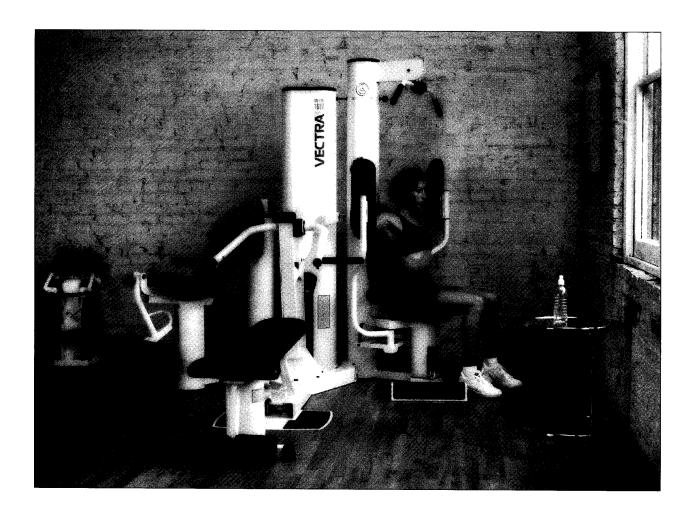
VECTRA



On-Line® 1600 Owner's Manual

Introduction

e at Vectra appreciate your selecting our On-Line[®] 1600 for your fitness program, and invite your questions and comments. We're sure that you'll be pleased with your new Vectra gym.

This owner's manual provides you with safety rules, assembly instructions and routine inspection and maintenance information to enable you to get the most from your gym. Please read through this manual carefully before you assemble and use your $On-Line^{\textcircled{\textbf{B}}}$ 1600.

Routine Inspection & Maintenance

he Vectra On-Line[®] 1600 is designed to provide years of trouble-free service with minimal routine maintenance. You can be confident of continued top quality performance by carrying out the following periodic inspection.

PERFORM THE FOLLOWING SAFETY CHECK DAILY:

1. Inspect cables, cable ends and nylon jacket very carefully. Refer to Warning Label for specific information on inspecting cables. This same information is repeated in this manual and on your exercise chart. Replace any damaged or worn cables. Annual cable replacement (semiannual in multi-user settings) is strongly recommended as an additional precaution. The rate at which cables wear depends on many factors including: repetitions, weight setting, misuse, abuse, etc. Because of this, periodic cable replacement is not a sufficient safeguard against unexpected breakage. Nothing short of a thorough, careful daily inspection constitutes an adequate safety program.

PERFORM THE FOLLOWING CHECKS WEEKLY:

- 1. Inspect frame and pulley bolts for tightness. Tighten if necessary.*
- Inspect accessory items (lat bar, curl bar, abdominal strap, ankle strap, etc.) for damaged mounting eyes, broken stitches, etc. Replace any damaged or worn items
- Inspect weight selector pin for proper fit and retention in selector shaft. Replace improperly functioning pin with Vectra replacement pin only.
- Inspect press arm adjustment lever for proper engagement. Replace improperly functioning parts only with VECTRA replacement parts.
- 5. Inspect press arm mounting screws for tightness. Tighten if necessary.*
- Inspect bench bolts. Tighten bolts if necessary.* Inspect bench wheels, wheel suspension springs and bench feet. Replace any damaged or malfunctioning parts.
- Inspect leg developer mounting screws for tightness. Tighten if necessary.*
- 8. Inspect leg/ab seat bolts and cushion bolts for tightness. Tighten if necessary.*
- 9. Inspect cable retaining plugs and spring plungers. Replace if necessary.
- 10. Inspect butterfly arm mounting screws for tightness. Tighten if necessary.*
- Inspect butterfly adjustment mechanism for proper function. Replace improperly functioning parts only with VECTRA replacement parts.
- 12. Adjust cable system tension if necessary (see assembly instructions for details).
- 13. Inspect stack column for proper rocking function. Inspect latch pins at base of stack column. Inspect press arm for adjustment (center and fore-aft). Inspect stack column latch mechanism. Repair, replace or adjust as necessary.
- 14. Inspect wheels on press arm. Repair or replace as necessary.

