

GAMMA 5003

STRINGING MACHINE



OWNER'S MANUAL

Issue 3 - December 14, 2000



GAMMA 5003

OWNER'S MANUAL

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LIMITED WARRANTY

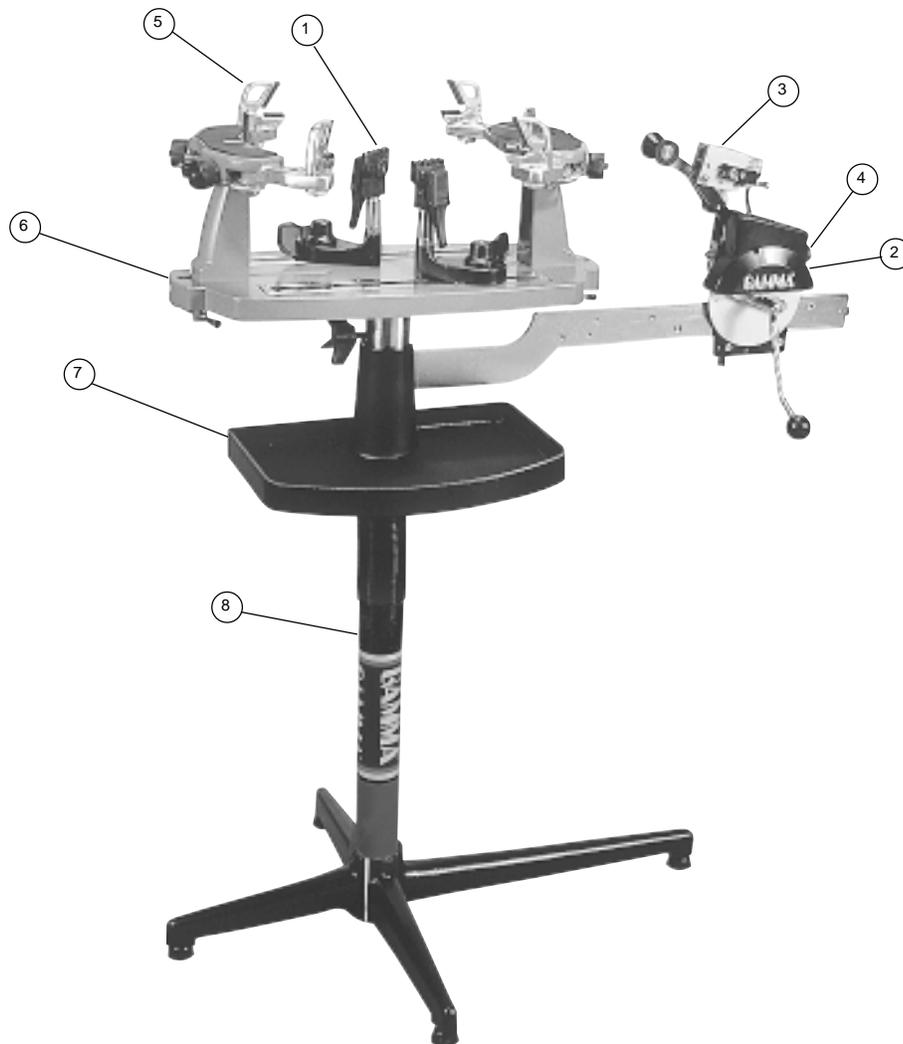
GAMMA SPORTS ("GAMMA") warrants to the original purchaser that the GAMMA 5003 stringing machine ("EQUIPMENT") purchased is free from defects in materials and workmanship for a period of five (5) years from the date of original purchase for mechanical parts (excluding string clamps), and for a period of one (1) year from the date of purchase for string clamps. Should any defects develop under normal use within the specified time periods, GAMMA will at its option, repair or replace the defective EQUIPMENT provided it is returned to GAMMA prepaid at the purchaser's expense. This warranty does not apply to any damage or defect caused by negligence, abuse, misuse, unauthorized alteration, shipping, handling, or part wear and tear as a result of normal use.

GAMMA's obligation under this warranty is limited to repair or replacement of defective EQUIPMENT, and no one is authorized to promise any other liability. GAMMA shall in no event be liable for any incidental or consequential damages.

To return defective EQUIPMENT, a return authorization (RA#) must be obtained from a GAMMA customer service representative by calling 1-800-333-0337. The RA# must be marked on the outside of the shipping carton being returned. All returns must be shipped prepaid by the customer to GAMMA. Please retain the original shipping carton and packing materials for any future shipments.

GAMMA 5003

FEATURES



- 1- Diamond Coated "Quick Action" Composite String Clamps
- 2 - Manual Spring Tensioner
- 3 - Diamond Coated Linear String Gripper
- 4 - Tension Range: 11lbs. - 89lbs.
- 5 - 6 Point Mounting System
- 6 - Full 360 Degree Turntable Rotation
- 7 - Large Convenient 141 sq. in. Tool Tray
- 8 - Height Adjustable From 36" to 48"



GAMMA 5003

PACKAGE CONTENTS

Your GAMMA 5003 is shipped in one large carton containing several smaller cartons. Open all cartons and inventory the parts to be sure that the shipment is complete.

Save the cartons and packing materials for possible future shipments. GAMMA Sports can not be responsible for machines which are not shipped in original, undamaged packaging.

