

# SHOW PRO INDUSTRIES

P.O. Box 1235 (Hwy. 51 N.), Springtown, TX 76082 / (817)523-4055 / (817)220-5117 fax

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*Show Pro Industries would like to thank you for purchasing a Pro Cutter. Every effort has been made to provide you with a quality product designed to enhance your training program while providing years of trouble-free service.*

## **Pro Cutter 1804PCcct** DIGITAL **with Performance Package Upgrade**

### **Packing List:**

- electronic control box
- digital remote control w/ Stepper Technology
- large FLEX cow
- (4) slide tubes w/snaps
- kevlar cable
- cable tensioner package
- installation instructions

# INSTALLATION INSTRUCTIONS:

## 1. Mount control box securely on LEFT side of arena:

Bottom of electronic control box should be approximately **56** inches above ground level. Insert four 1/4" bolts or lag bolts through drive box mounting tabs into steel or 1" plywood. (see included drawing)

## 2. Mount cable tensioner on RIGHT side of arena:

Begin by attaching steel mounting plate to fence by bolting or welding in place. Bottom of plate should be approximately **46** inches above ground level. Drop tensioner arms into receptacles on mounting plate.

## 3. Install kevlar cable:

Before beginning, refer to included drawings for slide tube placement and kevlar cable routing.

Included with your new Pro Cutter package are 4 slide tubes with snaps and a cord wheel containing kevlar cable.

- a) Locate a slide tube with 1 snap that does not have kevlar cable tied through it. Slide this tube onto the cord wheel kevlar cable (this will support the cows shoulder).
- b) Tie end of cable on cord wheel onto 1 end of slide tube containing 2 snaps (this will support the cows head).
- c) Have an assistant hold the double-snap slide tube in the center of the arena between the control box and Cable Tensioner. Begin feeding line off the cord wheel as you move to the Cable Tensioner; around the right (front) Cable Tensioner idler pulley; across arena to control box making sure slide tube in step 1 ends up on back line opposite from assistant in center of arena. Route kevlar cable behind left pulley on bottom of control box; then back to the center of arena. Allowing 2 feet extra kevlar cable, cut and tie to open end of double snap slide tube where you started. NOTE: pull excess slack out of cable before tying knot.

d) The next step is to install the hip line which will follow the same procedure as the head/shoulder line you have just installed in step 3.

**NOTE: single snap slide tube with cable tied through center must be line #3, and free sliding tube must end up at the rear, line #4.**

e) With both lines installed, use the included Cable Tensioner handle to tighten winches. Without the cow installed, loosen knob on bottom of pulley slide and use enclosed handle to tighten winch until the cable lies flat across arena. Tighten knob on bottom of arm to lock slide. Attach cow following the attached drawings.

*NOTE: With cow in center of arena, 3 to 5 inches of droop is desirable. Over-tightening the kevlar cable will cause the cow to bounce excessively.*

4. **Attach cow to cables:** The head of cow attaches to snaps on front line (two snaps), the shoulder of cow attaches to single snap on 2<sup>nd</sup> line, and the hip of cow attaches to single snaps on 3<sup>rd</sup> and 4<sup>th</sup> lines.
5. **Power:** Plug Pro Cutter into a grounded 120VAC, 3-prong outlet. Turn power on. **NOTE: *EURO models operate on standard 240VAC/50HZ***
6. **Make initial settings on control box:** Your new Pro Cutter 1804 can be tailored to suit your riding style and ability. We encourage you to experiment with the various controls before introducing your horse. The following common settings will allow you to get started most productively:
  - **Speed 1 = 15 (left speed dial on control box)**
  - **Speed 2 = 45 (right speed dial on control box)**
  - **Rate = 20**
  - **Mode = ROLL**
  - **Logic = user preference**
  - **Motor = ON**
  - **Brake = ON**
7. **Power on Remote Control:** Press POWER switch located on right-side of remote control. The Power indicator light does NOT illuminate when power is ON. It only illuminates when you press the directional switches on the remote control or the Stepper switches.

