

# Manual



PrimaryControl  
Arrow

Thank you for purchasing the PrimaryControl Arrow tonearm.  
To achieve the highest sound quality and to avoid damaging the tonearm, please take your time to get familiar with your PrimaryControl Arrow tonearm using this manual as your guide.

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## 1.Parts list

The PrimaryControl Arrow tonearm has been delivered in a customized soft cell package, which secures the tonearm during transport.

*Please retain all original packaging for storing and future transport.*

- A PrimaryControl Arrow tonearm
- B VTA adjuster
- C Standard tonearm weight
- D Additional tonearm weight (optional)
- E Tonearm cable
- F Alignment template
- G Small parts container
  - Hex base mounting screw M3 (3x)
  - Cartridge hex mounting screws M2.5 (6X)
  - Allen keys (1.5, 2)

Please check the parts listed above.

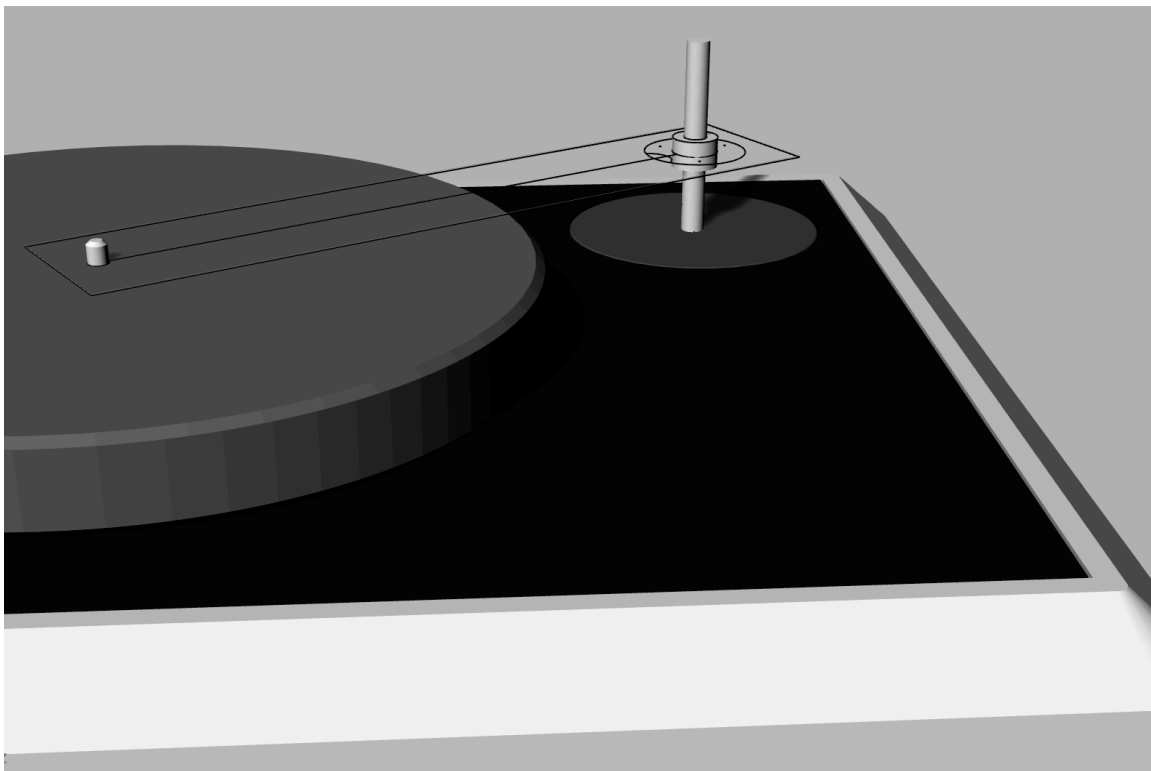
## 2. Mounting the PrimaryControl Arrow tonearm

Mounting the tonearm requires a centered 24mm hole and three 3,5mm holes in your plinth or tonearm board to be able to fix the VTA adjuster. Optional you can make three M3 threaded holes to mount the VTA adjuster. Begin by marking the location of the mounting hole using the provided template.