Carton Contents :

- (1) Upper Support Post
- (1) Lower Support Post w/ Plate
- (1) Long Leg w/ Adjustment Foot
- (3) Short Legs w/ Adjustment Feet
- (4) M8 x 30 Cap Screws
- (4) M8 Washers
- (4) M8 x 25 Flat HEad Screws
- (1) Bellows Set
- (1) Tool Tray w/ Pad

- (1) Tensioner Assembly
- (1) Tensioner Track
- (1) Turntable w/ 2 "Quick Action" Clamp Bases Installed
- (2) "Quick Action" Clamp Head Assemblies
- (1) Winged Turntable Locking Knob Screw
- (2) "Quick Mount" Mounting Stands w/ Side and Slide Support Fitted w/ Plastic Adapters
- (2) Mounting Stand Locking Levers w/ Washers
- (1) Package of Spare plastic adapters for mounting system (contains 12 pcs)
- (1) Spare Tension Calibration Lock Screw

- (1) Combination Needle Nose / Cutting Pliers
- (1) Straight Stringers Awl
- (1) Pathfinder Specialty Awl
- (1) 10 pc. Hex Key Set
- (1) 10 MM Open End / Box Wrench
- (1) 17 MM Open End / Box Wrench
- (1) 5 MM "T" Handle Hex Wrench
- (1) 4 MM "T" Handle Hex Wrench

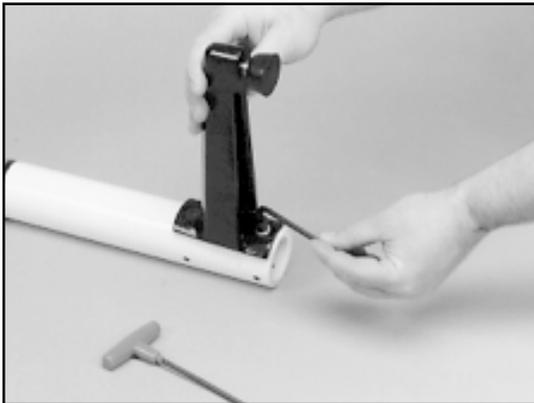
ASSEMBLY INSTRUCTIONS



Base Leg Assembly

The GAMMA 5003 stringing machine uses a four leg base design. The legs must be assembled to the support post before use. Remove the lower column support from the carton. This is the larger of the two posts and has the GAMMA label.

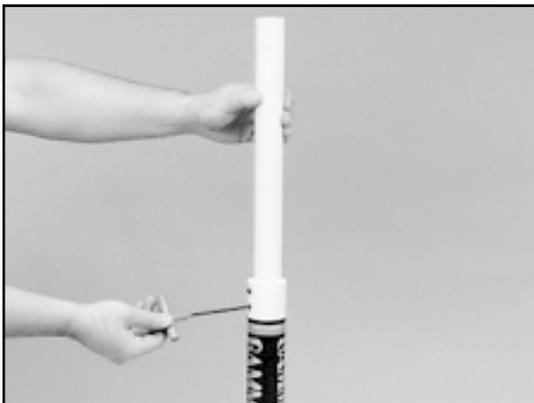
Note: For illustration purposes, the support column has been painted white for these instructions.



Align the holes in the leg flange with the matching holes in the lower column support post. Secure the leg with one FLAT HEAD cap screw through the upper hole, and one SOCKET HEAD cap screw through the bottom hole. Repeat this procedure for the three remaining legs.

Base Foot Height Adjustment

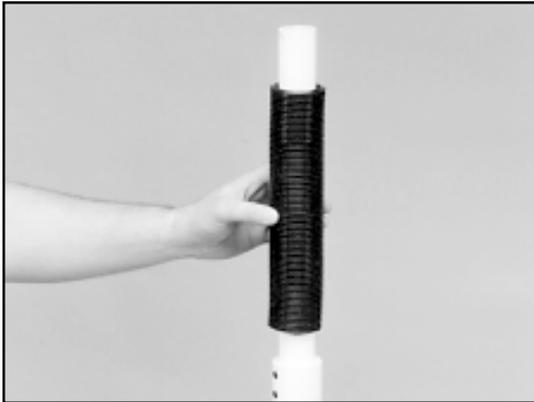
Each foot of the GAMMA 5003 Base Stand can be adjusted to compensate for uneven surfaces.



Upper Column Support Assembly

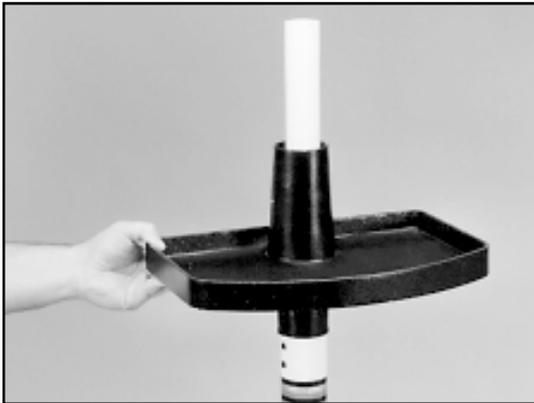
Insert the upper column support into the lower column support / base leg assembly. Leave the upper column extended to maximum height and lock in place with the two set screws located at the top of the lower column support.

