Suggested retail price $400.00

The Empire 698 Turntable

The Tonearm

The new 698 arm moves effortlessly on 32 jeweled, sapphire bearings. Vertical and horizontal bearing friction is a mere 0.001 gram, 4 times less than it would be on conventional steel bearings. It is impervious to drag. Only the calibrated anti-skating and tracking force you select control its movement.

The new aluminum tubular arm, dramatically reduced in mass, responds instantly to the slightest variation of a record's movement.

The Motor

A self-cooling, hysteresis synchronous motor drives the platter with enough torque to reach full speed in one third of a revolution. It contributes to the almost immeasurable 0.04% average wow and flutter value in our specifications.

The Drive Belt

Every turntable is approved only when zero error is achieved in its speed accuracy. To prevent any variations of speed we grind each belt to within one ten thousandth of an inch thickness.

The Platter

Every two piece, 7 lb., 3 inch thick, die cast aluminum platter is dynamically balanced. Once in motion, it acts as a massive flywheel to assure specified wow and flutter value even with the voltage varied from 105 to 127 volts AC.

The Suspension System

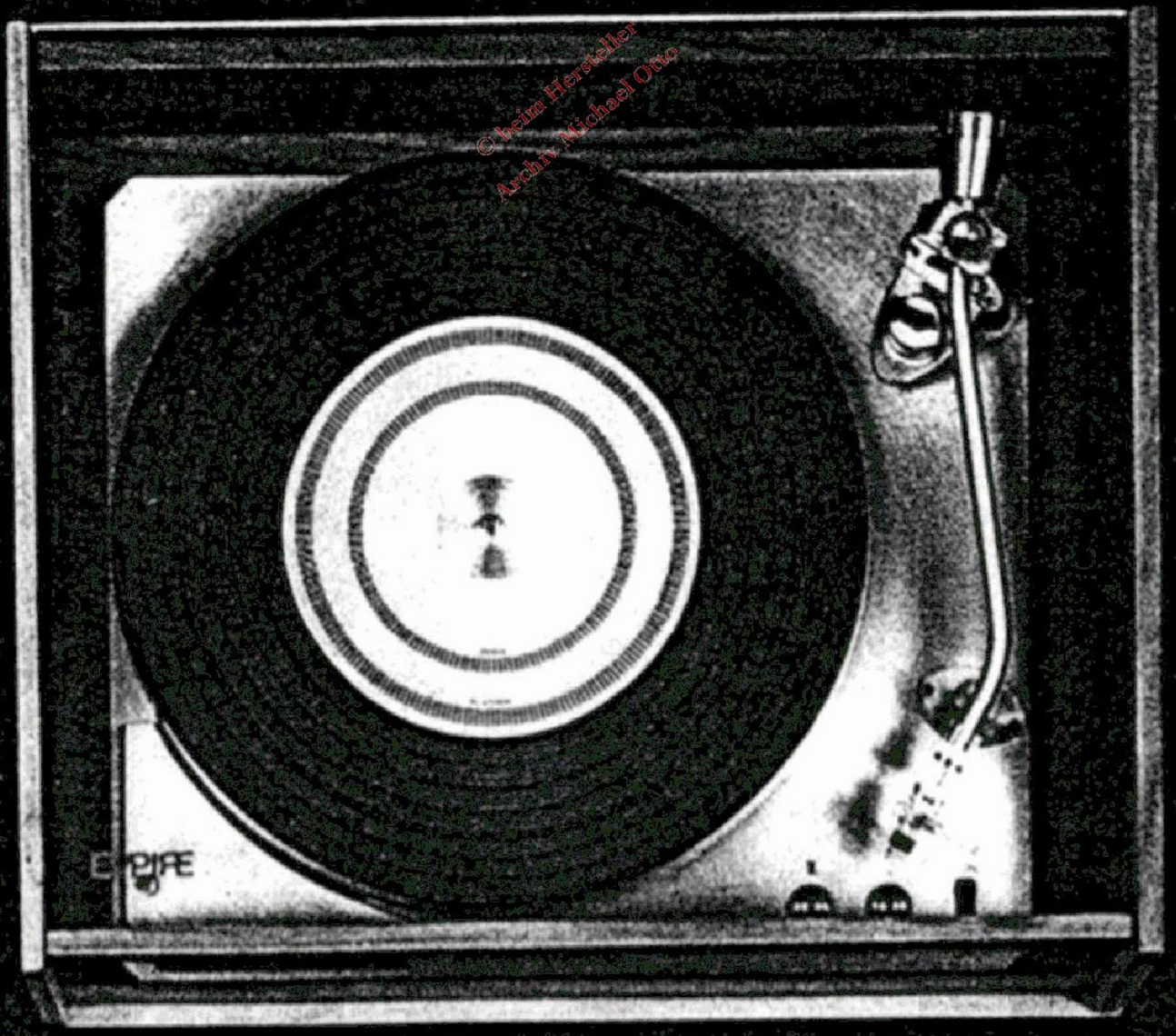
Piston damped, 16 gauge steel coil springs cradle the arm and platter.

