SERVICE MANUAL

Compact Disc Player

DZ-122

DZ-122

Contents

Specifications

<CD SECTIONS>

System	Optical (Compact Disc System)
Quantizing Bit Number	16 bit linear
Channel	2 (Stereo)
Pickup	Semiconductor laser type
Frequency Response	5Hz to 20kHz : 0 ± 1dB
Distortion (at 1kHz)	0.008%
S/N Ratio	99dB
Dynamic Range	91dB
Separation (at 1kHz)	90dB

<COMPACT DISC>

Track Pitch	1.6μm
Modulation Frequency	44.1kHz
Transfer Rate	43.218M bit/sec.
Dimensions	80/120×1.2mm

<GENERAL>

Power Supply	AC 120/220/240V, 50Hz (○, △) AC 120V, 60Hz (●, ▲)
Power Consumption	15W
Output Voltage (1kHz, 0dB)	2V ± 1dB
Headphone Output Voltage (at 1kHz - 10dB/8ohm)	150mV ± 1.5dB
Semiconductors	20 IC's, 24 Transistors, 2 FET's, 31 Diodes, 3 Zener Diodes
Dimensions	483 (W) × 311 (D) × 85 (H) mm
Weight	4.5kg

NOTE : Due to continuing product improvement, specifications and designs are subject to change without notice.

○ : With Safety Regulations Version (AD), △ : Without Safety Regulations Version (EK)
● : U.S.A. Version (UZ), ▲ : Canada Version (UQ), Others : Common.

In Case of Difficulty

If you encounter a problem, please review the items in the following checklist. Also, be sure to thoroughly check other connected components, such as speakers, amplifier or receiver, etc.

PROBLEM	PROBABLE CAUSE AND SOLUTION
Power Does Not Come On.	• Check AC power cord to ensure good connection at AC outlet.
Does Not Play.	• CD disc placed in tray label down. Open and place with label up. • Disc damaged. Replace.
No Output.	• Be sure correct input is selected on the connected amplifier or receiver.
Remote Inoperative.	• Check "AA" batteries.

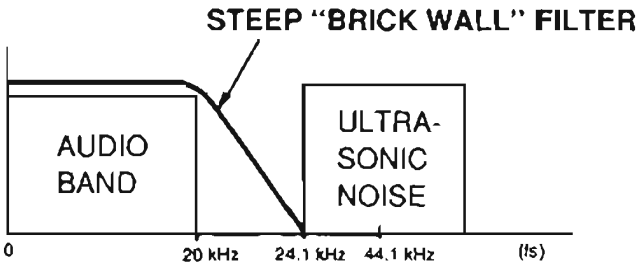
Special Features

Direct Digital Output Jack

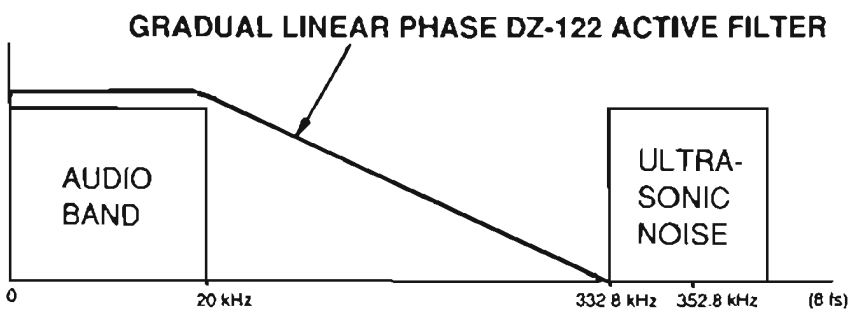
To provide the highest sonic quality possible, the DZ-122 utilizes a fiber optic digital output jack. This allows the superior performance of the digital direct connection and the high quality D/A converters in the companion Luxman integrated amplifiers to be utilized. Although highest quality reproduction is assured when using Luxman integrated amplifiers, such as the LV-113, LV-117, etc., the DZ-122 may be teamed with any amplifier or D/A converter system that conforms to the EIA-J Digital Audio Interface format.

8 Fold Oversampling Digital Filter

A high resolution 18 bit 8 fold oversampling digital F.I.R. (Finite Impulse Response) filter is used in the DZ-122. It permits extremely rapid roll-off of the undesired ultra-high frequencies before D/A conversion, without any of the phase distortion of "brick wall" analog filters used with conventional "single sampling" data rate converters.



CONVENTIONAL "SINGLE SAMPLING" SYSTEM



DZ-122 EIGHT FOLD OVERSAMPLING SYSTEM

In addition, 8 fold oversampling moves the remaining ultra-sonic frequencies well above 300 kHz, instead of just over 24 kHz, allowing the use of a very gradual linear phase analog filter. Such a filter greatly reduces phase and transient distortion effects, for pure, accurate sound reproduction.

Dual Digital-to-Analog Converters

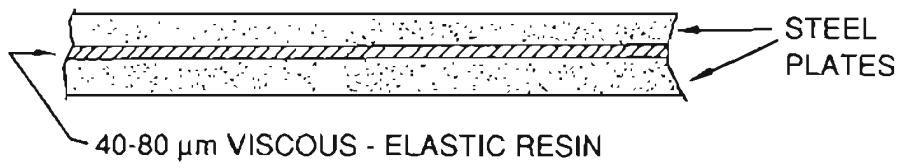
Dual 18 bit DACs allow precision factory trimming for highest possible conversion linearity. In addition, they permit the elimination of inter-channel phase shift as well as providing superior S/N ratio and channel separation.

Advanced 3-Beam Laser

A highly refined 3-beam configuration, it employs advanced techniques to provide precision tracking and focusing. Combined with state-of-the-art digital tracking and focus servos, accuracy of the digital data is preserved even with discs having significant surface defects

Anti-Vibration Laser Pick-up Assembly

The laser pick-up subchassis that supports the entire pick-up drive mechanism, consists of a unique 2 layer steel plate construction, bonded by a viscous-elastic resin material.



Vibration energy is effectively dissipated within the resin material as heat, virtually eliminating vibration deformation and any resultant mistracking.

In addition, the subchassis laser assembly of controlled mass is isolated by 3 glass fiber reinforced polyethylene terephthalate plastic suspension dampers.

This combination results in a mechanical filter that effectively removes any but the most gross of shock or vibration influences.

Front Panel Control, Display and Remote Control Systems

The DZ-122 has one of the most flexible and complete control systems ever offered in a CD player. Most functions are directly addressable, both on the front panel and by remote, without the annoyance of interrelated commands. In addition, all active control functions are simultaneously shown on a highly visible vacuum fluorescent display.

Special Features

Serial Remote Jacks

These jacks provide input and output connections for the simple "daisy chain" connection of the serially encoded RC signal of Luxman's unified remote control systems.

High Mass Magnetic Disc Clamper

A high density magnetic disc clamper mass loads the disc center to minimize spindle motor micro-vibration, thus improving tracking accuracy for lowest error rate. The magnetic clamp also provides a perfect friction-free non-wearing clamping action to hold the CD disc to the player drive spindle.

Remote Operable Motor Driven Output Level Controls

This feature provides variable analog outputs that can be operated by the supplied remote control as well as from the front panel. It also operates on the head-phone outputs. The amount of level reduction, in dB below full output, is shown in the display during the time the level control is being operated. The motor drive gives quick and smooth remote level setting action while eliminating any possibility of digital switching noise. These variable outputs are provided in addition to the normal fixed outputs.

Fade Out

This feature works through the motor driven level control and provides a smooth, computer controlled, precision fade out action. It is especially useful when making tape recordings from CDs. It is much more professional than manual fades and can be initiated at any playback point on a musical selection.

T-Fade Out

This function permits one to put a pre-determined time interval between the start of a given track and the beginning of the fade out action.

Random

If desired, activating this function will allow the computer in the unit to select tracks, in a completely random manner, for playback. While the selection is random, it does not repeat any given track. Rather, it plays each randomly selected track once, shutting off automatically after all tracks are played. If the RE-PEAT function is also selected, then the unit will continuously replay all tracks but in a completely dif-ferent order each time.

Edit

This feature is specifically intended to select and divide CD tracks, on the basis of timing, to fit the recording time on the A and B sides of any given tape cassette type. For instance, the EDIT function would be set to 30 minutes to fit both sides of a C-60 cassette. It divides a group of whole tracks, as closely as is possible, into two 30 minute sections. When the first side is recorded, the DZ-122 automatically stops so that the tape can be turned over in the cassette recorder. The 2nd half of the grouped tracks are then selected and the system restarted to record the 2nd side.

A-Pause

When activated, this feature causes the machine to automatically pause at the end of any currently playing track.

A-Scan

This feature allows the first 10 seconds of each track to be previewed (scanned) automatically, one by one, throughout the entire disc. It works in normal PLAY, PROGRAM and RANDOM modes.

Display Adjust

Four levels of display brightness are available with this feature, in addition to a display OFF position.

Power Off Memory

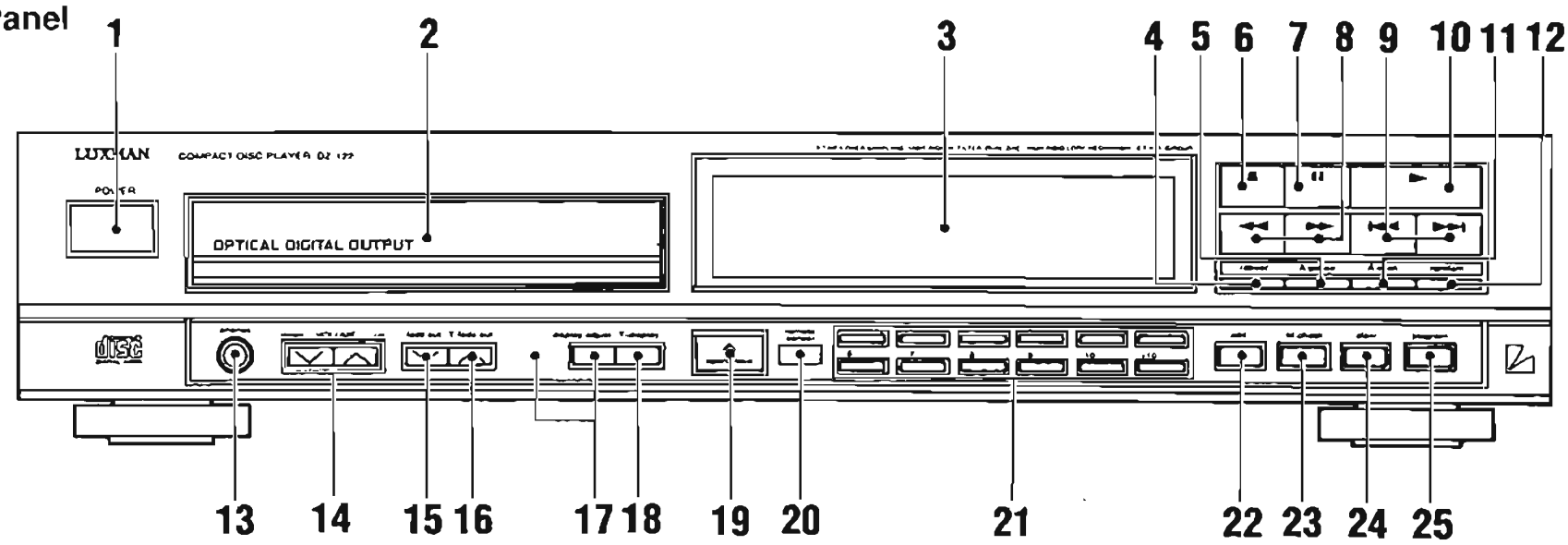
A special power reserve circuit retains in memory the contents of all programmed functions when the power is turned off or when the power cord is unplugged. The retention period is approximately 2 to 4 weeks.

Gold Plated Output Jacks

The L and R analog output jacks are gold plated for the highest possible quality connections and the elimination of corrosion losses over long term use.

Controls & Switches

Front Panel



1. **"POWER" button**
   Press this button to turn power on and off to the unit. The contents of the programmed play, random play and edit play are kept in memory even if the power is turned off. When one of the programmed play, random play and edit play functions has been set, the programmed operation will start when the power is turned on. When no programmed operation has been set, normal playback will start from the first track on the disc.

2. **Disc Tray**
   Place a disc on this tray, label side up. A light touch on the tray, when open, will cause it to retrack back into the unit ready for play. Pressing Play (item #10), Stop/Clear (item #6), Pause (item #7), "A-scan" (item #11) or any of the Direct Access Select (item #21) buttons will also close the tray and cause the unit to go into immediate play operation.

Note:
To use 8 cm (3 inch) single CDs, place them on the inner circular recessed area marked "8 cm disc" on the tray.

3. **Display**
   Track, index, time, etc. are all simultaneously shown in this Display. Refer to Operation Guidelines for details.

4. **"repeat" button**
   In normal play or random play mode, press this button to repeat all tracks on a disc.

   In programmed play or edited play mode, pressing this button will repeat only those programmed or edited.

   Pressing the "repeat" button a second time, will

5. **"A-pause" (auto-pause) button**
   Pressing this button will cause the machine to activate Pause automatically at the end of any currently playing track.
   To resume play, press the Play button.
   While the auto pause function is activated, "A-pause" will show in the display.

6. **Stop/Clear button (■)**
   One press of this button will stop playback and return the pick-up to the beginning of the disc. A second push will clear (reset) all memory contents.

Note:
The total number of tracks and the total playing time on the disc will always show on the display in the STOP mode.

7. **Pause button (II)**
   Press this button to temporarily cease playback or to cue up a track or segment for recording, etc. To resume playback, press the Pause button again or press the Play button.

Note:
Fast Forward/Backward Scan and Skip operations are still operable in the Pause mode.

8. **Fast Forward/Backward Scan buttons (◀◀, ▶▶)**
   When pressed, these buttons provide fast forward or backward scan within a track (music) selection. To more than double these scan speeds, press the Pause button first.

Controls & Switches

9. **Fast Forward/Backward Skip buttons (⏮, ⏭)**
These buttons allow one to "skip" forward or backward over any track in one track increments.

Pressing backward (⏮) once will cause return to the beginning of the current track; a second immediate push will cause a skip back to the preceding track.

When the pick-up comes to the first selection, the next push will cause it to go to the beginning of the last selection on the disc.

Pressing forward (⏭) will cause the player to skip forward, one track at a time for each successive push. When the last selection is reached, the next push will return the pick-up to the first track.

10. **Play button (▶)**
Press Play button when loading a disc for immediate playback beginning at track 1 and for starting a programmed, edited or random sequence.

11. **"A-scan" (auto-scan) button**
When pressed, the A-scan indicator will appear on the display and the first 10 seconds of each track on the disc will be automatically played, beginning at track 1. If in programmed mode, pressing this button will scan each track in the program, beginning with the first selection programmed.

Note:
Pressing the "A-scan" button will cancel the A-Pause function.

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12. **"random" button**
Press this button to automatically play tracks in a random order. During random play, the RANDOM indicator will appear on the display.

13. **"phones" jack**
Use the "phones" jack to connect stereo headphones for private listening.

14. **"VOLUME up and down" buttons (∨, ∧)**
Control volume level of connected stereo headphones and the "ANALOG OUT VARIABLE" jacks on the rear panel. When activated, the output level, as measured in dB below maximum output, is shown in the display.

15. **"fade-out" button**
Use this button to gradually decrease the output level for the "ANALOG OUT-VARIABLE" jacks and the "Phones" jack. When the fade-out completes, the unit enters the pause mode and the output level automatically returns to the original level.

16. **"T-fade out" (time fade out) button**
Use this button to gradually decrease the output level for the "ANALOG OUT-VARIABLE" jacks and the "phones" jack at the time specified by the Direct Access Select buttons.
When the fade-out completes, the unit will enter the pause mode and the output level automatically returns to the original level.

17. **"display adjust" button and indicator**
This button adjusts brightness of the display in four steps and also turns the display off. The red indicator lights up and stays lit in the 3 dimmed positions and in the display "off" position.

Controls & Switches

18. "T-display" (time display) button
Each push of this button selects one of 4 disc timing displays as follows:

- "Single Elapsed"
  Time elapsed since beginning of current track.
- "Total Elapsed"
  Time elapsed since beginning of total disc.
- "Single Remain"
  Play time remaining on current track.
- "Total Remain"
  Play time remaining on entire disc.

Notes:
When in program play mode, the remaining times displayed will be that of the selections programmed, not the entire disc.

In the RANDOM play mode, the display will not show Total Elapsed or Total Remain times. (This is not a malfunction.)

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19. "open/close" button (⏏)
Press to open or close the Disc Tray. (See also item #2.)

20. Remote Sensor
When using the hand held remote control, it must be pointed toward this sensor to activate operational functions.

21. Direct Access Select buttons
Use for immediate play of any track from 1 to 99 or, in conjunction with the "program" button, select up to 32 tracks in any order for programmed operation.

Also, use these buttons for the edit play and time setting for the Time Fade OUT function.

22. "edit" button
For convenience in tape recording, this button will perform automatic grouping of tracks that can be recorded within the time specified for any given tape type used (C-60, C-90 and others).

23. "M-check" (memory-check) button
Use this button to check the order of the selections that have been programmed. With each successive push of this button, the track numbers that have been programmed will be shown to the left and the programmed order to the right, in the track display area (the time portion of the display will turn off).

Note:
M-check operates only in the stop mode.

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24. "clear" button
This function allows track by track clearing, in sequence, of any programmed track, beginning with the last track programmed. With each push of this button, the next track to be cleared will appear in the Track No. Display and the red frame around the last programmed track No. will disappear.

Note:
Clear operates only in the stop mode.

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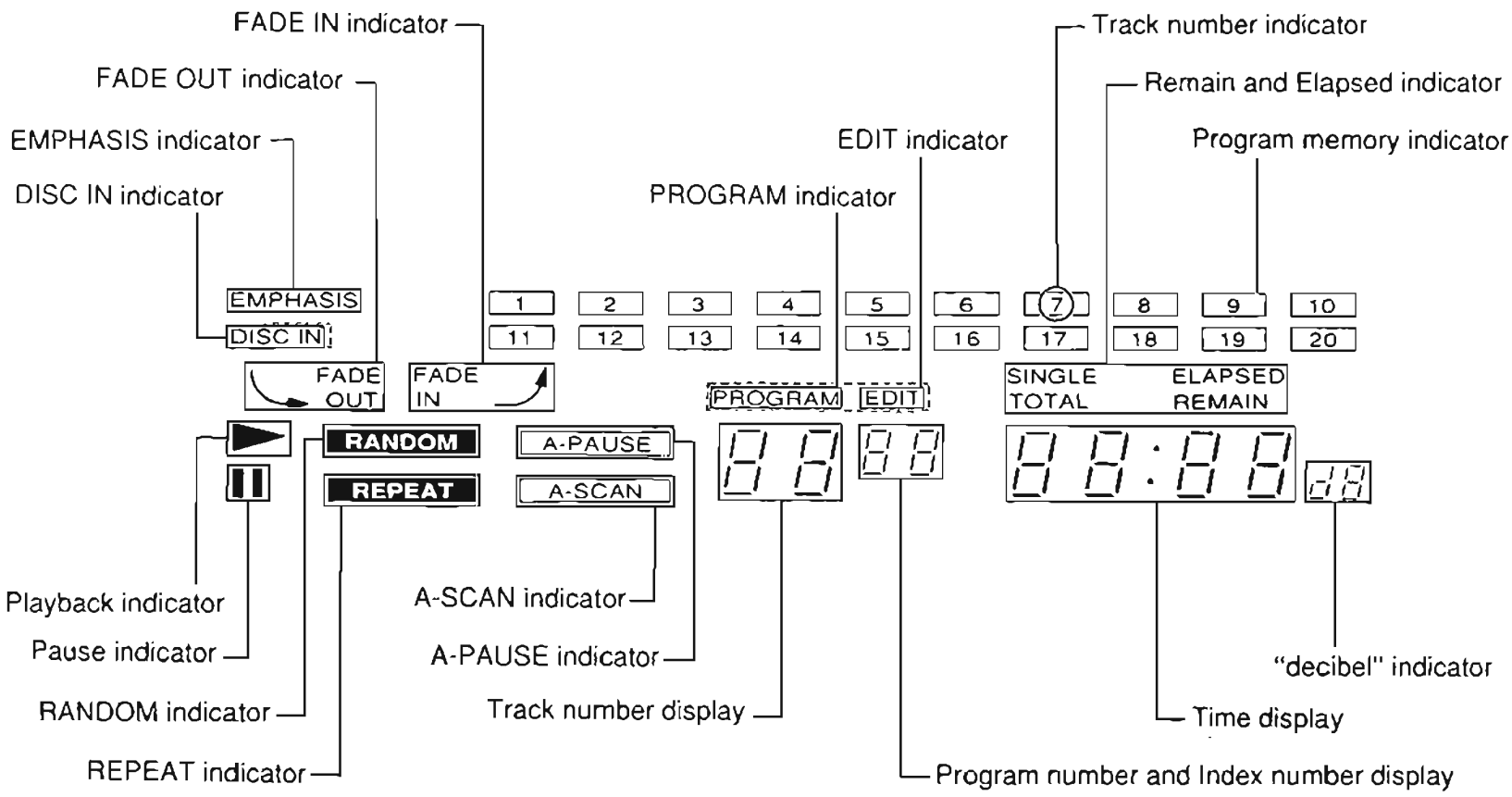
25. "program" button
Use this button in conjunction with the "Direct Access Select" buttons (item #21) to program up to 32 track selections in any random order. To clear program contents, press the Stop button (item #16) twice.