ASSEMBLY INSTRUCTIONS



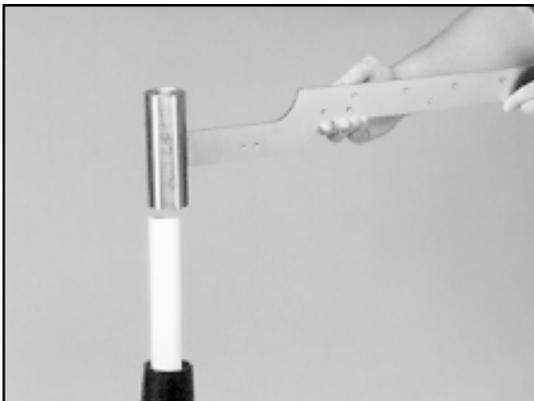
Bellows Installation

The bellows assembly is supplied in two pieces and should be assembled as follows. Place the bellows section with the flange over the upper support column with the flange on the top. Place the remaining bellows over the upper support column and mate it with the flange on the lower bellows.



Tool Tray Installation

Lower the tool tray over the top of the upper column support and let it rest loosely on the bellows assembly.



Tension Track Installation

Place the tube of the tension track assembly over the top of the upper column support. Securely tighten the two socket set screws on the tension track assembly tube, locking it to the upper column support. Align the notch in the tool tray with the tension track bar while raising the tool tray. Secure the tray with the set screws in the side of the tray casting.

ASSEMBLY INSTRUCTIONS



Installing the Turntable

Insert the center post of the turntable into the bushing located in the top of the tensioner bar post.



Installing the Frame Support Posts

The GAMMA 5003 support post assemblies are precision aligned at the factory and are marked for proper installation on the turntable.

Install the support post with the dot on its base to an identical dot on the turntable. Align the threaded hole in the bottom of the frame support post with the slot in the turntable. Screw the lever lock bolt with washer into the bottom of the support post and tighten gently. Position the washer with the rounded edge toward the turntable. Repeat procedure on the opposite side of the turntable.



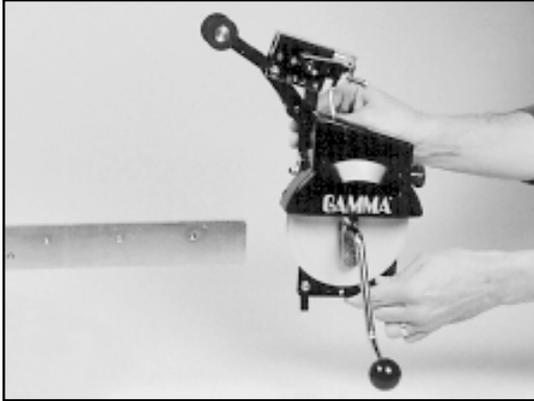
Locking the Turntable

The turntable may be locked in any position.

The turntable winged lock knob is packed separately in the accessory polybag. Install the lock knob into the threaded hole located on the side of the tensioner bar post.

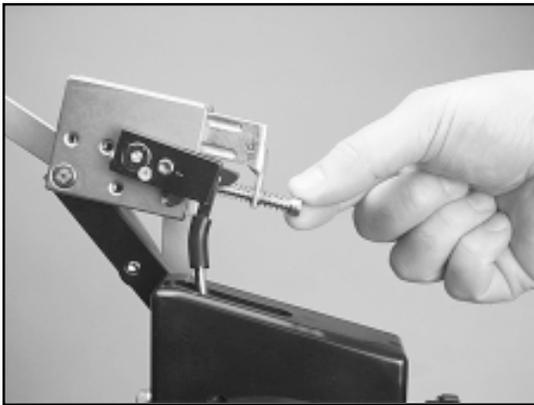
Rotate the knob clockwise to lock the turntable, and counter-clockwise to release the turntable.

ASSEMBLY INSTRUCTIONS



Installing the Tensioner

Remove the button head screw and washer located at the end of the tensioner bar with the 3 mm hex wrench provided. Slide the tensioner onto the bar, being careful to align the bar with all of the bearings and the drive gear with the gear track. Replace the button head screw and washer in the end of the tensioner bar.



Setting the Gripper Jaw Spacing

The gripper jaws of the 6004 tensioner are adjustable to accommodate varying string gauges.

If the string slips through the gripper jaws while pulling tension, rotate the gripper jaw adjustment screw counter-clockwise.

If the string is damaged while pulling tension, rotate the gripper jaw adjustment screw clockwise.

The jaws will be properly adjusted when there is enough pressure to securely grip the string without causing damage to the string.

MOUNTING THE FRAME

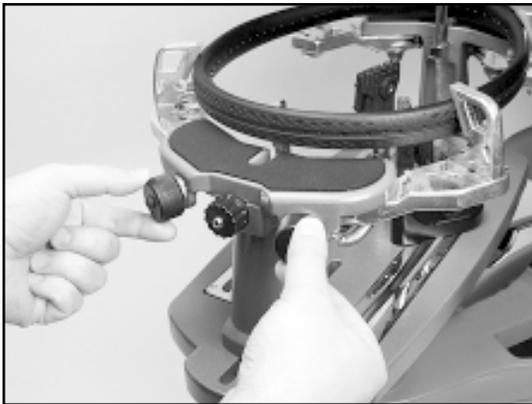


Adjusting the Frame Support Posts

Place the racquet frame over the center posts and onto the frame support. Loosen the lever lock bolt on one support post. Slide the post outward until the center support of the racquet support slide is positioned near the inside surface of the racquet frame. Securely tighten the lever lock bolt.

Adjust the opposite post using the same procedure.

Caution: To avoid racquet damage, the center posts should not contact the racquet prior to fixing the support posts.



Adjusting the Frame Shoulder Supports

Being sure the shoulder supports are free to swivel in their mountings, simultaneously rotate the shoulder support adjustment knobs clockwise until both shoulder supports gently and squarely contact the frame.

