GAMMA

PORTABLE STRINGING MACHINES
A PROGRESSIVE SERIES
INSTALLATION AND OPERATION MANUAL

TENEX
559 Rodi Road Pittsburgh, PA 15235 U.S.A.
412-243-0335   Telex: 350405
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FEATURES

A UNIQUE PROGRESSIVE SERIES:
UPGRADING KITS ARE AVAILABLE FOR YOUR PROGRESSIVE GAMMA PORTABLE STRINGING MACHINES.

1. GAMMA 200:
* 2-point mounting system-the simplest mounting system.
* Multiple use-designed for badminton, squash, racquetball, and tennis racquets.
* Racquet can rotate 360 degrees during stringing-an extra convenience to make stringing more efficient.
* Drum string gripper with uni-directional built-in clutch easiest to get accurate tension for a drop-weight system.
* Easy push-down and pull-up frame clamps-saving time in mounting and releasing racquets.

2. GAMMA 600:
* Drum string gripper replaced by linear string gripper (US Patent #4,491,3229)—a simple device to increase efficiency.
* 2-point mounting system upgraded to 6-point mounting system—the handiest way to avoid warping a racquet head.
* Unique string guiding ditch on the drum—preventing the string from sliding away.

3. GAMMA 600FC:
* Flying clamp system replaced by gliding clamp system with the unique patented GAMMA 360 degree swivel glide bar rail table. The most professional clamp system with the simplest and the most ingenious way to avoid removal and reinstallation of string clamps and glide bars.
DESCRIPTION OF PARTS

1) Tension Bar
2) Tension Weight
3) Tension Weight Knob
4) Tension Weight Lock
5) Front Edge of Tension Weight
6a) Drum String Gripper (GAMMA 200)
6b) Linear String Gripper (GAMMA 600, 600FC)
7) Tension Bar Drum
8a) Drum String Gripper Drum (GAMMA 200)
8b) Linear String Gripper Drum (GAMMA 600, 600FC)
9) String Guiding Ditch (GAMMA 600, 600FC)
10) Post for Tension Apparatus
11) Drum-Post Connection Plate
12) Tension Bar Stopper
13) Lower Casting
14) Upper Casting
15) Lower Vise Stock
16) Sliding Block
17) Screw
18) Frame Pad (GAMMA 200)
19) Mounting Arm (GAMMA 600)
20) Mounting Arm Assembly
21) Upper Vise Stock
22) Pressure Plate (GAMMA 600, 600FC)
23) Pressure Plate Knob (GAMMA 600, 600FC)
24) Vise Bar
25) Vise Bar Base
26) Vise Bar Brake
27) Glide Bar Table Base
28) Glide Bar Table
29) Glide Bar
30) Glide Bar Rail
31) Glide Bar Table Brake
32) Glide Bar Table Clutch Knob
33) Frame Clamp Knob
34) Frame Clamp
35) Frame Clamp Bolt
36) Frame Clamp Clutch Knob
37) Machine Base
38) Flying String Clamp (GAMMA 200, 600)
   a. Oversize, b. Standard,
   c. Badminton
39) Gliding String Clamp (GAMMA 600FC)
   a. Oversize, b. Standard,
   c. Badminton
40) 6 m/m L-Shaped Allen Wrench
41) 4 m/m L-Shaped Allen Wrench
42) 1.5 m/m L-Shaped Allen Wrench (GAMMA 200,600)
43) Plastic Adapter
44) Four-Point Screw Driver (GAMMA 600FC)
45) 10 m/m Open-End Wrench (GAMMA 600FC)
46) Frame Clamp Set
47) Weight Bar End Cap
48) Fastening Screw
**Step 1:** After opening the box, remove the installation and operation manual, the frame clamps (46), the upper vise stocks (21) (GAMMA 200) or the mounting a arm assembly (20) (GAMMA 600 or 600FC), and two string clamps (38) for GAMMA 200, 600 and (39) for GAMMA 600FC, one oversize and one standard. Remove the foam box, taking the machine body from the foam box.