The Main Bearing

The stainless steel shaft extending from the platter is aged, by alternate exposures to extreme high and low temperatures preventing it from ever warping. The tip is then precision ground and polished before lapping it into two oilite, self-lubricating bearings, reducing friction and reducing rumble to one of the lowest figures ever measured in a professional turntable; −68 dB CBS ARLL.

The Specifications

Type of Motor	Hysteresis Synchronous
Rumble (ARLL)	68 dB below 3.54 cm/sec @ 1,000 Hz.
Average Wow and Flutter (weighted)	.04%
Startup Time	1/3 Rev.
Weight of Platter	7 lbs. 3 oz.
Size of Platter	12 inches.
Platter Material	Aluminum
Arm Material	Aluminum
Length of Arm (Pivot to Stylus)	9 inches.
Bearing Friction (Vertical & Horizontal)	Less than .001 grams.
Maximum Lateral Tracking Angle Error	1.5°
Type of BIAS Control	Diminishing Spring
Track Force Range	0 to 4 grams (1/2 gram increments)
Standard Capacitance Cable	180 pF (including arm)
Low Capacitance Cable	70 pF (including arm)
Total Shipping Weight	30 lbs.
Physical Dimensions	8 3/16 H x 17 1/2 W x 15 1/8 D



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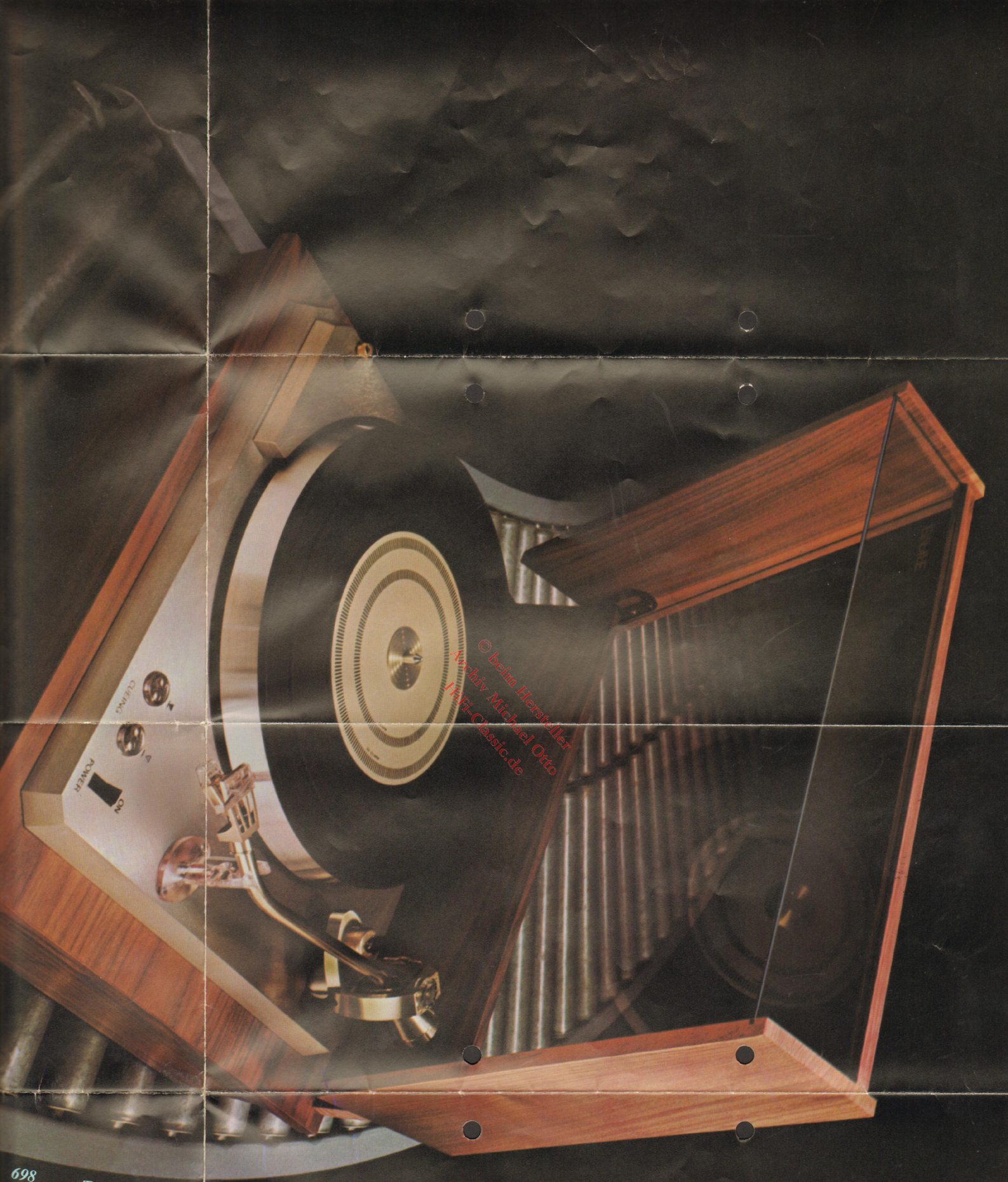
698 Turntable System



