

"Needless to say, it won't be leaving my system any time soon ..."

[Charles] New Jersey. (view full quote pg 8)

Tri-Art

## Turntable design features

# Tri-Art

### High-speed, Accurate Synchronous AC "Hurst" Motors

The TA-2 features two high-torque, high-speed-accuracy, 24-Pole synchronous AC "Hurst" motors, each housed in its vibration-decoupled motor, located on the lower plinth - completely decoupled from the top (upper) plinth. The higher the number of poles in a synchronous motor, the more frequently the magnetic field interacts with the rotor during each revolution. This results in smaller, more frequent torque pulses, which smooth out the rotational motion. This is crucial for accurate pitch and timing in vinvl playback.

When two identical synchronous motors are perfectly aligned and electrically in phase, their torque output profiles overlap. The torque "dips" (cogging points) of one motor are compensated by the torque "peaks" of the other, resulting in a much smoother combined torque curve. This significantly reduces micro-variations in rotational speed. By balancing forces, vibrations from each motor can partially cancel each other out, further reducing the noise floor and improving sound quality.

#### 6-Layer Gold-Plated Copper-Epoxy Disk Mat

After investing significant effort to minimize noise and vibrations throughout the turntable's Plinth and subassemblies, we recognized that allowing a conventional platter and spindle to introduce unwanted noise would undermine our work. That's why we engineered the distinctive 6-layer gold-plated copper/epoxy disk mat to tackle a crucial challenge in vinyl playback: further mitigating vibrations and resonances that can compromise sound quality. Tri-Art Audio's unique record mat's multi-layer construction, combining copper's conductive and damping properties with epoxy's energy-absorbing characteristics, is specifically designed to absorb and dissipate micro-vibrations generated during playback. The CNC-drilled pattern further optimizes this effect by channeling vibrational energy away from the record surface. By efficiently dissipating these unwanted energies, the mat prevents resonances from feeding back into the stylus, resulting in cleaner, more detailed audio reproduction, a lower noise floor, and enhanced musical clarity and focus

#### **Ultra-low Friction Bearing System**

At the heart of the TA-2 is an ultra-low friction bearing system, A precision-machined brass, bronze, and high-carbide tool-steel assembly, utilizing a hyper-spherical Apec-7 Carbon silicon-nitride ceramic ball resting on a ground thrust plate. A precision-ground thrust plate ensures an ultra-smooth surface for the ball to rest on, further reducing friction and vibration.

We chose the Apec-7 Carbon silicone-nitrate ceramic ball bearing, which is smooth yet extremely hard and resistant to wear. It reduces friction at the contact point with the thrust plate, minimizing mechanical noise (rumble) that could be picked up by the stylus and amplified through your speakers.

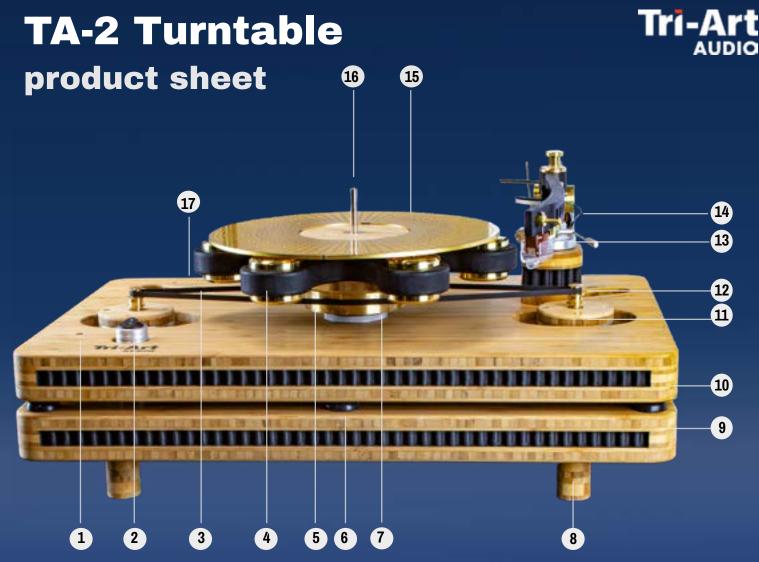
The passion and attention to these details contribute effectively to minimizing friction and speed variation, translating to an ultra-smooth, consistent, and accurate rotation for stunning realism.

#### **Removable Spindle Cover**

The record spindle is shrouded with a spindle sleeve (7.1mm) that decouples the LP-disc platter from the drive system, effectively nullifying the transmission of minute but audible vibrations. A 7.4mm machined hole in the upper plinth next to the power switch provides a convenient storage holder for the spindle cover when removed.

#### **Bamboo Plynth**

Crafted from precision CNC-machined, three-ply carbonized, constrained bamboo, the TA-2's upper and lower plinths are decoupled using Sorbothane pucks. Bamboo, nature's "carbon fiber," offers exceptional rigidity and resonance control, ensuring a pure, uncolored soundstage. Choose from hand-rubbed oil finishes: Umbra, Black, Natural, Distressed, or Graphite for a personalized aesthetic.