**Step 2:** Release the vise bar brake (26).

**Step 3:** Turn the vise bar (24) 90 degrees and then lift the tension bar (1).
Step 4: Use 6 mm L-shaped allen wrench (40) to lift the tension bar (1) screw the tension bar stopper (12), then there will have two fastening points upper and below the tension bar drum (7).

Step 5: Install the mounting arm assembly (20) (GAMMA 600, 600FC) or the upper vise stock (21) (GAMMA 200).

Step 6: Release the paper cover of the tension bar (1).
MOUNTING THE FRAME

Step 1: Place suitable plastic adapters (43), which fit the shape of the yoke and the tip, on the frame pads.

Step 2: Adjust the distance between the vise stocks by first adjusting the lower castings (13) and then the sliding blocks (16) properly. Use the 4mm Allen Wrench to loosen or to lock the lower castings (13) and the sliding blocks (16).

Step 3: Insert both frame clamps (46) by pushing them down and then fasten them. The frame clamp clutches click when the frame clamps (46) are properly inserted.
Step 4: (Skip this process for Pioneer 1) Adjust the pressure plates (22) by turning the pressure plate knobs (23). The pressure plates (22) should touch the sides of the frame snugly. The shape of each pressure plate is designed in such a way that different sides can be used to fit different racquet shapes. Now the frame should be properly secured in the vise.

Step 4-1: Putting the pressure plates into the appropriate holes on the pressure plate holders. Depending on the size of the racquet put the pressure plate into the appropriate holes on pressure plate holders. In general for an oversize racquet use the holes away from the center and for a midsize racquet use the holes closer to the center.
STRINGING THE FRAME

Step 1: Dismantle and mount the tension weight (2) by a 6 m/m L-shaped Allen Wrench (40).

Step 2: Adjusting the tension...The tension weight (2) consists of two pieces: use single piece with tension weight knob for upper scale, and use both pieces together for lower scales. The scales are marked in terms of pounds. Loosen the tension weight knob (3) and slide the tension weight (2) along the tension bar (1) until the front edge of the tension weight (5) is at the scale you want. Notice that the tension weight knob (3) should not be on the scale to avoid any damages on the scale.

Step 3: Choose the appropriate string clamps and attach the string clamps on the glide bars (29). To attach the clamps to each of the glide bars (29), lift the lever up to the removal position, press the clamp jaws together to open the foot, and attach the clamp on the glide bars. Recover the lever on locked position. (GAMMA 600FC).
Step 3-1: Locked

Step 3-2: Open

Step 3-3: Removable
Step 4: Starting to string the mains...
- Count the number of holes in the open throat area. For 4 or 8 holes, start at the tip of the frame, while for 2, 6, or 10 holes, start at the throat. Thread the ends of the string, beginning from the starting end just mentioned, through the two center holes of both the throat and the tip of the frame.

Step 5: Preparing for tension pulling...
- For GAMMA 200 or 600, thread one of the ends of the string on either side through the next hole, keep about 4" long loop outside of the frame, and clamp the loop with one of the flying clamps. For GAMMA 600FC, simply clamp one of the strings inside the frame with a clamp against the frame at the starting end. Pull the string one the other side of the clamped string taut. For GAMMA 200, wrap the string around the drum string gripper (6a), while for GAMMA 600 or 600FC, place it in the linear string gripper (6b) through the string guiding ditch (9) on the drum.
Step 5-2