Tighten the Frame Support Slides at the head and throat of the racquet until they gently contact the frame between the two center main string grommets.



Securing the Frame

Lock the shoulder supports in position by turning the knob at the base clockwise.

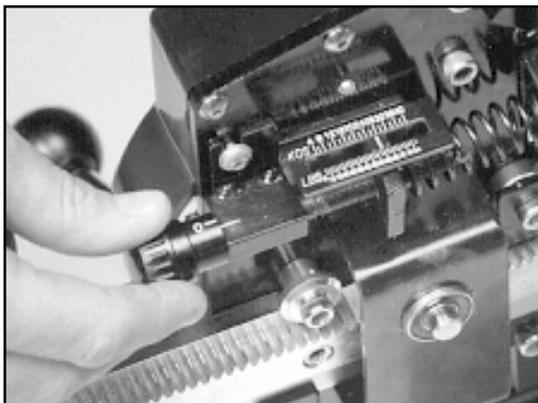
Repeat the adjustment procedure for the remaining support post.

Re-tighten all of the frame supports in the same order as before.

Do not overtighten any of the supports as racquet damage may occur.

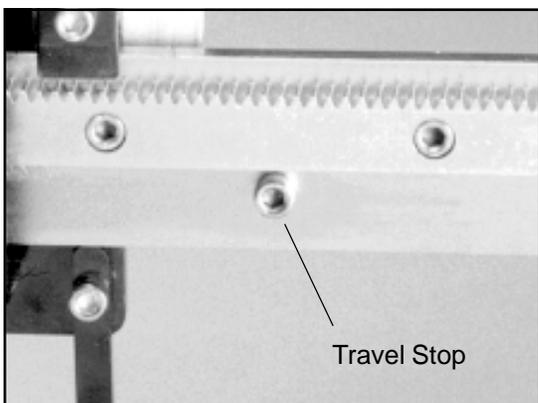
The supports should be tightened to the point where the racquet frame will not move in the mounting system when the handle is grasped and attempts are made to move it. Should any supports lose contact with the frame while stringing, they should be re-tightened.

STRINGING THE FRAME



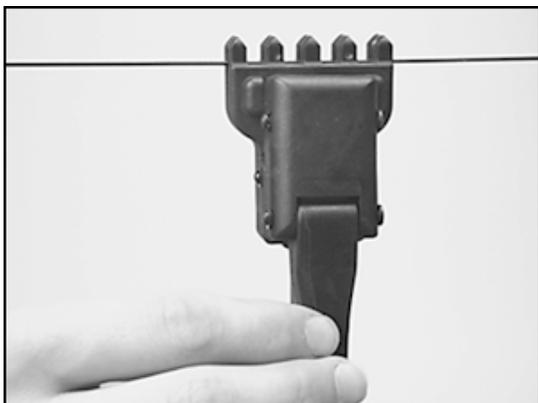
Setting Tension

The GAMMA 5003 utilizes a rotary adjusting knob along with a linear tension scale to indicate the tension setting. The scale is divided into 3 lb increments and each 1/3 turn of the tension knob changes tension by 1 lb. To set the desired tension, rotate the tension knob and align the mark on the spring guide with the desired tension setting on the scale. When the "0" mark on the knob aligns with the line on the knob support the tension will be that indicated on the scale. To increase tension by 1 or 2 lbs turn the knob counterclockwise until the "1" or "2" mark on the knob aligns with the line on the knob support. To decrease tension by 1 or 2 lbs, turn the knob clockwise until the "2" or "1" mark on the knob aligns with the line on the knob support.



Tensioner Travel Stop

To prevent contact between the tension head and the racquet and/or turntable, a stop screw is located about midpoint along the tensioner bar below the gear track. In the event the tension head must be moved closer to the racquet, turn the stop screw counter-clockwise with the 5 mm hex wrench until the end of the stop screw no longer protrudes beyond the surface of the tensioner bar. To re-engage the stop, simply turn the stop screw clockwise until the screw is seated against the tensioner bar.



Clamp Head Operation

GAMMA "Quick Action" Clamps are of a dual action design where as the clamp head and clamp base operate independently of one another.

To clamp a string, lift the clamp head and place the string between the jaws and depress the clamp head lever to secure the string. The clamping pressure applied to the string should be adjusted to provide sufficient pressure to secure the string when subjected to the desired pulling tension. The diamond coated gripper plates provide for increased friction between the clamps and the string to allow for reduced clamping pressure while securing and holding the string under tension.

STRINGING THE FRAME



Clamp Base Operation

Rotate the Base Locking Lever clockwise to secure the clamp base to the turntable.

Reverse the clamping procedure to unlock the string clamp. The Locking Lever is spring loaded to assist the unlocking of the clamp base.

The Locking Lever should be tightened enough to prevent clamp base slippage on the turntable, when the desired tension is placed on the string. To go from the loose position to the clamped position and back, generally requires the rotation permitted by the slot in the clamp base. If the rotation is not sufficient to allow smooth operation of, adjust the Clamp Base Locking Nut as outlined below.

