback, press **PAUSE** again.
- 4 Press **STOP•OPEN** to end playback.

Rewind/Fast Forward

At the stop mode

- 1 You can rewind or fast forward a tape by pressing ◀◀ or ▶▶ respectively.
 - The tape will stop automatically at the end of rewinding or fast forwarding.
- 2 Press **STOP•OPEN** to stop rewinding or fast forwarding.

TAPE

Continuous Playback From Tape Deck 2 to Tape Deck 1

- 1 Press **TAPE** to select TAPE mode.
- 2 Load the tapes in **tape deck 1** and **2**.
- 3 Press **PLAY** on **tape deck 2**.
- 4 Press **PAUSE** on **tape deck 1**.
- 5 Press **PLAY** on **tape deck 1**
 - Playback will begin with tape deck 2 and will continue with tape deck 1 when playback on tape deck 2 ends.
- 6 Press **STOP-OPEN** if you want to stop playback before the end of the tape in **tape deck 1** or **tape deck 2**.

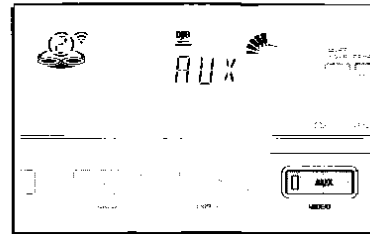
Notes:

During rewinding or fast forwarding of a tape, it is also possible to select another source mode (e.g. CD, TUNER or AUX mode)

Check and tighten slack tape before use with a pencil. Slack tape may get jammed or may burst in the mechanism.

- C-170 tape is extremely thin and is easily delaminated or damaged. It is not recommended for use in this system. Store the tapes at room temperature and do not put them too close to a magnetic field (for example, a transformer, TV or loudspeaker boxes)

AUX



Selecting External Equipment

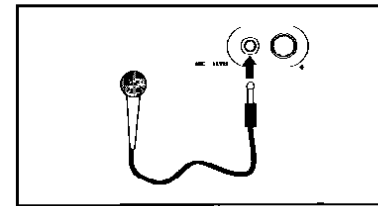
If you have connected the audio out terminals of the external equipment (TV, VCR, Laser Disc or DVD player) to the AUX IN terminals, you can hear the enhanced sound from the system.

- Press **AUX** to select the external mode.
 - "AUX" will be displayed.

Note:

All the sound control features (e.g. DSC, DBB, etc.) are available for selection.

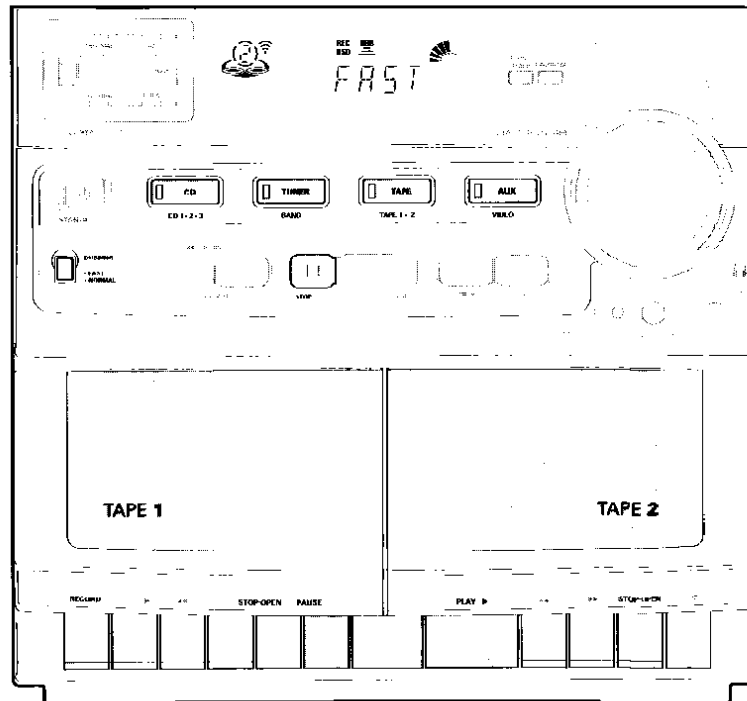
KARAOKE



Microphone Mixing (not available for all version)

- 1 Set the **MIC LEVEL** control to the minimum level to prevent acoustic feedback (e.g. a loud howling sound) before you connect the microphone.
- 2 Connect a microphone to the **MIC** socket.
- 3 Press **CD**, **TUNER**, **TAPE** or **AUX**.
- 4 Play the selected source.
- 5 Adjust the volume level with **VOLUME** control.
- 6 Adjust the **MIC LEVEL** control to the mixing level that you want.
- 7 Start singing or talking through the microphone.

RECORDING



Notes:

- For recording, use only tape of IEC type I (normal tape). The tape is secured at both ends with leader tape. At the beginning and end of tape, nothing will be recorded for six to seven seconds.
- The recording level is set automatically, regardless of the position of Volume or DBB.
- To prevent accidental recording, break out the tab on the left shoulder of the tape side you want to protect.

One Touch Recording

- For One Touch Recording, as soon as you press **RECORD**, the current source will be recorded on tape deck 1.
- 1 Load a blank tape in tape deck 1.
 - 2 Press **RECORD** on tape deck 1 to start recording.
 - The REC flag starts flashing.
 - 3 Press **PAUSE** to interrupt recording.
 - 4 Press **STOP-OPEN** on tape deck 1 to stop recording.

RECORDING

Dubbing tapes (from tape deck 2 to tape deck 1)

- 1 Load the prerecorded tape into tape deck 2 and a blank tape into tape deck 1.
 - Make sure that both tapes have their full spool to the left.
- 2 Press **DUBBING** to switch between normal and high speed dubbing.
 - "NORMAL" (normal speed) or "HSD" (high speed) will be displayed.
 - HSD flag appears on the display for high speed dubbing.
- 3 Press **PAUSE** on tape deck 1.
- 4 Press **RECORD** on tape deck 1.
- 5 Press **PLAY** on tape deck 2.
 - Recording will start automatically.
 - The REC flag starts flashing.
- 6 Press **STOP•OPEN** on tape deck 1 and tape deck 2 to stop dubbing.

Notes:

- At the end of side A, flip the tapes to side B and repeat the procedure.
- Dubbing of tapes is only possible from tape deck 2 to tape deck 1.
- To ensure good dubbing, use tapes of the same length. During high speed dubbing in tape mode, the sound is reduced to a low volume.

CD Synchro Start Recording

- During CD synchro start recording,
- It is not advisable to fast forward/rewind your tape in tape deck 2
 - It is not possible to listen to another source.
- 1 Load a blank tape into tape deck 1 and a disc into the disc tray.
 - 2 Press **CD**.
 - You can program the tracks in the order you want them to be recorded (see Programming Tracks). If not, the tracks are recorded according to the selected disc.
 - 3 Press **RECORD** on tape deck 1 to start recording.
 - 4 Press **STOP•OPEN** on tape deck 1 to stop recording and **STOP•CLEAR** ■ to stop CD playback.

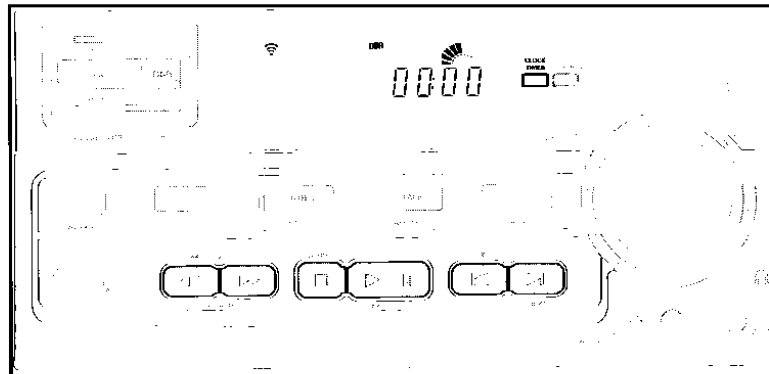
Recording from other sources (only on tape deck 1)

- 1 Load a blank tape into tape deck 1.
- 2 Press **CD, TUNER, TAPE** or **AUX**.
 - Start playback of the selected source.
- 3 Press **RECORD** on tape deck 1 to start recording.
 - The REC flag is flashing.
- 4 Press **PAUSE** to interrupt recording.
- 5 Press **STOP•OPEN** on tape deck 1 to stop recording.

Note:

- During recording, it is not possible to listen to another sound source.

TIMER



Timer Setting

- The system can switch on to CD or TUNFR mode automatically at a preset time. It can serve as an alarm to wake you up. After half an hour from the preset time, the system will return to the standby mode if no button is pressed.
- Before setting the timer, make sure the clock is set correctly.
- The timer has to be reset or start again for each subsequent preset time.
- **The volume of the timer will be at the last setting before the set is switched to standby mode.**

- 1 Press and hold **CLOCK•TIMER** for more than 2 seconds to select timer mode.
 - "IN 00 00" or the last set timer starts flashing. The TIMER flag flashes.
 - The last selected source is lighted while other available sources are flashing.
 - "◀▶", "◀▶", "◀▶", "■" light up.
- 2 Press **CD** or **TUNER** to select the desired source.
- 3 Press **◀▶** or **▶▶** to set the hour for the timer to start.
- 4 Press **◀▶** or **▶▶** to set the minute for the timer to start.
- 5 Press **CLOCK•TIMER** to store the start time.
 - The TIMER is now set.
 - The TIMER flag remains on the display.

View Clock

You can view the clock (if it is set) at standby or any source mode. It will be displayed for about 7 seconds.

- Press **CLOCK•TIMER** briefly.
 - "10:25" (the current time) will be displayed.
 - "----" will be displayed if the clock is not set.

Clock Setting

The clock is set in 24-hour mode, e.g. "00:00" or "23:59". Before setting the clock, you must be in the View Clock mode.

- 1 Press **CLOCK•TIMER** to select clock mode.
 - "00:00" or the current time starts flashing.
 - "◀▶", "▶▶", "◀▶", "▶▶", "■" light up.
 - 2 Set the hour with **◀▶** or **▶▶**.
 - 3 Set the minute with **◀▶** or **▶▶**.
 - 4 Press **CLOCK•TIMER** again to store the setting.
 - The clock starts running.
- In exit without storing the setting, press ■.

Notes:

- During clock setting, if no button is pressed within 90 seconds, the system will exit clock setting mode automatically.
- When a power interruption occurs, the clock setting is erased.

- In exit without storing the setting, press ■.
- At the preset time, the TIMER will be activated.
 - The selected source will be played.
 - The TIMER flag disappears from the display.

Notes:

- During timer setting, if no button is pressed within 90 seconds, the system will exit timer setting mode automatically.
- If the source selected is TUNFR, the last tuned frequency will be switched on.
- If the source selected is CD, playback will begin with the first track of the last selected disc. If the CD trays are empty, the TUNER will be selected instead.

To cancel the TIMER

- 1 Press **CLOCK•TIMER** for more than 2 seconds.
- 2 Press **■** to cancel the timer.
 - "TUN FR" will be displayed.
 - The TIMER flag disappears from the display.

To start the TIMER again (for the same time)

- 1 Press **CLOCK•TIMER** for more than 2 seconds.
- 2 Press **CLOCK•TIMER** again to store the start time and the selected source.

MAINTENANCE

Maintenance

Cleaning the Cabinet

- Use a soft cloth slightly moistened with a mild detergent solution. Do not use a solution containing alcohol, spirits, ammonia or abrasives.

Cleaning Discs

- When a disc becomes dirty, clean it with a cleaning cloth. Wipe the disc from the center out.
- Do not use solvents such as benzene, thinner, commercially available cleaners, or antistatic spray intended for analog records.



Cleaning the CD lens

- After prolonged usage, dirt or dust may accumulate at the CD lens. To ensure good playback quality, clean the CD lens with Philips CD Lens Cleaner or any commercially available. Follow the instructions supplied with the Lens Cleaner.

Cleaning the Heads and the Tape Paths

- To ensure good recording and playback quality, clean the heads, the capstan(s), and pressure roller(s) after every 50 hours of tape operation.
- Use a cotton swab slightly moistened with cleaning fluid or alcohol.
- You can also clean the heads by playing a cleaning tape through once.

Demagnetizing the heads

- Use a demagnetizing tape available at your dealer.

TROUBLESHOOTING

Warning! Under no circumstances should you try to repair the system yourself, as this will invalidate the warranty.

- If a fault occurs, check the points listed below before taking the system for repair.
- Should any problems persist after you have made these checks, consult your nearest dealer or service center.

CD Player Operation

- **"NO DISC" is displayed.**
 - The disc is inserted upside down.
 - Place CD with printed side up.
 - Moisture condensation at the lens.
 - Wait until lens has adjusted to normal room temperature.
 - There is no disc in the CD tray.
 - Insert a CD.
 - The CD is dirty, badly scratched or warped.
 - Clean or replace the CD.
 - The CD lens is dirty or dusty
 - See section under Maintenance

Radio Reception

Poor radio reception

- The signal strength is too weak.
 - Adjust the antenna.
- The TV or VCR is too close to the stereo system.
 - Separate the stereo system from the TV or VCR.
- Connect an external antenna for better reception.

Tape Deck Operation

- **"RECORDING HELPER" is displayed.**
 - A recording is in progress.
 - Stop the recording or wait until it is finished.
- **"TAPE DUBBING TIME 4" is displayed.**
 - Tape dubbing is only possible in tape mode.
 - Switch source to tape mode.

Recording or playback cannot be made or there is a decrease in audio level.

- Dirty tape heads, capstans or pressure rollers.
 - See section on tape deck maintenance.
- Magnetic build-up in the record/playback head.
 - Use demagnetizing tape.

General

- **System does not react when any button is pressed.**
 - Electrostatic discharge.
 - Press STANDBY-ON to switch the system off. Remove the AC power plug from the wall outlet, then reconnect and switch on the system again.

No or poor sound.

- Volume is not turned up.
 - Adjust VOLUME.
- The system is muted.
 - Press MUTE to switch on the sound.
- The headphones are connected.
 - Disconnect the headphones.
- Speakers are not connected or are connected wrongly.
 - Check that the speakers are connected correctly.
 - Make sure that the stripped speaker wire is clamped.

Reversed left and right sound.

- Speakers are connected wrongly.
 - Check the speaker connections and location.

Lack of bass sound or apparently imprecise physical location of musical instruments.

- Speakers are connected wrongly.
 - Check the speaker connection for proper phasing, red/black wires to red/black terminals.


Remote control has no effect on the system.

- The distance to the system is too large.
 - Reduce the distance.
- Batteries are inserted incorrectly.
 - Insert the batteries with their polarities (+/- signs) as indicated
- Batteries are exhausted.
 - Replace the batteries.
- Wrong source is selected.
 - Select the source (CD, TUNER, etc.) before pressing the function button, (PLAY, PREV/NEXT, etc.).

Timer not working.

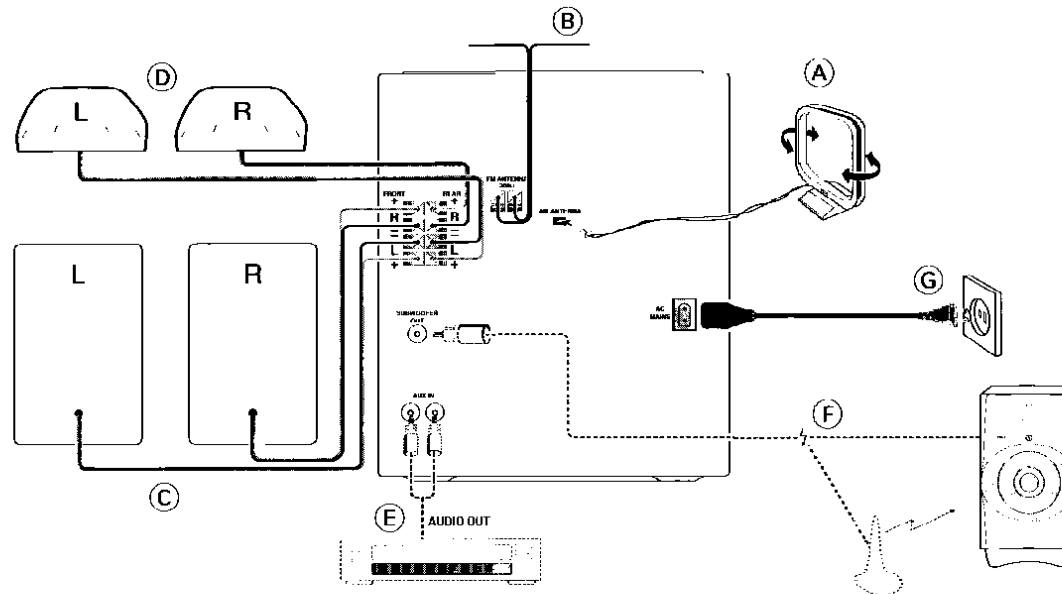
- Timer is not switched on.
 - Press CLOCK/TIMER to switch on the timer.
- Dubbing/recording is in progress.
 - Stop dubbing/recording.

System displays features automatically; buttons flash continuously.

- Demonstration mode is switched on.
 - Press and hold  for 3 seconds to switch off the demonstration.

ADDITIONAL FEATURES FOR FW65C & FW386C

PREPARATION



(A) AM Antenna Connection

Connect the supplied loop antenna to the AM ANTENNA terminal. Place the AM loop antenna far away from the system and adjust its position for the best reception.

(B) FM Wire Antenna Connection

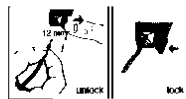
Connect the supplied FM wire antenna to the FM ANTENNA 300 Ω terminal. Adjust the position of the FM antenna for the best reception.

Outdoor Antenna

For better FM stereo reception connect an outdoor FM antenna to the FM ANTENNA 300 Ω terminal using a 300 Ω dipole wire.

(C) Speaker Connections

- Connect the right speaker to Front terminal R, with the red wire to + and the black wire to -.
- Connect the left speaker to Front terminal L, with the red wire to + and the black wire to -.
- Clip the stripped portion of the speaker wire as shown.



(D) Surround Speakers Connection

(for FW386C and FW65C only)

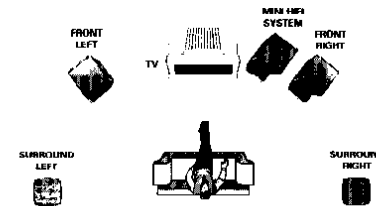
4-Speakers Connection

- **Front speakers**: Connect the black wires to the black FRONT terminals and the red wires to the red FRONT terminals.

- **Rear (surround) speakers**: Connect the black or non-marked wires to the black REAR terminals and the white or marked wires to the grey REAR terminals.

Positioning the Speakers

To get the best surround sound effect, place the speakers as follow.



Front Left and Right Speakers

For best listening effect, it is recommended to have the Left and Right speakers to form an angle of approximately 45 degrees to the listener. Should the magnetic field from the speakers affect the picture of the television, you should increase the separation distance.

Rear (surround) Speakers

The surround speaker should be placed at normal listening ear level. It can also be mounted on the wall at the back of the room. Most important, sometimes you need to experiment creatively when placing the surround speakers in order to obtain the most ideal sound projection.

(E) Connecting other equipment to your system

You can connect the audio left and right OUT terminals of a TV, VCR, Laser Disc or DVD player to the AUX IN terminals at the rear of the system.

(F) Subwoofer Out Connection

You can connect either an optional active subwoofer or an optional wireless active subwoofer to the SUBWOOFER OUT terminal. The wireless system uses a radio frequency transmitter. The subwoofer reproduces just the low bass effect (e.g. explosions, the rumble of the spaceships, etc.). Be sure to follow the instructions supplied with the subwoofer unit.

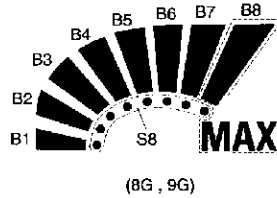
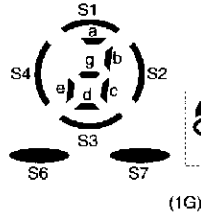
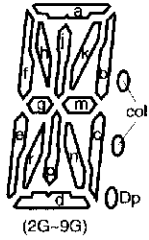
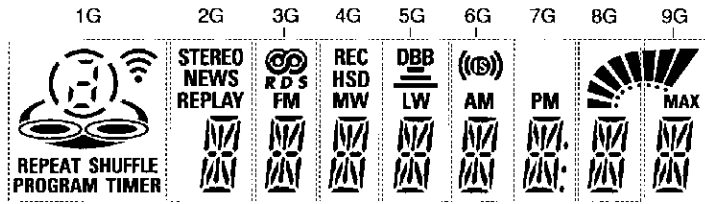
Note:

Availability of wireless transmitter and its peripherals are subjected to the approval of local authorities. Please check with respective local safety or approving authority.

(G) AC Power Supply

After all other connections have been made, connect the AC power cord to the system and to the wall outlet.

LCD DISPLAY PIN CONNECTIONS



	1G	2G	3G	4G	5G	6G	7G	8G	9G
P1	S1	a	a	a	a	a	a	a	a
P2	S2	h	h	h	h	h	h	h	h
P3	S3	j, p	j, p	j, p	j, p	j, p	j, p	j, p	j, p
P4	S4	k	k	k	k	k	k	k	k
P5	b	b	b	b	b	b	b	b	b
P6	c	f	f	f	f	f	f	f	f
P7	a, d, g	m	m	m	m	m	m	m	m
P8	e	g	g	g	g	g	g	g	g
P9	S5	c	c	c	c	c	c	c	c
P10	S6	e	e	e	e	e	e	e	e
P11	S7	r	r	r	r	r	r	r	r
P12	SHUFFLE	n	n	n	n	n	n	n	n
P13	REPEAT	d	d	d	d	d	d	d	d
P14	TIMER	STEREO	RDS	REC	DBB	()	PM	S8	
P15	PROGRAM	REPLAY	FM	HSD	LW	AM	col	B5	
P16		NEWS	-	MW			Dp	B6	
P17	-	-	-	-	-	-	-	B1	-
P18	-	-	-	-	-	-	-	B2	-
P19	-	-	-	-	-	-	-	B3	-
P20	-	-	-	-	-	-	-	B4	-
P21	-	-	-	-	-	-	-	-	B7
P22	-	-	-	-	-	-	-	-	B8

Front Board application

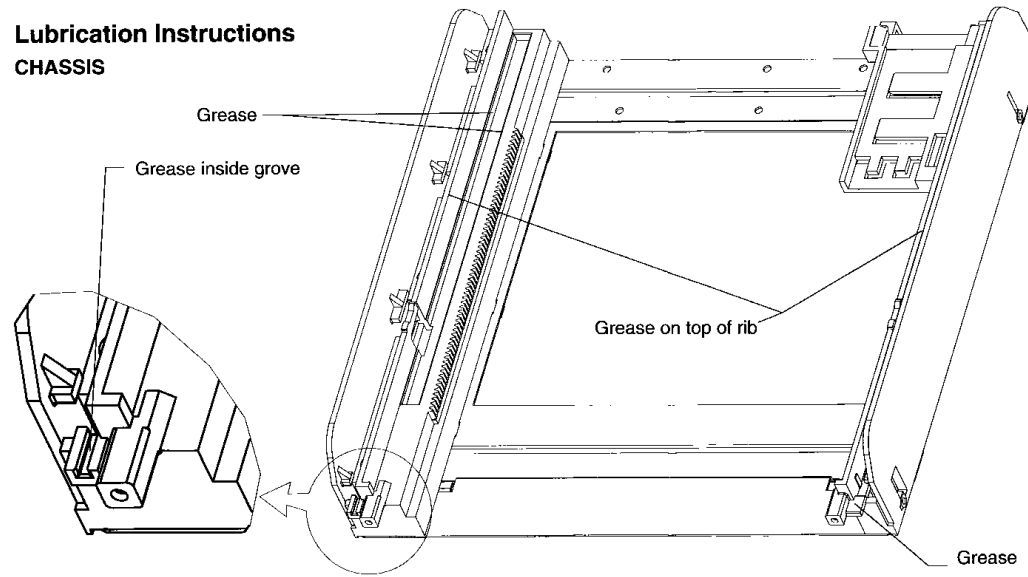
A51200	FW45C/37, FW320C/21/21M/22/37
A51220	FW55C/37
A51240	FW350C/22/34
A51350	FW390C/21/21M
A51360	FW390C/37
A51370	FW390C/21/21M, FW398C/21/21M
A51380	FW390C/22/34
A51390	FW390V/21/21M
A51400	FW65C/37, FW380C/37, FW386C/37

Variations table for Front Board

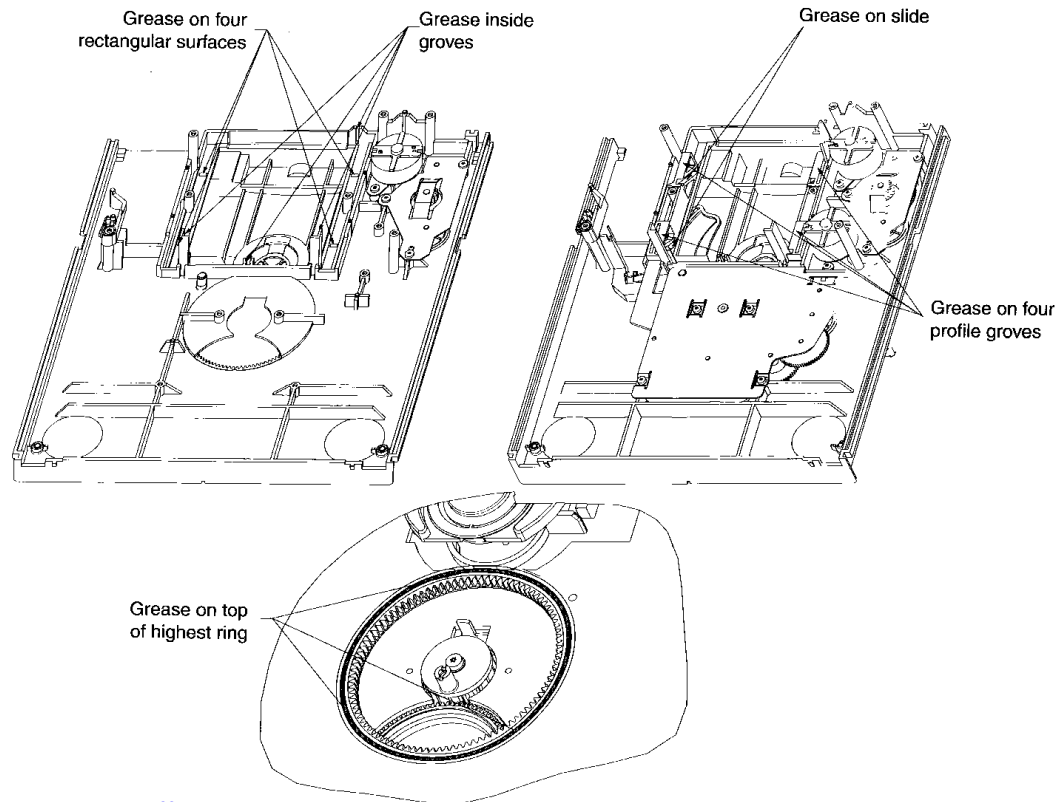
ITEM NO.	A51200	A51220	A51240	A51350	A51360	A51370	A51380	A51390	A51400
DM21	x	x	-	x	-	-	-	-	x
DM23	-	-	-	-	-	-	-	x	-
DM26	x	x	-	x	x	x	-	x	x
DM27	-	-	x	-	x	x	x	x	-
1405	-	-	x	-	x	x	x	x	-
1408	-	-	x	-	x	x	x	x	-
1409	-	-	x	-	x	x	x	x	-
1416	-	-	x	-	-	-	x	x	-
1419	-	-	x	-	-	-	x	-	-
1423	-	-	-	-	x	x	x	x	-
1424	x	-	-	-	-	-	-	-	-
1425	x	-	-	-	-	-	-	-	-
2421	2,2µF	22µF	22µF	22µF	22µF	22µF	22µF	22µF	22µF
2431	-	-	-	-	-	-	-	100nF	-
2432	-	-	100pF	-	-	-	100pF	-	-
2433	-	-	47pF	-	-	-	47pF	-	-
3407	-	-	-	-	2k7	2k7	2k7	2k7	-
3478	1k	1k	1k	1k	1k	1k	1k	-	1k
3479	100R	100R	100R	100R	100R	100R	100R	-	100R
3509	1k	1k	1k	1k	1k	1k	1k	-	1k
3512	1k	1k	-	1k	-	-	-	-	1k
3539	10k	10k	-	10k	10k	10k	-	10k	10k
3541	-	-	1k	-	-	-	1k	-	-
3546	10k	10k	-	10k	10k	10k	-	10k	10k
3577	-	-	-	-	12k	12k	12k	12k	-
3578	-	-	-	-	5k6	5k6	5k6	5k6	-
3584	-	-	-	-	-	-	-	47k	-
3585	-	-	-	-	-	-	-	47k	-
3586	-	-	47k	-	47k	-	47k	47k	-
3587	-	-	-	-	-	-	-	47k	-
4400	x	x	-	x	-	-	-	-	x
4403	x	x	x	x	x	x	x	-	x
4501	x	x	x	-	-	-	-	-	-
4600	-	-	-	-	-	-	-	x	-
5403	-	-	2,2µH	-	-	-	2,2µH	-	-
6402	-	-	-	-	x	x	x	x	-
6419	x	x	x	x	-	-	-	-	x
6421	x	-	-	-	-	-	-	-	-
6424	-	-	-	x	-	x	-	x	-
6427	x	x	x	-	-	-	-	-	-
FEATURE:									
FIDS	-	-	x	-	-	-	x	-	-
CTRL LIT.	-	-	-	x	x	x	x	x	x
Rotary Encoder	-	x	x	x	x	x	x	x	x
Digital Out	-	-	-	-	x	x	x	-	-

x = Item in use.

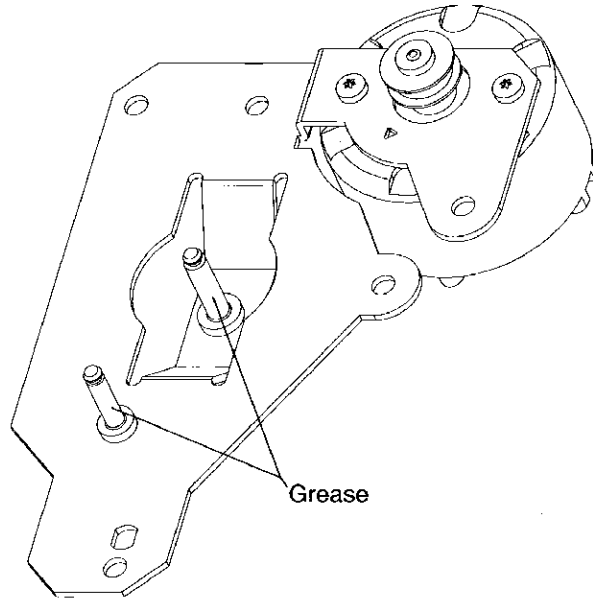
**Lubrication Instructions
CHASSIS**



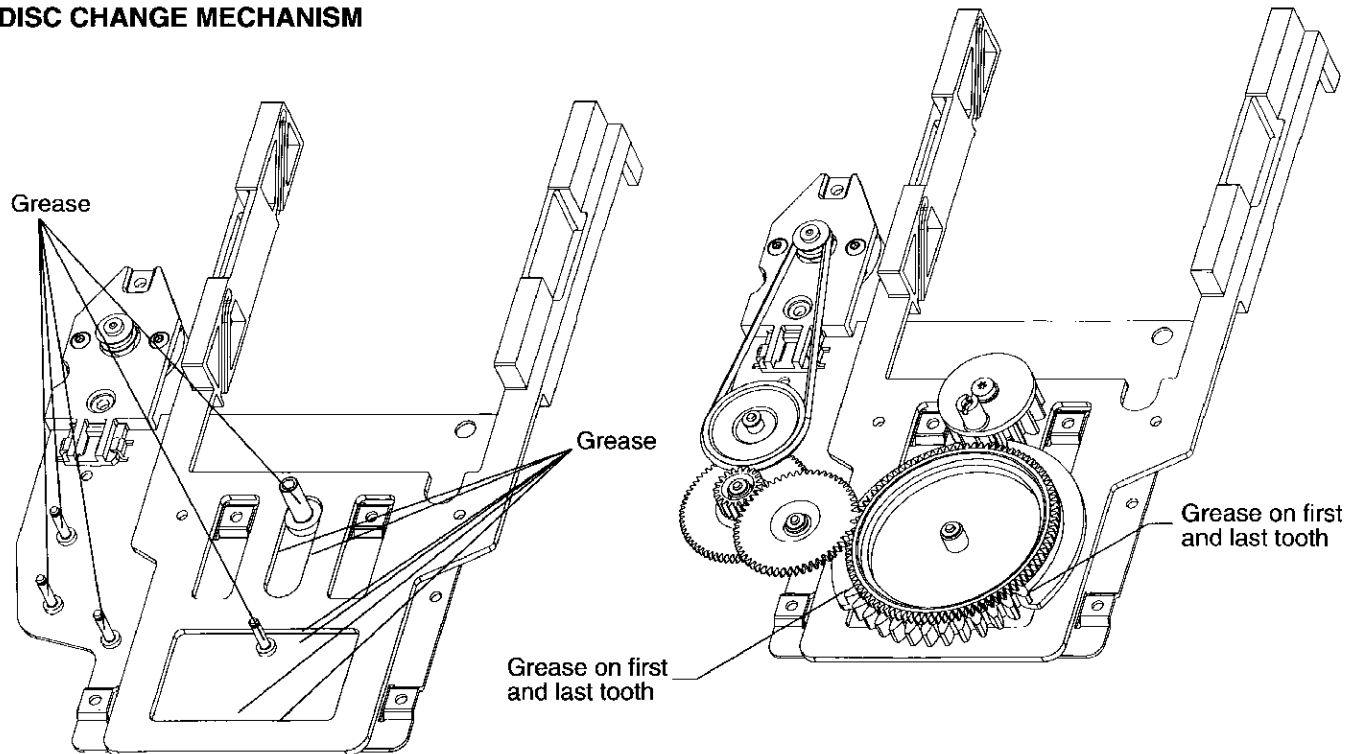
DRAWER



DRAWER MECHANISM



DISC CHANGE MECHANISM



Use only grease **Polylub GLY 801** service code number 4822 390 10136

A. TRANSFORMER PRIMARY PART

Transformer Primary Circuit provide connection for AC mains supply and primary wires of transformer.