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Printed in U.S.A.
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EMPIRE SCIENTIFIC CORP., 1055 Stewart Ave., Garden City, N.Y. 11530
Canada: EMPIRE SCIENTIFIC CORP. LTD., 65 Martin Ross Ave., Downsview, Ontario

It takes 15-1/2 hours to make an Empire turntable.

Each one stands over 80 separate inspections before it reaches the end of the line.

And after the assembly is done, we test it some more.

Wow and flutter, rumble, and speed accuracy are electronically confirmed to meet specifications before final approval.

It's not a fast way to finish a turntable, but it's a great way to start one.

In a few years you'll appreciate the difference.

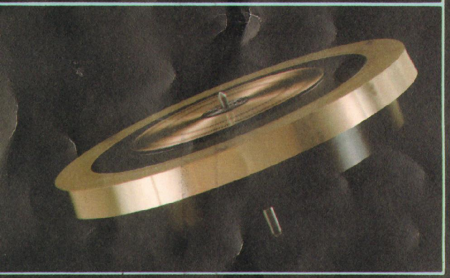
EMPIRE

The Empire

Using the finest materials available, regardless of cost, individually machining each part and assembling them by hand, every Empire 698 is a masterpiece. Precision and simplicity are the results of eighteen years of turntable manufacturing experience, here, in Garden City, New York.

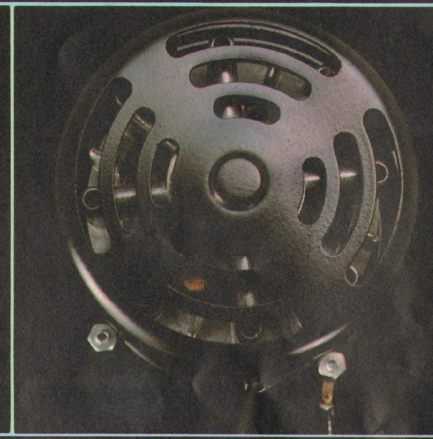
Empire's die cast aluminum platter weighs in at seven pounds! Each one is hand matched to the trim ring and center shaft and then dynamically balanced. Once in motion, it acts as a massive flywheel to assure stable speed.

The center spindle that supports the platter is tooled from 400-gauge stainless steel. But it's not just ordinary steel. It's aged, which means it will never warp. The tip is then polished to perfect symmetry and lapped into two oilite self-lubricating bearings. The end result? One of the lowest rumble figures ever attained by a professional turntable: -68 db CBS ARLL.



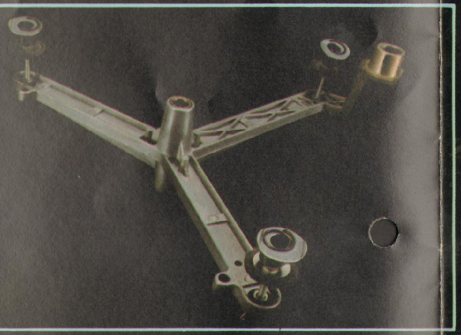
The heart of a turntable system is the motor and Empire uses a heavy duty Pabst hysteresis synchronous type. This is the only part not manufactured at Empire, but we had it built to our exacting specifications by one of the world's foremost manufacturers. It is self-lubricating, self-cooling, and it's very, very quiet.

