

Combines the matchless performance of the empire 208 belt-driven, 3-speed turntable and empire 98 transcription arm. With matching walnut base (less cart-ridge) \$145.50\* **new** Free "do-it-yourself Stereo/Balance Kit" at your high fidelity dealer.

# empire troubador

( record playback system )

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Archiv Michael Otto



\* SLIGHTLY HIGHER WEST OF ROCKIES



# new empire troubador

record  
playback  
system model 298

## empire 208

belt-driven, 3-speed turntable

So quiet . . . only the sound of the music distinguishes between the turntable at rest and the turntable in motion.

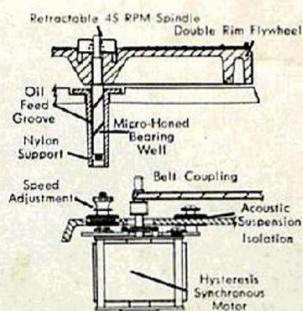
Any sound that comes through your phono speaker system is caused by movement of the stylus. In recorded music, the stylus movement is produced by the modulated record groove; with rumble noise, it is caused by mechanical vibration. However, to produce that sound, the stylus must move at least 1/50,000 of an inch at some frequency in the audible range. A microgroove recording causes a stylus movement of from 1/3000th to 1/30,000th of an inch.

Obviously, the amplitude of vibration transmitted by the turntable mechanism to the stylus is the vital factor in determining its rumble-producing characteristics. In the Empire 208, the total vibration generated by the mechanism is less than 1/1,000,000th of an inch. To convert this to audible sound would require more than 1000 times amplification. And with that much gain, the music would reproduce at a deafening level.

Here's why the 208 is virtually rumble-free: utterly simple design, utilizing only two moving parts—the motor and turntable; precise bearing tolerances in those parts; each motor and each turntable is individually adjusted to perfect dynamic balance; isolation provided by the motor suspension and belt drive; the resilient Nylon 'seat' which supports and cushions the thrust of the main bearing.

**MATCHING WALNUT BASE**—Supplied with the Troubador Playback system.

**FEATURES:** • dynamically balanced, hysteresis-synchronous motor • 3 speeds: 33½, 45 and 78 rpm • precision-ground, seamless belt couples motor directly to turntable • no intermediate idlers • push-button power control with 'on-off' light • rumble and wow far below NARTB spec. **TECHNICAL SPECIFICATIONS:** • Table weight: 6 pounds • 45 rpm Adapter: built-in, retractable • Turntable & Deck Plate: machined, heavy aluminum casting • Power: 117 v., 60 cycles AC, 30 W. • Minimum space requirements (turntable and arm on base) width: 17"; depth: 15"; height: 8¼". Empire 298—satin chrome; Empire 298-G, satin gold.



## empire 98

dynamically-balanced transcription arm

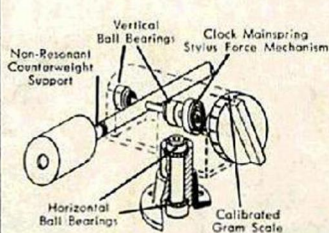
So perfectly balanced . . . it will track a record groove at any angle of turntable tilt, on its side, or even upside down.

The Empire 98 is probably the most stable and yet, freely responsive playback arm ever developed. So precisely calculated is the distribution of its mass; so ingenious the offset pivot design which locates the pivot points in the center of mass, that when balanced in any one plane, the 98 is in balance in all planes.

Even the application of stylus force doesn't disturb the arm's stability. An adjustment knob—calibrated in grams—is dialed to the stylus force desired. This tightens a spring, coiled around and secured to the vertical pivot shaft. The spring, in turn, exerts a torque or twisting action on the shaft which measures the stylus force without shifting the arm's center of mass, or upsetting its dynamic balance.

Yet, for all its rock-steady stability, lateral and vertical compliance is almost incredible. Both bearings are suspended in precision ball races, so free of friction drag, that the arm follows the spiral course of the record groove, effortlessly, favoring neither one wall nor the other, responding faithfully to the rise and fall of even the most badly warped record.

**THE CHOICE OF THE CARTRIDGE HAS BEEN LEFT UP TO YOU**—The Troubador system will provide the finest performance with any of the leading magnetic cartridges. However, to complete the finest record playback system available today, we recommend the Empire 108—the first truly compatible mono/stereo cartridge.



**FEATURES:** • Stylus force adjustable from 0 to 8 grams • integrated ground shield eliminates hum due to ground loops • interchangeable cartridge shells each equipped with gold-plated contacts • self-latching arm rest.

**TECHNICAL SPECIFICATIONS:** • Maximum Tracking Error: ±.75° • Arm Resonance: 9 cps • Overall Arm Length: 12¾" • Arm Offset Angle: 23.8° • Height Adjustment Range: 1¼" • Counterweight balances cartridges from 2-25 grams.

**audio empire**  
STEREO/BALANCED HIGH FIDELITY COMPONENTS DYNA-EMPIRE, INC.

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