Pro-MRC with Pro-Control Software Manual

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Introduction

Range Systems Pro-Control Software is the control platform used on the Pro-Tab Master Controller for wireless operation and programming of compatible Range Systems target systems. Pro-Control supports Pro-SIT, Pro-Turn Series, and Pro-Runner systems and provides tools for manual target control, Courses of Fire, qualifications, target setup, diagnostics, and mover operation.

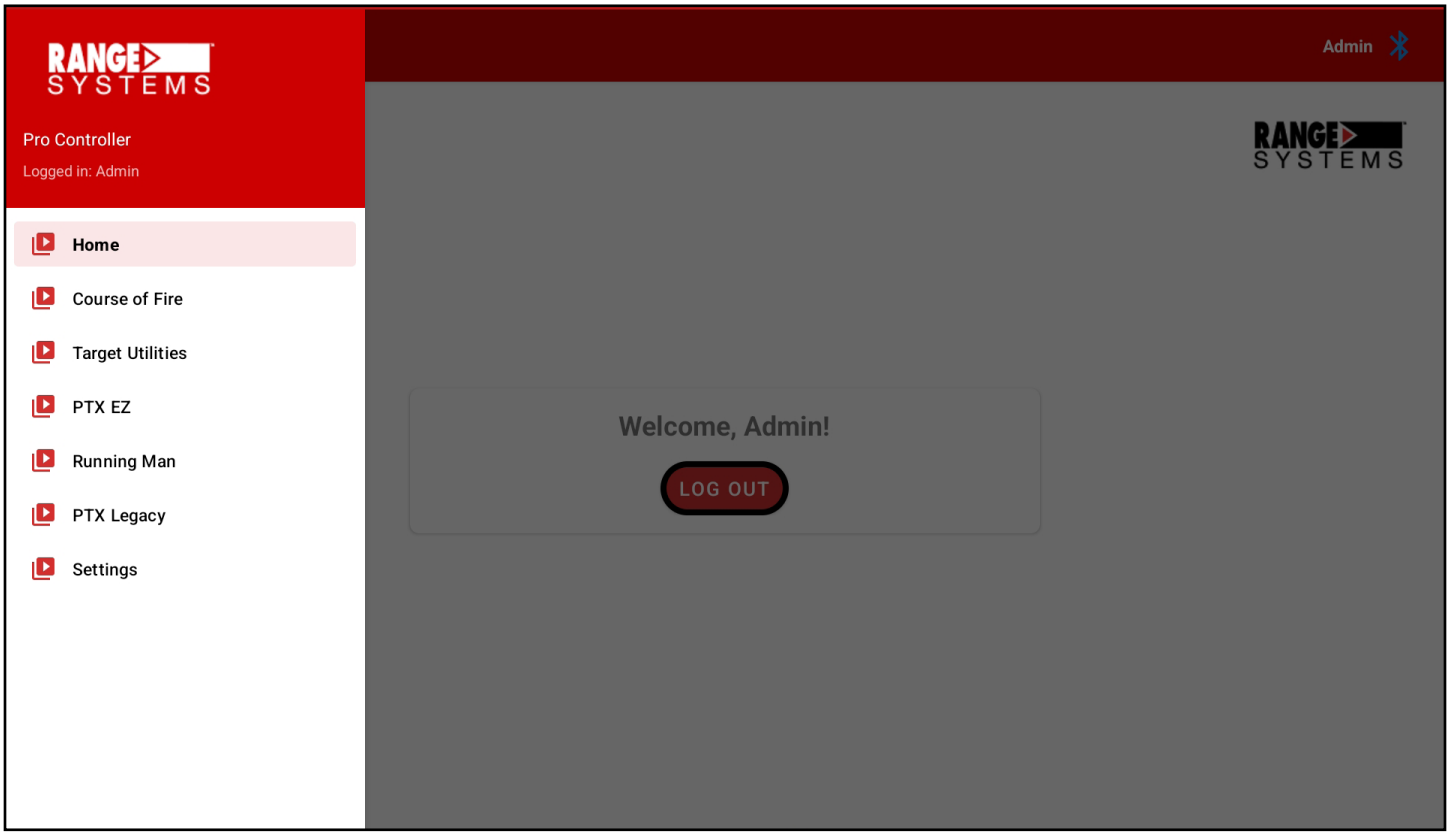
The system is designed for simple, portable operation in live-fire training environments. When paired with the target controller, Pro-Control provides Bluetooth-based target management with an extended control range of up to 600 meters. The system can control up to 200 Pro-Turn Series target units and supports four target function modes and custom Course of Fire programming.

