

GAMMA[®]

X-STRINGER

XLT

ELECTRONIC

STRINGING MACHINE



MMAN70
(MGXLT-11)

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OWNER'S MANUAL
Issue 2 – January 2022

GAMMA[®] X-STRINGER

XLT OWNER'S MANUAL

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LIMITED WARRANTY

GAMMA Sports (GAMMA) warrants to the original purchaser that the XLT 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 and for a period of one (1) year from the date of purchase for all electrical parts and 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.

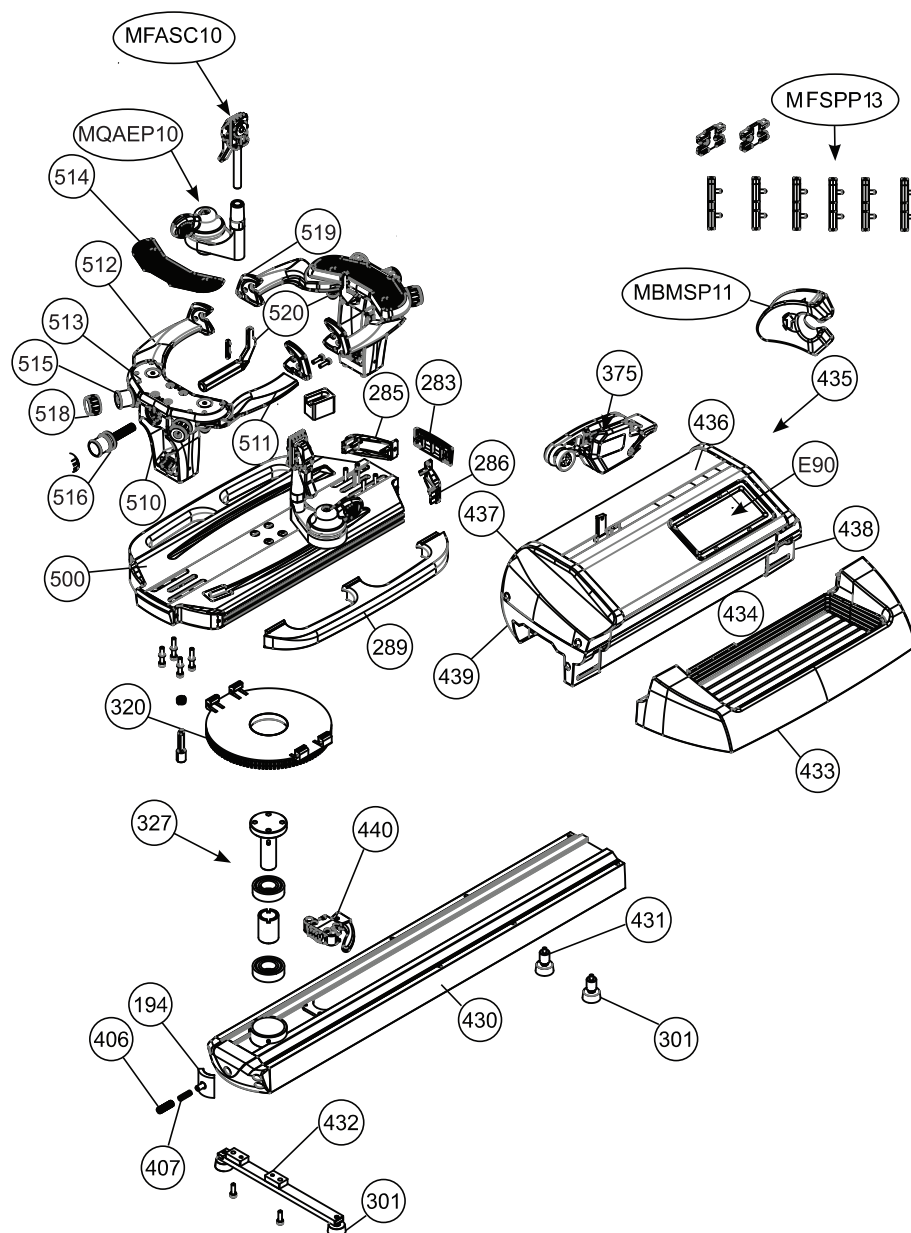
Routine maintenance, adjustment, and cleaning required to ensure proper operation are the responsibility of the purchaser and are not covered under the terms of this warranty. These include, but are not limited to: String Clamp adjustment, as described on page 16, Quick Action Clamp Base adjustment, as described on page 16 and the cleaning procedures listed on page 16.

