

X-RING RANGE CONTROL



Sage computer solutions
Billings, Montana

www.sagecomp.com

Instructions for operation of the X-Ring Range Control Unit

The unit is capable of controlling turning targets for Conventional Pistol, International Standard, International Center Fire events, and International Air Pistol. This control has an additional “HORN” setting for when there are no tuning targets available. In this setting a horn will announce the beginning and end of each string. The control may be operated with either the front panel or the radio keyfob.

The desired event is selected with the switch on the left side of the control panel. All other functions can be accessed through both the four button keyfob and the front panel. The front panel is well labeled so the following instructions are directed at using the keyfob. The front panel buttons will operate in the same fashion. All of the instructions assume one is holding the keyfob with the keys down in the palm of the hand. The arc of upper buttons is used for the timed shooting events. The bottom button toggles the position of the targets – if the targets are faced they will be edged, and if they are edged they will be faced. Using this button during a timed event will edge the targets and cancel the event returning the control to the ready mode. Pressing the toggle button once more will face the targets and allow the compressor to run. The left button is always Slow Fire. The upper button is Timed Fire in Conventional and International Standard Pistol, and the rapid fire portion of International Center Fire. The right button starts Rapid Fire in Conventional and International Standard Pistol and International Center Fire Pistol. The right button has a special function in Air Pistol to be explained later.

Conventional Pistol

The Range Officer (human) will state which event will be fired and the time limit. Then the targets are edged with the bottom button and the command to load is given. When the Range Officer sees that all are ready he will ask, “Is the line ready?” If there is no response the appropriate button for that string of fire is pressed. The control will then complete the commands and face the targets for the proper time. If it is a Slow Fire stage the unit will announce “Commence Fire”. This is helpful outdoors when the slow fire targets do not turn. If “HORN” is selected the horn will sound instead. At the end of the Slow Fire string the control will edge the targets and announce “Cease Fire”. If it is a sustained fire event at the end of the string the targets will edge and the Range Officer will ask for alibis. If there are none then the next string is fired in the same way.

If the commands need to be interrupted for any reason pressing any button will cause it to stop and say "As you were!" This action will return the control to the Ready-Mode with the targets remaining edged.

International Standard Pistol

International Standard Pistol is very similar to Conventional Pistol with the exception of the commands, and the slow fire is shot in two 2 ½ minutes strings. There were new commands started in 2012. At no time shall any ammo be loaded in the magazines or cylinder until the command load is given. The Range Officer will state which event will be fired and the time limit. He will then press the desired button and the control will give the command "load". At that time the magazines may be loaded and the pistol loaded and make ready to fire. There is one minute allowed for this. At the end of the one minute "attention" will be announced. At this time the targets will edge and seven seconds later they will be faced or the horn will sound to start the timed event. At the completion of the string the targets will edge and "cease fire – unload" will be announced.

After a few seconds the targets are returned to the faced position ready for the next string. All international events start with the targets faced. All strings are five shots each.

International Center Fire

The loading time and procedure is the same as in International Standard Pistol. The left button is for the Precision stage which is shot in two strings of 5 shots in five minutes for each string. In the Rapid Fire stage the targets are cycled through the string of 5 shots. They are edged for seven and faced for three during which time one shot is fired. At the end of the five shots the targets will face ready for the next string. Either the top or right button may be used to start a rapid fire string.

International Air Pistol

The "SLOW" and "TIMED" buttons will start a 35 minute period for timing four-bull air pistol targets. It is highly recommended that another timing method is also used so that the Range Officer may announce the remaining time when required.

Addition Feature

The control is now capable of playing the National Anthem at the beginning of a tournament if desired. To access this feature rotate the course of fire switch to the "AIR" position. Press the "RAPID" button. The "TIMING" light will come on. Press the "SLOW" button to start the anthem. At any time during the playing if the "TOGGLE-STOP" button is pressed the anthem will stop and the control will return to the ready mode. Also, if the EVENT switch is rotated

during play, the anthem will stop and the control will be in the ready-mode in that switch position.

Technical Specifications

This control has a Solid State Relay to control the turning targets. It sources 110 VAC. The solenoid wiring is plugged into the left side of the control. The plug connections are 1=neutral, 2=line, and 4=ground. The relay is rated at 10 amps and is protected with a 6 amp fuse. This is the upper fuse on the left side of the control. The compressor outlet is also a Solid State Relay and it is rated at 40 amps and it sources 110 VAC. This is provided to control the operation of the compressor so that it will not run while shooting is in preparation or in progress. The control will not allow the compressor to run anytime the targets are faced during a timed event, or when they are edged. It is not fuse protected and relies on the mains breaker for overload protection. The wiring is all 14 gauge and so is limited to 15 amps. This is sufficient for most small compressors that would likely be used for turning targets. If a larger compressor is used a motor contactor may be needed.

The unit should be positioned in such a way that the antenna is vertical and has a fairly unobstructed view of the keyfob. The buttons on the keyfob must be held for about a half a second for the unit to register a response. This time is required for the radio link to confirm that good data has been received. Using the front panel buttons do not exhibit this delay and are instantaneous.

The control's amplifier is capable of outputting 22 watts of power to a 8 ohm speaker. There is a control on the front panel to adjust the speaker volume. The only way to tell what the adjustment is doing is to adjust it while it is playing. The control box houses an internal speaker for use on the indoor range, and plugging in an external speaker into the jack disconnects the internal one.

Sage Computer Solutions warrants this unit to be free of defects in materials and workmanship for a period of one (1) year from the date of purchase.

If the unit should malfunction, it must be returned to SAGE for evaluation. Upon examination by SAGE, if the unit is found to be defective it will be repaired or replaced at no charge. SAGE's WARRANTY does not apply to defects resulting from any action of the purchaser, including but not limited to mishandling, improper interfacing, operation outside of design limits, improper repair, or unauthorized modification. This WARRANTY is VOID if the unit shows evidence of having been tampered with or shows evidence of being damaged as a result of excessive corrosion; or current, heat, moisture or vibration; improper specification; misapplication; misuse or other operating conditions outside of SAGE's control. Components which wear are not warranted, including but not limited to contact points, fuses, and SSRs.

SAGE is pleased to offer suggestions on the use of this product. However, SAGE neither assumes responsibility for any omissions or errors nor assumes liability for any damages that result from the use of its products in accordance with information provided by SAGE, either verbal or written. SAGE warrants only that the parts manufactured by it will be as specified and free of defects.

SAGE MAKES NO OTHER WARRANTIES OR REPRESENTATIONS OF ANY KIND WHATSOEVER, EXPRESSED OR IMPLIED, EXCEPT THAT OF TITLE, AND ALL IMPLIED WARRANTIES INCLUDING ANY WARRANTY OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY DISCLAIMED.

LIMITATION OF LIABILITY

The remedies of purchaser set forth herein are exclusive and the total liability of SAGE with respect to this order, whether based on contract, warranty, negligence, indemnification, strict liability or otherwise, shall not exceed the purchase price of the component upon which liability is based. In no event shall SAGE be liable for consequential, incidental or special damages.

**Sage Computer Solutions
Lew Muller
1120 17th ST W
Billings, MT 59102
406-690-0459**