Note: If the string slips in the string clamp while tensioning, adjust the gap between the clamp jaws as per the

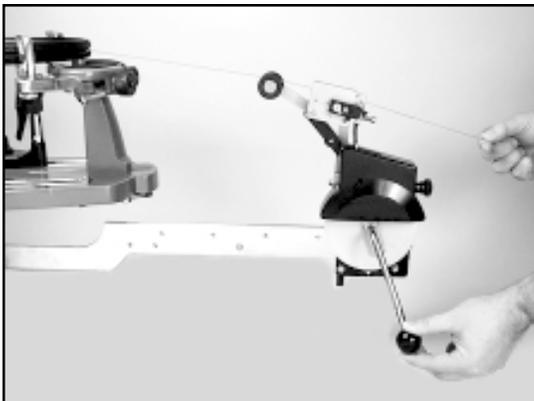
following instructions.



Clamping the First Main String

To begin stringing the main strings, thread the two ends of the string through the two center holes at the appropriate end of the frame and continue through the opposite center holes. Thread one end of the string through the adjacent grommet hole and pull excess by hand.

Secure one of the strings using a string clamp.

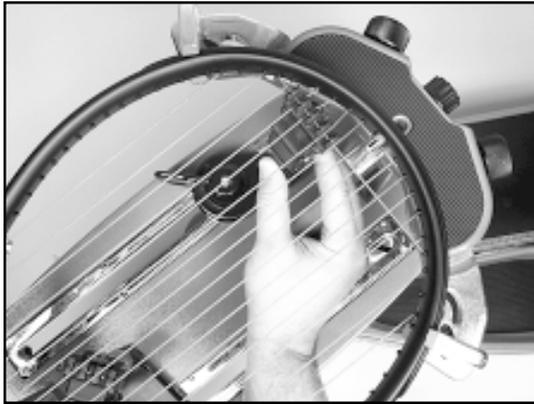


Pulling Tension

Wrap the loose section of string once around the roller guide and insert the string between the diamond dust coated string gripper plates. Pull the string perpendicular to the gripper plates while slowly rotating the tensioner crank clockwise until the brake lever pops out of the latching block. The string is now tensioned and can be clamped in place with the remaining fixed clamp.

Repeat the above steps until all main strings are installed. Tie off ends of main strings as per racquet manufacturers recommendations.

STRINGING THE FRAME

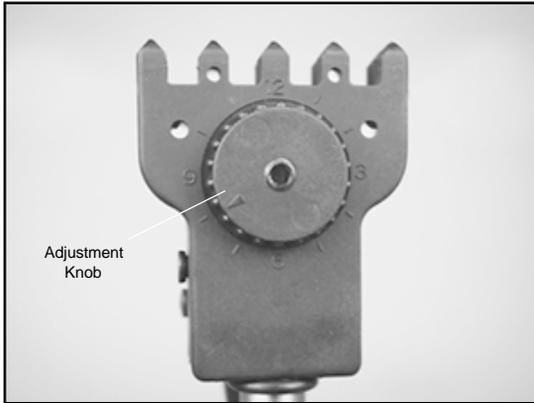


Weaving the Cross Strings

Weave the cross strings over and under the main strings being careful to alternate the weave direction of each consecutive cross string so as to be opposite of the previously installed cross string.

Once the final cross string is tensioned and clamped, tie off at the appropriate hole specified by the racquet manufacturer.

STRING CLAMP ADJUSTMENT

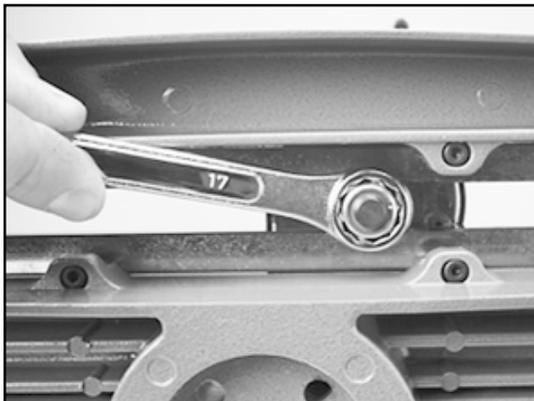


Adjusting the Clamp Jaws

The GAMMA “Quick Action” Clamps will need minor adjustments according to what string type, construction, and gauge you are using.

To adjust the gap (clamping pressure) between the clamp jaws, insert the string through the racquet as if you were beginning the main strings. Clamp the strings and pull tension. If the string slips through the jaws of the clamp, tighten the clamp by compressing the clamp jaws together by hand while turning the Adjustment Knob, in the clockwise direction. If the clamp leaves impressions or damages the string, it may be excessively tight and should be adjusted by turning the hex screw counter clockwise to open the gap between the jaws. The clamp jaws should be cleaned periodically to be free from dirt, oil, and any string coating for them to grip properly.

Note: The string clamps supplied with your Gamma stringing machine can accommodate tight string patterns such as badminton. Depending on the string pattern, the clamp may spread the strings slightly which will not compromise the quality of the string job.



Adjusting the Clamp Base Locking Nut

In the event the Locking Lever rotation is insufficient to ensure smooth operation of the clamp base, very minor adjustments to the Clamp Base Locking Nut can be made with the supplied 17mm wrench. Tighten or loosen the locking nut in very small increments to provide more clamping pressure or running clearance as needed.