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. 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 will not be responsible for machines which are not sent in the original undamaged packaging.

A GAMMA Care Service Plan is also available through GAMMA customer service, call 800.333.0337 for details.

PARTS DRAWING



PARTS LIST

PART #	DESCRIPTION	PART #	DESCRIPTION
194	TT CLUTCH PAD	E90	TOUCH DISPLAY SCREEN
203	TT BOLTS*	MFASC10	SLIM PROFILE CLAMPS
283	TT END CAP - CENTER	MQAEP10	QUICK ACTION BASE CLAMP
285	TT END CAP - RIGHT		
286	TT END - CAP LEFT285		
TOOLS & ACCESSORIES			
		71	6MM T-HANDLE HEX WRENCH*
289	TT HANDLES	109	NEEDLE NOSE PLIERS*
301	RUBBER FOOT	110	BENT NOSE PLIERS*
320	BRAKE RING	167	HEX WRENCH SET*
327	TT PIN	171	DIAGONAL CUTTERS*
500	TURNTABLE TT16	E16	A/C POWER CORD*
510	A240 MNTG STAND	E23	AC ADAPTER*
511	A240 MNTG ARM (R)	MA	STRINGERS AWL*
512	A240 MNTG ARM (L)	MFSP13	FRAME SUPPORT PAD SET BLK
513	A240 TOP PLATE	MFSP13	2 BAD SLIDE ON "H" PADS
514	A240 TOP PLATE/ARM PADS	MFSP13	V-MNT SHLDR SUPP PADS
515	A240 ADJ KNOB & SCREW	MBMSP13	BADM V-MNT COVER
516	A240 FRAME SLIDE KNOB	MPSA	PATHFINDER AWL
518	ADJ KNOB RUBBER GRIP		
519	A240 SHLDR V-MNT (BLK)		
520	A240 FRAME SUPPORT		
375	DC LINEAR GRIPPER BLK		
406	TT CLUTCH BOLT		
407	TT CLUTCH SPRING		
430	XLT BASE		
431	XLT RUBBER FOOT SLEEVE	MMP11-16	FOOT PEDAL SWITCH*
432	XLT BASE LEG	MBFC	BADM FLOATING CLAMP*
433	XLT TOOL TRAY	MBFS-14	BADM HEAD FRAME SUPP*
434	XLT TOOL TRAY PAD	MGSMC	MACHINE COVER*
435	XLT TENSIONER	MPG	STARTING CLAMP*
436	XLT TENSIOER UPPER CAP (R)	MXFLS	FLLOR STAND*
437	XLT TENSIOER UPPER CAP (L)	MTC	TENSION CALIBRATOR*
438	XLT TENSIOER LOWER CAP (R)	SGSM	STRINGERS MAT*
439	XLT TENSIOER LOWER CAP (L)	MBMSS11	BADM MNTG SYS UPGRADE*
440	XLT TT BRAKE BOX		
OPTIONAL TOOLS & ACCESS.			

* INDICATES ITEMS THAT ARE NOT SHOWN

FEATURES



MACHINE FEATURES

Electric Constant Pull Tensioner with 11.0 to 90.0 lbs Tension Range

Digital Tension Setting with LED Display

Parallel Jaw Linear Gripper with Textured Gripping Surfaces

Professional Six Point "Quick Mount" Racquet Mounting System- Accommodates All Racquets

Professional "Quick Action " Dual Action, Rotating String Clamp Bases

5 Tooth, Universal String Clamps with Textured Gripping Surfaces

High Strength Extruded Aluminum Base with Durable Anodized Finish

Large (Removable) Padded Tool Tray

ASSEMBLY INSTRUCTIONS



Leg Bracket with Foot Pads

There are four rubber foot pads supplied with the machine. Two have exposed threads and two have a spacer sleeve over the threads. Install the two rubber foot pads with the exposed threads into the outer holes on both ends of the leg bracket.



Mounting the Leg Bracket

Insert two hex head cap screws to the holes next to the rubber foot pad.



Mounting the Leg Bracket

Attached the leg bracket on the left side of the base by aligning the holes in the leg bracket with the threaded holes in the rails located on the underside of the machine base as shown. Tighten the hex head bolts.

NOTE: If desired, the Leg Bracket may also be installed on the right side of the base. If this position is desirable, the Tool Tray must be installed prior to installing the Leg Bracket.

