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# THE VINYL **ENGINE**®

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**AKG** *TS*  *SYSTEM*

Stereo  
Cartridge

## The AKG TS System

AKG have developed a unique single pivot point suspension system (Fig. 1) in which the suspended stylus is centred symmetrically in a minute hole precisely cut in a thin metal plate ①, the hole having a marginally larger diameter than the stylus ②. The metal plate and the stylus are connected together by means of a newly developed rubber compound ④, vulcanized to both parts in a special bonding process, thus creating a „knife-edge” type bearing in the area of the plate hole. Having this knife edge effect at the plate hole virtually eliminates all axial shifting of the pivot point. This enables the stylus tip to relay to the moving iron armature ③ with maximum accuracy, all information retrieved from the record groove modulation — evenly and independent of directional movement. Thus, any frequency dependent distortion of directional information is eliminated. A miniature magnet mounted in the cartridge body and not attached to the stylus itself, greatly reduces the effective moving mass. A short cantilever with a wall dimension (model P8ES) of 30 microns (0.0012”) helps to reduce it even further, producing a system with high compliance and the lowest possible mass, able to respond instantaneously to sudden peaks (transients). At the same time, record/stylus tip wear is kept to an absolute minimum.

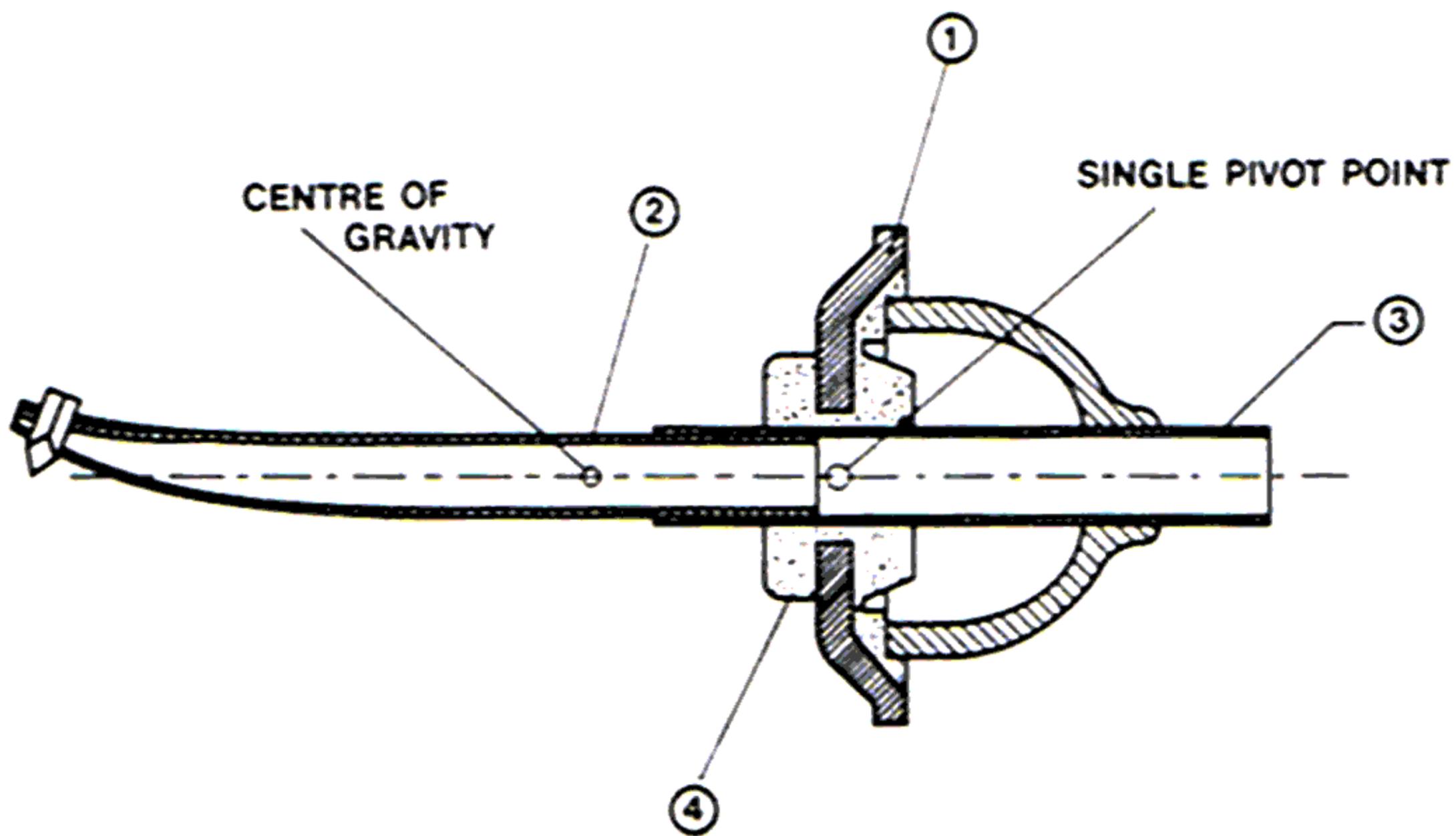


Fig. 1

Cartridge type	P6R	P6E
Stylus	spherical	ellipt.
Tip radii (inches)	.0007	.0004 × .0008
Eff. Mass (mg)	0.9	0.9
Frequency Response (Hz)	20—20 000	20—20 000
Output Voltage at 5 cm/sec (mV)	6.25	6.25
