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1984

Technics

Turntable System

SL-1200MK2

SL-1210MK2

Operating instructions



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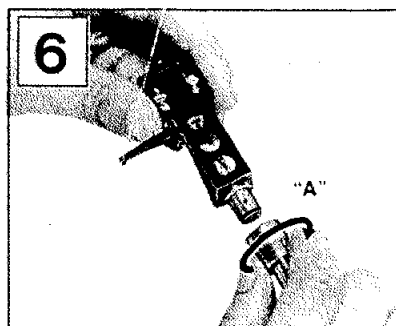
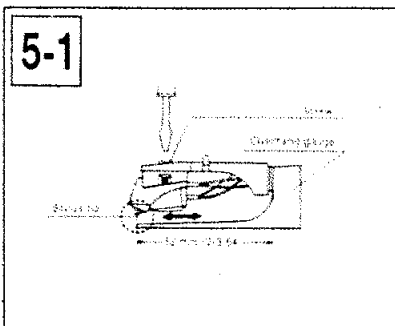
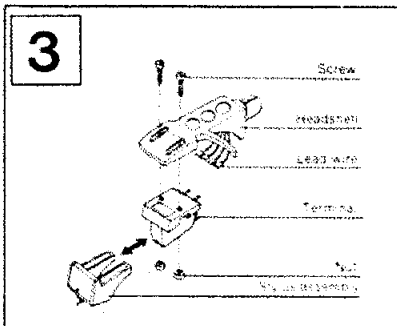
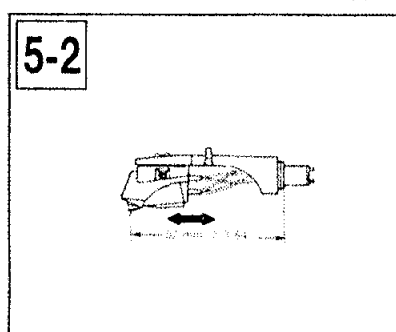
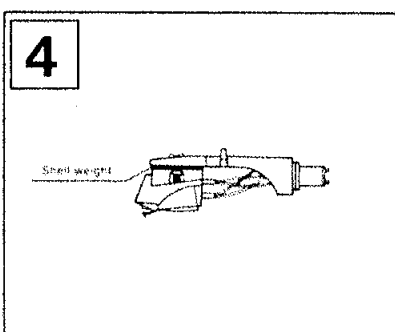
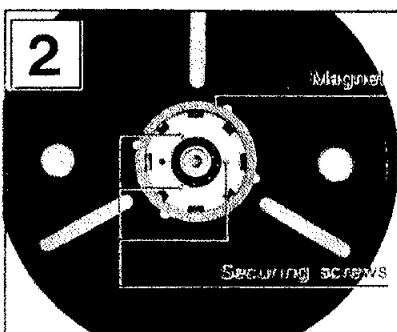
21 Locking nut

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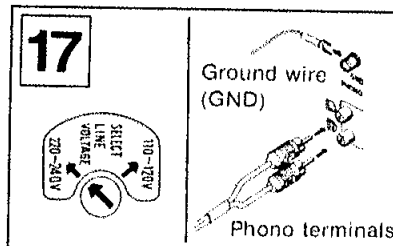
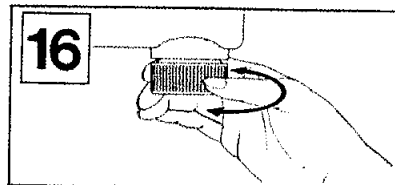
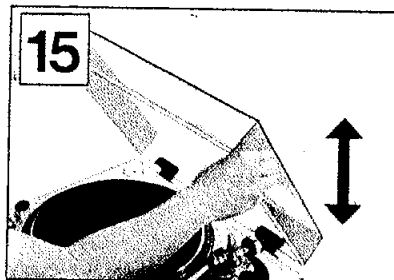
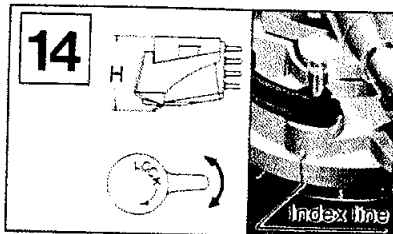
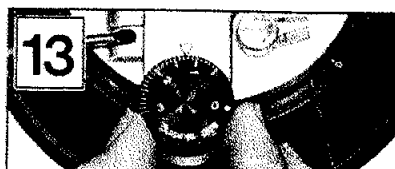
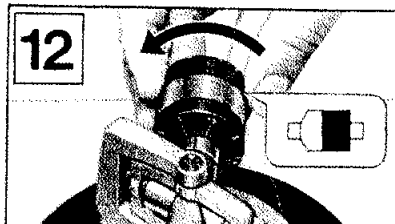
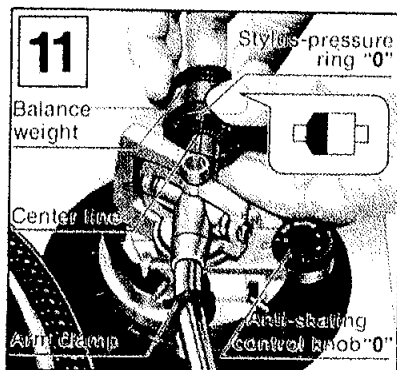
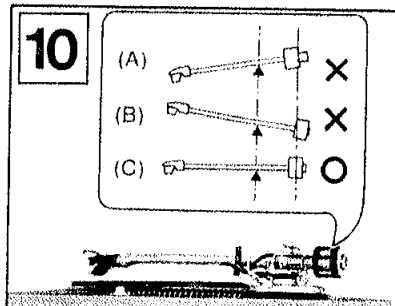
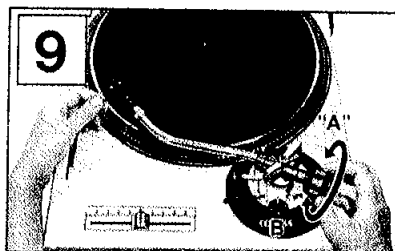
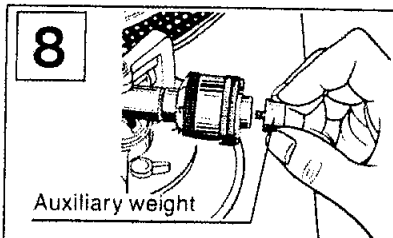
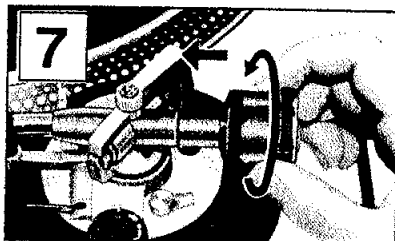
23 Stylus
illuminator switch

24 Stylus illuminator

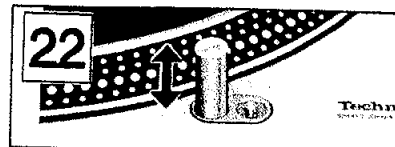
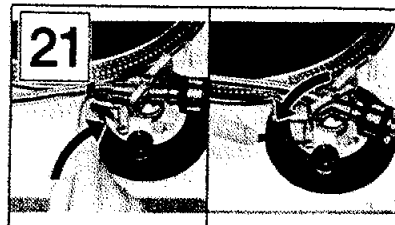
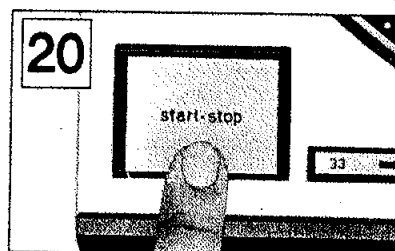
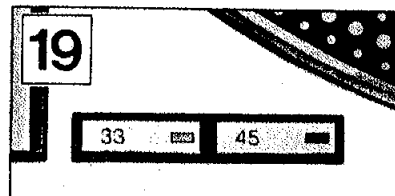
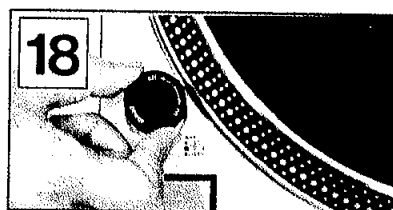
Assembly and set-up



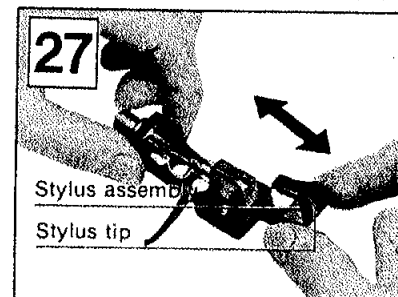
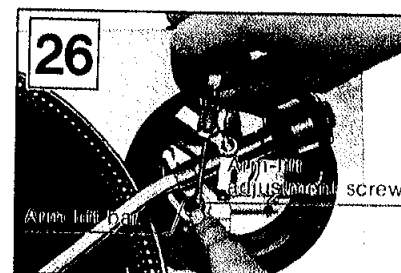
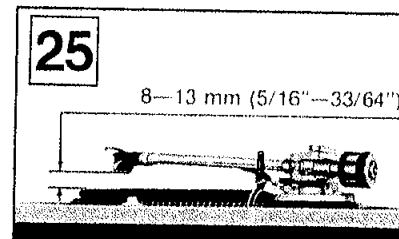
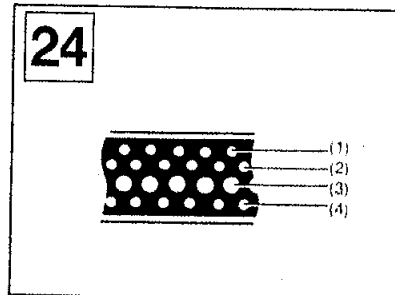
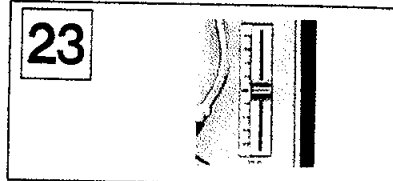
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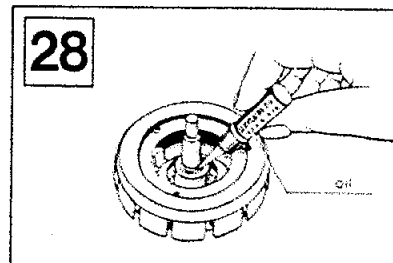
How to operate



Adjustments



Notes and maintenance



We want to thank you for selecting the SL-1200MK2/SL-1210MK2.

