



X-STRINGER

X-2



OWNER'S MANUAL

Issue 1 - December 2003



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LIMITED LIFETIME WARRANTY

GAMMA warrants to the original purchaser that the GAMMA X-2 stringing machine ("EQUIPMENT") purchased is free from defects in materials and workmanship for the life of the EQUIPMENT. Should any defects develop under normal use, 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 an 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.

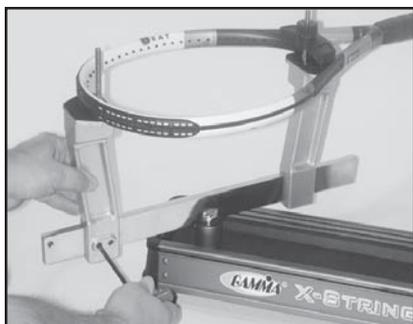
ASSEMBLY INSTRUCTIONS



Installing the Turntable

Place the turntable ring spacer on the post of the turntable.

Insert the turntable center post into the bushing assembly of the machine base.



Installing the Support posts

Slide each support post onto the end of the turntable bar. The posts should be oriented so as to angle away from the turntable center post.



Installing the Drop Weight

Remove the endcap from the tension bar and slide the drop weight onto the bar. The weight should be oriented with the knob end closest to the string winder. Replace the endcap.

ASSEMBLY INSTRUCTIONS



Winder Support Stand Installation

Attach the winder support stand to the machine base using the 5MM hex key (included) by sliding the 2 brackets into the 2 rear most grooves. Then align the right side of the stand with the right end of the base.



Tension Bar Stop Screw

Raise the Tension Bar to an upright position. Using the supplied 5MM wrench, securely tighten the Stop Screw. This will prevent the Tension bar from contacting the racquet frame.



Clamp Adjustment

The floating clamps provided with your machine will need minor adjustments according to what string type, construction, and gauge you are using.

If the strings slip through the jaws of the clamp, tighten the clamp by turning the thumb knob opposite of the handle, in the clockwise direction. If the clamps leave impressions or damage the string, they are too tight and the thumbwheel must be turned counterclockwise.

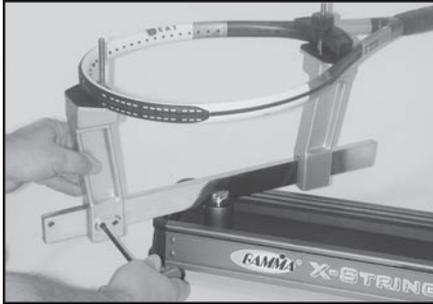
The clamp jaws must be clean and free from dirt, oil, and any string coating for them to grip properly. Keep the clamp jaws clean with alcohol.

MOUNTING THE RACQUET



Installing the Racquet Support Adapters

The GAMMA X-2 is supplied with two styles of Racquet Support Adapters. A thick profile adapter for widebody racquets and a thin profile adapter for conventional racquet frames. The Adapters are also tapered, use the highest side of the adapter that does not interfere with the string grommet holes.



Adjusting the Frame Support Posts

Place the racquet frame over the center posts and onto the frame support posts. Loosen the locking screws on one support post and slide the post in the appropriate direction until the plastic adapter contacts the frame. Securely tighten the locking screws. Adjust the opposite post in the same manner.

It is extremely important both plastic adapters are in contact with the frame to prevent racquet damage.

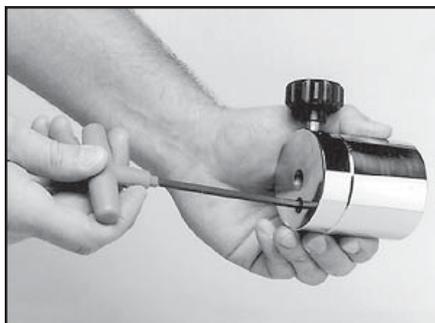


Securing the Racquet

With the frame support posts properly adjusted, place the frame hold down plates over the center screws and tighten the clamp bar knobs securely. Do not overtighten the knobs as frame damage may occur.

Note: Inverted throat racquet frames may require the throat clamp plate to be rotated 180 degrees to match the frame.