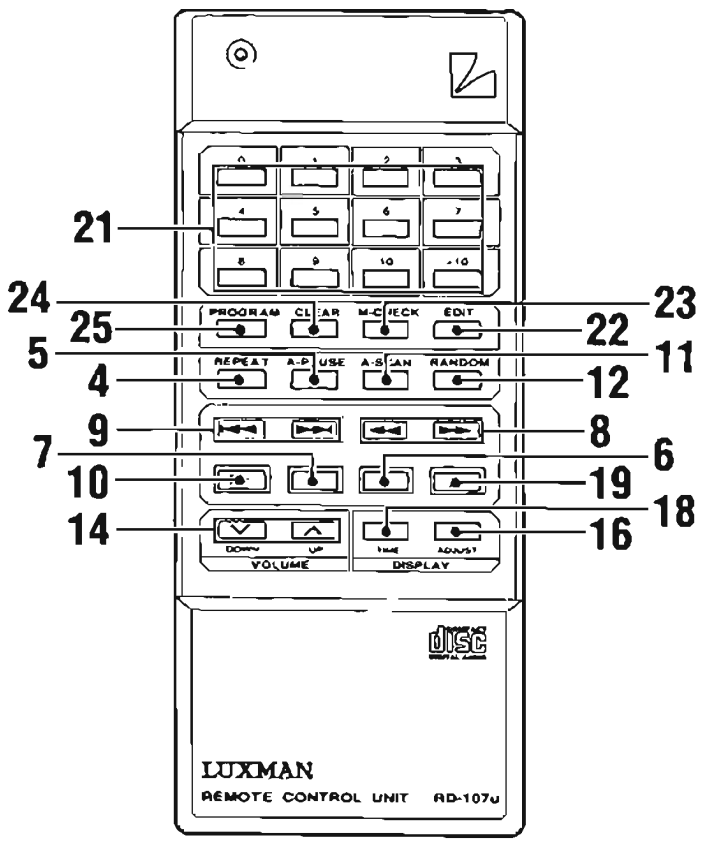
Note:
Pressing the "**program**" button will toggle between the selections programmed into memory and normal play operation. This allows one to temporarily go to normal play operation, if desired, without losing the stored program. To recover the program, simply press "**program**" again!

Controls & Switches

Display



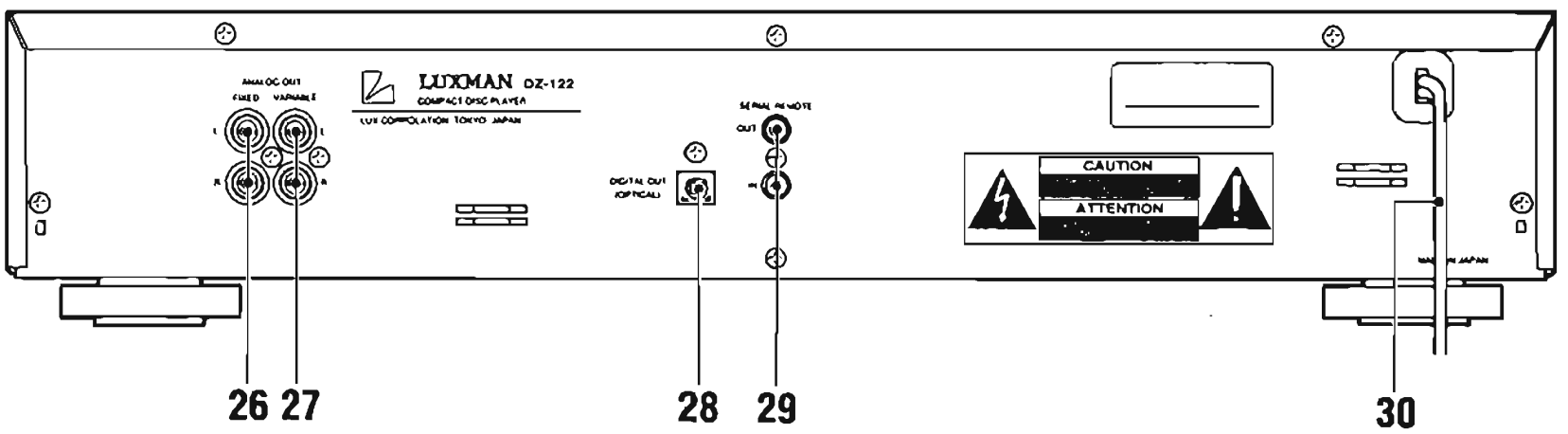
Remote Control Unit



Note:
Operation is the same as for the buttons on the set.

Jacks & Terminals

Rear Panel



26. "ANALOG OUT-FIXED" jacks
For connection to the CD inputs of any amplifier or receiver.
The output level is 2 volts fixed, referenced to 0 dB recording level.

27. "ANALOG OUT-VARIABLE" jacks
For connection to the CD inputs of any amplifier or receiver.
The output level can be adjusted using the "VOLUME up and down" buttons (item #14).
Also, fade-out and time fade-out operate through these jacks.

28. "DIGITAL OUT-OPTICAL" jack
This is a standard optical jack for digital output. Use the fiber optic cable (supplied) for connection to an amplifier having a digital optical input (such as the Luxman LV-113 or LV-117).

29. "SERIAL REMOTE IN and OUT" jacks
Use these jacks for simple and convenient connection to other Luxman components for System Remote Control operation. Connect these Serial Remote In and Out jacks to the Serial Remote Out and In jacks, respectively, on other Luxman components (in daisy chain fashion), for a unified remote control system.

Note:
Turn the power off before connecting these jacks.

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30. AC Power Cord
Insert the polarized AC plug of the DZ-122 into any 120 volt AC/60 Hz wall outlet, or, preferably, into the unswitched outlet of the amplifier or receiver used with it.

Operation Guidelines

Initial Set-Up

Make sure all connections are securely made. Turn the volume of the amplifier fully down and turn the power on to all the components in use. Adjust the volume of the amplifier to a suitable level just prior to playback.

Push the "open/close" button (item #19) on the DZ-122 and set a disc on the disc tray, label surface up.

Note:
To use 8 cm (3 inch) single CDs, place them on the inner circular recessed area marked "8 cm disc" on the tray.

Normal Play

1. After the disc is loaded, press the Play button (item #10).

2. Playback will begin from the first track number, continuing on through the remaining tracks. As each track is completed, the number corresponding to it on the display will turn off.

Note:
The word "**EMPHASIS**" will light up in the display if a disc or track has been recorded with pre-emphasis. This is a standard CD noise reduction system sometimes used by the disc manufacturer. The DZ-122 automatically switches in a standard de-emphasis circuit when this occurs and requires no action on the part of the user.

3. Playback automatically stops after the last track on the disc is played (unless in repeat mode).

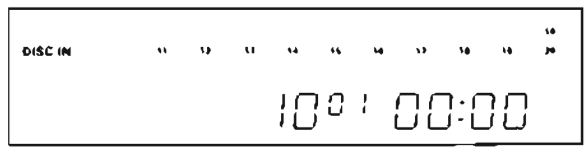
Direct Track Access

1. Use the Direct Access Select buttons (item #21) to specify a desired track.
2. All track numbers before this track will be cleared from the display, and playback will begin immediately.
3. Playback will stop automatically after the last track is played (unless in repeat mode).

Note:
If the Repeat function is on, the pickup will move to the desired track and begin playback, then continue through all the tracks remaining on the disc. It will then go back to the beginning of the disc and into continuous repeat.

Direct Access to the 10th Track

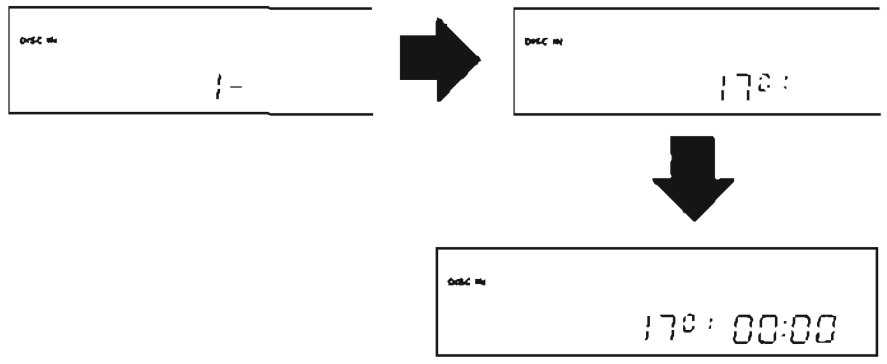
Press either Direct Access Select button "10" or "+10" and the Play button (item #10).



Direct Access From the 11th Track to the 19th Track

Press the Direct Access Select buttons "+10" and a number from 1 through 9.

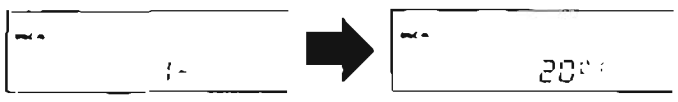
Example: For direct access to the 17th track, press "+10" and "7."

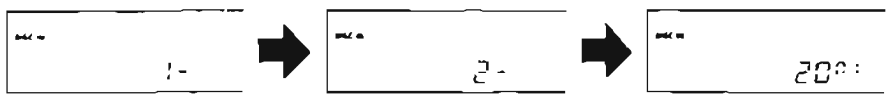


Operation Guidelines

Direct Access to the 20th Track

Press the Direct Select buttons "+10" and "10" or "+10" twice and the play button.

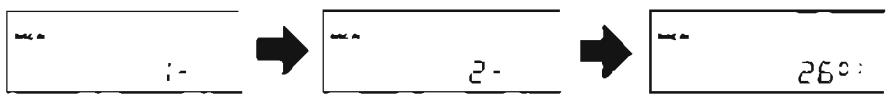




Direct Access to the 21st Track and Above

Press the Direct Access Select button "+10" twice, then press a number from 1 through 9.

Example: For direct access to track 26, press "+10", "+10" and "6."



Note:
Direct access will be cancelled if a Direct Access Select button other than "+10," the Play button, or the Pause button (item #7) is not pressed within 4 seconds after pressing "+10."
The "+10" button will not operate with discs containing 10 or fewer tracks.

Random Play

If desired, activating this function will allow the computer in the unit to select tracks, in a completely random manner, for playback. While the selection is random, it does not repeat any given track. Rather, it plays each randomly selected track once, shutting off automatically after all tracks are played. If the REPEAT function is also selected, then the unit will continuously replay all tracks but in a completely different order each time.

1. Press the "random" button (item #12) and RANDOM indicator will light up on the display

Note:
When the "random" button is pressed, it will cause the PROGRAM or EDIT functions, if previously selected, to be cancelled.

2. Press the Play button (item #10).

Note:
During the random play mode, undesired tracks that you do not want included in the random selection, can be individually deleted. Simply press the Direct Access button of the track(s) you wish to delete. The deleted track number(s) will disappear from the upper part of the display.

3. When playback of the last track completes with the REPEAT indicator not lit on the display, the unit enters the stop mode.

Repeat Play

1. When the "repeat" button (item #4) is pressed during normal or random playback, all tracks on the disc will be repeated continuously.

- If the "repeat" button is pressed during programmed playback, all programmed tracks will be repeated continuously.

2. To cancel the repeat mode, press the "repeat" button a second time and playback will continue to the end of the disc then stop, or press the Stop (reset) button (item #6) and playback will stop immediately.

Programmed Play Operations

Programming

1. Press the "program" button (item #25). "PROGRAM" will appear on the display. Choose a track number using the Direct Access Select buttons (item #21). A red frame will light around that track number, and every other track number you program subsequently.

2. A maximum of 32 tracks can be programmed. If an attempt is made to program a 33th track, "FULL" will appear on the display for approximately 4 seconds, indicating that no more tracks can be programmed.

3. Programmed playback will begin immediately after the Play button (item #10) is pressed, beginning with the first track placed in memory.

4. When in stop mode, pressing the **program** button will toggle between the selections programmed into memory and normal play operation. This allows one to temporarily go to normal play operation, if desired, without losing the stored program. To recover the program after normal play, simply press **program** again!

Operation Guidelines

Note:
Programming can only be done in the stop mode.

Program Check
The programmed track numbers and the order they were placed in memory can be checked.

1. Press the "M-check" button (item #23) with the unit in stop mode.
2. With each successive push of the "M-check" button, the programmed track numbers will be shown on the display in the order of playback.

Note:
When the "M-check" button is continuously pressed, the memory check function will operate automatically, showing the track numbers in the order of playback. When the check operation completes, it will stop on the last track programmed.

Clearing Programs
1. To clear programs from memory, you must be in stop mode. Select the track you wish to clear with the "M-check" button (item #23). Then press the Clear button (item #24).

Note:
If you do not use the "M-check" button, clearing will begin with the last track programmed and continue with each successive push of the Clear button.

2. To clear the entire program, press the Stop (Clear) button (item #6) twice.

Fade Out
This feature works through the motor driven level control and provides a smooth, computer controlled, precision fade out action. It is especially useful when making tape recordings from CDs. It is much more professional than manual fades and can be initiated at any playback point on a musical selection. It is fed to the "ANALOG OUT-VARIABLE" jacks on the rear panel, and to the phones jack.

Note:
The "ANALOG OUT-FIXED" (item #26) and "DIGITAL OUT-OPTICAL" (item #28) jacks do not operate for the fade out function.

1. Press the "fade-out" button (item #15) during playback.
2. The "FADE OUT ( )" on the display will blink and the output level will fade to zero in a precision manner. The unit will go automatically into the pause mode after the output level reaches minimum.

Notes:
- During the auto pause mode, the "FADE IN ( )" on the display will blink and the output level will gradually return to the original level.
- The time required for the fade out depends upon the output level which has been previously set. The higher the initial output level, the longer the fade out time.

Time Fade Out
The time preceding the actual fade out (for the "ANALOG OUT-VARIABLE" jacks and the phones jack) can also be set.

Operation Guidelines

Note:
The "ANALOG OUT-FIXED" (item #26) and "DIGITAL OUT-OPTICAL" (item #28) jacks do not operate for the fade out function.

1. To fade out track 1, begin by pressing the "T-fade out" button (item #16).

2. Set the time desired to precede fade out with the Direct Access Select buttons (item #21)

Note:
T-fade is only setable in 1 minute increments. Be sure the T-fade time is always less than or equal to the track time.

3. Press the Play button (item #10). The fade out function will start a few seconds before the time which has been set, and the fade out will finish after the specified time has elapsed. The unit then enters the Pause mode automatically.

Notes:
During the auto pause mode, the "FADE IN (↗)" on the display will blink and the output level will gradually return to the original level.

To view the count-down time to the fade out point, set the T-Display to the Total Remain position.

4. To set the time preceding fade out for tracks 2 and above, it is necessary to use the "Program" function. Proceed as follows:

5. From stop mode, press the "program" (item #25) button and select the desired track with the Direct Access buttons.

6. Press the "T-fade out" button (item #16).

7. Now set time to precede fade out as in step #2.

8. Press the Play button. See step #3.

[Time Setting for T-Fade Out]

1. When setting times of 1 to 10 minutes, directly press the respective Direct Access Select buttons.

2. When setting times of 11 minutes or higher, first set the 10's digit by pressing the "+10" button and then set the 1's digit by pressing one of the "1" to "10" buttons.

Edit Play

This feature is specifically intended to select and divide CD tracks, on the basis of timing, to fit the recording time on the A and B sides of any given tape cassette type. For instance, the EDIT function would be set to 30 minutes to fit both sides of a C-60 cassette. It divides a group of whole tracks, as closely as is possible, into two 30 minute sections. When the first side is recorded, the DZ-122 automatically stops so that the tape can be turned over in the cassette recorder. The 2nd half of the grouped tracks are then selected and the system restarted to record the 2nd side. Proceed as follows:

1. In the stop mode, press the "edit" button (item #22). The "EDIT" indicator will blink, showing that the Edit function is ready.

2. Set editing time with the Direct Access Select buttons (item #21) to the length of time of one side of the tape being used to make the recording. (If it is a C-90, set the time to 45 minutes).

Note:
Tracks to be recorded on both sides are automatically programmed with this one time setting.

3. When the editing time has been set, the "EDIT" indicator will light continuously and the play "▶" indicator in the display will blink, awaiting your play command.

Note:
Some tracks on the CD near the end may not be programmed or recorded, if the total length of time on the CD exceeds that of both sides of the cassette tape. If this happens, use a tape having longer recording time.

4. Now, press the "edit" button to check the edited contents. The "edit" button toggles between the set of tracks selected for side A and those for side B. The actual tracks selected, along with their total playing (recording) time, will be shown in the display.

5. You are now ready to begin recording. With the set of tracks selected for side A, press the Play button and at the same time place the cassette deck in record mode on side A.
When side A finishes, the DZ-122 will go into stop mode.

Operation Guidelines

of tracks intended for side B. Flip the cassette over in the cassette deck and initiate the play and record process as before.

Edit Time Setting

1. When setting times of 1 to 10 minutes, directly press the respective Direct Access Select buttons.

2. When setting times of 11 minutes or higher, first set the 10's digit by pressing the "+10" button and then set the 1's digit by pressing one of the "1" to "10" buttons.

Timer Play

With the use of an external AC power timer, the DZ-122 can be made to turn on and go into automatic play at any desired time.

Note:
The AC power plugs of the components used for the timed playback, must be connected to the AC outlets of the timer.

---

1. Be sure the "POWER" button is pressed ON (IN) on the DZ-122 and load a compact disc.

Note:
The contents of the memory for the programmed play, random play, edit play, etc. are kept in memory for about two weeks even if the power is turnd off. When one of the programmed play, random play, and edit play functions has been set, programmed operation will start when the power is turned on by the external timer. When no programmed operation has been set, normal playback will start from the first track on the disc.

---

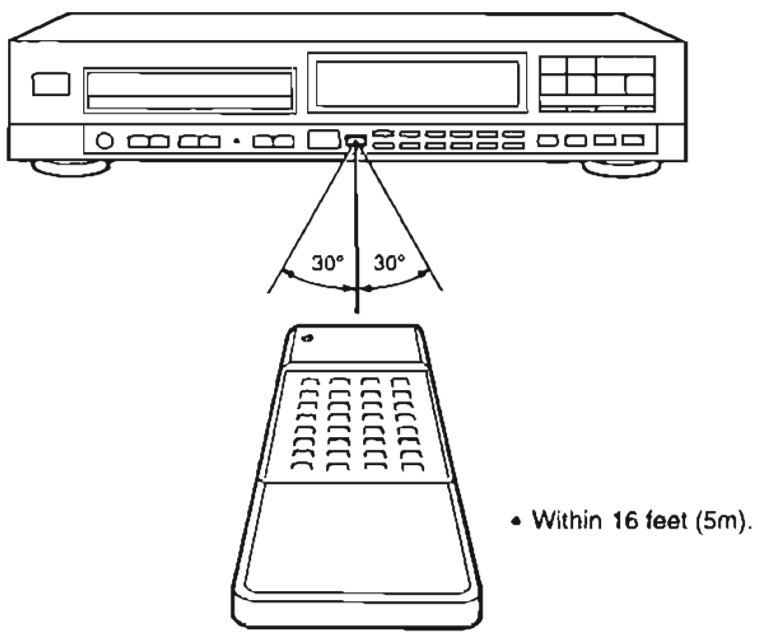
2. Set the playback start time and end time with the external timer. Also properly set all controls on each component used in the system for timer play as necessary.

3. Make sure the power buttons on all other components used in the system for timer play operation are switched to their ON positions.

4. When the power is turned on by the external timer, the DZ-122 will start playback, and the entire system will operate as previously set.

Remote Operations

For reliable operation, use the hand-held remote within the basic dimensional area.



Care & Maintenance

Precautions

Condensation may occur inside the set if it is brought into a warm room from the cold or if a cold room is heated quickly. If this happens, drops of water may form on the pickup, scattering the laser beam and hampering operation.

The extent of condensation depends on various conditions, but if condensation should occur, remove the disc then turn on the power and wait at least one hour before using the unit.

Proper Care of Compact Discs

Improper handling of your CDs will shorten their life. When handling, hold them at the edges so that you will not leave fingerprints on the playing surfaces.

When your discs are not in use, replace them in their respective cases and store away from sunlight, high temperature, humidity and dust. Should they require cleaning, use a clean soft cloth slightly moistened with water only. A good commercially available CD cleaner may also be used. Do not use oil or chemically treated cloths.

Cleaning

The durable finish of the knobs and heavy aluminum front panel will last indefinitely with proper care and cleaning. Never use scouring pads, steel wool, scouring powders, or harsh chemical agents, such as lye solution. These will mar the finish. Clean with a soft, lintfree cloth or cotton swab slightly dampened with a mild solution of detergent and water.