PERFORM THE FOLLOWING CHECKS MONTHLY:

- 1. Inspect all foam hand grips. Replace any damaged, worn, or loose hand grips.
- Inspect weight plates for cracks, damaged bushings, etc. Replace if necessary. Check bolt, tighten if necessary.
- Vectra's stainless steel guide rods DO NOT REQUIRE LUBRICATION or anti-rust treatment. Simply keep them free of grit, sticky or gummy sprays, etc.
- 4. Clean upholstery with mild soap and water as desired.
- 5. If unit is in a humid area, such as near a pool, hot tub or sauna, or in certain climates, use of an auto wax should delay rusting.
- * If any bolts seem to loosen periodically, use Loctile 242 for a long-term cure.

Safety Rules

Warning:

Serious injury can occur if you are struck by falling weights or moving parts. The risk that you assume by using this type of equipment can be reduced by obeying a few simple rules:

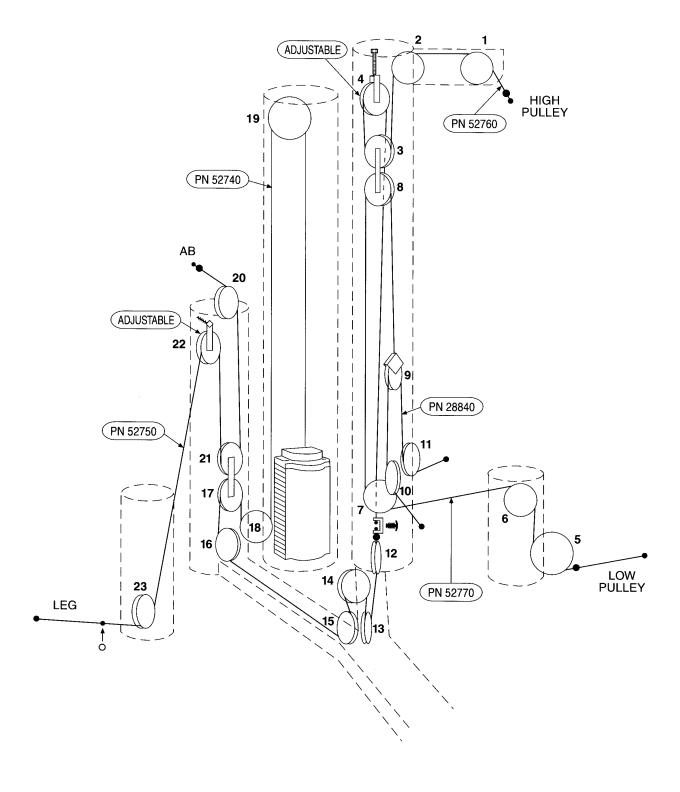
- 1. IMPORTANT: Cables are wear items. It is your responsibility to prevent unexpected breakage. To do this, inspect every cable daily. Pay particular attention to areas near the fittings at each end of each cable. Access panels are provided for this purpose. Replace worn, frayed, or damaged cables immediately. The actual wire strands, the fittings and the nylon jacket itself must all be scrutinized. Using or allowing a machine to be used with a suspect cable can result in serious injury.
- 2. Inspect the nylon jacket of each cable carefully, again paying particular attention to the cable ends. This nylon jacket is essential for cable life and safety. Any cable should be replaced if the nylon jacket is missing, is damaged in any way, has pulled or shrunk away from the fittings at the end of the cable, or is discolored. DISCOLORATION OR DARKENING OF THE JACKET IS AN EARLY INDICATION OF INTERNAL PROBLEMS SUCH AS WEAR OR FRAYING.
- 3. Read and follow all instructions in your Owner's Manual, the labels on the product and on your exercise chart. Additional copies are available from Vectra Fitness, Inc. or your dealer. Do not use this machine until you have taken the time to become completely familiar with its safe operation.
- 4. Consult your physician before beginning your exercise program.
- Do not allow young children to use or play with or around this machine. Allow older children to use the machine only with adult supervision.
- Keep head and limbs clear of weights and moving parts at all times. Keep fingers clear of moving parts while making adjustments.
- 7. Inspect the gym for loose or worn parts; damaged, frayed or worn cables, broken weight plates, etc. Do not use or allow the machine to be used until any defective parts are repaired or replaced. Refer to the "Routine Inspection and Maintenance" section of this manual for specific inspection rules.
- Ensure that the weight selector pin is in good working condition and fully engaged in the selector shaft prior to lifting. Use only the factory supplied pin or a factory authorized replacement.
- 9. Ensure that the locking mechanisms are properly engaged prior to lifting. Locking mechanisms secure the following in position during use: seat pads, accessory items such as squat attachments and lat hold downs, cable attachments, press arms, leg developers, etc. An improperly engaged locking mechanism could result in an injury.
- Obtain assistance to free jammed weight plates, pulleys, etc. Do not attempt to free jammed weight plates by yourself. Falling weight plates can cause serious injury.
- 11. Do not drop the weight plates. Lift only as much weight as you can control safely. Don't be careless, stay alert.
- 12. Serious injury could result if equipment moves while in use. To prevent this, ensure that the floor is even, strong and not too slippery. If equipment slides too easily on floor, place equipment on rubber matting. Errors in lifting form could also result in bench moving in use. To prevent this, lift weight vertically only and do not push horizontally with your feet while lifting.

