

# Service Manual

TT-15S1 /N1M/T1M

Turntable



## TABLE OF CONTENTS

SECTION	PAGE
1. TECHNICAL SPECIFICATIONS .....	1
2. EXPLODED VIEW AND PARTS LIST .....	2
3. USER GUIDE	

Please use this service manual with referring to the user guide ( D.F.U. ) without fail.  
修理の際は、必ず取扱説明書を準備し操作方法を確認の上作業を行ってください。

# marantz®

## TT-15S1

Part no. 90M31BW855020  
First Issue 2005.01  
MJJ

TT-15S1

## MARANTZ DESIGN AND SERVICE

Using superior design and selected high grade components, **MARANTZ** company has created the ultimate in stereo sound. Only original **MARANTZ** parts can insure that your **MARANTZ** product will continue to perform to the specifications for which it is famous.

Parts for your **MARANTZ** equipment are generally available to our National Marantz Subsidiary or Agent.

### ORDERING PARTS :

Parts can be ordered either by mail or by Fax.. In both cases, the correct part number has to be specified.

The following information must be supplied to eliminate delays in processing your order :

1. Complete address
2. Complete part numbers and quantities required
3. Description of parts
4. Model number for which part is required
5. Way of shipment
6. Signature : any order form or Fax. must be signed, otherwise such part order will be considered as null and void.

#### USA

**MARANTZ AMERICA, INC**  
1100 MAPLEWOOD DRIVE  
ITASCA, IL. 60143  
USA  
PHONE : 630 - 741 - 0300  
FAX : 630 - 741 - 0301

#### EUROPE / TRADING

**MARANTZ EUROPE B.V.**  
P. O. BOX 8744, BUILDING SILVERPOINT  
BEEMDSTRAAT 11, 5653 MA EINDHOVEN  
THE NETHERLANDS  
PHONE : +31 - 40 - 2507844  
FAX : +31 - 40 - 2507860

#### CANADA

**MARANTZ CANADA INC.**  
5-505 APPLE CREEK BLVD.  
MARKHAM, ONTARIO L3R 5B1  
CANADA  
PHONE : 905 - 415 - 9292  
FAX : 905 - 475 - 4159

#### AUSTRALIA

**QualiFi Pty Ltd,**  
24 LIONEL ROAD,  
MT. WAVERLEY VIC 3149  
AUSTRALIA  
PHONE : +61 - (0)3 - 9543 - 1522  
FAX : +61 - (0)3 - 9543 - 3677

#### THAILAND

**MRZ STANDARD CO., LTD**  
746 - 754 MAHACHAI ROAD.,  
WANGBURAPAPIROM, PHRANAKORN,  
BANGKOK, 10200 THAILAND  
PHONE : +66 - 2 - 222 9181  
FAX : +66 - 2 - 224 6795

#### SINGAPORE

**WO KEE HONG DISTRIBUTION PTE LTD**  
No.1 JALAN KILANG TIMOR  
#08-03 PACIFIC TECH CENTRE  
SINGAPORE 159303  
PHONE : +65 6376 0338  
FAX : +65 6376 0166

#### NEW ZEALAND

**WILDASH AUDIO SYSTEMS NZ**  
14 MALVERN ROAD MT ALBERT  
AUCKLAND NEW ZEALAND  
PHONE : +64 - 9 - 8451958  
FAX : +64 - 9 - 8463554

#### TAIWAN

**PAI- YUING CO., LTD.**  
6 TH FL NO, 148 SUNG KIANG ROAD,  
TAIPEI, 10429, TAIWAN R.O.C.  
PHONE : +886 - 2 - 25221304  
FAX : +886 - 2 - 25630415

#### MALAYSIA

**WO KEE HONG ELECTRONICS SDN. BHD.**  
2ND FLOOR BANGUNAN INFINITE CENTRE  
LOT 1, JALAN 13/6, 46200 PETALING JAYA  
SELANGOR DARUL EHSAN, MALAYSIA  
PHONE : +60 - 3 - 7954 8088  
FAX : +60 - 3 - 7954 7088

