



Original Engineering  
WILLSON BERNESECH

# SETTING UP INSTRUCTIONS FOR THE A.C.T. ONE TONE ARM.

## **1. Unpacking.**

Carefully remove the arm from its protective packaging this should be retained with the box should the need arise for any future transportation.

Remove the arm board before removing the tonearm. Remove the fasteners.

## **2. Fitting the tonearm.**

In order to fit the arm (Wilson Benesch).the turntable should be positioned horizontally. i.e. in the playing position such that with the bottom board removed you have easy access to the inside of the deck (A good idea is to lay the turntable across an equipment table that has had its top board removed). The arm collar is attached to the sub-chassis by four Allen cap screws. These screws can be found in the pack supplied with the deck. Note that the arm collar fits only one way. Tighten the screws diametrically opposite to each other. Care should be taken not to overtighten the screws, if in doubt the long part of the Allen key should be inserted in the screw and the short part used as the lever. There is nothing to be gained by overtightening the screws - except a broken sub-chassis!

The arm should now be fitted according to the arm manufacturers instructions.

## **3. Fitting the arm board.**

The arm board should be placed on the sub chassis and rotated until the holes align. The grub screw should be located at the right hand side of the turntable when viewed from the front.

The arm board is clamped to the sub-chassis using four, four millimetre Allen cap screws that are supplied with four washers. The wrench supplied in the same bag should be used with care when tightening. Tighten each screw until finger tight. Nip each screw up in turn. Each screw should be turned a quarter turn and diametrically opposite to one another in order to achieve equal levels of pressure. **DO NOT OVER TIGHTEN THE SCREWS AS THIS MAY DAMAGE THE SUB CHASSIS.** If you are in any doubts then use only the shorter length of the wrench to apply the turning effect on the screw. There is nothing to be gained by overtightening the screws. Equal pressure is the main objective.

## **4. Initial adjustments of the arm.**

Remove the tone arm itself and familiarise yourself with its design.

As you will see the system is in capable of functioning at this stage as the locking collar is in place.

( The bearing is not made. )

*This means that the active parts of the bearing are actually separated and incapable of being damaged.*

The bearing is made by releasing the ball that is clamped by the grub screw this can be achieved simply by using the appropriate wrench from the bag supplied to undo the grub screw.

It is advisable to do this with care if the tonearm is not supported or restrained in the arm board itself.

Gentle handling of the bearing is advised at all times.

Whilst the bearing is unmade and away from the turntable it is good time to position the lift lower mechanism. The platform which makes contact with the Tonearm can be released so as to be adjusted later and to avoid interference during the following adjustment.

The mechanism can be released by using the systems own operating lever to turn the system. Turn the stainless clamping screw located beneath the platform in order to release the clamping pressure. Once it has been unscrewed slightly the whole mechanism can be rotated. With the A.C.T. Two be careful not to scratch the underside of the platform when turning the system. When positioned correctly the operating lever should be accessible from the left hand side of the turntable. Nip up the system by holding the stainless collar and turning the system using the lever again.

Unpack the cable and familiarise yourself with the method of installing the Binder connector. It can be seen that the system can only be located in one position and that it is a screwed attachment..

Unpack the Counterbalance and familiarise yourself with its design. The sprung loaded pin should be depressed to allow the system to slide over the Counter balance beam that protrudes from the back of the Egg ( Part 3 Diagram 1. )

Note:

It is easier to install the arm in the Arm board with the Counter balance removed.

## **5. Installing Tonearm in Armboard & adjusting V.T.A.**

The medium sized Allen key is used to adjust the height of the arm and clamp it once the correct setting has been found. Cartridges respond to precise V.T.A. settings. Small careful adjustment can be made by un-doing the grub screw just enough to maintain clamping pressure but be capable of movement. You will not damage the vacuum hardened spindle by doing this. The correct position of the arm should be maintained with relation to the arc the arm can scribe. It should of course be able to reach the end of the playing surface without being stopped by the Anti skate post.

## **6. Tracking Force.**

An Ortofon balance gauge is supplied that will allow you to make adjustments to the force at the point of contact with the record surface. The Ortofon is a rudimentary tool and a more accurate device might prove useful. however if the measurement is repeated and done with care it is reliable. Refer to the cartridge manufacturers recommendations and set the cartridge accordingly. Experiment with slight variations within 10% of that recommended.

## **7. Azimuth.**

A quick check of azimuth can be achieved by viewing the Anti Skate beam spigot relationship. They should be in line when the record is being played if adjustment is correct. Improvements can be achieved by careful tests with known pieces of music. To adjust the system simply rotate the counter balance to change the turning moment on the system. The

Counterbalance beams effect is related to the distance away from the pivot laterally. So when viewing the arm from the front if you want the arm to rotate clockwise then you need to increase the turning moment on the right hand side of the arm and decrease the moment on the left so turn the balance anti clockwise to achieve this. Familiarise yourself with this simple effect so that fine adjustments can be achieved.

## **8. Anti Skate.**

Refer to the Anti Skate diagram at the back of this booklet. Two rubber O rings are provided. The nylon cord used is very low in friction and apt to slip out of the groove if not restrained with either one or two rings if the user prefers.

## **9. Adjusting the Cartridge.**

The cartridge can be adjusted using the Wilson Benesch alignment card which has instructions on it. This card can also be used as a shim so that adjustments for record height can be made to compensate for V.T.A. variations.

## **10. Technical Information.**

EFFECTIVE MASS	9gms
EFFECTIVE LENGTH	280mm
WEIGHT	340gms
CARTRIDGE RANGE	5 - 16 gms
INTERNAL WIRE	Cardas
V.D.H. Deskadel , Discovery	
EXTERNAL WIRE .	
Star Quad	
4 * 96 * 0.05	
Resseun Shield. Core to Core 70pf	
Resistance 0.108 Ohms.	
Termination Neutrik Profi RCA Phono Plugs.	

## **Fitting to other Turntables.**

Fitting the Tone arm to other turntables varies according to each turntables requirements.

The card supplied with the tonearm should be used to obtain the correct distance between the bearing centre and arm pivot. Wilson Benesch produce two arm mount systems.

1. Wilson Benesch Arm Mount.
2. Standard Arm Mount.

The Standard Arm Mount is used to connect the Tonearm to other Turntables.

## **The Wilson Benesch Tonearms.**

This system is a unique product with unique characteristics that will respond well to fine adjustments. The quality of the materials and Engineering technology are second to none. Its name is derived from the A dvanced C omposite T echnology used in its construction.

No parts of the system are serviceable. If you experience any anomalies then contact your dealer first.

No parts other than those described should be adjusted. To do so would render all guarantees void.

All surfaces of the system require a simple wipe to remove dust only.

Do not under any circumstances attempt to add lubricant to the bearing.

Thankyou for buying Wilson Benesch.