**8. Limits:** The Pro Cutter 1804PC is equipped with a unique LIMIT feature designed to prevent over-runs or crashes when operating the remote control. To set these LIMITS:

- a. Press left gray switch on remote control; cow will travel left. Have cow stop within 10' of left side. This will become the left side limit.
- b. Press right gray switch on remote control; cow will travel right. Have cow stop within 10' of right side. This will become the right side limit.
- c. Bring cow back to center.

LIMITS are now set and the cow will automatically travel within these limits using remote control. LIMITS can be "cleared" by pressing and holding the orange "clear" button on the remote control for 5 seconds or cycling power to the control box.

***NOTE: LIMITS must be re-set whenever power is turned off to the control box.***

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## **ADDITIONAL FEATURES:**

- \* Soft-shift: eliminates hesitation when shifting from Speed 1 to Speed 2
- \* Soft-start acceleration: Graduated acceleration in 1st and 2<sup>nd</sup> speeds.
- \* Variable acceleration rates: promote draw and collection.
- \* Superior radio system: Better range, less interference.
- \* Dual drive system: Ultra heavy-duty industrial components
- \* Weather-tight NEMA enclosure

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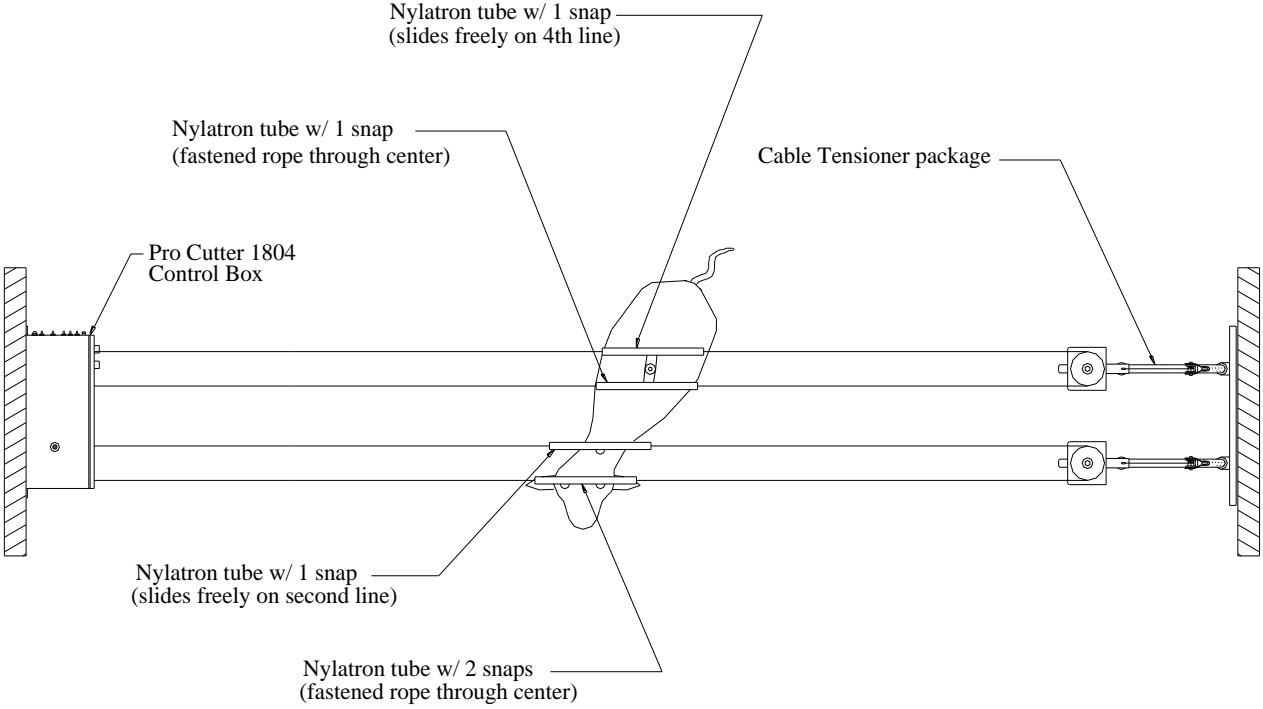
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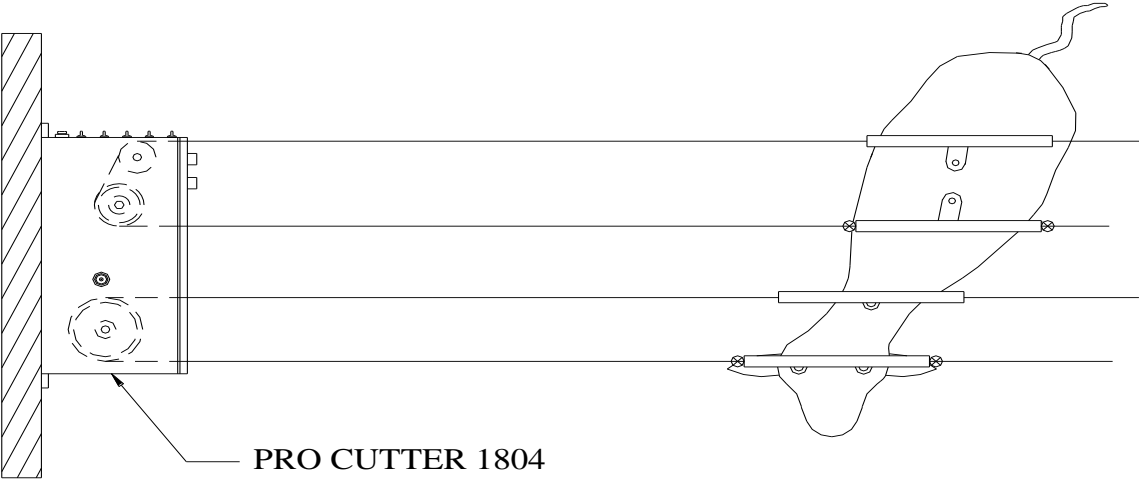
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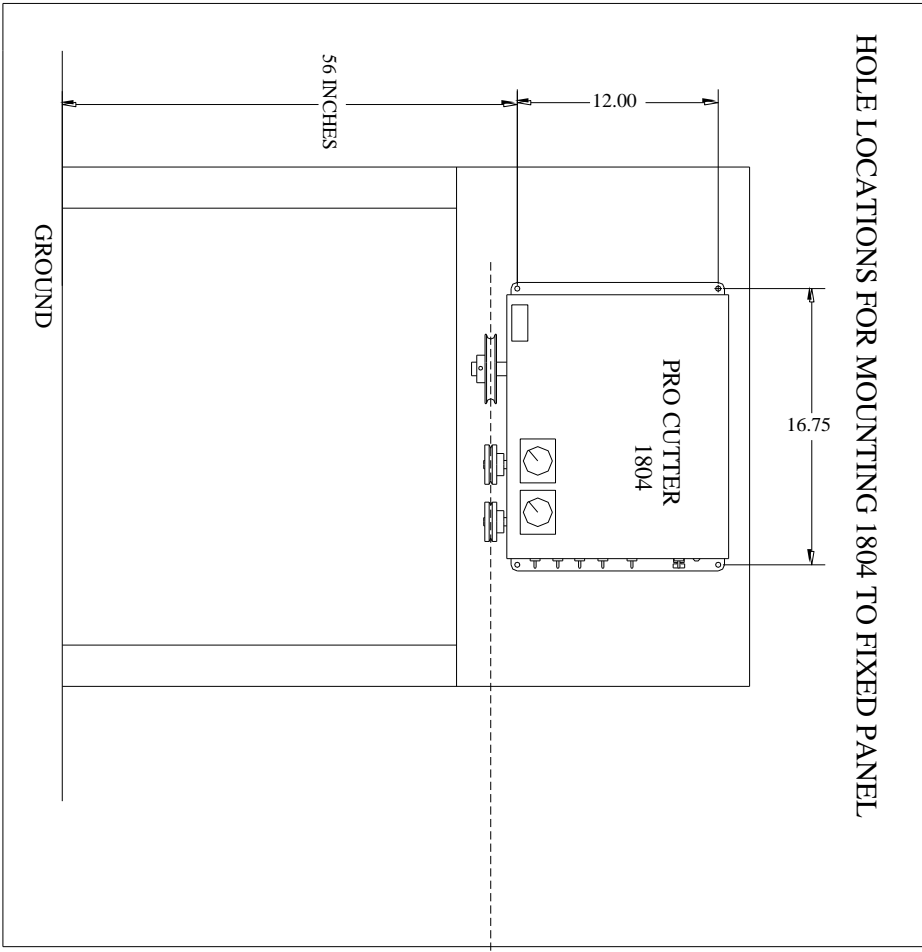
# OVERHEAD VIEW - PC 1804