Repacking for Shipment

Should it become necessary to ship your DZ-122 for any reason, use the original packing materials. If these are no longer available, be sure that adequate materials, at least equivalent to the original, are used.

Repairs

Only the most competent and qualified service technicians should be allowed to service the DZ-122. The Luxman company and its factory-trained warranty station personnel have the knowledge and special equipment needed for repair and calibration of this precision instrument.

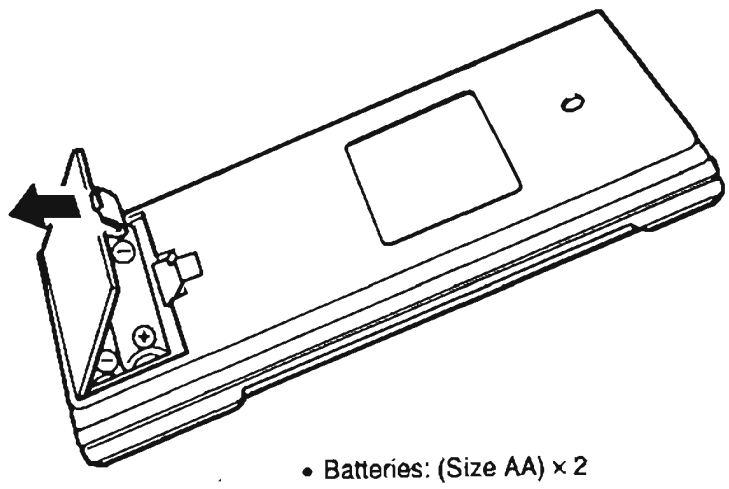
In the event of difficulty, call the toll free telephone number listed on the Warranty to obtain the name and address of the Luxman Authorized Service Station nearest your home or business. In many cases, the dealer where you purchased your Luxman unit will be equipped to provide service.

Battery Replacement

1. Open the battery compartment cover on the rear of the remote control unit. The cover should open easily if you press on the tab with your thumbnail and lift up.
2. Place two "AA" size dry batteries in the battery compartment in accordance with the diagram in the compartment, then replace the cover.

Incorrect use of batteries may lead to leakage or rupture. Be sure to follow these guidelines:

A. Always insert batteries into the battery compartment correctly matching the positive (+) and negative (–) polarities as shown in the diagram inside the compartment.
B. Never mix new and used batteries together.
C. Both rechargeable and non-rechargeable batteries are available. Be sure to use your batteries in accordance with the instructions provided on the cells.



• Batteries: (Size AA) × 2

Disassembly Instructions

1. Removal of the CD Mechanism

(1) After removal of the Top Cover, open the Disc Tray.
(2) Remove the Panel Tray in the arrow direction as shown in Figure 1.
(3) Remove three screws marked "○" as shown in Figure 2.
(4) Disconnect all wires from the CD Mechanism.

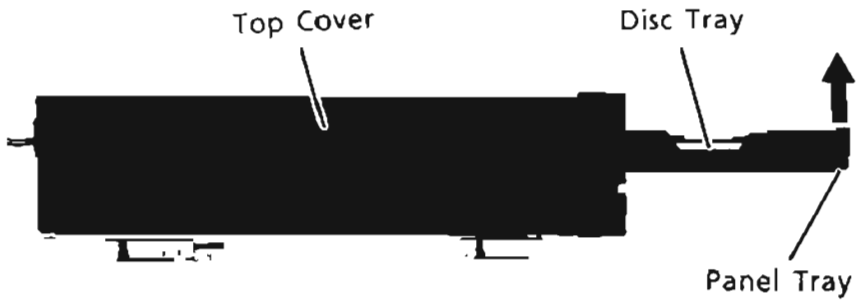


Figure 1

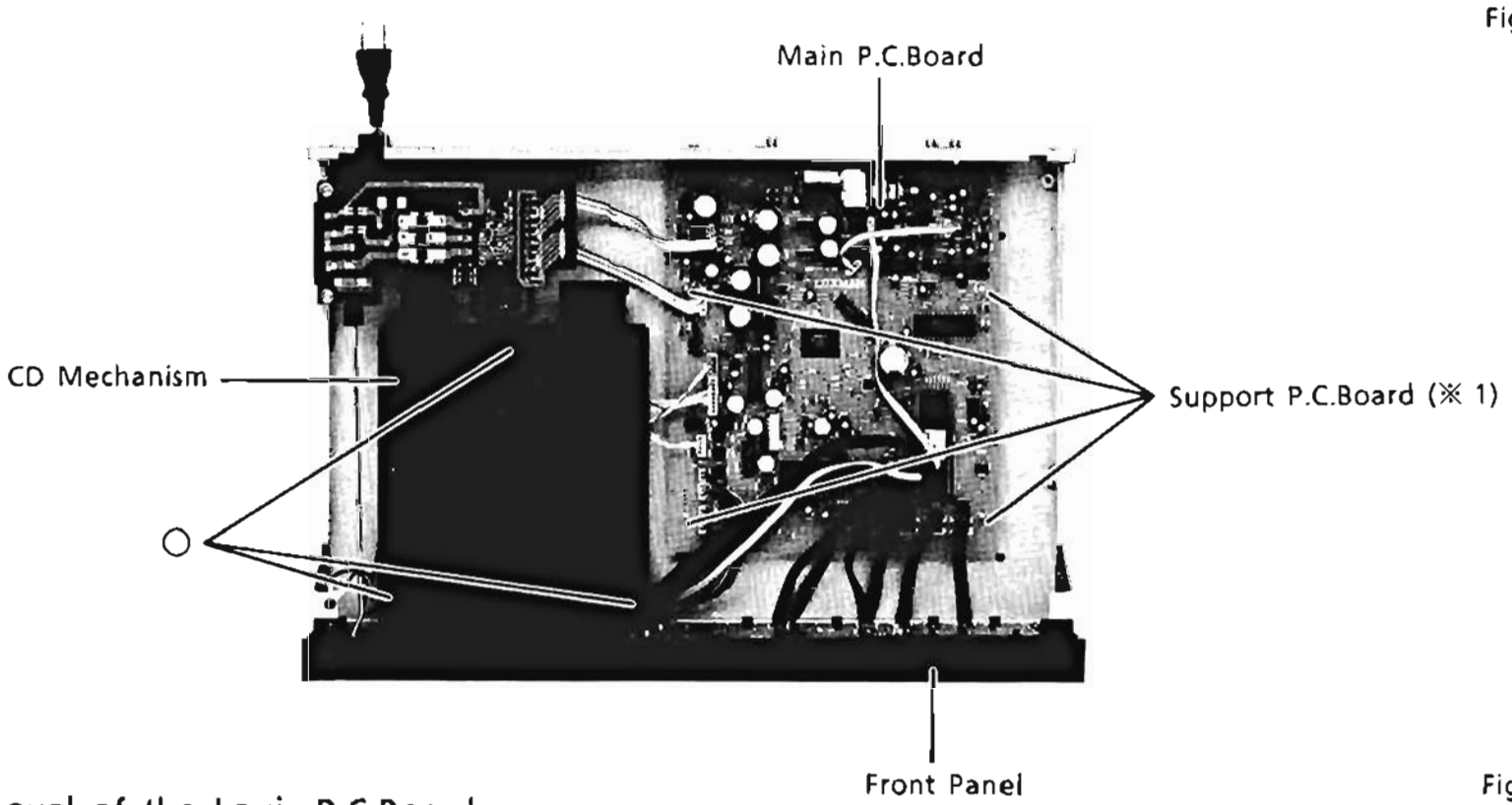


Figure 2

2. Removal of the Logic P.C.Board

(1) After removal of the Front Panel, remove six screws marked "x" as shown in Figure 3.
(2) Remove six Hooks as shown in Figure 3.
(3) Disconnect all connectors from the Logic P.C.Board.

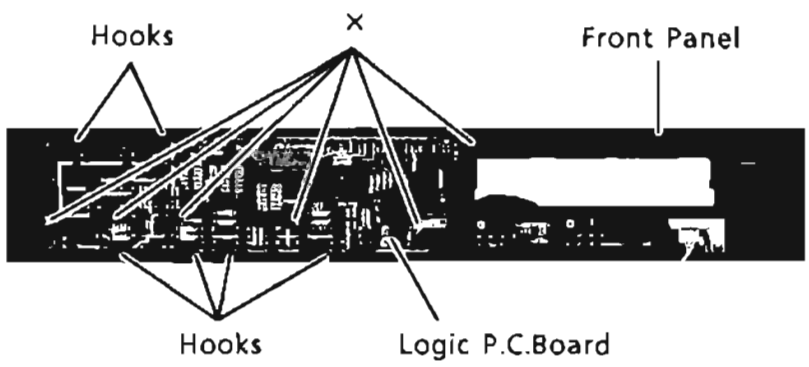


Figure 3

3. Removal of the Main P.C.Board

(1) After removal of the Top Cover, remove three screws marked "△" as shown in Figure 5.
(2) Remove four Supports P.C.Board (※1) from the Main P.C.Board as shown in Figure 2, by pushing the point "A" as shown in Figure 4.
(3) Disconnect all connectors from the Main P.C.Board.

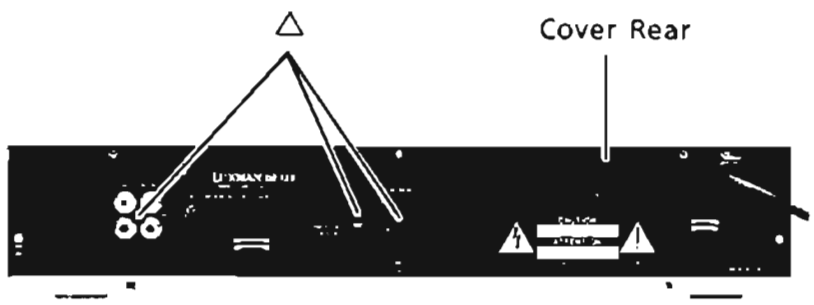


Figure 5

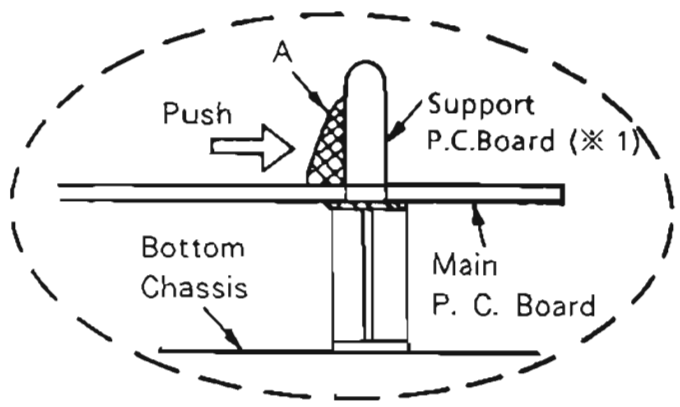


Figure 4

Adjustment Procedures

1. Compact Disc Section

(1) Connections

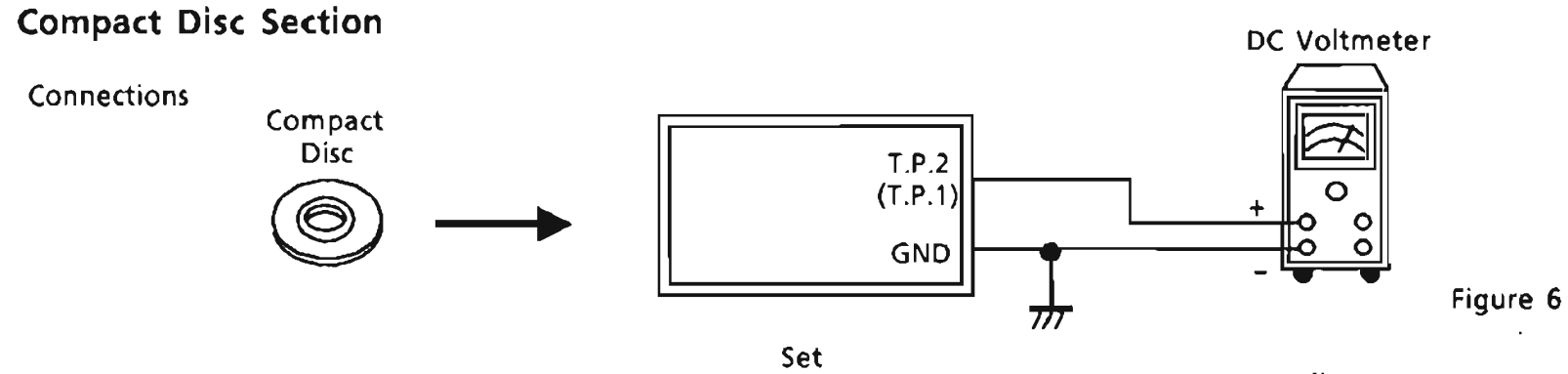


Figure 6

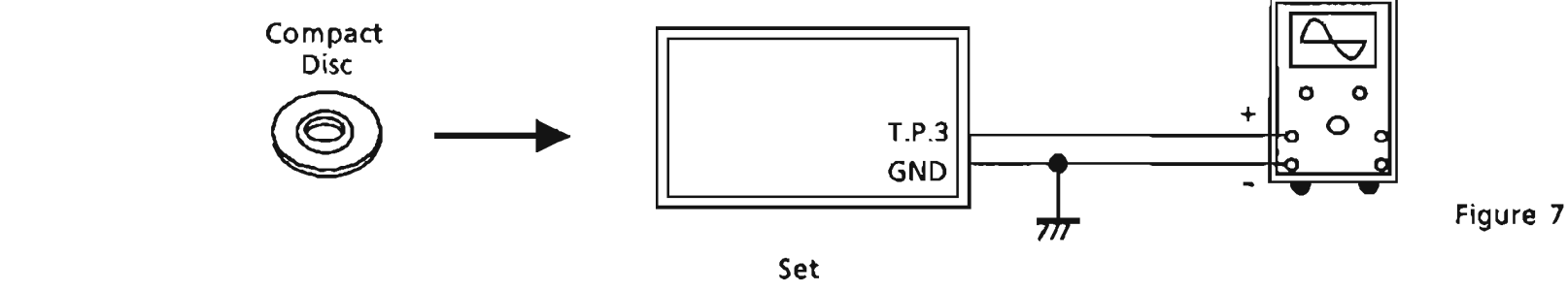


Figure 7

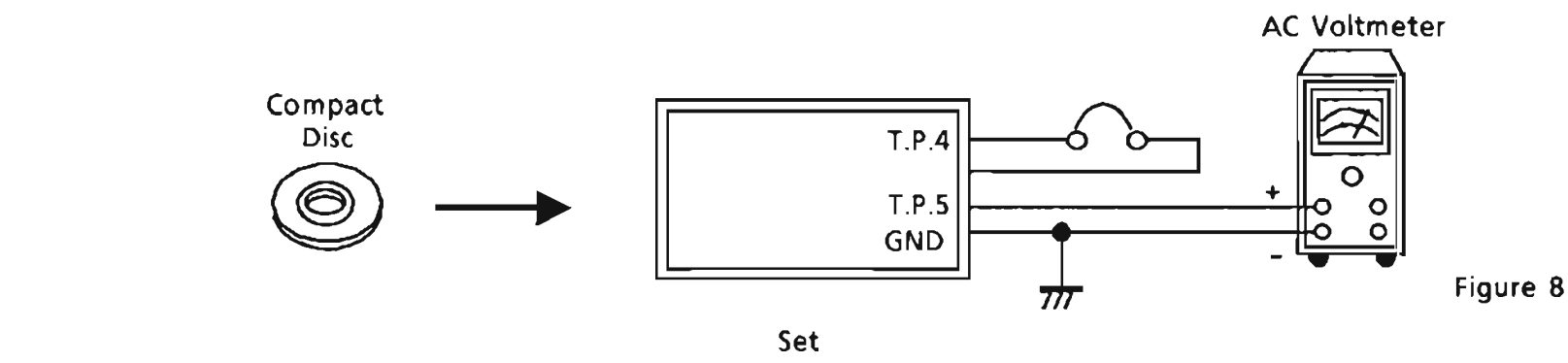


Figure 8

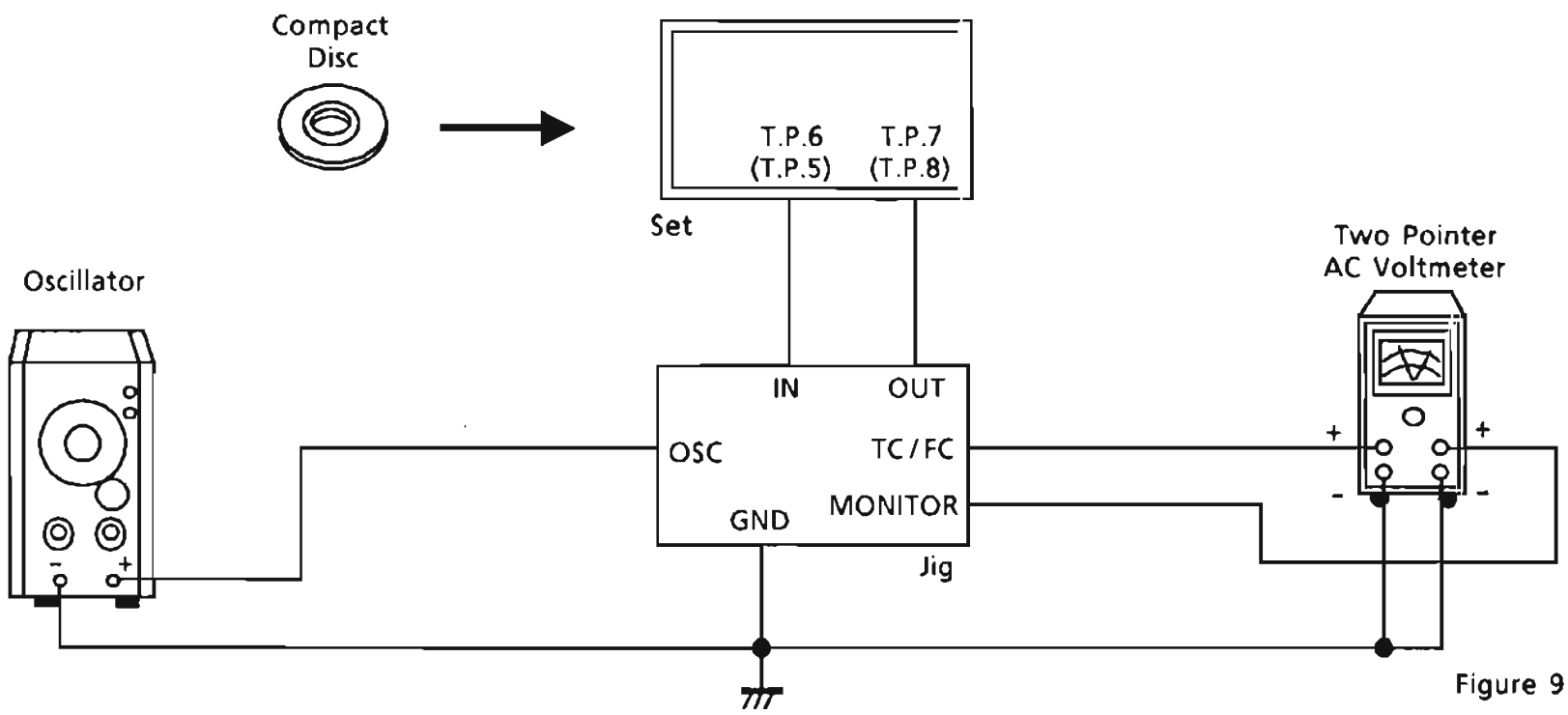


Figure 9

Note : Jig No. 01E05114S01

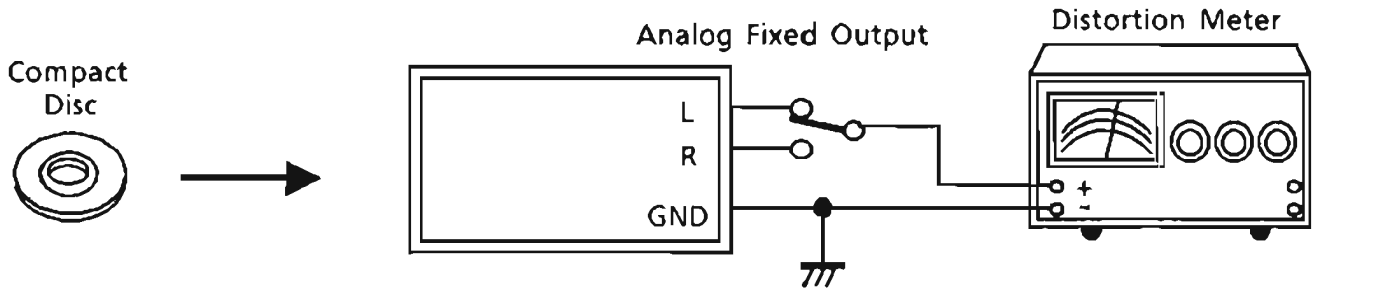


Figure 10

(2) Control Settings

Power Switch	ON
Play Switch	ON
Others	OFF

(3) Test CD

Tracking Error Balance Adjustment	SONY YEDS-18 (TNO. 7)
	A-BEX TCD-782 (TNO. 8)
D/A Converter MSB Adjustment	SONY YEDS-18 (TNO. 17)
	A-BEX TCD-782 (TNO. 18)
Others Adjustment	SONY YEDS-18 (TNO. 2)
	A-BEX TCD-782 (TNO. 2)

(4) Adjustment Procedures

Step	Description	Connections	Oscillator	Test Point	Adjustment
1	VCO Adjustment	Figure 6	-	T.P.1 T.P.2	Measure the voltage at the T.P.1. Then adjust VR1303 so that the output voltage at the T.P.2 becomes 1/2 of the voltage at the T.P.1.
2	Focus Bias Adjustment	Figure 7	-	T.P.3	Adjust VR1202 so that the waveform of oscilloscope becomes maximum as shown in Figure 11.
3	Tracking Error Balance Adjustment	Figure 8	-	T.P.4 T.P.5	After shortcircuiting T.P.4 and turning VR1301 fully counterclockwise, adjust VR1201 so that the voltage is 0 to 10mV. After the adjustment set VR1301 to it's center position.
4	Tracking Gian Adjustment	Figure 9	1kHz 100mV	T.P.6 T.P.7	Adjust VR1301 so that both arms of the voltmeter come at the same position.
5	Focus Gain Adjustment	Figure 9	1kHz 100mV	T.P.5 T.P.8	Adjust VR1302 so that both arms of the voltmeter come at the same position.
6	D/A Converter MSB Adjustment	Figure 10	-	Analog Fixed Output Lch (Rch)	Play back the -60dB 1kHz signal of the test CD. Adjust VR1404 for Rch and VR1403 for Lch, as the distortion rate becomes minimum.