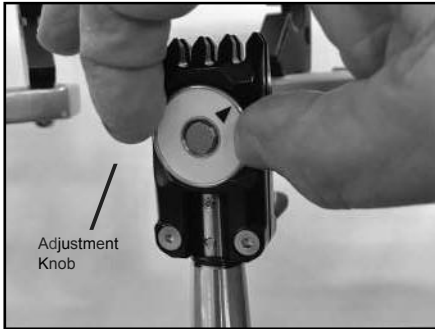
TROUBLESHOOTING TIPS

<u>PROBLEM</u>	<u>SOLUTION</u>
String slips in clamps	-Adjust gap between clamp jaws - Clean clamp jaws
String slips in gripper	- Clean gripper jaws - Make sure string is wrapped over top gripper prior to inserting between gripper jaws
String clamp base slips on turntable	- Clean bottom of clamp & top of turntable with alcohol -Adjust clamp base locking nut
Electrical system does not function	- Check power source - Check power cord connections
String tension too tight or too loose	- Check tension using a tension calibrator, adjust machine calibration if necessary

CARE & 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 String Clamps, String Clamp Base and String Gripper is recommended. Knife sharpening stones work well for cleaning the diamond coated string clamping surfaces. Cleaning with a solvent such as isopropyl alcohol and a mild abrasive tool such as a toothbrush also works well to remove oily or greasy build up.

MAINTENANCE & ADJUSTMENTS



Adjusting the String Clamp Jaw Spacing

The string 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 squeezing 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 Adjustment Knob counter clockwise to open the gap between the jaws.

NOTE: Due to the bearings used in the Clamp Lever the action of the Clamp Lever is very light making it easy to apply excessive clamping pressure. Clamps that are set too tight can damage the string as well as the string clamp jaws.

The clamp jaws should be cleaned periodically to be free from dirt, oil, and any string coating residue to grip properly. Knife sharpening stones are excellent for removing build-up on the diamond coated surfaces and are available.



Clamp Base Locking Nut Adjustment

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 6mm allen wrench. Tighten or loosen the locking nut in very small increments to provide more clamping pressure or running clearance as needed.



Quick Action Clamp Base Removal

Quick Action clamp bases can be removed from the turntable for maintenance or cleaning by removing clamp stop located at the end of the slot in the turntable. To remove the clamp stop, remove the two screws holding the clamp stop in place from the underside of the turntable. Lift the clamp stop out of the slot, slide the clamp base to the end of the slot and lift it out. Replace the clamp base and clamp stop in reverse order.

ASSEMBLY INSTRUCTIONS



Rubber Foot Pad Installation

Insert the two rubber foot pads with the spacer sleeve into the into the threaded holes of the rails located on the underside of the baser on the right side as shown.

NOTE: If desired, the Rubber Foot Pads may also be installed on the left side of the machine base.



Installing the Tool Tray

Hold the tool tray on an angle and align the tabs on the tool tray with the slots in the machine base. Rotate the tool tray down and apply pressure until the tool tray "snaps" into place. Secure the tool tray with three bolts in the bottom of the machine base from underneath.

Reverse the steps above to remove the tool tray for ease of travel.

NOTE: If the Leg Bracket is installed on the right side of the base, the Tool Tray must be installed prior to installing the Leg Bracket.

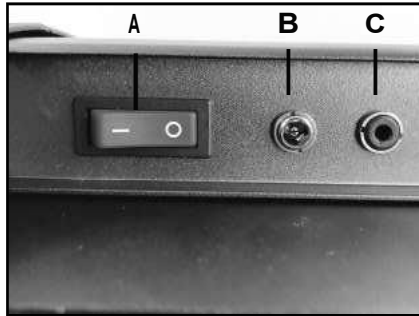


POWER CONNECTION & CONTROLS



Front Panel Features

- A - String Gripper
- B - Tension Lever
- C - Touch Screen Display



Back Panel Features

- A- Power On/Off Switch
- B- A/C Power Cord Socket
- C- Foot Pedal Switch Receptacle

Instructions for Power Connection and Controls

CAUTION ! Before connecting to the power supply, check the voltage source that the machine is being connected to. The acceptable range of input voltages for this machine is between 100 V and 240 V@ 50 to 60 Hz. If you have any questions regarding the input voltage supply for your area, please ask your electric utility company.

To install the power cord, insert the female end of the power cord into the AC Adapter and then insert the female end of the cord from the AC Adapter into the A/C Power Cord Socket "B" located on the back panel of the tensioner. Plug the male end of the power cord into a grounded power outlet. When using extension cords, use grounded heavy duty extension cords rated for 15 AMP service.