B. POWER SUPPLY PART

Power Supply Circuit consists of rectifiers, capacitive filters and voltage regulators. Regulated voltage include +5V6, +12A, +12M, -26V, PWDN. The +C supply to the power amplifier is not regulated. F1-F2 is the ac supply voltage to the FTD Display filament.

C. SOURCE SELECT & AMPLIFIER PART

a) SHIFT REGISTER (AF CONTROL)

This shift register deliver commands from the μ P to control the AF functions which include source selection (A0 & A1 control lines), DSC modes, DBB, IS and CD_ON. Other control lines such as MUTE, AMPON, STBY and PWM are coming directly from the μ P on the Front board.

b) SOURCE SELECTION

One of the 4 sources, namely AUX, TAPE, TUNER, CD, can be selected via A0 & A1 lines which control the IC 7501 (HEF4052BT). Karaoke mic. mixing is connected to the selected source before the signal is amplified with a buffer amplifier (Tr 7503 & 7504). The source signal is then split into recording path (for recording on tape) and main signal path (to the PWM volume control).

c) PWM VOLUME CONTROL

The discrete volume control makes use of 4 Transistors 7505, 7506, 7507 & 7508 (BC557B or ON4986) and PWM control signal from μ P. For good performance transistors for the left and right channels should be paired for gain characteristics.

d) SOUND FEATURES

Sound Features include the DBB, IS and 4 DSC modes. The sound features are realised with a hex-inverter IC 7530 (HEF4069BT) as analog buffer/amplifier and transistors as electronic switches controlled by the shift registers (AF control).

e) POWER AMPLIFIER

IC 7391 (AN7125) is used as power amplifier.

f) CD ON CONTROL

This circuit switches on the supply +CD supply (derived from +12A) to CD servo control, HF circuit and the laser light pen on the CD Module during the CD mode only.

g) MATRIX SURROUND OUTPUT

The matrix surround feature is provided on board. This feature is only optional on certain type version.

D. KARAOKE & HEADPHONE PART

a) SIMPLE KARAOKE

This is a 1-mic. mono amplifier using discrete components. It has a level control using a rotary potmeter. This feature is available for some version only.

g) HEADPHONE OUTPUT

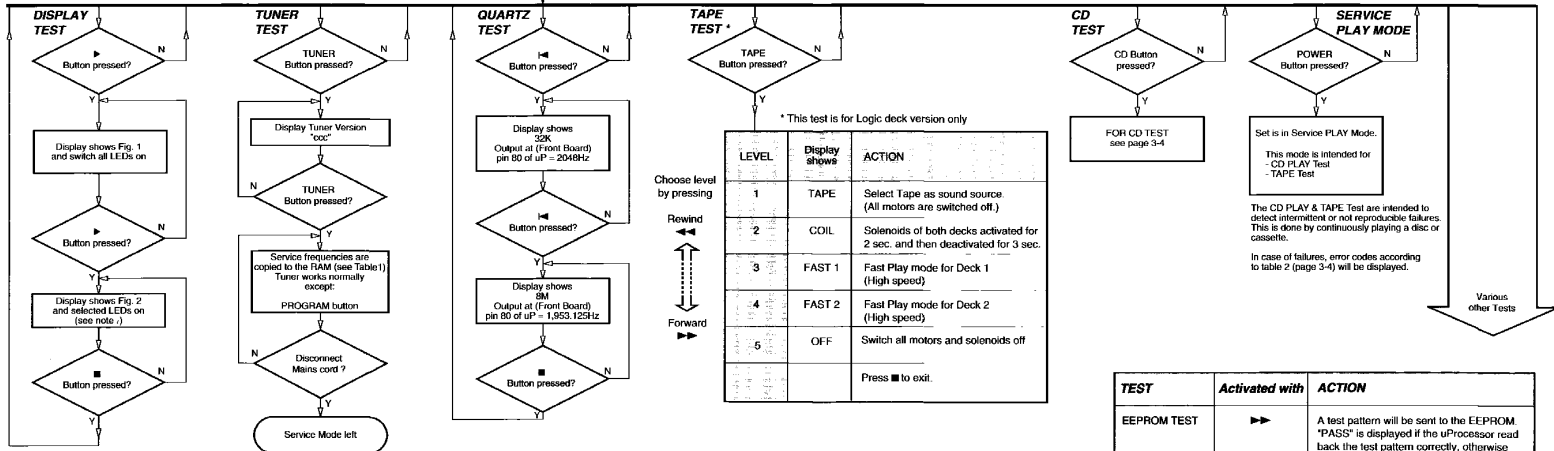
The headphone output is derived from the power amplifier output after the attenuation resistors which are tailored to deliver 18mW output power into a 32 ohm headphone.

SERVICE TEST PROGRAM I

To start service test program hold **▶** & **PROGRAM** depressed while plugging in the mains cord

Display shows the ROM version "S-Vyy"
(Main menu)

S refers to Service Mode.
V refers to Version.
yy refers to Software version number of μ Processor.
(Counting up from 01 to 99)



* This test is for Logic deck version only

LEVEL	Display shows	ACTION
1	TAPE	Select Tape as sound source. (All motors are switched off.)
2	COIL	Solenoids of both decks activated for 2 sec. and then deactivated for 3 sec.
3	FAST 1	Fast Play mode for Deck 1 (High speed)
4	FAST 2	Fast Play mode for Deck 2 (High speed)
5	OFF	Switch all motors and solenoids off

Press **■** to exit.

PRESET	Europe "EUR"	East Eur. "EAS"	East Eur. Extended-band "EAS"	USA "USA"	Oversea "OSE"
1	87.5MHz	87.5MHz	65.81MHz	87.5MHz	87.5MHz
2	108MHz	108MHz	108MHz	108MHz	108MHz
3	531kHz	531kHz	74MHz	530kHz	531/530kHz
4	1602kHz	1602kHz	87.5MHz	1700kHz	1602/1700kHz
5	558kHz	558kHz	531kHz	560kHz	558/560kHz
6	1494kHz	1494kHz	1602kHz	1500kHz	1494/1500kHz
7	153kHz	87.5MHz	558kHz	98MHz	87.5MHz
8	279kHz	87.5MHz	1494kHz	87.5MHz	87.5MHz
9	198kHz	87.5MHz	98MHz	87.5MHz	87.5MHz
10	98MHz	87.5MHz	70.01MHz	87.5MHz	87.5MHz
11	87.5MHz	98MHz	65.81MHz	87.5MHz	98MHz

Table 1

East Europe TUNER IF offset correction

- 1) Input a reference frequency 87.5MHz from the generator.
- 2) Proceed to the Tuner Test Mode
- 3) Hold TUNER button down for > 3 seconds
- 4) The set will self-calibrate automatically and display "OFS-xx" when calibration is successful, otherwise it will display "00E".

xx : offset value between -3 to +3

Note: This has to be done whenever the Eeprom, Microprocessor or the components in the oscillator circuitry are replaced.

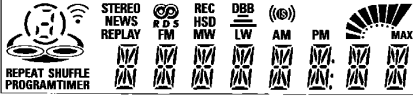


Figure 1

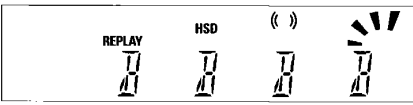


Figure 2

note : CDC1, CDC3, CD, Tape, Aux, ◀, ▶ and ■

TEST	Activated with	ACTION
EEPROM TEST	▶▶ ■ to Exit	A test pattern will be sent to the EEPROM. "PASS" is displayed if the μ Processor read back the test pattern correctly, otherwise "ERROR" will be displayed.
EEPROM FORMAT	◀◀	Load default data. Display shows "NEW" for 1 second. Caution! All presets from the customer will be lost!
KEY TEST	▶ ■ to Exit	Key numbers according table 3 are shown on the display. (see Chapter 3-4)
FAST CLOCK TEST	CLOCK/TIMER	The clock is switched to fast mode. "FAST" is displayed for 1 sec. Press CLOCK/TIMER again to reset the clock to normal. "NORMAL" displayed for 1 sec.
VOLUME TEST	Volume Knob	Display shows volume value for 2 seconds. Volume increases or decreases in steps of 1 until 0 (Min.) or 40 (Max.) is reached.
LEAVE SERVICE TESTPROGRAM	Disconnect mains cord	

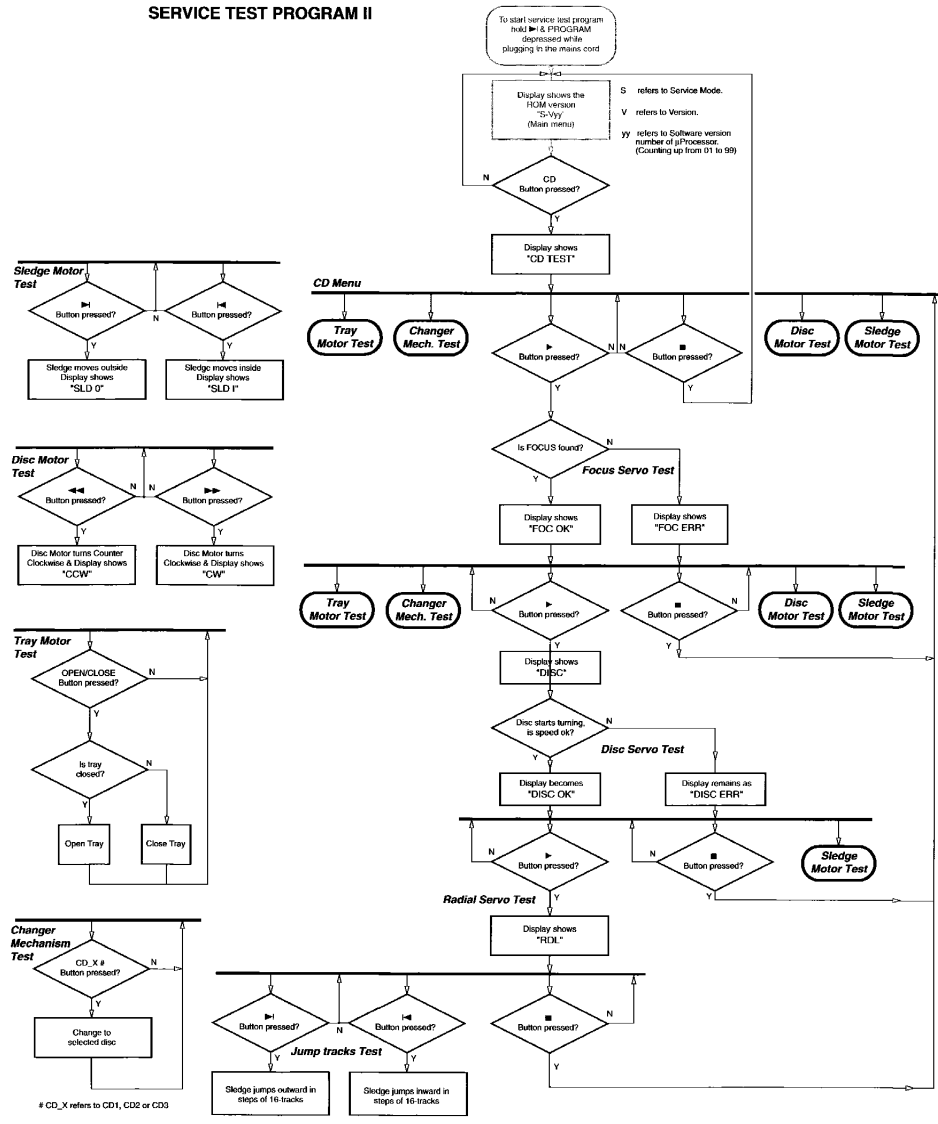
Error code	Type	Error Description
E1000	W	Focus Error Triggered when the focus could not be found within a certain time when starting up the CD or when the focus is lost for a certain time during play.
E1001	W	Radial Error Triggered when the radial servo is off-track for a certain time during play.
E1002	W	Sledge In Error The sledge did not reach its inner position (inner-switch is still close) before approximately 6 Sec. have passed. Inner-switch or sledge motor problem.
E1003	W	Sledge Out Error The sledge did not come out of its inner position (inner-switch is still open) before approximately 250 mSec. have passed by. Inner-switch or sledge motor problem.
E1005	W	Jump-off-track error Triggered in normal play when the jump destination could not be found within a certain time.
E1006	W	Subcode Error (no subcode within time) Triggered when a new subcode was missing for a certain time during play.
E1007	W	PLL Error The Phase Lock Loop could not lock within a certain time.
E1008	W	Turntable Motor Error Generated when the CD could not reached 75% of speed during startup within a certain time. Discmotor problem.
E1020	F	Focus Search Error The focus point has not been found within a certain time.
E1070	W	The carousel switch is not open within certain time. This can happen when either the switch is defective and closed all the time, or when the carousel is blocked in between two disc positions. The time-out is approximately 5 Sec.
E1071	W	The carousel position switch did not close within a certain time. This can happen when the switch is defective and never closes electrically, or when the carousel is blocked in between two disc positions. The time-out is approximately 5 Sec.
E1079	W	The drawer could not enter the inside position is opening again. This can be caused because the drawer is blocked by something and cannot go fully inside, or the drawer switch is defective and does not close.
E2020*	F	Head Movement Error Deck 1 Generated if the head does not reach the desired position within a certain time.
E2021*	F	Head Movement Error Deck 2 Generated if the head does not reach the desired position within a certain time.

F = Fatal error & the set stop play function
 * For Logic set only.

Keys activated	Display shows	Keys activated	Display shows	Keys activated	Display shows
No Key pressed	--	CLOCK /TIMER	10	RECORD *	21
Any Remote control key	RC	PROGRAM	11	REPLAY *	22
CD1 *	1	INCR. SURROUND *	12	◀◀	23
CD2 *	2	VOLUME UP *	13	▶▶	24
CD3 *	3	VOLUME DOWN *	14	■	Exit
DISC CHANGE	4	STANDBY - ON	15	▶▶	26
OPEN / CLOSE	5	CD	16	◀	27
DSC	6	TUNER	17	▶	28
DBB	7	TAPE	18		
RDS *	8	AUX	19		
NEWS *	9	DUBBING	20		

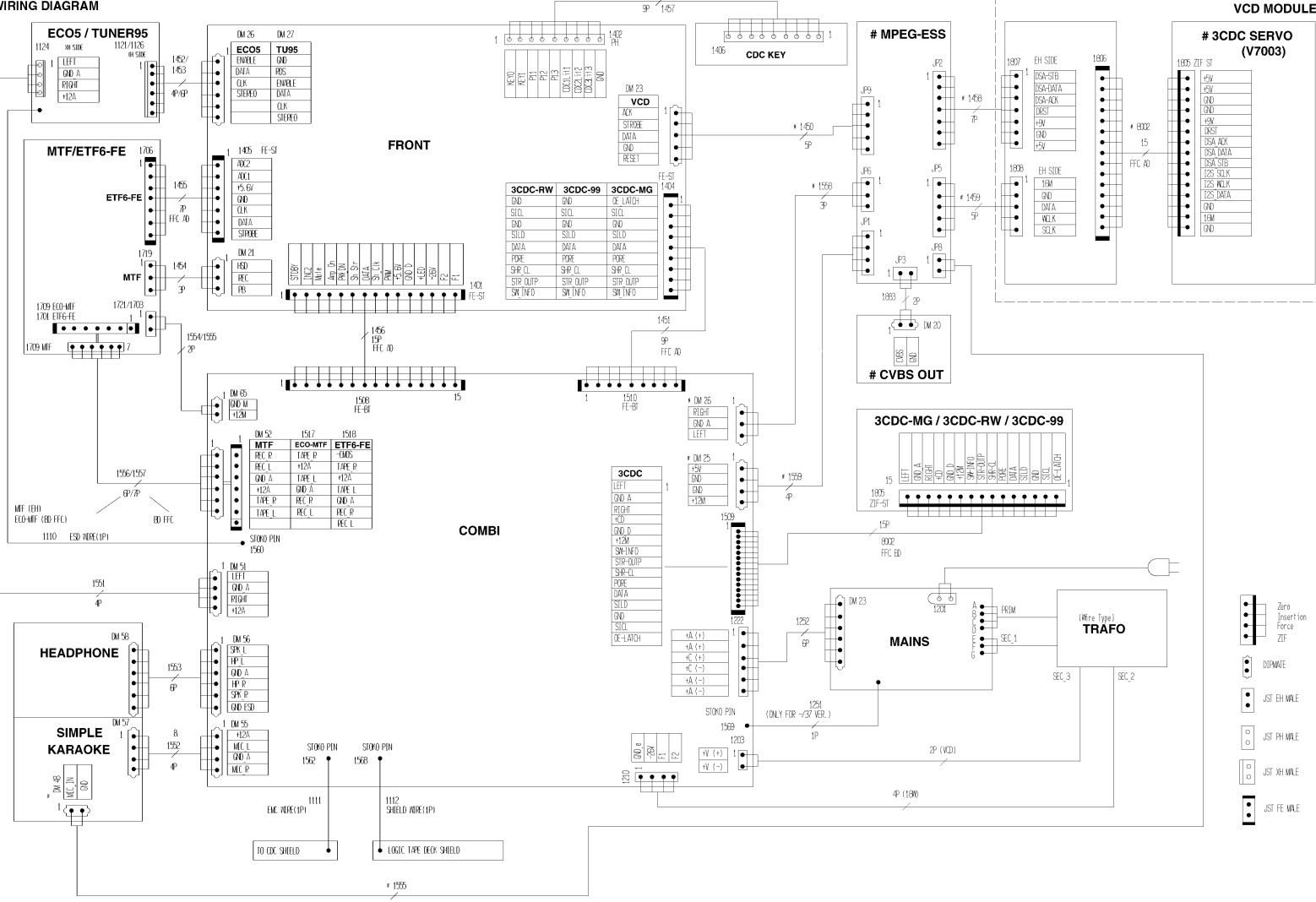
* Not for all type/version
 Table 3

SERVICE TEST PROGRAM II



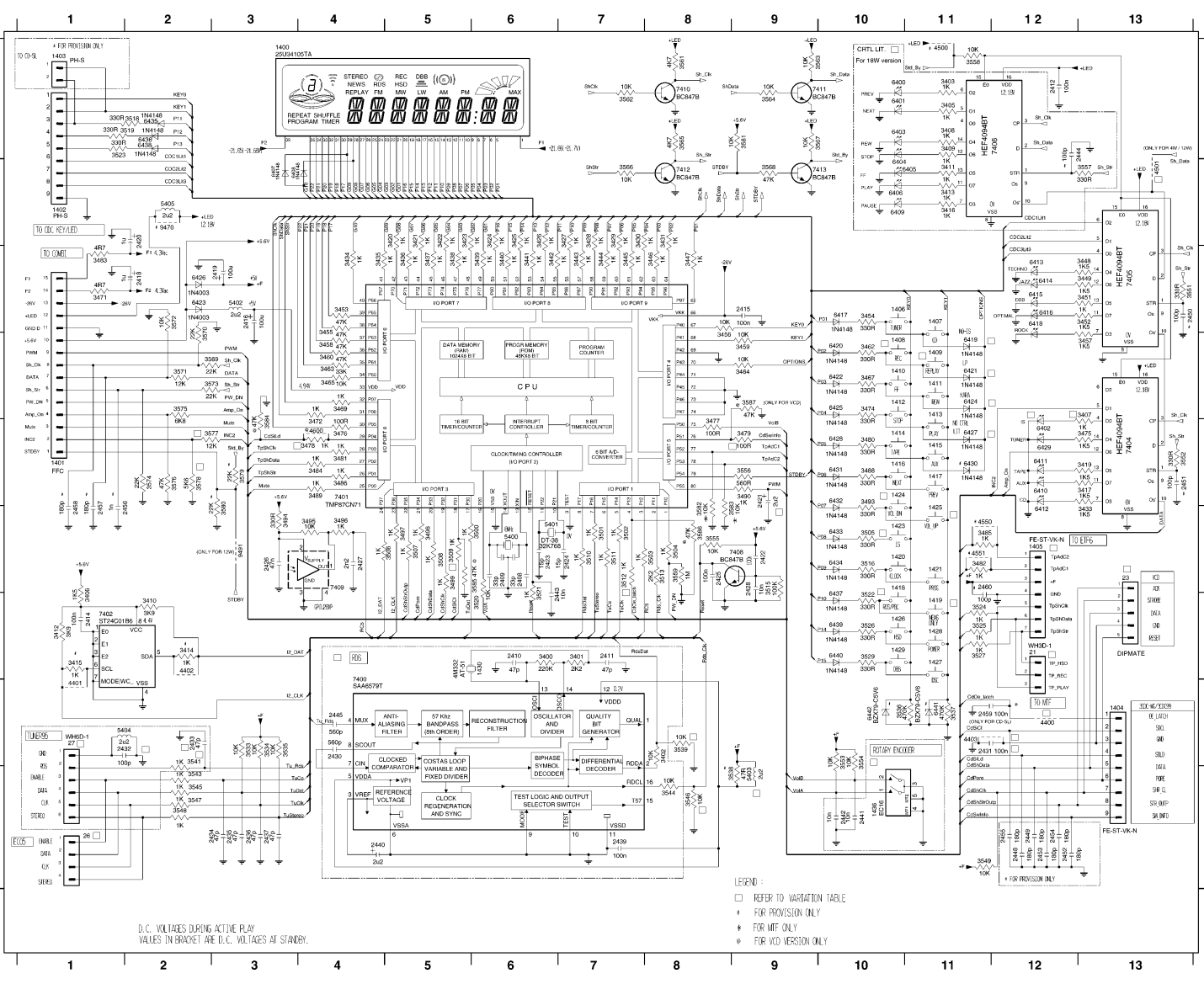
CD_X refers to CD1, CD2 or CD3

WIRING DIAGRAM



: VCD VERSION FOR F9390W/21
 & : FOR VERSIONS WITH SIMPLE KARAOKE
 UPDATED : 23/10/98

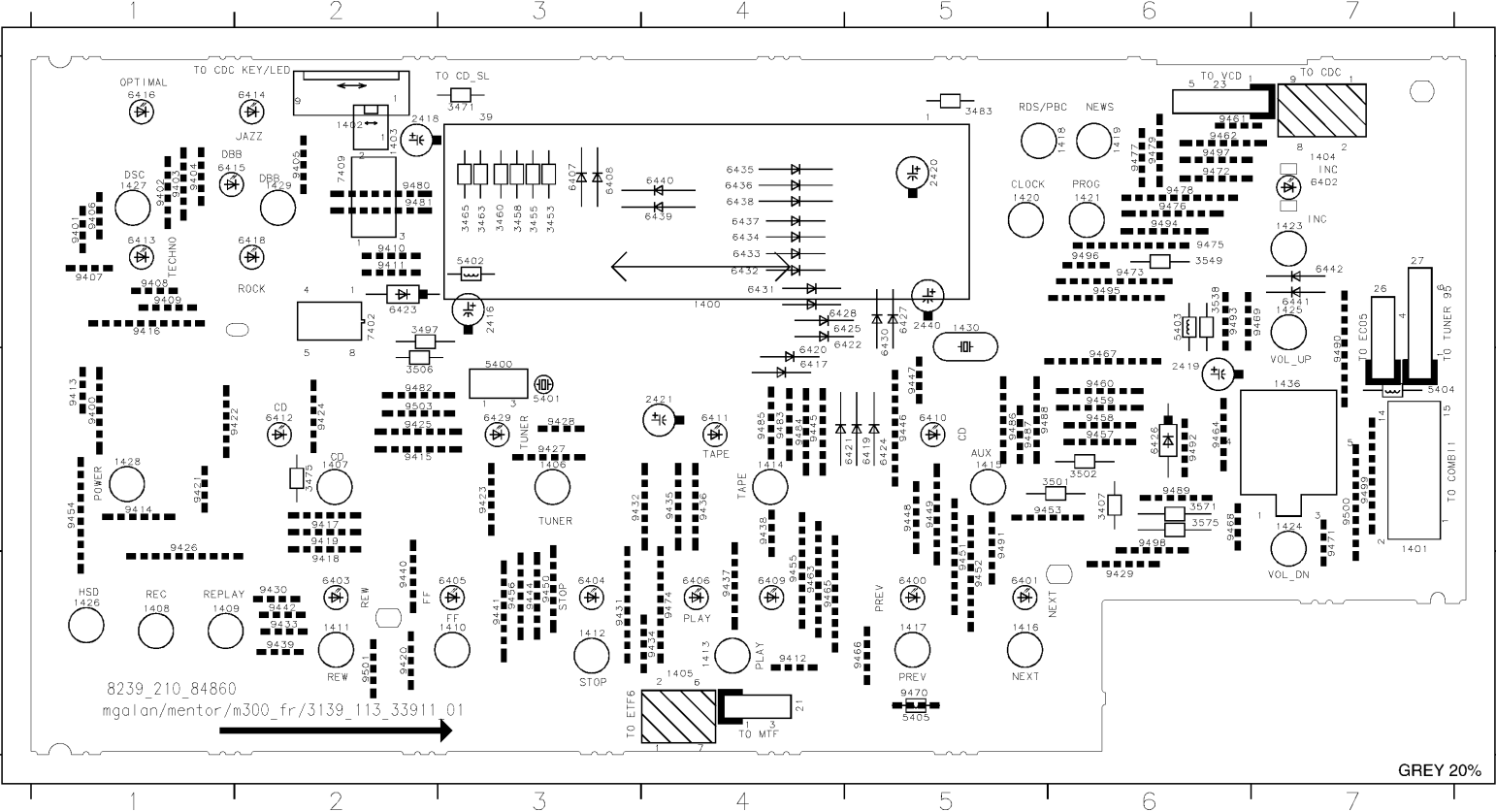
- Zero Insertion Force ZIF
- DIPWAVE
- JST EH MALE
- JST EH MALE
- JST XH MALE
- JST FE MALE



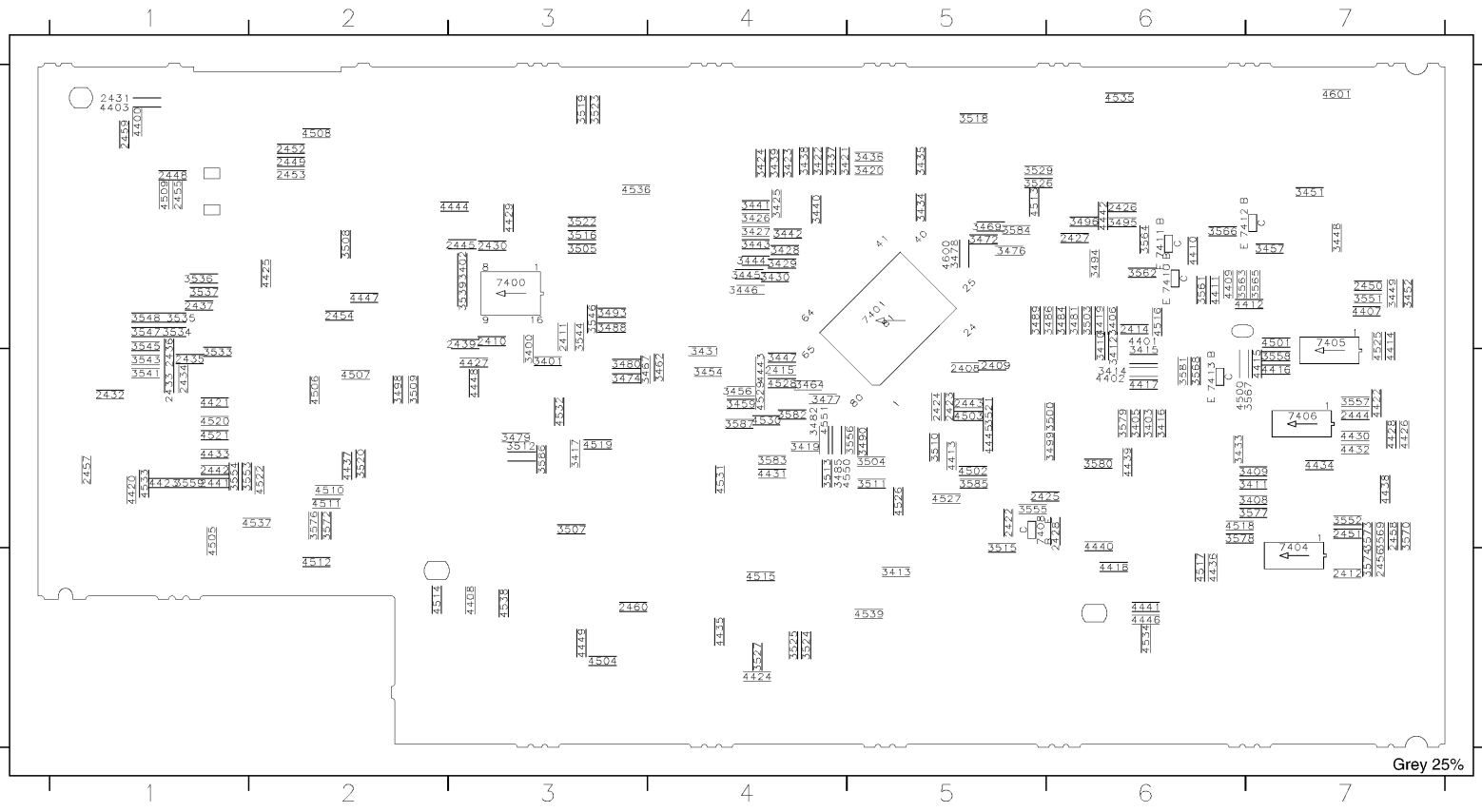
D.C. VOLTAGES DURING ACTIVE PLAY
VALUES IN BRACKET ARE D.C. VOLTAGES AT STANDBY.

