

EZPull Target Manager Setup Manual

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Overview

This manual is intended for gun club personnel responsible for setting up clay shooting areas with EZPull *Target Manager* target inventory controllers.

Hardware Installation

Mounting

On a Sporting Clays course, a Target Manager is mounted on each shooting station. On a Skeet field, the typical location is behind shooting position #4 and on a Trap field just behind the 27 yard line in the center of the arc.

Target Manager has built-in mounting flanges with key holes. A cable and a cable gland come out of the back of the unit and require some clearance from the mounting surface. The dimensions for preparing the mounting surface can be found on document 'TMGR_Mounting.pdf'. For best wireless range, it is preferable to mount the Target Manager on a non-metallic post.

Power Supply

Target Manager is designed for operation from external power source. Target Manager has wires terminated with quick connects for directly connecting to a sealed lead acid rechargeable battery.

The recommended power source is a 6V, 4Am/h capacity or greater. These batteries are used for alarm systems and emergency lights. Batteries and chargers can be purchased online or from Batteries Plus stores (Part number WKA6-5F).

A 12V lead acid rechargeable battery can also be used. If you have older batteries that are no longer good for a trap machine, they will work for TargetManager.

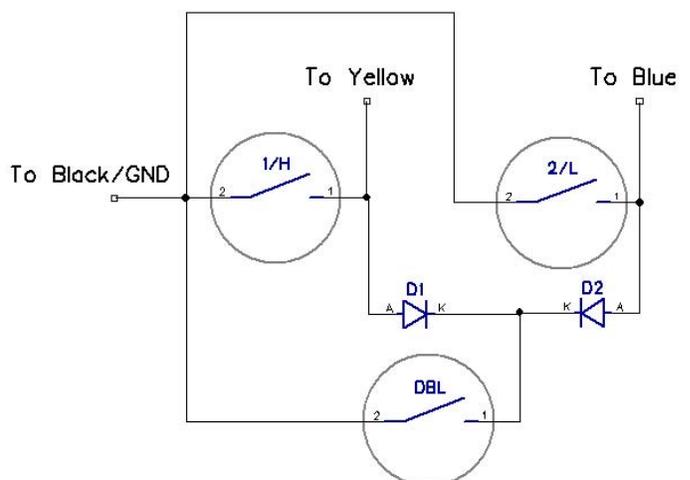
For permanent installations in Skeet/Trap fields, Target Manager can be powered from an AC/DC adaptor. AC/DC adaptor must have at least 6VDC and not more than 14VDC. AC/DC adaptor specified for 6VDC to 9VDC and 250 to 500mA should work. Contact *EZPullers* for connector solution for the AC/DC adaptor.

Target Manager comes programmed for low battery detection of a 6V battery. For other batteries, see the PWRS parameter in the Device Setup section of this manual.

Optional Wired Pull Button

In addition to the power supply wires (Red = +, Black = ground), the cable from Target Manager has two more wires: Yellow = 1/H and Blue = 2/L, that can be connected to a pull button such as a Winchester Skeet. The Common should go to the Black ground wire.

To prevent ghosting, connecting to the doubles switch must be done via diodes as shown in the schematics.



EZPull Setup Programming

Accessing and Using Admin Setup

To access programming and setup functions on the Target Manager, you will need a special "Administrator" RFID card. "Admin" Mode functions include:

- Device Setup – Programming the wireless addresses and other device parameters.
- Obtaining the total targets released from each trap since the counters were cleared.
- Reset the Target Manager.

To start programming in Admin mode: Momentarily hold the "Admin" card not more than 1" in front of the card slot, under the keypad. Target Manager immediately enters the Admin setup main menu.

Understanding the Admin Mode Display and Keypad Functions

1. The top line of the display shows the menus or setup items. The selected item is highlighted in a black background.
2. The second line shows the setup values. An entered value is surrounded by a frame.
3. The bottom line shows symbols of the keypad functions:
 - 3.1. Key [1] is LEFT arrow ← for navigating between menu items or UP arrow ↑ for modifying setup values.
 - 3.2. Key [2] is RIGHT arrow → for navigating between menu items or DOWN arrow ↓ for modifying setup values.
 - 3.3. Key [3] is ENTER ↵ for entering the value of menu items or SAVE ✓ for saving modified setup values.
 - 3.4. Key [4] is EXIT × for exit.