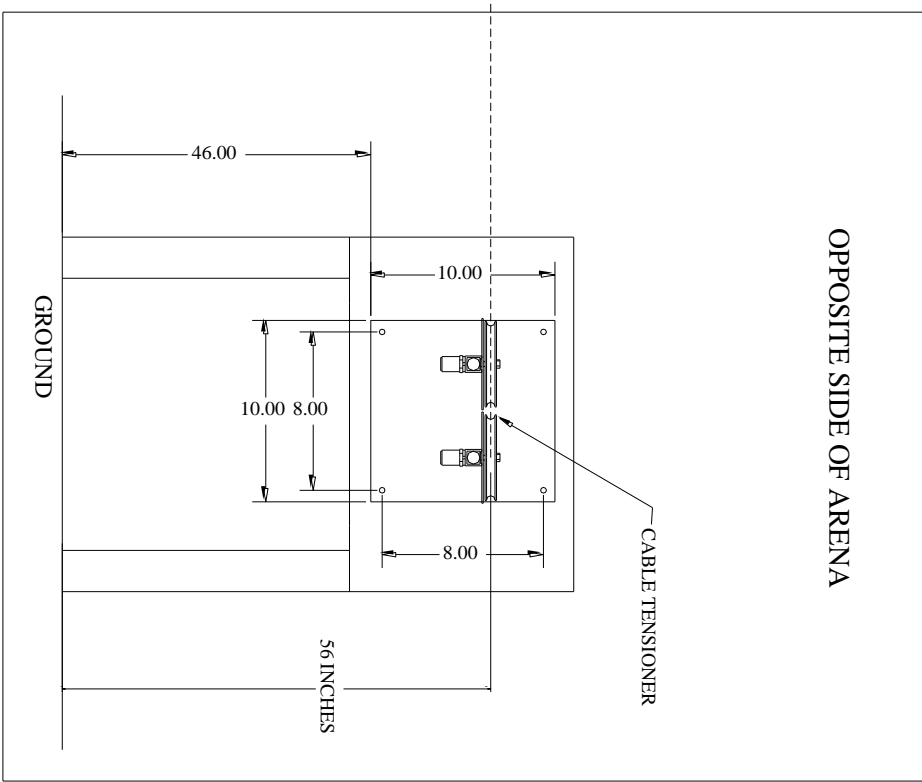
# OVERHEAD VIEW - PC 1804



HOLE LOCATIONS FOR MOUNTING 1804 TO FIXED PANEL



OPPOSITE SIDE OF ARENA



# Operating Instructions:

Following is a brief description of the various switches and dials:

1. **POWER:** Flip POWER switch ON to energize control box. Red POWER light will illuminate. The unit requires 5 seconds to initialize. Avoid pressing any control buttons while unit initializes.
2. **MANUAL:** Operate control box left, right, and change speeds.
3. **LOGIC:** Reverses the direction the cow travels.

*Example:* After the Pro Cutter is installed, attach remote control to your wrist (wrist watch position) and button assembly on index finger. Press left switch with your thumb. If cow travels left, you're ready to go. However, if cow travels right, toggle LOGIC switch. This will cause the cow to travel left as you press left switch and right as you press right switch.

4. **FUSE:** Power surges, faulty cord, or defective components may cause a fuse to blow. When this happens, remove fuse and replace using only **10 amp / 250v AGC fuse** or permanent damage may result.