STRINGING THE FRAME



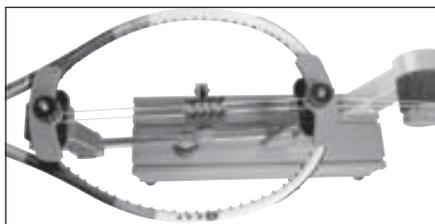
Setting Tension

The drop weight is of a two piece design. When assembled, it will accommodate tensions from 20 lbs. to 90 lbs. For tensions from 8 to 20 lbs., remove the 5mm bolt on the face of the drop weight, and use the smaller portion of the weight as described above.

Note: Tensions above 77lbs. require removal of the drop weight bar endcap.



To set the stringing tension, loosen the locking knob on the side of the drop weight. Slide the weight in the appropriate direction until the face **closest** to the string gripper is indexed with the desired tension mark on the tension bar.



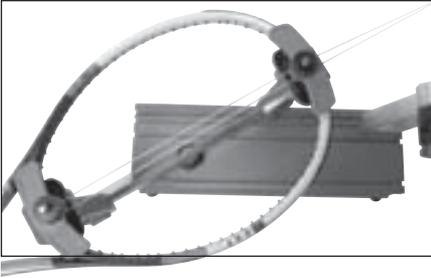
Starting the Main Strings

To begin stringing the main strings, count the number of holes at the throat of the frame, which will determine the starting point. For racquets with 4 or 8 holes at the throat, the main strings will begin at the head. For racquets with 2 or 6 holes at the throat, the main strings will begin at the throat.

Thread the two ends of the string through the two center grommet holes at the head or throat as determined in the previous step.

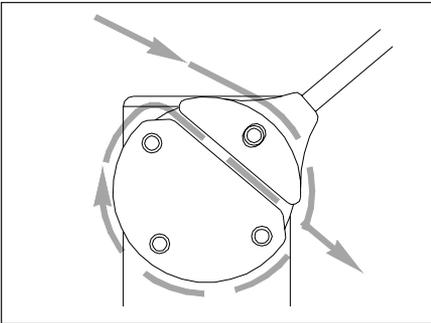
Route the strings through the opposite center holes.

STRINGING THE FRAME



Clamping the First Main String

Thread one end of the string through the adjacent grommet hole and pull excess by hand. Clamp both the center and the adjacent string to each other on the inside of the frame.



Pulling Tension

Wrap the free string clockwise around the gripper drum once and position between the gripper jaw.

Gently turn the gripper clockwise while squeezing the jaws together until all slack in the string is removed.

Note: For proper operation, the string gripper jaw must be in the position shown. The tension in the string provides the clamping force to the jaws.

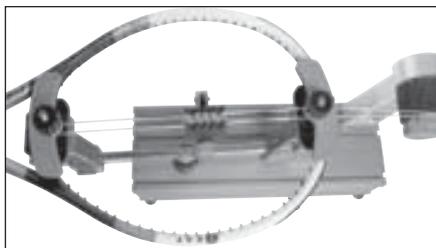


While holding the string gripper drum with your hand, lift the tension bar to approx. 45 degree angle and let fall. If the tension bar drops below horizontal, repeat the above action until the bar comes to rest parallel to the racquet. The set tension will be reached when the bar rests horizontal.

If the bar comes to rest above horizontal, release the string and re-pull tension.

Manually forcing the bar into the horizontal position will greatly increase string tension and may result in racquet damage.

STRINGING THE FRAME

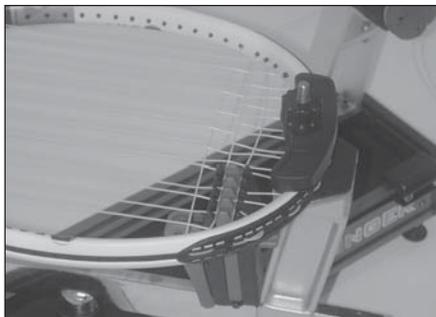


Clamping the String

Clamp the tensioned string to the next adjacent string using the second string clamp.

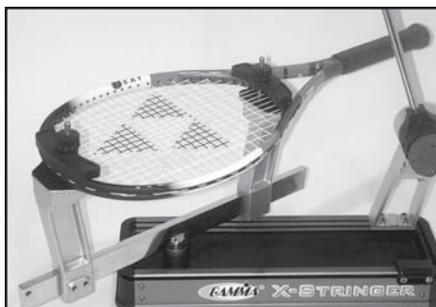
Release the tensioned string by raising the tension arm.

