

## GRADO STEREO PHONO PICKUPS

### SPECIFICATIONS—FTR+, FTE+, FCR+, FCE+

Output—5MV @ 3.54 CMV (45 degrees)  
 Frequency Response—10-35,000 Hz  
 Channel Separation—Average 20 DB, 10-20,000 Hz  
 \*Stylus—Diamond

### SPECIFICATIONS—FTE+1, FCE+1

Output—3 MV @ 3.54 CMV—(45 degrees)  
 Frequency Response—10-50,000 Hz  
 Channel Separation—Average 20 DB, 10-30,000 Hz  
 \*Stylus—Diamond

### SPECIFICATIONS—F3E+

Output—3 MV @ 3.45 CMV—(45 degrees)  
 Frequency Response—10-55,000 Hz  
 Channel Separation—Average 25 DB, 10-30,000 Hz  
 \*Stylus—Diamond

### SPECIFICATIONS—F2+, F1+, G1+, G2+

Output—3 MV @ 3.54—(45 degrees)  
 Frequency Response—10-60,000 Hz  
 Channel Separation—Average 25 DB, 10-30,000 Hz

### SPECIFICATIONS—ALL MODELS

Input Load—10,000 Ohms or more

Inductance—55 millihenries

DC Resistance—700 Ohms

Mounting—1/2 inch centers

Pickup Weight—4.5 grams

\*Last letter in model designates stylus type; R=Spherical, E=Elliptical. Models F2+, F1+, G1+ utilize a special Grado stylus. G2+ Twin Tip Stylus

## TRACKING FORCE GUIDE

MODEL	STYLUS	TRACING FORCE
FTR+	FTR+/S	1.5 to 3 grams
FTE+	FTE+/S	
FCR+	FCR+/S	
FCE+	FCE+/S	
FTE+1	FTE+1/S	1.5 grams
FCE+1	FTE+1/S	
F3E+	F3E+/S	
F2+	F2+/S	
F1+	F1+/S	
G1+	G1+/S	
G2+	G2+/S	

Adjust Arm Balance (prior to adjusting tracking force) so that the stylus just barely touches the record.

## ELECTRICAL CONNECTIONS

### STEREO

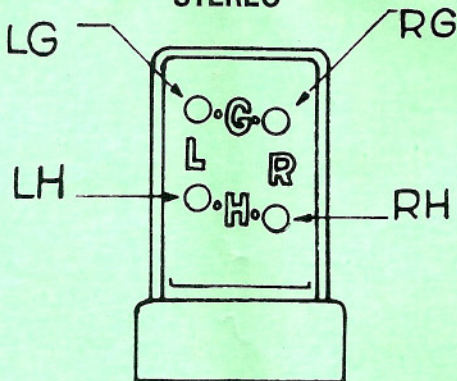


Fig. 1

#### Mono for Mono Tone Arm:

Connect both hot pins to hot lead in mono cable.  
 Connect both ground pins to ground lead in mono cable.

#### Mono for Stereo Tone Arm:

Connect both cables from tone arm to a "Y" connector cable which has two female inputs and one male output.

**CAUTION: DO NOT SOLDER CONNECTIONS DIRECTLY TO CARTRIDGE PINS. MAKE SOLDER CONNECTIONS TO CONNECTOR BEFORE SLIDING CONNECTORS ON CARTRIDGE PINS.**

## COLOR CODE FOR REPLACEMENT STYLUS

FTR+/S	Gray Plate	.5 mil Sph.	Gray Plate
FTE+/S	Gray Plate	.7x.3 mil Ell.	Two White Dots
FCR+/S	Gray Plate	.5 mil Sph.	Gray Plate
FCE+/S	Gray Plate	.7x.3 mil Ell.	Two White Dots
FTE+1/S	Gray Plate	.7x.3 mil Ell.	Two Silver Dots
FCE+1/S	Gray Plate	.7x.3 mil Ell.	Two Silver Dots
F3E+/S	Black Plate	.7x.3 mil Ell.	Black Plate
F2+/S	Black Plate	.6x.3 mil Ell.	Two White Dots
F1+/S	Black Plate	Grado Type	Two Blue Dots
G1+/S	Black Plate	Grado Type	Two Yellow Dots
G2+	Brown Plate	Twin Tip	Two Gold Dots

Although the FTR+, FCR+, FTE+ and FCE+ have the same color code, the FC Stylus Series are selected components with closer tolerances!