Warning:

SELECT "FIXED MODE" BEFORE USING THIS WEIGHT MACHINE by pushing in the handle on the tallest column. This press station offers an advanced free weight simulation that requires the user to perform actual balancing work. "FREE MODE" should only be selected after reviewing all information on exercise chart, labels and owner's manual. (Certain exercises are to be performed in fixed mode only.)

Vectra On-Line 1600 Cable Diagram

Note: The pulleys on this diagram are numbered to make the installation of new cables as easy as possible. Simply start threading the cables through the pulleys beginning with the lowest number and working up. For example, If you are installing an entire set of cables start at pulley #1. If you are installing only a new ab/leg cable (PN 52750), you would begin at pulley #20. Note: where applicable, text and other drawings in this manual that mention or show pulleys contain corresponding numbers.



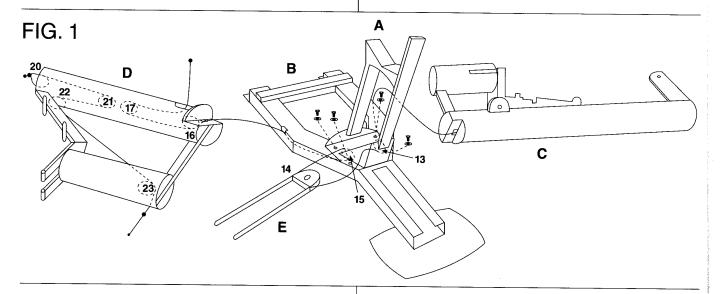
Tools Required:

Wrenches: one each (7/16, 1/2), two each (9/16)

