

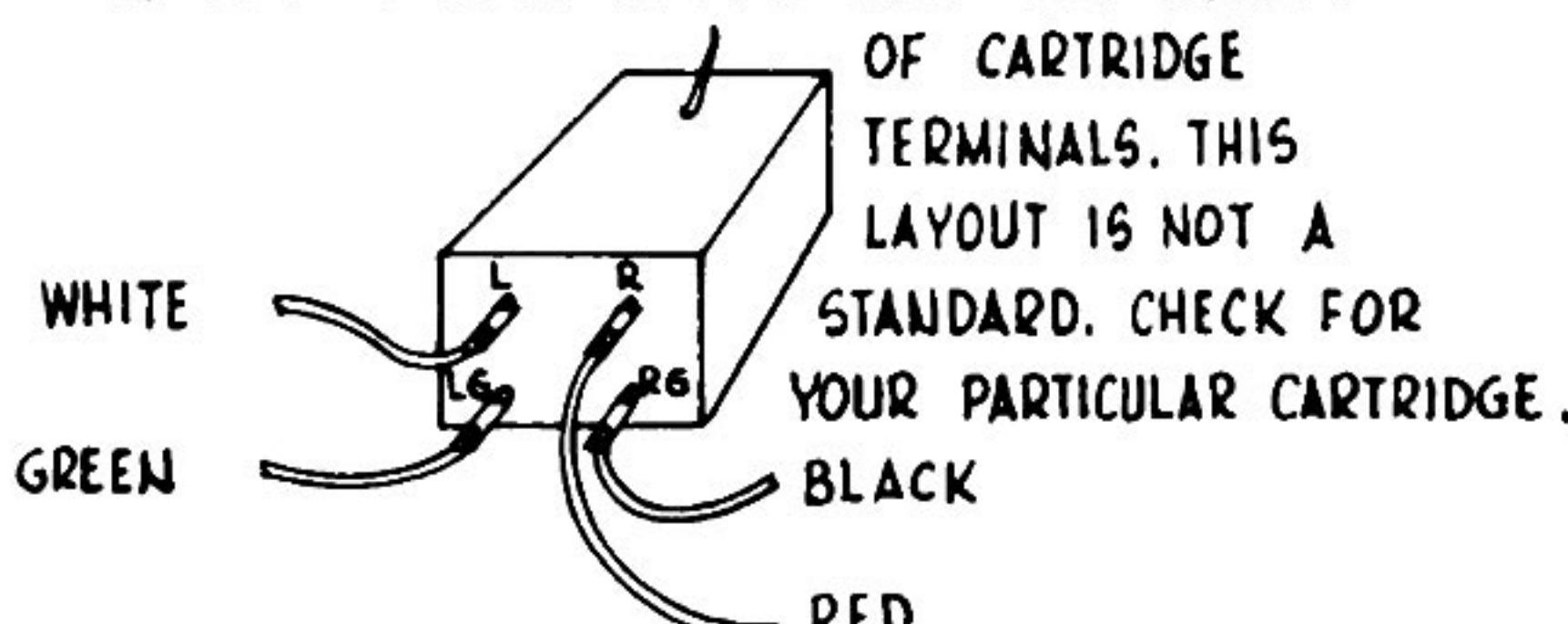
MOUNTING PICKUP CARTRIDGE IN THE AR CARTRIDGE SHELL

Good design requires that a tone arm and pickup shell be made as light as possible. The AR shell therefore is of a light plastic, but is strong enough to hold any cartridge securely. Threads in the cartridge mounting studs *can* be stripped, however, or the studs can be broken off, by excessive tightening of the screws. You may turn the screws reasonably tight without fear of damage, but do not overtighten them. Extra shells can be purchased directly from AR, Inc., 24 Thorndike St., Cambridge, Mass. 02141, at \$2.00 postpaid.

Wires are coded as follows. Red—right channel “hot”; Black—right channel ground; White—left channel “hot”; Green—left channel ground. For proper connection to stereo cartridges other than four-terminal units, refer to the cartridge manufacturer’s instruction book.

Clips at the ends of the cartridge shell wires should be put on the cartridge terminal pins before the cartridge is installed in the shell (see sketch). Extra clips are supplied with the mounting hardware. After the