*NOTE:* power indicator light will not illuminate when fuse is bad.

5. **MODE:** Controls how the cow turns around by managing how and when the cow backs up, or draws during the turn-around.
  - A. **ROLL:** When changing directions, the cow **automatically** backs up as the head comes through turn. This process encourages your horse to "collect" and "mirror" the cow by backing up as the turn occurs.
  - B. **DRAW:** Gives operator control over when and how the cow turns around. As you press either button on the remote control, the cow will begin backing at Speed 1. As the user double-clicks to Speed 2, the cow will complete a ROLL turn-around.

6. **MOTOR DISABLE:** This feature disables one drive motor when using a flag, or optional Advantage System. Set MOTOR DISABLE to the ON position for normal operation with standard cow installation.

7. **BRAKE:**

On: The cow has a firm, flat stop.

Off: The cow has a soft, easy stop, and turns head to look at horse.

8. **RATE:** Presets the acceleration profile in SPEEDS 1 and 2. With each horse, it can be desirable to change the RATE at which the cow accelerates. Typically, younger horses can benefit from longer RATE periods since it provides more time to collect and draw; thereby promoting a proper turn-around. As the horse progresses, the acceleration period can be reduced to force the horse to come through the turn at a faster rate.

9. **SPEED DIALS:** Front face of control box

- **SPEED 1:** The left speed dial is the starting speed. When the control box is asked to run using either remote or manual control switches, the cow will begin moving at Speed 1 regardless of direction. To stop, simply release button or switch.
- **SPEED 2:** The right speed dial is second speed. To access Speed 2, begin by pressing a run button on remote or manual control. The cow will begin moving at Speed 1. When traveling at Speed 1, release button and re-press immediately. Control box will shift to Speed 2.

*EXAMPLE:* Set Speed 1 (left dial) to "15", and Speed 2 to "45". When a run button is pressed, the cow will move at SPEED 1. To shift to SPEED 2, start the cow moving at SPEED 1, then release and instantly re-press run button. The cow will now travel at SPEED 2.

*NOTE:* when you stop, the unit automatically resets to SPEED 1.

*NOTE:* If the unit fails to shift to SPEED 2, double-click was not fast enough. User only has 100 milliseconds to cause speed change.



10. **REMOTE CONTROL:** The remote control can be worn in a variety of ways depending on comfort and convenience. The most common method is to strap the control pouch to your preferred wrist, and strap the button assembly to your index (pointer) finger. The riders' thumb is then used to operate the gray directional run buttons.

The remote control has a total of 7 buttons:

- Two gray buttons located at the end of the cable assembly used to operate the cow left, right, and Speed Change.
- Blue PLAY/STOP button located on the remote control pouch allows the rider to play the currently recorded working program.
- Orange CLEAR ALL located on the remote control pouch allows the rider to clear programs from temporary memory or select one of the programs stored in permanent memory.
- **Stepper Technology:** Green SPEED UP button and red SPEED DOWN button located on the remote control pouch allow the rider to incrementally change speeds from horseback. This STEPPER feature increases or decreases speed 10% with each button press.

*NOTE: cycle power on Pro Cutter control box to reset Stepper to mid-point.*

- Power button located on right-side of remote control pouch. With power switch on, the button will illuminate when a directional control button or stepper button is pressed indicating transmission. The power button indicator does NOT illuminate when power is ON, but no buttons are pressed except when battery is weak. Battery requires replacement if light is on continuously, or does not illuminate when control buttons are pressed.

*NOTE: The remote control uses a standard 9-volt battery which is pre-installed and ready for operation.*

11. **PROGRAM:** Once the power is on, a RED program indicator light on the face of the control box will begin flashing at 1 second intervals indicating the arena LIMITS are unknown. To set the LIMITS, refer to Item #8 under Installation Instructions. Once your LIMITS are stored in

memory they will not need to be reset unless the unit is turned off, loses power, or the user selects CLEAR ALL on the remote control or control box.