For optimum performance, we recommend that you read these instructions carefully.

Before use

Caution:

Never connect the AC power plug before assembly has been completed.

Attach the dust cover last, so that assembly and adjustments can be made most conveniently.

Note:

The operating instructions are commonly applicable to units with cartridge and without cartridge, and also to those of different colors.

For the units without cartridge, the cartridge section of the specifications may be neglected.

■ Checklist of parts

Turntable unit	1
Turntable platter	1
Turntable mat	1
Dust cover	1
45-rpm adaptor	1
Balance weight	1
Auxiliary weight	1
Headshell	1
Shell weight	1
Overhang gauge (for the unit without cartridge)	1

Assembly and set-up

■ Installation of turntable platter

1. Place the turntable platter on the center spindle.

Note:

The rotor is connected to the underside of the turntable platter. (The magnet of the motor is attached to the turntable platter.) To maintain optimum performance, extra care should be taken to prevent adhesion of dust or iron filings to the magnet and not to damage the magnet by dropping it.

Do not remove or loosen the screws. Should the position of the fixed magnet be altered by loosening the securing screws, the rated performance of the unit cannot be guaranteed. (See Fig. 2.)

2. Place the turntable mat on the platter.

■ Installation of cartridge (See Fig. 3.)

(For the unit without Cartridge)

When you install a cartridge, refer to the operation instructions of that cartridge.

During installation, attach the stylus protector to guard the stylus tip from damage.

1. Connect the lead wires to the cartridge terminals.
The terminals of most cartridges are color coded. Connect each lead wire to the terminal of the same color.
White (L+) **Left channel+**
Blue (L-) **Left channel-**
Red (R+) **Right channel+**
Green (R-) **Right channel-**
2. Install a cartridge to the headshell, and tighten it with screws provided with the cartridge.

Note:

Use the shell weight only for a lightweight cartridge (less than 6.0 g). (See Fig. 4.)

■ Adjustment of overhang (See Fig. 5-1.)

(For the unit with overhang gauge)

1. Insert the headshell into the gauge.
2. Loosen the mounting screws and move the cartridge forward or backward until the stylus tip lines up with the edge of the gauge.
3. Tighten the mounting screws without moving the cartridge.

Note:

Your cartridge is now adjusted for lowest tracking error and minimum distortion.

This gauge is exclusively designed for this tonearm.

■ Adjustment of overhang (See Fig. 5-2.)

(For the unit without overhang gauge)

The overhang of this unit is 15 mm.

Loosen the mounting screw and move the cartridge forward or backward until the distance between the stylus tip and the plug becomes 52 mm (2-3/64") as shown in the picture.

Tighten the mounting screws without moving the cartridge. Adjust horizontal zero balance, stylus pressure and arm-lift height whenever you change the cartridge.

■ Installation of headshell (See Fig. 6.)

Insert the headshell into the front end of the tubular arm, and turn the locking nut clockwise (in the direction shown by the arrow "A"), with the headshell firmly held horizontally.

■ Installation of balance weight (See Fig. 7.)

Place the balance weight on the rear shaft of the tonearm.

Note:

In case the cartridge weight exceeds 10 g, it is necessary to fix the attached auxiliary weight over the rear shaft of the arm.

With this auxiliary weight in use, it is possible to use any cartridge whose weight is in the range of 9.5–13 g. (See Fig. 8.)

■ Adjustments of horizontal zero (0) balance and stylus pressure

1. Remove the stylus protector, if your cartridge has a detachable one. Be careful not to touch your fingers to the stylus tip.
2. Release the arm clamp and lift the tonearm from the arm rest to free it.
3. Turn the entire balance weight clockwise (indicated by the arrow "A") or counterclockwise (indicated by the arrow "B") until the tonearm is approximately balanced horizontally (floats freely). (See Figs. 9 and 10.)

Note:

(A)

Excessive forward advancement of the balance weight causes the cartridge side to be lowered.

(B)

Excessive backward retreatment of the balance weight causes the cartridge side to be raised.

(C)

Upon balancing between the balance weight and cartridge, the tonearm is held horizontal.

During the adjustment of the horizontal zero (0) balance, be careful that the stylus tip of the cartridge does not contact the turntable mat or turntable base.

4. After the tonearm is horizontally zero (0) balanced, temporarily refasten the tonearm with the arm clamp.

5. Hold the balance weight stationary with one hand as shown in the picture, and rotate only the stylus-pressure ring to bring the numeral "0" of the ring into alignment with the center line on the tonearm rear shaft. (See Fig. 11.)

The adjustment of the horizontal zero (0) balance is now completed.

6. After adjusting the horizontal zero (0) balance, turn the balance weight clockwise in the direction of the arrow and align to the correct stylus pressure. (See Fig. 12.) (Follow the cartridge manufacturer's recommendation.) As the stylus-pressure ring moves in step with the balance weight, proper stylus pressure can be selected by directly reading the graduated ring.

■ Adjustment of anti-skating control

Set the anti-skating control knob to the same value as the stylus pressure. (See Fig. 13.)

■ Adjustment of tonearm height (See Fig. 14.)

The height of the tonearm can be adjusted up to 6 mm and a scale is provided on the adjust ring in 0.5 mm increments. Be sure to set the proper arm height using the adjust scale and referring to the table below.

Before adjusting the tonearm height, unlock the tonearm by turning the arm lock knob.

Height of cartridge (mm) (H)	Scale reading on the arm-height adjust ring
15	0
16	1
17	2
18	3
19	4
20	5
21	6

For example, if the cartridge height is 17.5 mm, the arm-height adjust ring should be positioned at the intermediate location between 2 and 3 on the scale. (See Fig. 14.)

Caution:

Be sure to lock the tonearm by turning the arm lock knob in the direction indicated by the arrow after finishing the height adjustment for the tonearm.

■ Installation of dust cover (See Fig. 15.)

Place the dust cover in position from directly above, holding it at both sides. For detaching the dust cover, be certain first to raise it as illustrated before removal.

Note:

Opening or closing of the dust cover during play should be avoided. This may not only cause undesired vibrations, but also result in skipping of the stylus.

If you must open the dust cover during play, do so as gently as possible.

- The legs/insulators also have functions for adjusting the height of the turntable unit itself. After installing the unit in the place for use, adjust the legs to stabilize the main body horizontally. (See Fig. 16.)

Placement

- Place the unit in a stable and horizontal position, where there is little or no vibration.
- Locate the unit as far away from the speakers as possible and isolate the unit from sound radiation from them.
- Do not place the unit where it is exposed to direct sun, dust, moisture or heat.
- Keep it in a well ventilated place.
- When a radio is placed too close to the turntable and is played while the turntable is in operation, interference to AM/FM reception may result.

Connections

■ Connect the AC power plug

Connect the AC power plug to an AC wall socket.

Caution:

Make sure that the turntable's AC line-voltage selector is matched to your local voltage before connecting the AC power plug.

Never connect to a DC socket.

If the pre-selected voltage is different from your local voltage, turn the AC line-voltage selector with a screwdriver so that it corresponds to your local voltage.

The AC line-voltage selector is located under the turntable platter. (See Fig. 17.)

■ Connect the output terminals (See Fig. 17.)

Output terminals	Amplifier or Receiver
L (White) →	L Channel
R (Red) →	R Channel
GND (Spade lug) →	GND

Note:

Be sure to connect the ground terminal firmly to the amplifier or receiver. If this connection is not made or is loose, a power source "HUM" will result.

How to operate

1. Place a record on the turntable mat.
2. Turn the power switch to the "on" position.
(See Fig. 18.)
The speed indicator for 33-1/3 rpm and the strobe-illuminator will all light up.
Note:
Since the unit has been designed to select 33-1/3 rpm automatically each time you push the power switch to "on", push the 45 rpm speed select button if you play a 45 rpm record (See Fig. 19.)
3. Remove the stylus protector, if your cartridge has a detachable one.
4. Release the arm clamp.
5. Push the start/stop button. (See Fig. 20.)
The turntable platter will start to rotate.
6. Set the cueing lever to the up position. (See Fig. 21.)
7. Move the tonearm over the desired groove.
8. Set the cueing lever to the down position. (See Fig. 21.)
The tonearm will descend slowly onto the record and play will begin.
9. When play is finished, move the tonearm to the arm rest; secure the tonearm with the arm clamp.
10. Push the start/stop button.
After the turntable is brought to a stop by means of the electronic brake, turn off the power.
Note:
The electronic brake does not function if the power switch is turned off before the start/stop button is pushed.

■ How to suspend play

Set the cueing lever to the "up" position.
The stylus tip of the cartridge will be lifted from the record.

■ When you play a 45-rpm record with a large center hole

Place the 45-rpm adaptor on the center spindle. Push the 45 speed select button.

■ Stylus illuminator (See Fig. 22.)

This unit is provided with a stylus illuminator for illuminating the stylus tip during play.
By pressing the stylus illuminator switch, the stylus illuminator is raised into position for illuminating the stylus tip. When not in use, keep the stylus illuminator lowered through depression.

Note:

The switch must be firmly engaged.
Incomplete depression of the switch will not raise the illuminator even though the lamp is lit.

Adjustments

■ Pitch control (fine adjustment of speed) (See Figs. 23 and 24.)

When the pitch control knob is located at the center of the position after turning on the power, the green LED indicator is lit showing the operating condition for the predetermined speed (either 33-1/3 or 45 rpm). The pitch control is variable in a range of about $\pm 8\%$.

Figures on the indicator show approximate percentages for variable pitch control.

When the strobe dots in 4 stages marked at the peripheral edge of the turntable appear to be stationary, variation of individual pitches is shown. (See Fig. 24.)

When (1) appears stationary, it shows a +6% pitch variation.

When (2) appears stationary, it shows a +3.3% pitch variation.

When (3) appears stationary, it shows normal turntable speed, 33-1/3 or 45 rpm.

When (4) appears stationary, it shows a -3.3% pitch variation.

Note:

The strobe-illumination of this unit employs a strobe-illuminator LED synchronized with the precise quartz frequency.

For fine adjustment of the turntable speed, be sure to effect the adjustment according to the LED illumination.