Hex Keys: 5/16

Phillips screwdriver, hammer, pliers

Assembly



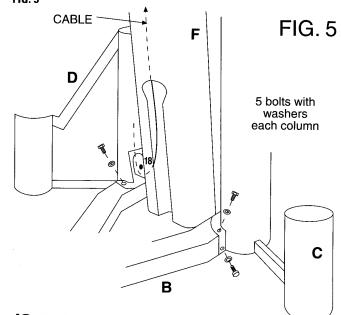
- 1 Select location for your machine. Set machine up in a well lighted and well ventilated area where you will enjoy exercising. Use rubber floor matting or carpet remnants to protect your floor if desired.
- 2. Unbox entire unit. (NOTE: LEAVE ALL CABLES AND CABLE RETAINERS IN PLACE.)
- **3.** Assemble the press arm support (A) to the main frame (B). (3/8-16 x 1/2 hex screws and washers, qty. 4 each). FIG. 1
- 4. In preparation for threading the cable, position the main column (C) on the right of the main frame (B), and the leg/ab station (D) on the left. Lay these parts down as shown in FIG. 1, to prevent them from falling over. You may tilt the main frame (B) on its left side to simplify cable routing. Now route the long cable from the base of the main column (C) into the opening on the right of the main frame (B) around the nearest pulley #13 and up out of the frame. The cable goes around the press arm pulley #14 such that the bolt head of the press arm pulley (E) is toward the bench press, and then back down into the main frame (B) going around the other of the two pulleys #15. The cable goes through the frame and exits out the opening near the leg/ab station (D). The cable enters the base of the leg/ab station (D) through an opening in the bracket and goes under pulley #16 found there. There is a "pulley-keeper" at this pulley. It is a small piece of steel about the diameter of a pencil. It is **VERY IMPORTANT** that the cable go between the pulley and this "pulley -keeper." Now the cable goes around the lower pulley#17 of the suspended pair of pulleys, front to back. Refer to FIG. 1 and Cable Diagram elsewhere in this manual. Going around this pulley in the correct direction without the cable twisted is VERY IMPORTANT. The cable exits through the large hole as shown.
- In preparation for attaching the stack column (F) to the main frame (B), make sure that the rear of the main frame is 2 to 3 feet from the wall. The stack column should have the guide rods (G) in place with the rubber bumper (H) at the bottom and the screws up. IMPORTANT: The guide rods need to be in now because ceiling height might make later insertion difficult or

FIG. 2

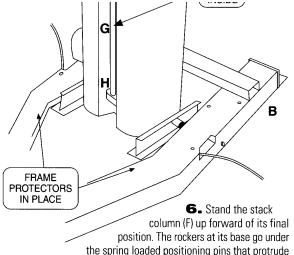
impossible. FIG. 2

GUIDE RODS

- 8. Stand the main column (C) up and place it into position while pulling cable out under the press arm support (A). Ensure that the cable feeds straight and is not pinched. Bolt column to frame (3/8-16 x 1/2 hex screws and washers, gtv. 5 each), FIG.5
- 9. Feed the cable from the leg/ab station (D) around the bottom of the pulley #18 in the side of the stack column (F) and have it come out the top of the stack column (F). Stand the leg/ab station (D) up and making sure to not pinch the cable, bolt it to frame (3/8-16 x 1/2 hex screws and washers, qty. 5 each). FIG. 5



10. Now install the weight stack inside the stack column (F) by sliding the 20 weight plates down the guide rods. Ensure that the guide rods and stack bumper are in position as mentioned in step 5 above. One at a time place weight plates onto guide rods at top of column with selector pin groove on bottom facing out.



horizontally above the felt. Place the rear of the rockers under these pins and work the column back carefully so as not to scratch the frame. Leave the factory installed frame protectors in place throughout this step. **FIG. 2** The positioning pins have to rise and snap into the notches provided at the base of the stack column (F). Because the springs holding down the pins are stiff, a fair amount of force is required. For the last two inches, tilting the stack column (F) toward the press arm support (A) helps by making the ramps less steep. Pop one side in at a time. **FIG. 3** (If disassembly is someday necessary, it is accomplished by prying up on these horizontal pins with a very long screw driver while pulling the bottom of the stack column (F) forward.)

