SME

SME

SME is an iconic brand founded in 1946 by audio legend Alastair Robertson-Aikman in West Sussex, England. Today SME is recognised as makers of the finest precision turntables and tonearms in the world. Entirely made in-house with state of the art manufacturing processes, complemented by traditional craftsmanship methods.

SME audio has evolved from 75 years of engineering excellence, innovation and perfection delivering precise and pure audio reproduction.

Audio Perfection

SME

MODEL 60
PRECISION TURNTABLE

INSTRUCTIONS

This is no ordinary turntable.
These instructions include unpacking, set up procedures and specifications.
Please read carefully.

Warning! Important Safety Instructions

CAUTION: RISK OF ELECTRIC SHOCK DO NOT REMOVE POWER UNIT COVERS.

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE THE POWER UNIT OR SPEED CONTROL UNIT COVER. THERE ARE NO USER SERVICEABLE PARTS INSIDE. REFER ALL SERVICING TO QUALIFIED PERSONNEL.

- Please read this manual carefully and keep it in a safe place for future reference.
- The vent slots in the Speed Control Unit are for necessary ventilation. To ensure reliable operation of this apparatus and to protect from overheating these vents must never be blocked or covered.
- Do not place a water containing vessel on this apparatus, as this can result in a risk of fire or electric shock. Do not expose this apparatus to rain or place it near water.
- If this apparatus accidentally gets wet, unplug it and contact an authorised dealer immediately.
- You can clean this apparatus with a damp cloth when necessary, but be sure to unplug the apparatus first. To cut off the power source, unplug the apparatus from the AC wall outlet.
- Do not overload AC wall outlets, power cables or adaptors beyond their capacity as this can result in fire or electric shock.
- Power cables should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cables at the plug end, adaptors and the point they exit from the appliance.
- Before connecting the AC power cable to the Power Unit, make sure the voltage of the Power Unit, as marked on the identification label at the rear, corresponds to the local electricity supply.
- Never insert anything metallic into the open parts of this apparatus.
- Only a qualified technician should remove the Power Unit or Speed Control Unit cover.
- Be sure to hold the plug, not the power cable, when disconnecting this apparatus from an electric socket.
- Locate this apparatus near an easily accessible AC outlet.
- If this apparatus does not operate normally, in particular if there are any unusual sounds or smells, unplug it immediately and consult an authorised dealer.
- Unplug this apparatus from the AC outlet before any service.

IMPORTANT NOTICE:

The power cable on this equipment when supplied for use in the UK, is fitted with a moulded plug incorporating a fuse. The value of the fuse is indicated on the pin face of the plug and if it required replacing a fuse approved to BSI 1362 of the same rating must be used. Never use the plug with the fuse cover omitted if the cover is detachable. If the plug fitted is not suitable for the power points in your room or if the power cable is not long enough to reach the power point, you should obtain a suitable safety approved extension lead or consult your dealer for assistance.

IMPORTANT:

The wires in the power cable are coloured in accordance with the following code: **BLUE NEUTRAL, BROWN LIVE**. As these colours may not correspond to the coloured markings identifying the terminals in your plug, proceed as follows: The wire coloured BLUE must be connected to the terminal marked with the letter N or coloured BLUE or BLACK. The wire coloured BROWN must be connected to the terminal marked with the letter L or coloured BROWN or RED.

WARNING:

DO NOT CONNECT EITHER WIRE TO THE EARTH TERMINAL, WHICH IS MARKED WITH THE LETTER (E) OR BY THE EARTH SYMBOL OR COLOURED GREEN OR GREEN/YELLOW.

WEEE SYMBOL INFORMATION

Correct Disposal of This Product (Waste Electrical & Electronic Equipment)

(Applicable to the European Union and other European countries with separate collection system).

The marking shown on this product or its literature, indicates that it should not be disposed with other household wastes at the end of its working life. To prevent possible damage to the environment or human health from uncontrolled waste disposal, please separate this from other types of wastes and recycle it responsibly to promote the sustainable re-use of material resources.

Household users should contact either the retailer where they purchased this product or their local government office, for more detailed information of where and how they can take this item for environmentally safe recycling.

Business users should contact their supplier and check the terms and conditions of the purchase contract. This product should not be mixed with other commercial wastes for disposal.

1. CONTENTS

2. INTRODUCTION

The Model 60 Precision Turntable

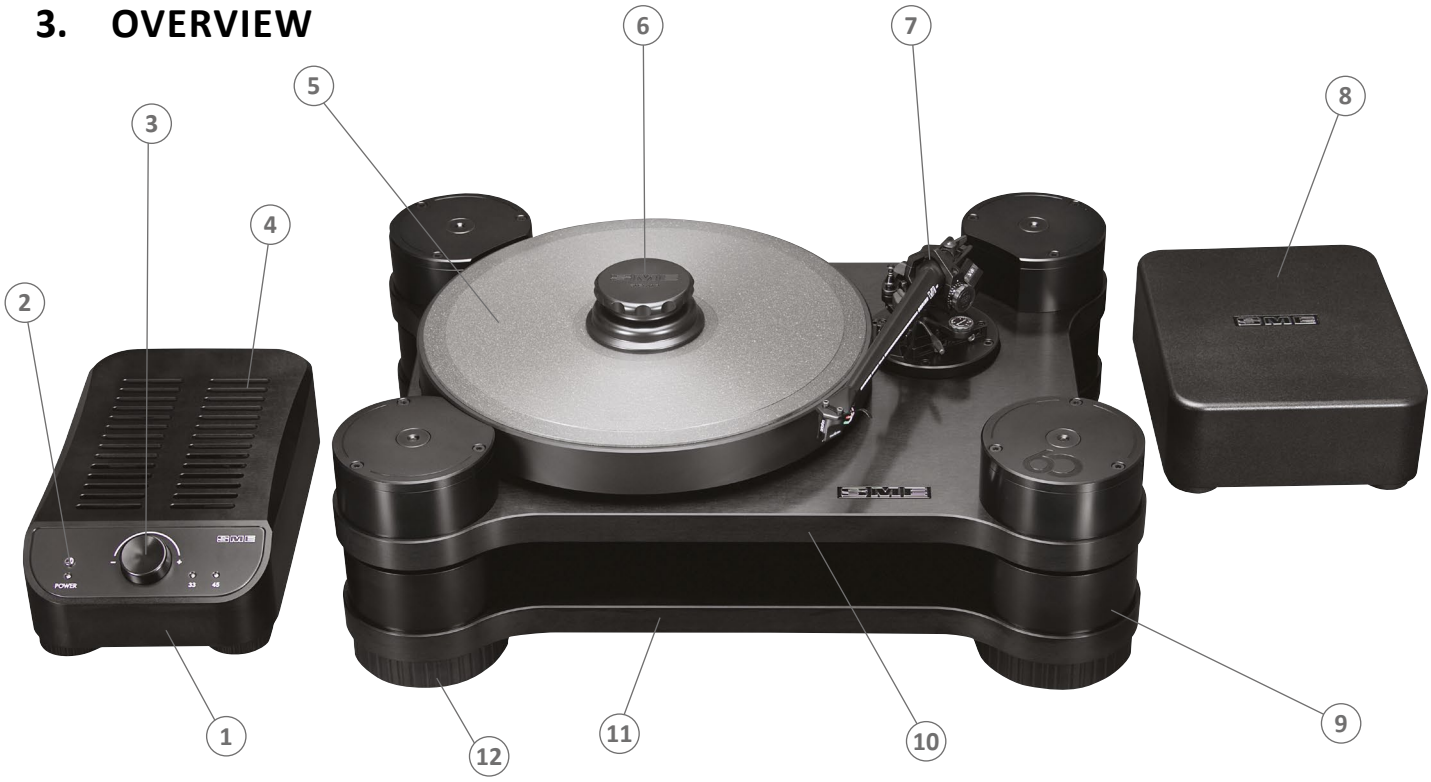
The Model 60 Flagship turntable, introduced 60 years after SME entered the elite high end audio world is far superior than the highly credible Model 30 which has been the reference precision turntable for over 3 decades.