Inclued with TA-2 Turntable:
Record Clamp & Diamond Iso feet

Record Clamp
A solid 3/4 inch constrained layer bamboo with brass centre on a "lite-weight" 6-layer copper/epoxy gold-plated LP-disc mat. It is CNC milled, drilled/perforated to provide superior energy dissipation for the LP vinyl record.



#### **Dimond Isolation feet**

Use to keep your equipment vibration free. A solid 3/4 inch constrained layer bamboo diamond shape finished with hemp oil. Tuned with brass ball bearing feet and 1 1/4 inch Sorbothane pad. Place the sorbothane pad into it grooved area and then postion beneath the table support legs. CNC milled, drilled/perforated to provide superior energy dissipation for the LP vinyl record.

- 1- Spindle Sleeve Resting Slot
- 2- Power Switch
- 3- Belt
- 4- Hex Platter
- 5- Sub Platter
- 6- Sorbothane pucks
- 7- Bearing Ring
- 8- Levelling Legs
- 9- Lower Plinth
- 10- Upper Plinth
- 11-2X AC 24 Pole Snychronous Motor
- 12- Speed pully
- 13- Tone Arm Plinth
- 14- Tone Arm
- 15- Mat
- 16- Spindle with Removable Sleeve
- 17- Second Arm Slot

# TA-2 Turntable specs & details



#### **CONSTRUCTION DETAILS:**

Decoupled chassis made with precision CNC'd 3 ply constrained (Bamboo) all machined surfaces.

#### SPEED OPTIONS:

33 / 45

#### **DRIVE UNIT:**

Two high torque, high 'speed-accuracy 24 pole synchronous A.C. "Hurst" motors, mounted in an independent "vibration-decoupled" motor pod, which are attached to the lower plinth and completely decoupled from the upper plinth.

#### **BEARING:**

The rotating sub-platter uses an ultra-low friction precision machined brass and bronze 'hyper-spherical' Silicon-Nitride Apec 9 carbonized ceramic ball bearing, resting on a precision ground thrust plate, resulting in very low friction and low-speed variance.

#### PLATTER:

A machined bamboo hexagonal sub-platter with six polished brass disk weights with center brass pins designed to make use of centripetal force and inertia to maintain speed stability.

A special "lite-weight" 6-layer copper/epoxy gold-plated LP-disc mat that is CNC milled, drilled/perforated to provide superior energy dissipation for the LP vinyl record.

#### **PULLEY:**

Solid Brass Pulleys for 33 and 45 RPM

#### SPINDLE: .

280mm spindle (thickness) with removable 7.1 mm width spindle sleeve standard and for use with optional record clamp.

#### SPEED ACCURACY: < ± 0.05%

#### POWER CONSUMPTION:

Max. consumption: 4.3 watts Consumption in operation: 1.5 watts Off mode: 0.0 watts

#### TOTAL WEIGHT:

Approx. 19kg

#### SUPPORT:

Leveling Legs with Sorbothane Iso Feet

#### DIMENSIONS PLINTH (W/D/H):

[INCHES] Approx. 24 × 16 × 5 inches

[METRIC] Approx. 609.60 ×406.4 × 127 mm

## Tone Arm design features



The design combines natural materials with precision engineering to optimize sound quality and reduce unwanted vibrations during playback.

### Each tonearm features the same 'family' characteristics

- Made from CNC machined Bamboo. (nature's carbon fiber)
- Uses an ultra-low friction uni-pivot brass and bronze bearing.
- •The uni-pivot is damping via an inverted grease-cup bearing system.
- Each arm is optimized via mass dampening for MM, MI, and MC cartridges.
- Cardas OFC/OCC 34AWG pure copper tonearm wire is designed to improve the transmission of the minute cartridge voltages to your phono preamp
- High-grade Cardas, plated OFC/OCC RCA output plugs that allow a low-impedance connection to the phono stage.

MATERIAL: Three Ply Bamboo Laminate 19mm Thick

**SETTINGS:** VTA & Azimuth Adjustments

BEARING: Brass with Bronze Collar Spike and Lithium,

High Viscosity Grease Bearing

ARM WIRE: Cardas Wire 33 AWG Uninterrupted from Headshell Clips to Brass, Pink Gold Plated Female RCA

**ARM LENGTH:** 9" (228.6mm) 12" (304.8 mm)

TONEARM MASS: 9" 15g 12" 19g
RESONANCE FREQUENCIES: 8 – 12Hz

**HEADSHELL:** Brass

SHIELDING: Inconel Tubing, Mu-METAL and Brass

ANTI-SKATE: Anti Skate Bias

**WEIGHTS:** Brass counter and brass azimuth weights



#### **TA-2**

### Tone Arm specs & details

Bamboo: The Perfect Tone Arm Material

3 Ply Solid Carbonized bamboo. Bamboo offers an excellent balance of low mass and high rigidity, making it ideal for tonearm construction. Its natural structure contains air pockets that effectively absorb and dissipate vibrations, reducing the transmission of unwanted resonances from the turntable to the cartridge. The benefits are obvious: a lower noise floor, enhanced clarity, detail, and musicality!