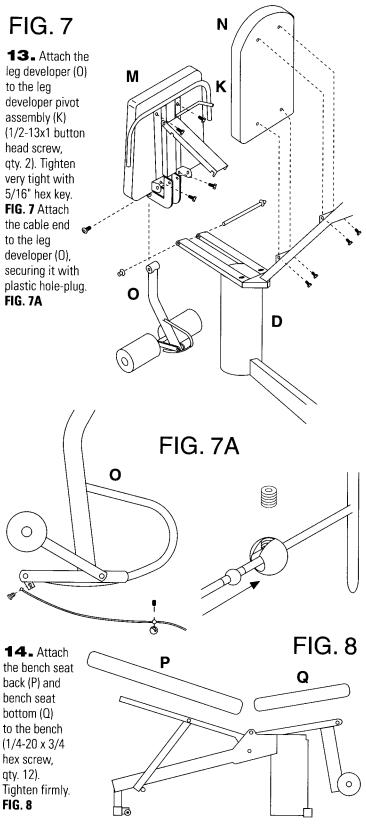
7. Now bolt the FIG. 3 press arm lever (I) to the stack column (F) through the F bearings. $(1/2-13 \times 1)$ button head screws, qty 2). Tighten very tight with 5/16" hex key. Allow the wheels on the bottom of the press arm lever Spring loaded positioning pin shown in latched position to rest in the "v" of the press arm FIG. 4 support. Attach pulley (E) to the press arm lever (I). The 5/16" diameter pin passes through the front of the press arm lever (I). On each end goes one of the steel strips of the press arm pulley (E) with installed bushing and an e-ring to retain it. Install e-rings with pliers. Make sure the cable is not twisted. E-RINGS FIG. 4 (Shown actual size) banging together the following procedure FIG. 6 is suggested: after releasing each plate, pull the guide rods apart to slow the plates fall. Don't try to catch plates with hands or feet. USE **EXTREME CAUTION. FIG. 6** 11. After all 20 plates are in column, feed the cable through the stack J pulley bracket (J) as shown. The cable goes in the large hole on one Rubber finish Neoprene end of the bracket, washer washer around the pulley #19 (square hole) and exits the bracket Nvlon U-clip spacer through another large hole in the center of the bracket. Assemble the top plate, selector shaft, rubber finish washer and U-clip to the cable end. securing with a 3/8-16 x 3 hex bolt. Now lower this assembly down the guide rods holding the stack pulley bracket (J) carefully to prevent damage to paint or cable. Remove the bolts in the end of each guide rod, leaving the nylon bushing in the top of each guide rod. Put a neoprene washer on one bolt and screw that bolt most of the way into the guide rod that ends up under the large pulley. The hole under the pulley for this bolt is slotted to save assembly time by allowing the pulley to remain in place. Slide the bolt head into the slot such that the F neoprene washer is below the bracket with the nylon bushing below it. Now assemble the second guide rod such that the bolt passes first through the bracket, then the neoprene washer, then the nylon bushing and then into the threaded insert in the top of the guide rod. Now secure the stack pulley bracket (J) in the top of the stack column (F) (3/8-16 x 1/2 hex screws, qty 2). Look down the column to make sure that the cable is not wrapped around itself or a guide rod. Tighten all four bolts installed in this step. Lift the top plate to the top of the column. If it is sticky near the top, adjust the guide rod spacing. Put the cap on top of the stack

INPURIANT: 10 Safety keep plates from

column (F). **FIG. 6** Label the weight stack per the instructions with the labels. The "Press Arm Adds 25 lbs." label goes on the press arm.

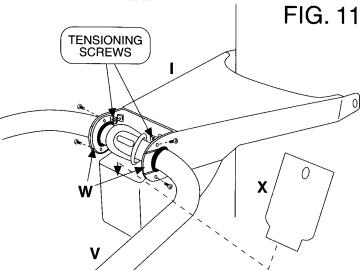
12. Bolt the leg seat handle/strut/leg developer pivot assembly (K) to the leg/ab seat bottom (M) (1/4-20 x 3/4 hex screws, qty 4). Attach this assembly to the leg/ab station (D) such that the hooks on the end of the strut go into the rectangular hole on the top of the column (D). Line up the 1/2" holes and insert the pivot (1/2" diameter rod and shaft retainers). Install shaft retainer with a hammer. Bolt the ab seat back (approx. 10" x 19") (N) to the leg/ab station (D) (1/4-20 x 3/4 hex screws, qty. 4). **FIG. 7**

nstructions



15. Install right butterfly arm (arm closest to press station) on pivot bar. The right arm is the one with the spring mounted flipper and related assembly at the lowest point on the arm. The right cam is the cam with the bushing supported by the shortest connector. Slip the cam over the assembly that holds the spring mounted flipper, such that the flipper engages the notches on the underside of the cam and such that the bushings all line up. Now