The new flagship is an entirely new turntable design with clever engineering and technological advancement, but importantly retaining key SME audio engineering principles.

The Model 60 specification includes: de-coupled feet with multipoint isolation, an intelligent suspended suspension system with horizontal and vertical control, hydraulically dampened main bearing, acoustically treated main chassis, sub-chassis and platter, sophisticated electronic speed control with AC motor with remote (separate) power transformer. In addition the legendary SME Series V tonearm has been extensively sonically improved by use of a non-metallic tonearm tube made from an advanced polymer resin material with high density and high rigidity properties and importantly acoustically inert. With a low effective mass and significantly reduced resonance signature the Series V tonearm has been redefined to the Series VA (advanced).

The Model 60 is the most technically advanced SME turntable ever made with extremely high build quality, close tolerance precision engineered componentry, striking design and a range of non-painted uniquely engineered finishes.

3. OVERVIEW



1. Speed Control Unit
2. Power Button
3. Rotary Speed Control
4. Air Vents
5. Platter
6. Record Clamp
7. Tonearm
8. Power Unit
9. Suspension Column
10. Sub Chassis
11. Main Chassis
12. Adjustable Foot

1. Power Unit
2. Power Unit Output
3. Voltage Ident Label
4. Power ON/OFF Button
5. Mains Input AC Socket
6. Left RCA Phono Output
7. Phono Ground
8. Right RCA Phono Output
9. Serial Number Plate
10. Speed Control Unit Input
11. Earth Post - Turntable
12. Power Unit Input
13. Speed Control Unit Output
14. Air Vents
15. Speed Control Unit

4. WEIGHTS & DIMENSIONS

WEIGHTS:

Turntable	48kg
Speed Control Unit	2kg
Power Unit	4.2kg
Boxed Shipping Weight	86kg

DIMENSIONS:

Turntable	
Height	212mm (top of clamp)
Width	557mm
Depth	417mm
Speed Control Unit	
Height	87mm
Width	170mm
Depth	295mm
Power Unit	
Height	83mm
Width	190mm
Depth	243mm
Platter	330mm
Spindle to Arm	215.35mm

5. DRIVE SYSTEM

The turntable is driven by a custom made bi-phase AC synchronous motor. The speed control unit uses a dedicated DSP engine to generate two independent pure mathematical sine waves which provide total control of frequency, phase relationship and amplitude. These in turn are matched (tuned) to the motor for accuracy to obtain the best possible performance. The output driver stage is a 2 channel, class AB Bi-polar design with low distortion and relay coupled directly to the motor. The entire design is implemented using high quality surface mount technology on a gold plated FR4 PCB.

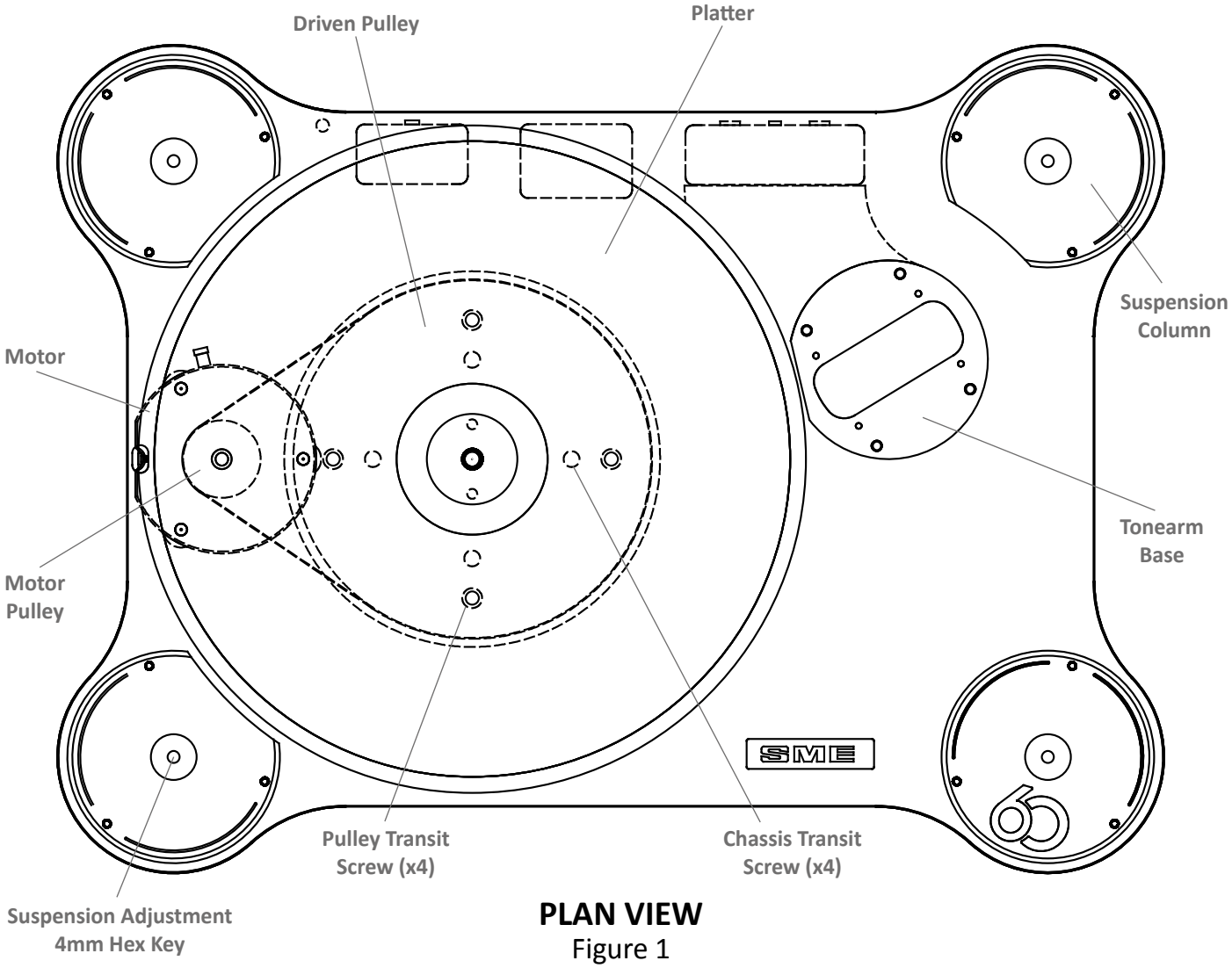
6. SPEED RANGE

The speed range is 33⅓ and 45rpm with independent memory settings via a switched encoder.