Admin Setup Main Menu

Target Manager Admin Setup main menu includes three submenus:

1. SET-UP – Programming the device parameters.
2. TARGET – Access to target counters for up to 8 traps.
3. RESET – Various rests of the device.

Device Setup

When you first enter Admin Setup, the SET-UP item is selected. Otherwise, use the navigation keys [1] or [2] to select **SET-UP**.

Press [3] to enter device setup.

Use the navigation keys [1] or [2] to navigate and select items.

Device Setup Items

Name	Description	Value range	
FLD#	Field ID - part of the radio address	1-14	
STN#	Station ID - part of the radio address	1-16	
RCAD	Remote unit address	1-14	
RCCH	Remote unit channel	1-16	
CLRT	Set the idle time in minutes after which Pay-Per-Round Targets will be cleared automatically. Default 30 minutes	15-60	
TRLD	Trap reload delay (unit = 0.1 Sec.)	01-32	
FRDL	Following report delay (unit = 1.0 Sec.)	01-05	
MAXT	Select the number of traps controlled by Target Manager	01-08	
MODE	Game type selection	1 = Sporting Clays	01-06
		2 = 5-Stand/FITASC	
		3 = Skeet	
		4 = Trap	
		5 = Combo Skett/Trap/5-Stand	
		6 = Sporting Clays with Manual keypad selection of SoloDelay	
		MODE > 6 - Reserved for future use. DO NOT select!	
IDLT	The idle time until sleep (unit = 1 Sec.)	10-120	
TR1+	For trap doubles - adds a target to each release of trap #1	00-01	
	Setting TR1+ = 1 automatically doubles the value of XTRA		
CHRG	Charge mode with independent pricing	0 = Pay per target	00-02
		1 = Pay per round	
		2 = Load 500 – 4000 targets	
	(*) Charge mode with unified pricing	3 = Pay per target	
		4 = Pay per round	
	5 = Load 500 – 4000 targets		
XTRA	Number of extra targets per shooter in round mode	00-06	
NUMS	Max. number of rounds in round mode	05-20	
PWRS	Power source Selection	0 = 6.3V lead acid battery	00-02
		1 = 12.6V lead acid battery	
		2 = AC/DC adaptor 6-13V	
BLIT	LCD backlight	0 = always Off	00-10
		1 – 9 adjust light sensitivity	
		10 = always ON	
(*) New/Changed items are not available on firmware versions earlier then 3.7.0 Free upgrade available for TargetManager with older versions.			

Understanding Wireless Setup Parameters

Field Address (FLD#): Think of it as your street name. The field number is a common radio address for all the receivers on the same Sporting Clays course. If you have only one course or if you have less than 15 Skeet/Trap fields, you do not need to change the Field Address. If you have more than one course, assign a different field address to each course.

Station Address (STN#): Think of it as your house number. The station number is the radio address for communicating with any receivers connected to traps that have the same field and station address.

⚠ Each station on the same field address must have a unique number

Remote Address (RCAD): This is the unique address of the EZPull wireless remote. It must match the address on the remote. For convenience, it can be set on the same value selected for the field address (FLD#).

Remote Channel (RCCH): This is also part of the address for the EZPull wireless remote. It must match the address on the remote. For convenience, it can be set on the same value selected for the station address (STN#).

Setup Example

Changing the station number:

1. From the main menu select **SET-UP**.
2. Press [3] to enter device setup.
3. Use the navigation keys [1] or [2] to navigate and select **STN#**.
4. Press [3] to enter the value. You will see a frame around the value.
5. Use the navigation keys [1] or [2] to change the station number.
6. Press [3] to save the new value.
7. Press [4] to exit SET-UP
8. Press [4] again to exit Admin menu



Payment Mode Setup

The “**CHRG**” setup item is used to determine the manner in which TargetManager charges the card and the payment modes.