21 G12	4339 C6	3576 E2
23 F12	3440 C6	3577 E3
26 H1	3441 C6	3578 E2
27 H1	3442 C6	3579 E3
1489 D2	3443 C7	3580 F9
1491 E1	3444 C7	3581 A9
1493 B1	3445 C7	3582 F9
1495 A1	3446 C8	3583 F9
1504 H3	3447 C8	3584 E3
1506 E2	3448 C13	3585 F6
1486 C10	3449 C13	3586 F6
1487 C11	3450 C13	3587 F6
1488 D10	3452 C13	3400 H12
1489 D10	3453 C13	3401 H12
1510 D10	3454 C10	3402 C2
1411 D11	3455 D4	3403 H12
1412 D10	3456 D9	3400 A11
1413 D11	3457 D13	3401 B13
1414 D11	3458 D4	3402 H12
1415 E11	3459 D9	3405 F11
1416 D10	3460 D13	3406 F9
1417 E11	3462 D10	3400 F6
1418 D10	3463 D4	3401 H12
1419 C11	3464 D9	3402 C2
1420 F10	3465 D4	3400 B9
1421 F11	3467 D10	3404 H1
1422 F10	3468 D4	3400 A10
1424 E10	3471 C1	3400 A10
1425 F11	3472 E4	3401 A10
1427 G11	3475 E13	3403 A10
1428 C11	3476 F13	3404 B10
1429 G10	3477 E9	3405 B11
1430 C6	3478 E4	3406 B10
1439 H10	3479 E9	3407 B3
1438 C6	3479 E4	3408 D10
2499 F8	3481 E4	3409 B10
2410 G9	3482 F11	3410 E12
2411 G11	3483 C1	3411 E12
2412 E12	3484 E4	3412 F12
2415 C9	3486 E4	3414 C12
2416 C9	3486 E4	3414 C12
2418 C2	3489 E4	3416 C12
2419 C2	3489 E4	3416 C12
2420 D2	3490 E10	3419 D12
2421 D2	3490 E10	3419 D12
2422 F9	3495 F4	3420 F9
2423 F9	3496 F4	3421 D11
2424 F7	3497 F5	3422 D11
2425 F9	3498 F5	3423 C2
2426 F9	3498 F5	3424 D11
2427 F4	3500 F6	3425 D10
2428 F9	3501 F7	3426 C2
2429 H4	3502 F7	3427 E11
2430 H4	3502 F7	3427 E11
2431 H2	3504 F8	3429 E11
2432 H2	3506 F10	3430 F10
2433 D2	3507 F5	3432 E10
2434 D2	3507 F5	3432 E10
2435 D2	3509 F6	3434 F10
2436 D2	3510 F6	3435 F10
2437 H4	3511 F7	3436 A2
2438 H4	3511 F7	3436 A2
2439 H2	3513 F7	3438 C10
2440 H2	3515 F8	3438 A2
2441 H2	3515 F7	3439 C10
2442 A12	3516 F10	3441 H10
2443 H4	3518 A2	3441 H10
2444 H2	3519 A2	3442 H10
2445 H2	3520 G6	3443 H10
2446 H2	3521 G6	3444 H10
2447 E13	3522 G10	3445 G11
2448 H2	3523 G10	3446 D11
2449 H2	3524 G11	3447 C13
2450 H2	3525 G11	3448 D11
2451 H2	3526 G10	3449 F10
2452 H2	3527 G11	3450 F10
2453 H2	3528 G10	3451 F10
2454 H2	3529 G10	3452 F10
2455 H2	3530 G11	3453 F10
2456 F11	3531 H3	3454 A2
2457 F11	3532 G10	3455 H10
2458 F11	3533 H3	3456 H10
2459 F11	3534 H3	3457 H10
2460 F11	3535 H3	3458 H10
2461 H10	3536 H3	3459 H10
2462 H10	3537 H11	3460 H10
2463 H10	3538 H11	3461 F10
2464 A11	3539 H8	3462 H10
2465 A11	3540 H8	3463 H10
2466 A11	3541 H2	3464 H10
2467 A11	3542 H2	3465 H10
2468 A11	3543 H2	3466 H10
2469 A11	3544 H2	3467 H10
2470 A11	3545 H2	3468 H10
2471 B11	3546 H2	3469 H10
2472 B11	3547 H2	3470 H10
2473 B11	3548 H2	3471 H10
2474 B11	3549 H2	3472 H10
2475 B11	3550 H2	3473 H10
2476 B11	3551 H2	3474 H10
2477 B11	3552 H2	3475 H10
2478 B11	3553 H2	3476 H10
2479 B11	3554 H2	3477 H10
2480 B11	3555 H2	3478 H10
2481 B11	3556 H2	3479 H10
2482 B11	3557 H2	3480 H10
2483 B11	3558 H2	3481 H10
2484 B11	3559 H2	3482 H10
2485 B11	3560 H2	3483 H10
2486 B11	3561 H2	3484 H10
2487 B11	3562 H2	3485 H10
2488 B11	3563 H2	3486 H10
2489 B11	3564 H2	3487 H10
2490 B11	3565 H2	3488 H10
2491 B11	3566 H2	3489 H10
2492 B11	3567 H2	3490 H10
2493 B11	3568 H2	3491 H10
2494 B11	3569 H2	3492 H10
2495 B11	3570 H2	3493 H10
2496 B11	3571 H2	3494 H10
2497 B11	3572 H2	3495 H10
2498 B11	3573 H2	3496 H10
2499 B11	3574 H2	3497 H10
2500 B11	3575 H2	3498 H10

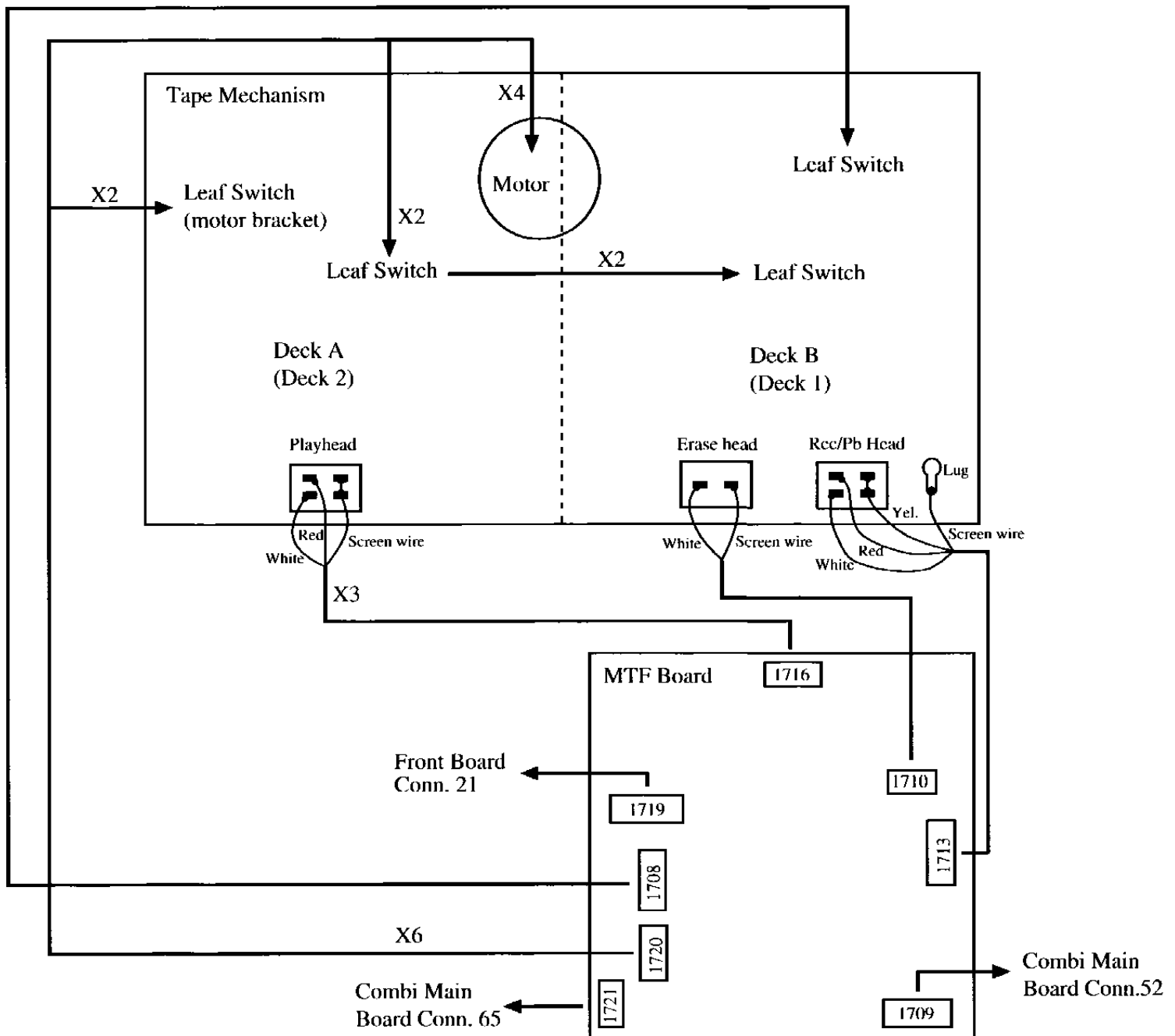
21	C4	1408	C1	1420	A5	2418	A2	3471	A3	5401	B3	6407	A3	6419	B5	6431	A4	7402	A2	9410	A2	9422	B1	9434	C4	9447	B5	9459	B8	9471	B7	9483	B4	9495	A6
23	A6	1409	C1	1421	A6	2419	B6	3475	A3	5402	A3	6408	A3	6420	B4	6432	A4	7409	A2	9411	A2	9423	B3	9435	B4	9448	B5	9460	B8	9472	A6	9484	B4	9496	A6
26	A7	1411	C3	1423	A7	2420	A5	3483	A3	5403	A6	6409	C4	6421	B5	6433	A4	7400	B1	9412	C4	9424	B2	9436	B4	9449	B5	9461	A6	9473	A6	9485	B4	9497	A6
27	A7	1412	C3	1424	B7	2421	B4	3487	A2	5404	B7	6410	B5	6422	A5	6434	A4	7401	A1	9413	B1	9425	B2	9437	C4	9450	C3	9462	A6	9474	C4	9486	B5	9498	B6
1400	A4	1412	C3	1425	A7	2440	A5	3501	B6	5405	C5	6411	B4	6423	A2	6435	A4	9402	A1	9414	B1	9426	B1	9438	B4	9451	C3	9463	C4	9475	A6	9487	B5	9499	B7
1401	B7	1413	C4	1426	C1	3407	B6	3502	B6	6400	C5	6412	B2	6424	B5	6436	A4	9403	A1	9415	B2	9427	B3	9439	C2	9452	C5	9464	B5	9476	A6	9488	B5	9500	B7
1402	A2	1414	B4	1427	A1	3453	A3	3506	B6	6401	C5	6413	A1	6425	A5	6437	A4	9404	A1	9416	A1	9428	B3	9440	C2	9453	B5	9465	C4	9477	A6	9489	B6	9501	C2
1403	A2	1415	B5	1428	B1	3455	A3	3538	A6	6402	A7	6414	A2	6426	B6	6438	A4	9405	A2	9417	B2	9429	C6	9441	C3	9454	B1	9466	C5	9478	A6	9490	B7	9502	B2
1404	A7	1416	C5	1429	A2	3459	A3	3549	A6	6403	C2	6415	A1	6427	A5	6439	A4	9406	A1	9418	C2	9430	C2	9442	C2	9455	C4	9467	B6	9479	A6	9491	B5	9503	B2
1405	C4	1417	C5	1430	A5	3460	A3	3571	B6	6404	C3	6416	A1	6428	A4	6440	A4	9407	A1	9419	B2	9431	C3	9444	C3	9456	C3	9468	B6	9480	A2	9492	B6		
1406	B3	1418	A6	1436	B7	3463	A3	3575	B6	6405	C3	6417	B4	6429	B3	6441	A7	9408	A1	9420	C2	9432	B3	9445	B4	9457	B6	9469	A7	9481	A2	9493	A6		
1407	B2	1419	A6	2416	A3	3465	A3	5400	B3	6406	C4	6418	A2	6430	A5	6442	A7	9409	A1	9421	B1	9433	C2	9446	B5	9458	B6	9470	C5	9482	B2	9494	A6		



2408 B5	2432 B1	2452 A2	3409 B7	3426 A4	3443 A4	3469 A5	3493 A3	3513 B4	3535 A1	3556 B5	3574 C7	4403 A1	4422 B7	4438 B7	4504 C3	4520 B1	4538 C3
2409 B5	2433 B1	2453 A2	3410 A6	3427 A4	3444 A4	3472 A5	3494 A6	3514 B5	3536 A1	3557 B7	3575 C7	4404 A7	4423 B1	4439 B7	4505 B1	4521 B1	4539 C5
2410 A3	2434 B1	2454 A2	3411 B7	3428 A4	3445 A4	3473 B3	3495 A8	3515 B5	3537 A1	3558 B7	3576 B2	4405 C3	4424 C4	4440 B6	4506 B2	4522 B2	4540 B4
2411 A3	2435 B1	2455 A1	3412 B6	3429 A4	3446 A4	3476 A5	3496 A6	3516 A5	3539 A3	3559 B1	3577 B6	4406 A6	4425 A2	4409 A6	4507 B2	4523 A7	4551 B4
2412 C7	2436 B1	2456 C7	3413 C5	3430 A4	3447 B4	3477 B4	3498 B2	3517 A3	3541 B1	3561 A6	3578 B6	4410 A6	4426 B7	4442 A5	4508 A2	4524 B5	4600 A5
2414 A6	2437 A1	2457 B1	3414 B6	3431 B4	3448 A7	3478 A5	3499 B6	3518 B2	3543 A1	3562 A6	3579 B6	4411 A6	4427 B3	4443 B4	4509 A1	4525 B5	4601 A7
2415 B4	2439 A3	2458 B7	3415 B6	3433 B6	3449 A7	3479 B3	3500 B6	3519 C5	3544 A3	3563 A6	3580 B6	4412 A7	4428 B7	4444 A3	4510 B1	4526 B4	7400 A3
2422 B5	2441 B1	2459 A1	3416 B6	3434 A5	3451 A7	3480 B3	3503 A6	3522 A3	3545 A1	3564 A6	3582 B4	4413 B5	4429 A3	4445 A5	4511 B2	4527 B4	7401 A5
2423 B5	2442 B1	2460 C3	3417 B3	3435 A5	3452 A7	3481 A6	3504 B5	3523 A3	3546 A3	3565 A7	3583 B4	4414 A7	4430 B7	4446 C6	4512 C2	4530 B4	7404 B7
2424 B5	2443 B5	3400 B3	3419 B4	3436 A5	3454 B4	3482 B4	3505 A3	3524 C4	3547 A1	3566 A6	3584 A5	4415 B7	4431 B4	4447 A2	4513 A5	4531 B4	7405 A7
2425 B5	2444 B7	3401 B3	3420 A5	3437 A4	3456 B4	3484 A6	3507 B3	3525 A4	3548 A1	3567 B7	3585 B5	4416 B7	4432 B7	4448 B3	4514 C5	4532 B3	7406 B7
2426 A6	2445 A3	3402 A3	3421 A3	3438 A4	3457 A7	3485 B4	3508 A2	3526 A5	3551 A7	3568 B6	3586 B3	4417 B6	4433 B1	4449 C3	4515 C4	4533 B1	7408 B5
2427 A6	2448 A1	3403 B6	3422 A4	3439 A4	3459 B4	3486 A6	3509 B2	3527 C4	3552 B7	3569 B7	3587 B4	4418 C6	4434 B7	4450 B6	4516 A6	4534 C6	7410 A6
2428 B6	2449 A2	3405 B6	3423 A4	3440 A4	3459 B4	3488 A3	3510 B5	3529 A5	3553 B1	3570 B7	4400 A1	4419 A6	4435 C4	4501 A7	4517 C6	4535 A6	7411 A6
2430 A3	2450 A7	3406 A6	3424 A4	3441 A4	3464 B4	3489 A5	3511 B5	3533 B1	3554 B1	3572 B2	4401 A6	4420 B1	4436 C6	4502 B5	4518 B3	4536 A3	7412 A6
2431 A1	2451 B7	3408 B7	3425 A4	3442 A4	3467 B3	3490 B5	3512 B3	3534 A1	3555 B5	3573 B7	4402 B6	4421 B1	4437 B2	4503 B5	4519 B3	4537 B2	7413 B6



Tape Deck Wiring Diagram



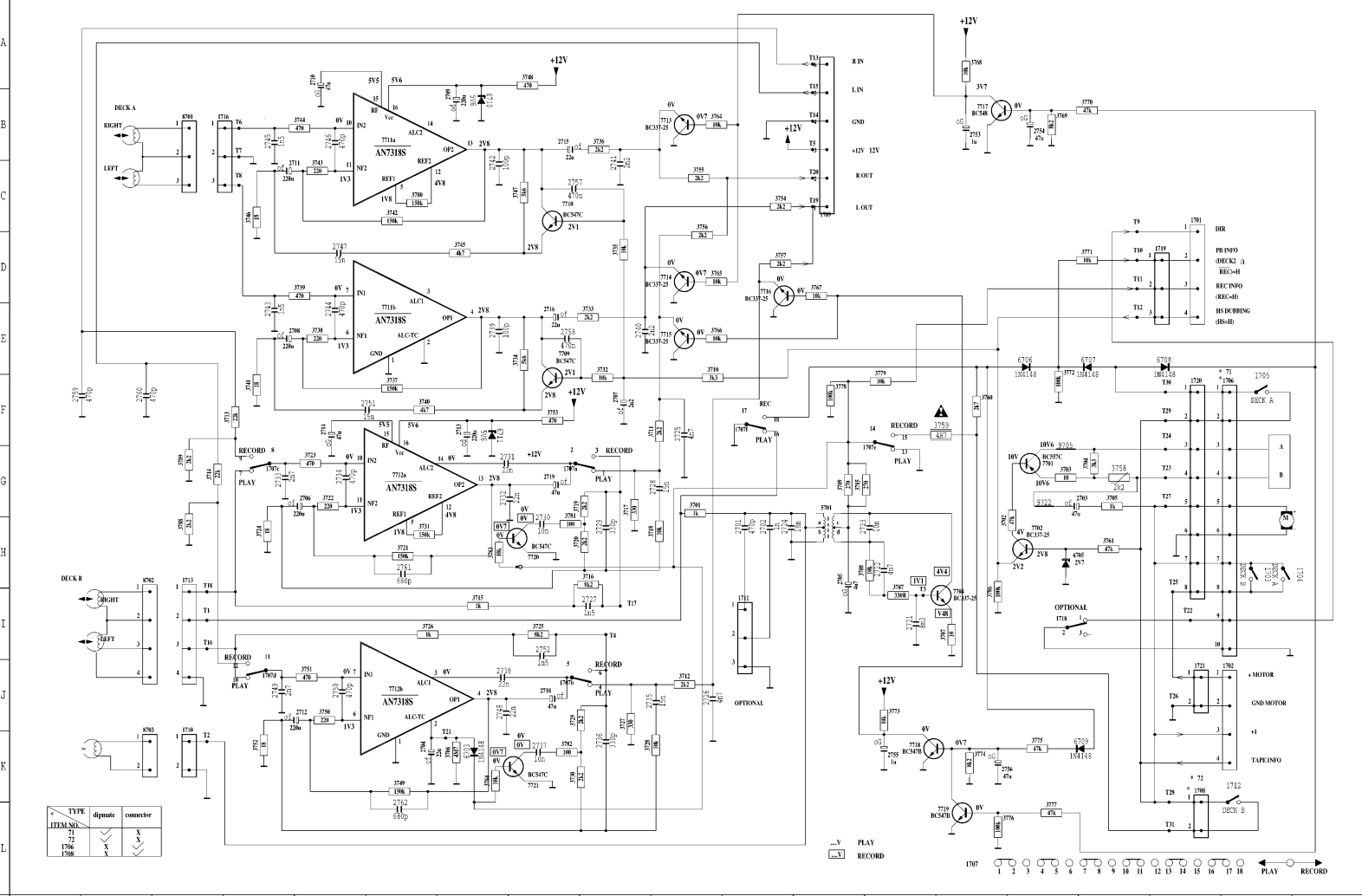
TAPE MECHANISM ADJUSTMENT

ADJUSTMENT	CASSETTE	DECK 1 (DECK B)	DECK 2 (DECK A)	MEASURE ON	READ ON	ADJUST WITH	ADJUST TO
Azimuth	10kHz	Play	-	L & R out T019/T020	mV-meter	Left hand screw of Play or R/P head	Maximum L = R
	SBC420*	-	Play				
Motor speed	3150Hz	Play	-	L & R out T019/T020	Wow and Flutter meter	3758	**a
	SBC420*	-	Play				

* SBC 420: 4822 397 30071

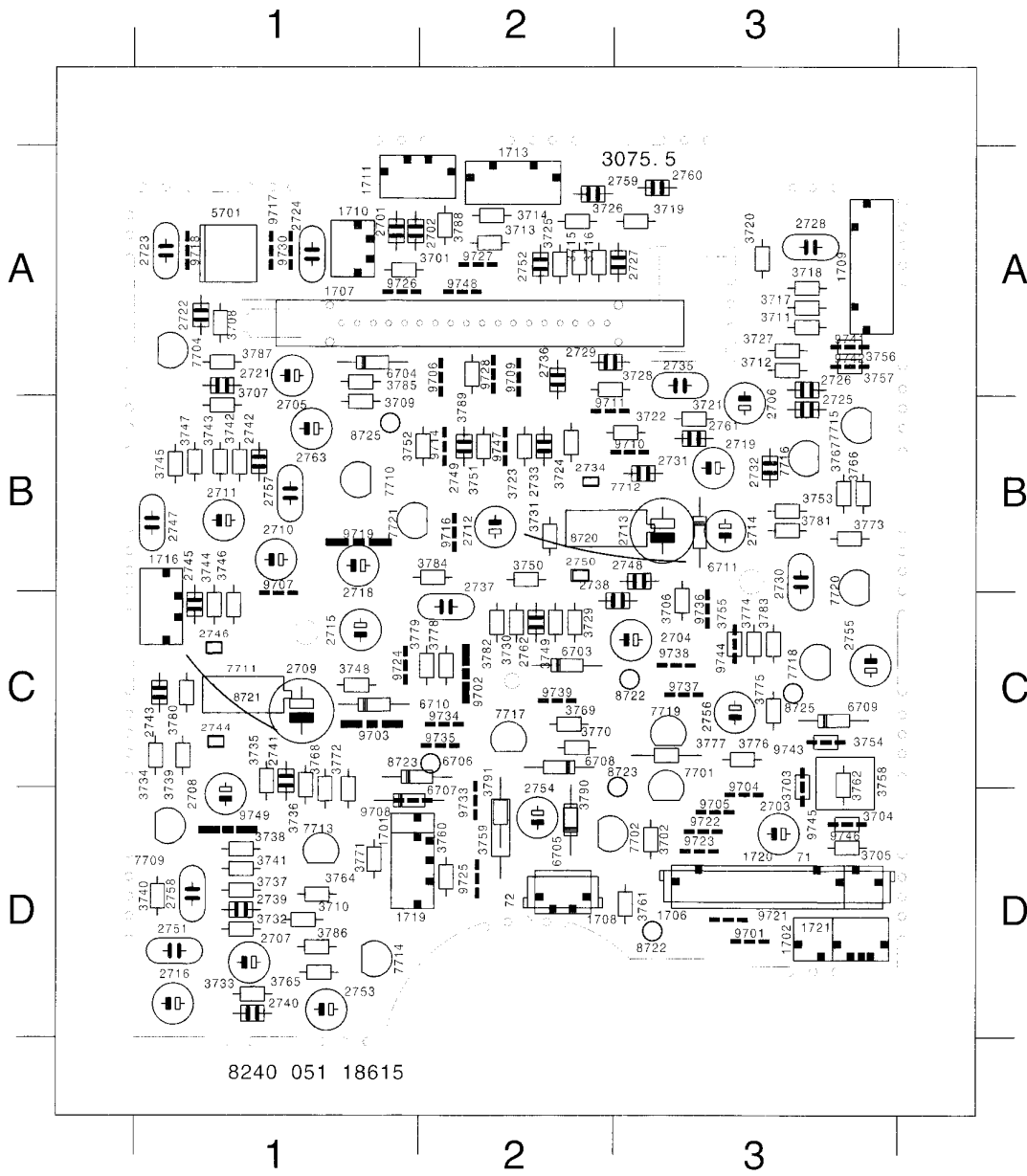
**a: The maximum permissible speed deviation is +3/-2%.
Moreover, the Wow & Flutter value can be read.
This value should not exceed 0.4%.

1703	RESISTOR	10K	10K
1704	RESISTOR	10K	10K
1705	RESISTOR	10K	10K
1706	RESISTOR	10K	10K
1707	RESISTOR	10K	10K
1708	RESISTOR	10K	10K
1709	RESISTOR	10K	10K
1710	RESISTOR	10K	10K
1711	RESISTOR	10K	10K
1712	RESISTOR	10K	10K
1713	RESISTOR	10K	10K
1714	RESISTOR	10K	10K
1715	RESISTOR	10K	10K
1716	RESISTOR	10K	10K
1717	RESISTOR	10K	10K
1718	RESISTOR	10K	10K
1719	RESISTOR	10K	10K
1720	RESISTOR	10K	10K
1721	RESISTOR	10K	10K
1722	RESISTOR	10K	10K
1723	RESISTOR	10K	10K
1724	RESISTOR	10K	10K
1725	RESISTOR	10K	10K
1726	RESISTOR	10K	10K
1727	RESISTOR	10K	10K
1728	RESISTOR	10K	10K
1729	RESISTOR	10K	10K
1730	RESISTOR	10K	10K
1731	RESISTOR	10K	10K
1732	RESISTOR	10K	10K
1733	RESISTOR	10K	10K
1734	RESISTOR	10K	10K
1735	RESISTOR	10K	10K
1736	RESISTOR	10K	10K
1737	RESISTOR	10K	10K
1738	RESISTOR	10K	10K
1739	RESISTOR	10K	10K
1740	RESISTOR	10K	10K
1741	RESISTOR	10K	10K
1742	RESISTOR	10K	10K
1743	RESISTOR	10K	10K
1744	RESISTOR	10K	10K
1745	RESISTOR	10K	10K
1746	RESISTOR	10K	10K
1747	RESISTOR	10K	10K
1748	RESISTOR	10K	10K
1749	RESISTOR	10K	10K
1750	RESISTOR	10K	10K
1751	RESISTOR	10K	10K
1752	RESISTOR	10K	10K
1753	RESISTOR	10K	10K
1754	RESISTOR	10K	10K
1755	RESISTOR	10K	10K
1756	RESISTOR	10K	10K
1757	RESISTOR	10K	10K
1758	RESISTOR	10K	10K
1759	RESISTOR	10K	10K
1760	RESISTOR	10K	10K
1761	RESISTOR	10K	10K
1762	RESISTOR	10K	10K
1763	RESISTOR	10K	10K
1764	RESISTOR	10K	10K
1765	RESISTOR	10K	10K
1766	RESISTOR	10K	10K
1767	RESISTOR	10K	10K
1768	RESISTOR	10K	10K
1769	RESISTOR	10K	10K
1770	RESISTOR	10K	10K
1771	RESISTOR	10K	10K
1772	RESISTOR	10K	10K
1773	RESISTOR	10K	10K
1774	RESISTOR	10K	10K
1775	RESISTOR	10K	10K
1776	RESISTOR	10K	10K
1777	RESISTOR	10K	10K
1778	RESISTOR	10K	10K
1779	RESISTOR	10K	10K
1780	RESISTOR	10K	10K
1781	RESISTOR	10K	10K
1782	RESISTOR	10K	10K
1783	RESISTOR	10K	10K
1784	RESISTOR	10K	10K
1785	RESISTOR	10K	10K
1786	RESISTOR	10K	10K
1787	RESISTOR	10K	10K
1788	RESISTOR	10K	10K
1789	RESISTOR	10K	10K
1790	RESISTOR	10K	10K
1791	RESISTOR	10K	10K
1792	RESISTOR	10K	10K
1793	RESISTOR	10K	10K
1794	RESISTOR	10K	10K
1795	RESISTOR	10K	10K
1796	RESISTOR	10K	10K
1797	RESISTOR	10K	10K
1798	RESISTOR	10K	10K
1799	RESISTOR	10K	10K
1800	RESISTOR	10K	10K



2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
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LAYOUT DIAGRAM



71 D 3	2747 B 1	3743 B 1	7702 D 2
72 D 2	2748 B 3	3744 C 1	7704 A 1
1701 D 1	2749 B 2	3745 B 1	7709 D 1
1702 D 3	2750 B 2	3746 C 1	7710 B 1
1706 D 3	2751 D 1	3747 B 1	7711 C 1
1707 A 2	2752 A 2	3748 C 1	7712 B 2
1708 D 2	2753 D 1	3749 C 2	7713 D 1
1709 A 3	2754 D 2	3750 B 2	7714 D 1
1710 A 1	2755 C 3	3751 B 2	7715 B 3
1711 A 1	2756 C 3	3752 B 2	7716 B 3
1713 A 2	2757 B 1	3753 B 3	7717 C 2
1716 C 1	2758 D 1	3754 C 3	7718 C 3
1719 D 1	2759 A 2	3755 C 3	7719 C 3
1720 D 3	2760 A 3	3756 A 3	7720 B 3
1721 D 3	2761 B 3	3757 A 3	7721 B 1
2701 A 1	2762 C 2	3758 C 3	9701 D 3
2702 A 1	2763 B 1	3759 D 2	9702 C 2
2703 D 3	3701 A 1	3760 D 2	9703 C 1
2704 C 3	3702 D 3	3761 D 3	9704 D 3
2705 A 1	3703 D 3	3762 C 3	9705 D 3
2706 B 3	3704 D 3	3764 D 1	9706 A 2
2707 D 1	3705 D 3	3765 D 1	9707 C 1
2708 D 1	3706 C 3	3766 B 3	9708 D 1
2709 C 1	3707 B 1	3767 B 3	9709 A 2
2710 B 1	3708 A 1	3768 D 1	9710 B 3
2711 B 1	3709 B 1	3769 C 2	9711 B 2
2712 B 2	3710 D 1	3770 C 2	9714 B 2
2713 B 3	3711 A 3	3771 D 1	9716 B 2
2714 B 3	3712 A 3	3772 D 1	9717 A 1
2715 C 1	3713 A 2	3773 B 3	9718 A 1
2716 D 1	3714 A 2	3774 C 3	9719 B 1
2718 B 1	3715 A 2	3775 C 3	9721 D 3
2719 B 3	3716 A 2	3776 C 3	9722 D 3
2721 A 1	3717 A 3	3777 C 3	9723 D 3
2722 A 1	3718 A 3	3778 C 2	9724 C 1
2723 A 1	3719 A 3	3779 C 2	9725 D 2
2724 A 1	3720 A 3	3780 C 1	9726 A 1
2725 B 3	3721 B 3	3781 B 3	9727 A 2
2726 A 3	3722 B 3	3782 C 2	9728 A 2
2727 A 3	3723 B 2	3783 C 3	9730 A 1
2728 A 3	3724 B 2	3784 B 2	9733 D 2
2729 A 2	3725 A 2	3785 A 1	9734 C 2
2730 B 3	3726 A 2	3786 D 1	9735 C 2
2731 B 3	3727 A 3	3787 A 1	9736 C 3
2732 B 3	3728 A 2	3788 A 2	9737 C 3
2733 B 2	3729 C 2	3789 A 2	9738 C 3
2734 B 2	3730 C 2	3790 D 2	9739 C 2
2735 A 3	3731 B 2	3791 D 2	9741 A 3
2736 A 2	3732 D 1	5701 A 1	9742 A 3
2737 C 2	3733 D 1	6703 C 2	9743 C 3
2738 C 3	3734 C 1	6704 A 1	9744 C 3
2739 D 1	3735 C 1	6705 D 2	9745 D 3
2740 D 1	3736 C 1	6706 C 1	9746 D 3
2741 C 1	3737 D 1	6707 D 1	9747 B 2
2742 B 1	3738 D 1	6708 C 2	9748 A 2
2743 C 1	3739 C 1	6709 C 3	9749 D 1
2744 C 1	3740 D 1	6710 C 1	
2745 C 1	3741 D 1	6711 B 3	
2746 C 1	3742 B 1	7701 D 3	

CD - MAIN BOARD

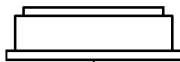
- 1* = OE_LATCH
- 2* = PORE
- 3* = GND
- 4* = SILD
- 5* = DATA
- 6* = SICL
- 7* = SHR_CL
- 8* = STR_OUT
- 9* = SWICH INFO
- 10* = +10V
- 11* = GND
- 12* = +5V
- 13* = CD RIGHT
- 14* = GNDA
- 15* = CD LEFT
- 16* = GBU/KILL
- 17* = COAX2/KILLR/EBU
- 18* = COAX1/IREF/+5
- 19* = GND
- 20* = μ P_CLK
- 21* = DQSY
- 22* = SRDT
- 23* = GND

NOT ON ALL VERSIONS



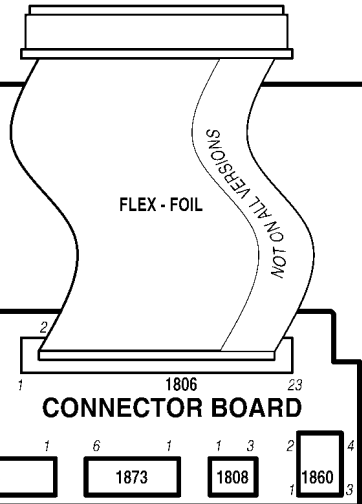
1801

- 1* = SLIDE MOTOR -
- 2* = SLIDE MOTOR +
- 3* = DISC MOTOR -
- 4* = DISC MOTOR +
- 5* = INNER SWITCH
- 6* = INNER SWITCH



1800

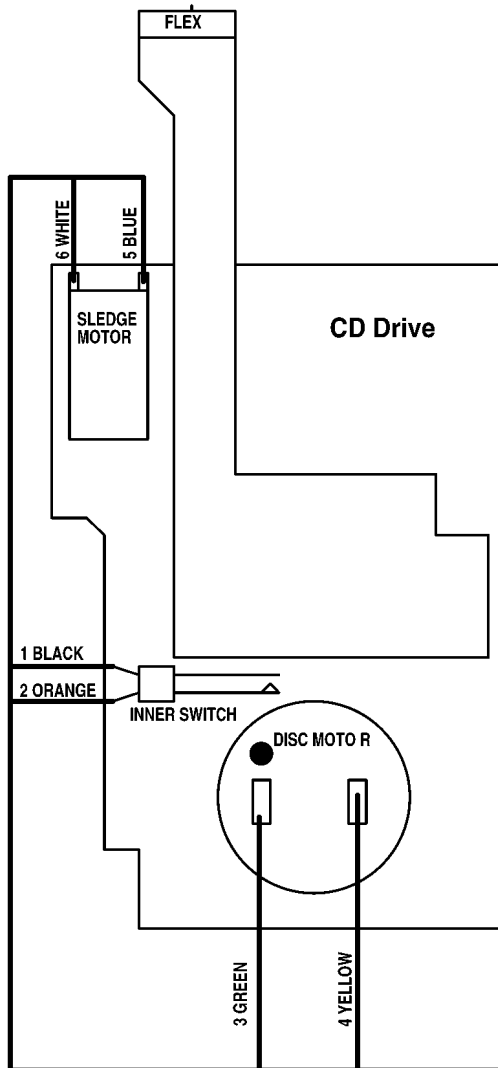
- 1* = TRACK +
- 2* = FOCUS -
- 3* = FOCUS +
- 4* = TRACK -
- 5* = LASER (cathode)
- 6* = LASER (anode)
- 7* = DIODE ARRAY (common cathode)
- 8* = D1
- 9* = D2
- 10* = D3
- 11* = D5
- 12* = D4



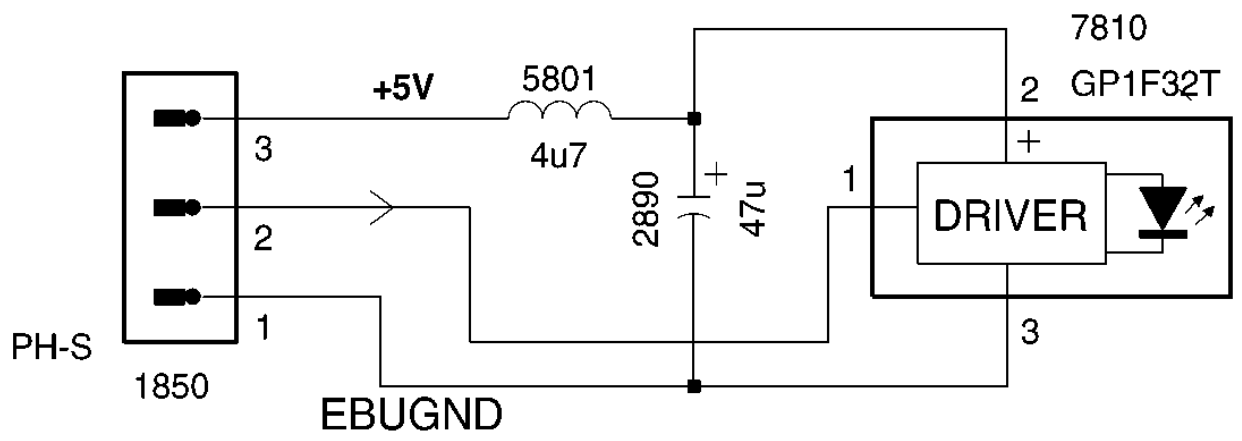
- 1* = SWITCH INFO
- 2* = STR_OUT
- 3* = SHR_CL
- 4* = PORE
- 5* = DATA
- 6* = SILD
- 7* = GND
- 8* = SICL
- 9* = OE_LATCH
- 1* = CD LEFT
- 2* = GNDA
- 3* = CD RIGHT
- 4* = +5V
- 5* = GND
- 6* = +10V
- 1* = μ P_CLK
- 2* = GND
- 3* = SRDT
- 4* = DQSY