The LED illumination is not synchronized using fluorescent lamps.

■ Adjustment of arm-lift height

(See Figs. 25 and 26.)

The arm-lift height (distance between the stylus tip and record surface when the cueing lever is raised) has been adjusted at the factory before shipping to approximately 8~13 mm.

If the clearance becomes too narrow or too wide, turn the adjustment screw clockwise or counterclockwise while pushing the arm lift down.

Clockwise rotation

—distance between the record and stylus tip is decreased.

Counterclockwise rotation

—distance between the record and stylus tip is increased.

Note:

As the adjusting screw has a hexagonal head, be sure to make the adjustment while depressing the arm lift, or the screw will not move freely.

Also be sure that the hexagonal head retracts correctly into the arm lift when the latter is released.

■ Replacement of stylus (for the unit with cartridge)

The unit is furnished with a diamond stylus.

The life of the stylus differs depending on the conditions of use, but it is recommended that you replace the stylus at the first sign of wear. About 500 hours of use is an approximate standard.

The replacement stylus for the unit is the EPS-207ED.

1. Remove the headshell/cartridge from the tubular arm.
Hold the stylus assembly with your fingers and withdraw it slantwise, as shown in the picture. (See Fig. 27.)
2. Align the new stylus assembly with the square opening of the cartridge main body, and push it into the opening positively as far as it will go

Notes and maintenance

- **Use utmost care when handling the platter and when placing it on the motor shaft to prevent possible damage to the magnet.**
- **Do not turn "on" the power supply, with the turntable platter detached.**
- **Before detaching or attaching the headshell, be sure to turn the power of the amplifier or receiver off.**
Detaching or attaching of the headshell with the volume control turned up may cause damage to the speakers.
- **When play is finished, be sure to secure the tonearm with the arm clamp.**
After play is finished, if the unit is not to be used for some time, care should be taken to secure the tonearm to protect the stylus tip.
For the same reason, the stylus protector should also be attached.
- **Dust and dirt should be carefully removed from stylus tip or records.**
Dust and dirt on the stylus tip or record may not only result in deterioration of tone quality, but also cause undue wear of the record and the stylus tip itself.
Special stylus tip brushes and record cleaners can be purchased in most electronic supply houses.
- **Wipe the headshell terminals from time to time.**
Dust and dirt at the headshell terminals may result in increased "HUM" noise or intermittent sound. Use a soft dry cloth to clean the headshell terminals.
- **Wipe the dust cover and turntable base with a soft, dry cloth.**
Never use any cleaners containing alcohol, benzine or thinner.
Use of a chemical dust cloth should also be avoided. Be sure that the dust cover is not exposed to insecticide spray.
To remove stubborn fingerprints or grease spots, detach the dust cover and disconnect the AC power plug.
Use a soft cloth slightly moistened with a mild soap and water solution.
Do not wipe the dust cover during play, or the tonearm may be attracted toward the dust cover due to the generation of static electricity.

■ Lubrication (See Fig. 28.)

Apply 2 or 3 drops of oil once after every 2000 hours of operation.

The time interval is much longer than that for conventional type motors (200–500 hours).

Please purchase original oil. (Part number is SFWO 010.)

■ Transportation of the unit to distant places for removal and the like.

Pack up the unit in the reverse order to that for unpacking, using the packing materials furnished when the unit was purchased. Should there be no such packing materials, be sure to take the following steps.

- Remove the turntable platter together with the turntable mat, and wrap it up to prevent any damage to them.
- Return the tonearm to the arm rest, and affix it with tape or the like.
- Remove the balance weight and the headshell/cartridge from the tonearm and then wrap them up to avoid any damage to them.
- Wrap up the turntable base with a blanket or soft paper also to prevent any possible damage to it.

Specifications

■ General

Power supply:	~110-120/220-240 V, 50 or 60 Hz
Power consumption:	13.5 W
Dimensions: (W×H×D)	45.3×16.2×36 cm (17-27/32"×6-19/64"×14-11/64")
Weight:	12.5 kg (27.6 lb)

■ Turntable section

Type:	Quartz direct drive Manual turntable
Drive method:	Direct drive
Motor:	Brushless DC motor
Turntable platter:	Aluminum diecast Diameter 33.2 cm (13-5/64") Weight 2 kg (4.4 lb.)
Turntable speeds:	33-1/3 rpm and 45 rpm
Starting torque:	1.5 kg·cm (1.3 lb·in)
Build-up characteristics:	0.7 s. from standstill to 33-1/3 rpm
Braking system:	Electronic brake
Wow and flutter:	0.01% WRMS* 0.025% WRMS (JIS C5521) ±0.035% peak (IEC 98A Weighted)

*This rating refers to turntable assembly alone, excluding effects of record, cartridge or tonearm, but including platter. Measured by obtaining signal from built-in frequency generator of motor assembly.

Rumble:	-56 dB (IEC 98A Unweighted) -78 dB (IEC 98A Weighted)
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■ Tonearm section

Type:	Universal
Effective length:	230 mm (9-1/16")
Arm height adjustment range:	0-6 mm
Overhang:	15 mm (19/32")
Effective mass:	12 g (without cartridge)
Offset angle:	22°
Friction:	Less than 7 mg (lateral, vertical)
Tracking error angle:	Within 2°32' (at the outer groove of 30 cm (12") record Within 0°32' (at the inner groove of 30 cm (12") record)
Stylus pressure adjustment range:	0-2.5 g
Applicable cartridge weight range:	6-10 g 13.5-17.5 g (including headshell)
(with auxiliary weight):	9.5-13 g 17-20.5 g (including headshell)
(with shell weight):	3.5-6.5 g 11-14 g (including headshell)
Headshell weight:	7.5 g

■ Cartridge section

Model No.	EPC-207C
Type:	Moving magnet
Frequency response:	20 Hz to 25 kHz 20 Hz to 15 kHz ±2 dB
Output voltage:	3 mV at 1 kHz 5 cm/s. zero to peak lateral velocity [8.5 mV at 1 kHz 10 cm/s. zero to peak 45° velocity (DIN 45500)]
Channel separation:	25 dB at 1 kHz
Channel balance:	Within 2 dB at 1 kHz
Compliance (dynamic):	10 × 10 ⁻⁸ cm/dyne at 100 Hz
Stylus pressure:	1.75 ±0.25 g (17.5 ±2.5 mN)
Load impedance:	47 kΩ to 100 kΩ
Weight:	5.6 g (cartridge only)
Replacement stylus:	EPS-207ED (Elliptical stylus)

Specifications subject to change without notice.
Weight and dimensions shown are approximate.

For longer and safer use of this unit

In order to receive the best service from this unit, and for the safest operation, carefully read the following information.

■ Power source

It is very dangerous to use this unit at a voltage which is different from the rated voltage.

There is danger of combustion if the unit is connected to a power source which is different from the rated voltage. Be very careful concerning this point.

Direct current cannot be used.

There are some places, such as ships, where direct current is used as the power source. Before connecting the unit, confirm the power source.

■ Connection of power cord

Be sure to never touch the power cord with wet hands because there is danger of electric shock. This is true, of course, of all electric equipment.

Do not pull the power cord.

Never pull the power cord to disconnect it. Always pull the plug only.

■ Location of unit

Choose a place which is not in direct sunlight.
Select a place which will assure good ventilation.

■ Never place heating equipment nearby.

Be sure to keep stoves and other sources of heat away from this unit, because heat radiated by such equipment may cause deformation of plastic parts or damage the cabinet, or, at worst, cause a fire.

■ Especially for families with children

Take care that no small items, such as metal objects, are put inside this unit.

In addition, children should be especially warned not to put anything into the ventilation holes, such as toys or a screw-driver, because these things may cause an electric shock or result in a malfunction of the unit.

■ If water spills on the unit.

If water should happen to spill on the unit, from an overturned vase for example, there is danger of fire or electric shock. Disconnect the power plug from the electric outlet immediately, and contact the store from which the unit was purchased.

■ **Reconstruction can cause accidents.**

Absolutely never try to remodel, reconstruct or repair this unit yourself. Do not attempt to touch any internal parts because to do so may result in an electric shock or other accident.

■ **Be sure the power is off.**

After you have finished using this unit, check once more to be sure that the power is off. If the unit is left with the power on for a long period of time, it may not only be damaged, thus shortening its useful life, but may also lead to a dangerous accident.

Features

■ **Total quartz locked continuous pitch adjustment about $\pm 8\%$**

Quartz-phase-locked control means almost perfect accuracy of turntable rotation.

But with most quartz turntables, this accurate control circuit must be cut out when the pitch control is employed.

With the SL-1200MK2/SL-1210MK2, however, pitch is variable continuously (analogically) by up to approximately $\pm 8\%$ under total quartz-locked control. The pitch is controlled with a large sliding lever, located to the right of the turntable platter.

Four lines of platter markings are also provided indicating $+6\%$, $+3.3\%$, 0% (exact rated speed) and -3.3% change from rated speed.

■ **Aluminum diecast cabinet and special heavy rubber base material provide acoustic isolation**

The effects of external vibrations are dramatically reduced in the turntable by this new turntable construction.

The turntable base is precision-made aluminum diecast. And the underside of the main base is made of a heavy rubber material (special one-piece molding) which has excellent vibration resistance and absorbing characteristics. The turntable platter is also vibration-damped with specially fabricated rubber matting in the underside along with the thick turntable sheet (rubber mat). Four large-size insulating feet also help to absorb unwanted vibrations.

These features make the SL-1200MK2/SL-1210MK2 ideal for use with extra-high sound pressure levels.

■ **High torque for fast starts**

The integral rotor/platter motor delivers $1.5 \text{ kg} \cdot \text{cm}$ ($1.3 \text{ lb} \cdot \text{in}$) starting torque. This high torque gives very quick starts enabling the platter to reach $33\frac{1}{3} \text{ rpm}$ within 0.7 s . (a quarter of a turn). This is a big advantage in many professional applications where fast cueing is a necessity.