18. Now install press handle (V). Insert the press handle (V) into the front of the press arm lever (I) such that the pin engages one of the notches at the inside with a bracket from the press handle on each side. A nylon bushing should be positioned (slot toward weight stack) to engage each side of the press arm lever (I). Secure each bushing with a bushing cap (W), bent flanges up. Install the screws in the sides (1/4-20 x 1/2 pan head phillips, qty. 4) and the tensioning screws (1/4-20 x 1-1/4 oval head, qty. 2). Tighten the 4 side screws finger tight. Now tighten the tensioning screws until the slop is taken up. Do not overtighten. Once the slop is removed from the pivot, but the joint still rotates easily, tighten the 4 cross screws. Check the adjustment lever's operation at this point. When the lever is operated in either direction, the pin should retract fully, allow the press handle to rotate. When the lever is released, the pin should lock the press handle by snapping all the way into the next notch. Adjust if necessary. When correctly adjusted, the latch pin will be forced by the spring all the way against the far end of the slot it travels in. The adjustment lever will pull it almost, but not all the way, to the other end of the slot. It is very important that it be adjusted such that it goes all the way to the end of the slot with the pressure of the spring. Now install the plastic cover (X). With the textured side out, insert the narrow end down into the front of the press arm lever (I). Curve it back and insert the end with the hole under the top of the press arm lever (I). The hole snaps onto a hook inside to secure it. FIG. 11

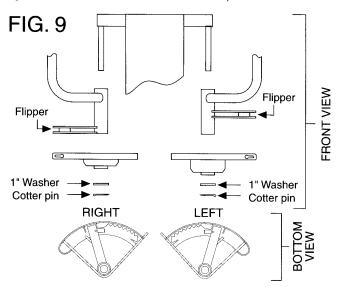


■ Next adjust the position of the stack column. First make sure all frame bolts are very tight. Behind the stack, near the floor on each leg of the main frame (B) you will find a bolt head. Turning either bolt head (9/16" wrench) will move the bottom of that side of the stack column (F). Clockwise moves the bottom of the stack back, counter-clockwise forward. Make sure the "Mode Selection Knob" near the top of the main column (C) is in "Free Mode." The wheels on the bottom of the press arm lever (I) will be in the "V" of the saddle of the press arm support (A). First adjust the bottom of the stack column to center the wheels on the press arm support (A). Once this is accomplished, check the alignment of the "Mode Selection Knob." If it slides into "Fixed Mode" easily, go to the next step. If it hits one side of the hole first, more adjustment is necessary. To bring the top of the stack column (F) toward the press station, the bottom of the stack needs to go away. Turn the two bolt heads clockwise. Turn them an equal number of turns to keep the press arm centered on the press arm support (A). To move the top of the stack

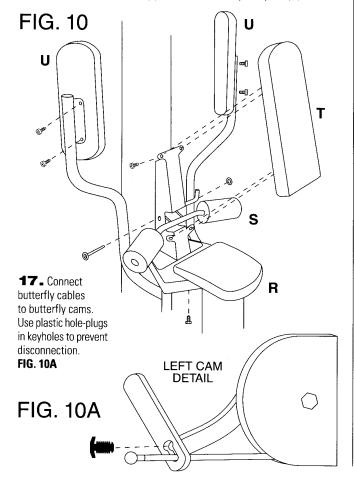
column back, turn the bolt heads counterclockwise. **FIG. 12**