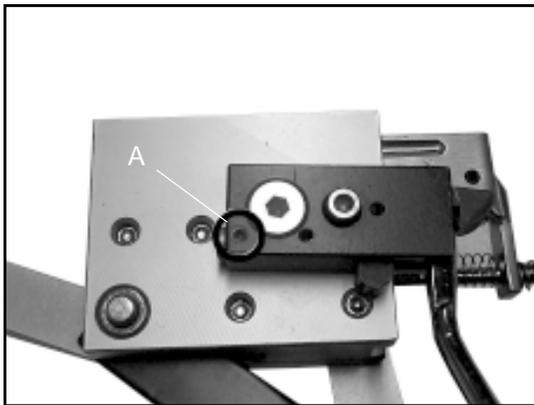
TENSION CALIBRATION



Tension Calibration Procedure

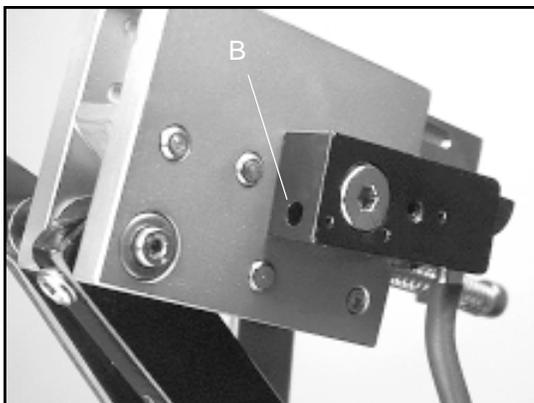
Step 1

Set the tension to 60 lbs. as indicated by the linear scale and rotary knob. Place the string on one end of a tension calibrator into a string clamp and secure. Place string tensioner on the other end of the calibrator into the string tensioner and apply tension. If the brake lever releases before 60 lbs. or after 60 lbs., the tension head should be calibrated as follows.



Step 2

Loosen the 1.5 mm locking set screw (A) located on the side of the latching block as shown. The set screw is used to hold the adjustment screw in place.

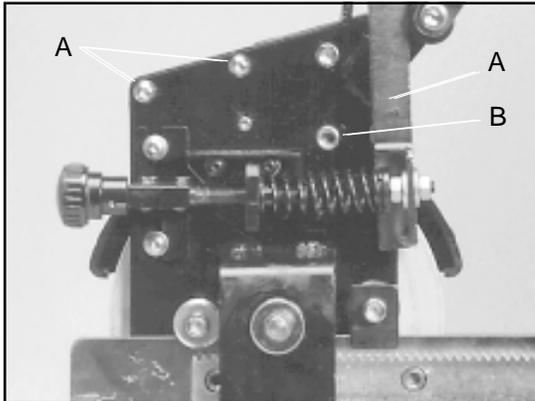


Step 3

If the lever releases before 60 lbs., using the supplied L-shaped hex wrench, turn the adjustment screw (B) located on the left side of the latch block counter-clockwise to increase the engagement of the brake release latch with the brake lever. Repeat step 1 and adjust until the correct tension is indicated on the calibrator.

If the tension indicated in step 1 is greater than 60 lbs., turn the adjustment screw clockwise to reduce the engagement of the brake release latch with the brake lever. Repeat step 1 and adjust until the correct tension is indicated on the calibrator.

DISK BRAKE ADJUSTMENT



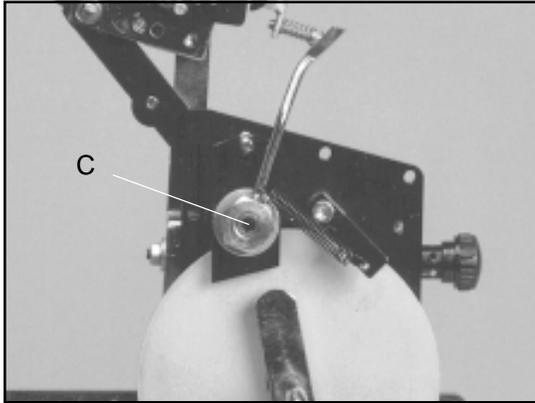
A - Cover Screws

B - Lock Bolt

Adjusting the Tensioner Brake

Step 1

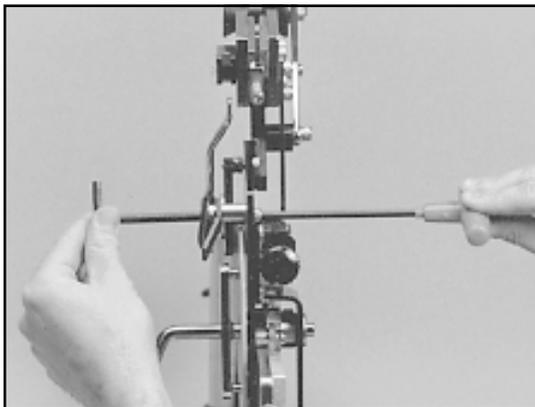
After stringing many racquets, the brake of the tensioner may need to be adjusted. The Brake Adjustment Bolt can be accessed through the hole in the face of the tensioner cover, which does not need to be removed for adjustment. The Tensioner Cover has been removed in the pictures for illustration purposes.



C - Brake Adjustment Bolt

Step 2

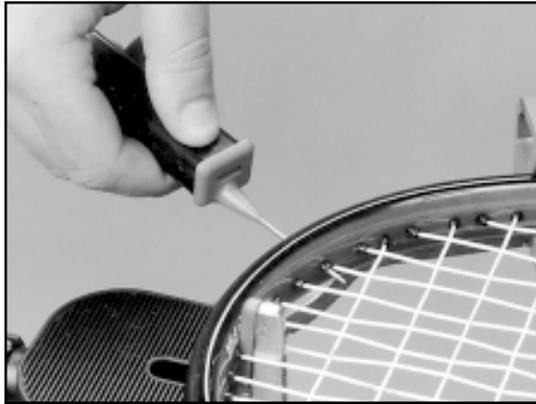
With the brake lever engaged, loosen the lower hex bolt located on the back side of the tensioner frame with the 10 mm box wrench. Note: The hex bolt should only be loosened until loose enough to be turned by hand and must not be removed completely.