## GUARANTEE

The Grado stereo pickups are guaranteed to be free from mechanical or electrical factory defects for a period of one year from the date of purchase or 18 months from the date of factory shipment providing all the enclosed instructions have been complied with.

All warranty repairs are to be performed at Grado Laboratories. Shipping costs to Grado Laboratories are to be paid by the Consumer. Warranty repair parts, labor and return shipment to Consumer will be paid by Grado Laboratories.

The above guarantee does not include stylus wear and does not include stylus damage due to abuse or mishandling.

A new replacement stylus assembly may be purchased from your dealer.

## CONSUMER REPLACEABLE STYLUS

Follow instructions carefully to avoid damage!

To remove the stylus assembly use the special tool supplied with your Grado pickup.

The tool has hooks with a backing plate behind each hook, extending 1/8 inch longer than the hooks.

Lay the flat of the backplate extension flush against the rear of the stylus plate. Push down on the tool until it seats with a click as in Fig. 2. With the hooks of the tool engaging the stylus plate as in Fig. 3 pull the tool in the direction of the arrow until the stylus assembly is clear of the pickup.

Fig. 2

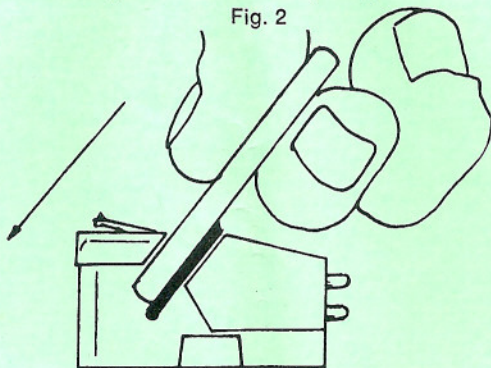
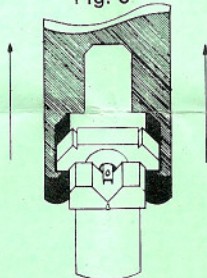


Fig. 3



## VERTICAL TRACKING ANGLE

Adjusting the vertical angle is relatively simple with Grado pickups. To facilitate the procedure, Grado has designed the outer casing of the pickup with vertical straight lines.

Illustration A shows the front of the pickup. If the front of the pickup is not at 90 degrees (right angle) to the surface of the record, there is need for correction. Make your correction to look like Ill. A.

Illustration A

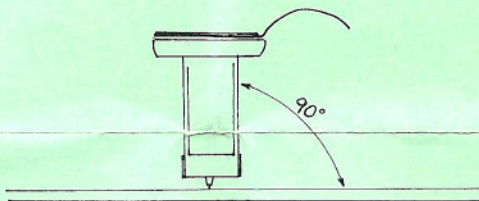
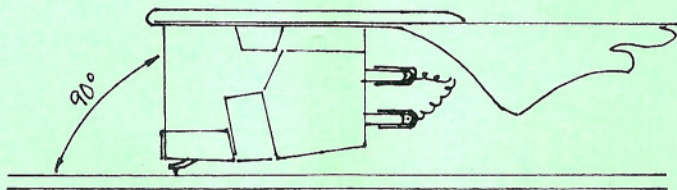


Illustration B shows the pickup from the side. Use the front of the pickup (left side in Illustration) as an alignment guide. Raise or lower your tone arm (at rear) until the front of the pickup is 90 degrees (right angle) to the record surface as in Ill. B.

Illustration B



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