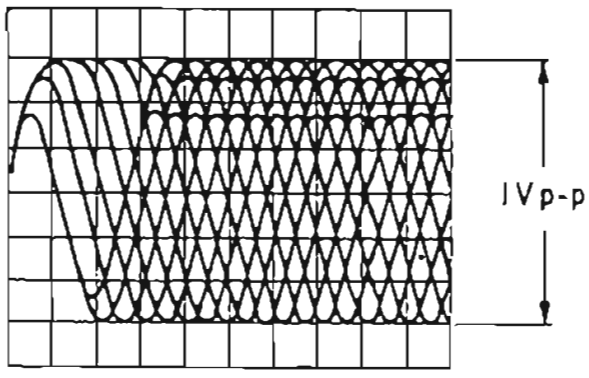
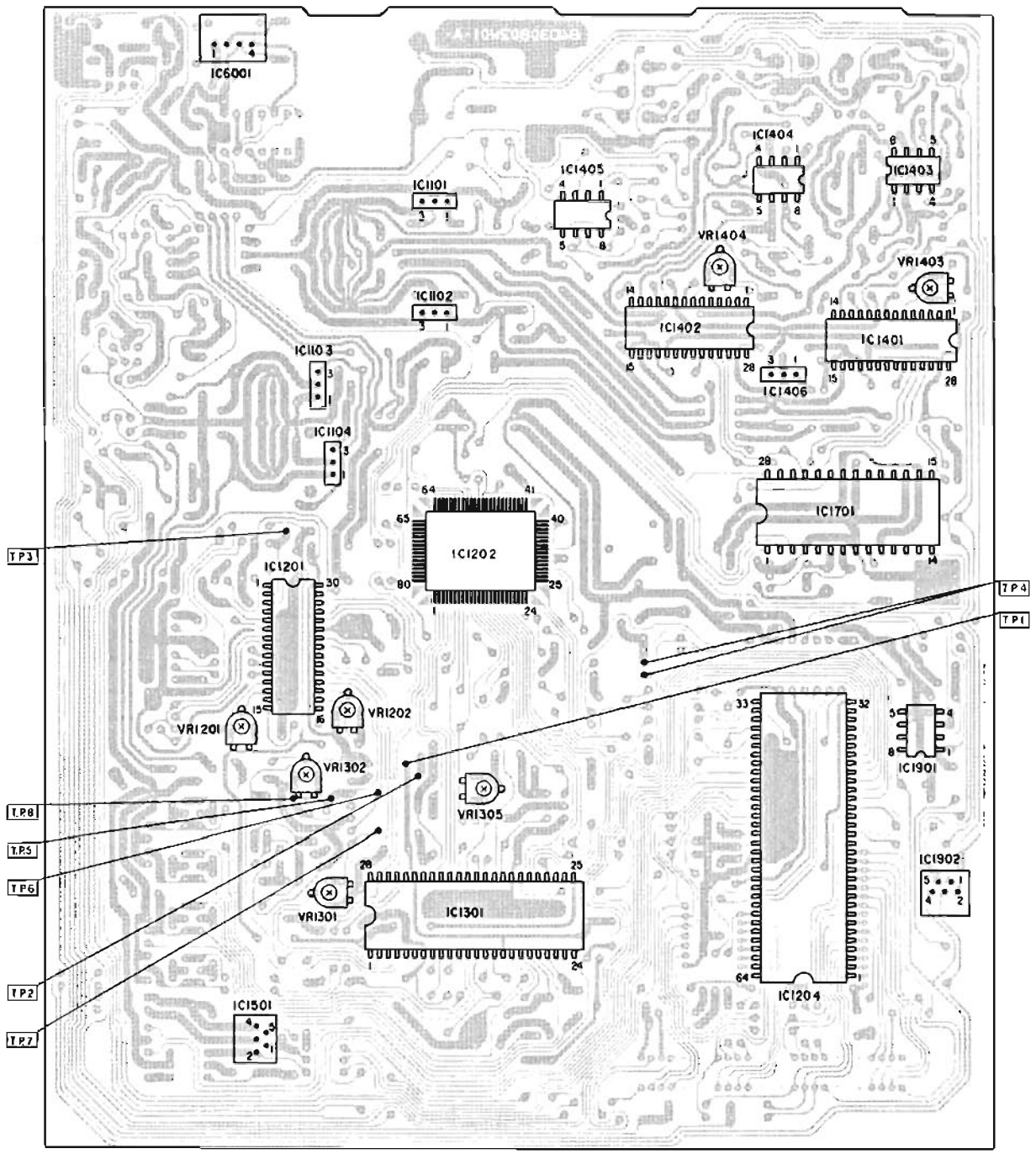
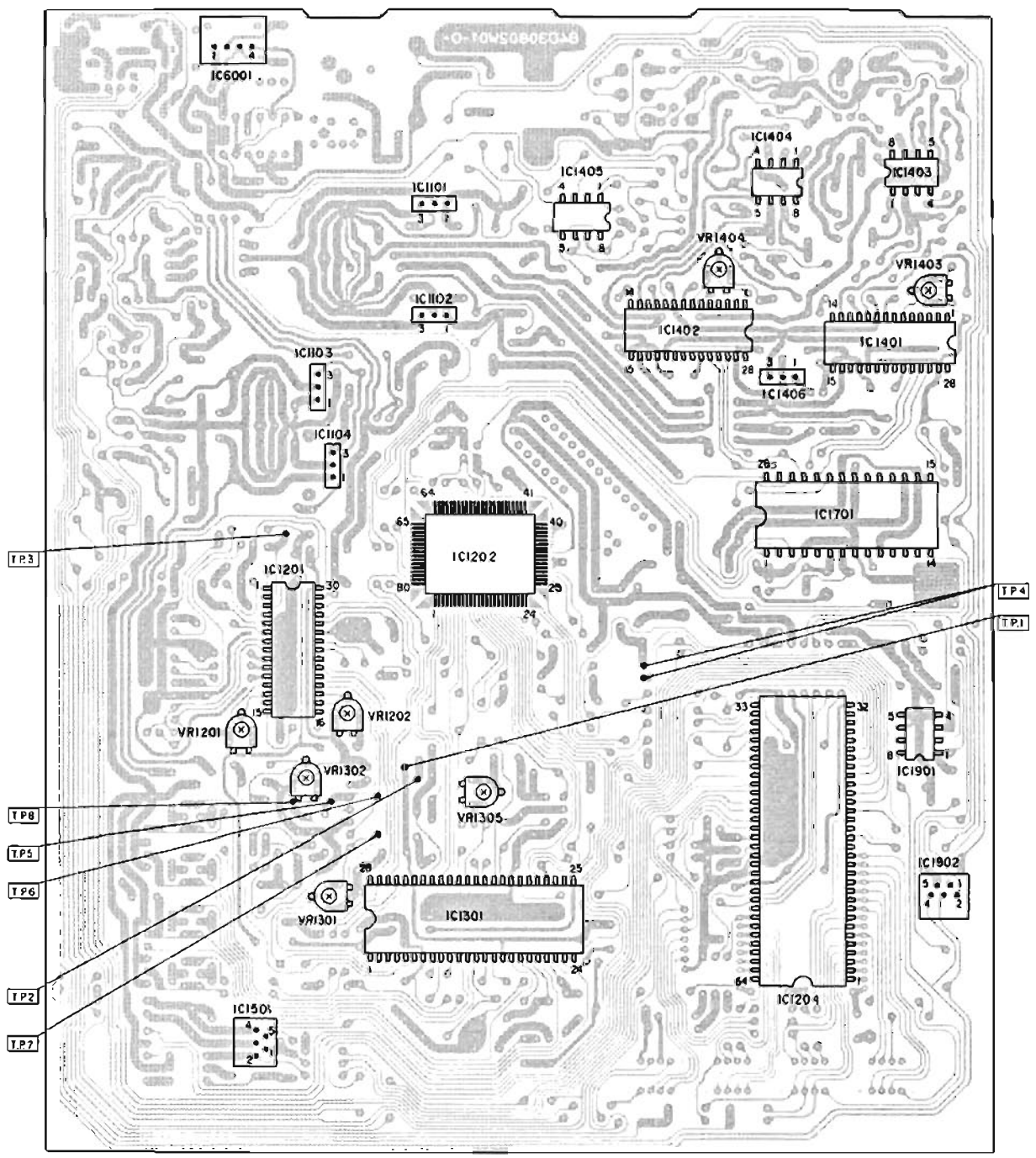


Figure 11

Adjustment Locations

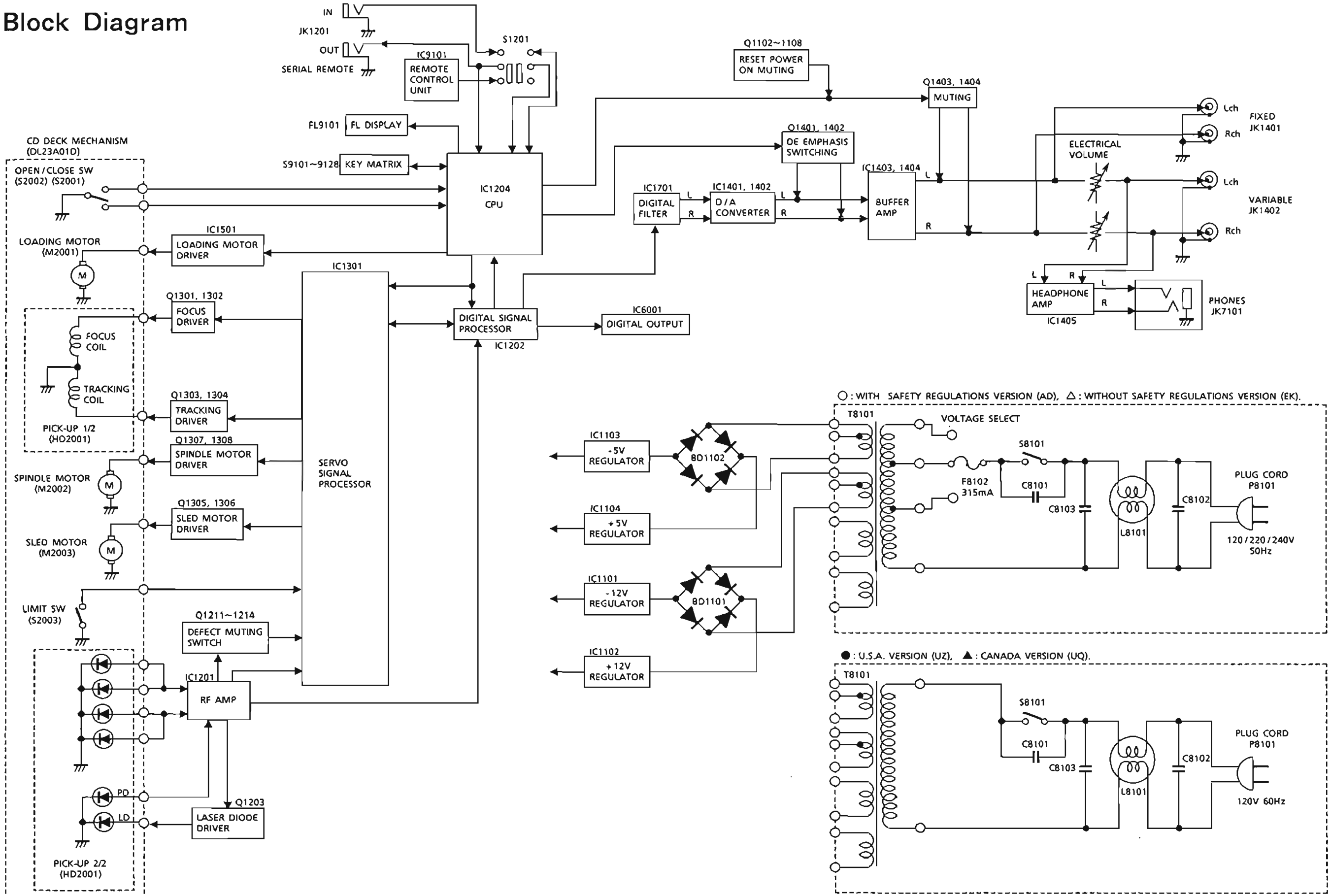


Main P.C. Board (Component Side) AD/UQ model only



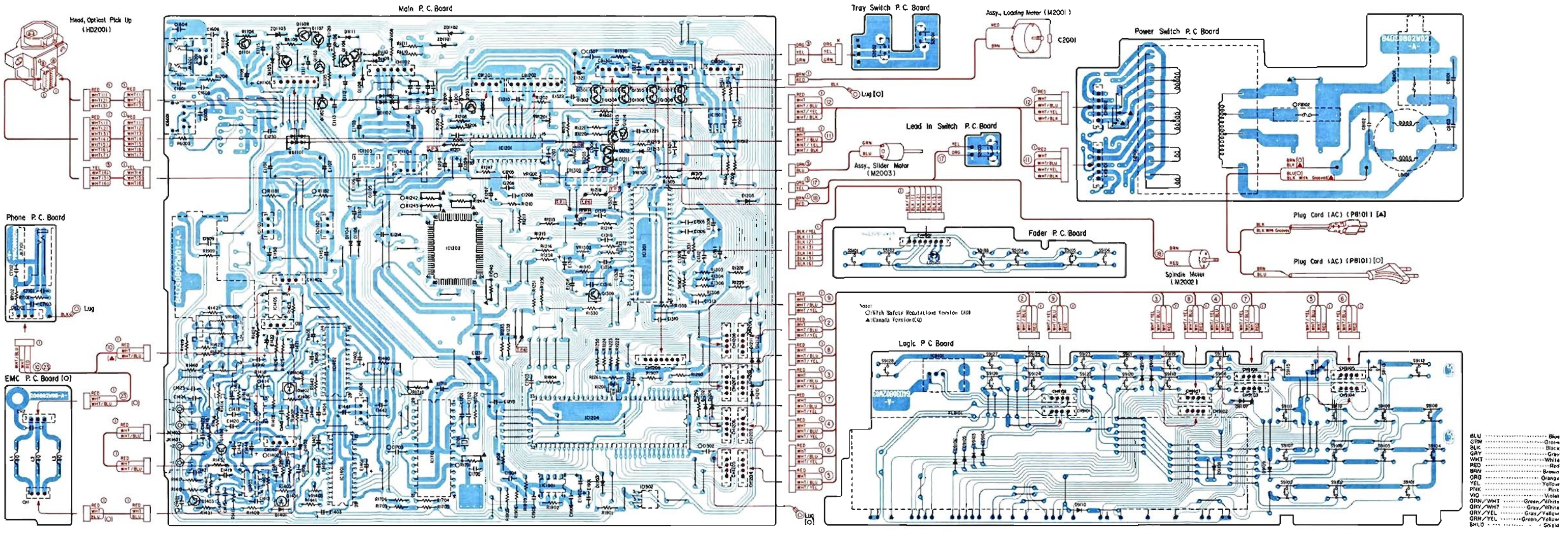
Main P.C. Board (Component Side) EK/UZ model only

Block Diagram



Parts Layout on P. C. Boards and Wiring Diagram

With Safety Regulation Version (AD) / Canada Version (UQ) model only

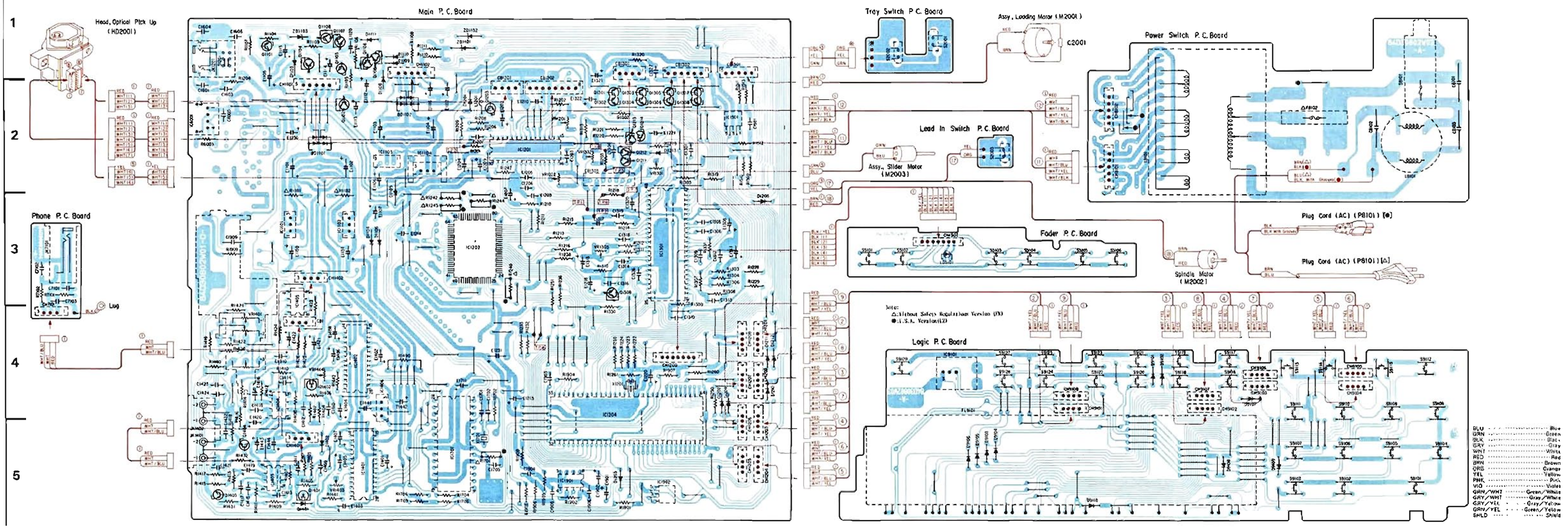


DZ-122 DZ-122

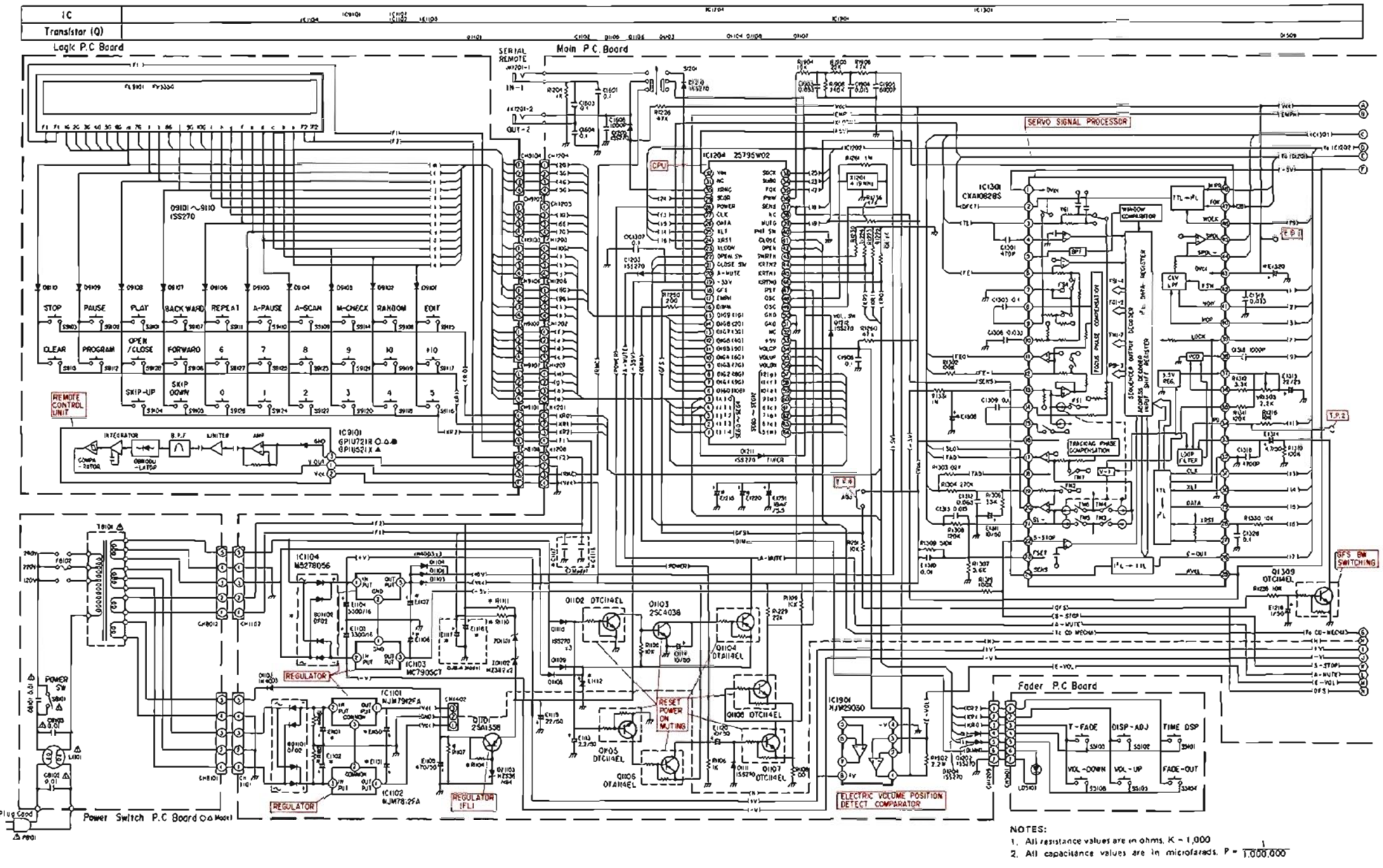
Parts Layout on P C Boards and Wiring Diagram