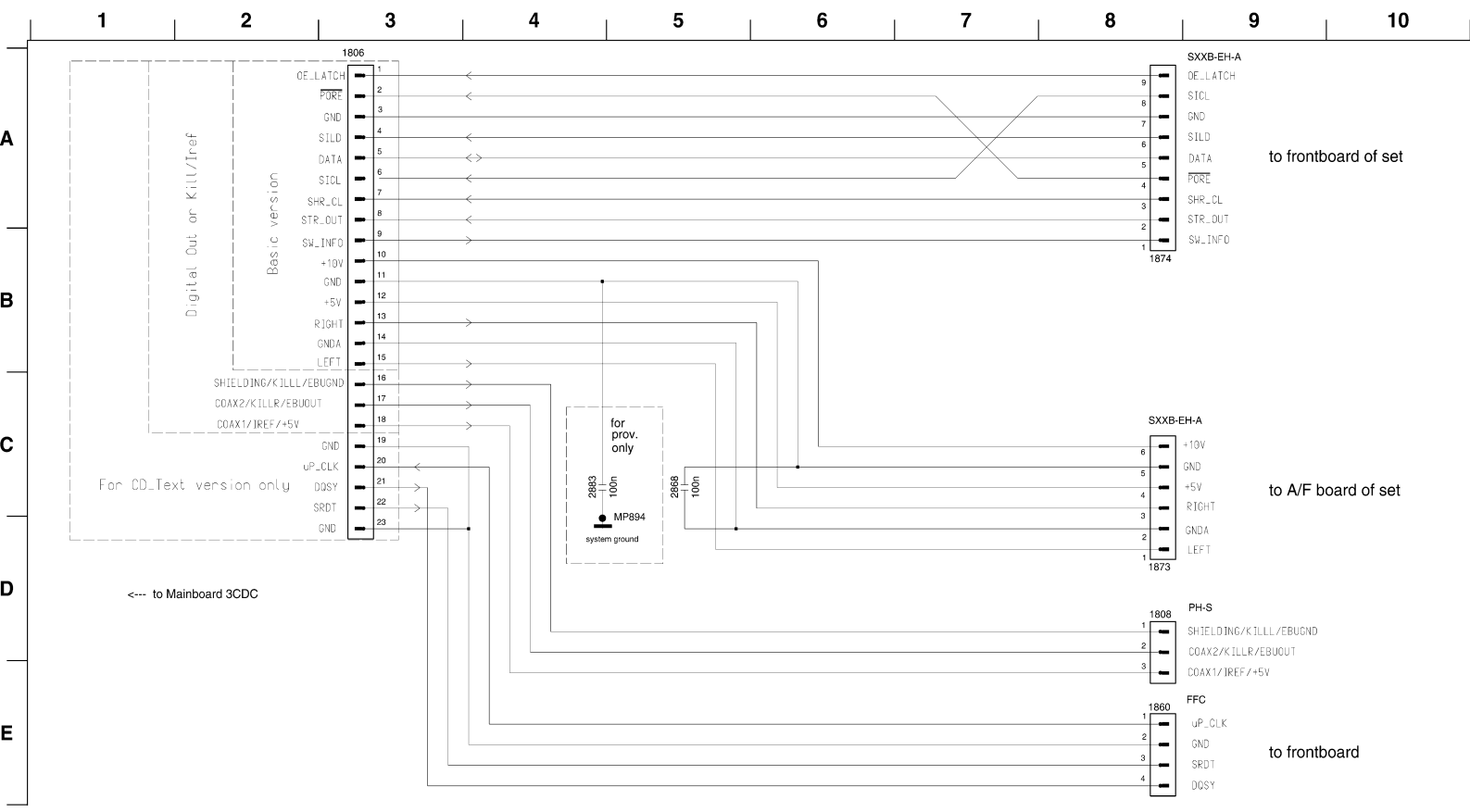
NOT ON ALL VERSIONS

SHIELDING/KILL/EBUGND
COAX2/KILLR/EBUCUT
COAX1/IREF/+5V



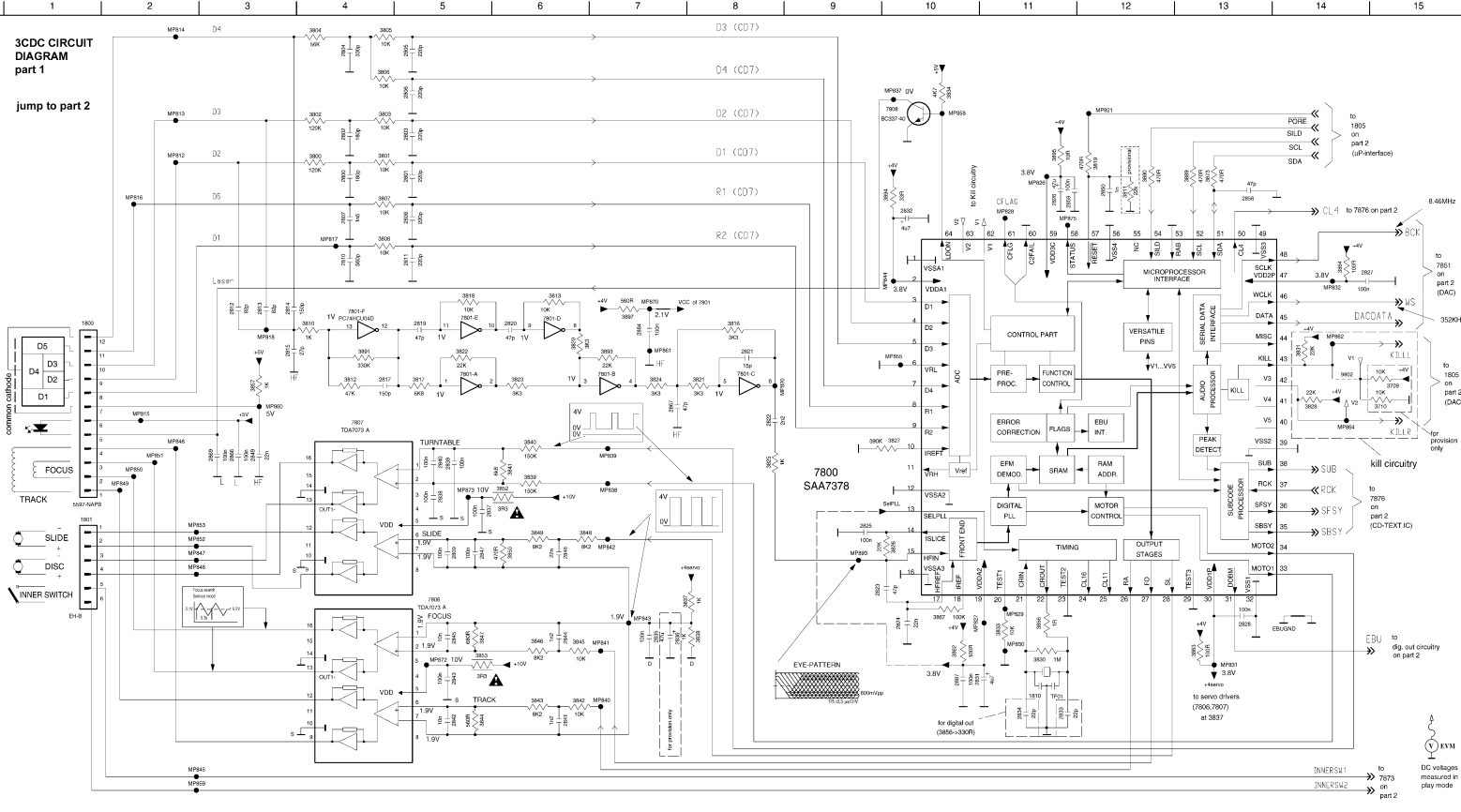
to 1808
on connector
board





3CDC CIRCUIT DIAGRAM part 1

jump to part 2



DC voltages measured in play mode

to 7806 on part 2 (CD-TEXT IC)

kill circuitry

to 7876 on part 2 (DAC)

to 1805 on part 2 (DAC)

to 1805 on part 2 (uP-interface)

to 1805 on part 2 (uP-interface)

to 1805 on part 2 (uP-interface)

to 1805 on part 2 (uP-interface)

to 1805 on part 2 (uP-interface)

to 1805 on part 2 (uP-interface)

to 1805 on part 2 (uP-interface)

to 1805 on part 2 (uP-interface)

to 1805 on part 2 (uP-interface)

to 1805 on part 2 (uP-interface)

to 1805 on part 2 (uP-interface)

to 1805 on part 2 (uP-interface)

to 1805 on part 2 (uP-interface)

to 1805 on part 2 (uP-interface)

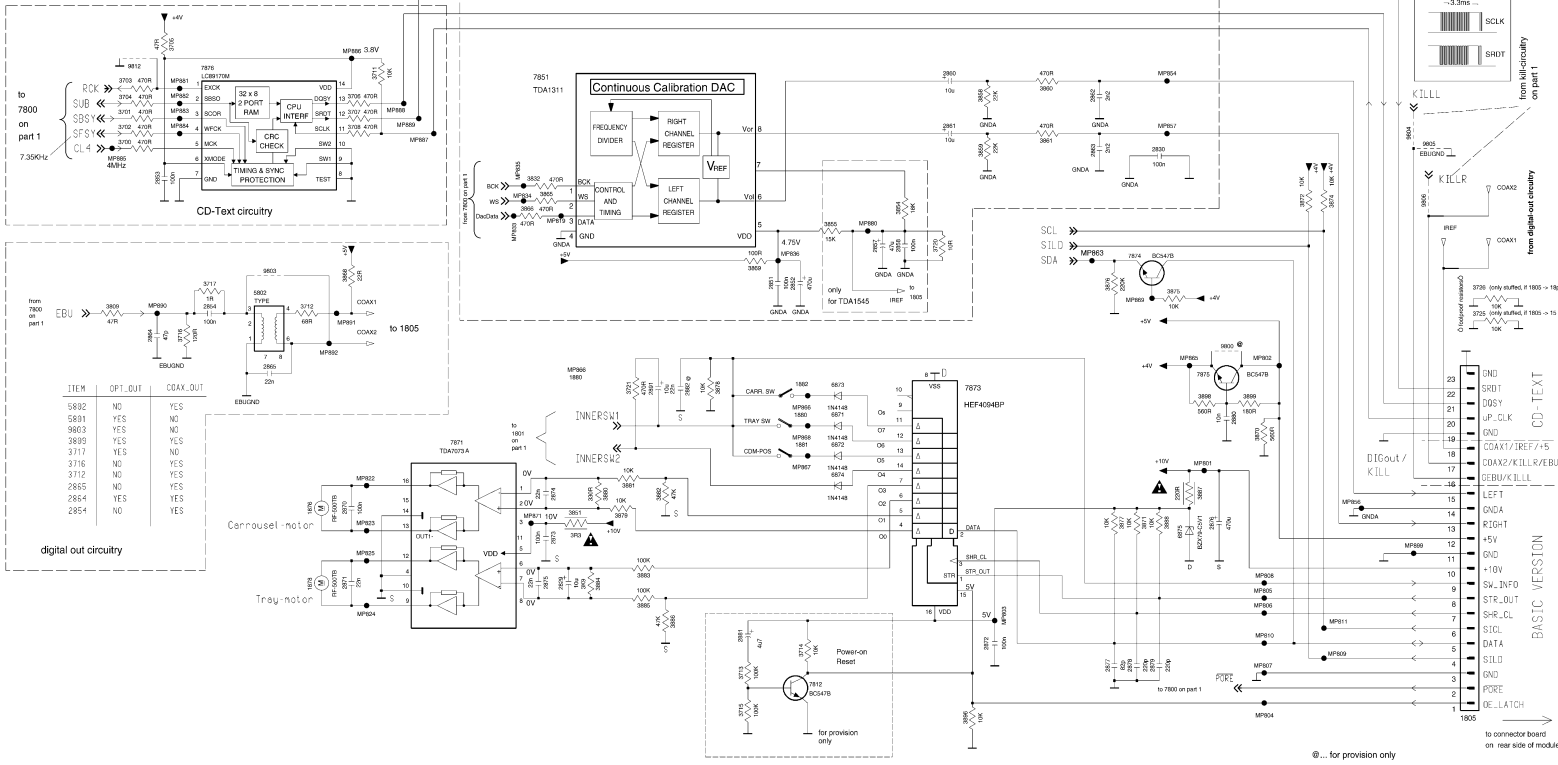
to 1805 on part 2 (uP-interface)

to 1805 on part 2 (uP-interface)

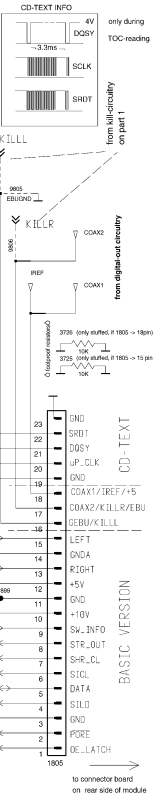
to 1805 on part 2 (uP-interface)

to 1805 on part 2 (uP-interface)

**3CDC CIRCUIT
DIAGRAM part 2**



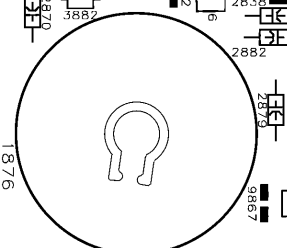
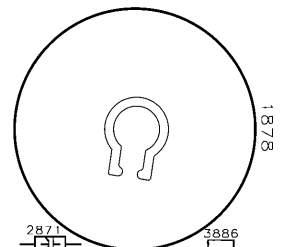
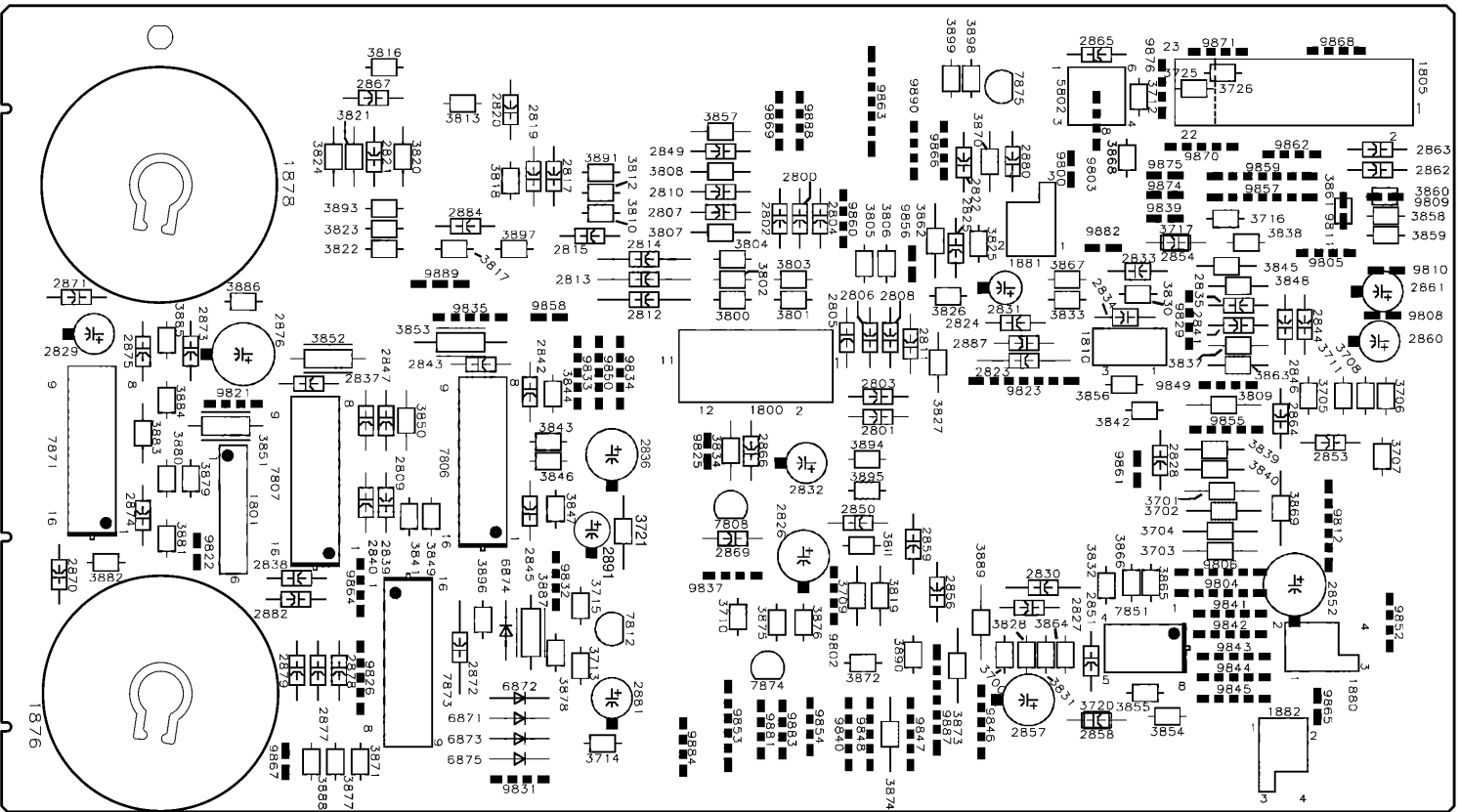
ITEM	OPT_OUT	COAX_OUT
5892	NO	YES
5891	YES	NO
5903	YES	NO
3989	YES	YES
3717	YES	NO
3716	NO	YES
3712	NO	YES
2855	NO	YES
2854	YES	YES
2854	NO	YES

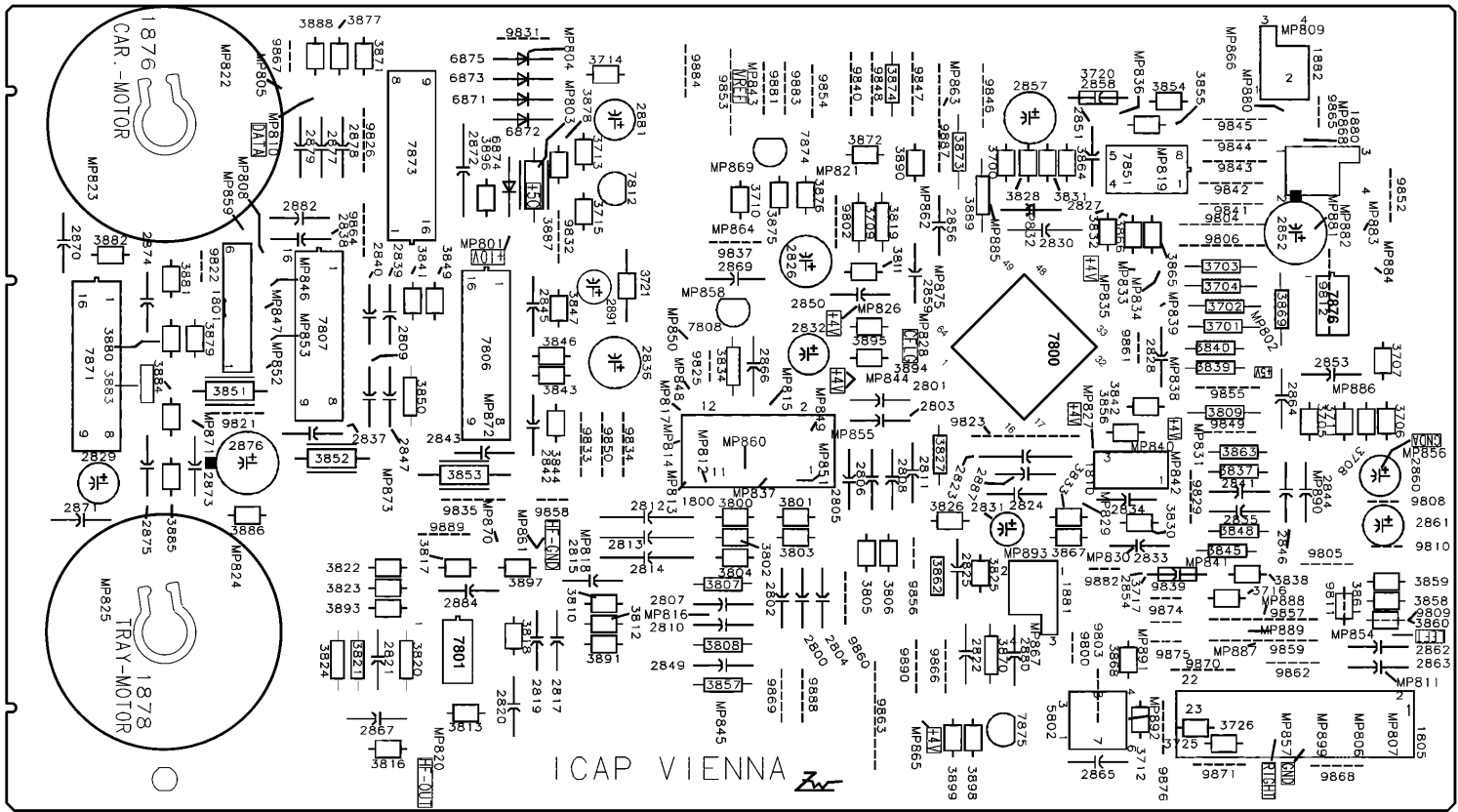


© ... for provision only

to connector board on rear side of module

A B C D E F G H





ICAP VIENNA

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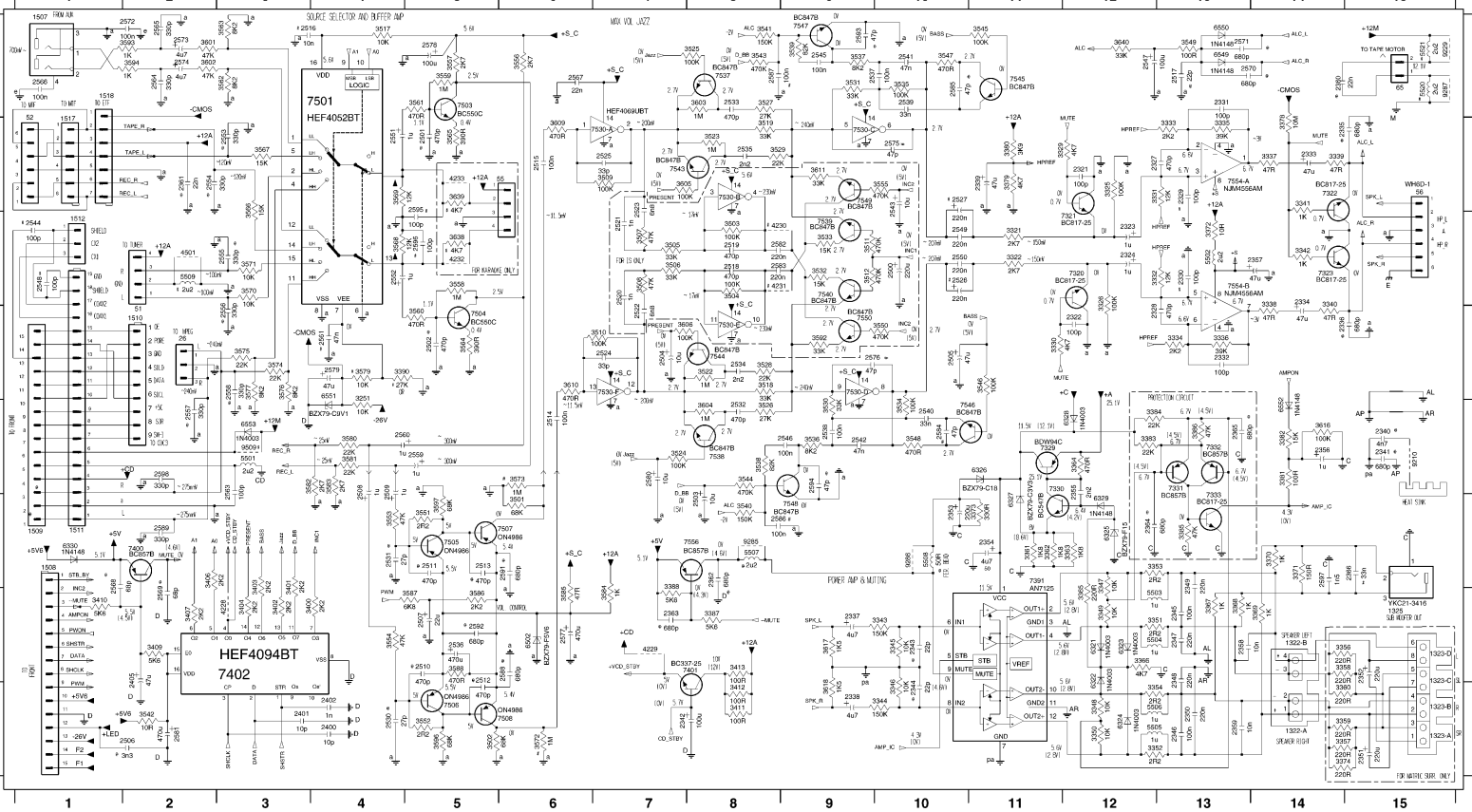
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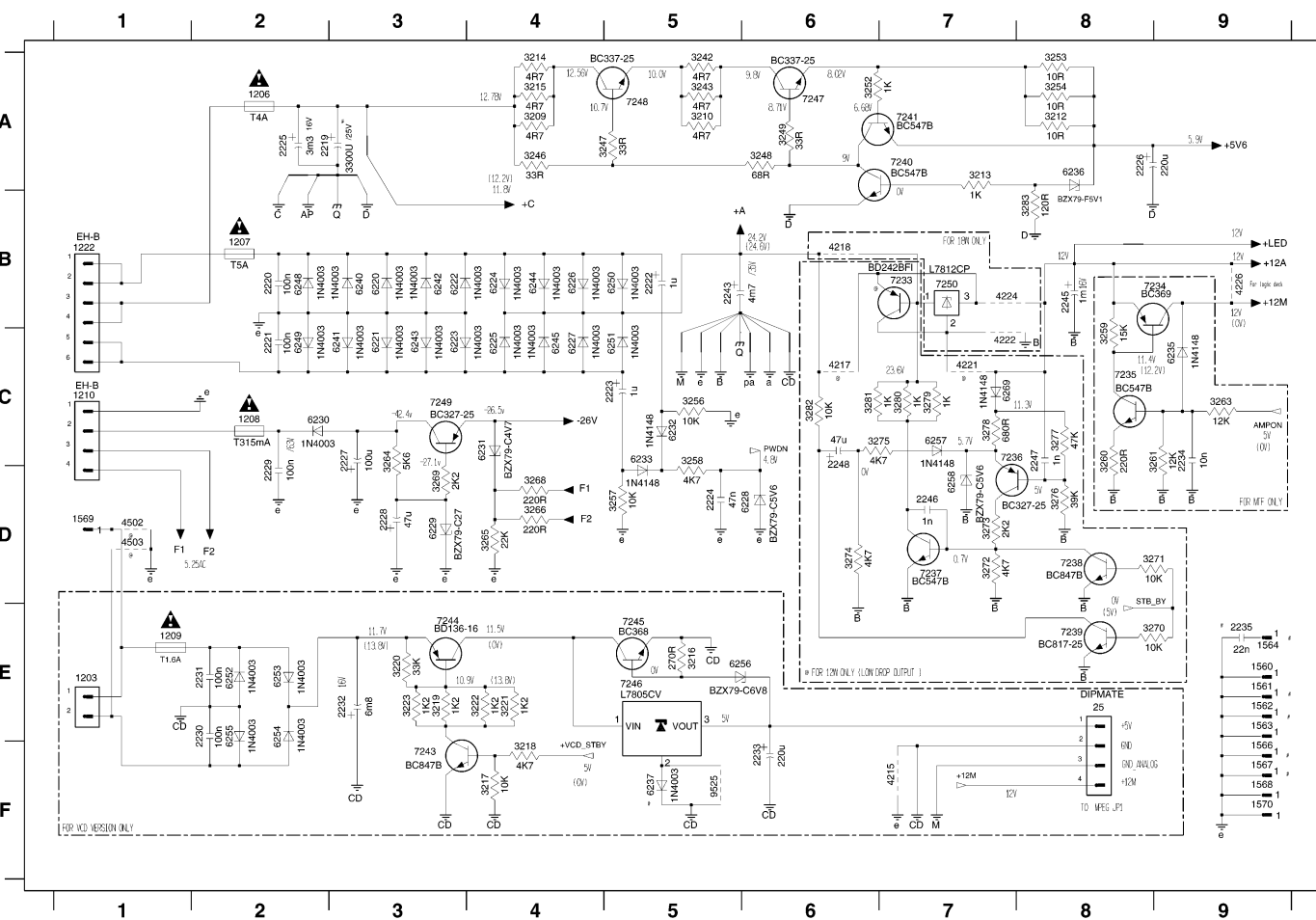
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31 D2	1510 D2	2333 B14	2348 G13	2363 F7	2395 H2	2522 C7	2539 E10	2554 B2	2570 A13	2585 A10	3322 C11	3341 B14	3357 H14	3372 C13	3400 G4	3504 C8	3525 A8	3540 F6	3555 B10	3570 C3	3586 G5	3610 D6	4002 C2	6325 H12	7323 C14	7507 H5	7546 E11
52 A1	1511 F1	2334 C14	2349 F13	2364 F12	2396 E4	2523 B7	2540 E10	2555 C3	2571 A13	2586 F8	3323 B12	3342 C14	3358 G14	3373 F11	3401 F3	3505 C7	3526 E8	3541 A8	3556 A5	3571 C3	3587 G5	3611 B9	4003 C2	6326 E11	7324 E11	7508 H5	7547 A9
65 B5	1512 C1	2335 B14	2350 H13	2365 F12	2397 E4	2524 D7	2541 A10	2556 D3	2572 A2	2587 A8	3324 C13	3343 D10	3359 H14	3374 H14	3402 C3	3506 C7	3527 A2	3542 H2	3557 A5	3572 H6	3588 G5	3612 B14	4004 C2	6327 F11	7325 E11	7509 A8	7548 F9
66 B15	1517 B1	2336 D14	2351 H15	2366 F15	2510 G5	2525 B7	2542 E9	2557 F2	2573 A2	2588 D8	3325 B12	3344 H10	3360 H14	3375 B14	3403 F3	3507 C7	3528 D8	3543 A8	3558 C5	3573 E6	3589 D9	3617 G9	4005 C2	6328 E12	7326 E11	7510 A8	7549 B9
68 A15	1519 A1	2337 G9	2352 G15	2400 H4	2511 F5	2526 C10	2543 D10	2558 D3	2574 A2	2589 F2	3326 D11	3345 G10	3361 F11	3376 B11	3404 G3	3508 C7	3529 B8	3544 E9	3559 A5	3574 D3	3590 A2	3618 H9	4006 C2	6329 F12	7327 E13	7511 C9	7550 D9
1322-A H14	2331 B12	2338 H9	2353 H9	2401 H3	2512 H5	2527 B10	2544 C1	2559 E2	2575 B10	2591 F6	3327 B13	3346 H10	3362 F11	3380 B11	3406 F2	3509 E7	3530 E9	3545 A11	3560 D5	3575 D3	3591 A2	3619 H5	4007 C2	6330 F12	7328 E13	7512 C9	7551 A9
1322-B G14	2332 D12	2339 B11	2354 F11	2402 H4	2513 F5	2528 H4	2545 A9	2560 E4	2576 D9	2592 D5	3328 C13	3347 F12	3363 F12	3381 E14	3407 G2	3510 D7	3531 A9	3546 D11	3561 A5	3576 D3	3592 H5	3620 B5	4008 C2	6331 F8	7329 E13	7513 C9	7552 E8
1322-A H15	2333 C13	2340 E13	2355 E12	2403 G3	2514 G6	2529 F4	2546 E9	2561 D4	2577 G6	2593 A9	3329 B13	3348 H12	3364 E12	3382 E14	3408 G2	3511 C9	3532 C9	3547 A10	3562 A3	3577 D3	3593 F5	3621 A12	4009 C2	6332 F11	7330 E13	7514 C9	7553 A9
1322-B H15	2334 C12	2341 E15	2356 E14	2500 C10	2515 B6	2530 E8	2547 A12	2554 E3	2578 A5	2594 E9	3334 D13	3349 G12	3365 G12	3383 E12	3410 G1	3512 C9	3533 C9	3548 E10	3563 A3	3578 D3	3594 H5	3622 A12	4010 C2	6333 F11	7331 E13	7515 C9	7554 B9
1322-C G15	2327 B12	2342 H7	2357 C14	2501 B5	2516 A3	2531 A8	2548 C1	2564 A2	2579 D4	2595 C5	3335 B13	3350 H12	3366 G12	3384 E12	3411 H8	3513 A4	3534 E10	3549 A13	3564 D5	3580 E4	3595 A2	3623 A7	4011 C2	6334 A15	7332 E13	7516 C9	7555 A9
1322-D G15	2328 D12	2343 D10	2358 G13	2502 G5	2517 A15	2532 D8	2549 C10	2565 A2	2580 E7	2596 C5	3336 C13	3351 C12	3367 G13	3385 F13	3412 H8	3514 B8	3535 A10	3550 D10	3565 B5	3581 E4	3596 A8	3624 C8	4012 C2	6335 E3	7333 E13	7517 A3	7556 F9
1325 G15	2329 B13	2344 H10	2359 H13	2503 F8	2518 C9	2533 B8	2550 C10	2566 A1	2581 H2	2597 F14	3337 B14	3352 H12	3368 G13	3386 F13	3413 B8	3515 B8	3536 E9	3551 F5	3566 B5	3582 E4	3597 A8	3625 C8	4013 C2	6336 E12	7334 E13	7518 C9	7557 F9
1607 A1	2330 C13	2345 G13	2360 A14	2504 D7	2519 C9	2534 G5	2551 E4	2567 A5	2582 C8	2598 E2	3338 D14	3353 F12	3369 G14	3387 C8	3501 F6	3522 D8	3537 A9	3552 H5	3567 B5	3583 E4	3600 D7	4014 C2	6337 C12	7335 E13	7519 C9	7558 F9	
1608 F1	2331 A13	2346 H13	2361 B2	2505 D10	2520 C7	2535 A9	2552 C4	2568 F1	2583 C9	2599 E4	3339 B14	3354 H12	3370 F14	3388 G7	3502 H6	3523 B8	3538 E8	3553 F4	3568 C1	3584 G7	3606 D7	4015 C2	6338 C11	7336 E13	7520 F5	7559 E3	