Tracking Force Range (grams)	2...4	1.5...3.0
Optimum Tracking Force (grams)	3	2.5
Compliance ( $\times 10^{-6}$ cm/dyne)	15	20
Channel Separation 1 kHz (dB)	25	25
Channel Separation 10 kHz (dB)	15	15
Channel Balance (dB)	within 2 dB	within 2 dB
Frequency Intermodulation Distortion (% at -6 dB Ref.)	$\leq 0.9$	$\leq 0.9$
Impedance (Ohms/mH)	860/280	860/280
Optimum Load (Ohms/pF)	47 000/470	47 000/470
Mounting (inch)	Standard 1/2	Standard 1/2
Weight (grams)	5.86	5.86
Connections	4 Terminals	4 Terminals

All mounting hardware is contained in a compartment at the base of the acrylic display box. A small screwdriver is supplied with models P7E, P8E and P8ES.

P7E	P8E	P8ES
ellipt. .0003 × .0007	ellipt. .0002 × .0007	ellipt. .0002 × .0007
0.6	0.45	0.42
10—21 500	10—23 000	10—28 000
4.5	4	3.75
1.25...2.50	0.75...1.25	0.75...1.25
1.5	1.0	1.0
25	35	35
25	30	30
18	20	25
within 2 dB	within 2 dB	within 2 dB
≤0.7	≤0.5	≤0.5
860/280	860/280	860/280
47 000/470	47 000/470	47 000/470
Standard 1/2	Standard 1/2	Standard 1/2
5.86	5.86	5.86
4 Terminals	4 Terminals	4 Terminals

## Mounting instructions

AKG cartridges have 1/2" (12.7 mm) standard fixing slots provided in an integral mounting bracket to ensure easy mounting.

- 1) Remove stylus assembly, with the stylus guard in the downward "protect" position.
- 2) Select correct pair of screws for your headshell and position in headshell. Fit the washers and nuts supplied and tighten partially.
- 3) Connect headshell leads to cartridge terminals located at the rear of the cartridge as shown in fig. 2, taking care to observe the colour coding.

Caution: Do not solder leads or pin jacks directly to the cartridge terminals, or attempt to solder them when connected to the cartridge terminals.