Note: Actual wireless range depends on site conditions, antenna placement, obstructions, interference, and target-system configuration.

Pro-Control is developed in-house by Range Systems to provide direct integration with Range Systems target hardware, a consistent operating interface, and knowledgeable technical support.

About This Manual

This manual is organized around the Pro-Control navigation menu. Each menu destination has its own operating section, followed by setup, scoring, administration, and troubleshooting information.



Main Menu Options

Home
Log in, create users, and log out.

Course of Fire
Select, create, edit, run, and score custom target sequences.

Target Utilities
Read or change target settings, sweep ranges, check firmware, and manage the base radio channel.

PTX EZ
Quick manual control of targets, groups, or all targets.

Pro-Runner
Control of Running Man Target Systems.

PTX Legacy
Legacy-style manual target keypad.

Settings
Scorecard format, qualification scoring method, and administrative controls.

System Terms

Target
A single physical target system. Each target is assigned a target number.

Range
A named set of targets operated together.

COF (Course of Fire)
A saved program that commands targets over a defined sequence.

Qualification
An automated, standards-based scored course for rifle or pistol.

Engagement
One qualification step in which targets are exposed for a set time.

Phase
A group of qualification engagements fired from one position or condition.

Lane
A shooter's firing position aligned with a target.

Hit Score
The number of hits registered and read from target electronics.

Pro-Runner
A Running Man target that travels along a rail. Mover numbering is separate from turning-target numbering.

Hopping Channel
The radio channel used by the target radio link. Both ends of the link must match.

Target Commands

FOE
Face the target toward the shooter / threat exposed.

FRND / FRIEND
Present the target as a friendly / no-shoot.

EDGE
Turn the target on edge.

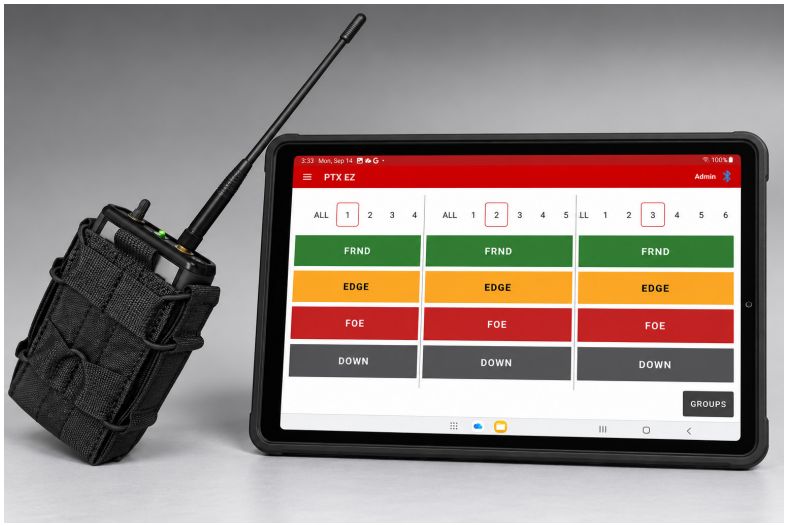
DOWN
Lower or conceal the target.

PAUS / PAUSE
Pause the sequence or target state.

BREAK / Stage Break
Halt the run at that step until the operator chooses to continue.

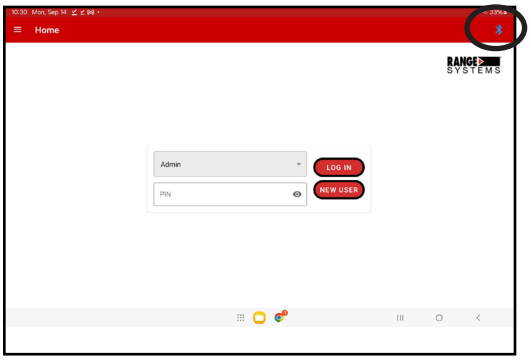
NA
No action. Leave the target in its current state.