With the arena limits established, the Red program indicator will stop flashing, indicating the unit is ready to operate.

#### NOTES:

- When unit is powered off, all programmed limits and recorded steps are cleared unless user follows storing program procedure listed below.
- LIMITS must be set before operating
- LIMITS can be established starting in either direction
- LIMITS should be set allowing for 10' shut-down area
- Flashing Program light indicates LIMITS not ready
- Once LIMITS are set, the Pro Cutter is automatically placed in RECORD mode
- LIMITS establish operating parameters for computer playback
- LIMITS PROVIDE CRASH PROTECTION WHEN OPERATING THE REMOTE CONTROL OR MANUAL CONTROL SWITCH

#### **RECORDING: working program**

The Pro Cutter constantly monitors and records each movement of the cow. This includes intervals between movements, speed changes, direction changes, and distance. RECORD mode is automatic and occurs each time the user operates the remote control or manual switch. Each movement made is stored in TEMPORARY memory. Pressing PLAY creates a TEMPORARY working program which plays continuously until PLAY is pressed again to stop the program. Once the temporary working program is stopped, the rider may choose to press PLAY to restart the program or use the remote control to record additional moves. The program continually evolves whenever the rider operates the machine. Once memory is full, new steps will begin overwriting the first stored steps. If no new steps are recorded, the unit sits in a "standby" state.

#### **STORING PROGRAMS: permanent programs**

The Pro Cutter PC can store 2 programs to permanent memory. These programs **will be retained** during CLEAR ALL function or cycling power. After you have created a working program, press

the orange CLEAR button and either of the gray directional control buttons SIMULTANEOUSLY to store the current working program to permanent memory. Both directional control buttons represent a permanent storage area.

*NOTE: storing a new working program to a previously used storage area overwrites the previously stored program.*

### **PLAYBACK: permanent programs**

To play a previously stored permanent program, press and hold blue PLAY button and immediately press the directional control button that corresponds to the program you wish to playback.

### **CLEARING WORKING PROGRAM AND LIMITS:**

Clearing the working program and limits is done by pressing AND holding orange CLEAR switch.

- a. To clear program data, press and hold orange CLEAR switch 2 seconds
- b. To clear ALL program data AND limits, press and hold orange CLEAR switch for 5 seconds. New LIMITS must be established before operating machine.
  - *Clearing of program memory or limits can only be accomplished when NOT in PLAYBACK mode. Pressing the CLEAR switch during playback will cause the indicator light to flash rapidly and the command will be ignored.*
  - *Holding switch for 5 seconds or more clears BOTH program memory AND limits. The unit program indicator light will begin flashing allowing new limits to be set.*
  - *A rapid flashing of the program indicator light indicates an error has occurred. Cycle power on control box to reset.*
  - *CLEAR switch is located on both remote control and control box.*

12. **Practice:** Attach remote control to your wrist by inserting your hand through Velcro loop on pouch. Attach switch plate to index finger and rotate buttons so they can be pushed by your thumb. Walk to center of arena and practice operating machine. Make any necessary adjustments to cable, etc. Once comfortable with the controls you are ready to introduce your horse to the Pro Cutter. We recommend working at slow speeds until both horse and rider are acclimated.

*Note: Keep in mind that all moves will be automatically recorded and may be played back t any time.*

## Important Safeguards:

1. Electrical enclosure should be protected with a non-metal roof or shield. This not only protects the paint finish but also keeps rubber components (gasket, boots, antenna, etc.) from drying out.
2. **Warning:** Electric shock or malfunction could occur if power cord or plug is damaged in any way. Do not work Pro Cutter in rain – or allow cord or plug to lie in water
3. Always use properly grounded 110VAC electrical outlet.
4. Do not operate Pro Cutter if electrical enclosure or any of its components are damaged in any way, or after malfunction.
5. Use Pro Cutter only as intended and described in literature.
6. Always unplug Pro Cutter when through working each day.

## TROUBLESHOOTING:

### Problem:

### Solution:

1. Pro Cutter will not operate using remote control or manual switch.

make sure there is power to machine. Check fuse.

