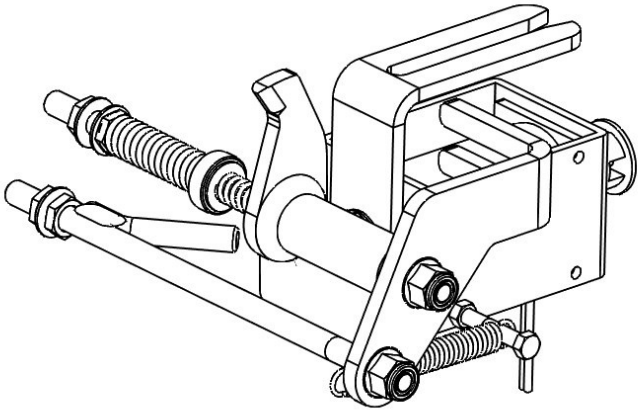
Setting Instructions
Solenoid Release

Use in conjunction with Owners Manual



WARNING

Clay target launchers can be dangerous and must be treated with great care at all times to avoid accidents.

Never place any bodily part into the path of any mechanical piece whilst the machine is in motion or likely to be so.

You must treat a clay target launcher with the same caution that you would treat a loaded gun.

Assume at all times that a clay target launcher is armed and loaded and treat it accordingly

This document must be read in full before attempting to operate the machine

Preface:

Every effort has been made to ensure that the information contained within this manual is complete, accurate and up-to-date.

Promatic International assumes no responsibility for errors beyond its control.

Conventions used within this manual:

Trap: Your Clay target launcher - commonly known as a clay trap and may be referred to in this manual as “The trap” or “The machine”

Warnings & Cautions:

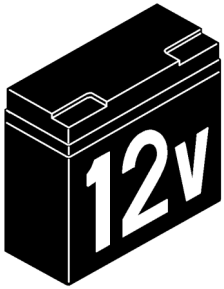
Warning: This section contains instructions which, if ignored or carried out incorrectly, may result in risk of personal injury**.**

Caution: This section contains instructions which, if ignored or carried out incorrectly, may result in malfunction or damage to the equipment or consumables**.**

Note: This section contains additional information which the user may find useful, but is not essential to the operation of the product.

12v DC Power Source:

This Trap is designed to be powered from a 12v DC battery.



IT MUST NEVER BE DIRECTLY CONNECTED TO ANY AC POWER SOURCE

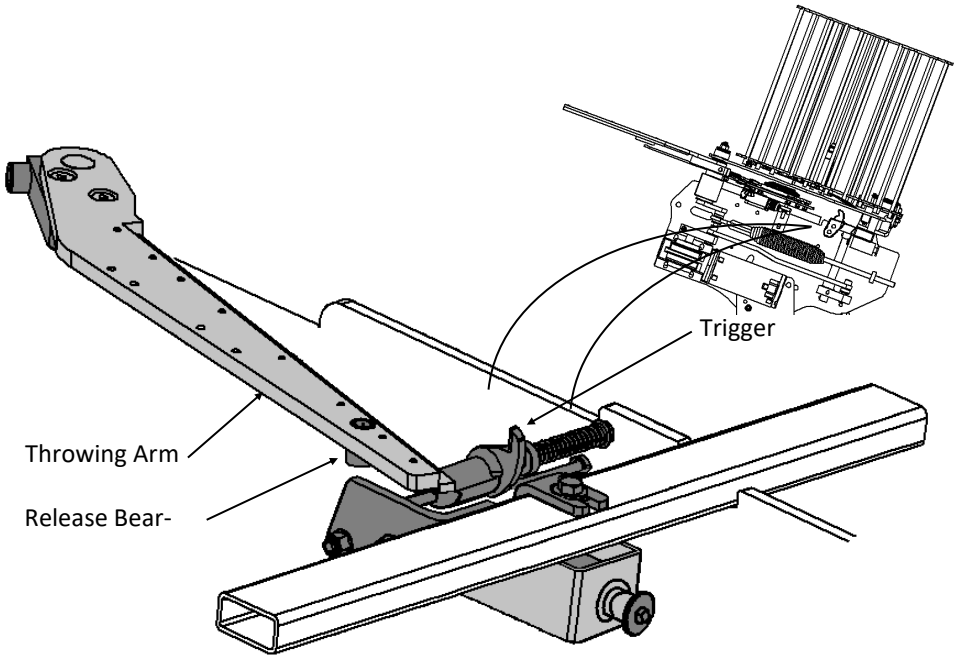
Battery: Where a trap is connected to any other suitable power source i.e. a Transformer - the relevant sections of instructions should still be observed, i.e. “Disconnect the battery” and applied to this or any other power source.