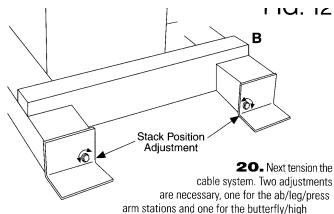
F

slide the two items as one up the pivot shaft. Install 1" washer and then cotter pin, bend end. Repeat this process for the left arm and cam. Test the ratcheting system at this point. If any problems are suspected, look up into the ratcheting mechanism from below. If the spring mounted flipper is not in the notched section, take the cam and arm off the pivot and after getting the flipper in the right area, reinstall the cam and arm as an assembly. **FIG. 9**

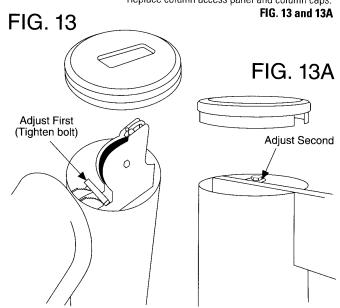


16. Install butterfly seat bottom (R) (1/4-20 x 3/4 hex screws, qty. 2). Install the Lat Hold Down (S) with the blue lever on the right pointing up. Line up the 1/2" holes and insert the pivot (1/2" diameter rod and shaft retainers). Install shaft retainer with a hammer. Install butterfly seat back (T) (1/4-20 x 3/4 hex screws, qty. 4). Install butterfly arm pads (U). **FIG. 10**





pulley/low pulley stations. The adjustment at the top of the leg/ab station is adjusted first, but first check something at the base of the main column (C). Remove the lowest access door. There is a stainless cable fitting above a slot about six inches above the floor. The cable system in the main column needs to have enough slack in it to allow this cable fitting to touch the slot. If the cable system does not allow the cable fitting to be pushed into contact with the slot, then turn the bolt on the top of the main column counterclockwise until it does. Now, remove the column cap from the top of the ab column. About 4" below the top of the column, a bolt passes through a pulley. Make sure it is not tight. Move the square bar from notch to notch until the top plate of the weight stack just starts to lift. Make sure the weight selector pin easily goes into all weight stack holes. Once the right notch is found, tighten up the bolt that passes through the adjustable pulley to secure it. Now adjust the bolt on the top of the main column until the top plate again just starts to lift. Again make sure the pin goes in all weight stack holes. Replace column access panel and column caps.



21 • Attach lat bar to cable at high pulley. Attach the ab strap at the ab pulley. Ensure that the foam press post cap (Y) is in place on the press arm support (A). **FIG. 4**

22. Make sure cables move freely when machine is operated. Immediately fix any cable rubbing problems.

If you have any questions, PLEASE contact the full-service dealer where you purchased this machine.

Vectra On-Line 1600 Limited Warranty

Vectra Fitness, Inc. warrants, to the original owner only, this Vectra On-Line®1600 to be free from defects in materials and workmanship for component specific periods as outlined below. Purchaser must retain bill of sale to establish warranty rights. This warranty is valid only if machine is purchased from a Vectra authorized dealer. Defective parts will be repaired or replaced at Vectra's option, when returned to Vectra Fitness, Inc. prepaid with prior authorization. No allowances for labor will be made.

Warranty Period: (All periods are from date of purchase by original consumer)

Home Use:

Structural Frame 10 years	Cables 1 year
Weight Stack 5 years	Bearings 1 year
Pulleys 5 years	Upholstery 1 year
Guide Rods 5 years	Other parts not listed 1 year

Home use is defined as use in a family's home by the members of that family.

Commercial/Institutional use:

This warranty is void if this machine is used in any type of commercial or institutional setting.

Conditions and Exceptions: Failures due to normal wear, damage, misuse, abuse, neglect, alteration, improper assembly, repairs other than by an authorized Vectra Service Center, or lack of maintenance are not covered. Use of a weight stack that is heavier than the heaviest stack that Vectra Fitness sells for use on the machine voids this warranty. This warranty does not cover damages sustained during shipment. Title passes to buyer upon delivery to carrier. If product is damaged in transit, file claim with carrier.