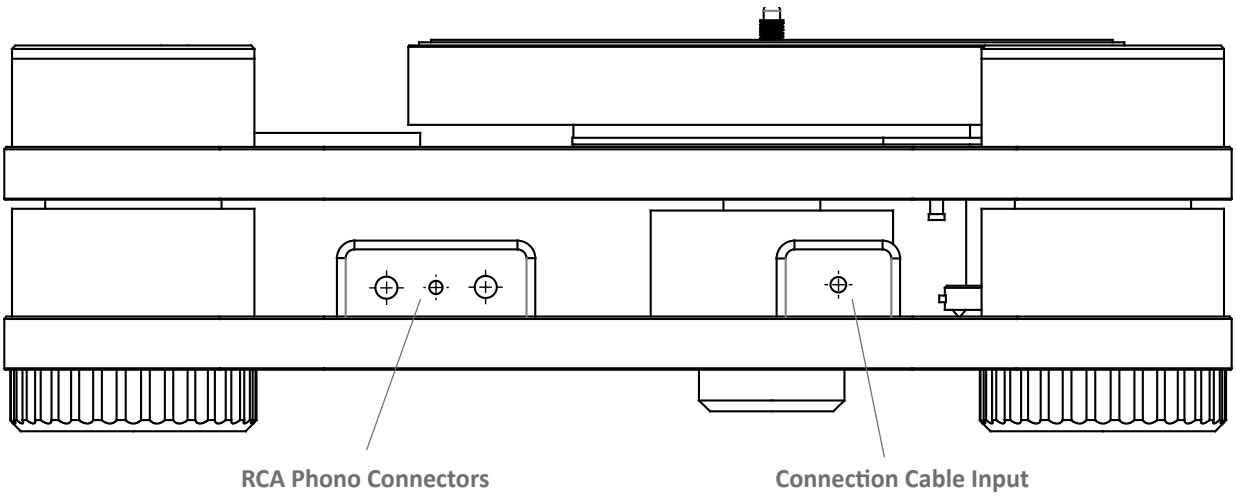
7. PACKING LIST

Qty	**TURNTABLE**	
1	Model 60 Chassis Assembly	☐
1	Platter	☐
1	Stroboscopic Disc	☐
1	Speed Control Unit	☐
1	Power Unit	☐
1	Connection Cable 'A'	☐
1	Connection Cable 'B'	☐
1	AC Power Cable	☐
1	Record Clamp	☐
1	Record Spindle Washer	☐
1	Drive Belt	☐
1	Syringe of Bearing Spindle Oil	☐
1	Bearing Spindle Oil Filler Adaptor	☐
1	Bearing Spindle Oil Filler Box Spanner	☐
1	Syringe of Tonearm Damping Fluid	☐
1	Finger Lift with 2 Washers	☐
1	Cartridge Screws (Stainless Steel Set)	☐
1	Cartridge Screws (Aluminium Set)	☐
Qty	**TOOL KIT**	
1	Cartridge Screwdriver - Flat Blade	☐
1	Cartridge Screwdriver - 2mm Hex	☐
1	5mm Spanner (Cartridge Screws)	☐
1	1/16 A/F Hex Wrench	☐
1	0.89mm Hex Wrench	☐
1	2mm Hex Wrench	☐
1	2.5mm Hex Wrench	☐
1	3mm Ball-ended Hex Handle	☐
1	4mm Hex Wrench	☐
1	Suspension Adjustment Key (4mm)	☐
4	Suspension Height Gauges (5mm)	☐
1	Motor Height Setting Gauge (2mm)	☐
1	Spirit/Bubble Level	☐
1	Alignment/Height Protractor	☐
1	Mounting Template	☐
1	VTA Screw	☐
1	HTA Key	☐
1	Protractor Spindle Bush	☐