EYE PROTECTION MUST BE WORN WHEN WORKING ON OR AROUND A CLAY TARGET LAUNCHER AS SMALL SHARP PIECES OF CLAY MAY BE EJECTED.

Solenoid release Mechanism

Solenoid release mechanisms are used on machines where an instantaneous release of the target is required. The solenoid release mechanism consists of a release bearing fitted to the throwing arm, a trigger assembly which pivots on a bar mounted on a bracket and a solenoid to activate the trigger to allow the release bearing to move past it and allow the trap to fire.

When the machine is turned on and arms itself, the motor drives the arm in a counter clockwise direction up to the solenoid trigger. The arm reaches **Top Dead Centre (TDC)** when the bearing is about 30mm (1-1/4") away from the trigger.



As the arm reaches TDC, the spring is at its maximum. As the arm then passes over TDC the spring takes over and pulls the arm around until it comes to rest with a clunk against the trigger and can go no further. The trigger holds the arm in the cocked position waiting to be fired.

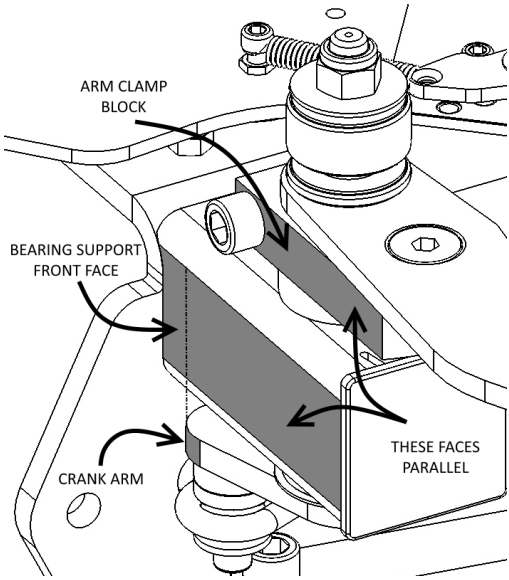
The roller switch is set to stop the motor just as the arm gets to TDC so that there is no chance of the motor driving the arm into the trigger.

Setting the Solenoid / Arm Timing

This is a potentially hazardous operation. Only attempt this procedure if you have read and understand these instructions thoroughly.

To check the arm timing, press the toggle switch to "ON". The machine will load a clay and come to the cocked position and should be in a position to fire. You should notice that the bearing on the underside of the throwing arm is against the trigger and that there is a gap of about 3mm (1/8") between the main shaft drive pin and the crank bolt. This is the normal position and no further action is necessary. If this is not the case, proceed with the following.

Dis-arm the trap. Rotate the arm counter-clockwise using the nudge button until the arm approaches the 9 o'clock (12 o'clock is straight ahead). Keep rotating the arm until the curve of the crank arm beneath the bearing support is just level (tangential) with the front face. (See diagram). In this position, the Arm clamp block should be parallel to the front face of the bearing support. If this is not the case, loosen the arm clamp bolt and move the arm until these two faces are parallel. Re-tighten the arm clamp bolt. This is the starting point.



Adjust the roller switch out to the left side of the machine as far as it will go.

Press the toggle switch to "ON". The machine will load a clay and come to the cocked position and is now ready to fire. Note that the throwing arm has stopped short of the trigger.

Press the toggle switch to "OFF" but do not disarm. The machine should still be armed and treated with **EXTREME CAUTION**.

From behind the machine slowly and carefully push the tip of the arm towards the trigger assembly on the side of the machine. If the arm timing is correctly set, when the arm is about 30mm (1-1/4") from the trigger it will go over TDC with the spring pulling the arm on to the trigger. If the arm goes over TDC more than 30mm away from the trigger or it does not go over TDC before touching the trigger, then the arm timing will need to be adjusted.

To adjust the arm timing, **the machine must be in the DIS-ARMED/SAFE position**. To dis-arm the machine, flick the **ARM/DISARM** switch momentarily towards the **DISARM** position

and immediately release. (Long enough for the trap to fire, but not giving the machine a chance to re-arm). The throwing arm should be at around the 9 o'clock position when viewed from behind the machine.

