

# 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 an ultra high quality product designed to provide years of trouble-free service.*

## Packing List

### **Pro Cutter 1504C-PC w/ cow**

- electronic control box
- digital remote control
- FLEX cow
- cable tensioner
- (3) nylatron tubes w/brass snaps
- kevlar cable (cow head/shoulder support)
- tech line (cow hip support)
- brochure & installation instructions

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**Thank you for choosing.....**

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# INSTALLATION INSTRUCTIONS:

1. **Mount control box:** Bottom of electronic control box should be mounted approximately 45 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) Or attach directly to wood, pipe or panels.
2. **Mount cable tensioner:** Mount cable tensioner on opposite side of arena from control box approximately 45 inches above ground level. The included universal bracket easily attaches to flat panel, wood or pipe.
3. **Install kevlar cable:** Before beginning, refer to included drawings for slide tube placement and kevlar cable routing.
  - a) There are two slide tubes on the spool of Kevlar cable. The slide tube sliding freely on the line will support the cow's shoulder (on the 2<sup>nd</sup> line) and the slide tube with two snaps will support the cow's head (on the front line). One end of the Kevlar cable is tied to this double-snap slide tube.
  - b) 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 roll of kevlar cable as you move toward the cable tensioner. Wrap cable around cable tensioner pulley, then move back across arena (be sure slide tube w/single snap ends up on back part of loop since it holds up shoulder of cow). Route kevlar cable behind both pulleys on bottom of control box; then back to the center of arena. Tie cable to open end of double-snap slide tube. *NOTE: pull excess slack out of cable before tying knot. You've formed a loop with the slide tube w/2 snaps on the front line and the slide tube w/ 1 snap sliding freely on the 2<sup>nd</sup> line. Extra can be cut off.*
  - c) Install Tech-line to support cow's hip. The Tech-line should be installed roughly 2 and 3 inches behind the shoulder line. This insures the cow will travel flat and stop straight. The Tech-line does not move, it is only responsible for supporting the cow's hip. Simply tie to the fence on each side of arena. A single-snap slide tube is pre-installed.

4. **Attach cow to cables.** The cow's head attaches to the double-snap slide tube. The cow's shoulder attaches to the single snap slide tube on 2<sup>nd</sup> line, and the cow's hip attaches to single-snap slide tube on Tech-line.
5. **Apply Power.** Plug Pro Cutter into a grounded 120VAC, 3-prong outlet. Turn power on. *NOTE: EURO models require 240VAC/50HZ*
6. **Make initial settings on control box.** Your new Pro Cutter 1504PC 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 = 20 (left speed dial on control box)**
  - **Speed 2 = 45 (right speed dial on control box)**
  - **Logic = user preference**
  - **Brake = off**
  - **Rate = 10**
7. **Power on Remote Control.** Press POWER switch located on right side of remote control pouch.
8. **Limits:** The Pro Cutter 1504PC 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.***

# 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:** switches control direction of remote control and manual control switches.

*Example:*

After the Pro Cutter is installed, attach remote control to your wrist (wrist position) with finger plate on index (pointer) finger. Using your thumb to operate buttons, move cow end to end. If cow travels left when pressing the "right" button, simply flip the logic switch to reverse running direction. This will cause the cow to travel left as you press left switch – and right as you press right switch.

4. **BRAKE:**  
On: The cow has a firm, flat stop  
Off: The cow has a soft stop; then turns her head to look at horse.
5. **FUSE:** Power surges, faulty cord, or defective component may cause a fuse to blow. When this happens, remove fuse and replace using only 4 amp/250v AGC fuse, or permanent damage may result.  
*NOTE: power indicator light will not illuminate when fuse is bad.*
6. **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.

7. **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. While in SPEED 2, releasing and instantly re-pressing will cause a controlled deceleration back to SPEED 1.*

*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 has only 100 ms to cause speed change.*

8. **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 run buttons.

The standard remote control has a total of 5 buttons.