- △ Precision on layout
- ▲ For set with Kanak
- ▲ For set without Kanak
- ▲ FOR BRUSH ONLY

Part	INC. 2	BB	Juz	Beis	PRESENT
7501	x	x	L	H	
7502	x	x	H	L	
7503	x	x	L	L	
7504	x	x	H	H	

Part	AD	A
ZLR		x
BEIS		x
BAR		x
ED		x



25 E8	3259 C9	6969 C7
1203 E1	3260 C8	7233 B7
1206 A2	3261 C9	7234 B8
1207 B2	3263 C9	7235 C8
1208 C2	3264 C3	7236 C7
1209 E1	3265 D4	7237 D7
1210 C1	3266 D4	7238 D8
1222 B1	3268 D8	7239 E8
1560 E9	3269 D3	7240 A7
1561 E9	3270 E8	7241 A7
1562 E9	3271 D8	7243 F3
1563 E9	3272 D7	7244 E3
1564 E9	3273 D7	7245 E5
1566 F9	3274 D6	7246 E5
1567 F9	3275 C6	7247 A6
1568 F9	3276 D8	7248 A5
1569 D1	3277 C8	7249 C3
1570 F9	3278 C7	7250 B7
2219 A2	3279 C7	9525 B5
2220 B2	3280 C7	
2221 C2	3281 C6	
2222 B5	3282 C6	
2223 C3	3283 B8	
2224 D5	4215 F7	
2225 A2	4217 C6	
2226 A8	4218 B6	
2227 C3	4221 C7	
2228 D3	4222 C7	
2229 D2	4224 B7	
2232 C3	4225 B8	
2231 E2	4502 D1	
2232 E3	4503 D1	
2233 F6	6220 B3	
2234 C9	6221 C3	
2235 E9	6222 B3	
2245 B5	6223 C3	
2245 B8	6224 B4	
2246 D7	6225 C4	
2247 C8	6226 B4	
2248 C6	6227 C4	
3209 A4	6228 D5	
3210 A5	6229 D3	
3212 A8	6230 C2	
3213 A7	6231 C4	
3214 A4	6232 C5	
3215 A4	6233 C5	
3216 E5	6235 C9	
3217 F4	6236 A8	
3218 F4	6237 F5	
3219 E3	6240 B3	
3220 E3	6241 C3	
3221 E4	6242 B3	
3222 E4	6243 C3	
3223 E3	6244 B4	
3242 A5	6245 C4	
3243 A5	6248 B2	
3246 A4	6249 C2	
3247 A5	6250 B5	
3248 A6	6251 C5	
3249 A6	6252 E2	
3252 A6	6253 E2	
3254 A8	6254 E2	
3256 C5	6256 E5	
3257 D5	6257 C7	
3258 C5	6258 D7	

* Provision on Layout

1 2 3 4

TRANSFORMER MAIN REF SHEET 1 FOR 1202, 1205, 1206, 1207

VERSION	1570	9272	9273	9271	9274	9299	5202	1202	1205	1206	1207	3208	A	B	C	D	E	F	G
/ 37	X	X	X	X		X			-	T2-5A UL	T5A, UL	X	WHITE	-	-	BLACK	BLUE	BLACK	BLUE
/ 21				-			X	X	X	T2-4A IEC	T5A, IEC		BROWN	BLACK	BLUE	RED			
/ 21 VCD				-	X		X	-	X	T2-4A IEC	T5A, IEC		BROWN	BLACK	BLUE	RED			
/ 22			X			X	X	-	-	T2-4A IEC	T5A, IEC		BROWN	-	-	BLUE			
/ 30			X			X	X	-	-	T2-4A IEC	T5A, IEC		BROWN	-	-	BLUE			
/ 34			X			X	X	-	-	T2-4A IEC	T5A, IEC		BROWN	-	-	BLUE			

A

A

B

B

C

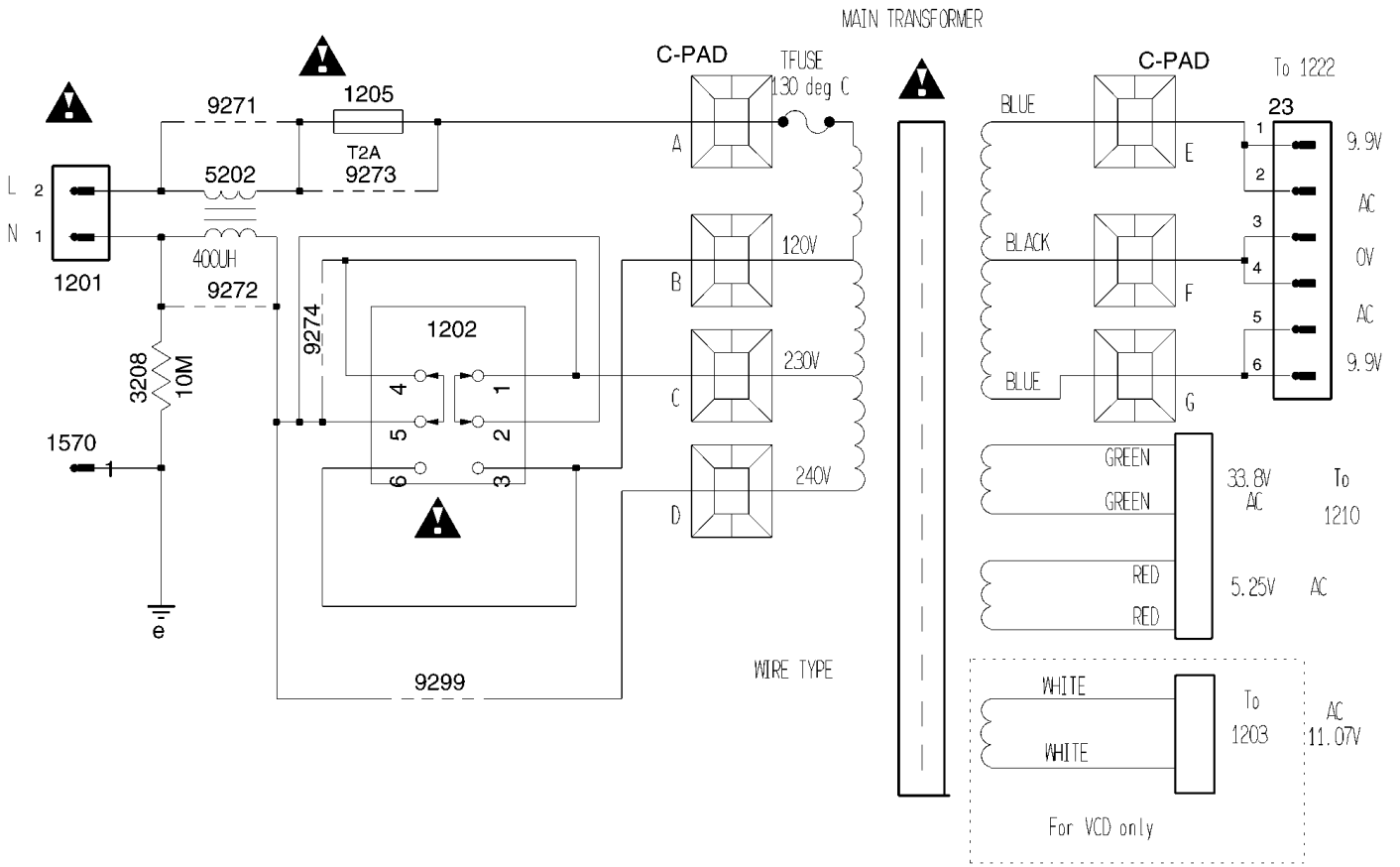
C

D

D

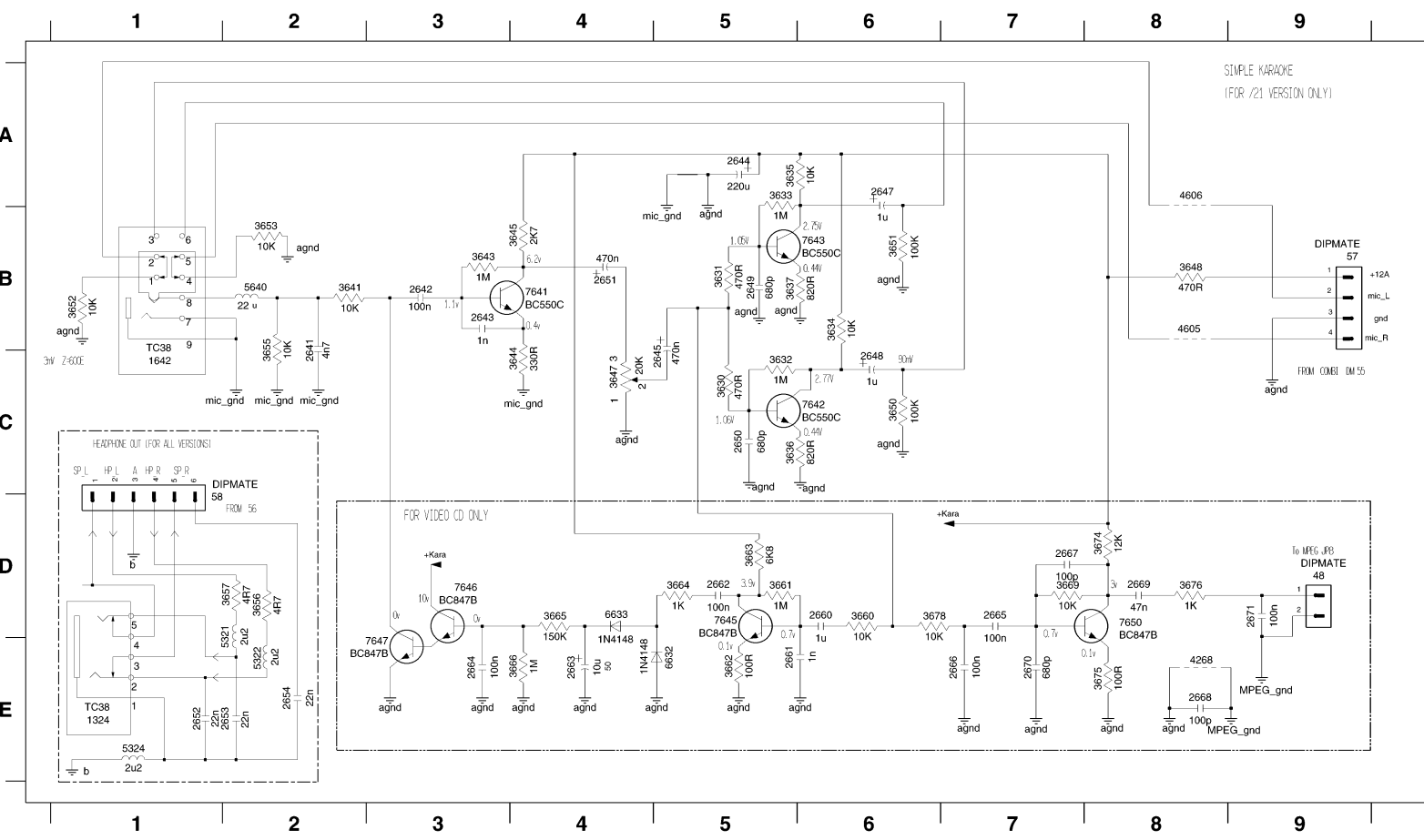
E

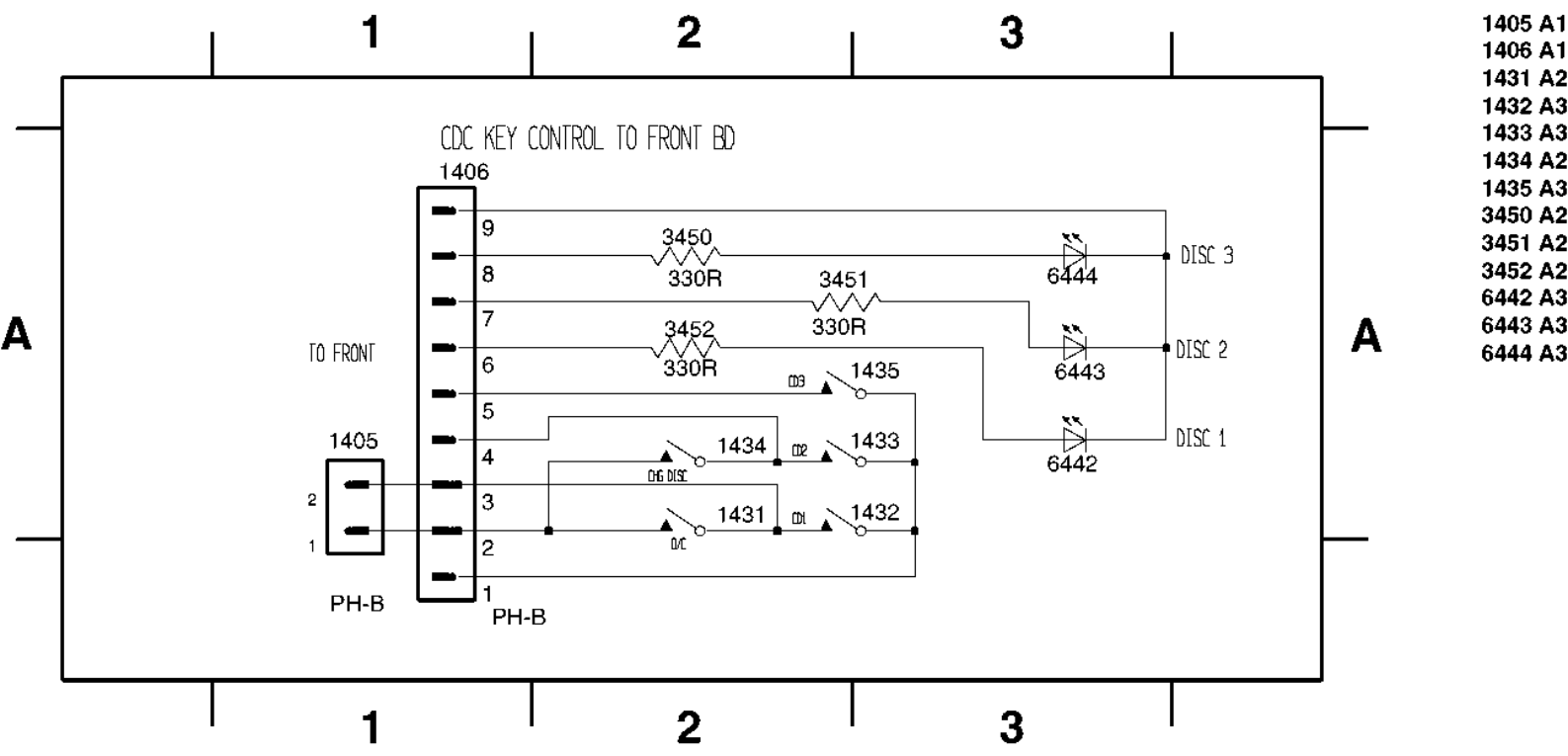
E



1 2 3 4

48 D9	1642 C1	2644 A5	2649 B5	2653 E2	2662 D5	2666 E7	2670 E7	3632 C5	3636 C5	3644 C4	3650 C6	3655 B2	3661 D5	3665 D4	3675 E8	4605 B8	5324 E1	7641 B4	7646 D3
57 B9	2641 B2	2645 C5	2650 C5	2654 E2	2663 E4	2667 D7	2671 D9	3633 A5	3637 B5	3645 B4	3651 B5	3656 D2	3662 E5	3666 E4	3676 D8	4606 A8	5640 B2	7642 C6	7647 E3
58 D1	2642 B3	2647 A6	2651 B4	2660 D6	2664 E3	2668 E8	3630 C5	3634 B6	3641 B2	3647 C4	3652 B1	3657 D2	3663 D5	3669 D7	3678 D6	5321 D2	6632 E5	7643 B6	7650 D8
1324 E1	2643 B3	2648 C6	2652 E1	2661 E5	2665 D7	2669 D8	3631 B5	3635 A5	3643 B3	3648 B8	3653 B2	3660 D6	3664 D5	3674 D8	4268 E8	5322 E2	6633 D4	7645 D5	

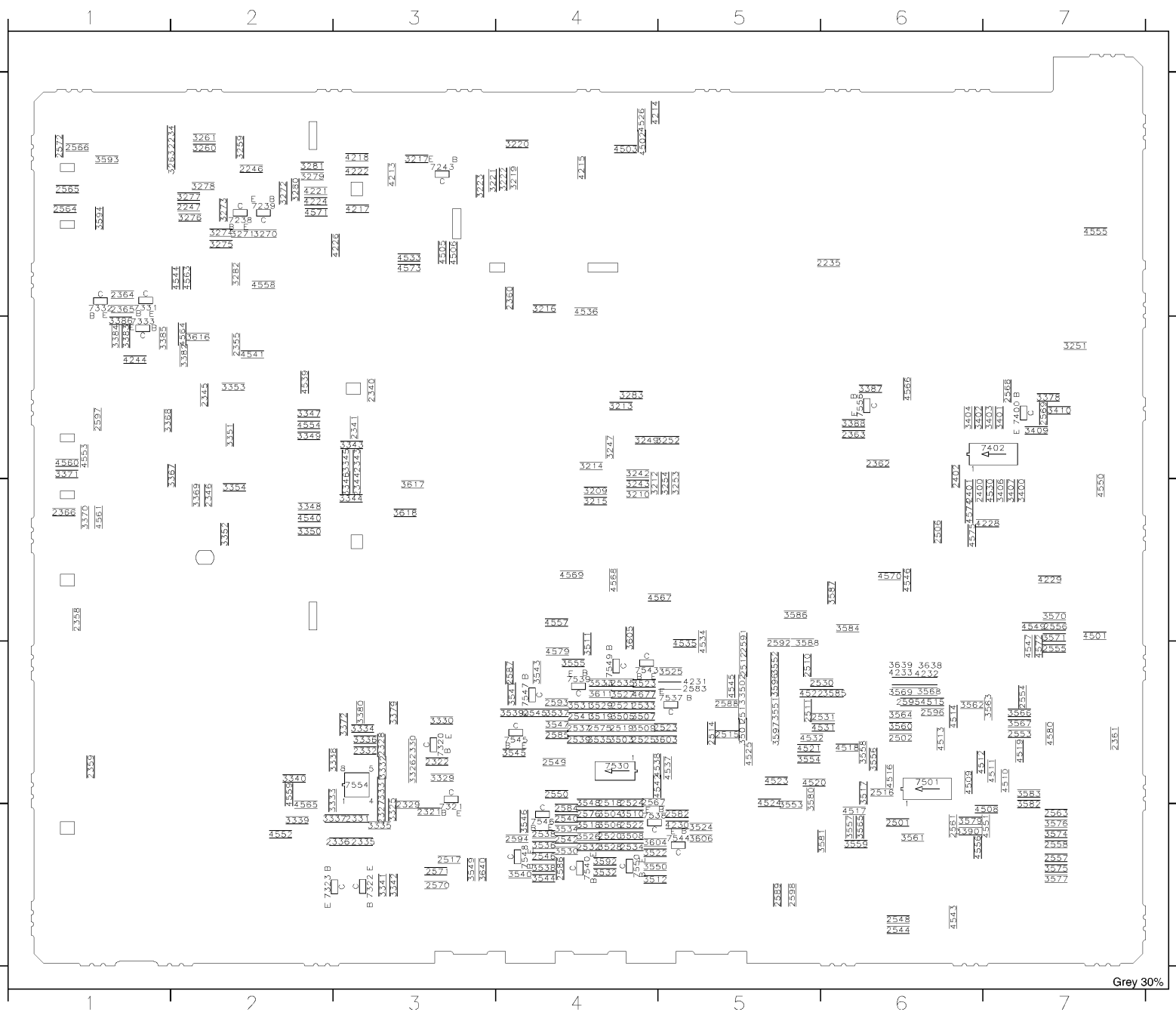




- 1405 A1
- 1406 A1
- 1431 A2
- 1432 A3
- 1433 A3
- 1434 A2
- 1435 A3
- 3450 A2
- 3451 A2
- 3452 A2
- 6442 A3
- 6443 A3
- 6444 A3

25	A4	1509	F3	2222	B3	2337	B5	2507	C2	3218	A5	3362	A7	5006	A3	6226	A3	6250	A3	6330	B2	7249	A1	9209	B4	9234	C4	9258	D5	9501	B1	9521	D3	9543	C2
26	F1	1510	F3	2223	B3	2338	C5	2508	D3	3219	B4	3363	A7	5007	A3	6227	A3	6251	A3	6331	B2	7250	A5	9210	B4	9235	B6	9259	D5	9502	C1	9522	C3	9544	C2
27	D1	1511	F3	2224	B2	2339	D5	2509	F3	3220	B4	3364	A6	5008	F1	6228	B2	6252	A4	6332	B2	7251	A5	9211	B4	9236	B7	9286	B7	9503	C1	9523	D3	9545	D5
28	D2	1512	F3	2225	C4	2340	C7	2510	D4	3221	B3	3365	B6	5009	D5	6229	B2	6253	A4	6333	A1	7252	A5	9212	B4	9237	B7	9287	A5	9504	B2	9524	B2	9546	F5
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30	E5	1514	F3	2227	A2	2342	C7	2512	D4	3223	B3	3367	A7	5011	D5	6231	A1	6255	A4	6335	B2	7254	A5	9214	B4	9239	B7	9289	A5	9506	C1	9526	C5	9548	C1
31	A5	1515	D1	2228	A1	2343	C7	2513	D4	3224	B3	3368	A7	5012	D5	6232	A1	6256	A4	6336	B2	7255	A5	9215	B4	9240	C7	9290	A7	9507	C1	9527	D7	9549	C1
32	A5	1516	D1	2229	A2	2344	C7	2514	D4	3225	B3	3369	A7	5013	D5	6233	B3	6257	A7	6337	B3	7256	A5	9216	B4	9241	A4	9300	D7	9508	D2	9528	D1	9550	D5
33	A4	1517	D1	2230	A4	2345	C7	2515	D4	3226	B3	3370	A7	5014	D5	6234	B3	6258	A7	6338	B3	7257	A5	9217	B4	9242	A5	9301	D7	9509	C1	9529	D1	9551	F5
34	A3	1518	D1	2231	A4	2346	C7	2516	D4	3227	B3	3371	A7	5015	D5	6235	B3	6259	A7	6339	B3	7258	A5	9218	B4	9243	A4	9302	D7	9510	C1	9530	D1	9552	F5
35	A5	1519	D1	2232	A5	2347	C7	2517	D4	3228	B3	3372	A7	5016	D5	6236	B3	6260	A7	6340	B3	7259	A5	9219	B4	9244	C5	9303	D7	9511	D2	9531	D1	9553	F5
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37	A3	1521	D1	2234	A5	2349	C7	2519	D4	3230	B3	3374	A7	5018	D5	6238	B3	6262	A7	6342	B3	7261	A5	9221	B4	9246	D5	9305	D7	9513	D3	9533	D1	9555	F5
38	A3	1522	D1	2235	A4	2350	C7	2520	D4	3231	B3	3375	A7	5019	D5	6239	B3	6263	A7	6343	B3	7262	A5	9222	B4	9247	F5	9306	D7	9514	C2	9534	D1	9556	F5
39	A3	1523	D1	2236	A5	2351	C7	2521	D4	3232	B3	3376	A7	5020	D5	6240	B3	6264	A7	6344	B3	7263	A5	9223	B4	9248	C4	9307	D7	9515	D2	9535	D2	9557	F5
40	A3	1524	D1	2237	A4	2352	C7	2522	D4	3233	B3	3377	A7	5021	D5	6241	B3	6265	A7	6345	B3	7264	A5	9224	B4	9249	B5	9308	D7	9516	C2	9536	F1	9558	F5
41	A3	1525	D1	2238	A5	2353	C7	2523	D4	3234	B3	3378	A7	5022	D5	6242	B3	6266	A7	6346	B3	7265	A5	9225	B4	9250	B5	9309	D7	9517	D3	9537	F1	9559	F5
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43	A3	1527	D1	2240	A5	2355	C7	2525	D4	3236	B3	3380	A7	5024	D5	6244	B3	6268	A7	6348	B3	7267	A5	9227	B4	9252	B5	9311	D7	9519	D4	9539	F1	9561	C1
44	A3	1528	D1	2241	A4	2356	C7	2526	D4	3237	B3	3381	A7	5025	D5	6245	B3	6269	A7	6349	B3	7268	A5	9228	B4	9253	B5	9312	D7	9520	D3	9540	F1	9562	F5
45	A3	1529	D1	2242	A5	2357	C7	2527	D4	3238	B3	3382	A7	5026	D5	6246	B3	6270	A7	6350	B3	7269	A5	9229	B4	9254	B5	9313	D7	9521	D3	9541	F1	9563	F5
46	A3	1530	D1	2243	A4	2358	C7	2528	D4	3239	B3	3383	A7	5027	D5	6247	B3	6271	A7	6351	B3	7270	A5	9230	B4	9255	B5	9314	D7	9522	D3	9542	F1	9564	F5
47	A3	1531	D1	2244	A5	2359	C7	2529	D4	3240	B3	3384	A7	5028	D5	6248	B3	6272	A7	6352	B3	7271	A5	9231	B4	9256	B5	9315	D7	9523	D3	9543	F1	9565	F5
48	A3	1532	D1	2245	A4	2360	C7	2530	D4	3241	B3	3385	A7	5029	D5	6249	B3	6273	A7	6353	B3	7272	A5	9232	B4	9257	B5	9316	D7	9524	D3	9544	F1	9566	F5
49	A3	1533	D1	2246	A5	2361	C7	2531	D4	3242	B3	3386	A7	5030	D5	6250	B3	6274	A7	6354	B3	7273	A5	9233	B4	9258	B5	9317	D7	9525	D3	9545	F1	9567	F5
50	A3	1534	D1	2247	A4	2362	C7	2532	D4	3243	B3	3387	A7	5031	D5	6251	B3	6275	A7	6355	B3	7274	A5	9234	B4	9259	B5	9318	D7	9526	D3	9546	F1	9568	F5
51	A3	1535	D1	2248	A5	2363	C7	2533	D4	3244	B3	3388	A7	5032	D5	6252	B3	6276	A7	6356	B3	7275	A5	9235	B4	9260	B5	9319	D7	9527	D3	9547	F1	9569	F5
52	A3	1536	D1	2249	A4	2364	C7	2534	D4	3245	B3	3389	A7	5033	D5	6253	B3	6277	A7	6357	B3	7276	A5	9236	B4	9261	B5	9320	D7	9528	D3	9548	F1	9570	F5
53	A3	1537	D1	2250	A5	2365	C7	2535	D4	3246	B3	3390	A7	5034	D5	6254	B3	6278	A7	6358	B3	7277	A5	9237	B4	9262	B5	9321	D7	9529	D3	9549	F1	9571	F5
54	A3	1538	D1	2251	A4	2366	C7	2536	D4	3247	B3	3391	A7	5035	D5	6255	B3	6279	A7	6359	B3	7278	A5	9238	B4	9263	B5	9322	D7	9530	D3	9550	F1	9572	F5
55	A3	1539	D1	2252	A5	2367	C7	2537	D4	3248	B3	3392	A7	5036	D5	6256	B3	6280	A7	6360	B3	7279	A5	9239	B4	9264	B5	9323	D7	9531	D3	9551	F1	9573	F5
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57	A3	1541	D1	2254	A5	2369	C7	2539	D4	3250	B3	3394	A7	5038	D5	6258	B3	6282	A7	6362	B3	7281	A5	9241	B4	9266	B5	9325	D7	9533	D3	9553	F1	9575	F5
58	A3	1542	D1	2255	A4	2370	C7	2540	D4	3251	B3	3395	A7	5039	D5	6259	B3	6283	A7	6363	B3	7282	A5	9242	B4	9267	B5	9326	D7	9534	D3	9554	F1	9576	F5
59	A3	1543	D1	2256	A5	2371	C7	2541	D4	3252	B3	3396	A7	5040	D5	6260	B3	6284	A7	6364	B3	7283	A5	9243	B4	9268	B5	9327	D7	9535	D3	9555	F1	9577	F5
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61	A3	1545	D1	2258	A5	2373	C7	2543	D4	3254	B3	3398	A7	5042	D5	6262	B3	6286	A7	6366	B3	7285	A5	9245	B4	9270	B5	9329	D7	9537	D3	9557	F1	9579	F5
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65	A3	1549	D1	2262	A5	2377	C7	2547	D4	3258	B3	3402	A7	5046	D5	6266	B3	6290	A7	6370	B3	7289	A5	9249	B4	9274	B5	9333	D7	9541	D3	9561	F1	9583	F5
66	A3	1550	D1	2263	A4	2378	C7	2548	D4	3259	B3	3403	A7	5047	D5	6267	B3	6291	A7	6371	B3	7290	A5	9250	B4	9275	B5	9334	D7	9542	D3	9562	F1	9584	F5
67	A3	1551	D1	2264	A5	2379	C7	2549	D4	3260	B3	3404	A7	5048	D5	6268	B3	6292	A7	6372	B3	7291	A5	9251	B4	9276	B5	9335	D7	9543	D3	9563	F1	9585	F5
68	A3	1552	D1	2265	A4	2380	C7	2550	D4	3261	B3	3405	A7	5049	D5	6269	B3	6293	A7	6373	B3	7292	A5	9252	B4	9277	B5	9336	D7	9544	D3	9564	F1	9586	F5
69	A3	1553	D1	2266	A5	2381	C7	2551	D4	3262	B3	3406	A7	5050	D5	6270	B3	6294	A7	6374	B3	7293	A5	9253	B4	9278	B5	9337	D7	9545	D3	9565	F1	9587	F5
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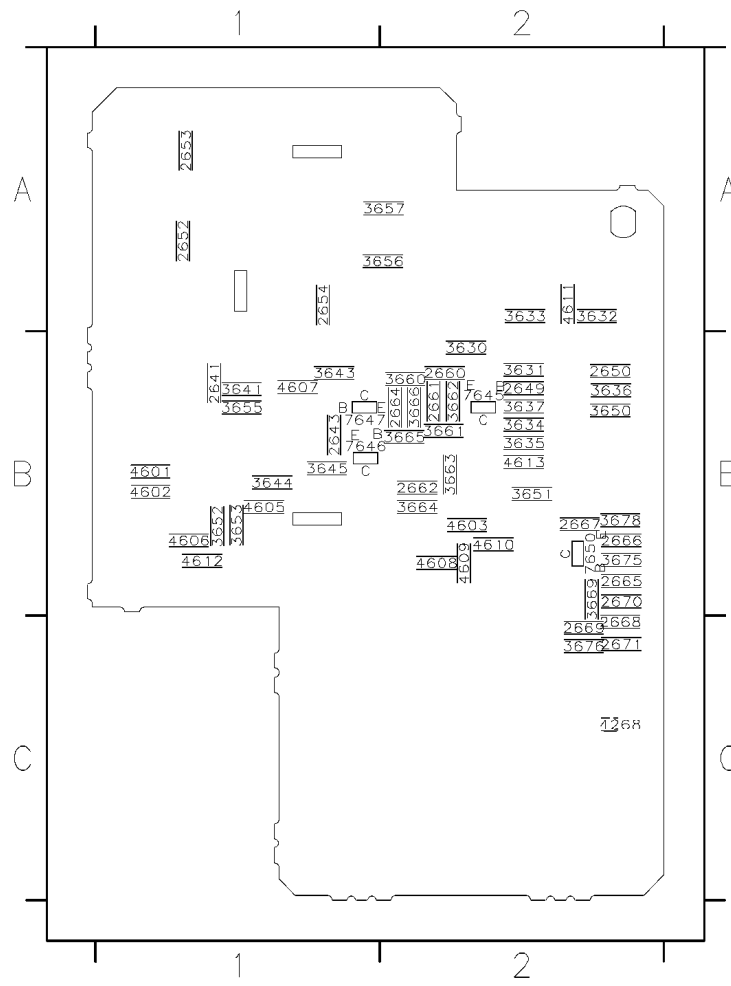
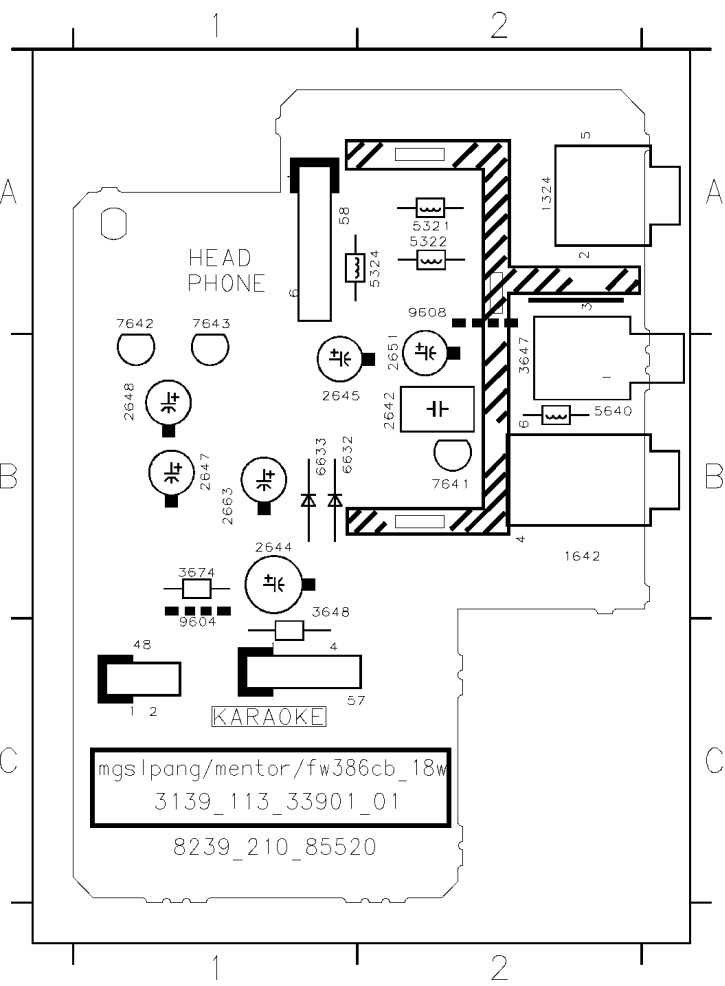
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2235	A2	2361	D7	2521	F4	2551	D7	2586	D4	3222	A4	3279	A2	3345	C3	3386	B1	3536	D4	3564	D7	3593	E4	4225	A3	4518	D6	4544	A2	4569	C4	7502	D6
2246	A2	2362	B6	2522	F4	2552	D7	2587	D4	3223	A3	3280	A2	3346	C3	3387	B6	3537	D4	3565	D7	3594	A1	4226	C7	4519	D7	4545	D5	4570	C6	7503	D4
2247	A2	2363	D5	2523	D5	2553	D5	2588	D5	3224	B4	3281	A2	3347	B2	3388	B6	3538	D4	3566	D7	3595	D5	4227	C7	4520	D7	4546	C6	4571	A2	7504	E4
2321	F3	2364	A1	2524	D4	2554	D4	2589	F5	3225	C4	3282	A2	3348	C2	3390	F6	3539	D4	3567	D7	3597	D5	4230	E5	4521	D5	4547	D7	4572	D7	7505	D4
2322	D3	2365	A1	2525	D4	2555	D4	2590	D5	3226	C4	3283	A2	3349	C2	3400	C7	3540	D4	3568	D6	3603	D5	4231	D5	4522	D5	4548	C7	4573	A3	7506	F4
2327	F3	2366	C1	2526	D4	2556	D4	2591	C5	3227	C4	3284	A2	3350	C2	3401	B7	3541	D4	3569	D4	3604	F4	4232	D6	4523	D5	4549	C7	4574	C8	7507	F4
2328	D3	2400	C6	2531	D6	2561	E6	2592	D5	3228	C4	3285	A2	3351	C2	3402	B6	3542	D4	3570	C7	3605	C4	4233	D6	4524	D5	4551	F7	4575	C6	7508	E4
2329	F3	2401	C6	2532	F4	2562	E7	2593	F4	3229	C4	3286	A2	3352	C2	3403	B7	3543	D4	3571	C7	3606	E5	4244	B1	4525	D5	4552	E7	4576	D4	7509	D4
2330	D3	2402	C6	2533	F4	2563	E7	2594	F4	3230	C4	3287	A2	3353	C2	3404	B6	3544	D4	3572	C7	3607	F3	4244	B1	4526	A4	4553	B1	4577	D7	7510	F4
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2333	F3	2503	D6	2536	D4	2566	A1	2597	D6	3233	C4	3290	A2	3356	C2	3408	B7	3547	D4	3575	E7	3610	D6	4253	D6	4529	D5	4556	A7	4580	D7	7513	F4
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2343	B3	2513	D5	2546	F4	2576	D4	2607	C4	3240	C4	3297	A2	3363	C2	3415	B7	3554	D4	3582	E7	3617	D6	4260	D6	4536	D5	4563	A2	4587	D7	7520	F4
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2345	B3	2515	D5	2548	F4	2578	D4	2609	C4	3242	C4	3299	A2	3365	C2	3417	B7	3556	D4	3584	E7	3619	D6	4262	D6	4538	D5	4565	A2	4589	D7	7522	F4
2346	B3	2516	D5	2549	F4	2579	D4	2610	C4	3243	C4	3300	A2	3366	C2	3418	B7	3557	D4	3585	E7	3620	D6	4263	D6	4539	D5	4566	A2	4590	D7	7523	F4
2347	B3	2517	D5	2550	F4	2580	D4	2611	C4	3244	C4	3301	A2	3367	C2	3419	B7	3558	D4	3586	E7	3621	D6	4264	D6	4540	C2	4567	A2	4591	D7	7524	F4
2348	B3	2518	D5	2551	F4	2581	D4	2612	C4	3245	C4	3302	A2	3368	C2	3420	B7	3559	D4	3587	E7	3622	D6	4265	D6	4541	B2	4568	B6	4592	D7	7525	F4
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Grey 30%