To connect the foot pedal switch, insert the male pin at the end of the foot pedal switch cord into the Foot Pedal Switch Receptacle "C" located on the back panel of the tensioner.

Switch on the machine by pressing the Lighted On-Off Power Switch on the back panel. At start-up, the LED will display a countdown from "9.0" to "0.0" while the machine performs a self diagnostics check at start-up.

MAINTENANCE & ADJUSTMENTS



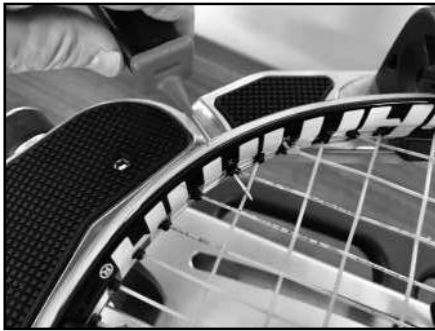
Tension Calibration Procedure

Each stringing machine has been checked and calibrated at the factory using accurate load sensing devices to ensure that the machine pulls at the correct tension. However, if you suspect that your machine may not be pulling at the correct tension you can check the pulling tension with a calibrator and make adjustments if needed.

Most tension calibrators (such as a Gamma Tension Calibrator) function by clamping off the string attached to one the end of the calibrator and applying tension to the string located on the opposite end of the calibrator. The tension measured by the calibrator will then display the tension being applied to the calibrator by the machine. If the calibrator and tensioner do not match then you can adjust the tensioner as follows:

1. Press and hold the settings button for three seconds, the first setting displayed is F 1-C. This is calibration mode, press the enter button to begin.
2. Display will read C 22.0; the machine will start by pulling tension at 22 lbs (10kgs). Pull tension and adjust the display to match the calibrator reading using the up/down arrows. After adjusting the display press enter and release tension.
3. Repeat step 2 at 44, 66, and 88 lbs. Following adjustment at the 88 lbs setting, calibration is now complete. To confirm calibration and finish press the enter button.
4. Press the settings button to return to the function list or press back to exit to stringing mode.

PATHFINDER AWL



The machine includes the pathfinder stringing awl which creates a pathway between or around strings to make inserting a string through blocked grommets easier and quicker.

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

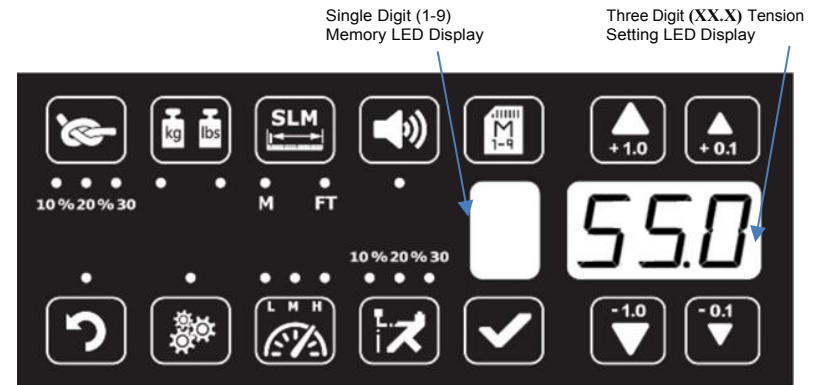


Once the awl is inserted, pull the handle of the awl outward while holding the tip section in place. This leaves the outer sheath in the grommet hole. Insert the end of the string into the outer sheath.



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

CONTROL PANEL FUNCTIONS AND FEATURES



Tension Index Buttons - Changes tension setting in +/- 1.0 or +/- 0.1 Lb or Kg increments. Holding the button down will scroll the tension setting values up or down. Tension settings entered with the tension index buttons are placed into temporary memory setting "0".



Back/Exit Button - Use this button to exit a feature such as calibration at any time. Doing so without hitting enter will clear any changes from the machine's memory.



Machine Settings This button allows access to several machine settings and features such as calibration, factory reset, and approximate number of racquets strung. To enter settings press and hold for 3 seconds, then use the up/down arrows to change between features.



Lbs/Kgs Button - Changes tension display from Lbs to Kgs. Each press of the button toggles back and forth between Lbs and Kgs.



Pre-Stretch Function - Pulls string 10% or 20% over the tension setting (up to 90 lbs / 40.8 kgs), releases the string, and repulls to the tension setting. Each press of the button toggles between 10%, 20% or no pre-stretch.