#### JAPAN *Technical*

**MARANTZ JAPAN, INC.**  
35- 1, 7- CHOME, SAGAMIONO  
SAGAMIHARA - SHI, KANAGAWA  
JAPAN 228-8505  
PHONE : +81 42 748 1013  
FAX : +81 42 741 9190

#### 日本マランツ株式会社

本社 〒228-8505  
神奈川県相模原市相模大野7-35-1

#### KOREA

**MK ENTERPRISES LTD.**  
ROOM 604/605, ELECTRO-OFFICETEL, 16-58,  
3GA, HANGANG-RO, YONGSAN-KU, SEOUL  
KOREA  
PHONE : +822 - 3232 - 155  
FAX : +822 - 3232 - 154

### SHOCK, FIRE HAZARD SERVICE TEST :

**CAUTION :** After servicing this appliance and prior to returning to customer, measure the resistance between either primary AC cord connector pins ( with unit NOT connected to AC mains and its Power switch ON ), and the face or Front Panel of product and controls and chassis bottom.

Any resistance measurement less than 1 Megohms should cause unit to be repaired or corrected before AC power is applied, and verified before it is return to the user/customer.

In case of difficulties, do not hesitate to contact the Technical Department at above mentioned address.

## 1. TECHNICAL SPECIFICATIONS

### TURNTABLE

Speed of rotation :	33 1/3 rpm / 45 rpm (78 rpm with optional motor pulley)
Drive unit :	Decoupled synchronous motor in a massive metal-housing, belt drive
Bearing :	Hardened steel, polished sinter bronze insert with a ceramic ball
Platter :	GS-PMMA, acrylic, precision CNC machined surface
Platter height :	30 mm
Speed variation :	±0.2 %
Signal to noise :	80 dB

### TONE ARM

ARM form :	Two-point vertical tone arm
Effective length :	239 mm
Overhang :	17 mm

### CARTRIDGE (CLEARAUDIO product)

Frequency Response :	20Hz - 20 kHz
Output voltage (1 kHz, 5 cm/s) :	≅ 3.6 mV
Channel separation :	> 30 dB
Channel balance :	< 0.2 dB
Recommendation needle pressure :	2.2 g
Impedance :	0.66 k ohm
Weight :	6.0 g

### ABOUT CARTRIDGE

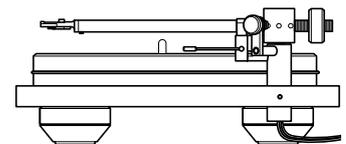
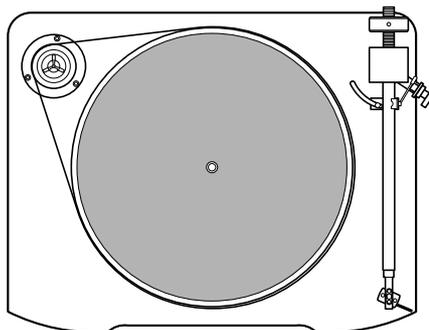
Exchange of only the needle of cartridge (CLEARAUDIO product) is impossible.