Without Safety Regulation Version (EK) / U.S.A Version (UZ) model only

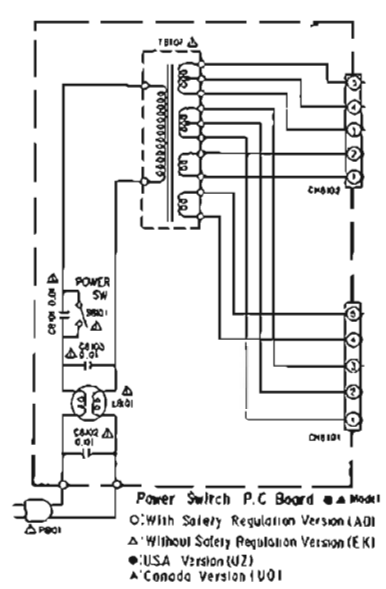
DZ-122 DZ-122



Schematic Diagram (1/2)

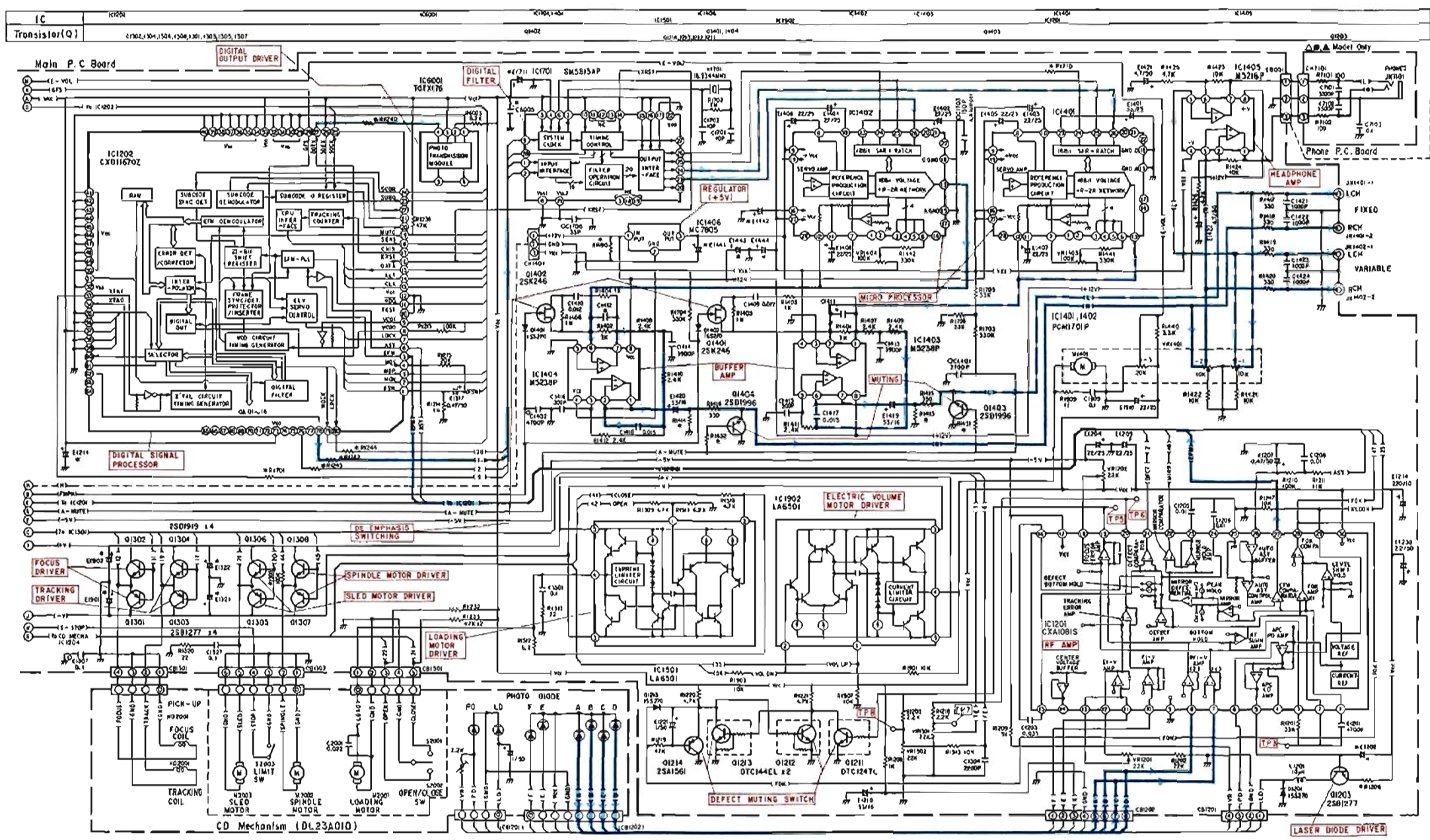


NOTES:
1. All resistance values are in ohms. K = 1,000
2. All capacitance values are in microfarads. P = 1/1,000,000



DZ-122 DZ-122

Schematic Diagram (2/2)



O:With Safety Regulation Version (AD)
Δ Without Safety Regulation Version (EK)
●:USA Version (UZ)
A:Canada Version (UO)

NOTES:
1. All resistance values are in ohms. K = 1,000
2. All capacitance values are in microfarads. P = $\frac{1}{1,000,000}$

Electrical Parts List

Resistor : Carbon resistors under 1/4 watts are not mentioned in the parts list, please confirm them by schematic diagram.

Capacitor : μF = microfarads, pF = picofarads

Abbreviations

RES. =	Resistor	CAP. =	Capacitor
C.F. =	Carbon Film	ELY. =	Electrolytic
M.F. =	Metal Film	CER. =	Ceramic
M.O. =	Metal Oxide Film	MYL. =	Mylar
M.P. =	Metal Plate	TAN. =	Tantalum
TR. =	Transistor	POLY. =	Polystyrol
TRANS. =	Transformer	PP. =	Polypropylene
CP. =	Chip	PLT. =	Polyethylene
		PF. =	Polyester Film

Main P. C. Board

IC's

Symbol No.	Part No.	Description
IC1101	51T80341F01	NJM7912FA
IC1102	51T80340F01	NJM7812FA
IC1103	51T94885F01	MC7905CT
IC1104	51T35010W02	M5278D56
IC1201	51T84721F01	CXA1081S
IC1202	51T25718W01	CXD1167QZ
IC1204	51T25795W02	25795W02
IC1301	51T84722F02	CXA1082BS
IC1401	51T16104W02	PCM1701P
IC1402	51T16104W02	PCM1701P
IC1403	51T80136F01	M5238P
or	51T15097W02	AD42712
IC1404	51T80136F01	M5238P
or	51T15097W02	AD42712
IC1405	51T81896F01	M5216P
IC1406	51T94884F06	MC7805
IC1501	51T90889F01	LA6501
IC1701	51T15628W01	SM5813AP
IC1901	51T64227F01	NJM2903D
IC1902	51T90889F01	LA6501
IC6001	51T95249F02	TOTX176

Transistors

Symbol No.	Part No.	Description
Q1101	48T69177F01	2SA1358
Q1102	48T82763F02	DTC114EL
Q1103	48T82758F01	2SC4038
Q1104	48T82762F02	DTA114EL
Q1105	48T82763F02	DTC114EL
Q1106	48T82762F02	DTA114EL
Q1107	48T82763F02	DTC114EL
Q1108	48T82763F02	DTC114EL
Q1203	48T82759F01	2SB1277
Q1211	48T82763F11	DTC124TL
Q1212	48T82763F04	DTC144EL
Q1213	48T82763F04	DTC144EL
Q1214	48T82757F01	2SA1561
Q1301	48T82759F01	2SB1277
Q1302	48T83275F01	2SD1919
Q1303	48T82759F01	2SB1277
Q1304	48T83275F01	2SD1919
Q1305	48T82759F01	2SB1277
Q1306	48T83275F01	2SD1919
Q1307	48T82759F01	2SB1277
Q1308	48T83275F01	2SD1919
Q1309	48T82763F02	DTC114EL
Q1401	48T66948F02	FET, 2SK246
Q1402	48T66948F02	FET, 2SK246
Q1403	48T90183F01	2SD1996
Q1404	48T90183F01	2SD1996

Diodes

Symbol No.	Part No.	Description
D1103	48S40477U01	IN4003
D1104	48S40477U01	IN4003
D1105	48S40477U01	IN4003
D1106	48S40477U01	IN4003
D1108	48T58583F01	1SS176
or	48T84758F01	1SS270
D1109	48T58583F01	1SS176
or	48T84758F01	1SS270
D1110	48T58583F01	1SS176
or	48T84758F01	1SS270
D1111	48T58583F01	1SS176
or	48T84758F01	1SS270
D1201	48T58583F01	1SS176
or	48T84758F01	1SS270
D1202	48T58583F01	1SS176
or	48T84758F01	1SS270
D1203	48T58583F01	1SS176
or	48T84758F01	1SS270
D1204	48T58583F01	1SS176
or	48T84758F01	1SS270
D1205	48T58583F01	1SS176
or	48T84758F01	1SS270
D1210	48T58583F01	1SS176
or	48T84758F01	1SS270
D1211	48T58583F01	1SS176
or	48T84758F01	1SS270
D1212	48T58583F01	1SS176
or	48T84758F01	1SS270

Symbol No.	Part No.	Description
D1213	48T58583F01	1SS176
or	48T84758F01	1SS270
D1401	48T58583F01	1SS176
or	48T84758F01	1SS270
D1402	48T58583F01	1SS176
or	48T84758F01	1SS270
BD1101	48T15662W01	Bridge, DF02
BD1102	48T15662W01	Bridge, DF02
ZD1101	48T52739F11	Zener, HZ3B2
ZD1102	48T52739F11	Zener, HZ3B2
ZD1103	48T90517F91	Zener, HZS36NB4
Jacks		
JK1201	09T84124F01	Headphone
S1201		(SERIAL REMOTE)
JK1401	09T16384W02	T6288 (ANALOG OUT)
JK1402	09T16384W02	T6288 (ANALOG OUT)
Coil / Crystals		
L1201	24T50508F22	Coil, Inductor 10μH
X1201	91T15285W01	CER., Lock 4.19MHz
X1701	91T84727F02	AT-51 16.9344MHz
Capacitors		
○ E1101	23T00181L50	ELY., 1000μF / 50V
△ E1101	23T00181L37	ELY., 1000μF / 35V
● E1101	23T00181L37	ELY., 1000μF / 35V
▲ E1101	23T00181L37	ELY., 1000μF / 35V
○ E1102	23T00181L50	ELY., 1000μF / 50V
△ E1102	23T00181L37	ELY., 1000μF / 35V
● E1102	23T00181L37	ELY., 1000μF / 35V
▲ E1102	23T00181L37	ELY., 1000μF / 35V
E1103	23T00181L23	ELY., 3300μF / 16V
E1104	23T00181L23	ELY., 3300μF / 16V
E1105	23T00181L80	ELY., 470μF / 50V
○ E1106	23T00180L14	ELY., 100μF / 25V
△ E1106	23T00180L04	ELY., 100μF / 10V
● E1106	23T00180L04	ELY., 100μF / 10V
▲ E1106	23T00180L04	ELY., 100μF / 10V
○ E1107	23T00180L14	ELY., 100μF / 25V
△ E1107	23T00180L04	ELY., 100μF / 10V
● E1107	23T00180L04	ELY., 100μF / 10V
▲ E1107	23T00180L04	ELY., 100μF / 10V

Symbol No.	Part No.	Description
○ E1112	23T00181L28	ELY., 220μF / 25V
△ E1112	23T00181L19	ELY., 330μF / 16V
● E1112	23T00181L19	ELY., 330μF / 16V
▲ E1112	23T00181L19	ELY., 330μF / 16V
E1113	23T00180L22	ELY., 2.2μF / 50V
E1114	23T00180L25	ELY., 10μF / 50V
E1115	23T00180L26	ELY., 22μF / 50V
○ C1116	08T90316F35	TF, 0.33μF
△ E1116	23T00180L23	ELY., 3.3μF / 50V
● E1116	23T00180L23	ELY., 3.3μF / 50V
▲ E1116	23T00180L23	ELY., 3.3μF / 50V
○ C1117	08T90316F35	TF, 0.33μF
△ E1117	23T00180L23	ELY., 3.3μF / 50V
● E1117	23T00180L23	ELY., 3.3μF / 50V
▲ E1117	23T00180L23	ELY., 3.3μF / 50V
E1120	23T00180L25	ELY., 10μF / 50V
○ E1150	23T00180L29	ELY., 100μF / 50V
△ E1150	23T00181L48	ELY., 100μF / 50V
● E1150	23T00180L14	ELY., 100μF / 25V
▲ E1150	23T00180L14	ELY., 100μF / 25V
○ E1151	23T00180L29	ELY., 100μF / 50V
△ E1151	23T00181L48	ELY., 100μF / 50V
● E1151	23T00180L14	ELY., 100μF / 25V
▲ E1151	23T00180L14	ELY., 100μF / 25V
C1201	08T57705F63	MYL., 4700pF
○ E1202	23T00180L17	ELY., 33μF / 35V
△ E1202	23T00180L12	ELY., 22μF / 25V
● E1202	23T00180L26	ELY., 22μF / 50V
▲ E1202	23T00180L26	ELY., 22μF / 50V
C1203	08T57705F73	MYL., 0.033μF
E1204	23T00180L12	ELY., 22μF / 25V
C1205	08T57705F67	MYL., 0.01μF
C1206	08T57705F67	MYL., 0.01μF
E1207	23T00180L20	ELY., 0.47μF / 50V
C1208	08T57705F67	MYL., 0.01μF
E1209	23T00180L12	ELY., 22μF / 25V
E1210	23T00180L08	ELY., 33μF / 16V
○ E1214	23T00180L13	ELY., 47μF / 25V
△ E1214	23T00180L13	ELY., 47μF / 25V
● E1214	23T00180L05	ELY., 220μF / 10V
▲ E1214	23T00180L05	ELY., 220μF / 10V
○ E1215	23T00180L13	ELY., 47μF / 25V
△ E1215	23T00180L13	ELY., 47μF / 25V
● E1215	23T00180L26	ELY., 22μF / 50V
▲ E1215	23T00180L26	ELY., 22μF / 50V
E1218	23T00180L21	ELY., 1μF / 50V
○ E1220	23T00180L26	ELY., 22μF / 50V
△ E1220	23T00180L12	ELY., 22μF / 25V
● E1220	23T00180L26	ELY., 22μF / 50V
▲ E1220	23T00180L26	ELY., 22μF / 50V
E1221	23T00180L21	ELY., 1μF / 50V

Notes : ○: With Safety Regulations Version (AD), △ : Without Safety Regulations Version (EK)
●: U.S.A. Version (UZ), ▲ : Canada Version (UQ), Others : Common.

	Symbol No.	Part No.	Description
	E1230	23T00180L12	ELY., 22μF / 50V
	E1231	23T74513F06	ELY., 18mF / 5.5V
	C1301	08T57705F63	MYL., 4700pF
○	C1302	08T57705F79	MYL., 0.1μF
	C1304	08T57705F59	MYL., 2200pF
	C1305	08T57298F01	CER., 0.1μF
	C1306	08T57705F73	MYL., 0.033μF
○	C1307	08S65480F63	CER., 0.1μF
○	E1308	23T00180L24	ELY., 4.7μF / 50V
△	E1308	23T00180L25	ELY., 10μF / 50V
●	E1308	23T00180L24	ELY., 4.7μF / 50V
▲	E1308	23T00180L24	ELY., 4.7μF / 50V
	C1309	08T57298F01	CER., 0.1μF
	C1310	08T57705F67	MYL., 0.01μF
	E1311	23T00180L25	ELY., 10μF / 50V
	C1312	08T57705F77	MYL., 0.068μF
	C1313	08T57705F69	MYL., 0.015μF
	E1314	23T00180L24	ELY., 4.7μF / 50V
	E1315	23T00180L12	ELY., 22μF / 25V
	C1316	08T57705F63	MYL., 4700pF
	E1317	23T00180L20	ELY., 0.47μF / 50V
	C1318	08T57705F55	MYL., 1000pF
	C1319	08T57705F73	MYL., 0.033μF
○	E1320	23T00180L25	ELY., 10μF / 50V
△	E1320	23T00180L12	ELY., 22μF / 25V
●	E1320	23T00180L26	ELY., 22μF / 50V
▲	E1320	23T00180L26	ELY., 22μF / 50V
○	E1321	23T00180L26	ELY., 22μF / 50V
△	E1321	23T00180L13	ELY., 47μF / 25V
●	E1321	23T00180L26	ELY., 22μF / 50V
▲	E1321	23T00180L26	ELY., 22μF / 50V
○	E1322	23T00180L26	ELY., 22μF / 50V
△	E1322	23T00180L13	ELY., 47μF / 25V
●	E1322	23T00180L26	ELY., 22μF / 50V
▲	E1322	23T00180L26	ELY., 22μF / 50V
	C1326	08T57298F01	CER., 0.1μF
	C1327	08T57298F01	CER., 0.1μF
○	C1401	08T90316F10	TF, 2700pF
	E1401	23T00180L12	ELY., 22μF / 25V
○	C1402	08T90316F13	TF, 4700pF
	E1402	23T00180L12	ELY., 22μF / 25V
	E1403	23T00180L12	ELY., 22μF / 25V
	E1404	23T00180L12	ELY., 22μF / 25V
	E1405	23T00180L12	ELY., 22μF / 25V
	E1406	23T00180L12	ELY., 22μF / 25V
	E1407	23T00180L12	ELY., 22μF / 25V
	E1408	23T00180L12	ELY., 22μF / 25V
	C1409	08T57705F68	MYL., 0.012μF
	C1410	08T57705F68	MYL., 0.012μF
○	C1411	08T93406F03	PP., 120pF

	Symbol No.	Part No.	Description
△	C1411	08T57705F54	MYL., 820pF
●	C1411	08T57705F54	MYL., 820pF
▲	C1411	08T57705F54	MYL., 820pF
○	C1412	08T93406F03	PP., 120pF
△	C1412	08T57705F54	MYL., 820pF
●	C1412	08T57705F54	MYL., 820pF
▲	C1412	08T57705F54	MYL., 820pF
	C1413	08T57705F62	MYL., 3900pF
	C1414	08T57705F62	MYL., 3900pF
	C1415	08T93406F12	PP., 300pF
	C1416	08T93406F12	PP., 300pF
	C1417	08T57705F69	MYL., 0.015μF
	C1418	08T57705F69	MYL., 0.015μF
	E1419	23T00180L08	ELY., 33μF / 16V
	E1420	23T00180L08	ELY., 33μF / 16V
	C1421	08T57705F55	MYL., 1000pF
	E1421	23T00180L24	ELY., 4.7μF / 50V
	C1422	08T57705F55	MYL., 1000pF
	E1422	23T00180L24	ELY., 4.7μF / 50V
	C1423	08T57705F55	MYL., 1000pF
	C1424	08T57705F55	MYL., 1000pF
○	E1441	23T00180L17	ELY., 33μF / 35V
△	E1441	23T00180L13	ELY., 47μF / 25V
●	E1441	23T00180L26	ELY., 22μF / 50V
▲	E1441	23T00180L26	ELY., 22μF / 50V
○	E1442	23T00180L17	ELY., 33μF / 35V
△	E1442	23T00180L13	ELY., 47μF / 25V
●	E1442	23T00180L26	ELY., 22μF / 50V
▲	E1442	23T00180L26	ELY., 22μF / 50V
○	E1443	23T00180L25	ELY., 10μF / 50V
△	E1443	23T00180L12	ELY., 22μF / 25V
●	E1443	23T00180L12	ELY., 22μF / 25V
▲	E1443	23T00180L12	ELY., 22μF / 25V
○	E1444	23T00180L25	ELY., 10μF / 50V
△	E1444	23T00180L12	ELY., 22μF / 25V
●	E1444	23T00180L12	ELY., 22μF / 25V
▲	E1444	23T00180L12	ELY., 22μF / 25V
	C1501	08T57298F01	CER., 0.1μF
	C1601	08T57298F01	CER., 0.1μF
	C1603	08T57298F01	CER., 0.1μF
	C1604	08T57298F01	CER., 0.1μF
	C1606	08T40794F50	CER., 1000pF
	C1701	08T55260F13	CER., 10pF
	C1702	08T55260F13	CER., 10pF
○	C1703	08T55260F39	CER., 150pF
▲	C1703	08T55260F39	CER., 150pF
○	C1705	21S40655F17	CER., 33pF
○	E1711	23T00180L17	ELY., 33μF / 35V
△	E1711	23T00180L13	ELY., 47μF / 25V
●	E1711	23T00180L26	ELY., 22μF / 50V
▲	E1711	23T00180L26	ELY., 22μF / 50V

Notes : ○: With Safety Regulations Version (AD), △ : Without Safety Regulations Version (EK)
●: U.S.A. Version (UZ), ▲ : Canada Version (UQ), Others : Common.