Repeat the procedure for all of the remaining main strings and tie off following the racquet manufacturer's recommendations.



Starting the Cross Strings

Follow the manufacturer's recommended stringing pattern for one or two piece stringing. This will determine the starting point for the cross strings. Weave the first two cross strings and pull tension and clamp the cross strings to each other.

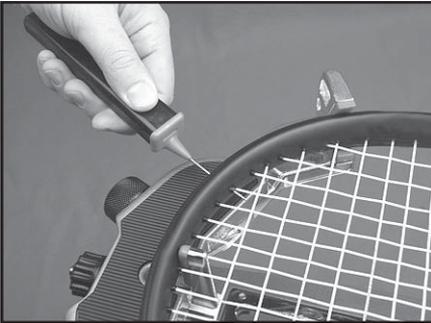


Finishing the String Job

Weave and tension the remaining cross strings and tie off at the specified grommet hole.

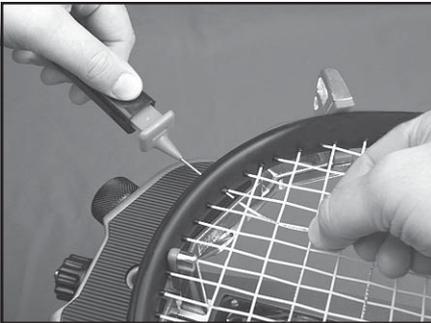
Remove the strung racquet from the GAMMA X-2 in the reverse order of mounting.

PATHFINDERAWL



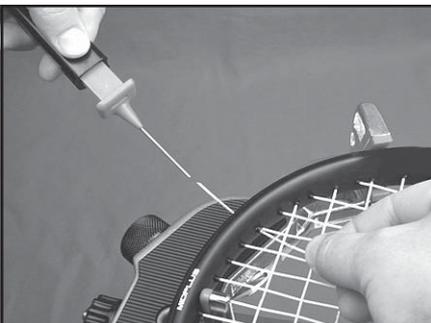
The GAMMA X-2 includes the Pathfinder stringing awl which creates a pathway between or around strings to make inserting a string through tight grommets easier and quicker.

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, 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.

PARTSLIST

PART #	DESCRIPTION	PART #	DESCRIPTION
4A	TURNTABLE BUSHING	78	CLAMP PLATE
8A	BUSHING SET SCREW	79	CLAMP PLATE PAD
24	KNOB	82	FRM. SUPP. ADPTR - SHORT
25	TENSION BAR	82A	FRM.SUPP. ADPTR. - TALL
25A	SET SCREW	83A	TENSION BAR STOP SCREW
26	TENSION BAR CAP	92	TURNTABLE
27	DROP WEIGHT KNOB	93	SUPPORT POST
28	FRONT WEIGHT	94	SUPPORT POST PIN
29	BACK WEIGHT	95	SUPPORT POST PAD
30	TENSION BAR DRUM	161	WINDER BEARING
30A	SET SCREW	162	GRIPPER PIVOT PIN
31	STRING GRIPPER DRUM	163	PIVOT PIN RET. COLLAR
MRSRG	ROTATIONAL GRIPPER	255	BASE
34	RATCHET TEETH	256	BASE FOOT
35	RACHET TEETH SPRING	257	LOWER WINDER STAND
37	CAP SCREW	258	UPPER WINDER STAND
MPFC	FLOATING CLAMP ASMBLY	259	WINDER ST. BRACKET CLAMP
43	LEVER JAW		(NOT SHOWN)
44	INNER JAW	69	HEX WRENCH / 3MM
45	KNOB JAW		HEX WRENCH / 5MM
46	LEVER	70	5MM T-HANDLE HEX WRENCH
47	KNOB	72	PATHFINDER AWL
48	SWING BOLT	73	STRINGERS AWL
49	RETURN SPRING	108	UTILITY KNIFE
50	PIVOT PIN	109	NEEDLE NOSE PLIERS
51	RETAINING RING	98A	10MM WRENCH
		260	TURNTABLE SPACER RING

EXPLODED PART VIEW