Repairs to the Structural Frame and Weight Stack will be made only if such repairs are necessary to make the machine functional as designed. Repairs for other reasons will not be made. Cosmetics are not covered by this warranty. This is a powder coated steel product, and as such rust-resistant in most settings Any rusting and/or corrosion is completely outside the scope of this warranty. Owners who live in humid climates or intend to install this machine in a humid area such as outside, near a pool, hot tub, or sauna should apply an automotive wax to delay rusting. The corrosive effects of sweat, cleaners, body lotions, sunlight, etc. are also the responsibility of the owner.

It is our policy to replace components rather than entire machines or assemblies. It is also our policy to repair rather than replace frame components. Such repairs of structural parts will be made using appropriate technology and may be visible. Repaired items will be repainted as needed, but the new paint may not match the old.

Replacement and Repair Expenses: Vectra Fitness will provide only replacement parts or repair to parts under this warranty, and will pay for standard ground shipping of such parts to the consumer. The owner of the machine is responsible for all other costs. Such costs may include, but are not limited to: labor charges for service, removal, repair, and re-installation of the Vectra product or any component part; shipping, delivery, handling, and administrative charges for returning parts to Vectra; all necessary or incidental costs related to installation of the replacement part.

Claim Procedure: Please contact the Vectra authorized dealer from whom you purchased your machine should warranty service be required. Items returned to Vectra without prior factory authorization or freight collect will not be accepted. Vectra assigned RMA number MUST be prominently shown on OUTSIDE of carton. Copies of original bill of sale MUST accompany any merchandise returned for warranty service. Also, each returned item must be accompanied by the following information: RMA number assigned by Vectra, product serial number, description of problem experienced, and instructions for return of repaired/replaced part. Parts should be shipped to Vectra Fitness in their original carton or equivalent packaging. Vectra Fitness will not be responsible for any loss or damage incurred in shipping.

No other express warranty has been made or will be made on behalf of Vectra Fitness with respect to any Vectra product or the operation, repair or replacement of any Vectra product. Vectra Fitness shall not be responsible for injury, loss of use of the Vectra product, inconvenience, loss or damage to personal property, whether direct or indirect, and incidental or consequential damages. This warranty is LIMITED STRICTLY to the terms stated herein and no other express warranties or remedies shall be binding on us. THIS WARRANTY AND ALL WARRANTIES WHICH MAY BE IMPLIED UNDER STATE LAW, INCLUDING, BUT NOT LIMITED TO, WARRANTIES OF MERCHANTABILITY AND WARRANTIES OF FITNESS FOR ANY PARTICULAR PURPOSE, EXPIRE WITH THE TRANSFER OF OWNERSHIP FROM THE ORIGINAL OWNER. ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE SHALL BE LIMITED TO ONE YEAR FROM DATE OF PURCHASE. REPAIR OF THE PRODUCT AS PROVIDED UNDER THIS WARRANTY IS THE EXCLUSIVE REMEDY OF THE CONSUMER. IN NO EVENT SHALL WE BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES, FOR BREACH OF THIS WARRANTY, OR ANY OTHER WARRANTY EXPRESS OR IMPLIED. Some states do not allow limitations on how long an implied warranty lasts, or do not allow the exclusion of incidental or consequential damages, so the above limitations or exclusions may not apply to you.

Consumers Rights: This Limited Warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

Vectra Fitness, Inc. 15135 N.E. 90th Street Redmond, WA 98052, U.S.A.

Protected by one or more of the following Patent Numbers: RE34,572; 4,900,018; 4,986,538; 5,336,148; 5,378,216; 5,395,295; 5,462,510; 5,605,523, 5,672,143; 5,779,601; D320,246; D320,247; D320,248; D329,563; CN1,309,738; CN2,023,972.

Other U.S. and foreign patents pending. Vectra and On-Line are registered trademarks of Vectra Fitness, Inc. ARC (Automatic Ratcheting Cam) and Pinnacle are trademarks of Vectra Fitness, Inc.

PN 52470, Rev.- 8/99

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