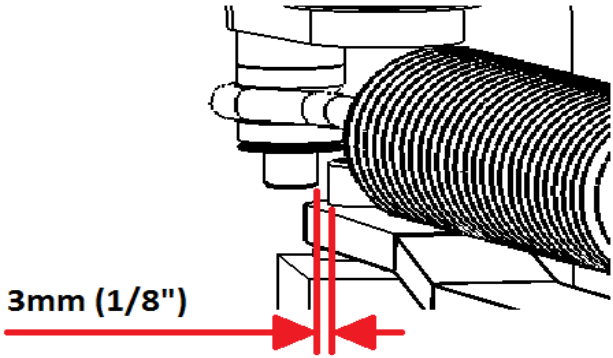
Undo the socket head bolt on the arm clamp block so that the arm can be moved on the shaft. Be careful not to move the arm while undoing the bolt.

If the arm goes over TDC too early i.e. 40mm before it gets to the trigger, move the arm counter clockwise about 10mm (1/2") at the tip and retighten the arm clamp block bolt. If the arm passes TDC too late and the gap is smaller than 30mm (1-1/4"), move the arm clockwise and retighten the arm clamp bolt. Repeat this process until the 30mm gap is achieved. If you now push the arm over TDC, it should only need a gentle push before the spring takes over and pulls the arm onto the trigger when a firm clunk will be heard.

With the arm timing set correctly, the roller switch needs to be adjusted back in to the correct position. This is to create a gap between the main shaft pin and the motor drive pin to avoid the motor driving the arm through the trigger mechanism upon firing.

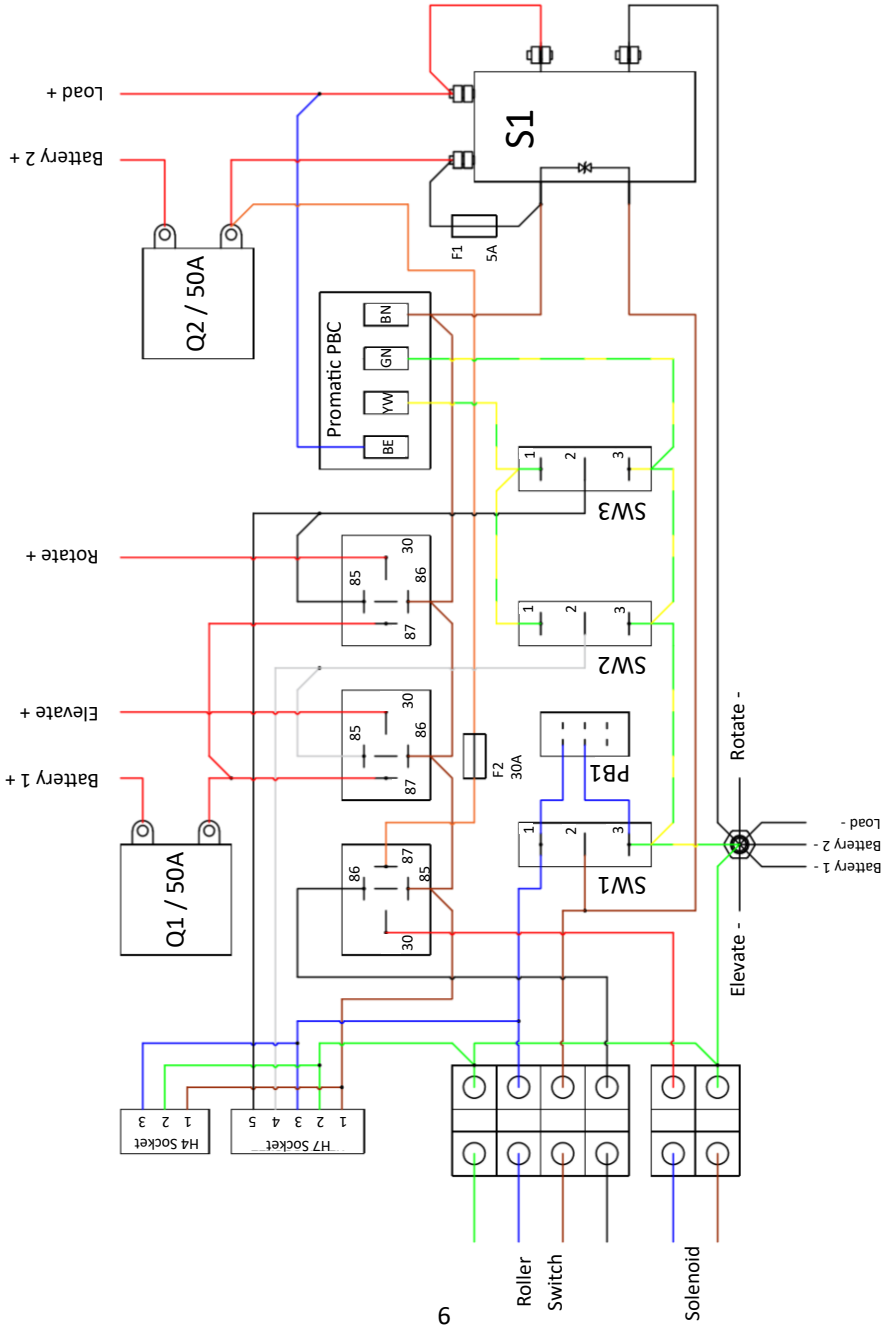
Before making any adjustment ensure the machine is in the **DIS-ARMED/SAFE** position (as above).