Independent versus Unified pricing

Independent Pricing: Most gun clubs offer different pricing for different games. When **CHRG** is 0, 1 or 2, TargetManager allocates different “banks” on the card for “Sporting Clays”, “5-Stand” and “Trap-Skeet”. This means that you cannot use Trap-Skeet targets on the card to shoot Sporting Clays or 5-Stand.

Unified Pricing: These modes are suitable for gun clubs that charge a flat rate for all games. When **CHRG** is 3, 4 or 5, TargetManager uses the “Sporting Clays banks” on the card for all games. In unified Pricing you can use your Sporting Clays targets to shoot Trap-Skeet and 5-Stand.

Pay-Per-Target

When **CHRG** is 0 or 3, TargetManager operates in “Pay-Per-Target” mode: To throw targets, the card must be in the slot. Each target is counted as it releases. This is the only mode to be used for Sporting clays. Pay-Per-Target can be used for practice rounds on Skeet, Trap and 5-Stand. In Pay-Per-Target mode the “extra” targets are added on the card.

In *Pay-Per-Target* mode, the customers can shoot the nominal number of targets on a course or “shoot-on-tab”. In *shoot-on-tab*, the card is typically loaded with more targets than required so they can shoot as many targets as they like and pay for the targets used when done shooting.

Pay-Per-Round

When **CHRG** is 1 or 4, TargetManager operates in “Pay-Per-Round” mode: TargetManager takes 25 targets off the card for each round. The user can press keys [1] to [4] for the corresponding number of rounds per transaction. The card is then removed. The targets are stored in a bank for all the shooters. This mode is NOT suitable for Sporting Clays. Pay-Per-Round is the preferred mode for Skeet, Trap and 5-Stand. The operation of Pay-Per-Round depends on several other setup items:

- In Pay-Per-Round mode the “extra” targets are set in the TargetManager: The “XTRA” setup item determines how many extra targets are allowed per shooter. The typical value is 2. The extra targets are not shown on TargetManager’s display. Once the nominal 25 targets per shooter are all used, 3 minutes of no activity will cause the extra targets to be erased and TargetManager is ready for a new round.
- In Pay-Per-Round mode, the maximum number of targets that can be logged into TargetManager at any given moment, is limited by the maximum number of rounds. The “NUMS” setup item determines how many targets can be loaded. The typical value is 5.
- The “CLRT” setup item determines the duration of idle time period before clearing any targets left in the TargetManager’s “bank”. For example: CLRT = 30, any targets left in the bank will be purged after 30 minutes of no activity and TargetManager will go to power down mode waiting for a new round.
- For Trap Doubles, remember to set the “TR1+” setup item so TargetManager takes 50 targets off the card.

Notice: In Pay-Per-Round the Office program does not track extra targets!

Limit Bypass – setting for card free events

When **CHRG** is 2 or 5, TargetManager operates in Limit Bypass mode: This mode is similar to Pay-Per-Round mode but TargetManager takes 500 targets off the card and allows up to 4000 targets in the bank. This is suitable for shooting events when the club does not want shooters to have any cards. The draw back of Limit Bypass mode is that the office windows program cannot keep track of target inventory.

A better way of running a card free event is to load a card with as many targets as needed and tape it to the back of TargetManager behind the slot area. When the event is over, the card can be read and cleared by the office program and inventory will be tracked accurately.

Other Setup Parameters

Clay target game

The **"MODE"** setup item determines the clay target game type. There are six modes:

(1) Sporting Clays – with solo delay on the card, (2) Five-Stand/FITASC, (3) Skeet, (4) Trap, (5) COMBO and (6) Sporting Clays – with solo delay on keypad.

There are two special modes designed to address club specific requirements:

In modes: (2) Five-Stand/FITASC, (3) Skeet, (4) Trap and (5) COMBO it is possible to use *"PayChanger"* control tags to instantly change the payment mode from "Pay-Per-Target" to "Pay-Per-Round" and vice versa without going into the Setup menu. This allows for shooters to quickly change the payment method without full access to other setup parameters.