Memory Button - Indexes from 9 preset tension settings that can be stored in memory. Settings are retained even if machine is turned off. Each press of the button indexes to the next memory setting. Memory settings 1-9 must be entered using the keypad followed by pressing the "ENT" button.



Enter Button - Saves displayed tension for Memory setting - when tension is entered using the keypad display flashes until this button is pressed to save the setting. Also saves changes made in settings.



Knot Function - Increases pulling tension by 10% over the setting value (max 90 lbs / 40.8 kgs) for one pull. During the pull the LED stays lit to indicate the Knot function is enabled.



Speed Button - Changes pulling speed of winder from Fast (default) to Medium to Slow. Slow speed is recommended for low stretch strings, such as Kevlar. Each press of the button toggles between Fast, Medium and Slow speeds.



String Length Meter Button - feature is currently not available.



Sound On/Off - Turn the buzzer off by pressing this button.

**WARNING! FOR INDOOR USE ONLY.
NEVER OPEN UNIT WITH POWER CONNECTED.
CHILDREN SHOULD NEVER BE PERMITTED TO OPERATE THIS
MACHINE WITHOUT ADULT SUPERVISION.**

STRING CLAMP INSTALLATION



String Clamp Installation

The post of the string clamp and tube of the string clamp base are treated with grease to provide protection against corrosion during shipping. Remove any excessive grease with a clean cloth prior to use. The post and tube may also be cleaned with isopropyl alcohol. After this type of thorough cleaning, the post and tube should be treated with a light coating of machine oil to protect the surfaces against corrosion and to ensure smooth operation.

ADDITIONAL FEATURES



Turntable Brake

The turntable may be locked in any position.

To engage the turntable brake, rotate the brake lever clockwise.

To release the brake, rotate the brake lever counter clockwise.

Turntable Brake Lever - Released Position



Turntable Brake Lever - Engaged Position

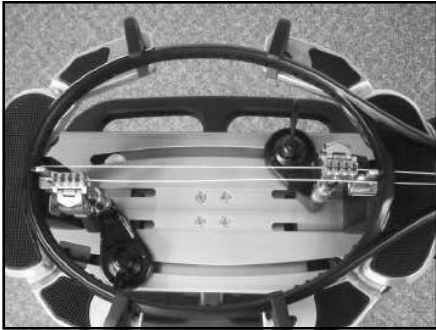


Badminton Shoulder Support Protection Pad Installation

Slide the badminton shoulder support cover over the shoulder supports. There is no need to remove the tennis shoulder supports.

Note: An optional badminton frame support for the head of the racquet is available.

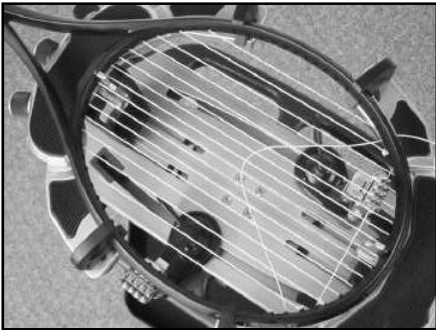
STRINGING THE FRAME



Clamping the First Main String

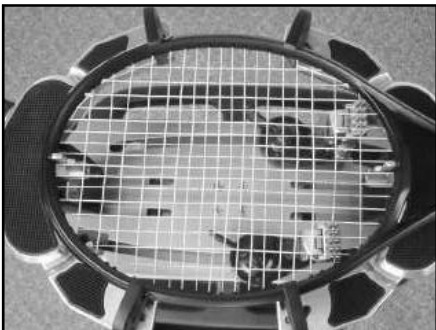
Secure the tensioned main string using the remaining fixed clamp. Repeat the procedure for all of the remaining main strings and tie off following the racquet manufacturers recommendations .

Follow the manufacturer 's recommended stringing pattern for one or two piece stringing. This will determine the starting point for the cross strings. If applicable, tie the first cross string using an appropriate starting knot.



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.



Completing the String Job

Once the final cross string is tensioned and clamped, tie off at the appropriate hole specified by the racquet manufacturer. Remove the frame from the mounting system by loosening the shoulder supports and frame supports.

MOUNTING THE FRAME



Adjusting the Frame Support Posts

The adjust the position of the frame support posts, use the latch located at the bottom of each post. Push the latch release and hold to adjust. A spring inside the mechanism will pull the post towards the middle of the turntable. When the post is in the desired position release the latch and the post will lock in place securely. Each post has three possible mounting positions intended for various racquet sizes. Find the position best for your frames and make fine adjustments using the frame supports.