Startup

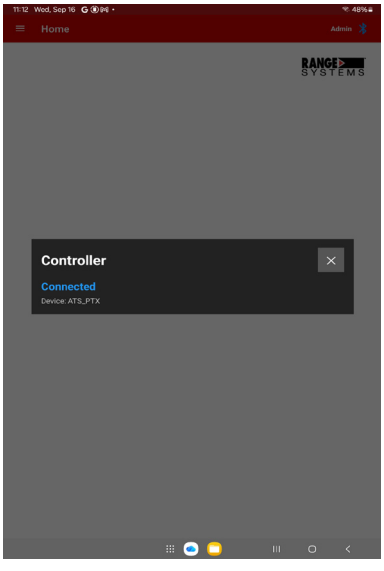


The Pro-Tab Master Controller ships from Range Systems configured for use with Pro-Control Software and compatible Range Systems target systems.

When the control system is purchased with a target system, the Controller Transmitter and target system are linked at the factory. When a control system is purchased separately, the Controller Transmitter must be linked to the target system before operation. Follow instructions to create a range below. Contact Range Systems Technical Support if assistance is needed on linking the Controller Transmitter to the target system.



1. Power on the target system, Pro-Tab Master Controller, and Controller Transmitter.
2. Open Pro-Control on the Pro-Tab Master Controller.
3. Verify that the Bluetooth status icon in the top toolbar is blue. A blue icon indicates an active connection to the Controller Transmitter. A gray icon indicates that the Controller Transmitter is not connected.
   - If the connection is lost, Pro-Control will automatically attempt to reconnect. There is no manual Connect button. If connection problems occur, move closer to the Controller Transmitter and cycle the transmitter power switch OFF, then ON.
4. Tap the Bluetooth status icon to view the current connection status and Controller Transmitter information.



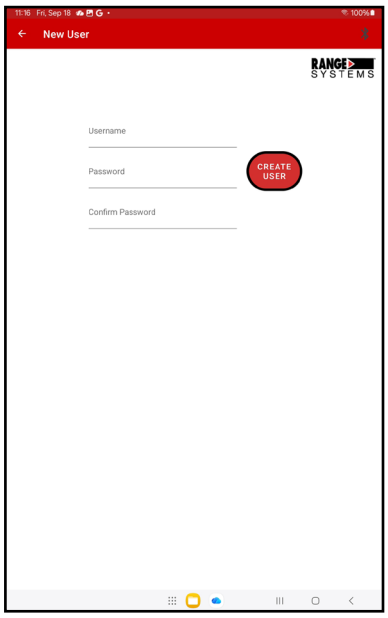
Note: Target commands require an active connection. If the Bluetooth icon is gray, targets will not respond.

Charging

DAILY CHARGING

Be sure to charge both the Controller Transmitter and the Pro-Tab Master Controller at the end of each day to ensure the system is ready for the next training session. Charge the Controller Transmitter using the Micro-USB port located on the bottom of the transmitter. Charge the Pro-Tab Master Controller using its USB-C charging port.

User Accounts and Login



Create a New User

1. From Home, tap New User.
2. Enter a Username and PIN.
3. Confirm the PIN.
4. Tap Create User.

The Home menu is the user access point for Pro-Control. It is used to select a user, log in, create a user profile, and log out.

1. Select the user name from the user list.
2. Enter the user's PIN.
3. Tap Log In. The active user's name is displayed in the toolbar after login.

Note: The built-in Admin account uses PIN 1234 on initial setup. Change the default Admin PIN before operational use.

Log Out

Tap Log Out from the Home welcome screen.

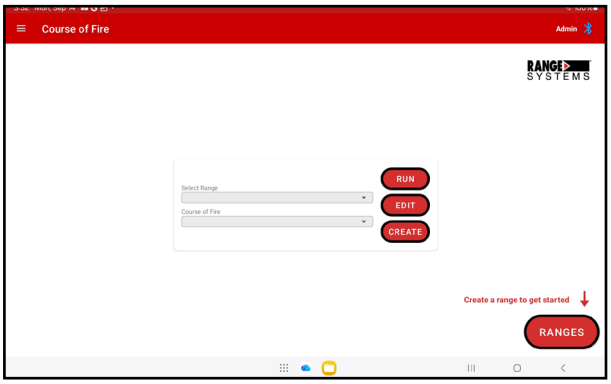
Admin and Standard Users

Administrative functions are available only while logged in as Admin. Admin users can create and manage ranges, configure qualification ranges, and access Admin Settings.