■ **Stylus illuminator for low-light conditions**

■ **High sensitivity, low mass, gimbal suspension tonearm**

The highly sensitive tonearm features a genuine gimbal suspension, the rotational center of which is precisely defined at one point. Bearings are finished to a tolerance of $\pm 0.5 \text{ microns}$. This, and the extra-closeness of pivot center to the bearings, result in the minimal friction of 7 mg (0.007 g) for both horizontal and vertical movement. Add to this the low 12-gram effective tonearm mass (including headshell,

without cartridge) and you have a tonearm compatible with the wide range of compliances found in today's cartridges. If you choose a popular high compliance MM cartridge, the low range resonance frequency will appear in the correct area to avoid warp frequencies of records, but without entering the low end of the audio spectrum. This tonearm is provided with a computer designed, light-weight, high-rigidity headshell made of single-piece diecast aluminum to resist partial vibration. The universal design allows headshell interchangeability. Contacts are gold-plated.

■ **Helicoid tonearm height adjustment**

Arm height is adjustable within a range of 6 mm to accommodate varying cartridge dimensions. Adjustments are done with a precision-made helicoid.

■ **Other fine features**

- Quick stops are achieved with a fully electronic braking system.
- A strobe illuminator is provided. The stroboscope is controlled by the extremely stable quartz oscillator, rather than potentially unstable AC line frequency.
- Power on/off control built-into strobe illuminator for ease of operation.
- Soft-touch start/stop switch allowing precision control capability without the annoyance of accidental operation.
- Technics integral rotor/platter motor construction with full cycle detection FG.

Service Manual

Supplement
New

hart
Schonwieser
SFUP122-23
SFUP122-24
SFUM102NO4

Turntable System

SL-1200MK2

[M], [MC],

[E], [EK], [XL], [EG], [EB], [EH],

[EF], [EI], [XA], [PA], [PE], [PC]

SL-1210MK2

[E], [EG], [EH]



*SL-1200MK2 is the model for silver type.

*SL-1210MK2 is the model for black type of SL-1200MK2.

Areas

- * [M] is available in the U.S.A.
- * [MC] is available in Canada.
- * [E] is available in Switzerland and Scandinavia.
- * [EK] is available in United Kingdom.
- * [XL] is available in Australia.
- * [EG] is available in F.R. Germany.
- * [EB] is available in Belgium.
- * [EH] is available in Holland.
- * [EF] is available in France.
- * [EI] is available in Italy.
- * [XA] is available in Southeast Asia, Oceania, Africa, Middle Near East and Central South America.
- * [PA] is available in far East PK.
- * [PE] is available in European Military.
- * [PC] is available in European Audio Club.

Please use this manual together with the service manual for Model No. SL-1200MK2/1210MK2.

English

Specifications

Specifications are subject to change without notice for further improvement.
Weight and dimensions shown are approximate.

General

Power supply: 120V, AC 60 Hz (For [M], [MC] areas)
~110-120/220-240V, 50 or 60 Hz
(For other areas)

Power consumption: 14 W (For [M], [MC] areas)
13.5 W (For other areas)

Dimensions: 45.3 x 16.2 x 36 cm

(17.27/32" x 6.19/84" x 14.11/64")

Weight: 12.5 kg (27.6 lb)

Turntable section

Type: Quartz direct drive
Manual turntable

Drive method: Direct drive

Motor: Brushless DC motor

Turntable platter: Aluminum diecast
Diameter 33.2 cm (13.5/64")
Weight 2 kg (4.4 lb)

Turntable speeds: 33-1/3 rpm and 45 rpm

Starting torque: 1.5 kg · cm (1.3 lb · in)

Build-up characteristic: 0.7 s. from standstill to 33-1/3 rpm

Braking system: Electronic brake

Wow and flutter: 0.01% WRMS*

0.025% WRMS (JIS C5621)

± 0.035% peak (IEC 98A Weighted)

* This rating refers to turntable assembly alone, excluding effects of record, cartridge or tonearm, but including platter.

Measured by obtaining signal from built-in frequency generator of motor assembly.

Rumble: -55 dB (IEC 98A Unweighted)

-78 dB (IEC 98A Weighted)

Matsushita
Service Call
30 Meadow
Secaucus, NJ

Panasonic-CENTRE NEDERLAND
servicom bv

Technics

Pans
Matsushita Elec
1-2, Ichome, Shibuya

Balie Service Manual

SL-1200MK2/1210MK2

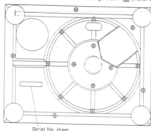
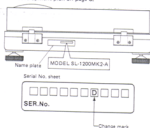
■ Tonarm section

Type:	Universal
Effective length:	230 mm (9-1/16")
Arm height adjustment range:	0 - 6 mm
Overhang:	15 mm (19/32")
Effective mass:	12 g (without cartridge)
Offset angle:	22°
Friction:	Less than 7 mg (lateral), vertical
Tracking error angle:	Within 2°32' (at the outer groove of 30 cm (12") record Within 0°32' (at the inner groove of 30 cm (12") record)

Stylus pressure adjustment range:	0 - 2.5 g
Applicable cartridge weight range:	6 - 10 g
(with auxiliary weight):	13.5 - 17.5 g (including headshell)
(with shell weight):	9.5 - 13 g
(with shell weight):	17 - 20.5 g (including headshell)
(with shell weight):	2.5 - 6.5 g
(with shell weight):	11 - 14 g (including headshell)
Headshell weight:	7.5 g

Notes

- To improve the performance of SL-1200MK2/1210MK2, the bottom structure and circuit are changed in the course of production.
- After the change, SL1200MK2-A/1210MK2-A is indicated in the name plate as the model of the set. It is discriminated from before-change set by -A. Also, check that the present change is of the sets after the change mark  shown in the serial No. sheet attached to the bottom and carton box.
- This supplement service manual contains the bottom plate disassembly procedure, change part No., circuit diagram, P.C.B. and block diagrams. The other contents are the same as for the service manual of SL-1200MK2/1210MK2 already issued.
- Sets with cartridge (EPC-207C) are included in those for same areas.
- Since the power transformer fitting method is different for sets with serial number sheet change mark , refer to the development plan on page 8.



Deutsch

TECHNISCHE DATEN

Änderungen der technischen Daten vorbehalten.
Die angegebenen Gewichts- und Abmessungsdaten sind ungefähre Werte.

■ Allgemeine Daten

Bromversorgung:	~ 110-120/220-240 V, 50/60 Hz
Leistungsaufnahme:	Wechselstrom
Abmessungen:	13.5 W
(B x H x T):	45.3 x 16.2 x 36 cm
Gewicht:	12.5 kg

■ Plattenspieler

Typ:	Manueller Quasi-Direktantrieb-Plattenspieler
Antrieb:	Direktantrieb
Motor:	Kollektionsloser Gleichstrommotor
Plattenteller:	Aluminium-Spritzguss
	Durchmesser 33.2 cm
	Gewicht 2 kg

Plattenteller-Drehzahlen:	33-1/3 und 45 U/min
Antriebsmoment:	1.5 kg · cm
Drehzahl-Hochlaufzeit:	0.7 s. vom Stillstand auf 33-1/3 U/min
Bremsystem:	Elektronische Bremse
Gleichlaufschwankungen:	0.01% WRMS*
	0.025% WRMS (JIS C5621)
	± 0.035% Spitze (IEC 96A bewertet)

* Diese Kennzeichnung bezieht sich auf das Laufwerk-Bauteil allein, ausschließlich Einflüsse von Schallplatte, Tonabnehmer oder Tonarm, aber einschließlich Plattenteller.
Gemessen anhand von Signalen vom eingebauten Frequenzgenerator des Motorbauteils.

Rumpel-Geräuschspannungsbereich:	-56 dB (IEC 96A unbewertet)
	-78 dB (IEC 96A bewertet)

• How to remove the hinge case

1. Remove the bottom cover. (Refer to "How to remove the bottom cover".)
2. Remove the 4 setscrews (Fig. 2 : ⑤) of the hinge case bracket.
3. Remove the 4 setscrews (Fig. 2 : ⑥) of the hinge case.

Note: The other disassembly procedure are the same as for before-change sets.

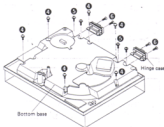


Fig. 2

■ REPLACEMENT PARTS LIST

Notes:

1. This parts list mentions only the difference between before and after change of SL-1200MK2/1210MK2.
2. ⑤-marked parts are used only for SL-1210MK2 (black type). And ⑥-marked parts are used for SL1200MK2 (silver type).
3. Parts other than ⑤- and ⑥-marked are used for both SL-1210MK2 and SL-1200MK2.
4. The "⑤" mark is service standard parts and may differ from production parts.

Areas

- [M] is available in the U.S.A.
- [MC] is available in Canada.
- [E] is available in Switzerland and Scandinavia.
- [EK] is available in United Kingdom.
- [XL] is available in Australia.
- [G] is available in F.R.G. Germany.
- [SB] is available in Belgium.
- [EH] is available in Holland.
- [EP] is available in France.
- [E] is available in Italy.
- [XA] is available in Southeast Asia, Oceania, Africa, Middle Near East and Central South America.
- [PA] is available in far East PK.
- [PE] is available in European Military.
- [PC] is available in European Audio Club.