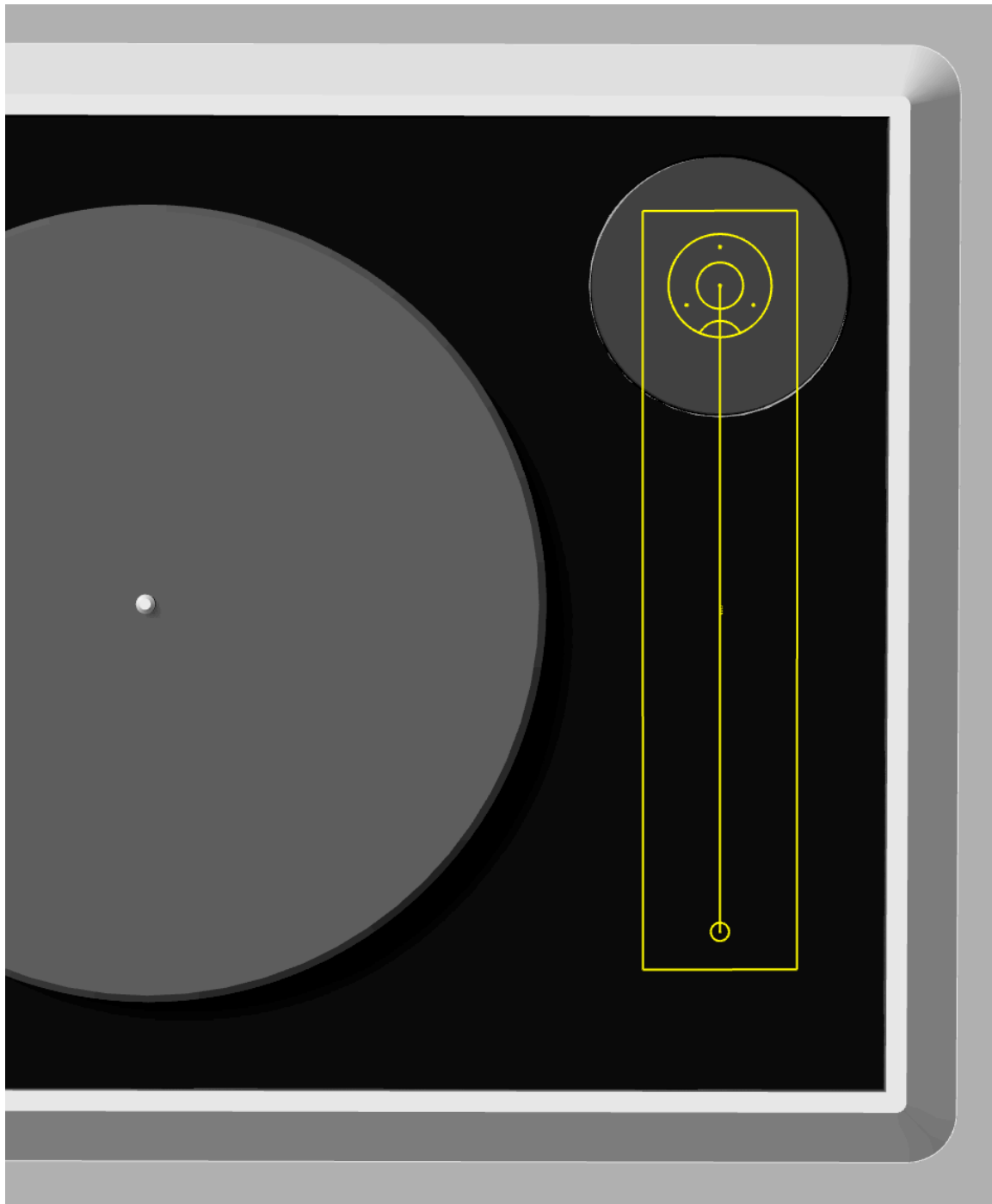
Put the template at your plater. Insert the marker in the middle of the VTA template.