Standard users can create and run Courses of Fire, run existing qualifications, and use Target Utilities, PTX EZ, Running Man, and PTX Legacy. Standard users cannot create or manage ranges.

Course of Fire Menu

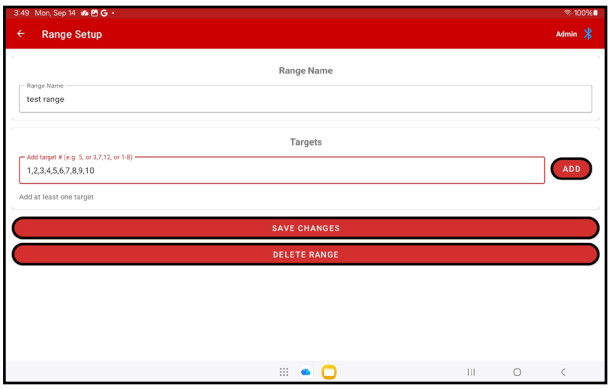
The Course of Fire menu is used to build and run timed target sequences. Each COF is associated with a Range and contains target commands arranged by time.



Create a Range

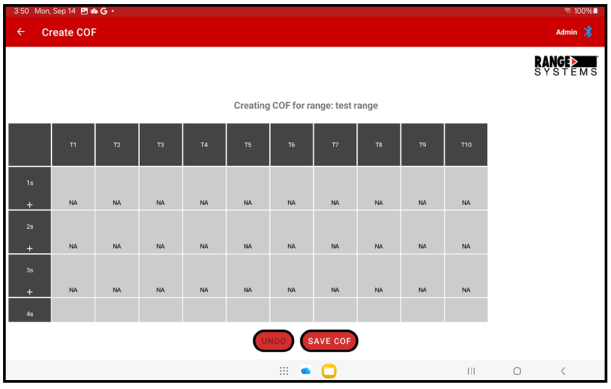
1. Open Course of Fire and tap Ranges in the bottom right corner.
2. Tap + Create Range and enter a Range Name.
3. Add target numbers individually, as a comma-separated list such as 3,7,12, or as a consecutive range such as 1-8.
4. To reorder targets, press and hold the target, then drag it to the desired position.
5. Tap Save or Save Changes.

Note: Target numbers must be unique positive whole numbers.



Create a Course of Fire

1. Tap Create.
2. Enter a COF Name.
3. Select the Range.
4. Set the initial Duration in seconds.
   Note: Toggle on the Half Seconds button if half-second timing is required.
5. Build the command grid. Each row represents one second and each target has its own column.
6. Select one or more cells and assign FOE, FRIEND, EDGE, DOWN, NA, PAUSE, or Stage Break as required.
7. Tap Save COF.



Notes:

- Pro-Control enforces a 1.5-second minimum between turn commands for the same target while authoring a COF. Edits that introduce a shorter interval are refused.

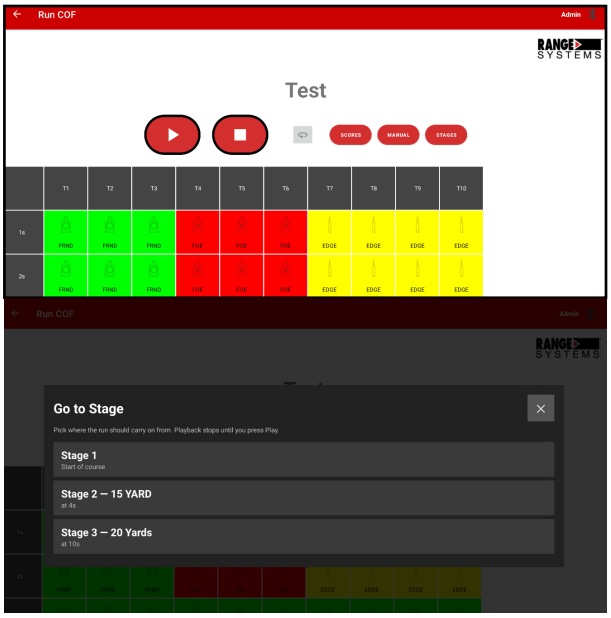
- COF command cells are color-coded in the software for quick identification. PAUSE and Stage Break apply to the entire row.