48	C1	2642	B2	2651	B2	5321	A2	6633	B1	9608	A2
57	C1	2644	B1	2663	B1	5322	A2	7641	B2		
58	A1	2645	B1	3647	B2	5324	A2	7642	A1		
1324	A2	2647	B1	3648	B1	5640	B2	7643	A1		
1642	B2	2648	B1	3674	B1	6632	B1	9604	C1		

2641	B1	2665	B2	3634	B2	3653	B1	3669	B2	4608	B2
2643	B1	2666	B2	3635	B2	3655	B1	3675	B2	4609	B2
2649	B2	2667	B2	3636	B2	3656	A2	3676	C2	4610	B2
2650	B2	2668	C2	3637	B2	3657	A2	3678	B2	4611	A2
2652	A1	2669	C2	3641	B1	3660	B2	4268	C2	4612	B1
2653	A1	2670	B2	3643	B1	3661	B2	4601	B1	4613	B2
2654	A1	2671	C2	3644	B1	3662	B2	4602	B1	7645	B2
2660	B2	3630	B2	3645	B1	3663	B2	4603	B2	7646	B1
2661	B2	3631	B2	3650	B2	3664	B2	4605	B1	7647	B1
2662	B2	3632	A2	3651	B2	3665	B2	4606	B1	7650	B2
2664	B2	3633	A2	3652	B1	3666	B2	4607	B1		



1405 A12 1406 A11 1431 A3 1432 A9 1433 A8 1434 A5 1435 A7 6442 A10 6443 A8 6444 A7 9401 A12

1 2 3 4 5 6 7 8 9 10 11 12

msglpang/mentor/fw386cb_18w/3139_113_33901_4
8239_210_82560



1 2 3 4 5 6 7 8 9 10 11 12

3450 A6 3451 A6 3452 A3

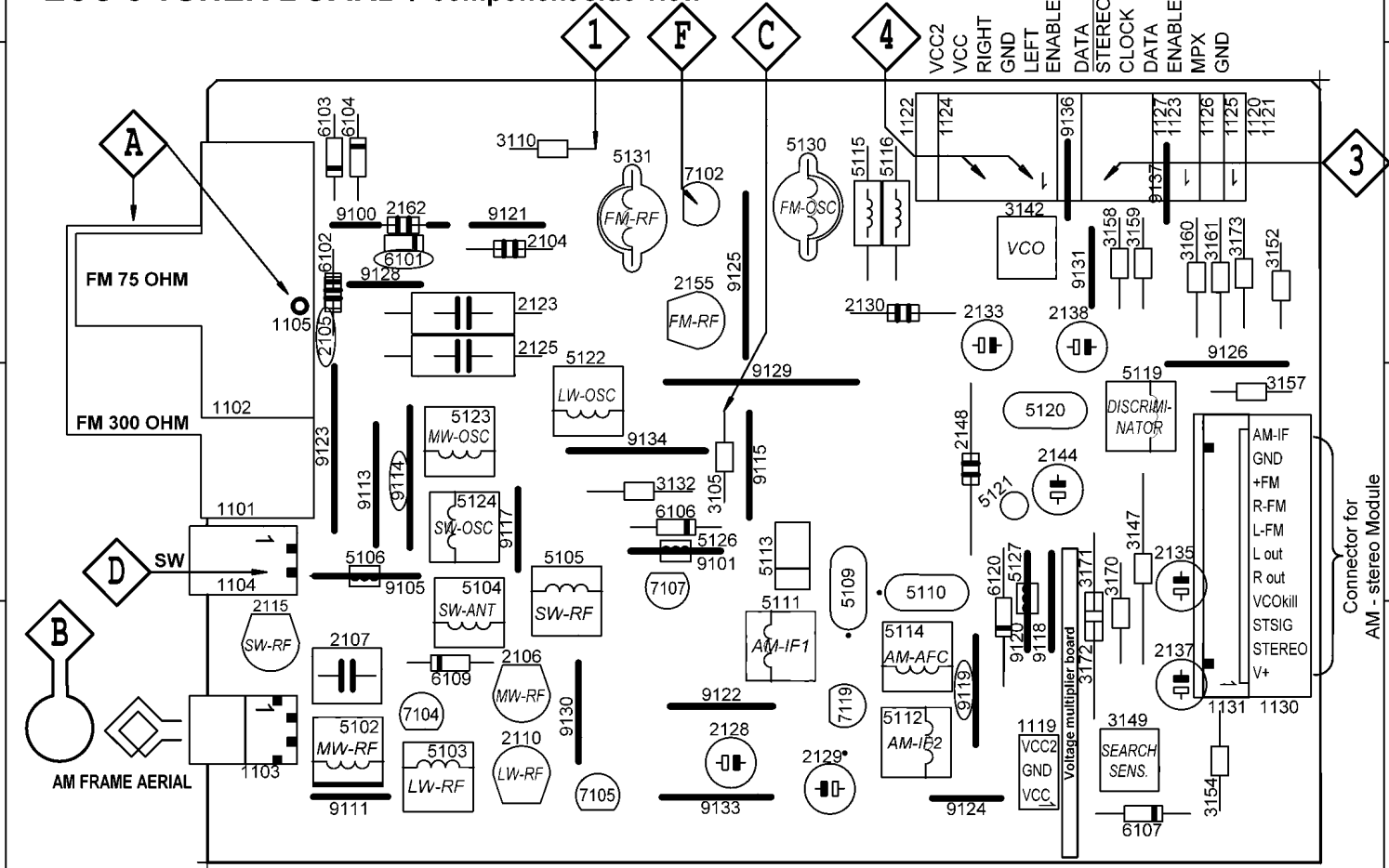
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3452


3451
3450

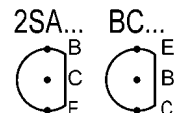
1 2 3 4 5 6 7 8 9 10 11 12

ECO 5 TUNER BOARD / component side view

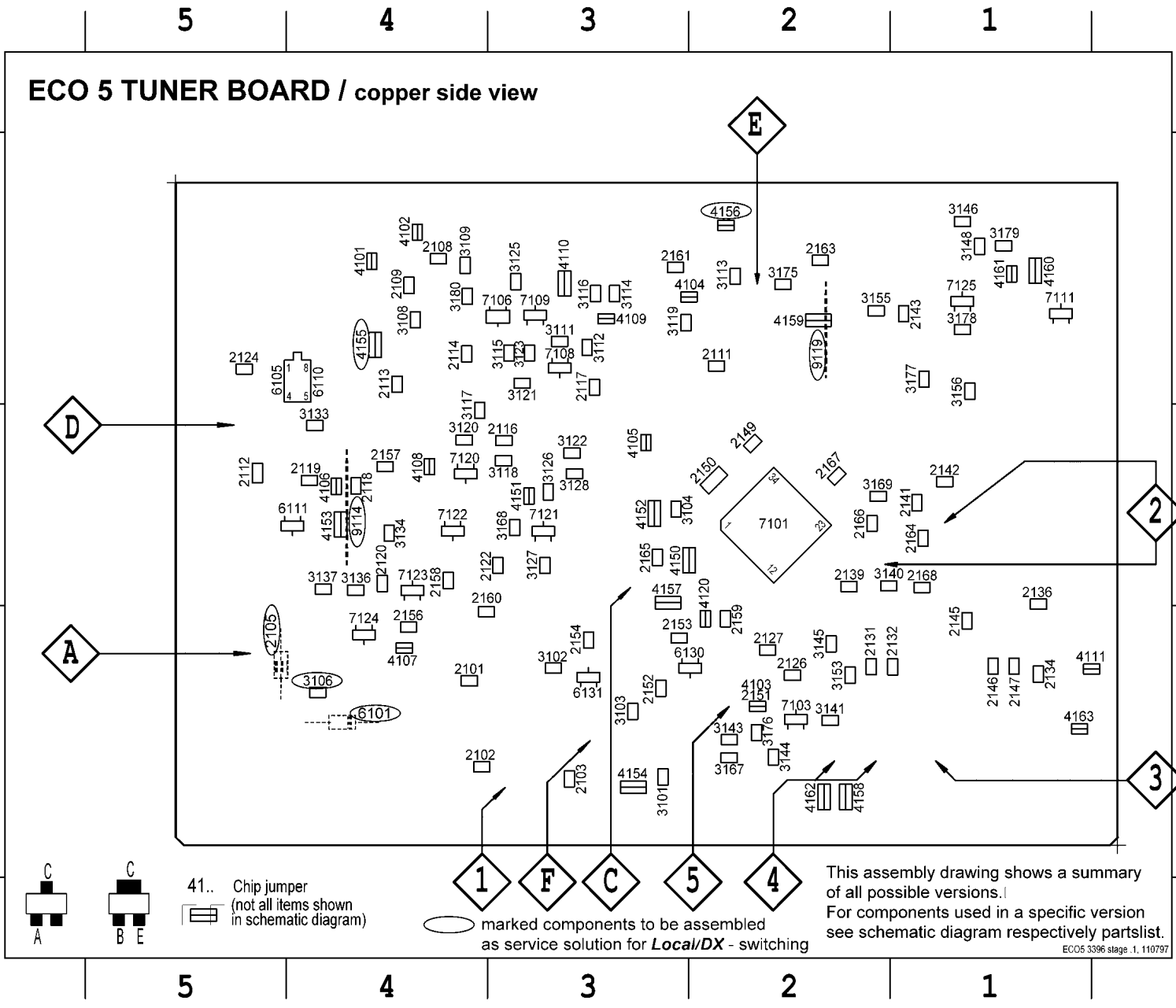


This assembly drawing shows a summary of all possible versions.
 For components used in a specific version see schematic diagram respectively partlist.

 marked components to be assembled as service solution for **Local/DX** - switching



ECO 5 TUNER BOARD / copper side view

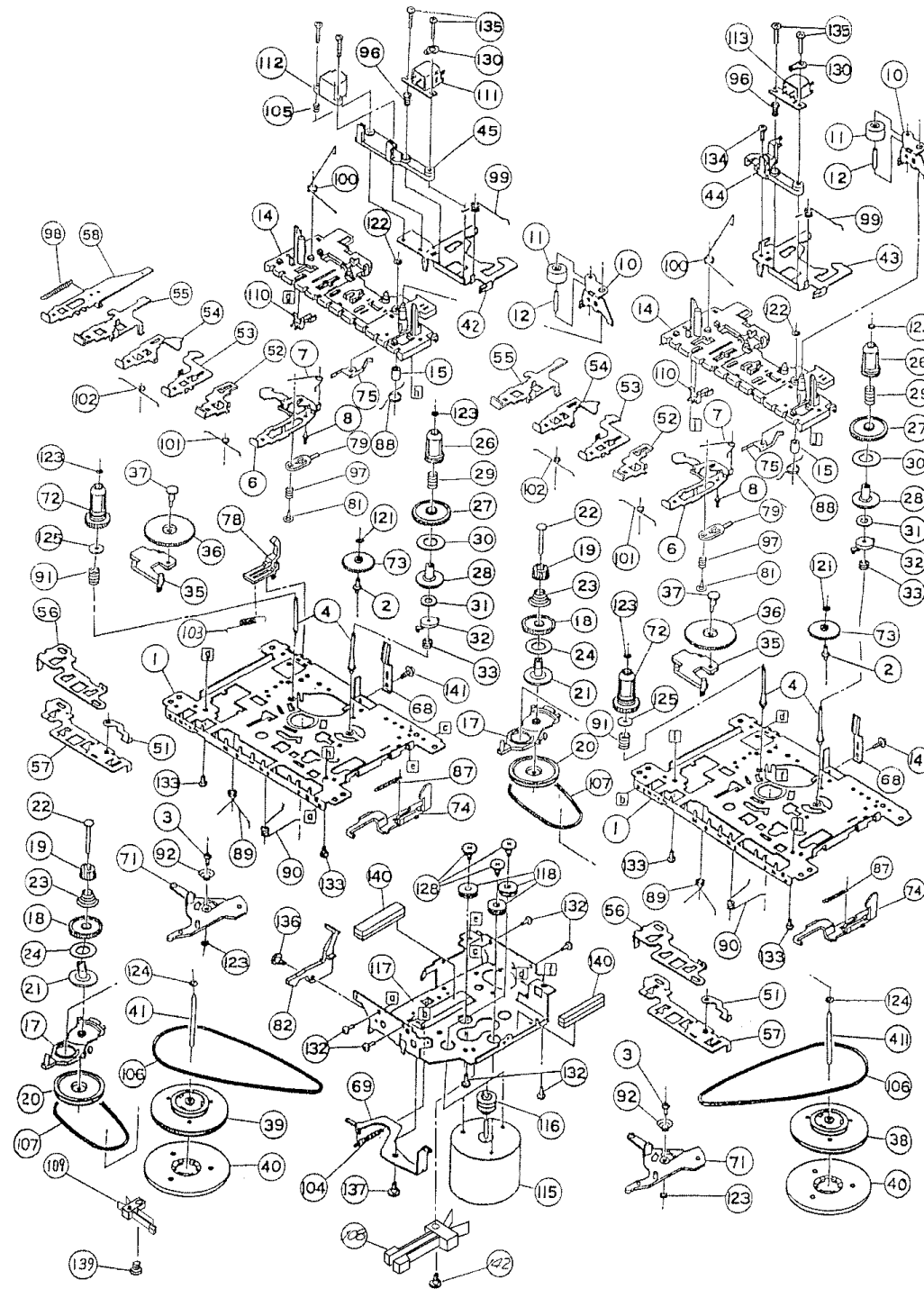


41.. Chip jumper
(not all items shown
in schematic diagram)

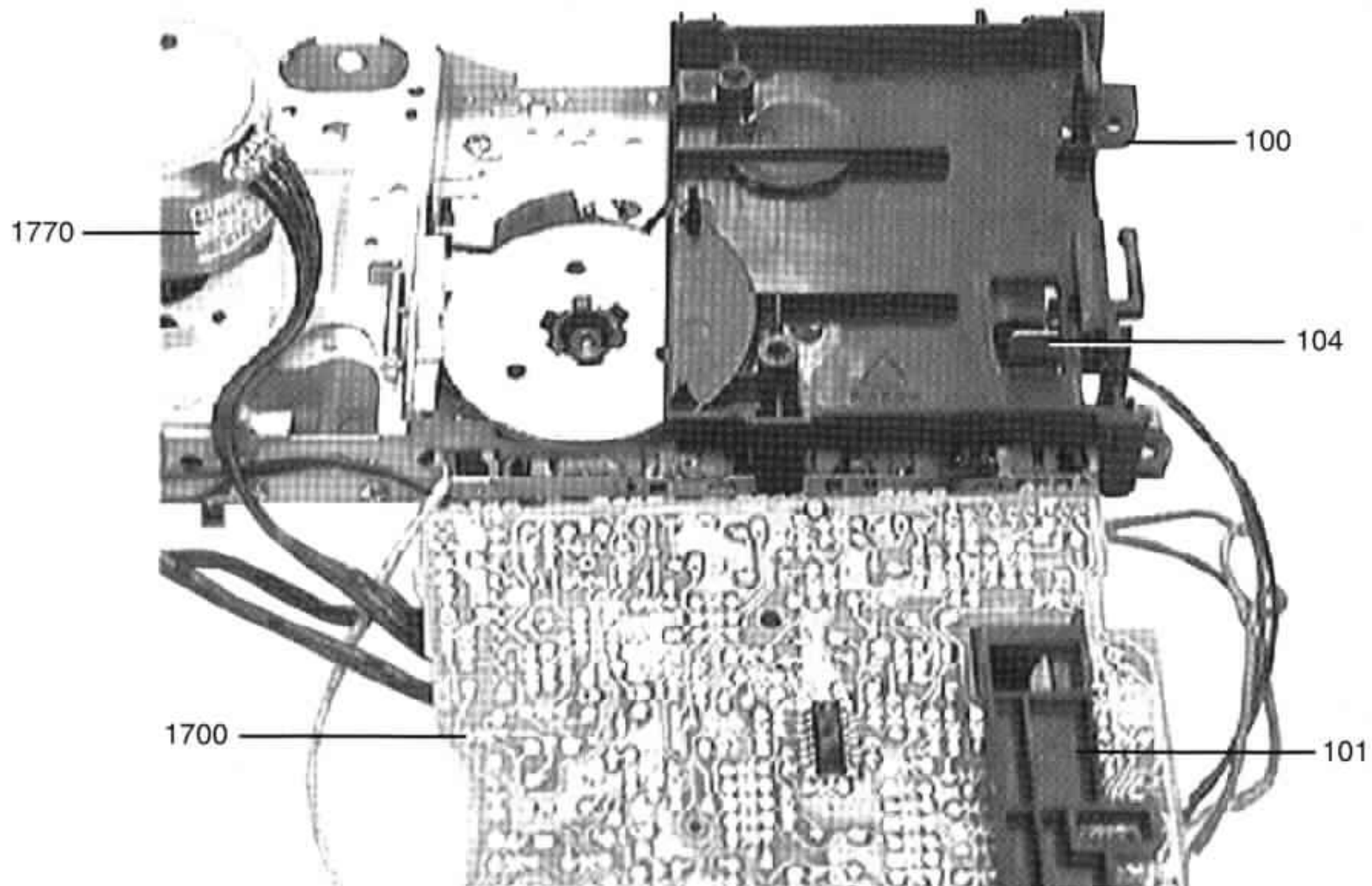
○ marked components to be assembled
as service solution for *Local/DX* - switching

This assembly drawing shows a summary
of all possible versions.
For components used in a specific version
see schematic diagram respectively partslist.

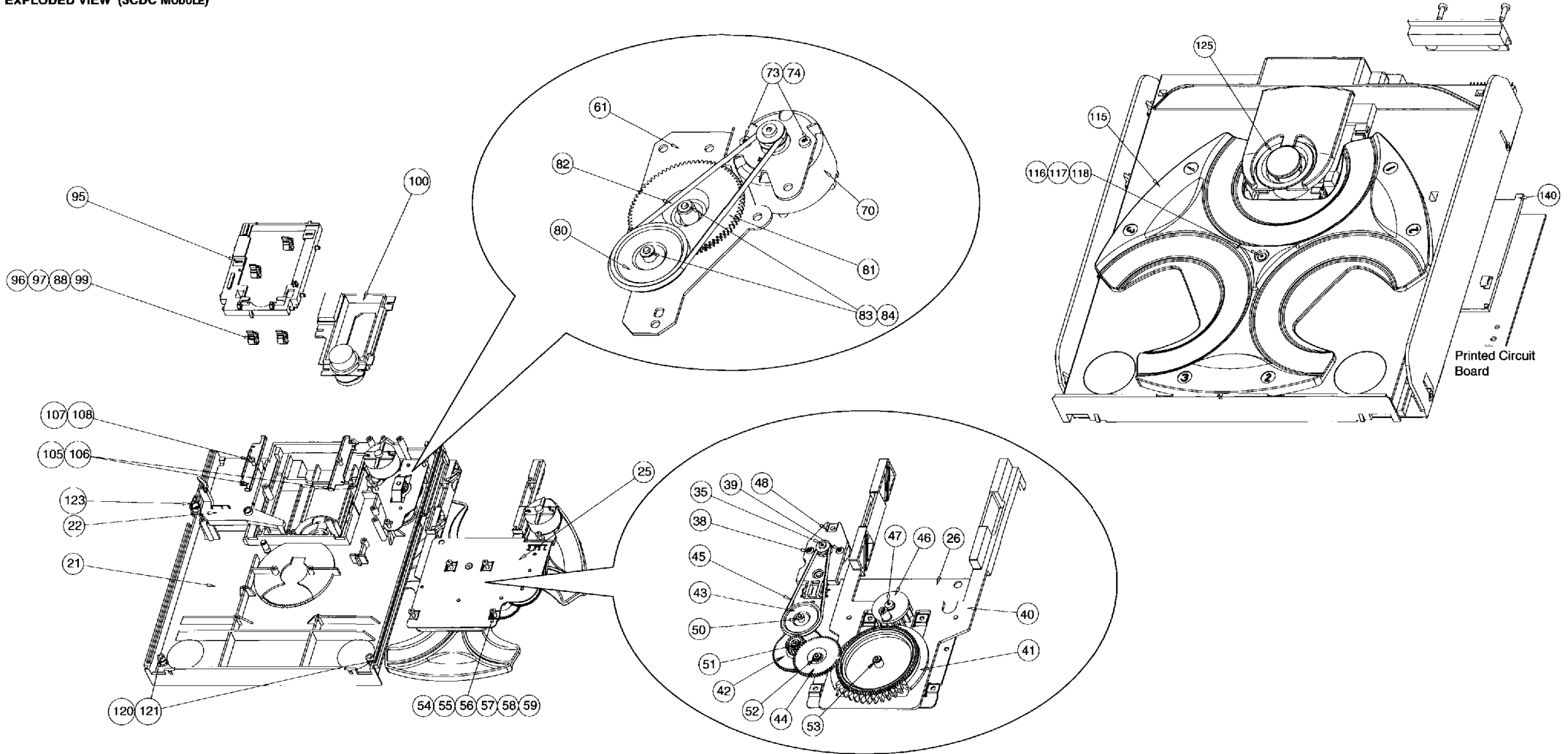
TAPE MECHANISM

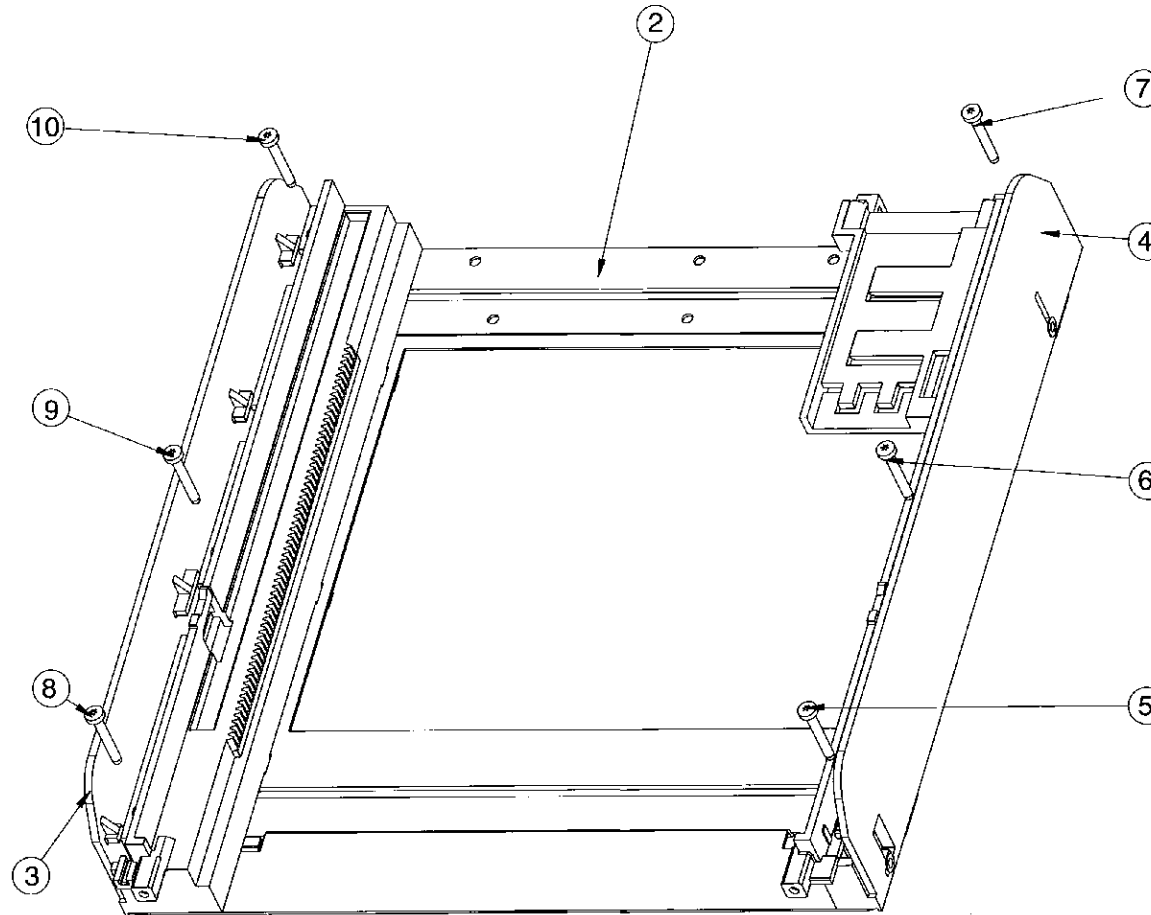


MTF MODULE PICTURE



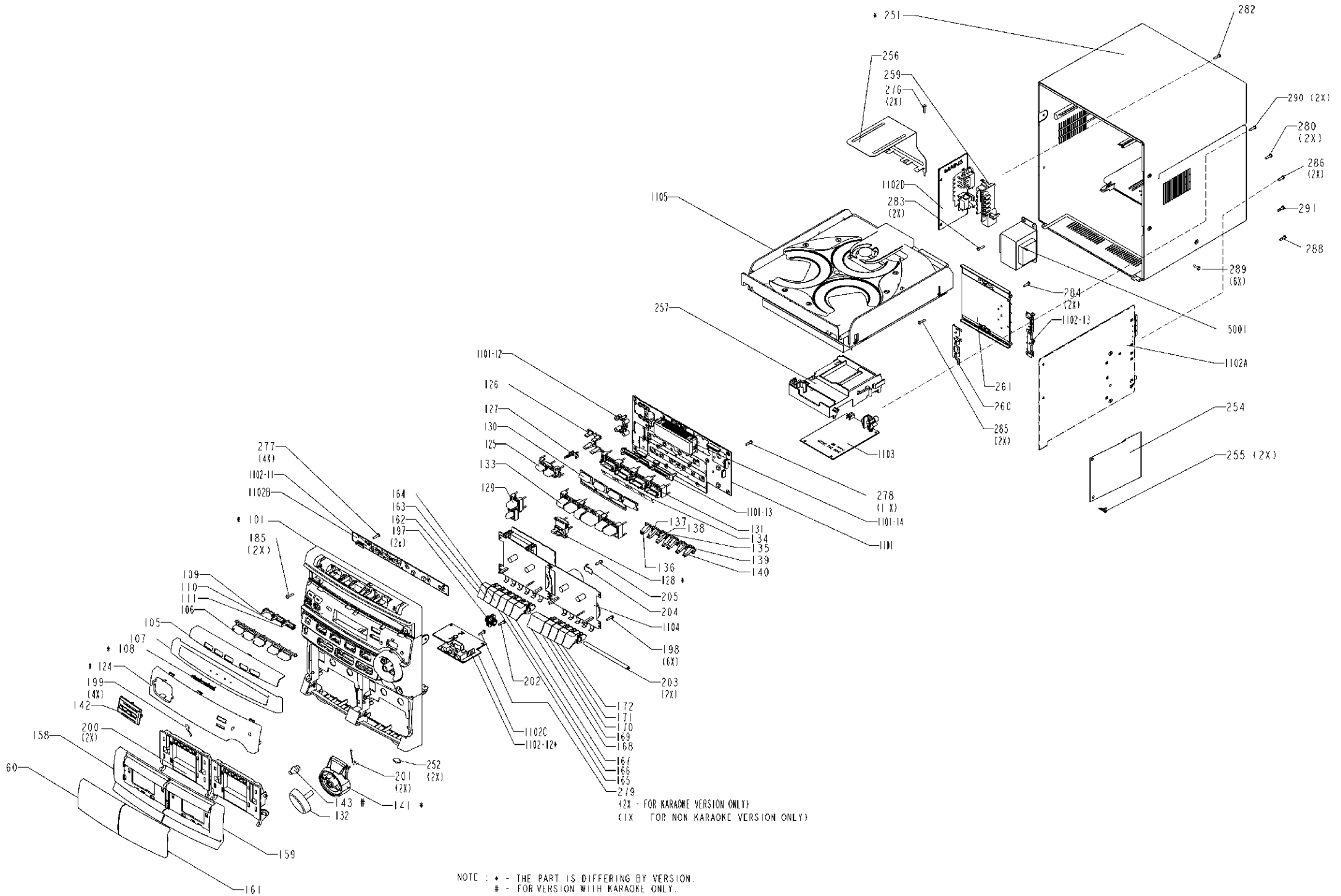
EXPLODED VIEW (3CDC MODULE)





MECHANICAL PARTSLIST 3CDC MODULE

73	4822 502 12548	SCREW M2,6X3,5	98	4822 325 50215	SUSPENSION
74	4822 502 12548	SCREW M2,6X3,5	99	4822 325 50215	SUSPENSION
80	4822 528 10937	PULLEY	100	4822 691 10615	CD DRIVE VAM1201
81	4822 522 10494	GEAR DRAWER	115	4822 466 10736	CARROUSEL
82	4822 358 10115	BELT	117	4822 532 12365	BUSH DRAWER
83	4822 532 12364	WASHER	120	4822 532 51756	GROMMET
84	4822 532 12364	WASHER	121	4822 532 51756	GROMMET
95	4822 404 10894	SUPPORT	123	4822 402 10085	SWITCH BRACKET
96	4822 325 50215	SUSPENSION	125	4822 401 11708	DISC CLAMP
97	4822 325 50215	SUSPENSION	140	4822 466 10734	PLATE



Philips Consumer Electronics

Technical Service Data

Service and Quality
Service Publications Dept.
One Philips Drive
P.O. Box 14810
Knoxville, TN 37914

Manual 1900

Model no.: FW380C
First Publish: 3-9-99
Rev. Date: 05-14-2005
Print Date: 14-05-2005

Parts List

REFER TO SAFETY GUIDELINES

SAFETY NOTICE: ANY PERSON ATTEMPTING TO SERVICE THIS CHASSIS MUST FAMILIARIZE HIMSELF WITH THE CHASSIS AND BE AWARE OF THE NECESSARY SAFETY PRECAUTIONS TO BE USED WHEN SERVICING ELECTRONIC EQUIPMENT CONTAINING HIGH VOLTAGES.