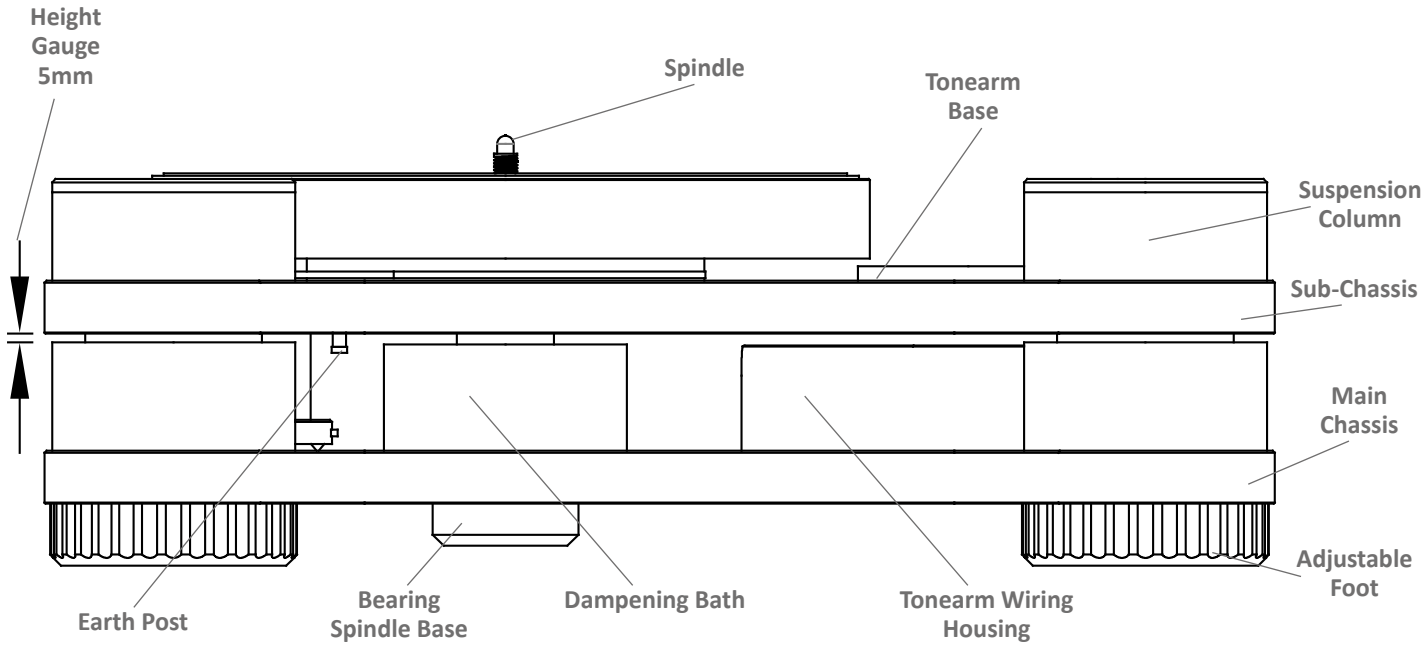
8. IDENTIFICATION TURNTABLE



PLAN VIEW
Figure 1

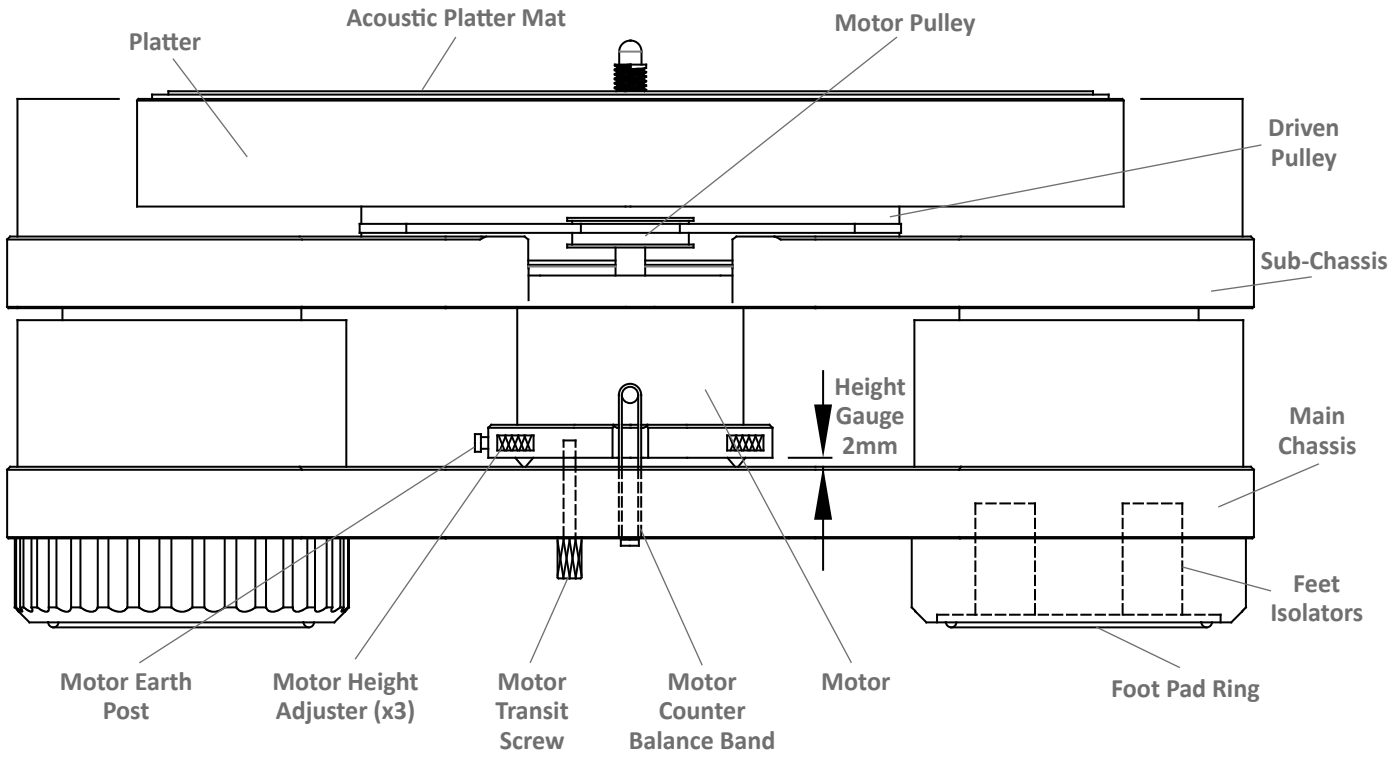


REAR VIEW
Figure 2



SIDE VIEW R/H

Figure 3



SIDE VIEW L/H

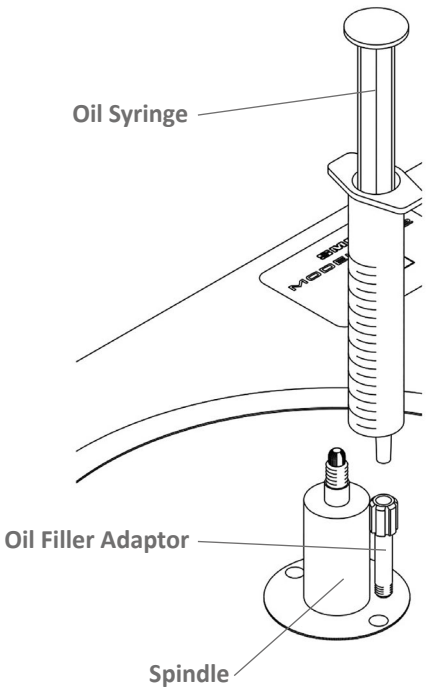
Figure 4

9. UNPACKING

1. Unpack and check all items against the packing list in Section 7.

2. Having opened the packing case lid carefully lift upwards the top section high density foam module which covers the turntable/ tonearm unit. Due to the weight of the Model 60 turntable it is best lifted out of the case by two people, one at each end and lifting from under the main chassis (bottom of turntable) and not the upper sub-chassis. The turntable should be sited on a substantial table or strong audio stand which must be capable of supporting the turntable weight of 48kg.

3. With the turntable sited lift the left side of the turntable to gain access to the motor transit screw which secures (clamps) the motor to the main chassis. Remove the motor transit screw and the anti-fret packing strips and position the turntable squarely and centrally onto an audio stand. Ensure that the motor spikes are securely inserted into the compliance cups.



4. The turntable is shipped with only a small quantity of oil in the bearing housing and this should be filled before setting up the turntable. A measured quantity of oil is provided in the syringe and needs to be injected into the bearing housing.

5. Remove the syringe from its packing and insert the tip into the oil filler adaptor, which will be found factory fitted next to the spindle (as illustrated).

6. Slowly inject the complete quantity of oil into the bearing housing maintaining downward pressure throughout the operation to prevent leakage. Remove the syringe and dispose of it responsibly.

7. Unscrew and remove the oil filler adaptor using the box spanner found inside the tool kit. Retain the adaptor for possible future use.

8. With the turntable removed and sited, proceed to remove all ancillary components and accessories located in the packing case modules below the turntable packing platform.

10. SETTING UP - TURNTABLE

With the turntable unpacked and sited follow the turntable setting up procedures in the order detailed below:

1. Levelling the Turntable

With the use of a spirit/bubble level ensure that the main chassis (lower chassis) is level in the lateral and longitudinal planes. The 4 feet are height adjustable and can be used to achieve a level chassis. When adjusting the feet it is recommended to slightly lift the chassis adjacent to the foot being adjusted. This aides ease of rotation of the foot and prevents the foot rubber pad binding.

2. Levelling the Motor

a. The motor is mounted on 3 height adjustment screws, the points of which sit in compliant cups in the chassis base. For transit purposes these screws have been backed off clear of the compliant cups.

b. Raise the motor by adjusting the x3 height adjustment screws (clockwise) to a height setting of 2mm, achieved by use of the supplied 2mm height gauge. The height gauge is inserted near each adjustment screw in turn between the underside of the motor and the surface of the chassis base.

c. The motor level can be checked by use of the spirit/bubble level applied to the top surface of the motor pulley.

3. Chassis Unlocking

a. For transit the sub-chassis (upper chassis) is locked down by x4 transit screws (Section 8 Figure 1). The transit screws should be turned anti-clockwise with the supplied 4mm hex wrench and removed. The sub-chassis will lift slowly upwards as the transit screws are removed.

b. Also for transit the main bearing is off-loaded by x4 pulley transit screws. The transit screws are located in the driven pulley (Section 8 Figure 1). These are captive screws and should be turned anti-clockwise with the supplied 3mm hex handle wrench until they stop. Ensure the handle wrench is fully engaged to avoid damage to the transit screw socket.

c. With the sub-chassis unlocked carefully insert the x4 (5mm) suspension height gauges between the underside of the sub-chassis and the mid-section of the suspension columns (Section 8 Figure 3). With use of the suspension adjustment key (4mm) insert the key into the access hole on the top of each suspension column and adjust the suspension height by turning the key clockwise to lower and anti-clockwise to raise. Adjust each column evenly until the sub-chassis lightly contacts all 4 height gauges at the same time to ensure the sub-chassis is evenly set to a fixed height of 5mm.

11. SETTING UP (continued)

4. Drive Belt Installation

a. Place the drive belt over the large driven pulley and stretch over the motor pulley. Slowly turn the driven pulley to allow the drive belt to take up its natural running position.

b. Rotate the driven pulley by hand to ensure the drive belt is positioned correctly and rotating freely.

5. Platter Installation

Remove and unpack the platter from the bottom section of the packing case. Place it carefully and squarely over the turntable spindle and lower it gently down until it rests on the driven pulley, having first ensured that both mating surfaces are clean.

6. Suspension Height Setting

The suspension height is adjusted by use of the height adjustment key. Carefully engage the key into the top centre of each suspension column and in sequence turn anti-clockwise to raise the suspension to a height setting of 5mm (clockwise will lower the suspension). The height setting is checked by carefully inserting a 5mm height gauge between the underside of the sub-chassis and the mid-section of each suspension column (Section 8 Figure 3).

7. Power Unit & Speed Control Unit

The power unit is connected to the speed control unit and turntable by way of the connection cables (Section 12) with LEMO connectors. The cables cannot be confused as they carry a different number of pins which are purposely configured to observe both safety and miss-identification. The cables are identified as A and B.

- Connection Cable A - Power Unit Output to Speed Control Unit Input
- Connection Cable B - Speed Control Unit Output to Turntable Input

The AC mains power cable is connected to the power unit AC input. A push ON/OFF switch is located on the rear of the power supply unit.

IMPORTANT

The mains voltage setting is indicated on the rear panel of the power unit. Before fitting the mains power cable check carefully that this matches your mains voltage.