NOTE: SKETCH SHOWS ONLY ONE LAYOUT



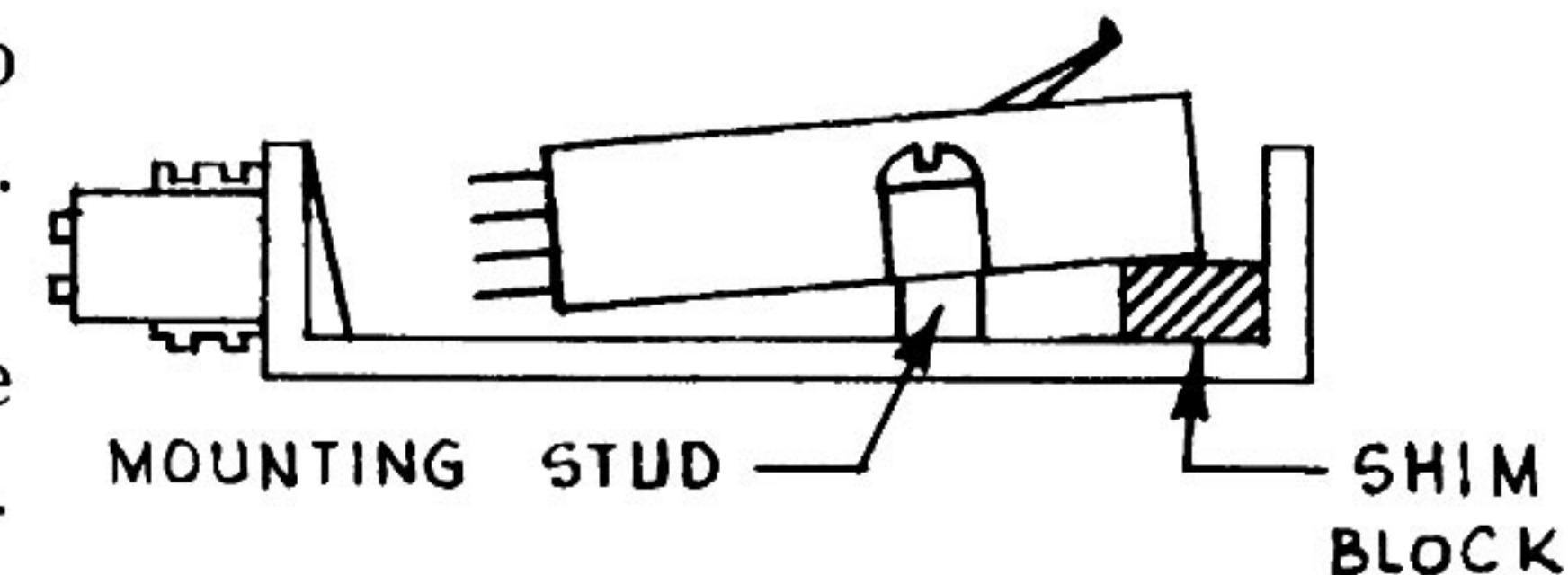
cartridge is put in the shell, push the wire loops gently up into the shell and make sure that the clips do not touch one another.

Screws in four sizes and standoff bushings in three sizes are supplied for mounting cartridges. In the table below, both screws and bushings are identified by numbers in ascending order of length. No. 1 screws and No. 1 bushings are shortest. No. 4 screws and No. 3 bushings are the longest. In addition, a small bar or shim block is supplied

to raise the front end of some cartridges, as shown in the sketch.

Unless noted otherwise, standoff bushings (where required) are to be placed between the cartridge shell mounting studs and the cartridge. Turn the bushings onto the screws to hold them in place.

Combinations of standoff bushings and screws shown in the table below *must* be used to obtain proper alignment of the cartridge in the shell.



Cartridge	Standoffs	Screws	Cartridge	Standoffs	Screws
ADC — All Models	None	No. 2	Ortofon SPU/T ⁵	No. 2 plus 3	No. 3
CBS-Columbia ²	No. 3	No. 2	Ronette Stereo TO	No. 1	No. 1
Dyna Stereodyne II, III	No. 1	No. 1	Shure M3 ⁶	None	No. 2
Elac 200, 210, 310, 3221	No. 1	No. 1	Shure M44, V-15, M55-E ⁶	None	No. 3
Emp. 880 Series ¹ ; 888 Series, 808, 999	No. 1	No. 1	Shure V15 Type II, M75	None	No. 3
E-V 21, 26, 27 ³	No. 2	No. 1	Shure M7, M8, M33, M77 ⁶	No. 2	No. 2
Euphonics ² , ⁸	None	No. 1	Sonotone 8T ²	No. 2	No. 1
Fairchild SM-1, SM-2, F-7	None	No. 4	Sonotone 9T, 916T, 16T ³	No. 2	No. 1
Gen. Elec. GC, VR-225, VR-227	None	No. 2	Stanton-Pickering 380, 381, U38AT.		
Gen. Elec. VR-1000	No. 3	No. 2	400, 481	No. 2	No. 1
Grado Mark Series, Type A ⁴ , Type B ²	None	No. 3	Stanton-Pickering 500, 500A, V-15 Series ²	No. 2	No. 1
IMF Goldring ¹	No. 2	No. 2	Stanton-Pickering 581 Series ⁹	No. 1 plus 3	No. 3
Ortofon S-15T ¹⁰	No. 1	No. 4	Stanton-Pickering XV-15 Series	No. 1	No. 1
Ortofon SL-15	None	No. 1	Weathers C 66, LDM ³ , ⁷	No. 3	No. 2

¹Standoffs must be put between screw heads and cartridge.

²A U.S. penny must be glued inside shell above cartridge to obtain proper needle force.

³One U.S. penny and one U.S. nickel must be glued inside shell above cartridge to obtain desired needle force.

⁴Shim block (see sketch above) must be used under front of cartridge.

⁵Requires small extra counterweight section and special shim block, available free directly from AR, Inc., 24 Thorndike Street, Cambridge, Mass. 02141. Front mounting holes of cartridge must be used in order to obtain proper overhang adjustment.

⁶It may be desirable to tilt cartridge body with paper or thin cardboard shim blocks placed as shown in illustration above.

⁷Cartridge body should be connected to left channel ground pin.

⁸Terminal clips supplied by cartridge manufacturer must be soldered on cartridge shell wires.

⁹No. 1 standoffs go between screw heads and cartridge; No. 3 standoffs plus large standoff block supplied by cartridge manufacturer go between cartridge and mounting studs in shell. Special cartridge shell with cutaway in front, which permits mounting cartridge deeper in shell, available free directly from AR Inc., 24 Thorndike Street, Cambridge, Mass. 02141.

¹⁰Requires small extra counterweight section, available free directly from AR, Inc., 24 Thorndike St., Cambridge, Mass. 02141.

SETTING STYLUS FORCE. Cartridge manufacturers recommend a range of permissible stylus force settings rather than a specific setting. In general the lower end of such a recommended range is optimistic; the needle will stay in the record groove, but it will not trace heavily-recorded music without severe distortion. It has been our experience that no cartridge will operate satisfactorily in any arm at less than 1 gram stylus force. Most require much more. A list of stylus force requirements for most current cartridges is enclosed.