It is best to move the roller switch back in towards the trap about 2-3mm (1/8") at a time. The motor needs to be stopping just as the arm goes over centre, so that when the arm and motor have both stopped there is a gap of about 3mm (1/8") between the main shaft drive pin (under the nylon spring roller that the spring hooks to) and the 10mm Allen key bolt (that drives the base of the main shaft). See diagrams below. Repeat the roller switch adjustment until the required gap is achieved. The timing procedure is now complete.



Approximate gap between the base of the main shaft pin and the drive pin viewed from behind the machine.

Electrical Schematics
Solenoid Release



Electrical Schematics

Use this section to help identify any faults during any electrical troubleshooting, or to assist with the wiring of components if replacing parts.

Note: The layout of the schematics do not resemble the general arrangement of the components. This layout is to make the drawings as clear as possible.

Key:

Q = Circuit Breaker	SW = Switch	PB = Push Button
F = Fuse	S = Solenoid	

ALWAYS disarm the machine before carrying out loading, adjustment or maintenance. Ensure that the machine has been isolated from the power source before proceeding with any maintenance on the control box.

Notes:

For Service and Supplies contact your local Trap Supplier.

Follow Promatic on social media:

Subscribe to the Promatic newsletter. Browse to:

www.promatic.co.uk/Keep_In_Touch

Be sure to ask your supplier for Promatic Clays.

www.promatic.co.uk/all-products/clays

Barclay Phelps CE Marking Consultants, 29/8 City Mill Lane, Gibraltar 646, Europe

CERTIFICATE & DECLARATION OF CONFORMITY FOR CE MARKING

Company contact details:
Promatic International Ltd.
Station Works, Hooton Road, Hooton, S Wirral, CH66 7NF, United Kingdom
Tel: +44(0)151 327 2220 Fax: +44(0)151 327 7075 e mail: info@promatic.co.uk

Promatic International Ltd. declares that their:
Clay Target Launchers listed as the following models
Elite, Hawk, Superhawk, Harrier, Harrier ABT/Wobble, Eagle, Eagle Battue, Falcon, Hobby / Merlin, Ranger 8, Osprey/All American Ranger, Ranger Battue, Ranger ABT/Wobble, Sporter 400TT, Sporter 400TT ABT/Wobble, Super Sporter Battue, Super Sporter, Super Sporter Downhill Thrower, Super Sporter ABT/Wobble, Rabbit, Squirrel, Ranger Chondell, Chondell, Hunter Wobble, Huntsman, Huntsman XP, Fieldsman, Club Skeet, Pro Skeet, Int Skeet, Olympic Trap, Club 275 DTL/ATA, International DTL/ATA, Pro ABT/Wobble, Auto Trap DTL/ATA/ABT/Wobble, International Doubles DTL/ATA/Wobble and Sporter Doubles DTL/ATA/Wobble

are classified within the following EU Directives:
Machinery Directive 2006/42/EC
Electromagnetic Compatibility Directive 2004/108/EC

and further conform with the following EU Harmonized Standards:
EN 12100-1:2003+A1:2009 EN 12100-2:2003+A1:2009
EN 61000-6-3:2007 EN 61000-6-1:2007

Dated: 19 April 2011
Position of signatory: Group Technical Director
Name of Signatory: Graham Stephen Fair
Signed below:
p.p. Promatic International Ltd.

Promatic International Ltd.

Hooton Road
Hooton
South Wirral
CH66 7PA
United Kingdom

Tel: +44 (0) 151 327 2220 (General)
+44 (0) 1407 860800 (Sales)
Fax: +44 (0) 151 3277075

E-mail info@promatic.co.uk

Website: www.promatic.co.uk

Promatic Inc.
801, Mid America Drive,
Plattsburg.
MO 64477
USA

Toll Free: 888.767.2529
Fax: 816.539.0257

E-mail: sales@promatic.biz

Website: www.promatic.biz