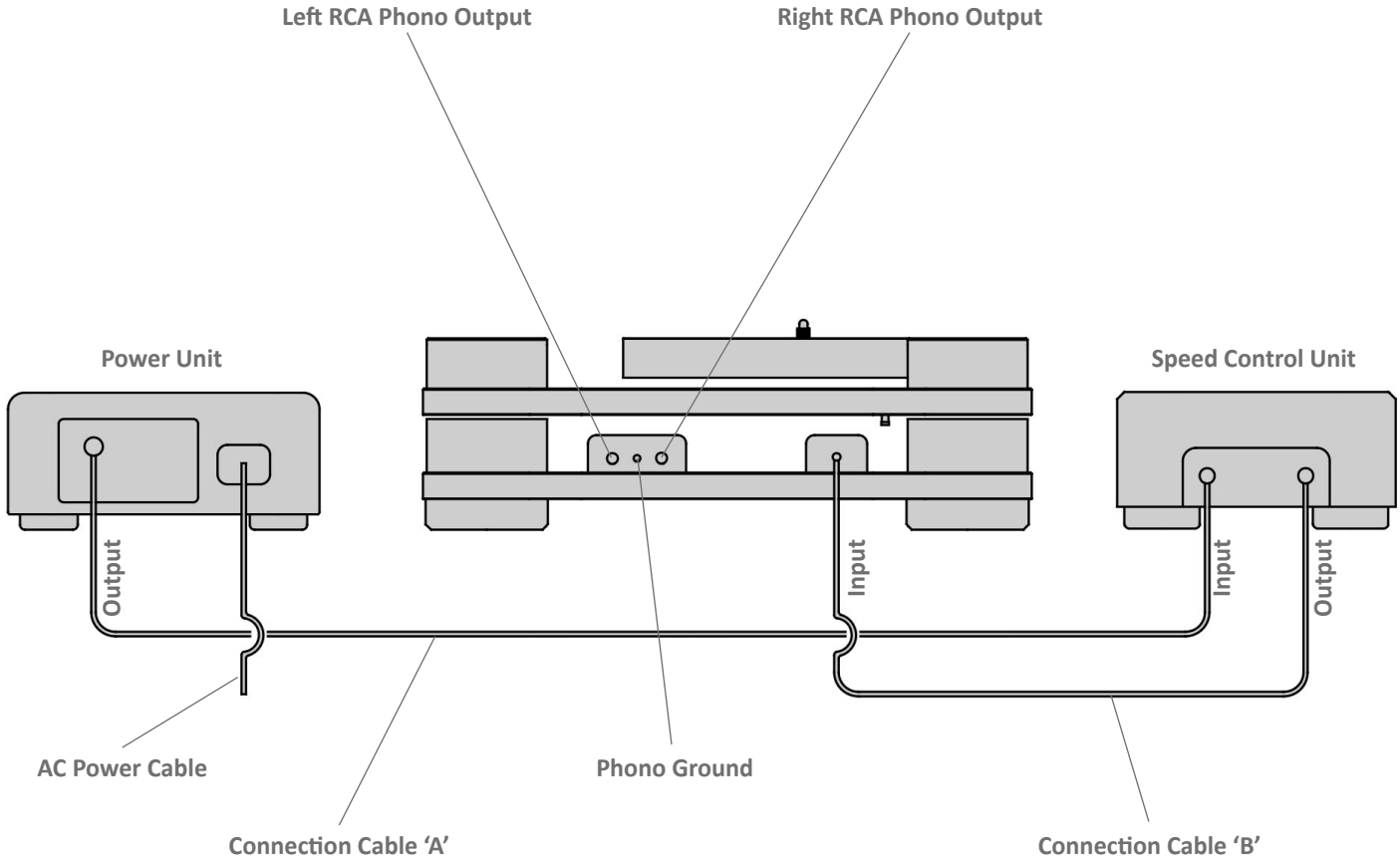
WARNING

To meet international safety standards the power supply unit is earthed through the yellow/green wire of the power cable and particular care must be taken to ensure that this is connected so as to maintain effective earthing should the original mains plug be changed.

Tonearm Installation

The Model 60 is equipped with a factory fitted SME Series VA tonearm. **Under no circumstances** attempt to remove the tonearm as it is wired directly to the RCA phono output sockets.

12. POWER CABLE CONNECTIONS



NOTE:

• Mains power **must be off** when connecting cables.

13. OPERATION - Turntable

The Model 60 precision turntable is partly run-in before leaving the factory but will benefit and improve after a few weeks of use. Do not worry if initially the bearing is not totally silent. A slight 'swish' barely audible at very close range in a silent room will quickly disappear after use of the turntable. If you should wish to check the speed settings and make your own adjustments the procedure is as follows:

1. **Mains Power:** the power ON/OFF button is located on the rear of the power unit. With power ON the last used speed indicator LED light will illuminate on the speed control unit fascia.

2. **Motor Power:** pressing the power button on the speed control unit fascia will start the motor. With power OFF and pressing the rotary button on the fascia the speed settings of 33⅓ and 45rpm will cycle and be indicated by the speed LED. With the motor running, pressing the power button will stop the motor.

3. **Speed Testing:** the stroboscopic disc installed on the platter is used to check speeds of 33⅓ and 45rpm. Use the strobe bands appropriate for your mains AC frequency. The disc should be viewed in a fluorescent or neon light. The appropriate band will synchronise and appear stationary when the speed is correct. Whilst forward and reverse band movement will indicate fast or slow running respectively. This is best observed with the cartridge fitted and the tonearm in the raised position and placed directly over the band being viewed as a reference point.

4. **Speed Adjustment:** with the motor running press and hold the rotary button for two seconds, the speed indicator LED will begin to flash. The motor is now in speed adjust mode and the speed can now be adjusted in conjunction with the stroboscopic disc. Turning the rotary button anti-clockwise will reduce speed and clockwise will increase speed. The method provides a microfine incremental adjustment. When the speed adjustment is completed depress and release the rotary button, the speed indicator LED light will stop flashing and become constant and the speed setting will be stored in the system memory for future use.

5. Repeat this process for the 45rpm speed range if required.

14. OPERATION - Playing a Record

Place the record spindle washer on the spindle followed by the record and clamp. The clamp should be screwed down clockwise enough to deflect the record flat into firm contact with the platter. With a fingertip, tap the record in three places equally over its surface and with a little practice it will soon become evident whether or not the record is touching the platter. If not, some further tightening of the clamp may be necessary.

15. MAINTENANCE

1. There are no critical adjustments or need for 'tweak' and only very little maintenance is required. Clean the drive belt occasionally by drawing it through a piece of soft tissue or linen moistened with lighter fuel. The same material may be used to clean the periphery of the motor pulley and driven pulley. The main bearing is lubricated for life.
2. The sub-chassis (upper chassis) damping system automatically seals when the sub-chassis is locked down and does not require maintenance.
3. Replace the drive belt after 1000 hours use. A replacement belt is available directly from SME Limited.
4. The life of the suspension bands will depend on climatic conditions. If eventually they should stretch beyond further adjustment, replacement suspension bands are available directly from SME Limited.
5. Changing the suspension bands should only be conducted by an experienced technician or at the supplying dealer. A technical instruction process can be obtained from SME Limited.
6. There are no user-serviceable parts inside the Power Unit or Speed Control Unit.

16. TRANSIT PRECAUTIONS

The Model 60 can be safely transported.

SUBJECT TO THE FOLLOWING PRECAUTIONS:

Short journeys by car: remove the platter, disengage the drive belt from the motor pulley, back off the motor height adjustment and refit the motor transit screw. Lock down the sub-chassis suspension. Screw down the four driven pulley transit screws lightly and evenly, just enough to prevent the pulley rotating. The turntable itself is best placed on a flat floor of a car boot/trunk. The platter and other items can be carefully protected and packed separately from the turntable. For all other transportation purposes the original packing case and materials must be used.

SME

SERIES VA

HIGH DENSITY TONEARM

INSTRUCTIONS

This is no ordinary tonearm.
These instructions include set up procedures, adjustments and specifications.
Please read carefully.

17. CONTENTS

18. INTRODUCTION

The Series VA (Advanced) Tonearm.