For example: A club has a Skeet field that is normally set for "Pay-Per-Round". Occasionally, a solo shooter wants to practice with EZPull voice release in "Pay-Per-Target" mode. Next to the TargetManager they have two control tags one marked "Pay-Per-Round" and the other "Pay-Per-Target". By holding a tag in front of the card reader, TargetManager will instantly switch to the desired payment mode.

Mode (5) Combo is suitable for a combo field with Skeet, Trap and/or 5-Stand overlay. In Combo mode, it is possible to instantly change the combo field's game designation using *"GameChanger"* control tags. It is possible to program a tag with combined *"GameChanger"* and *"PayChanger"* for instant change of game and payment mode.

For example: A club has a Trap and 5-Stand overly. They want to shoot Trap in *pay-per-round* and 5-Stand in *pay-per-target*. They will have two tags marked Trap and 5-Stand. By holding a tag in front of the card reader, TargetManager will instantly switch both game and payment mode.

Mode #6, is designed for compatibility with legacy Sporting Clays control systems using manual Solo Delay selection: In Mode #6, TargetManager ignores any Solo Delay on the card. Before placing the card, the shooter can select the delay period by pressing a key on TargetManager. For 2 Sec. delay key [2], 3 Sec. key [3] = and 4 Sec., key [4]. For a delayed report: on the wireless remote, press the key for the first target and quickly press the key for the second target. Once the card is removed, the delay selection is cleared.

Maximum number of traps

The **"MAXT"** setup item determines the highest Trap number that can be addressed by TargetManager. The MAXT setup item is used to prevent accidental target counting when using the MTX-8 multi-trap controller for 5-Stand, FITASC or super Sporting with less than 8 Traps. For example, on a 5-Stand with 6 Traps, set MAXT = 6. If the puller presses button #7 or #8 TargetManager will ignore the command and will not increase the target count.

Following report delay for Solo-Delay card

The "FRDL" setup item determines the delay time (in seconds) for the delayed "Report" target for a card with "Solo Delay". When a shooter with Solo Delay on the card presses the [R] key on the TX-C2/3-Pro remote, the first target "A" is thrown according to the delay on the card and the second target "B" follows after the delay set by FRDL.

Trap reload delay

The "TRLD" setup item determines the delay time (in a 10th of a second increments) for the Trap machines to reload a new target. This is an arbitrary setting for all the traps on the field. The trap reload delay prevents accidental target counting in case the puller clicks the button for the same trap before it has reloaded a new target. During the reload period, the display will show: "BUSY:" and the trap designation (A-H).

Idle time before power down

The "IDLT" setup item determines the duration of idle time (in seconds) before TargetManager enters low power state. In Pay-Per-Target, idle time is counted after removal of the card. In Pay-Per-Round, idle time starts counting once the bank is empty.

Trap Doubles:

The "TR1+" setup item applies only in Trap mode when the Trap machine is set to throw doubles. It counts two targets for each throw. In pay-per-round mode, setting TR1+ = 1, automatically doubles the number of extra targets per shooter (XTRA)

Selecting Power Source:

The "PWRS" setup item selects the power source for TargetManager: (0) 6.3 Volt Lead acid battery, (1) 12.6 Lead acid battery, (2) AC/DC adaptor with open circuit output in the range 7 to 13 VDC. The power source selection affects the low battery detector. When low battery is detected, the heat bit icon on the lower right corner of the display is replaced with a battery icon.

LCD Backlight

The "BLIT" setup item adjusts the display backlight. A value of 0 disables the back light and saves some power. Values 1 – 9 adjust the sensor's sensitivity so the backlight will automatically turn on. A value of 10 sets the back light to always on.

EZPull Target Counters

Target Manager keeps track of the targets released from up to 8 traps. The maximum number that can be stored is 9999 targets. It is advised to clear the counters occasionally. The counters can be used to track inventory or to determine when a trap needs to be reloaded.

Accessing Target counters

Momentarily hold the "Admin" card, not more than 1", in front of the card slot under the keypad. Target Manager immediately enters the Admin setup main menu.