Wow and flutter are an almost immeasurable 0.04%. And it's powerful enough to reach full speed in just one-third of a revolution — then hold it there, even if the AC current fluctuates from 95 to 130 volts.



Empire's exclusive aluminum suspension system is designed to insulate the tonearm and platter from outside resonance.

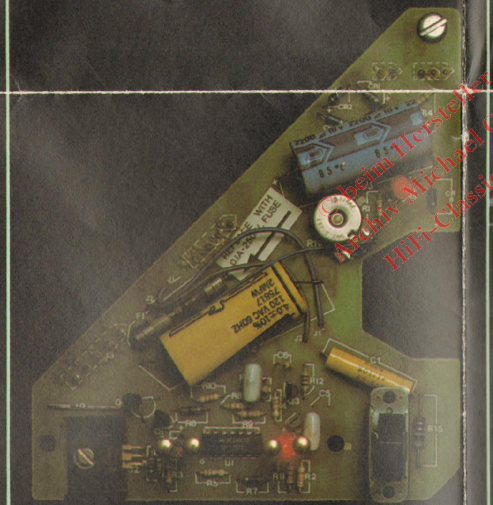
The three ends, attached to the base, provide piston damped, steel coil springs to absorb external vibrations in the same way the shocks in your car absorb the tremors of a road.

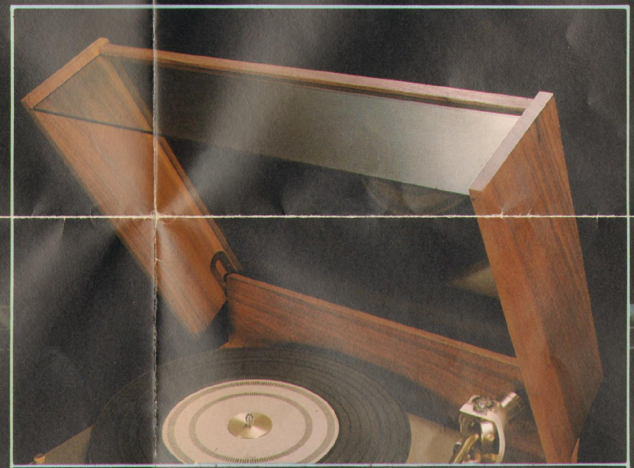


Empire's belt drive system isolates the shaft of the motor from the turntable itself.

Every drive belt is individually cut and ground at Empire to ensure correct fit and tension. No one belt varies from another by more than 1/10,000 inch.

Incorporated in the 698 turntable are integrated circuits which allow for the raising and lowering of the tonearm at the slightest touch of your finger. At the end of a record, the tonearm is automatically raised by a signal from the photocell sensor. Since the circuitry is D.C. and there are no motors or mechanical linkages, you are assured of a quiet, smooth, efficient operation.





The Empire dust cover is tempered glass, not plastic. So it's less likely to hold a static charge and collect dust. And it's also less likely to scratch.

Solid walnut surrounds the glass and provides an integrated hinge. So when it lifts, it lifts effortlessly without projecting behind the base of the turntable. It stays open at any desired angle, from 60° upwards. And raising or lowering it won't interfere with the operation of the turntable.

If the motor is the heart of the system, then surely the tonearm is nothing less than the mind.

The new Empire tonearm, made from hollow tubular aluminum, is half the mass of previous models. It is pivoted by 32 sapphire bearings, not steel bearings used by most manufacturers. They're harder and lighter and produce 4 times less friction. One reviewer of the Empire 698 put it this way: "I was unable to measure any pivot friction, but must point out that, with the test method used, I am unable to measure anything less than 0.003 grams — a figure which no other arm has ever bettered."

The stylus force is dialed using a calibrated clock mainspring that is more accurate than any commercially available stylus pressure gauge.

The anti-skate adjustment provides a micrometer-calibrated force that eliminates channel imbalance and unnecessary record wear.

The open "lace work" shell is extremely light weight and detaches for easy cartridge installation.

And the tonearm is balanced by a rear counterweight that is de-coupled by a damped bushing to minimize arm resonance.