Symbol No.	Part No.	Description
○ E1901	23T00180L12	ELY., 22μF/25V
△ E1901	23T00180L12	ELY., 22μF/25V
● E1901	23T00180L26	ELY., 22μF/50V
▲ E1901	23T00180L26	ELY., 22μF/50V
○ E1902	23T00180L12	ELY., 22μF/25V
△ E1902	23T00180L12	ELY., 22μF/25V
● E1902	23T00180L26	ELY., 22μF/50V
▲ E1902	23T00180L26	ELY., 22μF/50V
C1903	08T57705F73	MYL., 0.033μF
C1904	08T57705F69	MYL., 0.015μF
C1905	08T57705F65	MYL., 6800pF
C1906	08T57298F01	CER., 0.1μF
C1909	08S65480F63	CER., 0.1μF
E1910	23T00180L12	ELY., 22μF/25V
○ C6005	08T90316F32	TF, 0.18μF
△ C6005	08T57298F01	CER., 0.1μF
● C6005	08T57298F01	CER., 0.1μF
▲ C6005	08T57298F01	CER., 0.1μF

Resistors

○ R1490	06T92263F35	M.F., 270 ohm 1W
△ R1490	06T92263F37	M.F., 330 ohm 1W
● R1490	06T92263F37	M.F., 330 ohm 1W
▲ R1490	06T92263F37	M.F., 330 ohm 1W
VR1201	18T15356W15	Variable, RH0634C 22K ohm
VR1202	18T15356W15	Variable, RH0634C 22K ohm
VR1301	18T15356W15	Variable, RH0634C 22K ohm
VR1302	18T15356W15	Variable, RH0634C 22K ohm
VR1303	18T15356W09	Variable, RH0634C 2.2K ohm
VR1401 M1401	18T10803W03	Variable, RK16313MA (10K)
VR1403	18T15356W19	Variable, RH0634C 100K ohm
VR1404	18T15356W19	Variable, RH0634C 100K ohm

Fader P. C. Board

LED

LD5101	48T66616F02	SLR-54VR3 (RED)

Symbol No.	Part No.	Description
Switches		
S5101	40T83324F11	Tact, SKHHAP (TIME DSP)
S5102	40T83324F11	Tact, SKHHAP (DISP-ADJ)
S5103	40T83324F11	Tact, SKHHAP (T-FADE)
S5104	40T83324F11	Tact, SKHHAP (FADE-OUT)
S5105	40T83324F11	Tact, SKHHAP (VOL-UP)
S5106	40T83324F11	Tact, SKHHAP (VOL-DOWN)

Phone P. C. Board

Capacitors

C7101	08T57705F61	MYL., 3300pF
C7102	08T57705F61	MYL., 3300pF
C7103	08T57298F01	CER., 0.1μF

Jacks

○ JK7101	09T66672F04	Jack, Phones (PHONES)
△ JK7101	09T74077F02	Jack, Phones (PHONES)
● JK7101	09T74077F02	Jack, phones (PHONES)
▲ JK7101	09T74077F02	Jack, Phones (PHONES)

Power Switch P. C. Board

Coil

L8101	24T15610W01	PLA6003R3A

Switch

S8101	40T84122F01	Power, SDDLE (POWER)

Capacitors

C8101	08T00196L01	POLY., 0.01μF
C8102	08T00196L01	POLY., 0.01μF
C8103	08T00196L01	POLY., 0.01μF

Notes : ○: With Safety Regulations Version (AD), △ : Without Safety Regulations Version (EK)
●: U.S.A. Version (UZ), ▲ : Canada Version (UQ), Others : Common.

Symbol No.	Part No.	Description
	Logic P. C. Board	
	IC's	
○	IC9101	51T16094W03	GP1U721R
△	IC9101	51T16094W03	GP1U721R
●	IC9101	51T16094W03	GP1U721R
▲	IC9101	51T16094W02	GP1U521X
	Diodes	
	D9101	48T58583F01	1SS176
	or	48T84758F01	1SS270
	D9102	48T58583F01	1SS176
	or	48T84758F01	1SS270
	D9103	48T58583F01	1SS176
	or	48T84758F01	1SS270
	D9104	48T58583F01	1SS176
	or	48T84758F01	1SS270
	D9105	48T58583F01	1SS176
	or	48T84758F01	1SS270
	D9106	48T58583F01	1SS176
	or	48T84758F01	1SS270
	D9107	48T58583F01	1SS176
	or	48T84758F01	1SS270
	D9108	48T58583F01	1SS176
	or	48T84758F01	1SS270
	D9109	48T58583F01	1SS176
	or	48T84758F01	1SS270
	D9110	48T58583F01	1SS176
	or	48T84758F01	1SS270
	Switches	
	S9101	40T83324F11	Tact, SKHHAP (PLAY)
	S9102	40T83324F11	Tact, SKHHAP (PAUSE)
	S9103	40T83324F11	Tact, SKHHAP (STOP)
	S9104	40T83324F11	Tact, SKHHAP (SKIP - UP)
	S9105	40T83324F11	Tact, SKHHAP (SKIP - DOWN)
	S9106	40T83324F11	Tact, SKHHAP (FORWARD)
	S9107	40T83324F11	Tact, SKHHAP (BACKWARD)
	S9108	40T83324F06	Tact, SKHHAN (RANDOM)
	S9109	40T83324F06	Tact, SKHHAN (A - SCAN)
	S9110	40T83324F06	Tact, SKHHAN (A - PAUSE)
	S9111	40T83324F06	Tact, SKHHAN (REPEAT)
	S9112	40T83324F11	Tact, SKHHAP (PROGRAM)
	S9113	40T83324F11	Tact, SKHHAP (CLEAR)
	S9114	40T83324F11	Tact, SKHHAP (M - CHECK)
	S9115	40T83324F11	Tact, SKHHAP (EDIT)
	S9116	40T83324F11	Tact, SKHHAP (5)
	S9117	40T83324F11	Tact, SKHHAP (+10)
	S9118	40T83324F11	Tact, SKHHAP (4)
	S9119	40T83324F11	Tact, SKHHAP (10)
	S9120	40T83324F11	Tact, SKHHAP (3)
	S9121	40T83324F11	Tact, SKHHAP (9)
	S9122	40T83324F11	Tact, SKHHAP (2)
	S9123	40T83324F11	Tact, SKHHAP (8)
	S9124	40T83324F11	Tact, SKHHAP (1)
	S9125	40T83324F11	Tact, SKHHAP (7)
	S9126	40T83324F11	Tact, SKHHAP (0)
	S9127	40T83324F11	Tact, SKHHAP (6)
	S9128	40T83324F11	Tact, SKHHAP (OPEN / CLOSE)
	EMC P. C. Board	
	Capacitor	
○	C001	08T57298F01	CER., 0.1μF
	Coils	
○	L001	24T35414W01	EMC Bead B-10
○	L002	24T35414W01	EMC Bead B-10
○	L003	24T35414W01	EMC Bead B-10
	Miscellaneous	
	C2001	08S40154T63	CAP., CER. 0.022μF
○	F8102	65T42077U11	Fuse, Semko (250V-315mA)
△	F8102	65T42077U11	Fuse, Semko (250V-315mA)
	FL9101	65T15386W01	FL, Display FV335G
	HD2001	88T81528F01	Head, Optical Pick Up
	M2001	01V11200W42	Assy., Loading Motor (5.5V-115mA)
	M2002	59T81431F01	Spindle Motor (2.5V-85mA)
	M2003	01V94700F74	Assy., Slider Motor (6V-210mA)
○	P8101	28T43812P04	Plug, Cord
○	or	28T00002K01	Plug, Cord
△	P8101	28T43812P04	Plug, Cord
△	or	28T00001K01	Plug, Cord
●	P8101	28T55335F02	Plug, Cord
●	or	28T00002K01	Plug, Cord
▲	P8101	28T55335F02	Plug, Cord
▲	or	28T00002K01	Plug, Cord

Notes : ○: With Safety Regulations Version (AD), △ : Without Safety Regulations Version (EK)
●: U.S.A. Version (UZ), ▲ : Canada Version (UQ), Others : Common.

Symbol No.		Part No.	Description
	S2001	40T71025F01	Switch, Detector (CLOSE)
	S2002	40T71025F01	Switch, Detector (OPEN)
	S2003	40T71025F01	Switch, Detector (LIMIT)
○	T8101	25T16148W01	TRANS., Power
△	T8101	25T16148W01	TRANS., Power
●	T8101	25T16147W01	TRANS., Power
▲	T8101	25T16147W01	TRANS., Power

Symbol No.	Part No.	Description

Notes : ○: With Safety Regulations Version (AD), △ : Without Safety Regulations Version (EK)
●: U.S.A. Version (UZ), ▲ : Canada Version (UQ), Others : Common.

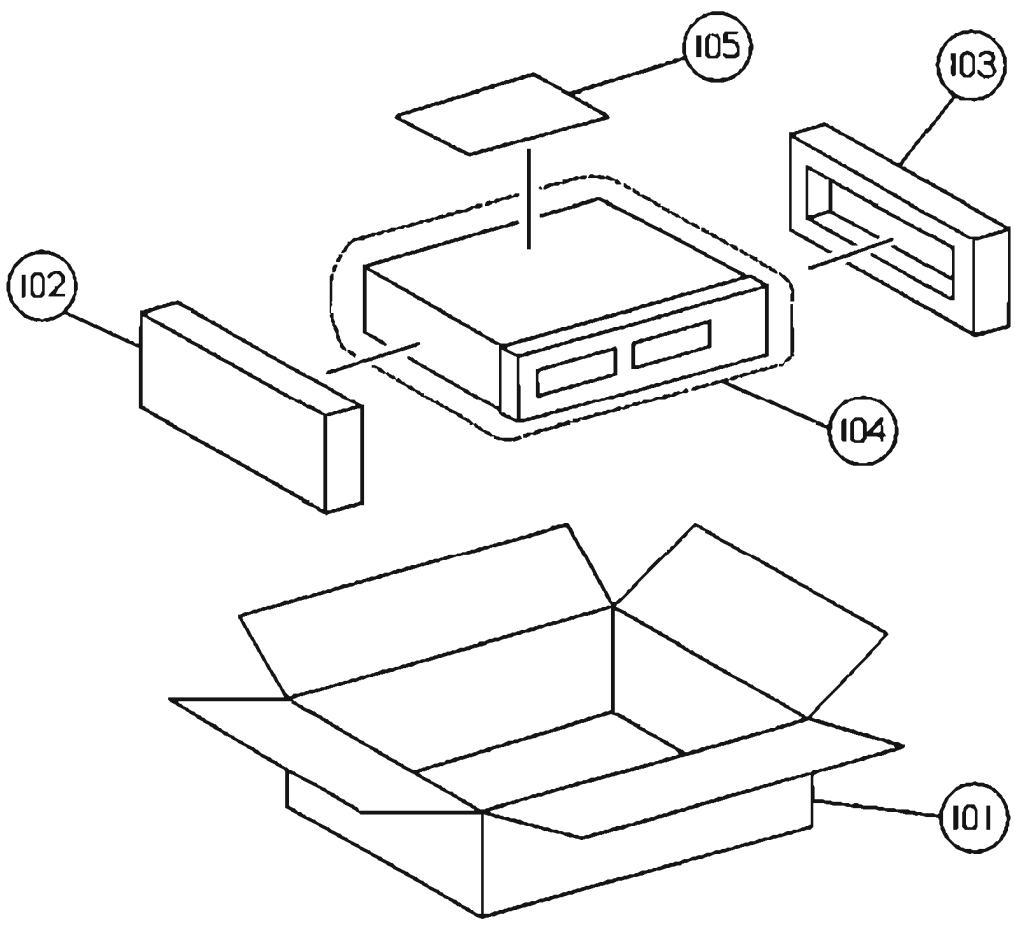
Packing Assembly Parts List

	Symbol No.	Part No.	Description
	101	56S10005W97	Carton, Packing
	102	56D13765W01	Tray, Packing (L)
	103	56D13765W02	Tray, Packing (R)
	104	56B40230G23	Sack, Polyethylene
○	105-1	68P21552W26	Owner's, Manual
△	105-1	68P21552W26	Owner's, Manual
●	105-1	68P21552W27	Owner's, Manual
▲	105-1	68P21552W26	Owner's, Manual
	105-2	28T70621F03	Plug, Output
	105-3	01T82091F01	Assy., Mini Plug Cord
	or	28T15332W04	Mini Plug, Cord
	105-4	01T25754W02	Unit, Rimocon RD107U
	105-5	60T58064F01	Battery, SUM-3

Symbol No.	Part No.	Description

Notes : ○: With Safety Regulations Version (AD), △ : Without Safety Regulations Version (EK)
●: U.S.A. Version (UZ), ▲ : Canada Version (UQ), Others : Common.

Packing Method View



Cabinet Assembly Parts List

NOTE : The parts without parts list are not supplied.

Symbol No.		Index	Part No.	Description
○	1	5-A	01C30667W02	Assy., Front Panel
△	1	5-A	01C30667W01	Assy., Front Panel
●	1	5-A	01C30667W01	Assy., Front Panel
▲	1	5-A	01C30667W01	Assy., Front Panel
	2	1-C	15C12903W01	Cover, Top
○	4	3-G	15C12902W16	Cover, Rear
△	4	3-G	15C12902W12	Cover, Rear
●	4	3-G	15C12902W14	Cover, Rear
▲	4	3-G	15C12902W14	Cover, Rear
	5	5-D	03S44205G49	Screw, Bind (M4×8)
	6	2-G	43T16093W01	Support, Cord
	7		03S71031F04	Screw, Bind (M3×8)
○	8		03S82672F33	Screw, Bind (M3×8)
△	8		03S82672F20	Screw, Bind (M3×8)
●	8		03S82672F33	Screw, Bind (M3×8)
▲	8		03S82672F33	Screw, Bind (M3×8)
	9	4-E	07A91046F01	Support, P.C.Board
	10	3-D	03C42723U01	Screw, Cup (M3×6)
	11	3-C	47A12896W01	Shaft, Power
	12	3-C	43T25269W01	Pushing, Rubber
	13	2-D	03A83946F01	Screw, Special (M3×35)
	14	2-D	04S40071G14	Washer, Spring (M4.1)
	15	2-D	04S40070G59	Washer, Flat (M4.1)
	17	3-C	03S71031F02	Screw, Bind (M2.6×8)
	20	4-A	36A12937W01	Knob, POWER
○	23	3-E	03D40014G04	Screw, W/Washer (M3×6)
△	23	3-E	03D40014G09	Screw, W/Washer (M3×5)
●	23	3-E	03D40014G09	Screw, W/Washer (M3×5)
▲	23	3-E	03D40014G04	Screw, W/Washer (M3×6)
○	26	3-D	09T51410F01	Holder, Fuse
△	26	3-D	09T51410F01	Holder, Fuse
○	28	4-C	01T15318W02	Assy., Lug Wire (1P)
△	28	4-C	01T15318W01	Assy., Lug Wire (1P)
●	28	4-C	01T15318W01	Assy., Lug Wire (1P)
▲	28	4-C	01T15318W01	Assy., Lug Wire (1P)
	30	3-C	75S12196W21	Cushion, Rubber
	31	3-B	07A83876F01	Support, FL
	32		03S40036U01	Screw, W/Washer (M4×8)
○	33		75A96563F03	Pad, Trannleg
△	33		75A96563F03	Pad, Trannleg
●	33		75A96563F02	Pad, Trannleg
▲	33		75A96563F02	Pad, Trannleg
	34		03S71677F25	Screw, Bind (M4×12)
	35	3-C	64B10696W06	Panel, Tray
	37	2-D	03S13049W04	Screw, Bind (M3×33)
	38	4-B	36A12907W01	Knob, Tact 10Key
	39		36A12909W01	Knob, Tact L
	40	4-A	36A12909W02	Knob, Tact UP
	41	4-A	36A12909W03	Knob, Tact DOWN
○	43		01T15318W01	Assy., Lug Wire (1P)
○	44	4-F	03S71677F38	Screw, Flange (M3×6)

Notes : ○: With Safety Regulations Version (AD), △ : Without Safety Regulations Version (EK)
●: U.S.A. Version (UZ), ▲ : Canada Version (UQ), Others : Common.