- 4) Slide cartridge mounting bracket under the screws and tighten screws up fully (fig. 3).
- 5) Replace stylus assembly, with stylus guard still in downward position.
- 6) Fit mounted cartridge to pick-up arm, and adjust for optimum tracking force, following instructions supplied by pick-up arm manufacturer. For maximum accuracy, a high quality stylus force gauge should be used. The maximum tracking forces quoted in the AKG specifications must not be exceeded.
- 7) For record changers/automatic turntables or where additional clearance between record and cartridge may be required, a

wedge is supplied. This should be inserted between headshell and cartridge mounting bracket. Longer screws will then be necessary.

For normal 'manual play' turntable/arm combinations, this wedge should not be necessary.

The wedge may be fitted simply in the following manner:

(a) Remove stylus assembly

(b) Slide wedge gently over the top of the mounting bracket from rear to front. The wedge will then "click" into place.

To remove, lift front "lip" of wedge gently and slide wedge towards rear of cartridge.

NB: Model P8ES is suitable for use with only the finest quality tone-arms, having very low friction in the arm pivot bearings of below 15 mg in any direction, e.g. the SME 9" model S2 pick-up arm.

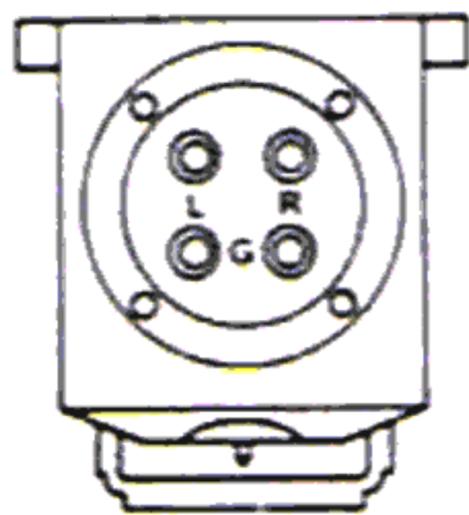


Fig. 2

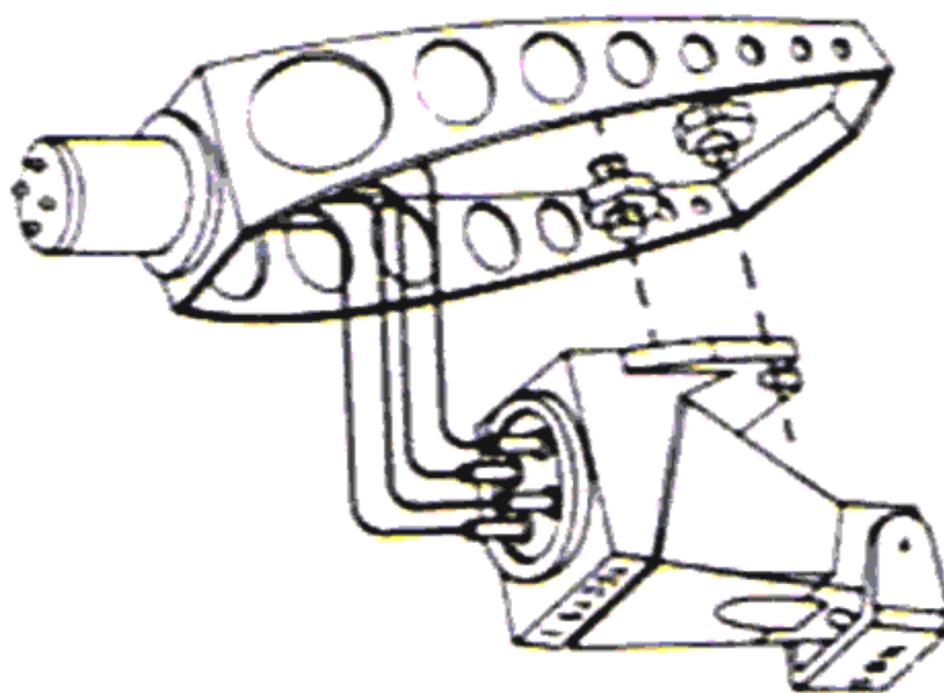


Fig. 3

## **Complete stylus interchangeability**

Interchangeability of AKG stylus assemblies by the user, present numerous advantages. For example, a less expensive stylus may be temporarily used in a more expensive cartridge body as a suitable alternative when playing favorite but worn records.