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2. Cutter will operate using manual switch but not remote control.

check battery in remote control.

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3. There's a "clicking" noise but Pro Cutter won't run. Power light does not illuminate.

fuse is blown.  
Replace fuse (10 amp, 250 v. fast blow).

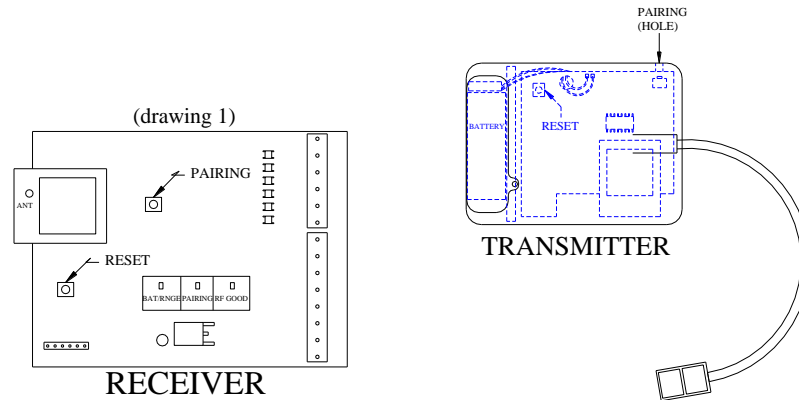
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**NOTE:** The remote control is powered by a common 9-volt battery which will require replacement on occasion. Remove plastic case from Velcro pouch. On top of plastic case, remove small screw to remove battery door. Unsnap battery and replace.

### Pairing (programming):

At times it is desirable to operate multiple Pro Cutters' in close proximity without the remote controls' cross-communicating. This requires a simple PAIRING procedure to shift the radio package to an alternate frequency. The following procedure outlines the pairing (programming) process which requires opening the Pro Cutter drive box **with power applied**. Care must be taken to avoid contact with live circuits or electric shock may occur. Show Pro Industries accepts no responsibility for damage or injury resulting from contact with live electrical circuits. **PROGRAM RADIOS AT YOUR OWN RISK.**

- 1) Begin by opening the lid on the Pro Cutter drive box. This is accomplished using a blade screw driver on the ¼ turn lid latch. Once open, the radio receiver is located in the top-center of the control box (drawing 1). Using drawing 1 as a guide, identify the black PAIR button located near the center of the receiver circuit board.



- 2) Remove the wireless remote control from the canvas/Velcro pouch. Using drawing 2 as a guide locate the pairing hole in the upper left corner of the remote control case. A small pin will be required to access the pairing switch.
- 3) With power applied to the Pro Cutter drive box, press and release the black PAIR button on the radio receiver board. A yellow PAIR indicator will illuminate on the receiver board indicating the receiver is searching for the remote control. Next, press and release the PAIR button on the remote control using a small pin. You should now see the yellow PAIR indicator flash and the green RF GOOD indicator illuminate. Wait for both indicators to turn off before pressing any buttons or switches.
- 4) Pairing is complete once both indicators turn off. Test for proper operation by pressing the remote control RUN buttons. The green RF GOOD indicator should illuminate each time a RUN button is pressed. Close Pro Cutter lid being careful to fully engage lid latch to prevent possible damage from water/dirt entering control box. Reinstall remote control case into Velcro pouch.

# LIMITED WARRANTY

The following warranty is in lieu of all other warranties, expressed, implied or statutory, including but not limited to any implied warranty of merchantability or fitness for a particular purpose.

**All new products sold by Show Pro Industries are warranted against defects in material and workmanship for two (2) years from the date of original purchase. During the warranty period, Show Pro Industries will repair, or at its option replace without charge, any SPI product (excluding normal wear items), providing it is returned to the factory, shipping prepaid, and is proven to be defective during the subsequent factory inspection. The warranty period for products repaired after expiration of new product warranty, as stated above, is limited to the repair portion and is valid for 90 days from date of reshipment to customer. All warranties, expressed or implied, are void if product is damaged by accident, misuse or modification in the absence of written authority from Show Pro Industries.**

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