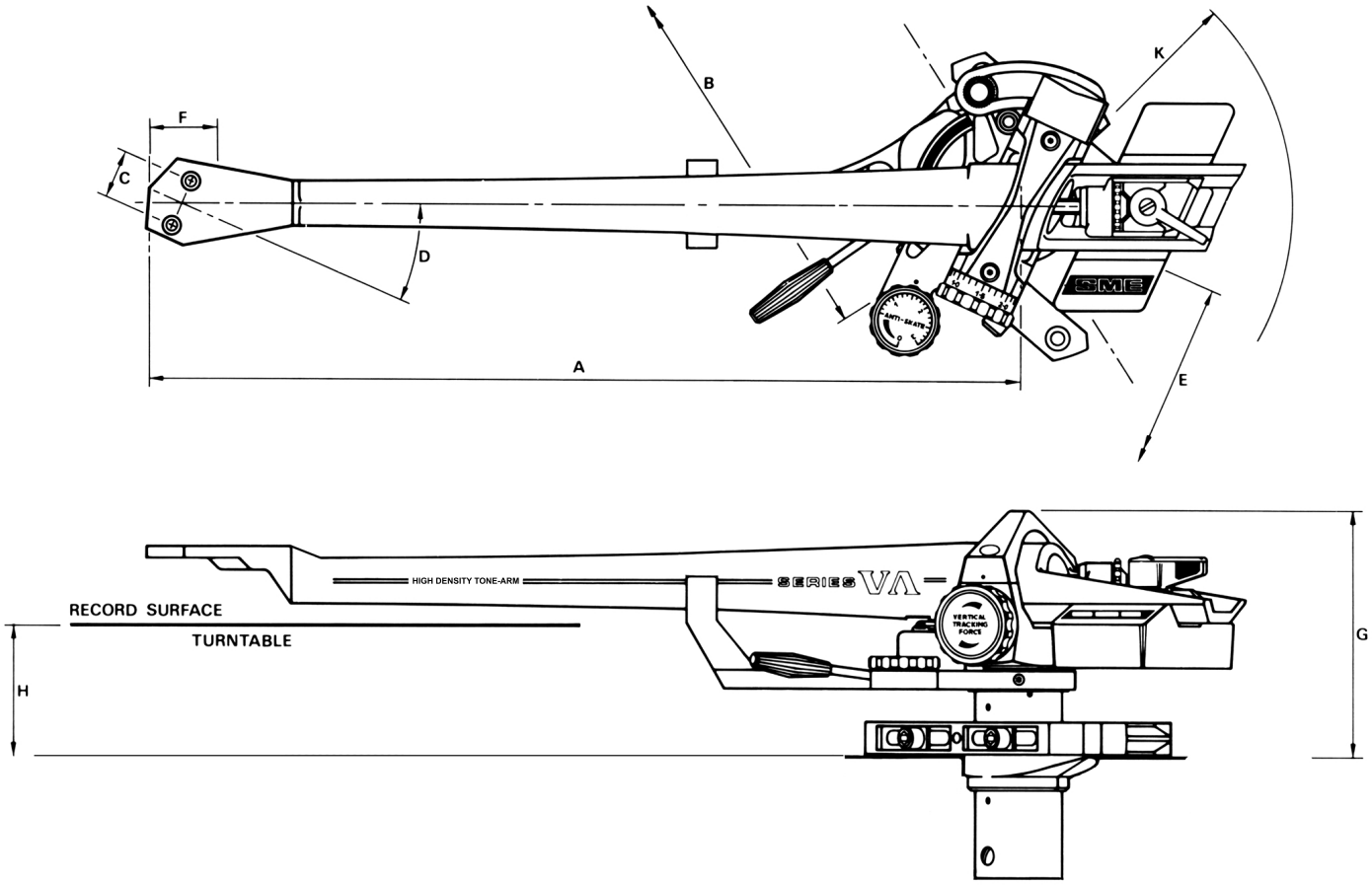
With over sixty years of tonearm design, engineering and manufacturing experience, SME is accredited as makers of the best tonearms in the world. For over three decades the SME Series V Magnesium tonearm has been the global reference standard, but with the introduction of the Series VA High-Density tonearm a new reference standard has been established. The Series VA tonearm has only been made possible by decades of precision audio engineering knowhow and new technology materials.

The Series VA tonearm tube is CNC precision machined in one piece from an advanced polymer resin high density material which is acoustically inert. The tonearm tube has a tri-lobular cross sectional shape which provides improved rigidity, the headshell is streamlined and modern in design. Importantly the Series VA has a very low resonance signature and an optimised effective mass with a wide cartridge balance weight range.

19. OVERVIEW

1. Headshell
2. High Density Tonearm
3. Arm Lift
4. Damper Reservoir
5. Damper Reservoir Cover
6. Dip Screw Lock Nut
7. Dip Screw
8. VTA Screw
9. Balance Thumbwheel
10. Balance Weight Clamp Lever
11. Balance Weight
12. VTF Control
13. Base Slideway
14. Base Clamp Bolt
15. HTA Key
16. Anti-Skate Control
17. Base
18. Control Lever
19. Control Bracket
20. Arm Rest

20. GENERAL ARRANGEMENT



DIMENSIONS

	mm
A - Distance (pivot to stylus)	233.15
B - Distance (pivot to spindle)	215.35
C - Cartridge (fixing centres)	12.70
D - Offset Angle	23.635°
E - Linear Offset	93.47
F - Overhang	17.80
G - Height (tonearm)	max 87.90 min 56.40
H - Height (record)	max 57.90 min 26.40
K - Radial (clearance)	73.0

SPECIFICATION

Effective Mass:	10g - 11g
Cartridge Balance Range:	5g - 18g
Vertical Tracking Force:	0.0g - 3.0g (30mN)
Maximum Tracking Error:	0.012°/mm
Null Points:	Inner - 66.04mm Outer - 120.9mm
Internal Wiring:	Crystal Cable 0.1mm Mono X-Tail

21. SET UP & OPERATION

Cartridge Leads Fitting

The cartridge leads have 1mm diameter receptacles for the tonearm and standard 1.25mm for the cartridge. The latter may require adjustment for a snug fit on non-standard terminals. This can be achieved by use of pointed nose pliers to close connectors or with a narrow screwdriver blade to splay (open) connectors. Connections must never be made by direct soldering.

Colour Coding:
Red - Right Channel Signal
Green - Right Channel Ground
White - Left Channel Signal
Blue - Left Channel Ground

Cartridge Mounting

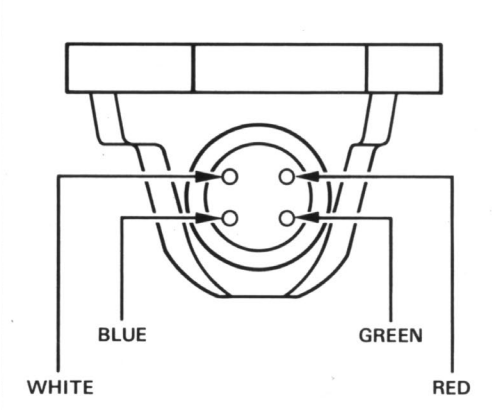
Step 1

Three different sizes (lengths) of cartridge mounting screws are provided (8mm, 12mm, 16mm) with washers and nuts. Select a pair of screws suitable for cartridge fitment in conjunction with the supplied finger lift. Purists may use without the finger lift but it is unlikely that the difference will be audible. If using the finger lift the washers must be used and inserted into the counterbores in the headshell. The washers must also be used without the finger lift as they are required to protect the enamel finish when the cartridge fixing screws are installed. For high compliance cartridges the supplied aluminium screws and nuts offer some reduction in the tonearm's effective mass. It is recommended that the SME supplied screwdrivers (flat blade or 2mm hex blade) and 2mm spanner are used for installing a cartridge to the Series VA tonearm headshell. Tighten the cartridge fixing screws sequentially and securely taking care not to over tighten.

Note:
The cartridge screws are non-magnetic. Damage can be caused if a screw is snatched by magnetic attraction whilst being offered up to the cartridge. For the same reason do not lay tools down nearby. WARNING Socket cap screws make high compression forces possible. Avoid over-tightening with cartridges having non-metallic mounting surfaces.