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



Tightening the Frame Supports

Tighten the Frame Support Slides by turning the adjustment knob clockwise until snug against the racquet frame and slight resistance is felt.

Caution: Overtightening the Center Supports will stretch the head of the racquet and could cause racquet damage.



Frame Shoulder Support Adjustment

Simultaneously rotate the shoulder support adjustment knobs clockwise until both shoulder supports gently and squarely contact the frame. Rotate the shoulder supports as needed so the pads make flush contact with the racquet frame.

Repeat this procedure for the remaining support posts.

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.

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

STRINGING THE FRAME



Clamp Base Operation

To lock the string clamp base to the turntable, rotate the clamp base locking lever clockwise. To release the string clamp base from the turntable, rotate the clamp base locking lever counter-clockwise.

The Locking Lever should be tightened enough to prevent clamp base slippage on the turntable, when the desired tension is placed on the string.



String Clamp Operation

The string clamps are a dual action design where the string clamp and clamp base operate independently of one another.

To clamp a string, lift the string clamp to place the string between the jaws and depress the string clamp 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 textured gripping surfaces on the teeth of the string clamps provide for increased friction between the clamps and the string to allow for reduced clamping pressure while securing and holding the string under tension.

Note that excessive pressure can damage both the strings and String Clamp.



Getting Started

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.

STRINGING THE FRAME

Applying Tension

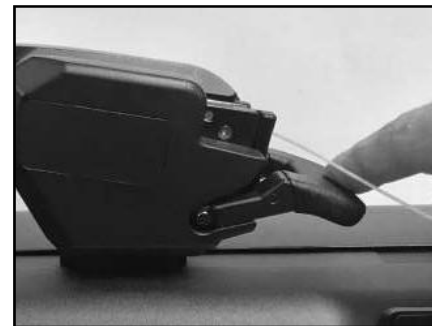
Before applying tension, gently pull the string until all slack is removed.

To apply tension, wrap the string clockwise around the String Guide and position the string between the two gripper jaws.



CAUTION: NEVER TENSION A STRING WITH YOUR FINGERS BETWEEN THE STRING AND THE STRING GUIDE AS SERIOUS INJURY COULD RESULT IF YOUR FINGER IS CAUGHT BETWEEN THE STRING AND STRING GUIDE WHEN TENSION IS APPLIED TO THE STRING.

IN CASE OF EMERGENCY, PRESSING ANY BUTTON ON THE CONTROL PANEL WILL RELEASE THE TENSION ON THE STRING.



To tension a string, push the tension switch or the foot pedal. The string gripper will rotate and slowly apply tension to the string. When the set tension has been attained, the gripper will stop and the display will flash. As the tensioned string stretches, the gripper may apply tension intermittently, maintaining the set tension.

To release the string after clamping, push the tension switch or foot pedal. If the string gripper does not release the string, depress and hold the return button to release the string.



**THANK YOU
FOR YOUR PATRONAGE!**



GAMMA Stringing Machine Return Guidelines

We hope you are fully satisfied with your new GAMMA Stringing Machine purchase. Your GAMMA Stringing Machine has been designed and tested against rigorous quality and engineering standards. If you find that you need to return the machine for any reason, please be aware of our Stringing Machine return guidelines and policies.

- Returns and exchanges will only be accepted within 30 days of shipment.
- Any return or exchange must have a Return Authorization Number (RA#). To receive an RA#, start the return process in accordance with the return policy of the GAMMA Dealer where the stringing machine was purchased. GAMMA Sports does not accept returns without an RA#.
- The return shipment must have the RA# printed clearly on the outside of the box and on the shipping label.
- RETURNS MUST BE IN THE ORIGINAL PACKAGING AND IN NEW RESALABLE CONDITION.
- A minimum restocking fee of 15% of the original purchase amount will be deducted from the refunded amount.
- GAMMA Sports will inspect each returned item to determine whether an additional adjustment to the refund amount is necessary. GAMMA Sports will deduct additional repair/maintenance fees if use or damage to the product or packaging is discovered upon return of the product.
- Refunds will be issued by the GAMMA Dealer where the stringing machine was purchased upon receipt and review of the returned machine and in accordance with the policy of the GAMMA Dealer where the stringing machine was purchased.
- All product return shipping and handling charges are the responsibility of the customer.
- Decisions made by GAMMA Sports are final.

WE APPRECIATE YOUR BUSINESS AND LOOK FORWARD TO SERVING YOU AGAIN!