Bamboo offers a natural balance; it's a lightweight material that improves on tracking ability, yet its rigid structure helps maintain precise cartridge alignment, contributing to a very accurate tracing of the LP grooves. The unique resonance characteristics of bamboo can add a natural warmth and clarity to the sound, often described as more musical or organic compared to metal arms.

The B Series Tonearm is available in either 12-inch or 9-inch lengths.



### Black standard finish

33614 TA-2 Tone Arm 9" (Cueing)

Black

33610 TA-2 Tone Arm 12" (Cueing)

Black

Special Order Options for hand rubbed oil finishes

**See Full Turntable Option List** 

#### special order







Natural

Distressed + 15%

Graphite + 15%



9" ARM		12" Arm	
PARAMETER	APPROXIMATE VALUE	PARAMETER A	PPROXIMATE VALUE
Effective Length	229 mm	Effective Length	305 mm
Spindle-to-Pivot Dista	nce ~211.7 mm	Spindle-to-Pivot Distance	e ~290 mm
Overhang	~17.3 mm	Overhang	~15 mm
Offset Angle	~22.0°	Offset Angle	~18.5°





# TA-2 Table & Tone Arm

full order options - 2025

PID	Description	
33590	Record Clamp Graphite Oil Rub	Special Order
33592	TA-2 Table with TA-2, 9" Arm "Cueing" (USA Can) Black	Special Order
33595	TA-2 Table with TA-2, 9" Arm "Cueing" (USA Can) Black + Natural	Special Order
33593	TA-2 Table with TA-2, 9" Arm "Cueing" (USA Can) Distressed Black	Special Order
33594	TA-2 Table with TA-2, 9" Arm "Cueing" (USA Can) Graphite Oil Rub	Special Order
33596	TA-2 Table with TA-2, 9" Arm "Cueing" (USA Can) Natural + Black (Umbra)	
9407	TA-2 Table with TA-2, 9" Arm "Cueing" (USA Can) Natural Oiled	Natural is now Umbra
33598	TA-2 Table with TA-2, 9"&12" Arm "Cueing" (USA Can) Black	Special Order
33601	TA-2 Table with TA-2, 9"&12" Arm "Cueing" (USA Can) Black + Natural	UMBRA
33599	TA-2 Table with TA-2, 9"&12" Arm "Cueing" (USA Can) Distressed Black	Special Order
33600	TA-2 Table with TA-2, 9"&12" Arm "Cueing" (USA Can) Graphite Oil Rub	Special Order
33602	TA-2 Table with TA-2, 9"&12" Arm "Cueing" (USA Can) Natural + Black	
31086	TA-2 Table with TA-2, 9"&12" Arm "Cueing" (USA Can) Natural Oiled	Special Order
33604	TA-2 Table without Arm (USA Can) Black	Special Order
33607	TA-2 Table without Arm (USA Can) Black + Natural	Special Order
33605	TA-2 Table without Arm (USA Can) Distressed Black	Special Order
33606	TA-2 Table without Arm (USA Can) Graphite Oil Rub	Special Order
33608	TA-2 Table without Arm (USA Can) Natural + Black	
10724	TA-2 Table without Arm (USA Can) Natural Oiled	Special Order
33610	TA-2 Tone Arm 12" (Cueing) Black	Standard
33611	TA-2 Tone Arm 12" (Cueing) Distressed Black	Special Order
33612	TA-2 Tone Arm 12" (Cueing) Graphite Oil Rub	Special Order
10727	TA-2 Tone Arm 12" (Cueing) Natural Oiled	Special Order
33614	TA-2 Tone Arm 9" (Cueing) Black	Standard
33615	TA-2 Tone Arm 9" (Cueing) Distressed Black	Special Order
33616	TA-2 Tone Arm 9" (Cueing) Graphite Oil Rub	Special Order
10726	TA-2 Tone Arm 9" (Cueing) Natural Oiled	Special Order



(The TA-2) "is Getting better by every listening session! Music is my rhythm of life.... I spend about 4-6 hours a day playing LP's. This is the best turntable I have ever owned! Superb, wonderful, I am running out of words, Thank you Steve!" Anthony, Richmond Heights, Ohio USA

I was exposed to this turntable at AXPONA '24, and it returned to "roost and rule" - I have twelve (yes, "12") turntables in my pen (some of which are heavy-weights), and you know you have something remarkable when your LP's always just seem to gravitate and "end-up" spinning on 'the golden platter' -- it is a table that bends your perception of value and quality -- needless to say, it won't be leaving my system any time soon ....
[Charles] New Jersey.



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