Insert or Delete Rows

1. Tap the time label for the desired row.
2. Choose Insert Above, Insert Below, or Delete Row.
3. Use Undo if the change needs to be reversed.

Stage Breaks

Stage Breaks stop a running COF at a defined point. A Stage Break may be named, such as Reload, Move to the 15, or Magazine Change. Tap the pencil icon on the Stage Break row to add, edit, or clear the stage name.
While running a COF, tap the Stages button to view the available Stage Breaks and jump directly to a selected stage.



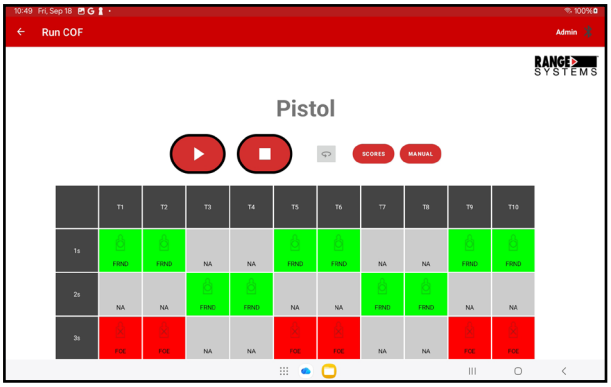
Edit or Delete a COF

Select a saved COF and tap Edit to change its name or command grid. Delete removes the selected COF after confirmation.

Select a Course of Fire

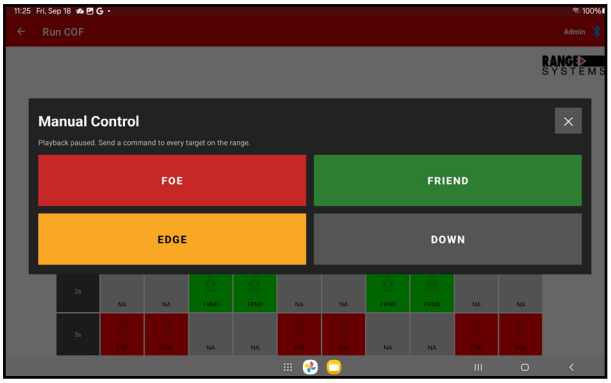
1. Select a Range.
2. Select a Course of Fire. The available COF list is filtered to the selected Range.
3. Tap Run, Edit, or Create as required.

Running a Course of Fire



1. Select the Range and COF.
2. Tap Run.
   - Press Play/Pause to start or hold the sequence.
   - Press Stop to halt the sequence and return to the first step.
   - Enable Loop to repeat the course automatically.
   - Long-press a row to begin playback from that point.

Note: Only COFs associated with the selected Range are shown.



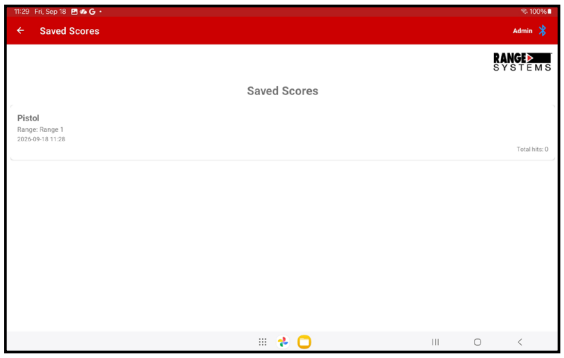
Manual Control While Paused

While a COF is paused, tap Manual to send FOE, FRIEND, EDGE, or DOWN to every target in the selected Range at once.

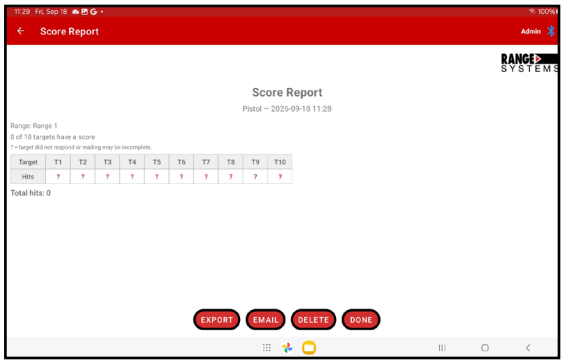
Scores

1. Pause the COF and tap Scores.
2. Tap Gather Scores to poll every target in the Range.
3. If some targets do not answer, tap Gather Missing (n) to retry only the missing targets.
4. Tap Clear Scores to reset accumulated hit counts on all targets.
5. Tap Save Scores to store the current gathered table as a report.