CAUTION: USE A SEPARATE ISOLATION TRANSFORMER FOR THIS UNIT WHEN SERVICING

MECHANICAL & ACCESSORIES PARTS LIST

106	MECHANICAL PARTS - 3DCD MODULE	4822	358	31225
MECHANICAL PARTS - 3DCD MODULE				
	POLYLUBGLY801 (GREASE)	4822	390	10136
3	GUIDE LEFT	4822	463	11008
4	GUIDE RIGHT	4822	463	11009
21	DRAWER	4822	441	11615
22	BRACKET TUMBLER	4822	402	10088
38	SCREW M2,6X3,5	4822	502	12548
39	SCREW M2,6X3,5	4822	502	12548
40	SLIDE	4822	463	11011
41	CONTROL DISC	4822	522	10509
42	GEAR WREEL	4822	522	10492
43	PULLEY	4822	528	10937
44	IDLER WHEEL	4822	522	10493
45	BELT	4822	358	10115
46	ECCENTRIC GEAR WHEEL	4822	466	10735
50	WASHER	4822	532	12364
51	WASHER	4822	532	12364
52	WASHER	4822	532	12364
53	WASH ER	4822	532	12364
35	CAROUSEL MOTOR	4822	361	10753
70	CAROUSEL MOTOR	4822	361	10753
73	SCREW M2,6X3,5	4822	502	12548
74	SCREW M2,6X3,5	4822	502	12548
80	PULLEY	4822	528	10937
81	GEAR DRAWER	4822	522	10494
82	BELT	4822	358	10115
83	WASHER	4822	532	12364
84	WASHER	4822	532	12364
95	SUPPORT	4822	404	10894
96	SUSPENSION	4822	325	50215
97	SUSPENSION	4822	325	50215
98	SUSPENSION	4822	325	50215
99	SUSPENSION	4822	325	50215
100	CD DRIVE VAM1201	4822	691	10615
115	CAROUSEL	4822	466	10736
117	BUSH DRAWER	4822	532	12365
120	GROMMET	4822	532	51756
121	GROMMET	4822	532	51756
123	SWITCH BRACKET	4822	402	10085
125	DISC CLAMP	4822	401	11708
140	PLATE	4822	466	10734

2832	4,7uF 20% 50V	4822	124	12
2833	22pF 5% 50V	4822	122	33
2834	22pF 5% 50V	4822	122	33
2835	100nF 20% 50V	4822	126	12
2837	100nF 20% 50V	4822	126	12
2838	100nF 20% 50V	4822	126	12
2839	100nF 20% 50V	4822	126	12
2840	100nF 20% 50V	4822	126	12
2841	1,2nF 10% 16V	4822	122	10
2842	10nF 20% 16V	4822	121	51
2843	100nF 20% 50V	4822	126	12
2844	1,2nF 10% 16V	4822	122	10
2845	10nF 20% 16V	4822	121	51
2846	22nF 20% 50V	4822	126	11
2847	100nF 20% 50V	4822	126	12
2849	22nF 20% 50V	4822	126	11
2850	1nF 10% 50V	4822	122	33
2851	100nF 20% 50V	4822	126	12
2852	470uF 20% 16V	4822	124	80
2853	100nF 20% 50V	4822	126	12
2856	47pF 5% 50V	4822	122	33
2859	100nF 20% 50V	4822	126	12
2860	10uF 20% 50V	4822	124	41
2861	10uF 20% 50V	4822	124	41
2862	2,2nF 10% 16V	4822	126	12
2863	2,2nF 10% 16V	4822	126	12
2864	47pF 5% 50V	4822	122	33
2866	100nF 20% 50V	4822	126	12
2867	47pF 5% 50V	4822	122	33
2868	100nF 20% 50V	4822	126	12
2869	100nF 20% 50V	4822	126	12
2870	100nF 20% 50V	4822	126	12
2871	22nF 20% 50V	4822	126	11
2872	100nF 20% 50V	4822	126	12
2873	100nF 20% 50V	4822	126	12
2874	22nF 20% 50V	4822	126	11
2875	22nF 20% 50V	4822	126	11
2876	470uF 20% 16V	4822	124	80
2877	82pF 5% 50V	4822	122	10
2878	220pF 10% 50V	4822	122	10
2879	220pF 10% 50V	4822	122	10
2880	10nF 20% 16V	4822	121	51
2884	100nF 20% 50V	4822	126	12
2887	100nF 20% 50V	4822	126	12
2890	470uF 20% 16V	4822	124	23
2891	10uF 20% 16V	4822	124	12
3700	470 ohm 5% 0,16W	4822	116	83
3701	470 ohm 5% 0,16W	4822	116	83
3702	470 ohm 5% 0,16W	4822	116	83
3703	470 ohm 5% 0,16W	4822	116	83
3704	470 ohm 5% 0,16W	4822	116	83
3705	47 ohm 5% 0,5W	4822	116	52
3706	470 ohm 5% 0,16W	4822	116	83
3707	470 ohm 5% 0,16W	4822	116	83
3708	470 ohm 5% 0,16W	4822	116	83
3710	10k ohm 5% 0,5W	4822	116	83
3711	10k ohm 5% 0,5W	4822	116	83
3717	1 ohm 5% 0,5W	4822	116	80
3720	10 ohm 5% 0,5W	4822	116	52
3721	470 ohm 5% 0,16W	4822	116	83
3725	10k ohm 5% 0,5W	4822	116	83
3726	10k ohm 5% 0,5W	4822	116	83
3800	120k ohm 5% 0,5W	4822	116	52
3801	10k ohm 5% 0,5W	4822	116	83
3802	120k ohm 5% 0,5W	4822	116	52
3803	10k ohm 5% 0,5W	4822	116	83
3804	56k ohm 5% 0,5W	4822	116	52
3805	10k ohm 5% 0,5W	4822	116	83
3806	10k ohm 5% 0,5W	4822	116	83
3807	10k ohm 5% 0,5W	4822	116	83
3808	10k ohm 5% 0,5W	4822	116	83
3809	100 ohm 5% 0,5W	4822	116	52
3810	1k ohm 5% 0,2W	4822	050	11
3812	47k ohm 5% 0,16W	4822	116	83
3813	10k ohm 5% 0,5W	4822	116	83
3816	3,3k ohm 5% 0,5W	4822	116	52
3879	10k ohm 5% 0,5W	4822	116	83
3880	330 ohm 5% 0,5W	4822	116	52
3881	10k ohm 5% 0,5W	4822	116	83
3882	47k ohm 5% 0,16W	4822	116	83
3883	100k ohm 5% 0,5W	4822	116	52
3884	3,9k ohm 5% 0,5W	4822	116	52
3885	100k ohm 5% 0,5W	4822	116	52
3886	47k ohm 5% 0,16W	4822	116	83
3887	220 ohm 5%	4822	052	10
3888	10k ohm 5% 0,5W	4822	116	83
3889	470 ohm 5% 0,16W	4822	116	83
3890	470 ohm 5% 0,16W	4822	116	83
3891	330k ohm 5% 0,5W	4822	116	52
3893	22k ohm 5% 0,5W	4822	116	52
3894	33 ohm 5% 0,5W	4822	116	52
3895	10 ohm 5% 0,5W	4822	116	52

S = Safety Part Be sure to use exact replacement part.

3896 10k ohm 5% 0,5W	4822 116 83864	1410 Tact Switch.	4822 276 13
3897 560 ohm 5% 0,5W.	4822 116 52226	1411 Tact Switch.	4822 276 13
3898 560 ohm 5% 0,5W.	4822 116 52226	1412 Tact Switch.	4822 276 13
3899 180 ohm 5% 0,5W.	4822 116 52213	1413 Tact Switch.	4822 276 13
1810 CRYSTAL 8MHz	4822 242 10849	1414 Tact Switch.	4822 276 13
1810 CERAMIC RES. 8,46MHz	4822 242 73557	1415 Tact Switch.	4822 276 13
5801 4,7uH.	4822 157 71249	1416 Tact Switch.	4822 276 13
6871 1N4148	4822 130 30621	1417 Tact Switch.	4822 276 13
6872 1N4148	4822 130 30621	1420 Tact Switch.	4822 276 13
6873 1N4148	4822 130 30621	1421 Tact Switch.	4822 276 13
6874 1N4148	4822 130 30621	1426 Tact Switch.	4822 276 13
6875 BZX79-B5V1	4822 130 34233	1427 Tact Switch.	4822 276 13
7808 BC337-40	4822 130 41344	1428 Tact Switch.	4822 276 13
7874 BC547B	4822 130 40959	1429 Tact Switch.	4822 276 13
7875 BC547B	4822 130 40959	1436 Rotary Encoder 24P	4822 273 10
7800 SAA7378GP (Signal Proce.	4822 209 12752	2408 33pF 5% 50V.	5322 122 32
7801 PC74HCU04T (HF Amplifie.	5322 209 11517	2409 33pF 5% 50V.	5322 122 32
7806 TDA7073A/N2 (Servo Driv.	4822 209 32852	2412 100nF +80/-20% 50V	4822 126 14
7807 TDA7073A/N2 (Motor Driv.	4822 209 32852	2414 100nF +80/-20% 50V	4822 126 14
7810 OPTICAL OUT UNIT	4822 130 10845	2415 100nF +80/-20% 50V	4822 126 14
7851 TDA1311 A/N2(DAC).	4822 209 32421	2416 100uF 30% 10V.	4822 124 42
7871 TDA7073A/N2 (Motor Driv.	4822 209 32852	2418 1uF 20% 63V.	4822 124 40
7873 HEF4094BP (Shift Regist.	5322 209 10421	2419 100uF 20% 10V.	4822 124 41
7876 LC89170M (CD Text)	4822 209 16143	2420 1,0uF 20% 50V.	4822 124 22
3817 6,8k ohm 5% 0,16W.	4822 116 83961	2421 22uF 20% 16V	4822 124 41
3818 10k ohm 5% 0,5W.	4822 116 83864	2422 100nF +80/-20% 50V	4822 126 14
3819 470 ohm 5% 0,16W.	4822 116 83883	2423 15pF 2% 63V.	4822 126 13
3820 3,3k ohm 5% 0,5W	4822 116 52269	2424 15pF 2% 63V.	4822 126 13
3821 3,3k ohm 5% 0,5W	4822 116 52269	2425 100nF +80/-20% 50V	4822 126 14
3822 22k ohm 5% 0,5W.	4822 116 52257	2426 47nF10%63V	4822 126 13
3823 3,3k ohm 5% 0,5W	4822 116 52269	2427 2,2nF 20% 50V.	4822 122 33
3824 3,3k ohm 5% 0,5W	4822 116 52269	2428 10nF 20% 50V	4822 122 33
3825 1k ohm 5% 0,2W	4822 050 11002	2434 47pF 1% 63V.	4822 126 13
3826 22k ohm 5% 0,5W.	4822 116 52257	2435 47pF 1 % 63V	4822 126 13
3827 290k ohm 5% 0,5W	4822 116 52278	2436 47pF 1 % 63V	4822 126 13
3828 22k ohm 5% 0,5W.	4822 116 52257	2437 47pF 1 % 63V	4822 126 13
3830 1M ohm 5% 0,5W	4822 116 52235	2441 10nF 20% 50V	4822 122 33
3831 22k ohm 5% 0,5W.	4822 116 52257	2442 10nF 20% 50V	4822 122 33
3832 470 ohm 5% 0,16W	4822 116 83883	2443 10nF 20% 50V	4822 122 33
3833 10k ohm 5% 0,5W.	4822 116 83864	3403 1k 2% 0,25W.	4822 051 10
3834 4,7k ohm 5% 0,5W	4822 116 52283	3405 1k 2% 0,25W.	4822 051 10
3837 1k ohm 5% 0,2W	4822 050 11002	3406 1k5 1% 0,1W.	4822 117 11
3838 1k ohm 5% 0,2W	4822 050 11002	3408 1 k 2% 0,25W	4822 051 10
3839 150k ohm 5% 0,16W.	4822 116 52245	3409 1 k 2% 0,25W	4822 051 10
3840 150k ohm 5% 0,16W.	4822 116 52245	3410 3k9 5% 0,1W.	4822 051 20
3841 6,8k ohm 5% 0,16W.	4822 116 83961	3411 1 k 2% 0,25W	4822 051 10
3842 10k ohm 5% 0,5W.	4822 116 83864	3412 3k9 5% 0,1W.	4822 051 20
3843 8,2k ohm 5% 0,5W	4822 116 52303	3413 1k 2% 0,25W.	4822 051 10
3844 560 ohm 5% 0,5W.	4822 116 52226	3416 1k 2% 0,25W.	4822 051 10
3844 470 ohm 5% 0,16W	4822 116 83883	3417 1k5 1% 0,1W.	4822 117 11
3845 10k ohm 5% 0,5W.	4822 116 83864	3419 1k5 1% 0,1W.	4822 117 11
3846 8,2k ohm 5% 0,5W	4822 116 52303	3420 1k 2% 0,25W.	4822 051 10
3847 680 ohm 5% 0,5W.	4822 116 52228	3421 1k 2% 0,25W.	4822 051 10
3847 470 ohm 5% 0,16W	4822 116 83883	3422 1k 2% 0,25W.	4822 051 10
3848 8,2k ohm 5% 0,5W	4822 116 52303	3423 1k 2% 0,25W.	4822 051 10
3849 8,2k ohm 5% 0,5W	4822 116 52303	3424 1k 2% 0,25W.	4822 051 10
3850 470 ohm 5% 0,16W	4822 116 83883	3425 1k 2% 0,25W.	4822 051 10
3851 3,3 ohm NFR25.	4822 052 10338	3426 1k 2% 0,25W.	4822 051 10
3852 3,3 ohm NFR25.	4822 052 10338	3427 1k 2% 0,25W.	4822 051 10
3853 3,3 ohm NFR25.	4822 052 10338	3428 1k 2% 0,25W.	4822 051 10
3856 330 ohm 5% 0,5W.	4822 116 52219	3429 1k 2% 0,25W.	4822 051 10
3856 1 ohm 5% 0,5W.	4822 116 80176	3430 1k 2% 0,25W.	4822 051 10
3857 1k ohm 5% 0,2W	4822 050 11002	3431 1k 2% 0,25W.	4822 051 10
3858 22k ohm 5% 0,5W.	4822 116 52257	3433 1k5 1% 0,1W.	4822 117 11
3859 22k ohm 5% 0,5W.	4822 116 52257	3434 1k 2% 0,25W.	4822 051 10
3860 470 ohm 5% 0,16W	4822 116 83883	3435 1k2%0,25W.	4822 051 10
3861 470 ohm 5% 0,16W	4822 116 83883	3436 1k 2% 0,25W.	4822 051 10
3862 100 ohm 5% 0,5W.	4822 116 52175	3437 1k 2% 0,25W.	4822 051 10
3863 100 ohm 5% 0,5W.	4822 116 52175	3438 1 k 2% 0,25W	4822 051 10
3864 100 ohm 5% 0,5W.	4822 116 52175	3439 1 k 2% 0,25W	4822 051 10
3865 470 ohm 5% 0,16W	4822 116 83883	3440 1 k 2% 0,25W	4822 051 10
3866 470 ohm 5% 0,16W	4822 116 83883	3441 1k 2% 0,25W.	4822 051 10
3867 100k ohm 5% 0,5W	4822 116 52234	3442 1k 2% 0,25W.	4822 051 10
3868 33 ohm 5% 0,5W	4822 116 52191	3443 1k 2% 0,25W.	4822 051 10
3869 100 ohm 5% 0,5W.	4822 116 52175	3444 1k 2% 0,25W.	4822 051 10
3870 560 ohm 5% 0,5W.	4822 116 52226	3445 1k 2% 0,25W.	4822 051 10
3871 10k ohm 5% 0,5W.	4822 116 83864	3446 1k 2% 0,25W.	4822 051 10
3872 10k ohm 5% 0,5W.	4822 116 83864	3447 1k 2% 0,25W.	4822 051 10
3873 470 ohm 5% 0,16W	4822 116 83883	3448 1k5 1% 0,1W.	4822 117 11
3874 10k ohm 5% 0,5W.	4822 116 83864	3449 1k5 1% 0,1W.	4822 117 11
3875 10k ohm 5% 0,5W.	4822 116 83864	3451 1k 2% 0,25W.	4822 051 10
3876 220k ohm 5% 0,5W	4822 116 83874	3452 1k5 1% 0,1W.	4822 117 11
3877 10k ohm 5% 0,5W.	4822 116 83864	3453 47k 5% 0,5W.	4822 116 83
3878 10k ohm 5% 0,5W.	4822 116 83864	3454 330R 5% 0,1W	4822 051 30

FRONT BOARD

FRONT BOARD	
1400 FTD Display.	4822 135 00171
1401 Flex Socket 15P Hort.	4822 265 10979
1404 Flex Socket 9P Hort.	4822 265 11531
1406 Tact Switch.	4822 276 13775
1407 Tact Switch.	4822 276 13775

3455 47k 5% 0,5W.	4822 116 83
3456 10k 1% 0,1W.	4822 117 10
3457 1k5 1% 0,1W.	4822 117 11
3458 47k 5% 0,5W.	4822 116 83
3459 10k 1% 0,1W.	4822 117 10
3460 47k 5% 0,5W.	4822 116 83
3462 330R 5% 0,1W	4822 051 20
3463 33k 5% 0,5W.	4822 116 52

S = Safety Part Be sure to use exact replacement part.

3464 10k 1% 0,1W.	4822 117 10833	3576 47k 1% 0,1W.	4833 117 10
3465 10k 5% 0,5W.	4822 116 83864	3581 10k 1% 0,1W.	4822 117 10
3467 330R 5% 0,1W	4822 051 20331	3582 10k 1% 0,1W.	4822 117 10
3469 1k 2% 0,25W.	4822 051 10102	3583 10k 1% 0,1W.	4822 117 10
3471 4R7 1% 0.6W.	4822 050 24708	4400 OR Jumper 0805	4832 051 20
3473 1k 2% 0,25W.	4832 051 10102	4401 OR Jumper 0805	4822 051 20
3474 330R 5% 0,1W	4822 051 20331	4402 OR Jumper 0805	4823 051 30
3475 1k5 5% 0,5W.	4822 116 52243	4403 OR Jumper 0805	4822 051 20
3476 100R5%0,1W .	4822 051 20101	4407 OR Jumper 0805	4822 051 20
3477 100R 5% 0,1W	4833 051 20101	4408 OR Jumper 0805	4822 051 20
3478 1k 2% 0,25W.	4822 051 10102	4409 OR Jumper 0805	4822 051 20
3479 100R5%0,1W .	4823 051 30101	4410 OR Jumper 0805	4822 051 20
3480 330R 5% 0,1W	4822 051 20331	4411 OR Jumper 0805	4822 051 20
3481 1k 2% 0,25W.	4823 051 10102	4413 OR Jumper 0805	4822 051 20
3482 1k 2% 0,25W.	4822 051 10102	4413 OR Jumper 0805	4822 051 20
3483 4R7 1% 0.6W.	4822 050 24708	4414 OR Jumper 0805	4822 051 20
3484 1k 3% 0,25W.	4822 051 10103	4415 OR Jumper 0805	4822 051 20
3485 1k 2% 0,25W.	4823 051 10102	4416 OR Jumper 0805	4822 051 20
3486 1k 2% 0,25W.	4822 051 10102	4417 OR Jumper 0805	4822 051 20
3488 330R 5% 0,1W	4832 051 20331	4418 OR Jumper 0805	4822 051 20
3489 1k 2% 0,25W.	4822 051 10102	4419 OR Jumper 0805	4822 051 20
3490 1k 2% 0,25W.	4822 051 10102	4420 OR Jumper 0805	4822 051 20
3493 330R 5% 0,1W	4822 051 20331	4421 OR Jumper 0805	4822 051 20
3494 330R 5% 0,1W	4833 051 30331	4422 OR Jumper 0805	4822 051 20
3495 10k 1% 0,1W.	4822 117 10833	4423 OR Jumper 0805	4822 051 20
3496 1k 2% 0,25W.	4823 051 10102	4424 OR Jumper 0805	4822 051 20
3497 1k 1% 0.4W .	4822 050 11002	4425 OR Jumper 0805	4822 051 20
3498 1 k 2% 0,25W	4833 051 10102	4426 OR Jumper 0805	4822 051 20
3499 1k 2% 0,25W.	4822 051 10102	4427 OR Jumper 0805	4822 051 20
3500 1k 2% 0.35W.	4833 051 10103	4428 OR Jumper 0805	4822 051 20
3501 1k 1% 0,4W .	4822 050 11002	4429 OR Jumper 0805	4822 051 20
3502 1k 1% 0,4W .	4822 050 11002	4430 OR Jumper 0805	4822 051 20
3503 1k 2% 0,25W.	4822 051 10102	4431 OR Jumper 0805	4822 051 20
3504 1k 2% 0,25W.	4823 051 10102	4432 OR Jumper 0805	4822 051 20
3505 330R 5% 0,1W	4822 051 20331	4433 OR Jumper 0805	4822 051 20
3506 1k 1% 0,4W .	4822 050 11003	4434 OR Jumper 0805	4822 051 20
3507 1k 2% 0,25W.	4822 051 10102	4435 OR Jumper 0805	4822 051 20
3508 1k 2% 0,25W.	4822 051 10102	4436 OR Jumper 0805	4822 051 20
3509 1k 2% 0,25W.	4822 051 10102	4437 OR Jumper 0805	4822 051 20
3510 1k 2% 0,35W.	4822 051 10102	4438 OR Jumper 0805	4822 051 20
3511 1k 2% 0,25W.	4822 051 10102	4439 OR Jumper 0805	4822 051 20
3512 1k 2% 0,25W.	4822 051 10103	4440 OR Jumper 0805	4822 051 20
3513 2k2 1% 0,1W.	4822 117 11449	4441 OR Jumper 0805	4822 051 20
3515 100k 5% 0,1W	4822 051 20104	4442 OR Jumper 0805	4822 051 20
3516 330R 5% 0,1W	4822 051 20331	4443 OR Jumper 0805	4822 051 20
3518 330R 5% 0,1W	4822 051 20331	4444 OR Jumper 0805	4822 051 20
3519 330R 5% 0,1W	4822 051 20331	4445 OR Jumper 0805	4822 051 20
3520 10k 1% 0,1W.	4822 117 10833	4446 OR Jumper 0805	4822 051 20
3521 1k 2% 0,25W.	4822 051 10102	4447 OR Jumper 0805	4822 051 20
3522 330R 5% 0,1W	4822 051 20331	4448 OR Jumper 0805	4822 051 20
3523 330R 5% 0,1W	4822 051 20331	4449 OR Jumper 0805	4822 051 20
3524 1 k 2% 0,25W	4822 051 10102	4502 OR Jumper 0805	4822 051 20
3525 1 k 2% 0,25W	4822 051 10102	4503 OR Jumper 0805	4822 051 20
3526 330R 5% 0,1W	4822 051 20331	4504 OR Jumper 0805	4822 051 20
3537 1k 2% 0,35W.	4833 051 10102	4505 OR Jumper 0805	4822 051 20
3539 330R 5% 0,1W	4822 051 20331	4506 OR Jumper 0805	4822 051 20
3533 10k 1% 0,1W.	4822 117 10833	4507 OR Jumper 0805	4822 051 20
3534 10k 1% 0,1W.	4822 117 10833	4508 OR Jumper 0805	4822 051 20
3535 10k 1% 0,1W.	4822 117 10833	4509 OR Jumper 0805	4822 051 20
3536 470k 5% 0,1W	4823 051 20474	4510 OR Jumper 0805	4822 051 20
3537 470k 5% 0,1W	4822 051 20474	4511 OR Jumper 0805	4822 051 20
3539 10k 1% 0,1W.	4823 117 10833	4512 OR Jumper 0805	4822 051 20
3543 1k 2% 0,25W.	4822 051 10102	4513 OR Jumper 0805	4822 051 20
3545 1k 2% 0,25W.	4822 051 10102	4514 OR Jumper 0805	4822 051 20
3546 10k 1% 0,1W.	4822 117 10833	4515 OR Jumper 0805	4822 051 20
3547 1k 2% 0,25W.	4823 051 10102	4516 OR Jumper 0805	4822 051 20
3548 1k 2% 0,25W.	4822 051 10102	4517 OR Jumper 0805	4822 051 20
3549 10k 5% 0,5W.	4832 116 83864	4518 OR Jumper 0805	4822 051 20
3551 330R 5% 0,1W	4822 051 20331	4519 OR Jumper 0805	4822 051 20
3552 330R 5% 0,1W	4822 051 20331	4520 OR Jumper 0805	4822 051 20
3553 10k 1% 0,1W.	4822 117 10833	4521 OR Jumper 0805	4822 051 20
3554 10k 1% 0,1W.	4822 117 10833	4522 OR Jumper 0805	4822 051 20
3555 10k 1% 0,1W.	4822 117 10833	4525 OR Jumper 0805	4822 051 20
3556 560R 5% 0,1W	4822 051 20561	4526 OR Jumper 0805	4822 051 20
3557 330R 5% 0,1W	4822 051 20331	4527 OR Jumper 0805	4822 051 20
3558 10k 1% 0,1W.	4822 117 10833	4528 OR Jumper 0805	4822 051 20
3559 1M 5% 0,1W .	4822 051 20105	4529 OR Jumper 0805	4822 051 20
3561 4k7 5% 0,1W.	4822 051 20472	4530 OR Jumper 0805	4822 051 20
3562 10k 1% 0,1W.	4822 117 10833	4531 OR Jumper 0805	4822 051 20
3563 10k 1% 0,1W.	4822 117 10833	4532 OR Jumper 0805	4822 051 20
3564 10k 1% 0,1W.	4822 117 10833	4533 OR Jumper 0805	4822 051 20
3565 4k7 5% 0,1W.	4822 051 20472	4534 OR Jumper 0805	4822 051 20
3566 10k 1% 0,1W.	4822 117 10833	4535 OR Jumper 0805	4822 051 20
3567 10k 1% 0,1W.	4822 117 10833	4536 OR Jumper 0805	4822 051 20
3568 47k 1% 0,1W.	4822 117 10834	4537 OR Jumper 0805	4822 051 20
3569 23k 5% 0,1W.	4822 051 20223	4538 OR Jumper 0805	4822 051 20
3570 22k 5% 0,1W.	4832 051 20223	4539 OR Jumper 0805	4822 051 20
3571 12k 5% 0,5W.	4822 116 52238	5400 Ceram Resonator 8MHz	4822 242 72
3572 10k 1% 0,1W.	4822 117 10833	5401 X'tal Resonator 32,768kHz	4822 242 70
3573 33k 5% 0,1W.	4822 051 20223	5402 Coil 2,2uH 5%	4822 157 11
3574 22k 5% 0,1W.	4822 051 20223	5403 Coil 2,2uH 5%	4822 157 11
3575 6k8 5% .	4822 116 83961	5404 LTL-1CHGE.	4822 130 10

S = Safety Part Be sure to use exact replacement part.

6401	LTL-1CHGE.	4822	130	10791	2149	22nF 10% 63V	5322	122	32
6403	LTL-1CHGE.	4822	130	10791	2150	100nF 20% 63V	4822	122	31
6404	LTL-1CHGE.	4822	130	10791	2152	560pF 5% 63V lor East. Europe.	5322	116	8C
6405	LTL-1CHGE.	4822	130	10791	2152	33nF 5% 63V.	4822	126	12
6406	LTL-1CHGE.	4822	130	10791	2153	12pF2%63V lor East. Europe	4822	122	32
6407	1N4148	4822	130	30621	2153	15pF2%63V.	4822	122	32
6408	1N4148	4822	130	30621	2155	Trimmer 3-11pF 100V.	4822	125	6C
6409	LTL-1CHGE.	4822	130	10791	2158	10pF 5% 50V for LW version	5322	122	32
6410	LTL-1CHPE.	4822	130	10792	2159	33pF 5% 50V.	5322	122	32
6411	LTL-1CHPE.	4822	130	10792	2160	22nF 10% 63V	5322	122	32
6412	LTL-1CHPE.	4822	130	10792	2161	100nF 20% 25V.	4822	126	1C
6413	LTL-1CHPE.	4822	130	10792	2163	100nF 20% 25V.	4822	126	1C
6414	LTL-1CHPE.	4822	130	10792	2164	470nF +80/- 20% 16V.	4822	126	13
6415	LTL-1CHGE.	4822	130	10791	2165	100nF 20% 25V.	4822	126	1C
6416	LTL-1CHPE.	4822	130	10792	2166	1nF10%50V.	5322	122	34
6417	1N4148	4822	130	30621	2167	12pF2%63V.	4822	122	32
6418	LTL-1CHPE.	4822	130	10792	2168	82pF 1 % 63V	4822	126	13
6419	1N4148	4822	130	30621	3101	5k6 5% 0,1W for East. Europe	4822	051	2C
6420	1 N4148.	4822	130	30621	3101	33k 5% 0,1W.	4822	051	2C
6422	1 N4148.	4822	130	30621	3102	100k5%0.1W	4822	051	2C
6423	1 N4003G	4822	130	31878	3103	18k 1%0,1W	4822	117	1C
6425	1 N4148.	4822	130	30621	3104	180R 1%0,1W.	4822	117	11
6426	1 N4003G	4822	130	31878	3105	220R 5% 0,5W	4822	116	83
6428	1N4148	4822	130	30621	3108	2k2 1 % 0,1 W for LW version	4822	117	11
6429	LTL-1CHPE.	4822	130	10792	3109	4k7 5% 0,1 W for LW version.	4822	051	2C
6431	1N4148	4822	130	30621	3110	47R 5% 0,5W.	4822	116	52
6432	1N4148	4822	130	30621	3120	OR Jumper 0805	4822	051	2C
6433	1N4148	4822	130	30621	3123	4k7 5% 0,1 W for LW version.	4822	051	2C
6434	1N4148	4822	130	30621	3125	10k1%0,1W for LW version	4822	117	1C
6435	1N4148	4822	130	30621	3128	2k2 1 % 0,1 W for LW version	4822	117	11
6436	1N4148	4822	130	30621	3132	47R 5% 0.5W.	4822	116	52
6437	1N4148	4822	130	30621	3134	220k 5% 0,1 W.	4822	051	2C
6438	1N4148	4822	130	30621	3137	22k 5% 0,1 W for LW version.	4822	051	2C
6439	1N4148	4822	130	30621	3140	OR Jumper 0805	4822	051	2C
6440	1N4148	4822	130	30621	3140	150R 1%0,1W.	4822	117	1C
7401	TMP87CP71 F "320S51801 "	4822	209	17283	3141	56k5%0,1W.	4822	051	2C
7402	ST24C01B1.	4822	209	31508	3142	Trimmer 100k 30% 0,1W.	4822	100	11
7404	HEF4094BT.	5322	209	11306	3143	22k 5% 0,1W lor RDS version.	4822	051	2C
7405	HEF4094BT.	5322	209	11306	3144	1 k 2% 0,25W for RDS version	4822	051	1C
7406	HEF4094BT.	5322	209	11306	3145	2k21%0,1W.	4822	117	11
7408	BC847B	4822	130	60511	3146	22R 5% 0,1W.	4822	051	2C
7409	GPU1U28XP	4822	130	10165	3152	470R 5% 0,5W	4822	116	83
7410	BC847B	4822	130	60511	3153	470R 5% 0,1 W.	4822	051	2C
7411	BC847B	4822	130	60511	3154	150R 5% 0.5W	4822	116	83
7412	BC847B	4822	130	60511	3155	470R 5% 0,1 W.	4822	051	2C
7413	BC847B	4822	130	60511	3156	100k5%0,1W for/21/30/33only.	4822	051	2C
					3157	100k5%0,5W for East. Europe.	4822	116	52
					3158	470R 5% 0,5W	4822	116	83
					3159	470R 5% 0,5W	4822	116	33
					3160	470R 5% 0,5W	4822	116	83
					3161	470R 5% 0,5W	4822	116	33
					3167	220R 1%0.1W.	4822	117	11
					3169	150k5%0,1W	4822	051	2C
					3170	100k5%0,5W	4822	116	52
					3171	330R 5% 0,5W	4822	116	52
					3176	1 k 2% 0,25W for RDS version	4822	051	1C
					4101	OR Jumper 0805 for 2-Band only	4822	051	2C
					4102	OR Jumper 0805 for 2-Band only	4822	051	2C
					4103	OR Jumper 0805	4822	051	2C
					4104	OR Jumper 0805	4822	051	2C
					4105	OR Jumper 0805	4822	051	2C
					4106	OR Jumper 0805	4822	051	2C
					4108	OR Jumper 0805	4822	051	2C
					4111	OR Jumper 0805	4822	051	2C
					4120	OR Jumper 0805	4822	051	2C
					4150	OR Jumper 1206	4822	051	1C
					4151	OR Jumper 0605	4822	051	2C
					4152	OR Jumper 1206	4822	051	1C
					4153	OR Jumper 1206	4822	051	1C
					4154	OR Jumper 1206	4822	051	1C
					4155	OR Jumper 1206	4822	051	1C
					4156	OR Jumper 0805	4822	051	2C
					4157	OR Jumper 1206	4822	051	1C
					4158	OR Jumper 1206	4822	051	1C
					4159	OR Jumper 1206	4822	051	1C
					4162	OR Jumper 1206	4822	051	1C
					5102	MW RF Coil	4822	157	71
					5103	LW RF Coil for LW version.	4822	157	71
					5109	Ceram Filter 10,7MHz	4822	242	7C
					5110	Ceram Filter10,7MHz.	4822	242	7C
					5111	AM-IF Filter 450kHz.	4822	158	6C
					5112	AM-IF Filter 450kHz.	4822	157	7C
					5114	AM-IF Filter 450kHz.	4822	157	7C
					5119	Discriminator 10,7MHz.	4822	157	11
					5120	Cer. Disc. 10,7MG40K	4822	242	82
					5120	Cer. Disc.10,7MG61KA-TF21.	4822	242	1C
					5121	Quartz 75kHz	4822	242	1C
					5122	Osc. Coil LW for LW version.	4822	157	6C
					5123	Osc. Coil MW	4822	157	6C
					5130	RF-Coil 1.5T	4822	156	3C
					5131	RF-Coil 1.5T	4822	156	3C
					6103	1N4148	4822	130	3C

EC05 Tuner Board

EC05 Tuner Board					
1101	Antenna Socket 300R.	4822	267	31505	
1102	Antenna Socket Coax IEC 75R.	4822	267	10283	
2101	100pF 5% 50V	5322	122	32531	
2101	47pF 1 % 63V for USA	4822	126	13692	
2102	10nF 20% 50V	4822	122	33177	
2103	1 nF 10% 50V	5322	122	34123	
2104	100pF 10% 50V.	4822	122	33195	
2106	Trimmer 4-20pF for LW version.	4822	125	50355	
2106	Trimmer 3-11pF 100V.	4822	125	60101	
2107	1uF 10% 63V.	4822	121	51319	
2108	100pF 5% 50V for LW version.	5322	122	32531	
2109	10pF 5% 50V for LW version	5322	122	32448	
2120	27pF 1% 63V for LW version	4822	126	13691	
2120	22pF 5% 50V.	5322	122	32658	
2122	3.3nF 10% 63V for LW version	4822	122	33891	
2125	560pF 5% 400V.	4822	121	51331	
2126	330pF 5% 50V.	5322	122	31863	
2127	220nF +80/-20% 50V	4822	126	13473	
2128	10uF 20% 50V	4822	124	41579	
2129	100uF20% 10V	4822	124	41584	
2130	22nF+80/- 20% 25V.	4822	126	11585	
2131	470nF 16V.	4822	122	33325	
2132	470nF 16V.	4822	122	33325	
2131	470nF +80/- 20% 16V.	4822	126	13482	
2132	470nF+80/-20% 16V.	4822	126	13482	
2133	1uF 20% 63V.	4822	124	40242	
2134	15nF 5% 63V.	4822	126	13188	
2134	22nF 10% 63V for USA	5322	122	32654	
2135	0,22uF 20% 63V	4822	124	40746	
2136	15nF 5% 63V.	4822	126	13188	
2136	22nF 10% 63V for USA	5322	122	32654	
2137	0,22uF 20% 63V	4822	124	40746	
2138	2,2uF 20% 50V.	4822	124	41576	
2139	50V 15pF5%	4822	126	14236	
2140	470nF 5% 63V	4822	121	51252	
2141	100nF 20% 25V.	4822	126	10002	
2142	100nF 20% 25V.	4822	126	10002	
2143	220nF +80/-20% 50V	4822	126	13473	
2144	1uF 20% 63V.	4822	124	40242	
2145	220pF 5% 50V	4822	122	33575	
2146	220pF 5% 50V	4822	122	33575	
2147	220pF 5% 50V	4822	122	33575	
2148	22nF+80/- 20% 25V.	4822	126	11585	

S = Safety Part Be sure to use exact replacement part.