The Substituted only by ID-11

Ref. No.	Change of Part No.		Part Name & Description	Per Set (Pcs.)	Remarks
	SL-1200MK2 (Before Change)	SL-1200MK2/1210MK2 (After Change)			
INTEGRATED CIRCUIT					
IC302	5V1TC40118P	MN40118	NAND Gate	1	
TRANSISTOR					
Q1	2SD389A—Q	2SD1265	Regulator	1	
DIODES					
D1	5VD51R8A40	5VD51R8A20Z	Rectifier	1	△
Q201, 202	5VDSR-105C	5VDP3902S-9	Speed Indicator	2	
Q203 ~ 206	5VDSR9505S	5VDSLH54VT3	Strobe	4	
D401	5VD5L-8P02	5VDSL-8N02	Pitch Indicator	1	
CRYSTAL					
X301	5VQJ306115	5VQMS4193	4.193 MHz Oscillator	1	
VARIABLE RESISTORS					
VR301	5VMH2GA00853	5VMH1GA00823	Pitch Control Adjustment, 2kΩ (B)	1	
VR303	5VB05C19A8E	5FDZ122N11	Pitch Control	1	
SWITCHES					
S203	5FOS556GL13C	5FOS5501GL13	Start/Stop	1	
S601	5FOS556GL13S	5FOS556GL13P	Power	1	△
TRANSFORMER					
T1	SLT60EU78	SLT66DTL3A [M]	Power Source	1	△
T1	SLT60E31C	SLT66DT14C [MC]	Power Source	1	△
T1	SLTF9900	SLT66DT13A [Other areas]	Power Source	1	△

Ref. No.	Change of Part No.		Part Name & Description	Per Set (Pcs.)	Remarks
	SL-1200MK2 (Before Change)	SL-1200MK2/1210MK2 (After Change)			
RESISTORS					
R4	ERD25FJ561	ERD25FJ471	Carbon, 1/8W, 470Ω	1	⑤
R209	ERD25TJ154	ERD25TJ334	Carbon, 1/8W, 330kΩ	1	⑤
R211	ERD25FJ103	ERD25FJ472	Carbon, 1/8W, 4.7kΩ	1	⑤
R212	ERD25FJ121	ERD25FJ151	Carbon, 1/8W, 150Ω	1	⑤
R222	Addition	ERD25FJ391	Carbon, 1/8W, 390Ω	1	⑤
R301	ERD25CKF3301	ERD25CKF2701	Metal Film, 1/4W, 2.7kΩ	1	⑤
R304	ERD25FJ152	ERD25FJ561	Carbon, 1/4W, 560Ω	1	⑤
R401	Addition	ERD50FJ152	Carbon, 1/2W, 1.5kΩ	1	⑤
R601	ERD25FJ4R7	ERD50FJ4R7	Carbon, 1/2W, 4.7Ω	1	⑤
CAPACITORS					
C5, 6	Addition	ECQM1223KZ	Polyester, 125V, 0.022μF	1	⑤
C104 ~ 107	ECQM1H104KZ	ECQM1H104JZ	Polyester, 50V, 0.1μF	4	⑤
C109, 110	ECQM1H104KZ	ECQM1H104JZ	Polyester, 50V, 0.1μF	2	⑤
C111	ECQM1H562KZ	ECQM1H562JZ	Polyester, 50V, 0.0056μF	1	⑤
C204	ECQM1H473KZ	ECQM1H473JZ	Polyester, 50V, 0.047μF	1	⑤
C210	ECQM1H224KZ	ECQM1H224JZ	Polyester, 50V, 0.22μF	1	⑤
C211	ECQM1H473KZ	ECQM1H473JZ	Polyester, 50V, 0.047μF	1	⑤
C217 ~ 219	Addition	ECQD1H104ZF	Ceramic, 50V, 0.1μF	1	⑤
C301	ECQK1123FZ	ECQK1333FZ	Polyester, 125V, 0.033μF	1	⑤
C302	ECQK1123FZ	ECQK16620Z	Polyester, 125V, 0.0068μF	1	⑤
C305	ECQM1H122KZ	ECQM1H122JZ	Polyester, 50V, 0.0012μF	1	⑤
CABINET AND CHASSIS PARTS					
9	SFUP122-12	Deletion		0	
10	SFAC122-01	SFAC122-01	Cabinet (Silver)	1	○
		SFAC124501	Cabinet (Black)	1	⑤
25	SFXB122-02	SFXB122-06	Box, Drive	1	
33	SFGA001-02	SFGA122-03	Spring	1	
36	SFUP025-01	SFUP122-16 [M, MC, PA, PE, PC]	Bracket, AC Card	1	
	SFUP025X01	SFUP122X01 [Other areas]	Bracket, AC card	1	
38	SFUP132-03	SFGC122-03	Cushion	2	
40	SFUP122-10	Deletion		0	
42	SFKK122-03	SFKK122-03	Plate (Silver)	1	
		SFKK124501	Plate (Black)	1	
48	SFAU122-01	SFAU122-02	Bottom Base	1	
48-1	Addition	SFAU122-03	Bottom Cover	1	
49	SFUP122-05	SFUP122-23	Supporter (A), Hinge	2	
50	SFUP122-04	SFUP122-24	Supporter (B), Hinge	2	
51	SFUM170-07	SFUMM02N04	Case, Hinge	2	
55	SFNN122M01	SFNN122M10 [M]	Name Plate	1	○
	SFNN122C01	SFNN122C10 [MC]	Name Plate	1	○
	SFNN122S01	SFNN122S10 [E]	Name Plate	1	○
	SFNN122L01	SFNN122L10 [EK, XL]	Name Plate	1	○
	SFNN122X01	SFNN122X10 [XA]	Name Plate	1	○
	Addition	SFNN122P10 [PA, PE]	Name Plate	1	○
	Addition	SFNN122P11 [PC]	Name Plate	1	○
	SFNN122N01	SFNN122N10 [Other areas]	Name Plate	1	○
	Addition	SFNN124510 [E]	Name Plate	1	⑤
	Addition	SFNN124G10 [EG, EH]	Name Plate	1	⑤
56	SFX0122-01	Deletion		0	
57	SFX0122-02	Deletion		0	
58	SFAT122-01A	SFATM02N01A	Hinge	1	

SL-1200MK2/1210MK2

Ref. No.	Change of Part No.		Part Name & Description	Per Set (Pcs.)	Remarks
	SL-1200MK2 (Before Change)	SL-1200MK2/1210MK2 (After Change)			
TONEARM PARTS					
82	SFPAM18201K	SFPAM18201K	Tonearm As'y (Silver)	1	○
		SFPAM18202K	Tonearm As'y (Black)	1	⊗
79	SFPKB17201S	SFPKB17204S	Ring, Arm Base Operation	1	
82	SFGK132-01	SFGK132-01	Cap (Silver)	1	○
		SFGK133601	Cap (Black)	1	⊗
ACCESSORIES					
A1	SFNU122M01	SFNU122M06 [M]	Instruction Book	1	
	SFNU122C01	SFNU122C06	Instruction Book	1	
	SFNU122S01	SFNU122S01 [E]	Instruction Book	1	
	SFNU122G01	SFNU122G01 [E]	Instruction Book	1	
	Addition	SFNU122P01 [PA, PE, PC]	Instruction Book	1	
	SFNU122X01	SFNU122X01 [Other areas]	Instruction Book	1	
A2	SFWE010	SFWE122-01	45 Adaptor	1	
PACKING PARTS					
P1	SFHP122C01	SFHP122C02 [MC, EF]	Carton Box (Silver)	1	○
	SFHP122M01	SFHP122M02 [Other areas]	Carton Box (Silver)	1	○
		SFHP124S02	Carton Box (Black)	1	⊗
P9	Addition	SF310B3	Polyethylene Bag, Accessories	2	
P10	Addition	SF115	Polyethylene Bag, Shell Weight	1	
P11	Addition	SFHZ003M01	Polyethylene Bag, Dust Cover	3	
P12	Addition	SFH2122-01	Polyethylene Bag, 45 Adaptor	1	
P13	Addition	SFP189	Polyethylene Bag, Cords	2	

■ ADJUSTMENT POINTS

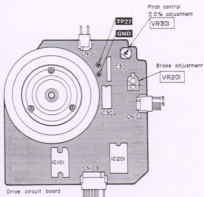


Fig. 3 (Abb. 3)

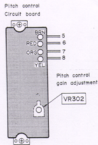


Fig. 4 (Abb. 4)

MEASUREMENTS AND ADJUSTMENTS English

• Conditions of set, and instruments used

1. Remove the panel cover.
2. Remove the bottom cover (when adjusting the pitch control gain).
3. Frequency counter
4. Tester

	Adjustment	Connection	Parts adjusted	Procedure
1	Pitch control $\pm 0\%$ adjustment	Frequency counter (+) — TP27 (-) — Earth point	VR301 (Fig. 3)	1. Connect the frequency counter and turn the power supply ON. 2. Set the pitch control knob to "0". (Indicator lights up.) 3. Adjust VR301 so that the frequency is $262.08 \text{ kHz} \pm 0.05 \text{ kHz}$.
2	Pitch control gain adjustment	Tester (+) — CN102 terminal ③ (-) — CN102 terminal ④	VR302 (Fig. 4)	1. Set the pitch control knob to "0". 2. Pull out the connector CN102 of drive P.C.B. 3. Connect the tester to terminals ③ and ④ of connector CN102 on the pitch control P.C.B. side. 4. Adjust VR302 so that the resistance value of the tester is $2.7 \text{ k}\Omega \pm 0.1 \text{ k}\Omega$.
3	Brake adjustment	—————	VR201 (Fig. 3)	1. Adjust VR201 so that the rotation at 33 r.p.m. stops within the angle of $90^\circ \sim 120^\circ$ after depressing the stop button.

MESSUNGEN UND JUSTIERUNGEN Deutsch

• Zustand des Gerätes und zu verwendende Instrumente

1. Die Abdeckplatte entfernen.
2. Die Bodenabdeckung entfernen (wenn die Drehzahlregelungs-Verstärkung justiert werden soll).
3. Frequenzzähler
4. Prüfgerät

	Justierung	Anschlüsse	Zu justierender Teile	Vorgehen
1	$\pm 0\%$ -Justierung des Drehzahlreglers	Frequenzzähler (+) — TP27 (-) — Messpunkt	VR301 (Abb. 3)	1. Frequenzzähler anschließen und Netzschalter einschalten. 2. Drehzahlreglerknopf auf "0" stellen. (Anzeige leuchtet auf.) 3. VR301 so justieren, daß die Frequenz $262.08 \text{ kHz} \pm 0.05 \text{ kHz}$ beträgt.
2	Justierung der Drehzahlregelungs-Verstärkung	Prüfgerät (+) — CN102 Anschluß ③ (-) — CN102 Anschluß ④	VR302 (Abb. 4)	1. Den Drehzahlreglerknopf auf "0" einstellen. 2. Steckverbindung CN102 von der Antriebsplatine herausziehen. 3. Prüfgerät an Anschlüsse ③ und ④ der Steckverbindung CN102 auf der Drehzahlreglerseite der Platine anschließen. 4. VR302 so justieren, daß der Widerstandswert des Prüfgerätes $2.7 \text{ k}\Omega \pm 0.1 \text{ k}\Omega$ beträgt.
3	Bremsjustierung	—————	VR201 (Abb. 3)	1. VR201 so justieren, daß die Rotation bei 33 UPM innerhalb $90^\circ \sim 120^\circ$ nach Drücken der Stop-Taste stoppt.