CARTRIDGE Service Spare Part no.: **MM new**

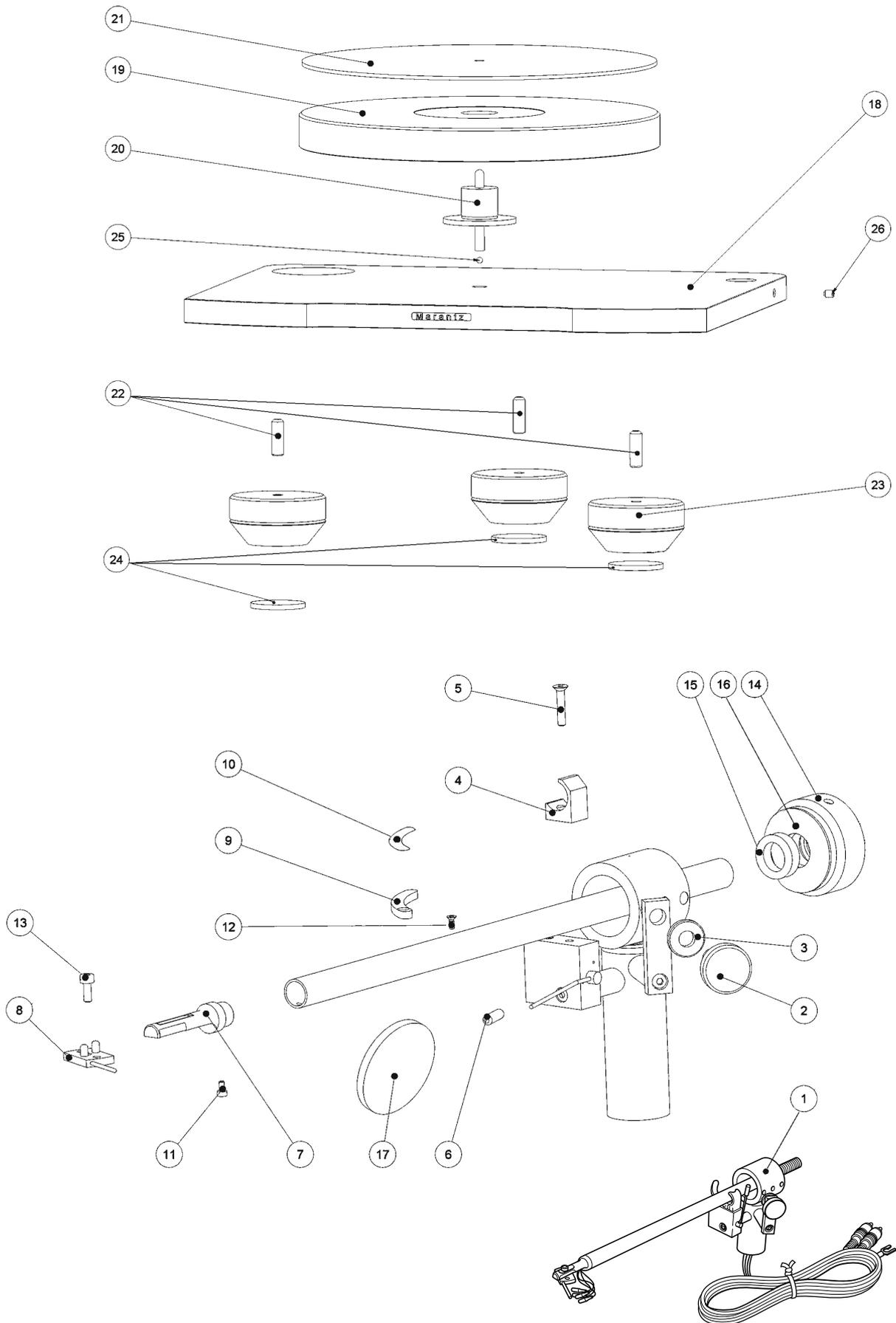


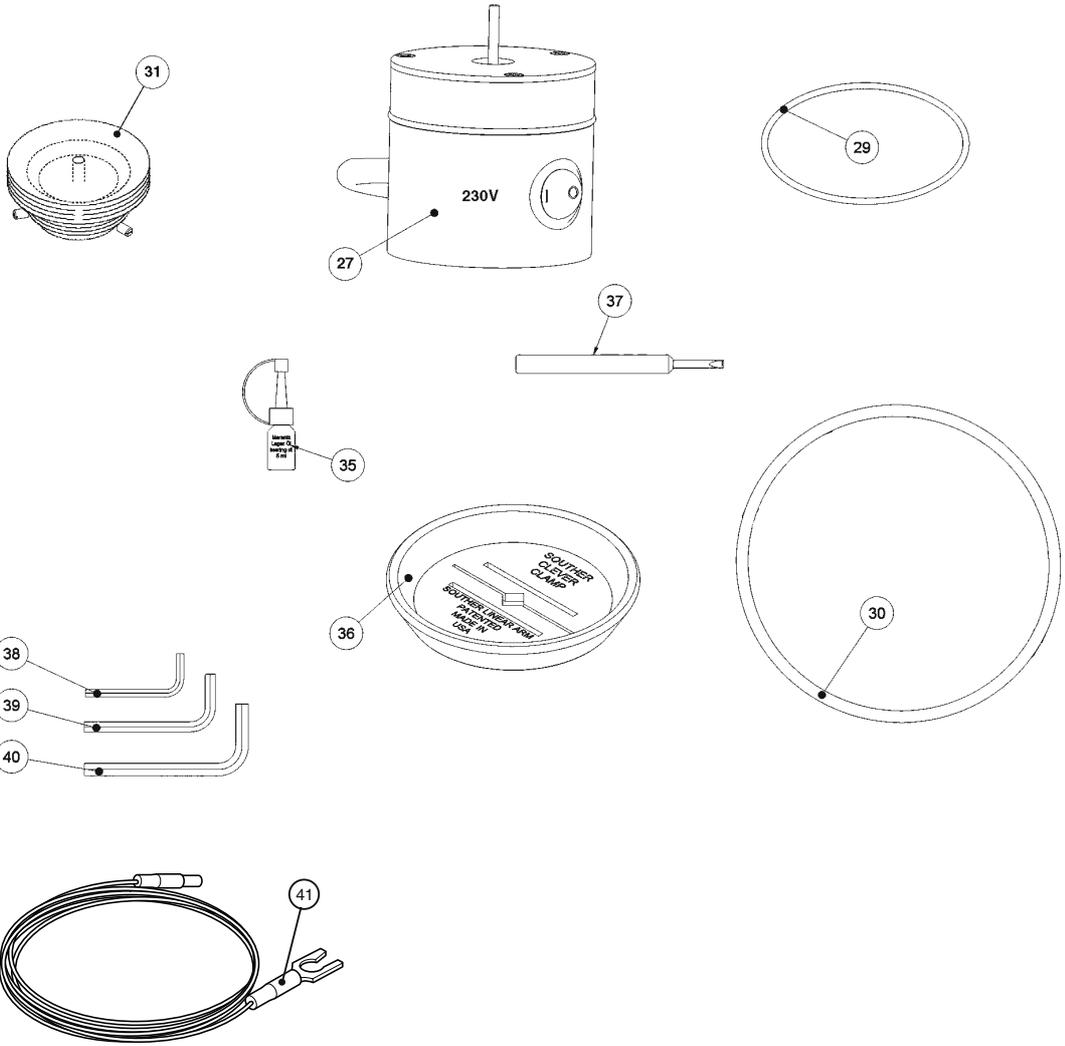
### GENERAL

Power requirement :	AC230V, 50 Hz
Power consumption :	5W
Dimensions :	Aprox. 400 mm x 330 mm x 150 mm
Net weight :	8.9 kg (Tone arm and Motor are included)



## 2. EXPLODED VIEW AND PARTS LIST





POS. NO.	VERS. COLOR	PART NO. (FOR EUR)	PART NO. (MJI)	PART NAME	DESCRIPTION	
		MM new	nsp	PHONO CARTRIDGE	VIRTUOSO MM NEW ELEMENT	MM New
1		SS-TT15/001	nsp	TONE ARM	TONE ARM ASSY	SS-TT15/001
4		SS-TT15/004	nsp	BRACKET	BRACKET FOR REST POSITION OF ARM	SS-TT15/004
5		SS-TT15/005	nsp	SCREW	SCREW FOR REST BRACKET M 3 X 16	SS-TT15/005
6		SS-TT15/006	nsp	KNOB	GRIP FOR TONE ARM LIFT	SS-TT15/006
7		SS-TT15/007	nsp	HOLDER	HEADSHELL UNIFY	SS-TT15/007