Step 5-3

Step 6: Adjusting the tension—Hold the string gripper (6) still with left hand and raise the tension bar (1) above the horizontal position with right hand. Now release the string gripper (6) and gently lower the tension bar (1). If the tension bar is below the horizontal position, repeat the process until the tension bar is within 3 degrees of horizontal position (an exact horizontal is the ideal position). If the tension bar (1) is above the horizontal position, release the string by raising the tension bar (1) without holding the string gripper (6), and start the tension adjustment process again.
Step 7: Holding the tension of the string—For GAMMA 200 or 600, clamp the last two strings near the frame closer to the string gripper (6) with a flying clamp. For GAMMA 600FC, clamp the tensioned string near the frame close to the string gripper (6). Continue the stringing process until the mains are completed and tied off.
Step 8: Preparing for stringing the crosses (skip this process for GAMMA 200 and 600).—Release the string clamps from the mains. Loosen the glide bar table brake (31), and turn the glide bar table (28) 90 degrees to where the clutch is trapped. Tighten the glide bar table brake. To turn the glide bar table, first release the clutch by pulling the clutch knob (32) upward, turn the glide bar table slightly, then release the clutch knob (32) and continue to turn.
Step 9: Stringing the crosses—Following the stringing pattern of the racquet given by the manufacturer, continue the same process used for the mains to string the crosses.

Step 9-1

Step 10: Removing the racquet—After completing the stringing, loosen the pressure plates (22) (only for GAMMA 600, 600FC). Loosen the frame clamps (46), pull the frame clamp clutch knobs (36) and remove the frame clamps (46). Then remove the racquet and straighten the strings.
UPGRADING PIONEERS
From GAMMA 200 to GAMMA 600

A: Replacing the drum string gripper (6a) with the linear string gripper (6b).

Step 1: Release the drum string gripper (6a).

Step 2: Insert the linear string gripper (6b) into the hole on the drum, and then tighten the fastening screw (48).
Step 3: Release the screw of the drum-post connection plate (11).

Step 4: Release the screw of the post for tension apparatus (10), tilt the drum-post connection plate (11), such that the upper end of the plate is away from the and the lower end is toward the center of the machine. Then fasten the screw.

Step 5: Now the tension bar (1) will be under the horizontal position, so release the tension bar stopper (12) and insert it into another screw and fasten it.
**B:** Replacing the vise stocks with frame pads (18) with those with 6-point mounting arms.

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**From GAMMA 600 to GAMMA 600FC**

**Step 1:** Remove the lower vise stock (15) and the mounting arm assemblies (20) from the vise bar (24), then remove the vise bar (24) from the vise bar base (25).

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**Step 2:** Place the glide bar table assembly on the vise bar (24) with the connecting holes under the glide bar table base (27) on top of the connecting holes on the vise bar (24).
Step 3: Fasten the glide bar table assembly on the vise bar (24) by screwing the bolts into the connecting holes with the 6 mm Allen Wrench (40).

Step 4: Reinstall the vise bar (24) which has the glide bar table (28) on it on to the vise bar base (25) by just place the vise bar on the vise bar base.

ADJUSTMENT OF GLIDE BARS

When the glide bars (29) do not slide smoothly on the rails (30), it could be because the glides are no longer parallel to each other or too close to each other. In either case, loosen the screws under the glides and adjust the glides properly.
ADJUSTING THE CLAMPS

A. Adjusting the Flying Clamps

Step 1: Use the 1.5mm L-shaped wrench (42) to loosen the screw on the flying clamp.

Step 2: Adjust the clamp to get the right grip and tighten the screw.

B. Adjusting the Gliding Clamps: If the clamp is slipping or too tight on the glide bar (29), the clamp should be properly adjusted. To do so, first grasp the clamp with left hand while the lever is on your left hand side, then turn the nut on your right hand side with the 10mm open-end wrench (45) to tighten or loosen the nut on the gliding clamp.
PLASTIC ADAPTERS FOR VARIOUS SHAPES OF FRAME YOKES AND TIPS

Appropriate choice of plastic adapters minimizes stress on the frames:

TYPE: 1

TYPE: 2

TYPE: 3

TYPE: 4

TYPE: 5

TYPE: 6

Applicable for badminton racket.

Applicable for the series of Wilson Profile
GAMMA

TENEX