Check that all moving parts of the tonearm have enough clearance to the edges and allow free movement of the arm-wand (the arm-wand in rest position is parallel to the plinth). If you are confident about the proper position of the tonearm, mark the middle point and drill a 24mm hole.

The distance center of platter to center of the 24mm hole (tonearm bearing) should be 251mm.



Next, take the template and insert the VTA mounting part into the 24mm hole. Mark the three holes and drill holes with a 3.5mm drill.

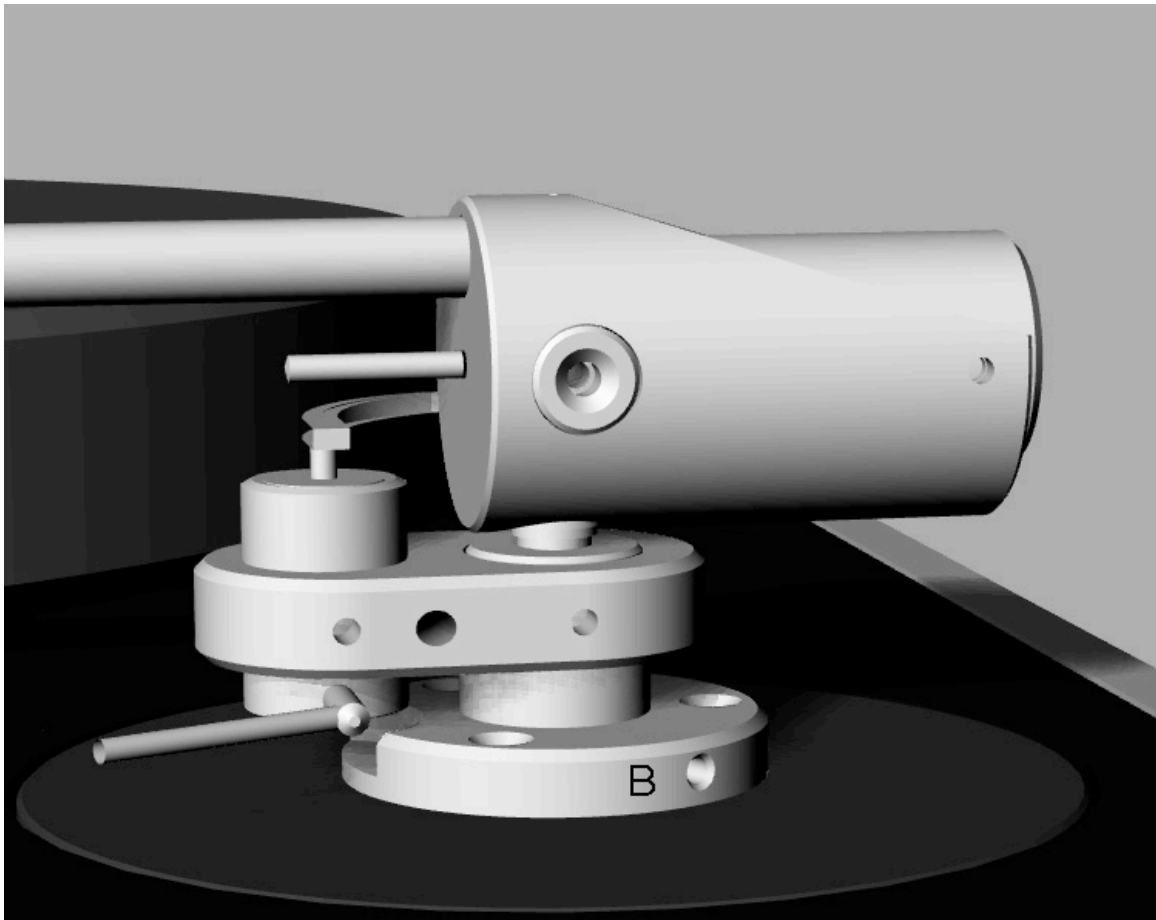


Now you can install the VTA adjuster with the provided M3 screws to your armboard.

Mount the tonearm in the VTA adjuster to a height approximately parallel to the turntable platter.

Fix the position with the set screw (B) using the 1.5 allen key.