14		SS-TT15/014	nsp	WEIGHT	CONTRA WEIGHT	SS-TT15/014
15		SS-TT15/015	nsp	RING	O-RING FOR TONE ARM CONTRA WEIGHT	SS-TT15/015
18		SS-TT15/018	nsp	CHASSIS	MAIN CHASSIS	SS-TT15/018
19		SS-TT15/019	nsp	TURNTABLE	TURNTABLE 30MM	SS-TT15/019
20		SS-TT15/020	nsp	BRACKET	BEARING BRACKET UPPER PART	SS-TT15/020
21		SS-TT15/021	nsp	SHEET	SLIP MAT	SS-TT15/021
25		SS-TT15/025	nsp	SUSTAINER	CERAMIC BALL D=5	SS-TT15/025
27	/N1M /T1M	SS-TT15/027	nsp	PHONO MOTOR UNIT	MOTOR ASSY WITHOUT PULLEY	SS-TT15/027
29		SS-TT15/029	nsp	RING	O-RING	SS-TT15/029
30		SS-TT15/030	nsp	BELT	BELT SILICON, TRANSPARENT	SS-TT15/030
31	/N1M /T1M	SS-TT15/031	nsp	PULLEY	PULLEY (2 STAGES PULLEY) FOR EU VERSION	SS-TT15/031
36		SS-TT15/036	nsp	CLAMPER	CLEVER CLAMP	SS-TT15/036