Step 2

Tighten the cartridge fixing screws securely using the 2mm hex wrench and spanner. The cap screws are non-magnetic. Damage can be caused if a screw is snatched by magnetic attraction whilst being offered up to the cartridge. For the same reason do not lay tools down nearby. WARNING Socket cap screws make high compression forces possible. Avoid over-tightening with cartridges having non-metallic mounting surfaces.



Cartridge Lead Replacement

The tonearm internal wiring terminates in a four-pin plug at the back of the headshell. The cartridge leads can therefore be replaced and can be obtained from your dealer or direct from SME. They should be fitted with due regard to their colour coding.

Longitudinal Balance

Step 1

The balance weight clamp lever is unlocked by moving it anti-clockwise. When required the action of the clamp lever can be adjusted as follows:

Remove the central screw and lift the clamp lever upwards from its boss, using a slight rocking movement. Replace the lever in a new position one spline at a time, anti-clockwise to increase locking pressure and clockwise to reduce it. Replace the central screw.

Step 2

Check that both the vertical tracking force (VTF) and anti-skate controls are set to zero. Position the tonearm so that the cartridge is clear of the turntable and the tonearm is clear of the armrest. Balance is achieved by rotating the thumbwheel carried on the leadscrew which moves the balance weight. Adjust until the tonearm with cartridge fitted is either level or slightly low at the front when the clamp lever is relocked.

Vertical Tracking Force (VTF) Adjustment

For safety the lever of the lowering control should be in the raised position before VTF is applied. The scale covers a full range of 3 grams (30mN). It is divided into units of half a gram (5mN) and subdivided in eighths of a gram (1.25mN). To apply VTF move the control anti-clockwise until the required position coincides with the index point. The illustration shows 1.5 grams (15mN).

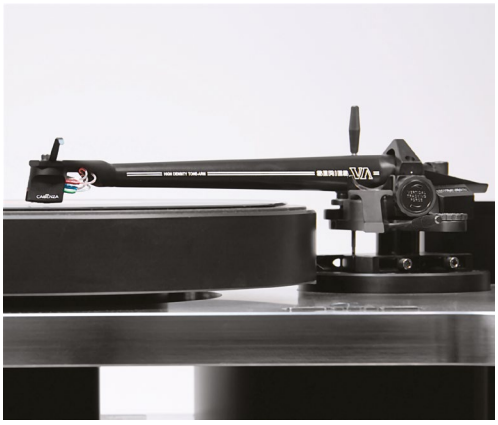
Height (VTA) Adjustment

Step 1

Insert the VTA screw into its socket as shown. Rotate clockwise until resistance is felt. Further rotation will increase the height of the tonearm relative to the base.

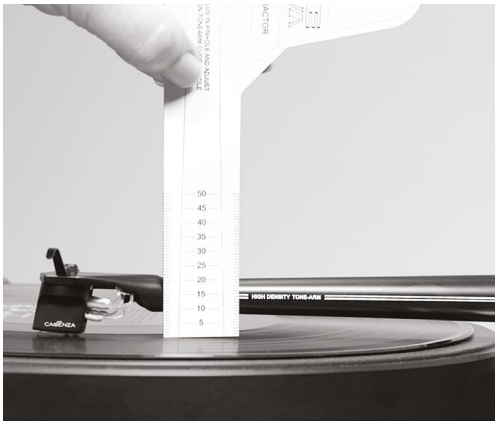
Step 2

To lower the tonearm turn the VTA screw anti-clockwise. Finger pressure will then move the tonearm downwards until it stops on the screw, at which point further movement in either direction can be made as needed. Take care not to bend the VTA screw either by accidentally knocking it.



Step 3

As the possibility of accidental damage cannot be ruled out, the use of an old record for the following procedures is recommended. Place the tonearm about halfway across the record and move the control lever forward to lower it into the playing position. Adjust the tonearm height until there is approximately 3mm clearance between the underside of the tonearm and the surface of the record at its circumference.



Step 4

In standard operation the mounting surface of the cartridge (underside of the headshell) and the centreline of the tonearm should all be parallel with the surface of the record. The alignment protractor has been printed to act also as a height gauge in conjunction with the horizontal lines on the side of the tonearm. Measure the distance from the surface of the record to the upper of the two lines at the front of the tonearm using the scale.

Step 5

Re-position the protractor about 6mm from the edge of the record. Using the scale repeat the measurement and compare it with the first one. Adjust the VTA screw until similar readings are obtained indicating that the tonearm is level with the surface of the record. Other dispositions can of course be accommodated and if the readings are noted can be quickly implemented for special needs.

Horizontal Tracking Angle (HTA) Adjustment

Step 1

Insert the HTA key into the socket situated centrally in either of the base slideways. Use a light pressure rocking it slightly to ensure full engagement of the pinion with the toothed rack in the base. Rotation of the key in either direction will now allow the base to move between the slideways (do not use force). If the movement is tight, check that the clamp bolts are sufficiently released. When all is well rotate the key to traverse the tonearm into its fully forward position.

Step 2

With the record still on the turntable fit the bush and alignment protractor. Check that the anti-skate control is at zero and the VTF control is set to suit the cartridge in use. The stylus position on the protractor is indicated by a cross. Place it so that the stylus drops into the indent formed at the intersection of the two lines, taking the utmost care not to touch or knock the tonearm once it is engaged. Rotate the HTA key to move the tonearm and the protractor backwards until when viewed directly from above their outlines coincide.

Step 3

Movement has been made too far and opposite rotation of the HTA key is required to correct it.

Step 4

Most cartridges have a stylus fixing hole centre distance of 9.5mm. Correctly adjusted with these the outlines of the tonearm and protractor will coincide when viewed directly above the centreline of the tonearm. With others, according to the position of the stylus, it will be necessary to view slightly to the left or right of the centreline. The only requirement for correct HTA being that the outlines appear to coincide along their length as shown. Place the tonearm in the armrest and remove the alignment protractor, leaving the bush on the record spindle.

Positioning the Armrest

Place the mounting template under the tonearm and over the bush. Keeping the tonearm in the armrest, swing it radially until it coincides with the two profile lines and is approximately square with the template (as shown). This relationship of the armrest with the record spindle is essential for the correct operation of the anti-skate control. Remove the template and the bush.

Locking the Base

Tighten the two clamp bolts evenly and firmly. Excessive tightening is unnecessary and should be avoided. Remove the VTA screw and HTA key.

Anti-skate Control

The dial is calibrated to correspond with the VTF scale and should be rotated until the required position coincides with the index point. Bias requirements are dependent on a number of variables and the recommended setting will be found a good compromise. The situation lends itself to experiment. Listen for any discrepancy in performance between the left and right channels. If the left channel mis-tracks, reduce the setting and if the right channel mis-tracks increase it.

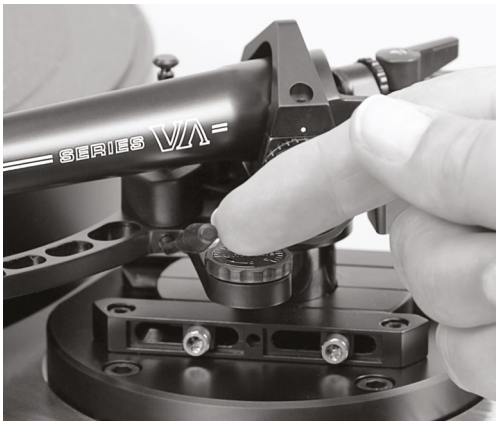
Operation

Step 1

With the control lever in the raised position move the tonearm off the armrest.

Step 2

Position the tonearm so that the stylus is over the selected band of the record.