Conversely, a more expensive stylus may be fitted to an economy type cartridge body to increase the performance characteristics whilst reducing the tracking force and consequently record wear, when playing records of higher quality. However, it should be pointed out that our stated performance specifications can only be guaranteed when the following combinations are used as originally supplied, i.e. P8ES normally fitted with X8S stylus assembly.

<b>Cartridge type</b>	<b>Replacement stylus assembly</b>
P6R	X6R (spher. tip)
P6E	X6E (ellipt. tip)
P7E	X7E (ellipt. tip)
P8E	X8E (ellipt. tip)
P8ES	X8S (ellipt. tip)

To remove stylus assembly, firmly grip the stylus holder (with stylus guard in downward position) and pull in the direction shown in fig. 4a.

To replace stylus, reverse the process, making certain that the guiding vanes on either side of stylus housing locate exactly with the slots provided in the cartridge body (Figs. 4b and 4c).

Fig. 4a

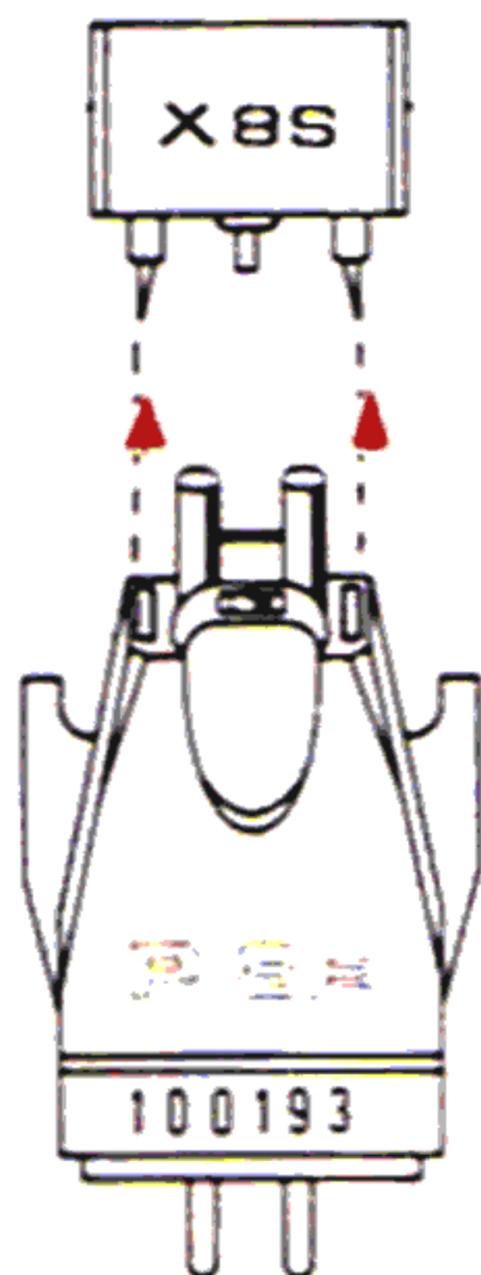


Fig. 4b

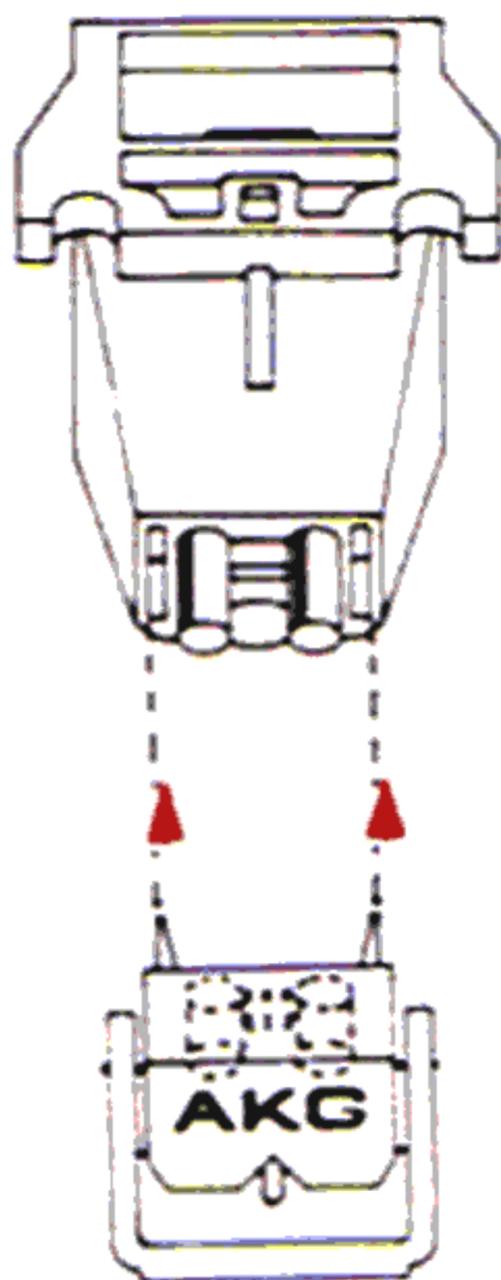
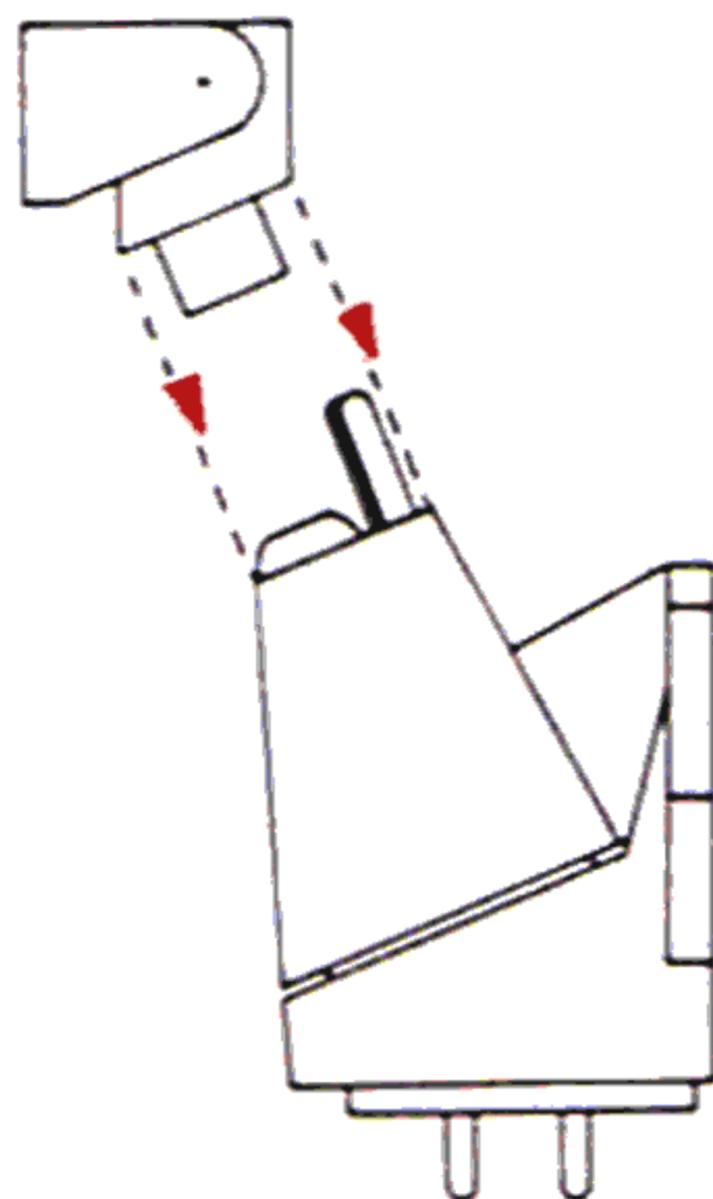