NOTE : "nsp" PARTS IS LISTED FOR REFERENCE ONLY, MARANTZ WILL NOT SUPPLY THESE PARTS.

# marantz®

## Model TT-15S1 User Guide

---

Turntable

# FOREWORD

Congratulations to your choice of the TT-15S1 turntable, a world-class turntable, made by Marantz. Please read this user manual carefully, to avoid any damages or loss of warranty. These instructions will help you with an easy set-up and guarantee the highest pleasure for a long time. We wish you a lot of musical enjoyments with your new Marantz TT-15S1 turntable.

This section must be read before any connection is made to the mains supply.

## Warnings

Do not expose the equipment to rain or moisture.  
 Do not remove the cover from the equipment.  
 Do not insert anything into the equipment through the ventilation holes.  
 Do not handle the mains lead with wet hands.  
 No naked flame sources, such as lighted candles, should be placed on the equipment.

### CE MARKING



The Marantz TT-15S1 conforms with the EMC directive and low voltage directive.

### EQUIPMENT MAINS WORKING SETTING

Your Marantz product has been prepared to comply with the household power and safety requirements that exist in your area. This product can be powered by 230 V AC only.

### COPYRIGHT

Recording and playback of any material may require consent. For further information refer to the following:

- Copyright Act 1956
- Dramatic and Musical Performers Act 1958
- Performers Protection Acts 1963 and 1972
- Any subsequent statutory enactments and orders

## Table of contents

<b>Product description</b>	<b>2</b>
<b>Scope of supply</b>	<b>2</b>
<b>Installation and set up</b>	<b>4</b>
<b>Specific precautions</b>	<b>6</b>
<b>Service information</b>	<b>6</b>
<b>Technical Specifications</b>	<b>6</b>

# PRODUCT DESCRIPTION

The ultra low resonance construction in combination with a stand alone motor unit, guarantees total isolation of resonance from the turntable chassis, providing the best music reproduction and authentic audiophile imaging. A high precision, maintenance free ceramic bearing is completing the analogue pleasure.

However it's the sum of the individual parts that determines the quality of the Marantz TT-15S1 turntable. That is why Marantz has optimised the tonearm for the mechanism with a magnetic floating antiskating system and a matching ClearAudio Virtuoso MM cartridge executed in ebony wood.

# SCOPE OF SUPPLY

Marantz has developed a special and secure turntable packing, to avoid any transportation damages. Please store this original packing, in case you need to ship the turntable.

Please confirm the content of the packaging of the TT-15S1 based on the below overview.