RESISTORS AND CAPACITORS

onsemi Parts

1. Part numbers are indicated on most mechanical parts. Please use this part number for parts orders.
2. Important safety notice:
Components identified by Δ mark have special characteristics important for safety. When replacing any of these components use only manufacturer's specified parts.
3. The "15" mark is service standard parts and may differ from production parts.
4. Bracketed indications in Ref. No. column specify the area. Parts without these indications can be used for all area.
5. The unit of resistance is Ω (ohm).
K = 1000 Ω , M = 1000K Ω
The unit capacitance is μ F (microfarad).
P = 10⁻⁶ μ F

Area

- * [M] is available in the U.S.A.
- * [MC] is available in Canada.
- * [E] is available in Switzerland and Scandinavia.
- * [EK] is available in United Kingdom.
- * [KL] is available in Australia.
- * [GG] is available in F.R. Germany.
- * [BB] is available in Belgium.
- * [EH] is available in Holland.
- * [EP] is available in France.
- * [EU] is available in Italy.
- * [XA] is available in Southeast Asia, Oceania, Africa, Middle Near East and Central South America.
- * [PA] is available in far East PK.
- * [PE] is available in European Military.
- * [PC] is available in European Audio Club.



Numbering System of Resistor

Example

ERD	25	P	J	101
Type	Wattage	Shape	Tolerance	Value
ERX	2	AN	J	2R2
Type	Wattage	Shape	Tolerance	Value

Resistor type	Wattage	Tolerance
ERD: Carbon	25 : 1/4W	F : $\pm 1\%$
ERG: Metal Oxide	50 : 1/2W	J : $\pm 5\%$
ERD: Metal Film	1A : 1W	
ERX: Metal Film	2A : 2W	

Numbering System of Capacitor

Example

ECKD	1H	102	Z	F
Type	Voltage	Value	Tolerance	Regularity
ECEA	50	M	R47	R
Type	Voltage	Regularity use	Value	Special use

Capacitor Type	Voltage	Tolerance
ECEA : Electrolytic	0J : 6.3V	J : $\pm 5\%$
ECBB : Electrolytic	1G : 16V	K : $\pm 5\%$
ECDD : Ceramic	1E : 25V	M : $\pm 20\%$
ECGM : Polyester	1H : 50V	Z : $\pm 80\% - 20\%$
ECGU : Polyester	1 : 100V	
ECQP : Polyester	1A : 125V	
ECNC : Polyester	4A : 400V	

Ref. No.	Part No.	Value	Ref. No.	Part No.	Value	Ref. No.	Part No.	Value	Ref. No.	Part No.	Value
RESISTORS			CAPACITORS								
R1	ERD25P100	5.6K	R210	ERD25P110	1.8K	C210	ECDDH100A2	0.22	C211	ECDDH100A2	0.22
R2	ERD25P100	5.6K	R211	ERD25P110	1.8K	C212	ECDDH100A2	0.22	C213	ECDDH100A2	0.22
R3	ERD25P100	2.7K	R212	ERD25P110	1.8K	C214	ECDDH100A2	470P	C215	ECDDH100A2	100
R4,5	ERD25P100	470	R213	ERD25P110	2.2K	C216	ECDDH100A2	100	C217	ECDDH100A2	100
R101	ERD25P110	10K	R214	ERD25P110	4.7K	C218	ECDDH100A2	100	C219	ECDDH100A2	100
R102	ERD25P110	10K	R215	ERD25P110	100K	C220	ECDDH100A2	100	C221	ECDDH100A2	100
R103	ERD25P110	4.7K	R216	ERD25P110	2.2K	C222	ECDDH100A2	100	C223	ECDDH100A2	100
R104	ERD25P110	47K	R217	ERD25P110	1K	C224	ECDDH100A2	100	C225	ECDDH100A2	100
R105	ERD25P110	10K	R218	ERD25P110	3.3K	C226	ECDDH100A2	100	C227	ECDDH100A2	100
R106	ERD25P110	15	R219	ERD25P110	22K	C228	ECDDH100A2	100	C229	ECDDH100A2	100
R107	ERD25P110	15	R220	ERD25P110	470	C230	ECDDH100A2	100	C231	ECDDH100A2	100
R108	ERD25P110	10K	R221	ERD25P110	470	C232	ECDDH100A2	100	C233	ECDDH100A2	100
R109	ERD25P110	4.7K	R222	ERD25P110	390	C234	ECDDH100A2	100	C235	ECDDH100A2	100
R110	ERD25P110	4.7K	R223	ERD25P110	2.7K	C236	ECDDH100A2	100	C237	ECDDH100A2	100
R201	ERD25P110	940	R224	ERD25P110	470	C238	ECDDH100A2	100	C239	ECDDH100A2	100
R202	ERD25P110	10K	R225	ERD25P110	6.2K	C240	ECDDH100A2	100	C241	ECDDH100A2	100
R203	ERD25P110	47	R226	ERD25P110	940	C242	ECDDH100A2	100	C243	ECDDH100A2	100
R204	ERD25P110	2.7K	R227	ERD25P110	180	C244	ECDDH100A2	100	C245	ECDDH100A2	100
R205	ERD25P110	120K	R228	ERD25P110	22K	C246	ECDDH100A2	100	C247	ECDDH100A2	100
R206	ERD25P110	18K	R229	ERD25P110	2.7K	C248	ECDDH100A2	100	C249	ECDDH100A2	100
R207	ERD25P110	94K	R230	ERD25P110	1.8K	C250	ECDDH100A2	100	C251	ECDDH100A2	100
R208	ERD25P110	220K	R231	ERD25P110	4.7K	C252	ECDDH100A2	100	C253	ECDDH100A2	100
R209	ERD25P110	330K	R232	ERD25P110	4.7K	C254	ECDDH100A2	100	C255	ECDDH100A2	100

■ REPLACEMENT PARTS LIST

- Notes:**
1. Part numbers are indicated on most mechanical parts. Please use this part number for parts orders.
 2. Important safety notice:
Components identified by Δ mark have special characteristics important for safety. When replacing any of these components use only manufacturer's specified parts.
 3. Bracketed indications in Ref. No. columns specify the area. Parts without these indications can be used for all areas.
 4. The "S" mark is service standard parts and may differ from production parts.
 5. The parenthesized numbers in the column of description stand for the quantity per set.
 6. $\otimes$ -marked parts are used only for SL-1210MK2 (black type). And $\circ$ -marked parts are used for SL-1200MK2 (silver type).
 7. Parts other than $\otimes$ - and $\circ$ -marked are used for both SL-1210MK2 and SL-1200MK2.

Area

- [M] is available in the U.S.A.
- [MC] is available in Canada.
- [E] is available in Switzerland and Scandinavia.
- [EK] is available in United Kingdom.
- [XL] is available in Australia.
- [EG] is available in F.R. Germany.
- [EB] is available in Belgium.
- [EH] is available in Holland.
- [EP] is available in France.
- [EI] is available in Italy.
- [XA] is available in Southeast Asia, Oceania, Africa, Middle Near East and Central South America.
- [PA] is available in far East FX.
- [PB] is available in European Military.
- [PC] is available in European Audio Club.

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
INTEGRATED CIRCUITS			CRYSTAL			LAMP		
IC19	AN6673	Tunable Drive	X201	SVCM34193	4.193MHz	PL	SP2102-20 X	1800000000
IC201	AN6682	Tunable Control						
IC302	MN0718	Push Control	VARIABLE RESISTORS			TRANSFORMER		
TRANSISTORS			VR201	$\otimes$ EV122MA02054	Break Adjustment	R1(MC)	Δ SL7MCT13A	Power Source
Q1	2SD1205	Regulator	VR301	$\otimes$ EVM113A00823	Push Control	R1(MC)	Δ SL7MCT14C	Power Source
Q2,3	2SD607	Regulator	VR302	$\otimes$ EV122MA02054	Push Control	R1(MC)	Δ SL7MCT15C	Power Source
Q201	$\otimes$ 2SD1845-A	Regulator				FUSES		
Q302	2SD607	LED Driver	VS201	$\otimes$ SP52122N1T	Push Control	F1(MC)	Δ KSA1712N14	125V 1.5A
Q303	$\otimes$ 2SD1338-T	PS Amp				F1(MC)	Δ KSA2020T1A	250V 7250mA
DIODES			SWITCHES			F1(MC)	Δ KSA2012T90	250V 71A
D1	Δ SVGD18BA202	Rectifier	S201,202	EVGPR04K	Speed Selector			
D2	MA1081	5.1V Zener	S203	SPGSS01SL13	Start/Stop			
S201,202	SVGPR09025-9	Speed Indicator	S401	SPGSS02ML-C	Style Indicator			
S203~206	SVGSLH4V73	Switch	S602	Δ SPGSS05SL13P	Power			
S204	MA1081	5.1V Zener	S602	Δ SPGSH09W0317	Voltage Selector			
S401	MA1081	5.1V Zener						
S402	$\otimes$ SVGSL4N52	Push Indicator						

Notes:

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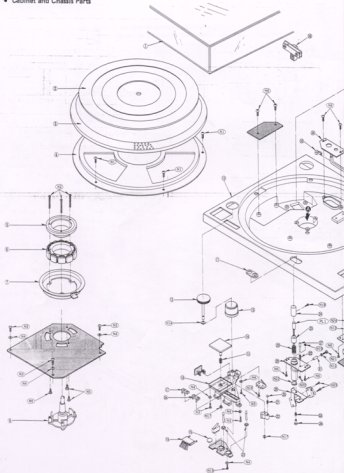
SL-1200MK2/1210MK2