Fig. 4c



## Stylus life

A damaged or worn stylus tip can actually destroy the delicate information to be found in a record groove, often in as little as one or two playings! It will be appreciated therefore that regular inspection of the hard working diamond tip under a high powered microscope is essential in order to maintain the high quality performance of both record and cartridge. As a guide, these inspections should take place at least every 6 months (or approximately 1000 L.P. sides).

## AKG stylus identification

When replacing your stylus assembly, in order to retain the original high performance standards achieved by AKG, care should be exercised that a genuine AKG replacement stylus is obtained. This is identified by having „AKG” embossed on the front of the plastic stylus housing and by the outer packaging which contains the wording „PAT. PEND.”, „MADE IN AUSTRIA”.

## Stylus cleaning

Use a small brush with soft bristles. The stylus should be cleaned gently, with a rear to front movement only. Do not use brush with a side to side movement or from front to rear.



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We reserve the right to make such technical alterations as may be found necessary from time to time without prior notice.

# Important Notice — Wichtiger Hinweis

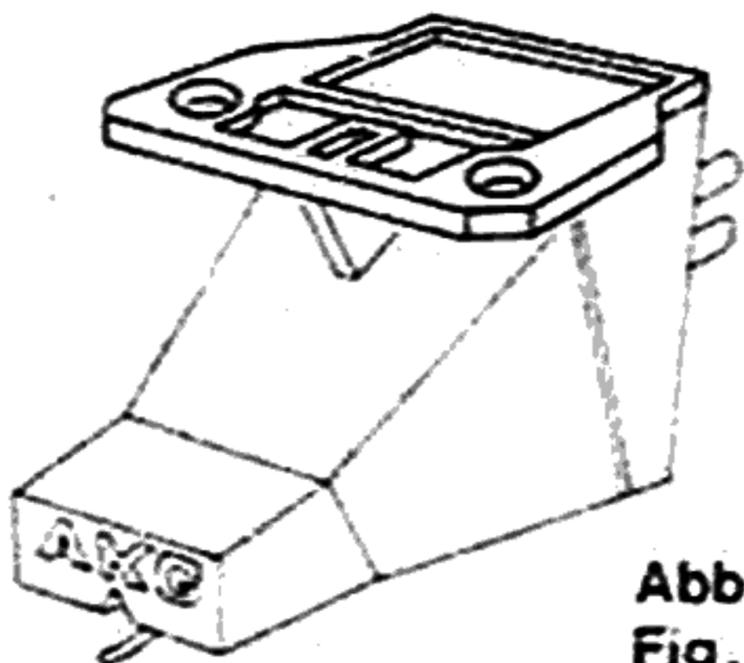


Abb.1  
Fig.1

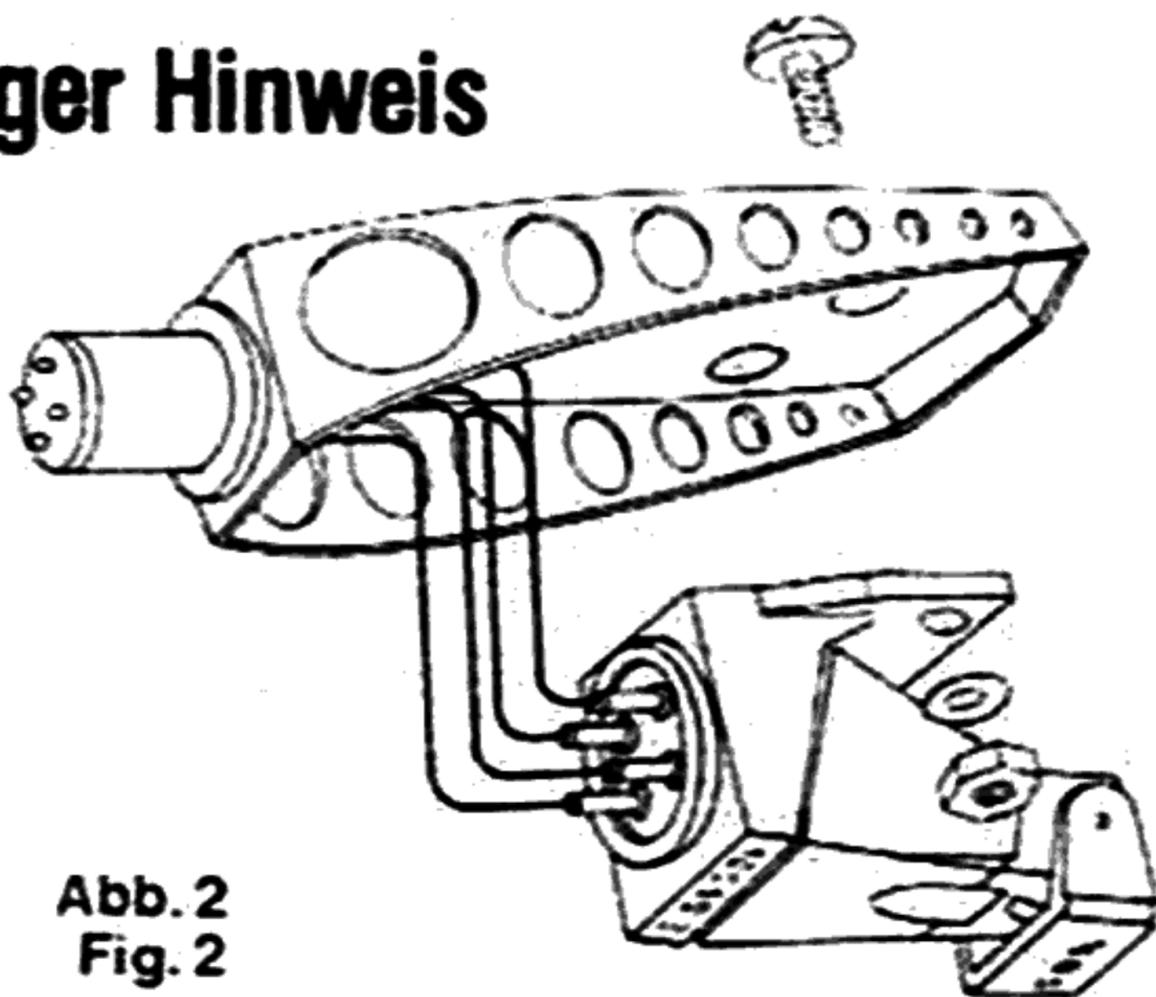


Abb.2  
Fig.2

## Alternative Mounting Instructions

Should your AKG cartridge mounting bracket have  $\frac{1}{2}$  inch (12,7 mm) fixing holes as shown in figure 1 please mount the cartridge as follows:

- 1) Remove stylus assembly with stylus guard in downward 'protect' position.
- 2) Connect headshell leads to cartridge terminals located at rear of cartridge, taking care to observe the correct colour coding.

**Caution:** Do not solder leads or pin jacks directly to the cartridge terminals or attempt to solder them when connected to the cartridge terminals.

- 3) Select correct pair of screws for your headshell from those provided. Mount cartridge, washers and nuts as shown in figure 2. Tighten screws firmly. Do not use excessive force.

- 4) Replace stylus assembly with stylus guard still in downward position.

All other information contained in data booklet under heading 'mounting instructions' remains unchanged and should be read in conjunction with this notice. Should your cartridge have mounting slots, rather than the holes mentioned, disregard this notice. Follow only instructions contained in data booklet.