- 1 - **POWER Switch:** on right side of pouch. Press switch to operate remote control. Red light will illuminate each time a function button is pressed. A solid light or no light indicates battery replacement is required.
- 2 - **GRAY:** operate cow left, right, and shift speeds
- 1 - **BLUE:** selects and de-selects program PLAY mode
- 1 - **ORANGE:** clears program memory after holding 2 seconds, AND clears arena limits after holding 5 seconds or more

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

*NOTE: The Pro Cutter 1504pc CCTD contains an all new ultra-high performance radio system eliminating the need for a traditional "whip" style antenna. The small button antenna located on top of the drive enclosure is all that is required. For a complete description, please refer to the attached RADIO BULLETIN.*

9. **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. *Refer to Item #8 - Limits, of the Installation Instructions.* With the arena limits established, the red program indicator light 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 taught 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 without user input. 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. After user operates machine to populate data storage, pressing PLAY will cause machine to generate programs. NOTE: This data is stored in temporary memory and will be erased when power is

## **PROGRAM: continued,**

switched off to control box, or the rider selects CLEAR ALL on the remote control or control box.

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

The Pro Cutter PC can store 2 programs to semi-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 eliminates the previously stored program.*

### **PLAYBACK: working program**

Pressing the PLAY switch will initiate playback of your recorded steps, and turn on the program indicator light on the front of the unit. The unit will continue to generate moves and the program indicator light will remain lit until the PLAY switch is pressed a second time. Once playback is stopped, the unit will automatically start recording additional moves made operating the remote control or manual switch. The program continually evolves whenever the rider is operates the machine.

*NOTE: New moves will be ADDED to the working program unless CLEAR is selected. Only movements from the remote control or manual switch will cause new steps to be appended to the end of the current steps. 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.*

### **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.

**PROGRAM: continued,**

**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.*
10. **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.

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

## **BULLETIN: remote control system upgrade**

Show Pro Industries is proud to announce that our next generation remote control radio system has been installed in your new Pro Cutter. This new “state of the art” operator interface provides many advantages over other remote control systems. These include user programmable functions, instant response, extended range, no outside interference, and an on/off switch for extended battery life.

The remote control system comes pre-equipped with an easily replaceable 9 volt battery and is ready to operate once your Pro Cutter is installed. As with any electronic device, the remote control should be stored in a cool, dry location to enhance battery life and prevent corrosion. Should the remote control become wet, damage may be prevented by immediately removing the battery and leaving the battery door off in a warm, low humidity location for several hours. The battery should also be removed during extended storage periods exceeding 2 to 3 months. Direct replacement remote controls are readily available should the original unit become lost or damaged.

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## **ADDITIONAL FEATURES:**

- \* Fully programmable with auto-learn feature
  - \* Crash protection through arena LIMIT management system
  - \* 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
  - \* Ultra-fast programmable radio system
  - \* Button antenna system prevents damage
  - \* Variable acceleration RATE
  - \* Large drive system: Heavy-duty industrial components
  - \* Weather-tight NEMA enclosure
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## 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. Be sure antenna & receptacle aren't damaged.

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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 (4 amp, 250 v. AGC fast blow).

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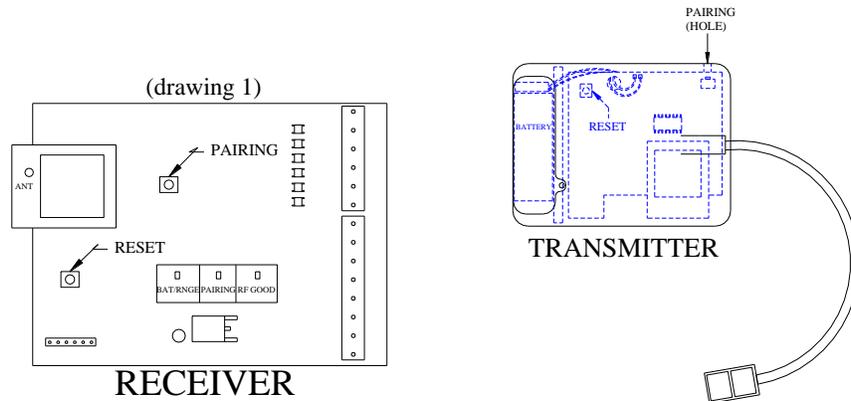
**NOTE:** The remote control is powered by a common 9-volt battery which will require replacement on occasion. Remove plastic case from Velcro pouch. On top of plastic case, remove small screw to remove battery door. Unsnap battery and replace.

### 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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