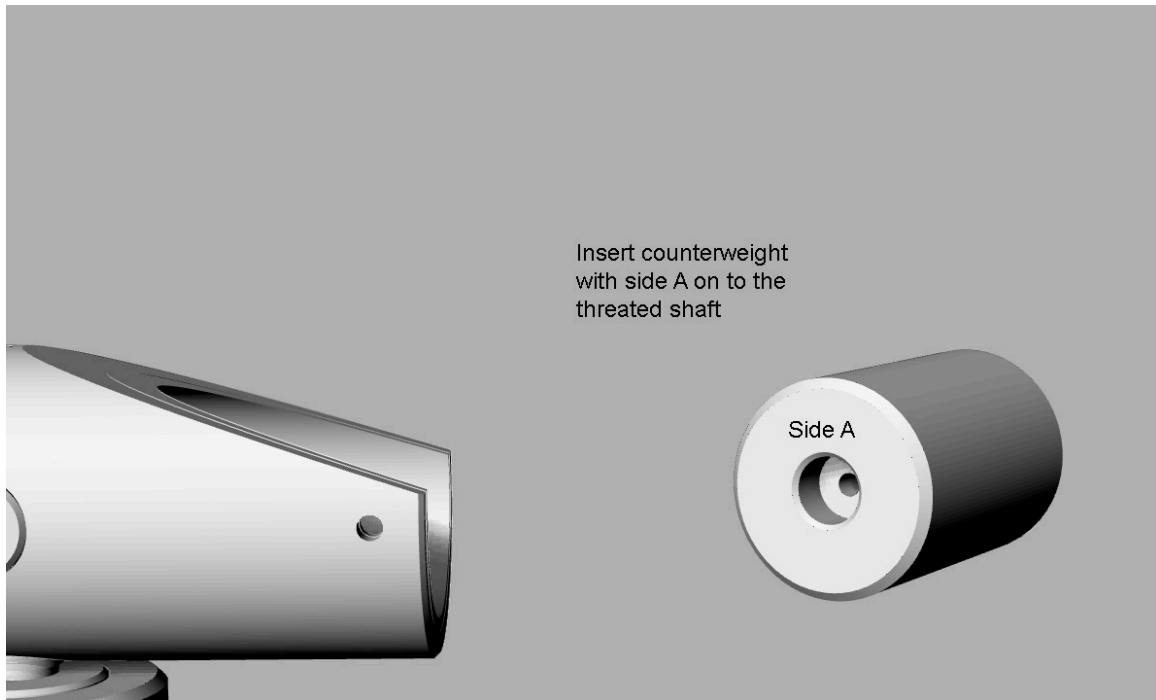
The PrimaryControl Arrow tonearm is now ready for further alignment.



### 3. Adjustment of the PrimaryControl Arrow tonearm.

#### 3.1 Mounting the cartridge

Before mounting the cartridge, install the counterweight (side A in direction of the tonearm bearing) by turning it on the threaded counter weight shaft close to the bearing. To avoid stress to the precision bearings please hold the head shell with your other hand. Now you are ready to mount your cartridge to the headshell using the supplied non magnetic M2.5 hex screws.



### **3.2 Adjusting the overhang and tracking angle**

Leave the stylus protection on the cartridge. Set the height position of the tonearm so that the arm wand is in parallel to the platter plus record if the cartridge diamond is about to touch the record. Use one of the proper templates (Denesen, Dr. Feickert) to set the overhang approximately. Remove the stylus protection. Set the tracking force in the lower range according to the manufacturer's specification. Adjusting tracking force is accomplished by turning the counter weight towards or away from the pivot point on the threaded shaft. While adjusting the tracking force with one hand, hold the head shell with your other hand to avoid stress to the precision bearing. Check the tracking force by using an electronic cartridge gauge. Now you are prepared to align the cartridge.

First you determine the overhang.

Next you adjust the tracking angle.

It is recommended that you check the overhang after altering the tracking angle and vice versa.