Exploded View (Cabinet)

1

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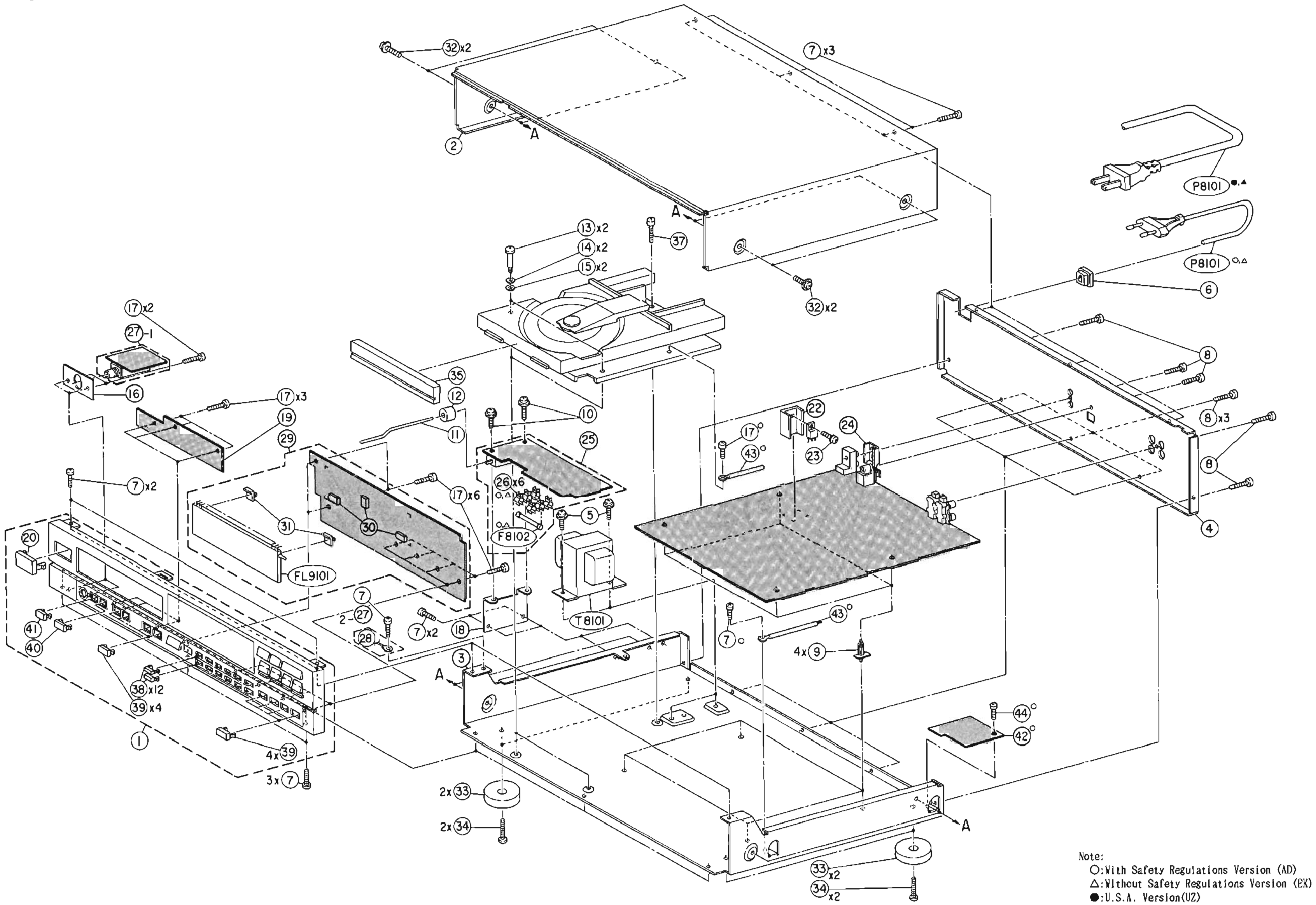
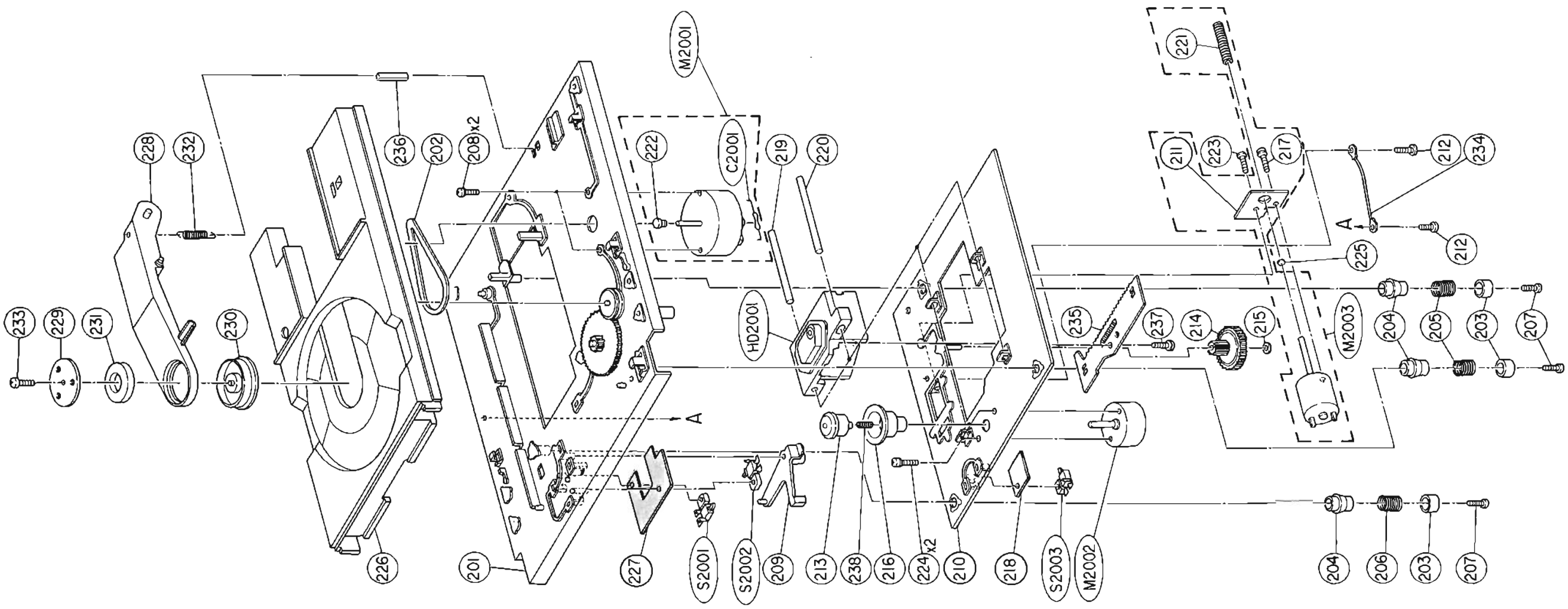


Note:
○:With Safety Regulations Version (AD)
△:Without Safety Regulations Version (EK)
●:U.S.A. Version(UZ)
▲:Canada Version(UQ)
Others:Common

Exploded View (CD Mechanism)



CD Mechanism Assembly Parts

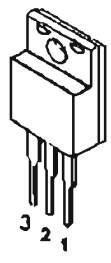
NOTE : The parts without parts list are not supplied.

Symbol No.	Index	Part No.	Description
201	4-C	01C82391F02	Assy., Main Chassis
202	2-C	42A81427F02	Belt, Drive
203		43A81407F01	Bush, Damper
204		75A81411F01	Rubber, Damper
205		41A81428F03	Spring, Compression
206		41A81428F05	Spring, Compression
207		03S40012G47	Screw, Pan (M2.6×8)
208	2-C	03D40014G19	Screw, W/Washer (M2.6×5)
209	4-D	45A81434F01	Arm, Switch
212		03S44205G30	Screw, Pan (M2.6×4)
213	4-E	49B81417F01	Disc, Guide
214	3-F	44A81401F01	Gear, Worm Wheel
215	3-G	04B41345P02	Washer, Lock (M1.7)
216	4-E	49B81414F01	Disc, Table
217	2-G	03D40014G62	Screw, W/Washer (M2×3)
219	2-D	47A81426F01	Shaft, Head
220	2-D	47A81426F02	Shaft, Head
221	2-F	44A96257F01	Worm, Drive
222	2-D	49A81397F01	Pulley, Loading Motor
223	2-F	03S94385F23	Screw, Pan Washer (M2×5)
224	4-E	03D40014G07	Screw, W/Washer (M2×4)
225		43A41182P02	Ball, Steel
226	4-C	01C10716W01	Assy., Tray Disc
228	2-A	45C81418F04	Arm, Clamp
229	3-A	07A81413F02	Bracket, Magnet
230	3-B	49A81403F01	Wheel, Clamp
231	3-A	59T81430F01	Magnet
232	2-B	41B81429F02	Spring, Extension
233	3-A	03S70494F08	Screw, Bind (M2×5)
234	2-G	01T92483F01	Assy., Lug Wire (1P)
235	3-F	01A82323F01	Assy., Rack
236	2-C	75S12196W06	Cushion, Rubber
237	3-F	03S70494F01	Screw, Bind (M2×5)
238	4-E	41A81428F01	Spring, Compression

Symbol No.	Index	Part No.	Description

Semi - Conductor Lead Identifications

NJM7912FA : IC1101



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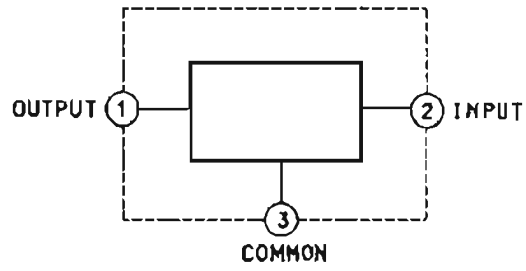
3 : COMMON



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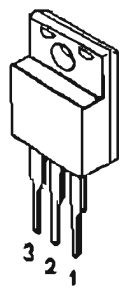

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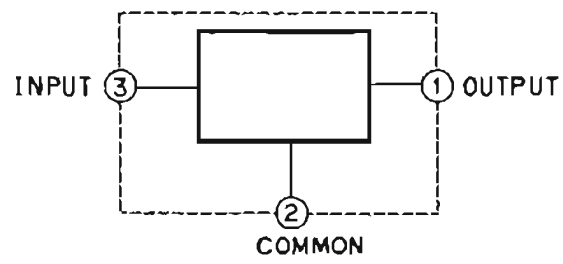
2. COMMON
3 : INPUT



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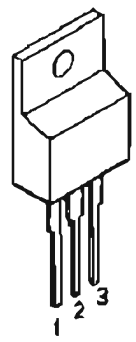
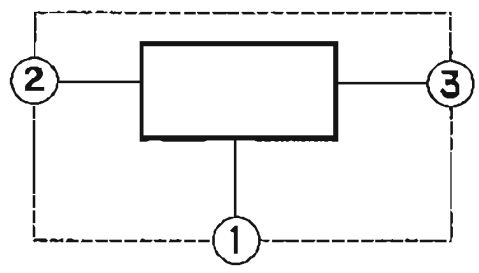
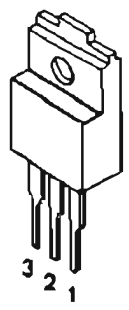
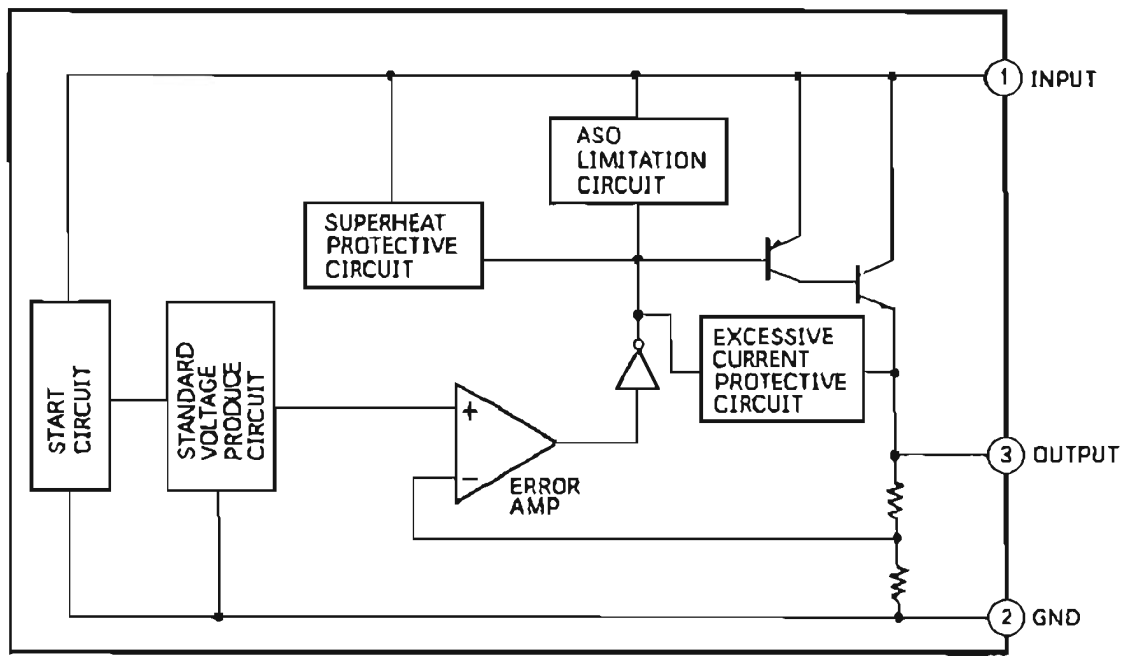




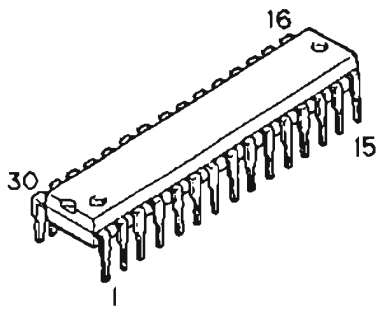
1 GND
2 INPUT
3 OUTPUT

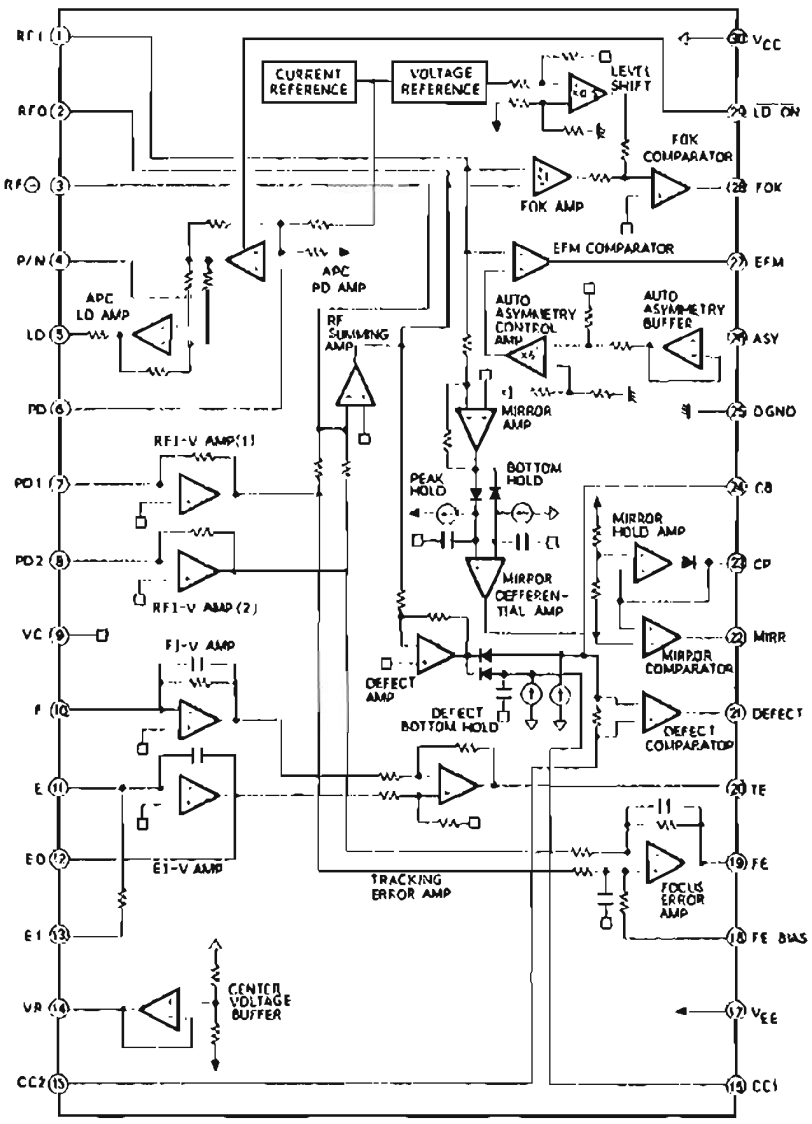
M5278D56 : IC1104





CXA1081S : IC1201





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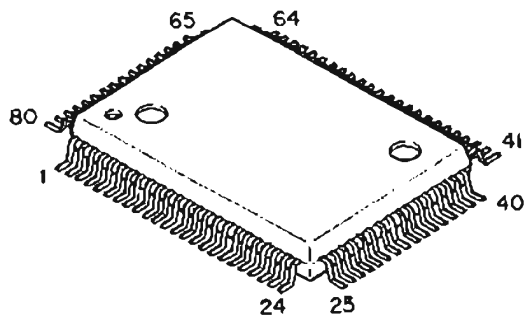
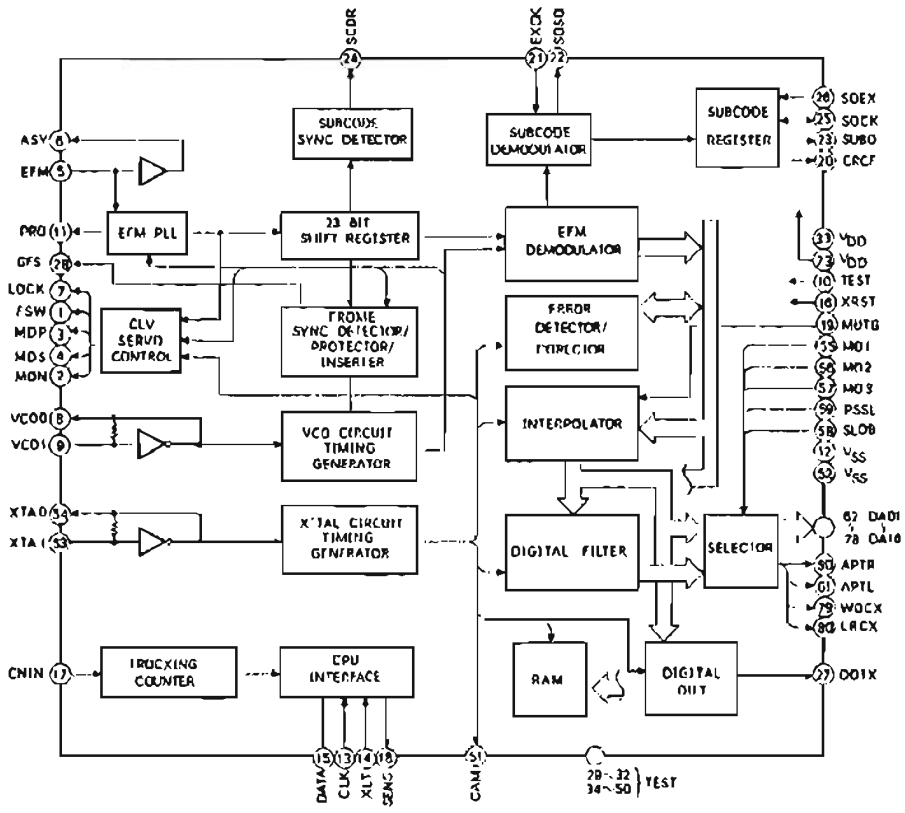
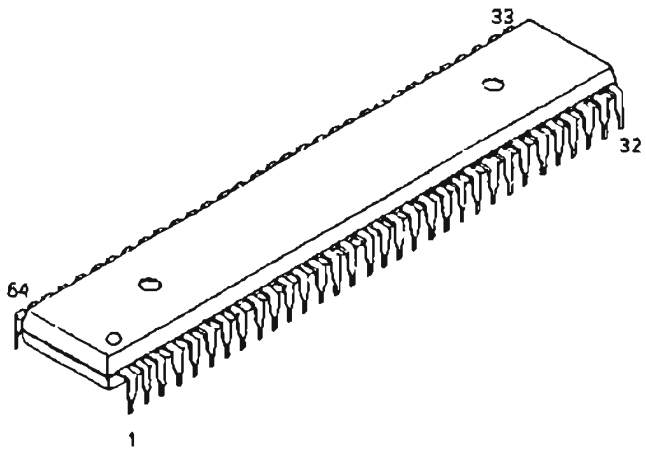


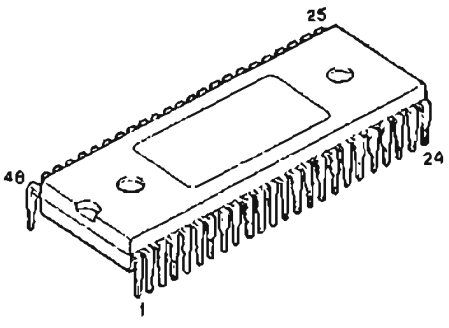


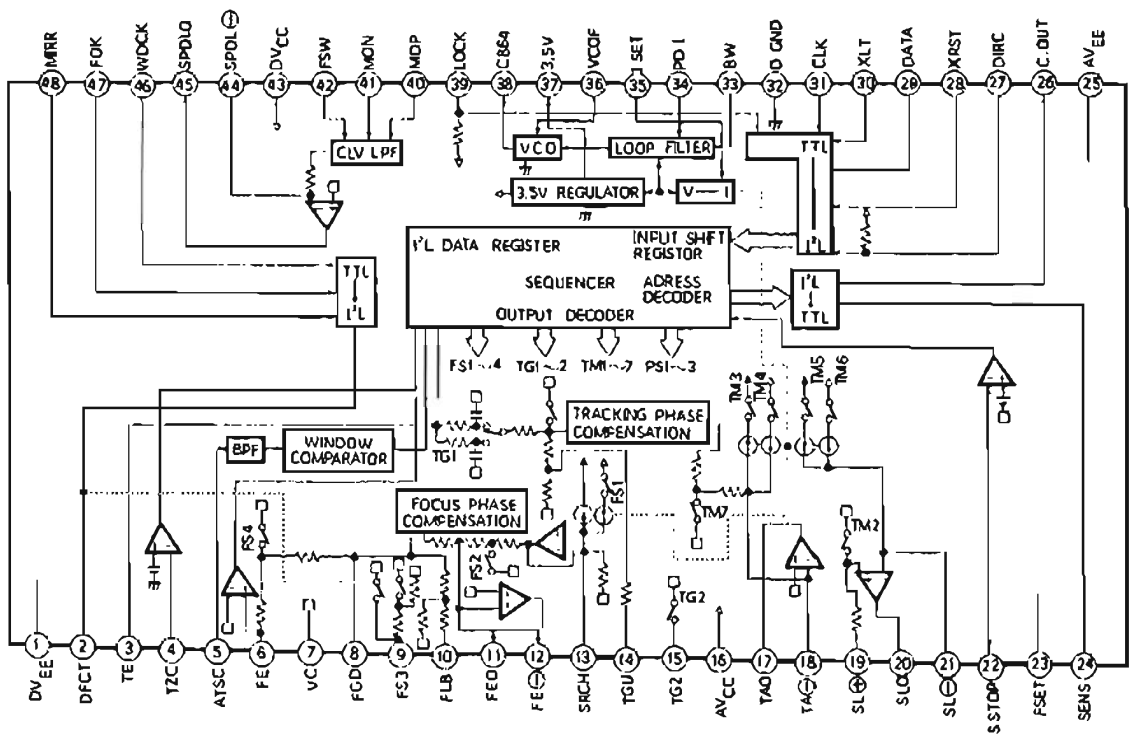
25795W02 : IC1204



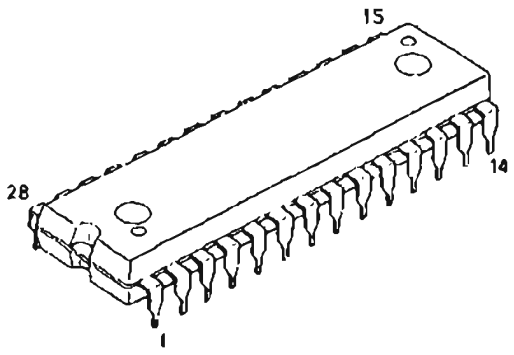
PIN NO.	CORD ADDRESS	I/O	PIN NO.	CORD ADDRESS	I/O	PIN NO.	CORD ADDRESS	I/O
1	SEG 4 (L)	O	23	XLDON	O	45	KRTN 1	I
2	SEG 3 (K)	O	24	XRST	I	46	KRTN 0	I
3	SEG 2 (J)	O	25	XLT	—	47	RST	I
4	SEG 1 (I)	O	26	DATA	O	48	OSC	—
5	SEG 0 (H)	O	27	CLK	I	49	OSC	—
6	DIG 0 (10G)	O	28	POWER	I	50	GND	—
7	DIG 1 (9G)	O	29	SCOR	I	51	GND	—
8	DIG 2 (8G)	O	30	XRMC	I	52	NC	—
9	DIG 3 (7G)	O	31	NC	—	53	+ 5V	—
10	DIG 4 (6G)	O	32	V_{DD}	—	54	VOLCP	O
11	DIG 5 (5G)	O	33	SQCK	I	55	VOLUP	O
12	DIG 6 (4G)	O	34	SUBQ	I	56	VOLON	O
13	DIG 7 (3G)	O	35	FOK	I	57	SEG12(G)	O
14	DIG 8 (2G)	O	36	PWM	O	58	SEG11(F)	O
15	DIG 9 (1G)	O	37	SENS	I	59	SEG10(E)	O
16	DIMM	O	38	NC	—	60	SEG 9 (D)	O
17	EMPH	O	39	MUTG	O	61	SEG 8 (C)	O
18	GFS	I	40	PHT SW	—	62	SEG 7 (B)	O
19	−3.5V	—	41	CLOSE	O	63	SEG 6 (A)	O
20	A− MUTE	O	42	OPEN	O	64	SEG 5 (M)	O
21	CLOSE. SW	I	43	SWRTN	I			
22	OPEN. SW	I	44	KRTN 2	I			