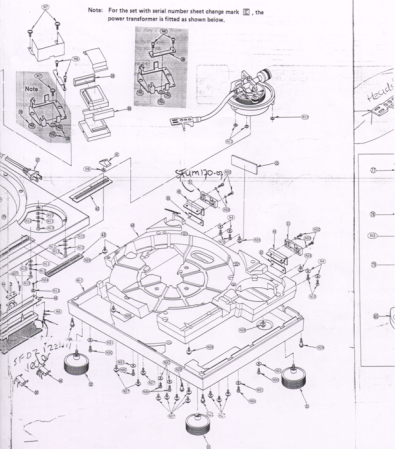
Ref. No.	Part No.	Description	Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
CHASSIS AND CHASSIS PARTS			TO NEARM PARTS			ACCESSORIES		
1	SPAC122-01	Coil Cover	62	SPG0122-02E	Insulator	N31	SWG32	Washer
2	SPG122-01A	Turntable Mat	63	SPK0122-02E	Button, Screw	N32	SWG114BV5	Screw
3	SPG122-01	Turntable Motor Assy	64	SPK0122-01	Name Plate	N33	SWG32	Washer
4	SPG122-05	Cover, Cabinet	65	SPK122015	Name Plate	N34	SPG025-1	Screw
5	SPG025-01	Cover, Drive Coil	66	SPK122016	Name Plate	N35	SWG114BV5	Screw
6	SPG025-01A	Drive Coil Assy	67	SPK122017	Name Plate	N36	KUC3PT	Crimp
7	SPG122-01E	PG Coil Assy	68	SPK122018	Name Plate	N37	SPG12201	Screw
8	SPG122-01E	PG Coil Assy	69	SPK122019	Name Plate	N38	SWG114BV5	Screw
9	SPG122-01A	Shift Assy, Turntable	70	SPK122020	Name Plate	N39	SWG114BV5	Washer
10	SPAC122-01	Cabinet (Silver)	71	SPK122021	Name Plate	N40	SWG114BV5	Screw
11	SPAC122001	Cabinet (Black)	72	SPK122022	Name Plate	N41	SWG32	Washer
12	SPG122-04	Ornament, Stylus	73	SPK122023	Name Plate	N42	SWG114BV5	Screw
13	SPG122-01	Hummer	74	SPK122024	Name Plate	N43	SWG32	Washer
14	SPG122-01E	Cass, Slide Hummer	75	SPK122025	Name Plate	N44	SWG114BV5	Washer
15	SPG122-06	Button, Start/Stop	76	SPK122026	Name Plate	N45	SWG114BV5	Washer
16	SPG122-01	Button, Speed	77	SPK122027	Name Plate	N46	SWG114BV5	Screw
17	SPG122-01E	Connector, Type	78	SPK122028	Name Plate	N47	SWG114BV5	Screw
18	SPG122-01	Spacer, Rubber	79	SPK122029	Name Plate	N48	SWG114BV5	Screw
19	SPG122-01	Ball, Switch Cam	80	SPK122030	Name Plate	N49	SWG114BV5	Screw
20	SPG122-01	Cass, Power Switch	81	SPK122031	Name Plate	N50	SWG114BV5	Screw
21	SPG122-01	Spacer, Speed Indicator	82	SPK122032	Name Plate	N51	SWG114BV5	Screw
22	SPG122-01	Cover/Slide Hummer	83	SPK122033	Name Plate	N52	SWG114BV5	Screw
23	SPG122-01	Base, Drive	84	SPK122034	Name Plate	N53	SWG114BV5	Screw
24	SPG122-01	Spring, Drive Base	85	SPK122035	Name Plate	N54	SWG114BV5	Screw
25	SPG122-01	Pin, Lock Connector	86	SPK122036	Name Plate	N55	SWG114BV5	Screw
26	SPG122-01	Bracket	87	SPK122037	Name Plate	N56	SWG114BV5	Screw
27	SPG122-01	Stylus Hummer	88	SPK122038	Name Plate	N57	SWG114BV5	Screw
28	SPG122-01	Plate, Lock Operation	89	SPK122039	Name Plate	N58	SWG114BV5	Screw
29	SPG122-01	Connector, Spin	90	SPK122040	Name Plate	N59	SWG114BV5	Screw
30	SPG122-01	Pin, Guide	91	SPK122041	Name Plate	N60	SWG114BV5	Screw
31	SPG122-01	Spring	92	SPK122042	Name Plate	N61	SWG114BV5	Screw
32	SPG122-01	Lock Connector	93	SPK122043	Name Plate	N62	SWG114BV5	Screw
33	SPG122-01	Spring	94	SPK122044	Name Plate	N63	SWG114BV5	Screw
34	SPG122-01	Lock Operation Plate	95	SPK122045	Name Plate	N64	SWG114BV5	Screw
35	SPG122-01	Pin	96	SPK122046	Name Plate	N65	SWG114BV5	Screw
36	SPG122-01	Lock Operation Plate	97	SPK122047	Name Plate	N66	SWG114BV5	Screw
37	SPG122-01	Clamp, AC Cord	98	SPK122048	Name Plate	N67	SWG114BV5	Screw
38	SPG122-01	Clamp, AC Cord	99	SPK122049	Name Plate	N68	SWG114BV5	Screw
39	SPG122-01	Clamp, AC Cord	100	SPK122050	Name Plate	N69	SWG114BV5	Screw
40	SPG122-01	Bracket, AC Cord	101	SPK122051	Name Plate	N70	SWG114BV5	Screw
41	SPG122-01	Bracket, AC Cord	102	SPK122052	Name Plate	N71	SWG114BV5	Screw
42	SPG122-01	Bracket, AC Cord	103	SPK122053	Name Plate	N72	SWG114BV5	Screw
43	SPG122-01	Bracket, AC Cord	104	SPK122054	Name Plate	N73	SWG114BV5	Screw
44	SPG122-01	Bracket, AC Cord	105	SPK122055	Name Plate	N74	SWG114BV5	Screw
45	SPG122-01	Bracket, AC Cord	106	SPK122056	Name Plate	N75	SWG114BV5	Screw
46	SPG122-01	Bracket, AC Cord	107	SPK122057	Name Plate	N76	SWG114BV5	Screw
47	SPG122-01	Bracket, AC Cord	108	SPK122058	Name Plate	N77	SWG114BV5	Screw
48	SPG122-01	Bracket, AC Cord	109	SPK122059	Name Plate	N78	SWG114BV5	Screw
49	SPG122-01	Bracket, AC Cord	110	SPK122060	Name Plate	N79	SWG114BV5	Screw
50	SPG122-01	Bracket, AC Cord	111	SPK122061	Name Plate	N80	SWG114BV5	Screw
51	SPG122-01	Bracket, AC Cord	112	SPK122062	Name Plate	N81	SWG114BV5	Screw
52	SPG122-01	Bracket, AC Cord	113	SPK122063	Name Plate	N82	SWG114BV5	Screw
53	SPG122-01	Bracket, AC Cord	114	SPK122064	Name Plate	N83	SWG114BV5	Screw
54	SPG122-01	Bracket, AC Cord	115	SPK122065	Name Plate	N84	SWG114BV5	Screw
55	SPG122-01	Bracket, AC Cord	116	SPK122066	Name Plate	N85	SWG114BV5	Screw
56	SPG122-01	Bracket, AC Cord	117	SPK122067	Name Plate	N86	SWG114BV5	Screw
57	SPG122-01	Bracket, AC Cord	118	SPK122068	Name Plate	N87	SWG114BV5	Screw
58	SPG122-01	Bracket, AC Cord	119	SPK122069	Name Plate	N88	SWG114BV5	Screw
59	SPG122-01	Bracket, AC Cord	120	SPK122070	Name Plate	N89	SWG114BV5	Screw
60	SPG122-01	Bracket, AC Cord	121	SPK122071	Name Plate	N90	SWG114BV5	Screw
61	SPG122-01	Bracket, AC Cord	122	SPK122072	Name Plate	N91	SWG114BV5	Screw
62	SPG122-01	Bracket, AC Cord	123	SPK122073	Name Plate	N92	SWG114BV5	Screw
63	SPG122-01	Bracket, AC Cord	124	SPK122074	Name Plate	N93	SWG114BV5	Screw
64	SPG122-01	Bracket, AC Cord	125	SPK122075	Name Plate	N94	SWG114BV5	Screw
65	SPG122-01	Bracket, AC Cord	126	SPK122076	Name Plate	N95	SWG114BV5	Screw
66	SPG122-01	Bracket, AC Cord	127	SPK122077	Name Plate	N96	SWG114BV5	Screw
67	SPG122-01	Bracket, AC Cord	128	SPK122078	Name Plate	N97	SWG114BV5	Screw
68	SPG122-01	Bracket, AC Cord	129	SPK122079	Name Plate	N98	SWG114BV5	Screw
69	SPG122-01	Bracket, AC Cord	130	SPK122080	Name Plate	N99	SWG114BV5	Screw
70	SPG122-01	Bracket, AC Cord	131	SPK122081	Name Plate	N100	SWG114BV5	Screw
71	SPG122-01	Bracket, AC Cord	132	SPK122082	Name Plate	N101	SWG114BV5	Screw
72	SPG122-01	Bracket, AC Cord	133	SPK122083	Name Plate	N102	SWG114BV5	Screw
73	SPG122-01	Bracket, AC Cord	134	SPK122084	Name Plate	N103	SWG114BV5	Screw
74	SPG122-01	Bracket, AC Cord	135	SPK122085	Name Plate	N104	SWG114BV5	Screw
75	SPG122-01	Bracket, AC Cord	136	SPK122086	Name Plate	N105	SWG114BV5	Screw
76	SPG122-01	Bracket, AC Cord	137	SPK122087	Name Plate	N106	SWG114BV5	Screw
77	SPG122-01	Bracket, AC Cord	138	SPK122088	Name Plate	N107	SWG114BV5	Screw
78	SPG122-01	Bracket, AC Cord	139	SPK122089	Name Plate	N108	SWG114BV5	Screw
79	SPG122-01	Bracket, AC Cord	140	SPK122090	Name Plate	N109	SWG114BV5	Screw
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82	SPG122-01	Bracket, AC Cord	143	SPK122093	Name Plate	N112	SWG114BV5	Screw
83	SPG122-01	Bracket, AC Cord	144	SPK122094	Name Plate	N113	SWG114BV5	Screw
84	SPG122-01	Bracket, AC Cord	145	SPK122095	Name Plate	N114	SWG114BV5	Screw
85	SPG122-01	Bracket, AC Cord	146	SPK122096	Name Plate	N115	SWG114BV5	Screw
86	SPG122-01	Bracket, AC Cord	147	SPK122097	Name Plate	N116	SWG114BV5	Screw
87	SPG122-01	Bracket, AC Cord	148	SPK122098	Name Plate	N117	SWG114BV5	Screw
88	SPG122-01	Bracket, AC Cord	149	SPK122099	Name Plate	N118	SWG114BV5	Screw
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90	SPG122-01	Bracket, AC Cord	151	SPK122101	Name Plate	N120	SWG114BV5	Screw
91	SPG122-01	Bracket, AC Cord	152	SPK122102	Name Plate	N121	SWG114BV5	Screw
92	SPG122-01	Bracket, AC Cord	153	SPK122103	Name Plate	N122	SWG114BV5	Screw
93	SPG122-01	Bracket, AC Cord	154	SPK122104	Name Plate	N123	SWG114BV5	Screw
94	SPG122-01	Bracket, AC Cord	155	SPK122105	Name Plate	N124	SWG114BV5	Screw
95	SPG122-01	Bracket, AC Cord	156	SPK122106	Name Plate	N125	SWG114BV5	Screw
96	SPG122-01	Bracket, AC Cord	157	SPK122107	Name Plate	N126	SWG114BV5	Screw
97	SPG122-01	Bracket, AC Cord	158	SPK122108	Name Plate	N127	SWG114BV5	Screw
98	SPG122-01	Bracket, AC Cord	159	SPK122109	Name Plate	N128	SWG114BV5	Screw
99	SPG122-01	Bracket, AC Cord	160	SPK122110	Name Plate	N129	SWG114BV5	Screw
100	SPG122-01	Bracket, AC Cord	161	SPK122111	Name Plate	N130	SWG114BV5	Screw
101	SPG122-01	Bracket, AC Cord	162	SPK122112	Name Plate	N131	SWG114BV5	Screw
102	SPG122-01	Bracket, AC Cord	163	SPK122113	Name Plate	N132	SWG114BV5	Screw
103	SPG122-01	Bracket, AC Cord	164	SPK122114	Name Plate	N133	SWG114BV5	Screw
104	SPG122-01	Bracket, AC Cord	165	SPK122115	Name Plate	N134	SWG114BV5	Screw
105	SPG122-01	Bracket, AC Cord	166	SPK122116	Name Plate	N135	SWG114BV5	Screw
106	SPG122-01	Bracket, AC Cord	167	SPK122117	Name Plate	N136	SWG114BV5	Screw
107	SPG122-01	Bracket, AC Cord	168	SPK122118	Name Plate	N137	SWG114BV5	Screw
108	SPG122-01	Bracket, AC Cord	169	SPK122119	Name Plate	N138	SWG114BV5	Screw
109	SPG122-01	Bracket, AC Cord	170	SPK122120	Name Plate	N139	SWG114BV5	Screw
110	SPG122-01	Bracket, AC Cord	171	SPK122121	Name Plate	N140	SWG114BV5	Screw
111	SPG122-01	Bracket, AC Cord	172	SPK122122	Name Plate	N141	SWG114BV5	Screw
112	SPG122-01	Bracket, AC Cord	173	SPK122123	Name Plate	N142	SWG114BV5	Screw
113	SPG122-01	Bracket, AC Cord	174	SPK122124	Name Plate	N143	SWG114BV5	Screw
114	SPG122-01	Bracket, AC Cord	175	SPK122125	Name Plate	N144	SWG114BV5	Screw
115	SPG122-01	Bracket, AC Cord	176	SPK122126	Name Plate	N145	SWG114BV5	Screw
116	SPG122-01	Bracket, AC Cord	177	SPK122127	Name Plate	N146	SWG114BV5	Screw
117	SPG122-01	Bracket, AC Cord	178	SPK122128	Name Plate	N147	SWG114BV5	Screw
118	SPG122-01	Bracket, AC Cord	179	SPK122129	Name Plate	N148	SWG114BV5	Screw
119	SPG122-01	Bracket, AC Cord	180	SPK122130	Name Plate	N149	SWG114BV5	Screw
120	SPG122-01	Bracket, AC Cord	181	SPK122131	Name Plate	N150	SWG114BV5	Screw
121	SPG122-01	Bracket, AC Cord	182	SPK122132	Name Plate	N151	SWG114BV5	Screw
122	SPG122-01	Bracket, AC Cord	183	SPK122133	Name Plate	N152	SWG114BV5	Screw
123	SPG122-01	Bracket, AC Cord	184	SPK122134	Name Plate	N153	SWG114BV5	Screw
124	SPG122-01	Bracket, AC Cord	185	SPK122135	Name Plate	N154	SWG114BV5	Screw
125	SPG122-01	Bracket, AC Cord	186	SPK122136	Name Plate	N155	SWG114BV5	Screw
126	SPG122-01	Bracket, AC Cord	187	SPK122137	Name Plate	N156	SWG114BV5	Screw
127	SPG122-01	Bracket, AC Cord	188	SPK122138	Name Plate	N157	SWG114BV5	Screw
128	SPG122-01	Bracket, AC Cord	189	SPK122139	Name Plate	N158	SWG114BV5	Screw
129	SPG122-01	Bracket, AC Cord	190	SPK122140	Name Plate	N159	SWG114BV5	Screw
130	SPG122-01	Bracket, AC Cord	191	SPK122141	Name Plate	N160	SWG114BV5	Screw
131	SPG122-01	Bracket, AC Cord	192	SPK122142	Name Plate	N161	SWG114BV5	Screw
132	SPG122-01	Bracket, AC Cord	193	SPK122143	Name Plate	N162	SWG114BV5	Screw
133	SPG122-01	Bracket, AC Cord	194	SPK122144	Name Plate	N163	SWG114BV5	Screw
134	SPG122-01	Bracket, AC Cord	195	SPK122145	Name Plate	N164	SWG114BV5	Screw
135	SPG122-01	Bracket, AC Cord	196	SPK122146	Name Plate	N165	SWG114BV5	Screw
136	SPG122-01	Bracket, AC Cord	197	SPK122147	Name Plate	N166	SWG114BV5	Screw
137	SPG122-01	Bracket, AC Cord	198	SPK122148	Name Plate	N167	SWG114BV5	Screw
138	SPG122-01	Bracket, AC Cord	199	SPK122149	Name Plate	N168	SWG114BV5	Screw