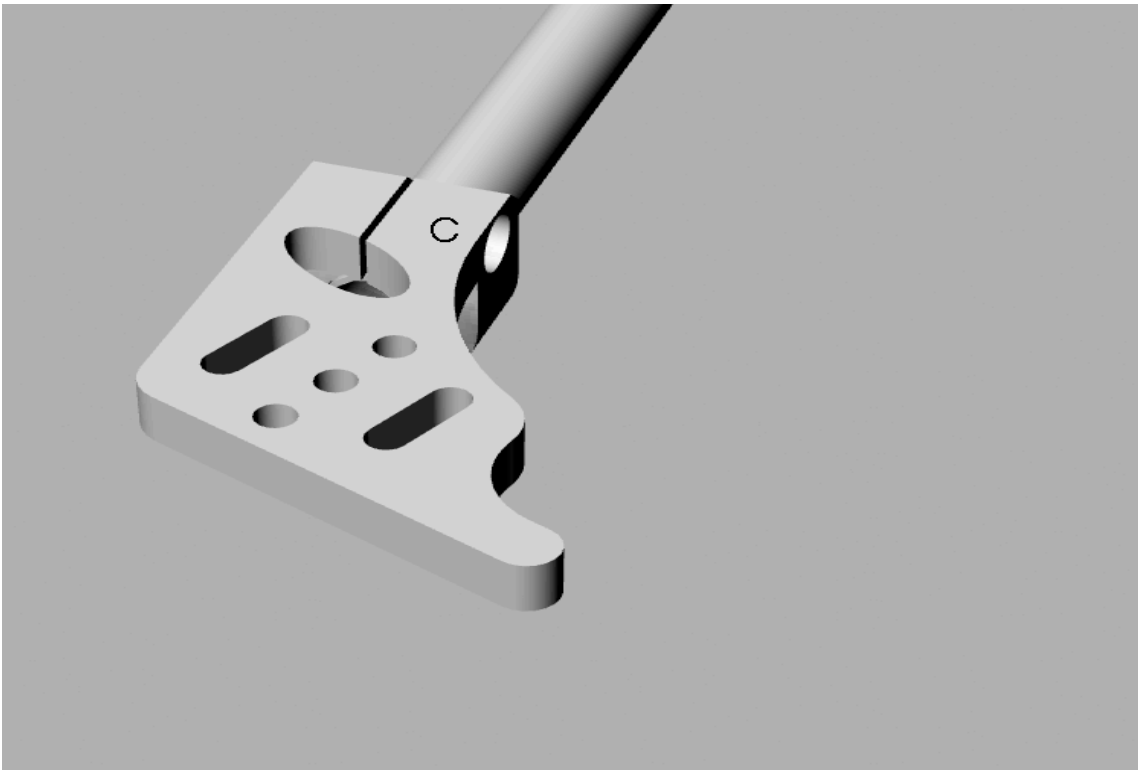
For more detailed information please refer to the manual of your alignment tool.

Once everything is correctly aligned, tighten the screws carefully. Please, do not overtighten the screws!