1



3



2



4

- 1 Turntable chassis
- 3 Tonearm with counterweight and interconnects

- 2 Bearing (upper part) with adjusted bearing shaft
- 4 Turntable-Platter made from GS-Acryl



5



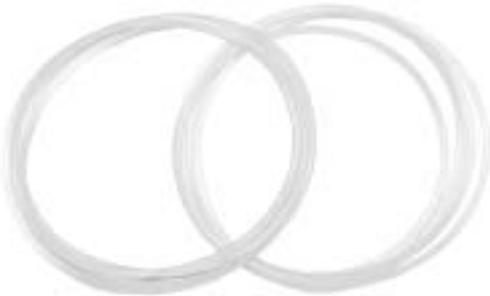
6



7



8



9



10



11



12



13

- 5 Motor drive unit with mains cable
- 7 A pair of white gloves
- 9 Two drive belts
- 11 Felt Sheet
- 13 Record clamp "Clever Clamp"

- 6 Acrylic motor pulley
- 8 Grounding wire for the turntables bearing
- 10 Bearing oil for occasional use
- 12 Three Allen keys (sizes: 1.5 / 2.5 / 3)

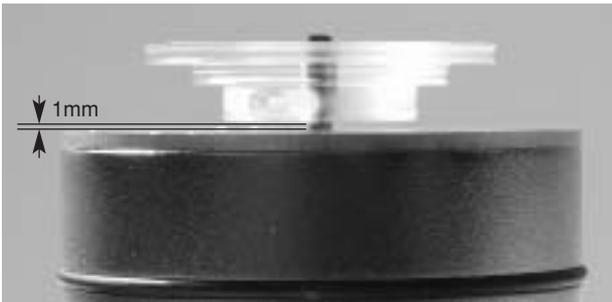
# INSTALLATION AND SET UP

The Marantz TT-15S1 comes in several pre mounted parts, as described in Scope of supply. The set up and installation is done quickly and very easy. Please use the white gloves during this procedure, to avoid scratches.

You should consider a safe and clean working area for the installation, in spite, as near as possible to the final position of the turntable.

First take out the accessories, the motor and the tonearm of the packing. Now you should take out the first packing layer. After that you can take out the turntable chassis including the mounted lower and upper bearing part from the second packing layer. Place the turntable chassis on its feet on the area where the final position of your turntable will be.

Take the motor-pulley out of the accessory bag and shift the motor pulley as far as on the motors' shaft until you have a distance of approximately 1 mm between the upper edge of the motor and the lower edge of the pulley. Now screw the three screws in the pulley one after the other with a screwdriver.



Lift the turntable chassis and slide the motor from below exactly under the predefined position hole in the chassis. Please pay attention that the switch of the motor is outside on the left side of the record player body. When the motor is at the right position carefully put the chassis down again.

After that you have to centre the motor in the motor-position hole without any contact to the turntable chassis. This way you can use your turntable perfectly decoupled from the motor.

Remove the second packing layer. In the bottom packing layer you will find the turntable platter. Please take the platter out with both hands. Place the platter with the 60mm wide and 5mm deep cut out on the upper bearing part. Through a lightly up and down movement the platter will slip onto the bearing upper part. Ensure with a gently (!) pressure that the platter is applying on the complete surface of the bearing.

Take the threaded bolt (M6 x 8) out of your accessory bag and screw it with the adequate Allen key into the winding near the tonearm cut of the turntable chassis, so that the front of the bolt is not facing out the inner side of the tonearm cut.

Position the enclosed counterweight on top of the chassis in front of the cut out for the tonearm. Take the tonearm and slide first the interconnect cable through the hole followed by the tonearm's shaft. Gently push the arm down into to the hole until the pickup lift is seated on the counterweight (see figure...). Please ensure that the tonearm tube is in parallel to the right edge of the turntable body. Now carefully fix by turning the pick up with an Allen key and afterwards remove the counterweight.



When the tonearm is fixed you can connect the cartridge to the tonearm. The guideway in the headshell simplifies the assembling. Please fix the cartridge, with the screw and appropriate allen key, to the tonearm when positioned at the lower threshold (see picture). In this position the cartridge and the arm will automatically have the correct angle and an optimised incline.