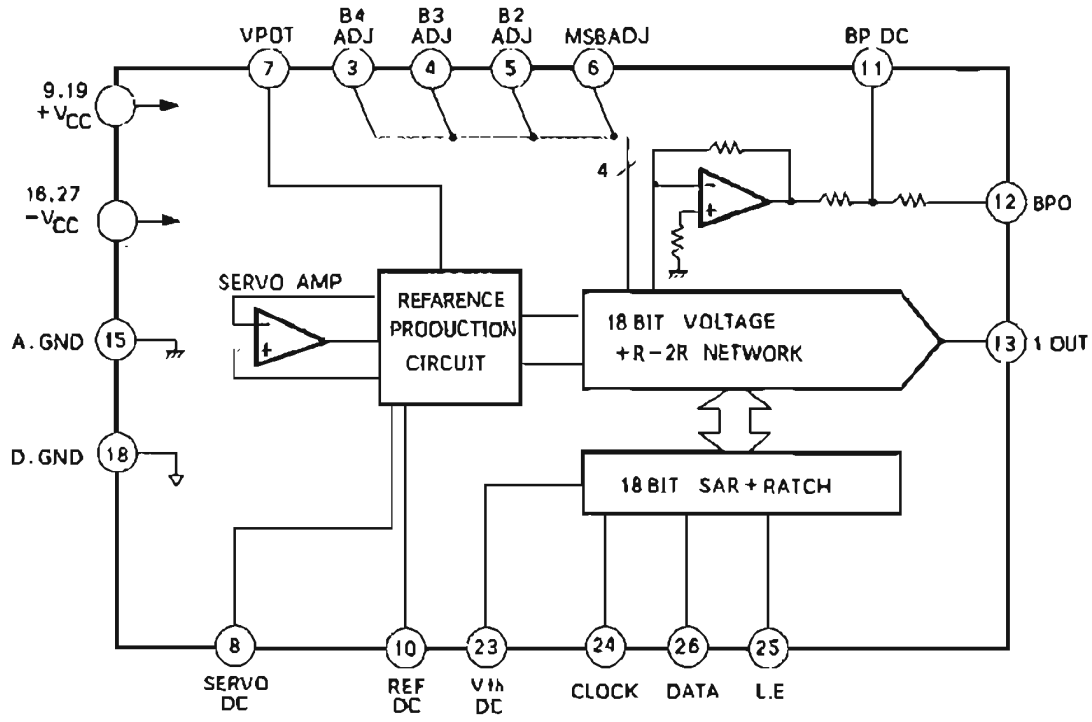
CXA1082BS : IC1301



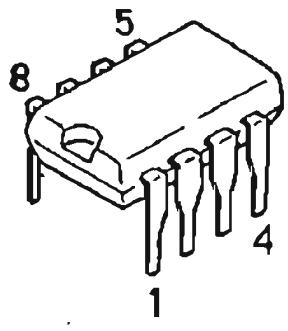


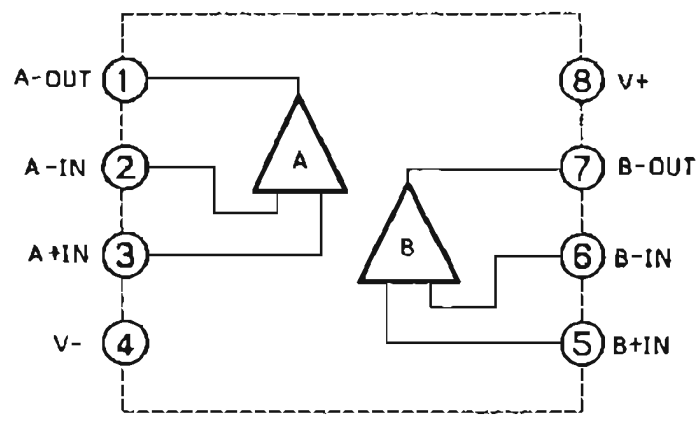
PCM1701P : IC1401, 1402



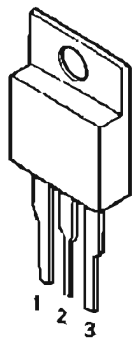


M5238P
AD42712 : IC1403, 1404
M5216P : IC1405





MC7805 : IC1406



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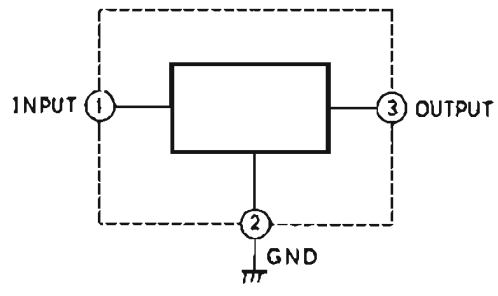
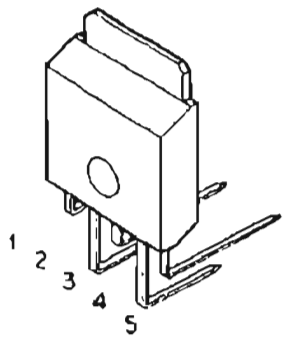
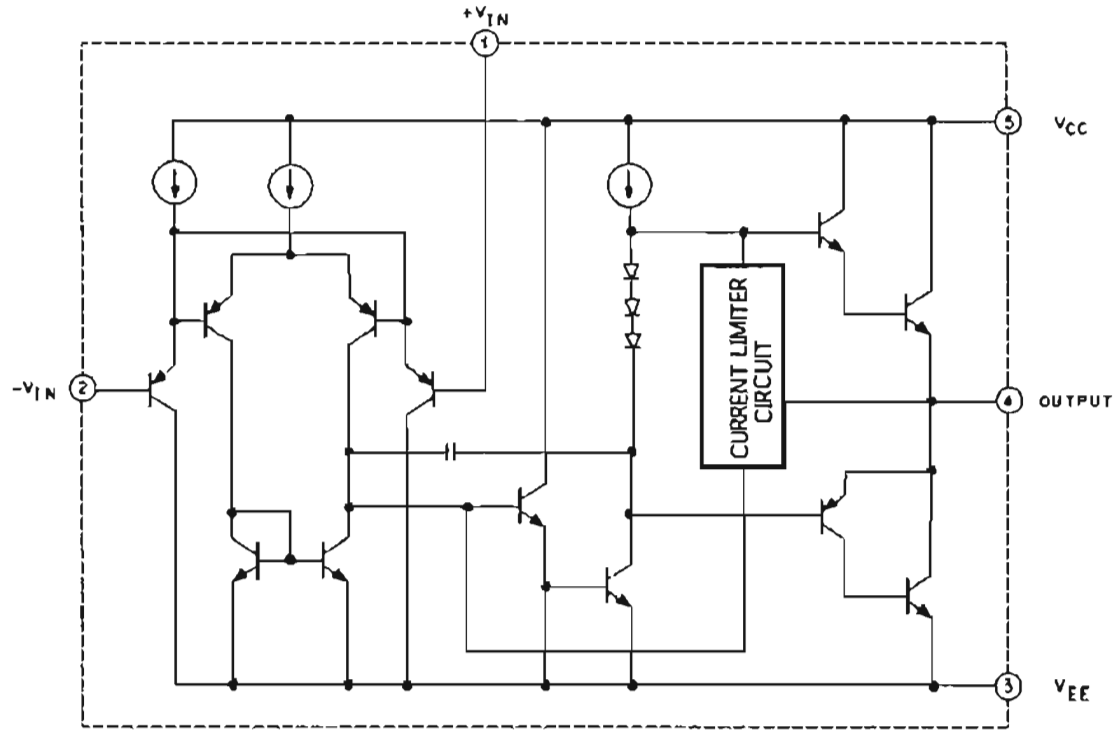
2 : GND
3 : OUTPUT

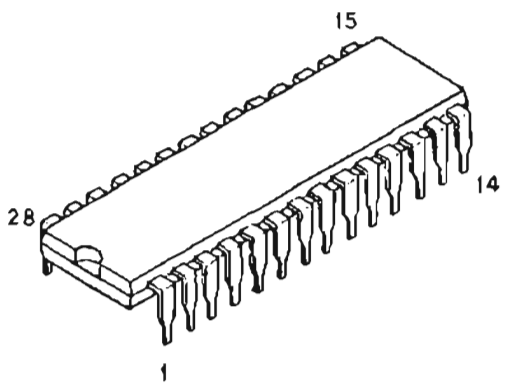


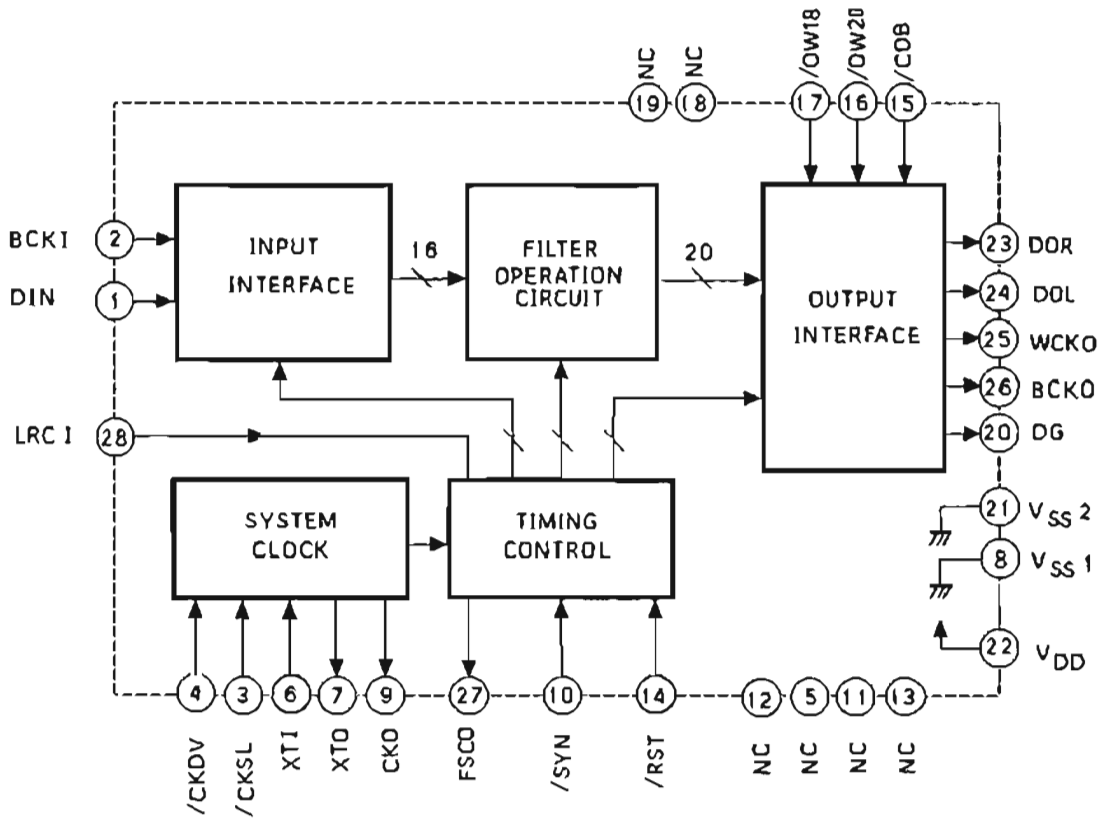
LA6501 : IC1501, 1902



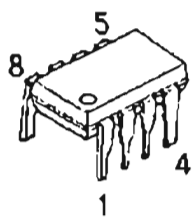


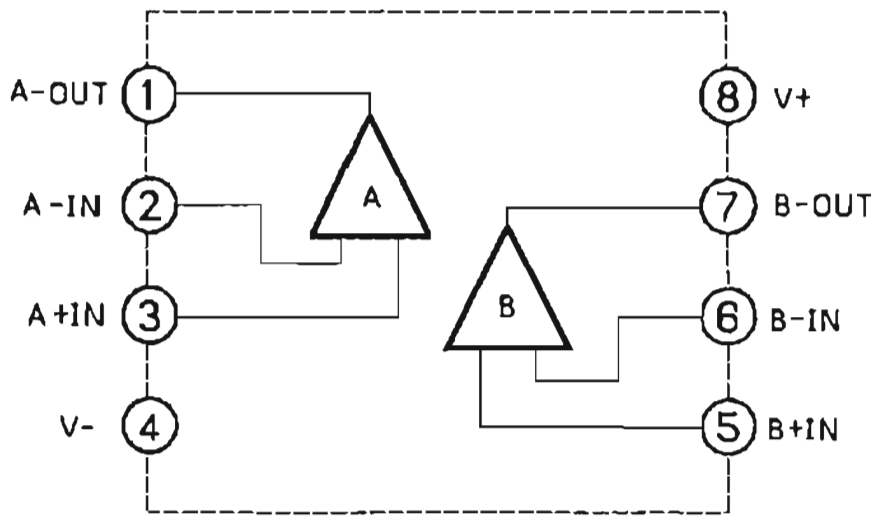
SM5813AP : IC1701



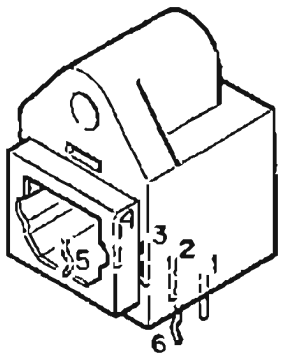


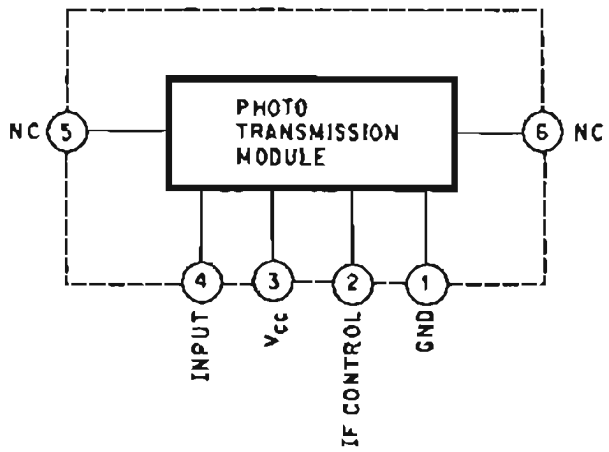
NJM2903D : IC1901



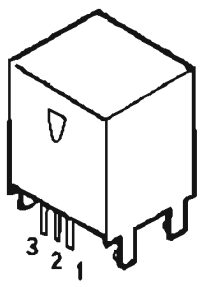


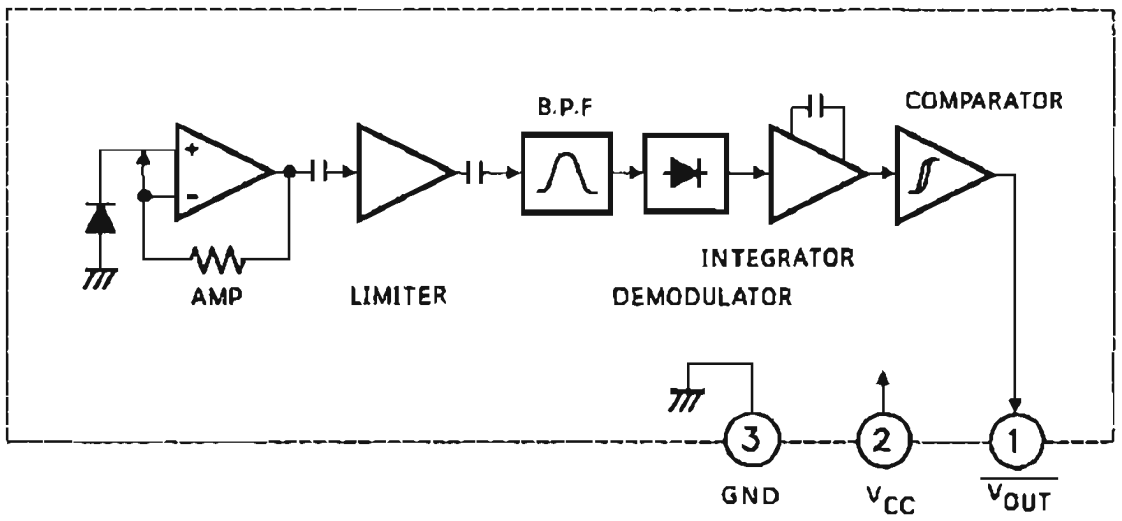
TOTX176 : IC6001



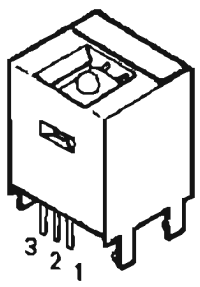


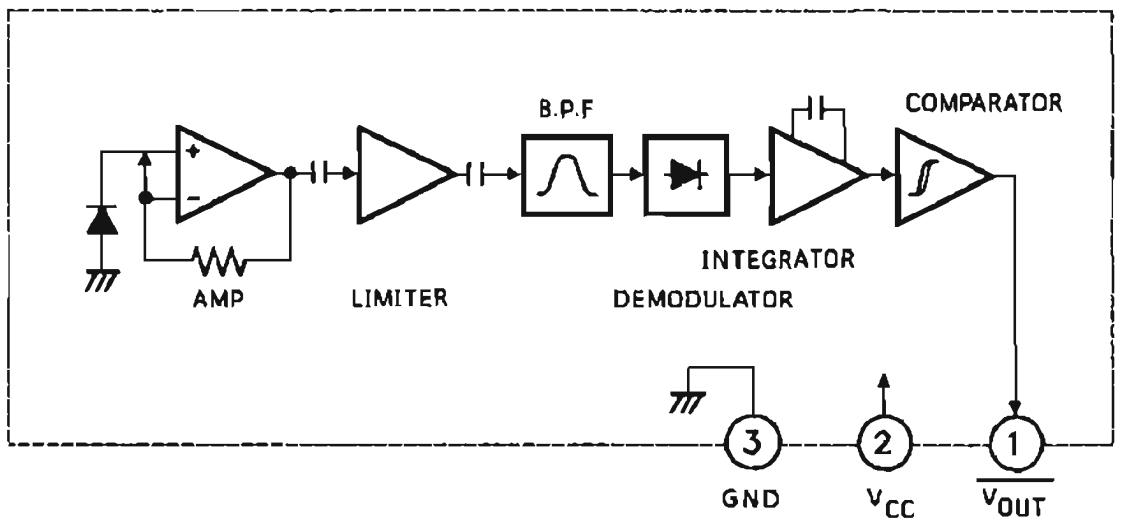
GP1U721R : IC9101 (○, △, ●)





GP1U521X : IC9101 (▲)





Notes : ○: With Safety Regulations Version (AD), △ : Without Safety Regulations Version (EK)
●: U.S.A. Version (UZ), ▲ : Canada Version (UQ), Others : Common.

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