### 3.3 Adjusting the azimuth

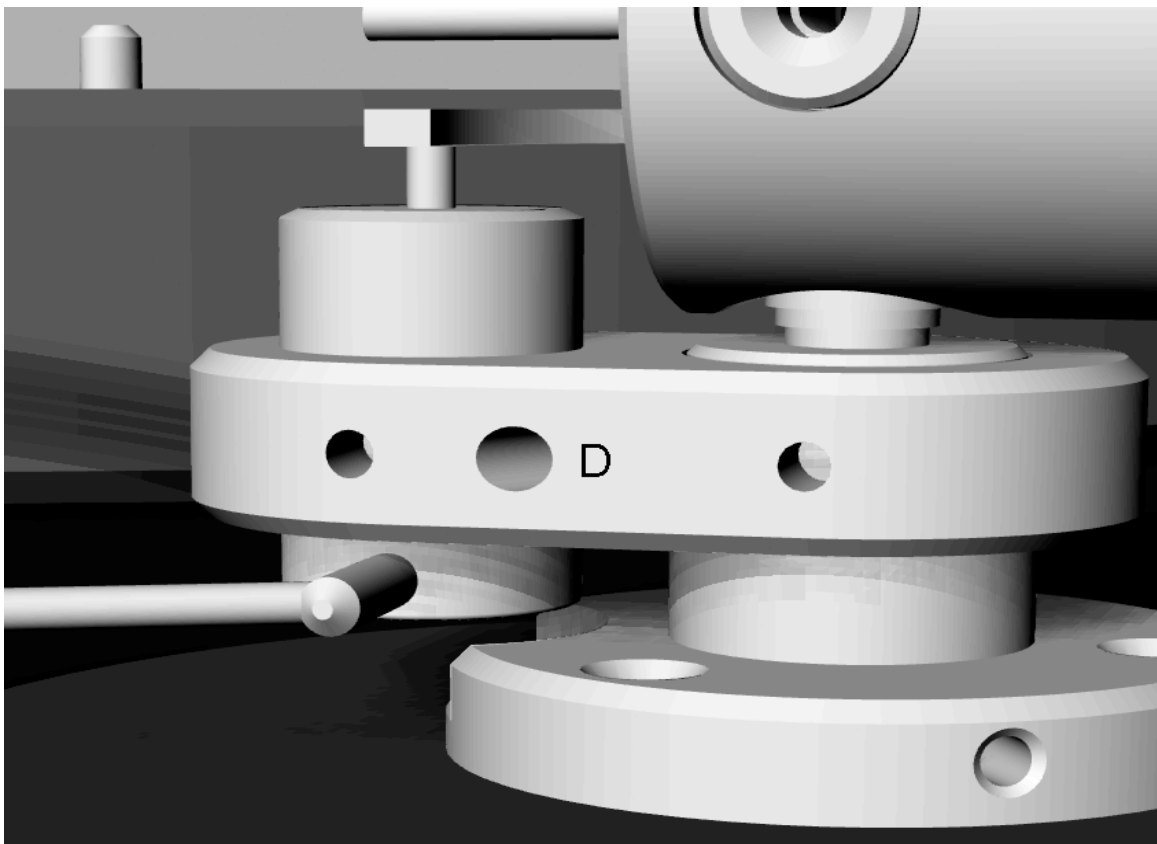
The azimuth of the tonearm is factory pre-adjusted. If you need to change the azimuth, bring the arm wand in rest position and unloose the headshell screw (C) with the 2.0 Allen key. Turn the headshell to the azimuth position you prefer and tighten the headshell screw gently.



### 3.5 Setting the anti-skating

Using the provided 2mm Allen key you can alter the magnetic anti-skating set instrument (D) to the anti-skating force needed for you cartridge. Skating force varies with the amount of the tracking force and type of stylus. Turning the anti-skating screw clockwise increases the anti-skating force. First take a blank record or a record with a large lead-out area. Put the diamond between the lead-out grooves and adjust the anti-skating force so, that the tonearm moves slowly towards the record center. This is a good starting point for further fine adjustment.

Take a tracking ability test record or a recording with high level female voice and fine adjust the anti-skating force so that distortion (miss-tracking) occurs on both channels.



### **3.6 Adjusting the VTA**

Set the VTA so that the cartridge's top surface is approximately parallel to the record surface when the arm is lowered onto a record. Play a record with good female vocals and clear high frequency sounds such as cymbals. Higher the tonearm shaft in the VTA adjuster by small steps until the voice and the cymbals becomes obviously excessive. Now lower the VTA post step by step until the voice and the cymbals just sound right.

A VTA position set to low will lead to a dull and overdamped sound.

#### 4. Technical data

Effective Length	266.5 mm
Overhang	15.5 mm
Angular Offset	20.52°
Distance Platter – Tonearm	251.0 mm
Effective Mass	17 gr
Baerwald alignment	
Inner Null	66.0 mm
Outer Null	122.0 mm
Cable Capacity	130 pF

#### 5. Service

If any service or repair on all PrimaryControl products is necessary, please contact PrimaryControl directly. We will inform you about your nearest service location.

**PLEASE RETAIN ALL ORIGINAL PACKAGING.** You will need it if this unit has to be transported and/or shipped.