Carefully connect the cartridge to the tonearm cable. The headshell wires (cartridge connection leads) are colour coded according to the international standard and are given in the below overview:

**Colour code of the Satisfy tonearm wire:**

Signal left channel (L+)	white
Signal ground left channel (L -)	blue
Signal right channel (R+)	red
Signal ground right channel (R -)	green

**Important:** pay attention during the following steps to avoid any damages to the cartridge.

If you are using the enclosed ClearAudio Moving Magnet cartridge Virtuoso Wood you can adjust the force to 22 mN. Gently push the counterweight onto the pick up end so that the imprinted scale shows in the pick up system direction. When you let the pick up go, the counterweight moves down and the system up. Now remove the needle's protective cover and turn the counterweight in the system direction until the pick up is in balance and hovers freely. Please be careful not to damage the system's needle when doing this. The position you now have corresponds to a load weight of 0mN. With the scaling on the counterweight you can now adjust this to exactly 22mN. A complete revolution corresponds to 5mN, i.e. you must turn the counterweight 4 complete revolutions plus 2 scaled units in the system direction. Now the system has been lowered. Please take care to not damage the system's needle when doing this.

For the next settings place any LP on to the platter. Now you can remove the stylus protector. If you now lift down the cartridge to the middle of the turntable platter, you must see (from the side) that the upper edge of the tonearm tube is parallel to the surface of the record. You can use the tonearm tube as orientation. If it is necessary you can adjust the height of the tonearm. For that you have to move the tonearm in the chassis's hole in the right direction and fix the position through locking the Allen screw in the edge of the turntable chassis.

In order to finalize the general setup you have to adjust for antiskating. This is also related to the tracking force of the cartridge. With the antiskating screw (on the right hand sight of the main counter weight) you can complete the calibration of the tonearm. Given the tracking force of 22Nm, the screw should be in the middle position.



The fine-tuning can be done best when a well known recording containing a solo instrument or voice which should be located in the front centre position of the sound stage. In case the image has moved to much to the right hand sight of the sound stage, you should lower the antiskating by screwing the antiskatingscrew out. In case the image is positioned to much to the left hand sight you should increase the antiskating by screwing the antiskatingscrew in.

Connect your interconnect cable of your Marantz TT-15S1 now with the phono input of your phono-preamplifier and connect the power cord to the mains.

Place one drive belt (the second is for spare) around the platter and around the pulley. The smaller diameter of the pulley is used for 33 1/3 rpm and the larger diameter for 45 rpm. The position "I" on the motor-switch indicates that the turntable is switched on. Please let the turntable be switched on for the first 15 to 30 minutes, for breaking in.

It is recommended to connect the lower part of the bearing with the enclosed grounding cable to the grounding terminal on your amplifier.



You are completely set to play and enjoy your vinyl records on your Marantz TT-15S1 turntable.

# SPECIFIC PRECAUTIONS

Every two years you can lubricate (only if you will recognize speed variations) the bearing of the turntable platter with the delivered oil. In this case it is enough to put 4 or 5 drops of the oil into bearing. Please take special caution to any damages of the power cord. Any damages should only be repaired only by authorized personal. A damaged power cord must be exchanged immediately!

**Caution!** Please use only non-alcoholic fluids and only fluids specially used for acrylic, to clean the Emotion-turntable. Otherwise there could occur damage to the material or the surface!!!

# SERVICE AND REPAIR

Please contact your Authorized Marantz dealer nearby in case this manual didn't answer all your questions regarding your newly purchased Marantz product.

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

After the warranty period has expired, repairs will be performed for a charge if the equipment can be restored to normal operation. In the event of difficulty, consult your Authorized Marantz dealer. Please quote the model and serial number of the equipment and give a full description of what you think is abnormal about the equipment's behaviour.

# TECHNICAL SPECIFICATIONS

<b>Construction principle:</b>	Resonance optimised chassis shape, belt driven
<b>Speed possibilities:</b>	33 1/3 rpm / 45 rpm (78 rpm with optional motor pulley)
<b>Drive unit:</b>	Decoupled synchronous motor in a massive metal-housing
<b>Bearing:</b>	Hardened steel, polished sinter bronze insert with a ceramic ball
<b>Platter:</b>	GS-PMMA, acrylic, precision CNC machined surface
<b>Speed variation:</b>	±0,2 %
<b>Dimensions:</b>	Aprox. 400 mm x 330 mm x 150 mm
<b>Warranty:</b>	3 years (excluding the cartridge)