Step 3

With the hex bolt loosened and the brake lever engaged in the latch, insert the 6 mm hex wrench into the set screw located inside the nut located at the base of the brake lever. To tighten the braking mechanism, turn the set screw counter clockwise by about 1/8 turn. Retighten the hex bolt on the back side of the tensioner frame and check for brake tightness. The tensioner should move freely along the track with the brake lever engaged and should hold tension with the brake lever released. If more adjustment is needed, repeat steps above until properly adjusted.

PATHFINDER AWL OPERATION



The GAMMA 5003 includes the new Pathfinder stringing awl which creates a pathway between or around strings and through tight grommets.

Insert the awl through the grommet hole in the same manner as for traditional awls. The Pathfinder awl must be closed before insertion.



Once the awl is inserted, pull the handle of the awl outward while holding the tip section in place, leaving the outer sheath in the grommet hole.

Insert the end of the string into the center of the sheath.



While holding pressure on the string, slowly pull the sheath out of the grommet hole to leave the end of the string exposed.

TROUBLESHOOTING TIPS

PROBLEM	SOLUTION
String slips in clamps	<ul style="list-style-type: none">- Adjust gap between jaws- Clean clamp jaws
String slips in gripper	<ul style="list-style-type: none">- Clean gripper jaws- Adjust Gripper Jaw Stop Screw
String clamp slips on base	<ul style="list-style-type: none">- Clean base of clamp and top of turntable- Adjust Clamp Base Locking Nut
String tension too tight or too loose	<ul style="list-style-type: none">- Check tension using a tension calibrator and adjust machine calibration if necessary

For additional assistance, contact Gamma Sports Customer Service at 1-800-333-0337

CARE and CLEANING

With time and use, the clamping surfaces of your machine may become oily or dirty and result in string or clamp slippage while stringing. Periodic cleaning of the following parts is recommended.

String Clamps

Clean the inside gripping surfaces of the string clamp jaws by inserting a cloth or pipe cleaner soaked with isopropyl alcohol between the jaws and rub back and forth. If the build-up is excessive, dismantle the string clamp jaws to expose the gripping surfaces by removing the adjustment screw. Using a small nylon brush (such as a toothbrush), a flat sharpening stone, or an emery board, scrub the inside surfaces until all debris is removed. Clean the jaws with isopropyl alcohol and re-assemble.

String Clamp Base

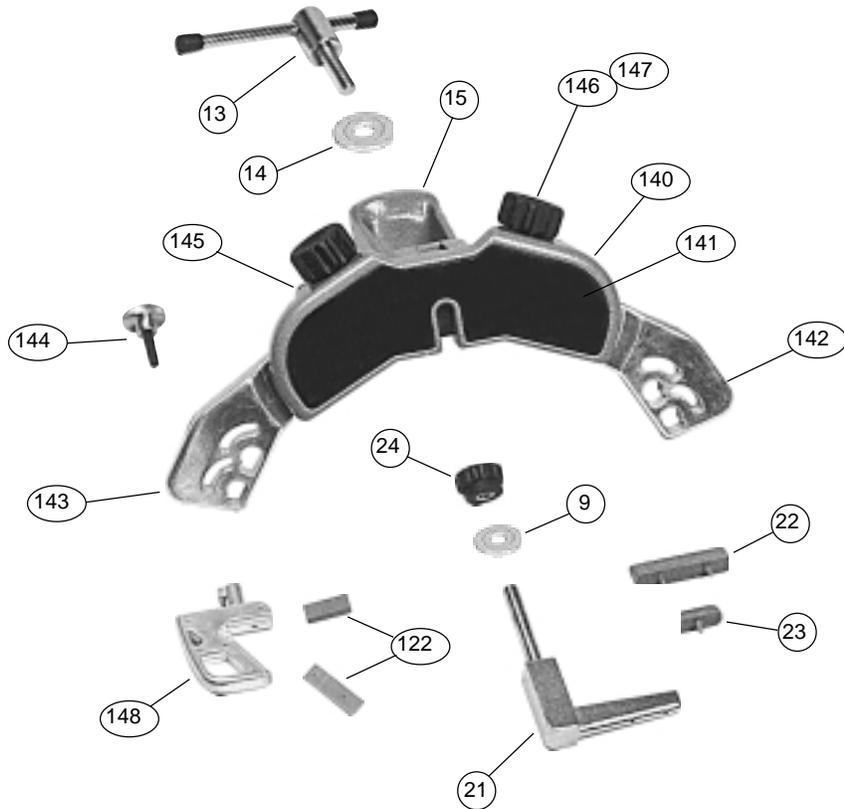
Clean the base of the clamps and the top of the turntable with isopropyl alcohol.

String Gripper

Clean inner gripping surfaces with isopropyl alcohol soaked cloth or pipe cleaner. In cases where there is a lot of build-up, use a flat emery board and scrub the surfaces first.