6104	1N4148	4822	130	30621
6105	HN1V02H-B	4822	130	83075
6106	1N4148	4822	130	30621
6107	BZX79-B11	4822	130	34488
6120	1N4148 not for /21/30/33	4822	130	30621
6130	1SV228	4822	130	82833
6131	1SV228	4822	130	82833
7101	TEA575H/V1	4822	209	90924
7102	2SA638B	4822	130	60093
7103	BC858C for RDS version	4822	130	42513
7104	BC338-40 for LW version	5322	130	44779
7105	BC338-40 for LW version	5322	130	44779
7109	BC858B for LW version	5322	130	41983
7111	BC848C	5322	130	42136
7122	BC848C for LW version	5322	130	42136
7124	BC848C for LW version	5322	130	42136

3715	1k 1% 0,4W	4822	050	11
3716	8k2 1% 0,4W	4822	050	18
3717	330R 5% 0,5W	4822	116	52
3718	10k 1% 0,4W	4822	050	11
3719	2k2 1% 0,4W	4822	050	12
3720	2k2 1% 0,4W	4822	050	12
3721	150k 5% 0,5W	4822	116	52
3722	220R 5% 0,5W	4822	116	83
3723	470R 5% 0,5W	4822	116	83
3724	18R 5% 0,5W	4822	116	52
3725	8k2 1% 0,4W	4822	050	18
3726	1k 1% 0,4W	4822	050	11
3727	330R 5% 0,5W	4822	116	52
3728	10k 1% 0,4W	4822	050	11
3729	2k2 1% 0,4W	4822	050	12
3730	2k2 1% 0,4W	4822	050	12
3731	150k 5% 0,5W	4822	116	52
3732	10k 5% 0,5W	4822	116	83
3733	2k2 5% 0,5W	4822	116	52
3734	5k6 1% 0,4W	4822	050	15
3735	10k 5% 0,5W	4822	116	83
3736	2k2 5% 0,5W	4822	116	52
3737	150k 5% 0,5W	4822	116	52
3738	220R 5% 0,5W	4822	116	83
3739	470R 5% 0,5W	4822	116	83
3740	4k7 5% 0,5W	4822	116	52
3741	18R 5% 0,5W	4822	116	52
3742	150k 5% 0,5W	4822	116	52
3743	220R 5% 0,5W	4822	116	83
3744	470R 5% 0,5W	4822	116	83
3745	4k7 5% 0,5W	4822	116	52
3746	18R 5% 0,5W	4822	116	52
3747	5k6 1% 0,4W	4822	050	15
3748	470R 5% 0,5W	4822	116	83
3749	150k 5% 0,5W	4822	116	52
3750	220R 5% 0,5W	4822	116	83
3751	470R 5% 0,5W	4822	116	83
3752	18R 5% 0,5W	4822	116	52
3753	470R 5% 0,5W	4822	116	83
3754	2k2 1% 0,4W	4822	050	12
3755	2k2 1% 0,4W	4822	050	12
3756	2k2 1% 0,4W	4822	050	12
3757	2k2 1% 0,4W	4822	050	12
3758	Trimmer 2k2	4822	101	11
3759	4R7 5% 0,33W	4822	052	10
3760	2k7 1% 0,4W	4822	050	12
3761	47k 5% 0,5W	4822	116	83
3764	10k 5% 0,5W	4822	116	83
3765	10k 5% 0,5W	4822	116	83
3766	10k 1% 0,4W	4822	050	11
3767	10k 1% 0,4W	4822	050	11
3768	10k 5% 0,5W	4822	116	83
3769	8k2 1% 0,4W	4822	050	18
3770	47k 5% 0,5W	4822	116	83
3771	10k 5% 0,5W	4822	116	83
3772	100k 5% 0,5W	4822	116	52
3773	10k 1% 0,4W	4822	050	11
3774	8k2 1% 0,4W	4822	050	18
3775	47k 5% 0,5W	4822	116	83
3776	100k 1% 0,4W	4822	050	11
3777	47k 5% 0,5W	4822	116	83
3778	100k 5% 0,5W	4822	116	52
3779	10k 5% 0,5W	4822	116	83
3780	150k 1% 0,4W	4822	050	11
3781	100R 1% 0,4W	4822	050	11
3782	100R 1% 0,4W	4822	050	11
3783	10k 5% 0,5W	4822	116	83
3784	10k 5% 0,5W	4822	116	83
3785	270R	4822	111	20C
3786	100k 5% 0,5W	4822	116	52
3787	330R 5% 0,5W	4822	116	52
3788	2k2 1% 0,4W	4822	050	12
3789	2k2 1% 0,4W	4822	050	12
5701	Osc Coil 100kHz	4822	157	10
6703	1N4148	4822	130	30
6705	BZX79-C2V7	5322	130	34
6706	1N4148	4822	130	30
6707	1N4148	4822	130	30
6708	1N4148	4822	130	30
6709	1N4148	4822	130	30
6710	BZX79-B5V6	4822	130	34
6711	BZX79-B5V6	4822	130	34
7701	BC557C	4822	130	42
7702	BC337-25	4822	130	40
7704	BC337-25	4822	130	40
7709	BC547C	4822	130	44
7710	BC547C	4822	130	44
7711	AN7318S	4822	209	32
7712	AN7318S	4822	209	32
7713	BC337-25	4822	130	40
7714	BC337-25	4822	130	40
7715	BC337-25	4822	130	40

MTF BOARD

MTF BOARD				
1707	Recording Switch	4822	277	11504
2703	47uF 20% 25V	4822	124	40433
2704	22uF50V	4822	124	81151
2705	4,7uF 20% 63V	4822	124	40246
2706	220uF 20% 10V	4822	124	12068
2707	2,2uF 20% 50V	4822	124	41576
2708	220uF 20% 10V	4822	124	12068
2709	220uF 20% 25V	4822	124	80144
2710	47uF 20% 25V	4822	124	40433
2711	220uF 20% 10V	4822	124	12068
2712	220uF 20% 10V	4822	124	12068
2713	220uF 20%25V	4822	124	80144
2714	47uF 20% 25V	4822	124	40433
2715	22uF 50V	4822	124	81151
2716	22 uF 50V	4822	124	81151
2718	47uF 20% 25V	4822	124	40433
2719	47uF 20% 25V	4822	124	40433
2721	8,2nF 10% 16V	4822	126	13307
2722	4,7nF 20%	4822	126	11714
2723	10nF 5% 250V	4822	121	41857
2724	18nF 5% 250V	4822	121	43179
2725	4,7nF 20%	4822	126	11714
2726	4,7nF 20%	4822	126	11714
2727	1,5nF 10% 16V	4822	126	12878
2728	15nF 10% 50V	4822	121	51305
2729	330pF 10% 50V	4822	136	12787
2730	10nF 10% 50V	4822	121	51304
2731	22nF +80/-20% 25V	4822	126	11585
2732	22nF +80/-20% 25V	4822	126	11585
2733	1,5nF 10% 16V	4822	126	12878
2734	470pF 10% 100V	5322	122	32311
2735	15nF 10% 50V	4822	121	51305
2736	330pF 10% 50V	4822	126	12787
2737	10nF 10% 50V	4822	121	51304
2738	22nF +80/-20% 25V	4822	126	11585
2739	100pF 10% 50V	4822	122	33195
2740	2,2nF 10% Y5R	4822	126	12339
2741	2,2nF 10% Y5R	4822	126	12339
2742	100pF 10% 50V	4822	122	33195
2743	1,5nF 10% 16V	4822	126	12878
2744	470pF 10% 100V	5322	122	32311
2745	1,5nF 10% 16V	4822	126	12878
2746	470pF 10% 100V	5322	122	32311
2747	15nF 10% 50V	4822	121	51305
2748	22nF +80/-20% 25V	4822	126	11585
2749	1,5nF 10% 16V	4822	126	12878
2750	470pF 10% 100V	5322	122	32311
2751	15nF 10% 50V	4822	121	51305
2752	1,5nF 10% 16V	4822	126	12878
2753	1uF 20% 63V	4822	124	40242
2754	47uF 20% 25V	4822	124	40433
2755	1uF 20% 63V	4822	124	40242
2756	47uF 20% 25V	4822	124	40433
2757	470nF 5% 63V	4822	121	51252
2758	470nF 5% 63V	4822	121	51252
2759	470pF 10% 50V	4822	122	33519
2760	470pF 10% 50V	4822	122	33519
2761	680pF 10% 50V	4822	126	14316
2762	680pF 10% 50V	4822	126	14316
3701	1k 1% 0,6W	4822	050	21002
3702	47k 5% 0,5W	4822	116	83884
3703	10R 1% 0,4W	4822	050	11009
3704	3k3 1% 0,4W	4822	050	13302
3705	1k 1% 0,6W	4822	050	21002
3706	4M7 5% 0,2W	4822	111	30893
3707	10R 5% 0,5W	4822	116	52176
3708	10k 1% 0,4W	4822	050	11003
3709	270R	4822	111	20434
3710	3k3 5% 0,5W	4822	116	52269
3711	2k2 1% 0,4W	4822	050	12202
3712	2k2 1% 0,4W	4822	050	12202
3713	22k 5% 0,5W	4822	116	52257
3714	22k 5% 0,5W	4822	116	52257

S = Safety Part Be sure to use exact replacement part.

7716	BC337-25	4822	130	40981
7717	BC548	4822	130	40938
7718	BC547B	4822	130	40959
7719	BC547B	4822	130	40959
7720	BC547C	4822	130	44503
7721	BC547C	4822	130	44503

279	D3x12
280	D3x12
281	D3x12
282	D3x16
283	M3x15
284	D3x16
285	D3x12
288	D3x12
289	D3x12
290	D3x12
291	D3x12

MECHANICAL & ACCESSORIES PARTS LIST

MECHANICAL & ACCESSORIES PARTS LIST				
101	Cabinet Front /21/21M	4822	459	05234
101	Cabinet Front /37	4822	459	05214
105	Window CDC Control	4822	450	10608
106	Button CDC Select	4822	410	12232
107	Cover Tray CDC /21/21M	4822	442	01746
107	Cover Tray CDC /37	4822	442	01699
108	Badge Ph-Mag /21/21M	4822	454	13035
108	Badge Ph-Mag /37	4822	454	13265
124	Window Display FW65C	4822	450	10611
124	Window Display FW380C	4822	450	10614
124	Window Display FW386C	4822	450	10609
125	Button DSC/DBB	4822	410	12233
128	Button Set Clock	4822	410	12234
129	Button Power/Rec	4822	410	12235
130	Lightguide Source Sel	4822	380	10262
131	Button Set Source Select	4822	410	12236
132	Knob Volume Rotary	4822	410	12237
133	Button Set Controls	4822	410	11729
141	Cover Non-IS	4822	442	01701
142	Cover DSC/DBB	4822	442	01702
143	Knob Karaoke /21/21M	4822	210	12277
158	Cover Cassette Door Left	4822	442	01703
159	Cover Cassette Door Right	4822	442	01704
160	Lens Cassette Left	4822	381	12054
161	Lens Cassette Right	4822	381	12055
162	Rec/Pb Button Set	4822	410	12227
163	Rec/Pb Button Set	4822	410	12227
164	Rec/Pb Button Set	4822	410	12227
165	Rec/Pb Button Set	4822	410	12227
166	Rec/Pb Button Set	4822	410	12227
167	Rec/Pb Button Set	4822	410	12227
168	Playback Button Set	4822	410	12228
169	Playback Button Set	4822	410	12228
170	Playback Button Set	4822	410	12228
171	Playback Button Set	4822	410	12228
172	Playback Button Set	4822	410	12228
197	Damper Assembly	4822	529	10322
199	Spring Leaf	4822	492	70231
200	Door Cassette	4822	443	10881
201	Spring-Door	4822	492	42709
251	Cabinet Rear L/R /21	4822	426	10803
251	Cabinet Rear L/R /21M	4822	426	10798
251	Cabinet Rear L/R /37	4822	426	10799
251	Cabinet Rear Matrix /37	4822	426	10784
252	Plate (Foot)	4822	462	40683
255	Spacer 5mm	4822	466	93148
260	Spring, IC	4822	492	11734
349	Surround Box for Matrix /37	4822	445	10809
350	Left/Right LS Box/21/21M	4822	445	10813
350	Left/Right LS Box /37	4822	445	10811
351	FM Aerial 75R /21/21M	4822	303	50063
351	FM Aerial 300R /37	4822	320	11094
356	Remote Control /21/21M	4822	219	10666
356	Remote Control /37	4822	219	10614
384	AM Frame Aerial	4822	303	50082
385	Mains Cord/21/21M	4822	321	10249
385	Mains Cord/37	4822	321	11466
387	Instruction For Use/21/21M	4822	736	16717
387	Instruction For Use /37	4822	736	16673
1451	Flex Cable 9pin 22cm	4822	320	12604
1456	Flex Cable 15pin 19cm	4822	320	11974
5001	MainsTransformer/21/21M	4822	146	10951
5001	Mains Transformer/37	4822	146	10957

COMBI BOARD

COMBI BOARD		
3342	1k 2% 0.25W	4822 051 10
3343	150k 5% 0,1W	4822 051 20
3344	150k 5% 0,1W	4822 051 20
3345	10k 1% 0,1 W	4822 117 10
3346	10k 1% 0,1 W	4822 117 10
3347	10k 1% 0,1W	4822 117 10
3348	10k 1% 0,1W	4822 117 10
3349	10k 1% 0,1W	4822 117 10
3350	10k 1% 0,1W	4822 117 10
3351	2R2 5% 0,1 W	4822 051 20
3352	2R2 5% 0,1W	4822 051 20
3353	2R2 5% 0,1W	4822 051 20
3354	2R2 5% 0,1W	4822 051 20
3356	220R 5% 0,5W	4822 116 83
3357	220R 5% 0,5W	4822 116 83
3358	220R 5% 0,5W	4822 116 83
3359	220R 5% 0,5W	4822 116 83
3360	220R 5% 0,5W	4822 116 83
3361	1k8 5% 0,5W	4822 116 52
3362	1k8 5% 0,5W	4822 116 52
3363	1k8 5% 0,5W	4822 116 52
3364	470R 5% 0,5W	4822 116 83
3365	220R 5% 0,5W	4822 116 83
3366	4k7 5% 0,5W	4822 116 52
3367	1k 2% 0.25W	4822 051 10
3368	1k 2% 0.25W	4822 051 10
3369	1k 2% 0.25W	4822 051 10
3370	1k 2% 0.25W	4822 051 10
3371	150R 1% 0,1W	4822 117 10
3372	10R 5% 0,1W	4822 051 20
3373	330R 5% 0,5W	4822 116 52
3374	220R 5% 0,5W	4822 116 83
3378	10M 5% 0,1W	4822 051 20
3379	4k7 5% 0,1W	4822 051 20
3380	3k9 5% 0,1W	4822 051 20
3381	100R 5% 0,5W	4822 116 52
3382	15k 5% 0,1W	4822 051 20
3383	22k 5% 0,1W	4822 051 20
3384	22k 5% 0,1W	4822 051 20
3385	47k 1% 0,1W	4822 117 10
3386	47k 1% 0,1W	4822 117 10
3387	5k6 5% 0,1W	4822 051 20
3388	5k6 5% 0,1W	4822 051 20
3390	OR Jumper 0805	4822 051 20
3401	2k2 1% 0,1W	4822 117 11
3402	2k2 1% 0,1W	4822 117 11
3403	2k2 1% 0,1W	4822 117 11
3404	2k2 1% 0,1W	4822 117 11
3406	2k2 1% 0,1W	4822 117 11
3407	2k2 1% 0,1W	4822 117 11
3409	5k6 5% 0,1W	4822 051 20
3410	5k6 5% 0,1W	4822 051 20
3411	100R 5% 0,5W	4822 116 52
3412	100R 5% 0,5W	4822 116 52
3413	100R 5% 0,5W	4822 116 52
3450	330R 5% 0,1W	4822 051 20
3451	330R 5% 0,1W	4822 051 20
3452	330R 5% 0,1W	4822 051 20
3501	68k 5% 0,1W	4822 051 20
3502	68k 5% 0,1W	4822 051 20
3509	100k 5% 0,1W	4822 051 20
3510	100k 5% 0,1W	4822 051 20
3517	10k 1% 0,1W	4822 117 10
3518	33k 5% 0,1W	4822 051 20
3519	33k 5% 0,1W	4822 051 20
3522	1M 5% 0,1W	4822 051 20
3523	1M 5% 0,1W	4822 051 20
3524	100k 5% 0,1W	4822 051 20
3525	100k 5% 0,1W	4822 051 20
3526	27k 5% 0,1W	4822 051 20
3527	27k 5% 0,1W	4822 051 20
3528	22k 5% 0,1W	4822 051 20
3529	22k 5% 0,1W	4822 051 20
3530	33k 5% 0,1W	4822 051 20
3531	33k 5% 0,1W	4822 051 20
3534	100k 5% 0,1W	4822 051 20
3535	100k 5% 0,1W	4822 051 20
3536	8k2 5% 0,1W	4822 051 20

LEFT/RIGHT LOUDSPEAKER BOX BREAKDOWN

LEFT/RIGHT LOUDSPEAKER BOX BREAKDOWN				
	Woofers 5,25" 6R	4822	240	10307
	Tweeter 2,5" 6R	4822	240	10306
	Neutral Cloth Frame Assy	4822	458	10668

SURROUND BOX BREAKDOWN

SURROUND BOX BREAKDOWN				
	Speaker 3" 6R	4822	240	10353

SCREW LISTS - MAIN UNIT

SCREW LISTS - MAIN UNIT				
185	D3x12			
198	D3x12			
202	D3x12			
205	D3x12			
276	M3 x 6			
277	D3x12			
278	D3x12			

S = Safety Part Be sure to use exact replacement part.

3537 8k2 5% 0,1W.	4822 051 20822	4244 OR Jumper 0805	4822 051 20
3538 82k 1% 0,1W.	4822 117 11149	4268 OR Jumper 0805	4822 051 20
3539 82k 1% 0,1W.	4822 117 11149	4501 OR Jumper 0805	4822 051 20
3540 150k 5% 0,1W	4822 051 20154	4502 OR Jumper 0805	4822 051 20
3541 150k 5% 0,1W	4822 051 20154	4505 OR Jumper 0805	4822 051 20
3542 10R 5% 0,5W.	4822 116 52176	4506 OR Jumper 0805	4822 051 20
3543 470k 5% 0,1W	4822 051 20474	4508 OR Jumper 0805	4822 051 20
3544 470k 5% 0,1W	4822 051 20474	4509 OR Jumper 0805	4822 051 20
3545 100k 5% 0,1W	4822 051 20104	4510 OR Jumper 0805	4822 051 20
3546 100k 5% 0,1W	4822 051 20104	4511 OR Jumper 0805	4822 051 20
3547 470R 5% 0,1W	4822 051 20471	4512 OR Jumper 0805	4822 051 20
3548 470R 5% 0,1W	4822 051 20471	4513 OR Jumper 0805	4822 051 20
3549 100R 5% 0,1W	4822 051 20101	4514 OR Jumper 0805	4822 051 20
3551 2R2 5% 0,1W.	4822 051 20228	4515 OR Jumper 0805	4822 051 20
3552 2R2 5% 0,1W.	4822 051 20228	4516 OR Jumper 0805	4822 051 20
3553 47k 1% 0,1W.	4822 117 10834	4517 OR Jumper 0805	4822 051 20
3554 47k 1% 0,1W.	4822 117 10834	4518 OR Jumper 0805	4822 051 20
3556 2k7 1% 0,1W.	4822 117 12955	4519 OR Jumper 0805	4822 051 20
3557 2k7 1% 0,1W.	4822 117 12955	4520 OR Jumper 0805	4822 051 20
3558 1M 5% 0,1 W.	4822 051 20105	4521 OR Jumper 0805	4822 051 20
3559 1M 5% 0,1W .	4822 051 20105	4533 OR Jumper 0805	4822 051 20
3560 470R 5% 0,1W	4822 051 20471	4523 OR Jumper 0805	4822 051 20
3561 470R 5% 0,1W	4822 051 20471	4524 OR Jumper 0805	4822 051 20
3562 8k2 5% 0,1W.	4822 051 20822	4525 OR Jumper 0805	4822 051 20
3563 8k2 5% 0,1W.	4822 051 20822	4526 OR Jumper 0805	4822 051 20
3564 390R 5% 0,1W	4822 051 20391	4530 OR Jumper 0805	4822 051 20
3565 390R 5% 0,1W	4822 051 20391	4531 OR Jumper 0805	4822 051 20
3566 15k 5% 0,1W.	4822 051 20153	4532 OR Jumper 0805	4822 051 20
3567 15k 5% 0,1W.	4822 051 20153	4533 OR Jumper 0805	4822 051 20
3568 12k 1% 0,1W.	4822 117 11383	4534 OR Jumper 0805	4822 051 20
3569 12k 1% 0,1W.	4822 117 11383	4535 OR Jumper 0805	4822 051 20
3570 10k 1% 0,1W.	4822 117 10833	4536 OR Jumper 0805	4822 051 20
3571 10k 1% 0,1W.	4822 117 10833	4537 OR Jumper 0805	4822 051 20
3574 22k 5% 0,1W.	4822 051 20223	4538 OR Jumper 0805	4822 051 20
3575 22k 5% 0,1W.	4822 051 20223	4539 OR Jumper 0805	4822 051 20
3576 8k2 5% 0,1W.	4822 051 20822	4540 OR Jumper 0805	4822 051 20
3577 8k2 5% 0,1W.	4822 051 20822	4541 OR Jumper 0805	4822 051 20
3580 22k 5% 0,1W.	4822 051 20223	4542 OR Jumper 0805	4822 051 20
3581 22k 5% 0,1W.	4822 051 20223	4543 OR Jumper 0805	4822 051 20
3582 2k7 1% 0,1W.	4822 117 12955	4544 OR Jumper 0805	4822 051 20
3583 2k7 1% 0,1W.	4822 117 12955	4545 OR Jumper 0805	4822 051 20
3584 1k 2% 0,25W.	4822 051 10102	4546 OR Jumper 0805	4822 051 20
3585 47R 5% 0,1W.	4822 051 20479	4547 OR Jumper 0805	4822 051 20
3586 2k2 1% 0,1W.	4822 117 11449	4549 OR Jumper 0805	4822 051 20
3587 6k8 1% 0,1W.	4822 117 11507	4550 OR Jumper 0805	4822 051 20
3588 470R 5% 0,1W	4822 051 20471	4551 OR Jumper 0805	4822 051 20
3593 1k 2% 0,25W.	4822 051 10102	4552 OR Jumper 0805	4822 051 20
3594 1k 2% 0,25W.	4822 051 10102	4553 OR Jumper 0805	4822 051 20
3596 68k 5% 0,1W.	4822 051 20683	4554 OR Jumper 0805	4822 051 20
3597 68k 5% 0,1W.	4822 051 20683	4555 OR Jumper 0805	4822 051 20
3601 47k 5% 0,5W.	4822 116 83884	4556 OR Jumper 0805	4822 051 20
3602 47k 5% 0,5W.	4822 116 83884	4557 OR Jumper 0805	4822 051 20
3603 1M 5% 0,1W .	4822 051 20105	4558 OR Jumper 0805	4822 051 20
3604 1M 5% 0,1W .	4822 051 20105	4559 OR Jumper 0805	4822 051 20
3605 100k 5% 0,1W	4822 051 20104	4560 OR Jumper 0805	4822 051 20
3606 100k 5% 0,1W	4822 051 20104	4561 OR Jumper 0805	4822 051 20
3609 470R 5% 0,5W	4822 116 83883	4563 OR Jumper 0805	4822 051 20
3610 470R 5% 0,5W	4822 116 83883	4564 OR Jumper 0805	4822 051 20
3616 100k 5% 0,1W	4822 051 20104	4565 OR Jumper 0805	4822 051 20
3617 1k5 1% 0,1W.	4822 117 11139	4566 OR Jumper 0805	4822 051 20
3618 1k5 1% 0,1W.	4822 117 11139	4567 OR Jumper 0805	4822 051 20
3630 470R 5% 0,1W	4822 051 20471	4568 OR Jumper 0805	4822 051 20
3631 470R 5% 0,1W	4822 051 20471	4569 OR Jumper 0805	4822 051 20
3632 1M 5% 0,1W .	4822 051 20105	4570 OR Jumper 0805	4822 051 20
3633 1M 5% 0,1W .	4822 051 20105	4571 OR Jumper 0805	4822 051 20
3634 10k1% 0,1W .	4822 117 10833	4572 OR Jumper 0805	4822 051 20
3635 10k 1% 0,1W.	4822 117 10833	4573 OR Jumper 0805	4822 051 20
3636 820R 1% 0,1W	4822 117 11454	4574 OR Jumper 0805	4822 051 20
3637 820R 1% 0,1W	4822 117 11454	4575 OR Jumper 0805	4822 051 20
3640 33k 5% 0,1W.	4822 051 20333	4579 OR Jumper 0805	4822 051 20
3641 10k 1% 0,1W.	4822 117 10833	4601 OR Jumper 0805	4822 051 20
3643 1M 5% 0,1W .	4822 051 20105	4602 OR Jumper 0805	4822 051 20
3644 330R 5% 0,1W	4822 051 20331	4603 OR Jumper 0805	4822 051 20
3645 2k7 1% 0,1W.	4822 117 12955	4605 OR Jumper 0805	4822 051 20
3647 Potm Rotary 20KA	4822 101 21204	4606 OR Jumper 0805	4822 051 20
3648 470R 5% 0,5W	4822 116 83883	4607 OR Jumper 0805	4822 051 20
3650 100k 5% 0,1W	4822 051 20104	4608 OR Jumper 0805	4822 051 20
3651 100k 5% 0,1W	4823 051 20104	4609 OR Jumper 0805	4822 051 20
3652 10k 1% 0,1W.	4822 117 10833	4610 OR Jumper 0805	4822 051 20
3653 10k 1% 0,1W.	4822 117 10833	4611 OR Jumper 0805	4822 051 20
3655 10k 1% 0,1W.	4822 117 10833	4612 OR Jumper 0805	4822 051 20
3656 4R7 5% 0,1W.	4822 051 20478	4613 OR Jumper 0805	4822 051 20
3657 4R7 5% 0,1W.	4822 051 20478	5202 Coil 400^ 30% not for /37.	4822 157 71
4214 OR Jumper 0805	4822 051 20008	5321 Coil 2,2^ 5%	4822 157 62
4218 OR Jumper 0805	4822 051 20008	5322 00112,2^5%	4822 157 62
4222 OR Jumper 0805	4822 051 20008	5324 Coil 2,2^ 5%	4822 157 62
4224 OR Jumper 0805	4822 051 20008	5501 Coil 2,2^5%.	4822 157 62
4229 OR Jumper 0805	4822 051 20008	5502 Coil 2,2^ 5%	4822 157 62
4230 OR Jumper 0805	4822 051 20008	5503 coil 18,5 turns.	4822 157 62
4231 OR Jumper 0805	4822 051 20008	5504 coil 18,5 turns.	4822 157 62
4232 OR Jumper 0805	4822 051 20008	5505 coil 18,5 turns.	4822 157 62
4233 OR Jumper 0805	4822 051 20008	5506 coil 18,5 turns.	4822 157 62

S = Safety Part Be sure to use exact replacement part.

5507	Coil 2,2^1-1 5%	4822	157	62552
5508	FeBead100MHz	4822	526	10704
5640	Coil 22^ 5%	4822	157	11526
6220	1 N4003G	4822	130	31878
6221	1N4003G.	4822	130	31878
6222	1 N4003G	4822	130	31878
6223	1N4003G.	4822	130	31878
6224	1N4003G.	4822	130	31878
6225	1N4003G.	4822	130	31878
6226	1N4003G.	4822	130	31878
6227	1N4003G.	4822	130	31878
6228	BZX79-B5V6	4822	130	34173
6229	BZX79-B27.	4822	130	34379
6230	1N4003G.	4822	130	31878
6231	BZX79-B4V7	4822	130	34174
6232	1 N4148.	4822	130	30621
6233	1 N4148.	4822	130	30621
6235	1 N4148.	4822	130	30621
6236	BZX79-B5V1	4822	130	34233
6240	1N4003G.	4822	130	31878
6241	1 N4003G	4822	130	31878
6242	1 N4003G	4822	130	31878
6243	1 N4003G	4822	130	31878
6244	1 N4003G	4822	130	31878
6245	1 N4003G	4822	130	31878
6248	1 N4003G	4822	130	31878
6249	1 N4003G	4822	130	31878
6250	1 N4003G	4822	130	31878
6251	1 N4003G	4822	130	31878
6321	1 N4003G	4822	130	31878
6322	1N4003G.	4822	130	31878
6323	1 N4003G	4822	130	31878
6324	1N4003G.	4822	130	31878
6325	BZX79-B15.	4822	130	34281
6326	BZX79-B18.	4822	130	31024
6327	BZX79-B3V3	5322	130	31504
6328	1N4003G.	4822	130	31878
6329	1N4148	4822	130	30621
6330	1N4148	4822	130	30621
6442	LTL-1CHPE.	4822	130	10792
6443	LTL-1CHPE.	4822	130	10792
6444	LTL-1CHPE.	4822	130	10792
6502	BZX79-B5V6	4822	130	34173
6549	1N4148	4822	130	30621
6550	1N4148	4822	130	30621
6551	BZX79-B9V1	4822	130	30862
6552	1 N4148.	4822	130	30621
6553	1 N4003G	4822	130	31878
7234	BC369.	5322	130	44593
7235	BC547B	4822	130	40959
7240	BC547B	4822	130	40959
7241	BC547B	4822	130	40959
7247	BC337-25	4822	130	40981
7248	BC337-25	4822	130	40981
7249	BC327-25	4822	130	41246
7250	L7812CP.	4822	209	33575
7320	BC817-25	4822	130	42804
7321	BC817-25	4822	130	42804
7322	BC817-25	4822	130	42804
7323	BC817-25	4822	130	42804
7329	BDW94C	4822	130	10847
7330	BC547B	4822	130	40959
7331	BC857B	5322	130	60508
7332	BC857B	5322	130	60508
7333	BC817-25	4822	130	42804
7391	AN7125	4822	209	16224
7400	BC857B	5322	130	60508
7401	BC337-25	4822	130	40981
7402	HEF4094BT.	5322	209	11306
7501	HEF4052BT.	5322	209	11102
7503	BC550C	4822	130	41096
7504	BC550C	4822	130	41096
7505	ON4986	4822	130	44568
7506	ON4986	4822	130	44568
7507	ON4986	4822	130	44568
7508	ON4986	4822	130	44568
7530	HEF4069UBT	5322	209	14482
7537	BC847B	4822	130	60511
7538	BC847B	4822	130	60511
7543	BC847B	4822	130	60511
7544	BC847B	4822	130	60511
7545	BC847B	4822	130	60511
7546	BC847B	4822	130	60511
7547	BC847B	4822	130	60511
7548	BC847B	4822	130	60511
7554	NJM4556MB.	4822	209	31378
7556	BC857B	5322	130	60508
7641	BC550C/21/21M.	4822	130	41096
7642	BC550C/21/21M.	4822	130	41096
7643	BC550C/21/21M.	4822	130	41096

S = Safety Part Be sure to use exact replacement part.