Use the navigation keys [1] or [2] to select **TARGET**.

Press [3] to enter target counters.

Use the navigation keys [1] or [2] to navigate.

Clearing a Trap Target counter

Use the navigation keys [1] or [2] to navigate and select the trap to be cleared

Press [3] to enter the value

Press [3] again to zero the counter

Repeat for more traps or Press [4] to exit.

EZPull Resets

The RESET Admin submenu that allows resetting the system:

1. RUND – Clears any left over targets from a round in progress (only applies to pay-per-round mode).
2. CNTR – Clears all the trap counters at once.
3. NAPP – Not available ignore it.
4. TMGR – Reset the entire device without cutting off the power.

Control Tags/Cards

Control Tags are special purpose cards or key FOBs designed for the Club personnel. Hold card in front of TargetManager's card slot and follow instructions on the display.

There are a few types of control tags:

1. **Administrator** – the Admin tag (typically a yellow key FOB) allows access to the Admin menus discussed in this document.
2. **Pause** – a Pause tag (typically a red key FOB) instantly toggles the TargetManager from *Play* to *Pause* and vice versa. For safety purposes a Pause tag is used to disable TargetManager during target reloading and maintenance on a Sporting Clays course. While TargetManager is in *Pause*, it cannot release targets. The only way to return to *Play*, is with the Pause tag or with a wireless Trap voice or Puller units. All other target controllers for sporting clays and skeet do not have *Pause/Play* capability.
3. **Counter** – The Counter tag (typically a blue key FOB) "collects" thrown from each TargetManager and clears the total counter from the TargetManager's memory. The Counter tag automatically sums the targets from all the TargetManagers read. The total number of targets for the club is then read from the Counter tag using the *EZPull Target Counter* PC program via a DTRW2 USB office card reader.
4. **Clear** – a Clear Tag instantly clears any left over targets from a round in progress (applies only to *pay-per-round* mode).
5. **FreePlay** – the "*FreePlay*" tag (typically a green key FOB) set the TargetManager in FreePlay mode (limited to 10,000 targets). During FreePlay, only the Pause tag is recognized, all other cards and tags are ignored. To exit FreePlay mode, hold the FreePlay tag in front of the card slot until the screen goes blank and then quickly remove it. The system will reset and revert to the normal settings.
6. **GameChanger** – in Combo mode, the "*GameChanger*" tags instantly change the game mode on TargetManager set to MODE 5/COMBO (see detailed description on page 7 of this manual).
7. **PayChanger** – In Trap, Skeet, 5-Stand or Combo modes, "*PayChanger*" tags instantly change the game payment modes on TargetManager from Pay-Per-Round to Pay-Per-Target and vice versa (see detailed description on page 7 of this manual).

Power Down Modes

TargetManager has two low power modes:

1. Sleep: TargetManager automatically enters sleep mode after a period of idle time (no activity) set by the IDLT setup parameter.
 - 1.1. TargetManager will not go to sleep if a card is in proximity to the reader.
 - 1.2. While in Pay-per-round mode, when the target count is displayed, TargetManager will not go to sleep until the idle period set by the CLRT has elapsed.
 - 1.3. Once in sleep mode, TargetManager will wake up on any keypad key press or by sensing a card in proximity to the reader.
2. Power-Down/Reboot: When the display shows **"Place Card"**, simultaneously pressing the [1] and [4] keys, will cause TargetManager to enter Power-Down/reboot mode.
 - 2.1. Once in Power-Down/Reboot, pressing any of the keys will cause TargetManager to reboot (restart) and refresh its memory. Once in Power-Down/Reboot mode TargetManager will NOT wake up on by sensing a card in proximity to the reader.
 - 2.2. To prevent clearing critical data from the memory, it is not possible to enter Power-Down/reboot under the following conditions:
 - 2.2.1. When a card is in proximity to the reader.
 - 2.2.2. While in *Pay-per-round* mode with targets in the bank.
 - 2.2.3. When TargetManager is in *Pause* mode.
 - 2.3. Notice: It is recommended to occasionally perform Power-Down/Reboot.