GAMMA 5003

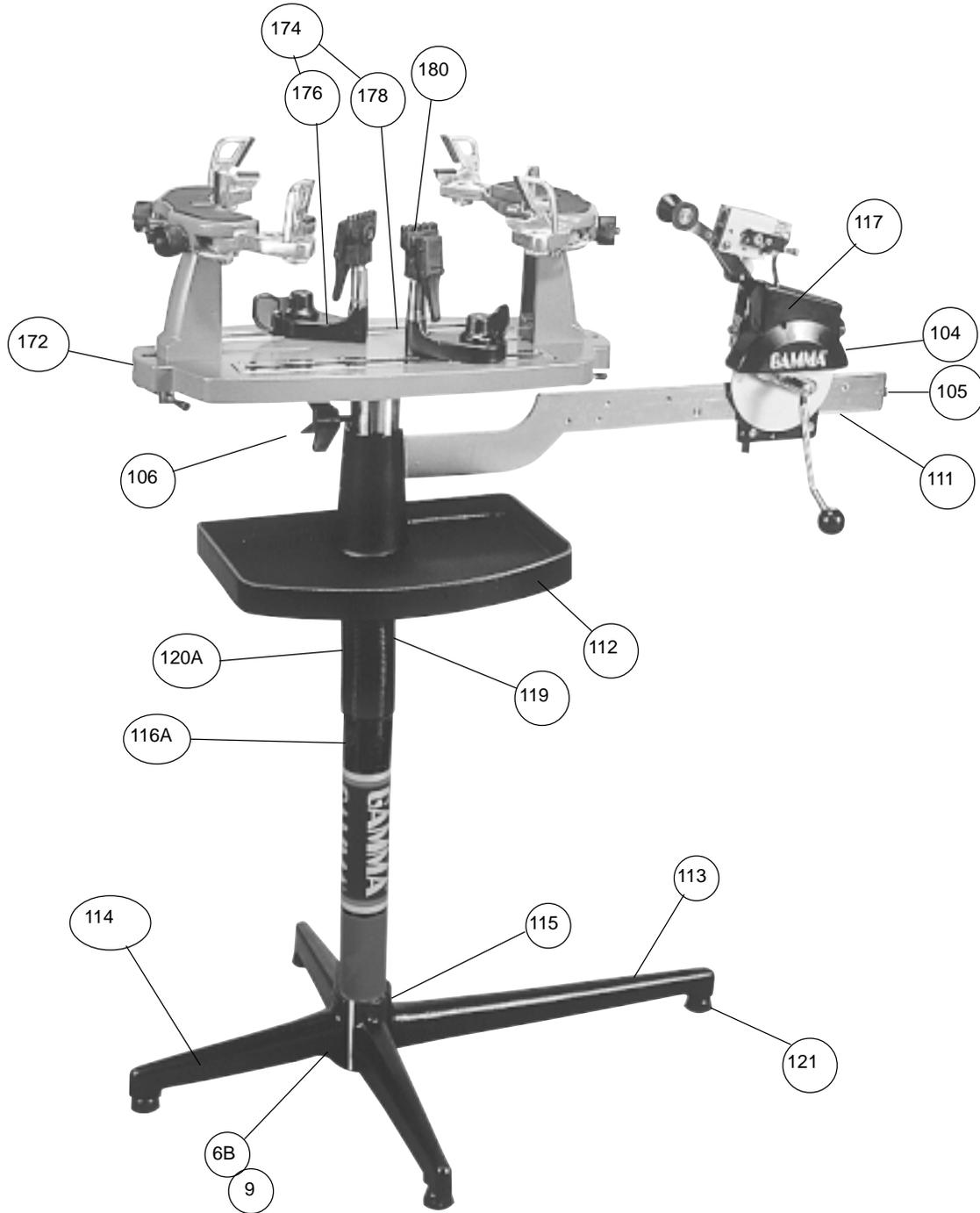
MOUNTING STAND PARTS



PART #	DESCRIPTION	PART #	DESCRIPTION
9	WASHER - M8	141	MTNG. STAND PAD
13	POST LOCKING LEVER	142	SUPPORT ARM - LEFT
14	WASHER - M10	143	SUPPORT ARM - RIGHT
15	SUPPORT POST	144	SHOULDER SUPP. LOCK KNOB
21	FRAME SUPPORT SLIDE	145	SUPP. ARM RETURN SPRING
22	BADMINTON ADAPTER	146	ARM ADJUSTMENT KNOB
23	TENNIS ADAPTER	147	ARM ADJUSTMENT SCREW
24	SUPPORT SLIDE KNOB	148	SHOULDER V-CLAMP
140	MTNG. STAND TOP PLATE		

***GAMMA* 5003**

MACHINE PARTS





PARTS LISTING

PART #	DESCRIPTION	PART #	DESCRIPTION
6B	CAP SCREW - M8 X 30	172	2020-25 TURNTABLE
9	WASHER - M8	174	QA CLMP TALL w/GLIDE BAR
104	TENSIONER ASSEMBLY	176	QA CLMP BASE TALL
105	RETAINER SCREW	178	GLIDE BAR SST
106	TABLE BRAKE KNOB	180	COMP. FIXED CLAMP (THIN)
111	TENSIONER TRACK		
112	TOOL TRAY		
113	LONG LEG		
114	SHORT LEG		
115	FLAT HEAD SCREW - M8	70	HEX WRENCH - 5MM
116A	LOWER COLUMN SUPP.	72	PATHFINDER AWL
117	TENSIONER COVER	73	STRINGERS AWL
119	BELLOWS	98	BOX WRENCH - 10MM
120A	UPPER COLUMN SUPP.	108	UTILITY KNIFE
121	LEVELING FOOT	109	NEEDLE NOSE PLIERS
		167	10 PC. HEX WRENCH SET
		170	M10 SUPP - POST SCREWS
		196	BOX WRENCH - 17MM

TOOLS AND ACCESSORIES