Step 3

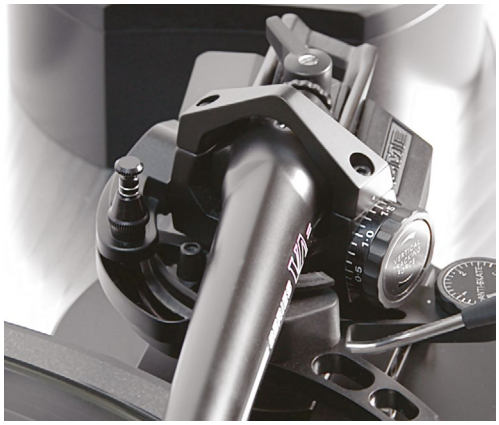
To lower the stylus onto the record move the control lever forward just over top centre. This will set the lowering control in motion, at which point it will take over the movement of the lever. For the correct descent time the control must be operated in this way. The speed will be increased considerably if the lever is pushed down rather than moving of its own accord.

Step 4

To raise the stylus from the record move the control lever back to its original position. When the tonearm is not in use it should always be returned to the armrest for safety. This also closes the damper reservoir cover and protects the fluid from foreign matter.

Adjusting Height of Lift

The raising and lowering control is set to suit the majority of cartridges but the height raised above the record can be changed to meet individual needs. The small hole in the centre of the arm lift provides access to the adjustment screw. Insert the long leg of the 0.89mm hex wrench through this hole to engage the screw. Clockwise rotation will decrease the height of lift, anti-clockwise rotation will increase height. The adjustment is sensitive so the wrench should be turned only a few degrees at a time.



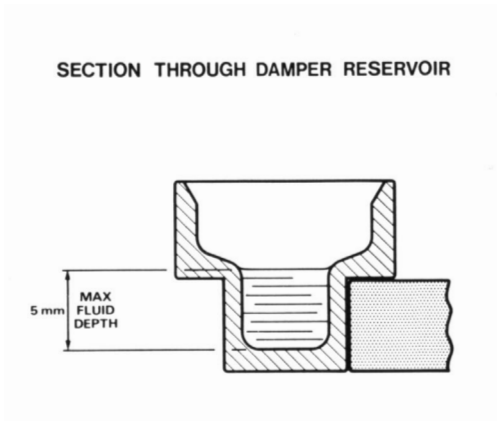
Filling the Damper Reservoir

Step 1

With the control lever in the raised position, move the tonearm off the armrest, swinging it towards the turntable spindle as far as it will go. This will open the reservoir cover.

Step 2

Remove the cap and seal from the syringe and holding it as shown slowly depress the plunger to expel the fluid. Fill from the rear and work forwards pausing from time to time while the fluid settles.



Step 3

Only the lower section of the reservoir has to be filled. The deep rim is to prevent spillage in the event of rapid arm movement. The syringe contains sufficient fluid for two fillings. Replace the cap, seal with adhesive tape and store safely. We recommend an annual fluid change. Use only genuine fluid obtainable from your dealer or direct from SME.

WARNING: Silicone fluid can cause discomfort if introduced into the eyes. It is therefore advisable to wash your hands at this point.

Operating the Damper

Step 1

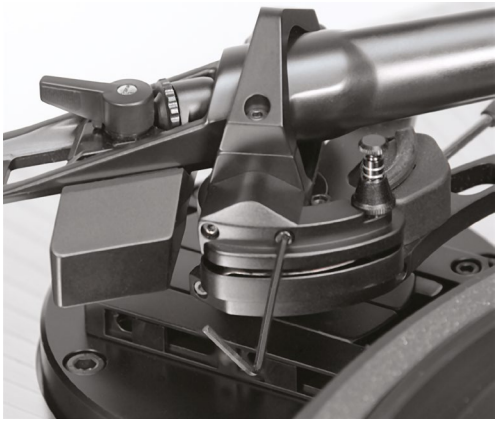
The degree of damping is controlled by a dip-screw and its depth of engagement with the fluid, from which it can also be withdrawn when damping is not required. To release the dip-screw for setting, the locknut should be rotated anti-clockwise about two turns.

Step 2

Clockwise rotation of the dip-screw increases damping and anti-clockwise rotation reduces dampening. The ident rings on the screw are for reference, allowing setting to be noted and repeated. The system applies damping in the horizontal plane only.

Step 3

View the cartridge head-on whilst it is negotiating the record run-in groove. The stylus should enter the record groove smoothly without lateral oscillations of the tonearm. Increase damping as required.



Cleaning the Damper Reservoir

Step 1

Release the dip-screw locknut (Section 19). Rotate the dip-screw anti-clockwise until it is clear of the fluid. Remove the two socket cap screws which secure the reservoir cover, using the 1/16 A/F hex wrench. Place the cover on a paper tissue to be cleaned at a later stage. WARNING: At this point the horizontal bearing adjustment nut will be visible. Do not be tempted to interfere with it, to do so will invalidate the guarantee and almost certainly cause permanent damage to the bearings. If the damping fluid is spilled it can enter the pillar bearings and in this event their replacement is not covered by the guarantee.

Step 2

With the same 1/16 A/F hex wrench remove the two socket cap screws securing the damper reservoir to the control bracket. It can now be lifted clear and inverted on tissue paper to drain. The VTA screw works in a brass nut housed in the control bracket and this will be visible when the reservoir is removed. Do not interfere with it. Wipe out any fluid remaining in the reservoir with tissue and wash it and its cover with a small soft brush in warm water to which a few drops of washing-up liquid added. Dry with a clean tissue. Re-assemble in the reverse order, entering the screws carefully taking care not to cross the threads. Tighten firmly and evenly, only when all the screws have been fitted. Do not over-tighten.

Cleaning the Arm Lift

If the tonearm drifts outwards during raising and lowering it usually indicates the presence of contaminant on the rubber pad in the arm lift. To restore positive working wipe the pad with a damp cloth and repeat with a paper tissue until dry. Clean the underside of the tonearm in the same manner where it contacts the rubber pad.

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22. GUARANTEE

Your SME Model 60 turntable is guaranteed against faulty material and workmanship. The nominal period of the guarantee is 24 months but is liberally interpreted at SME's discretion subject to the following conditions being observed:

1. Any matter arising must in the first instance be reported to SME Limited at the address appearing below.
2. Do not return the turntable or any part thereof to SME Limited unless requested to do so.
3. SME Limited will not accept liability for any items until they reach the factory safely.
4. Any parts found to be faulty will be replaced free of charge.
5. Return transport and insurance costs will be charged.
6. The guarantee expressly excludes:
   a. Damage by any cause.
   b. Contingent and third party liability.
   c. Personal injury.
7. No alteration or variation of the guarantee will be recognised by SME Limited.
8. The guarantee is not transferable.

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23. APPENDIX

We hope these instructions have made the installation of your Model 60 precision turntable straightforward. Care for it as befits its fine construction. Do not invert it. Do not apply oil or other lubricant except as directed. Do not attempt to take it to pieces or interfere with any of the screws except as directed in the instructions. To do so will invalidate the guarantee and may incur costly repairs. Keep your turntable clean by dusting it regularly with due regard for the safety of the cartridge and stylus. Finger marks may be removed from the finished surfaces with a linen handkerchief moistened with warm soapy water. Do not use any kind of spirit or solvent cleaner.

In the unlikely event of a problem concerning operation or service, always contact the supplying dealer or SME Limited stating the exact nature of the problem and the serial number which will be found on the rear of the main chassis.

EC DECLARATION OF CONFORMITY

The SME Model 60 Turntable has been manufactured to conform with the protection requirements of the EC Council Directive 89/336/EEC relating to EMC by application of the following standards:

BS EN 61000-6-3:2007+A1:2011 Emissions Standard.

BS EN 61000-6-1:2007 Immunity Standard and also the requirements of the EC low voltage directive relating to electrical safety by application of the following standard:

BS EN 62368-1:2014 International Safety Standard.

For the purposes of testing the SME Model 60 Turntable was used with the high quality interconnects supplied as standard equipment. Compliance with the above standards may only be made if the unit is installed as per this instruction manual and using the correct cables.

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