■ EXPLODED VIEWS

- Cabinet and Chassis Parts

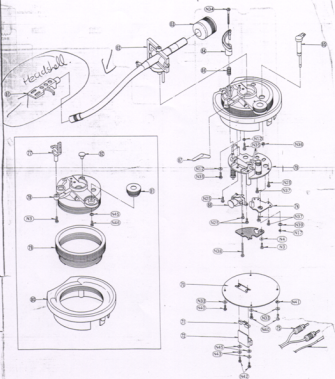


Note: For the set with serial number sheet change mark , the power transformer is fitted as shown below.



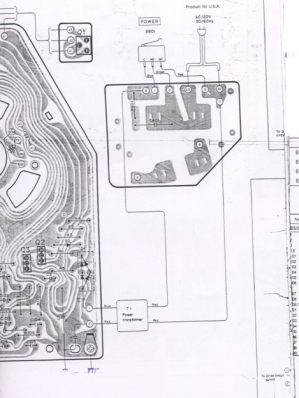
■ E

• Tonarm Parts



SL-1200MK2/1210MK2

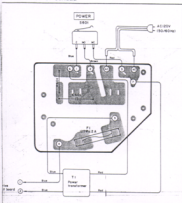
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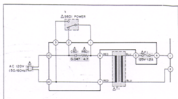
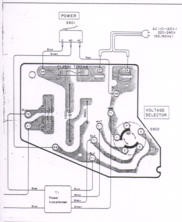
SL-1200MK2/1210MK2

• Power source circuit

* Product for Canada



* Product for [E], [EK], [XL], [EG], [EB], [EH], [EF], [EI], [XA], [PA], [PE] and [PC] areas



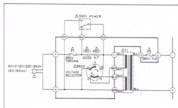
• Product for MC only

FUSE REPLACEMENT

⚡ Symbol located near the fuse indicates fast operating type. For continued protection against fire hazard, replace with same type fuse. Refer to the symbol for fuse rating.

FUSIBLE REMPLACEMENT

⚡ Le symbole qui se trouve près du fusible signifie un fusible à action rapide. Pour une protection conçue contre les risques d'incendie, n'utiliser que des fusibles du même type. Se reporter au symbole pour la valeur des fusibles.



■ SCHEMATIC DIAGRAM

(This schematic diagram may be modified at any time with the development of new technology.)

Notes:

1. S201, 202 : Speed selector switch.
2. S203 : Start/stop switch.
3. S301 : Pitch control reset switch in "off" position.
4. S401 : Stylus illuminator switch in "off" position.
5. S601 : Power switch in "on" position.
6. S602 : Voltage selector in "220 ~ 240" position.
7. The voltage value, and waveforms are the reference voltage values of this unit measured by DC electronic voltmeter (high-impedance) and oscilloscope on the basis of chassis. Therefore, the voltage value and waveform may include some error due to the internal impedance of the tester or the measuring set.
 *  is the voltage when turntable is in stop.
 *  is the voltage when turntable is in rotation. (at 33 rpm)
8.  +B voltage lines.
9. Important safety notice.
 Components identified by  mark have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.
10. The part No. of diodes mentioned in the schematic diagram stand for production part No. Regarding the part No. with  mark the production part No. are different from the replacement part No. Therefore, when placing an order for replacement part, please use the part No. in the replacement parts list.

IMPORTANT SAFETY NOTICE

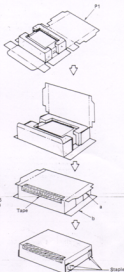
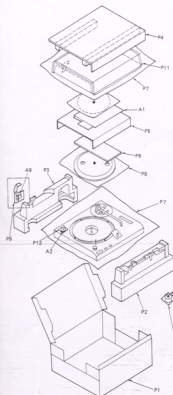
The shaded area on this schematic diagram incorporates special features important for protection from fire and electrical shock hazards. When servicing it is essential that only manufacturer's specified parts be used for the critical components in the shaded area of the schematic.

• Terminal guide of transistors, diodes and IC's

AN6675	AN6680	AN6682	SVD51RBA20P
			
MN4011B 14 Pin		2SD1285	MA150
			
2SC1328	2SC1846	2SD637 2SD641 2SD636 2SD643	MA1051
			
SVDR39025-9 SVD5LH54VT3	SVD5L-8PG2		
			

■ PACKING

1. Place the unit (with cushions attached) as illustrated.
2. Fold the flaps according to the line marks.
3. Seal the top with adhesive tape.
* Use gum tape or adhesive cloth tape of 50mm wide at least.
4. For the edges, first fold the flap "a" and then flap "b", and staple. Remember to staple only flap "b". (Use 15 or 16mm staple)



* Stapling positions are shown below.