Note: Clear Scores cannot be undone. Previously saved reports are not deleted.

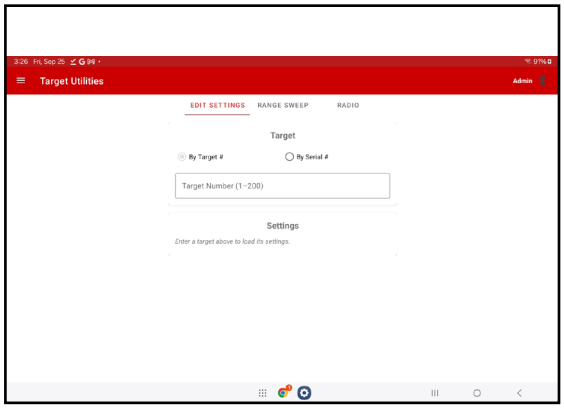


Saved Scores
After at least one report has been saved, Saved Scores appears on the Course of Fire screen. Saved reports can be reopened, exported, emailed, or deleted. Reports retain the COF name, Range, label, target results, and save time even if the original Range or COF is later changed.



Target Utilities Menu

Target Utilities provides setup and diagnostic tools for individual targets and complete Ranges. An active controller connection is required.



Edit Settings Tab
1. Choose By Target # or By Serial # and enter the identifier.
2. Allow Pro-Control to read the target's editable settings.
    - Not all settings will apply or be available for all targets.
3. Tap a setting row to open the editor.
4. Select or enter the new value and tap Write Setting.
5. Pro-Control writes the setting and reads it back for verification.

Editable Target Settings
- Hit Count Sensitivity (1-10)
- Hit Style (Off / Bob / Die)
- Hits to Die (1-20)
- Hit Position (Normal / Reverse / Non-Edge)
- Die Face (Down / Edge / Foe / Friend)
- Target Number (0-200)
- Target Speed (Low / High)
- Hit Active Face (Down / Edge / Foe / Friend / Any)
- Port Lock (None / Port 1 / Port 2 / Port 1+2)
- Group Member 1-4 (0-200)

RESTORE DEFAULTS
- Resets the target to factory settings and cannot be undone.

Range Sweep Tab

1. Choose Find Targets, Ranges, or Qual Ranges as the source.
2. Select a Range when applicable.
3. Tap Sweep Range or Find Targets.
4. Review Hits, Battery, Hit Style, Sensitivity, and software version in the results table.
5. Use Retry Incomplete Targets or tap an incomplete row to retry missing information.



Note: Low battery readings are highlighted in the software. Readings below 11.5 V are flagged amber and readings below 11.0 V are flagged red.

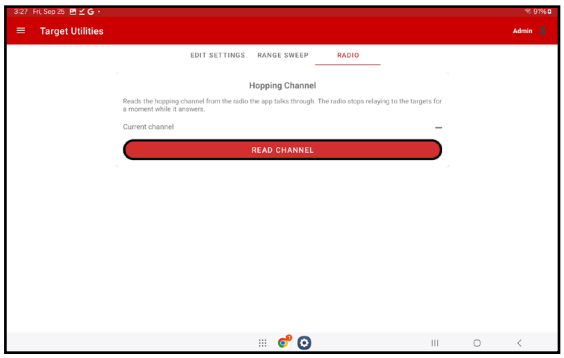
Find Targets

- Find Targets scans target numbers 1 through 200 and lists only targets that answer. This is useful when commissioning a new Range or when a target number is unknown. The scan does not poll hit scores. This process can take a few minutes.

Radio Tab

The Radio tab reads and changes the radio channel on the base radio connected to the Pro-Tab side of the target link.

Note: DO NOT USE DURING A RUN. The base radio temporarily stops relaying target traffic while responding to Radio-tab commands. Do not use this menu during a Course of Fire or qualification.



Read the Current Channel

1. Tap Read Channel.
2. Wait while Pro-Control enters radio command mode.
3. Confirm the Current Channel displayed by the software.

Change the Channel

1. Read the current channel first.
2. Select a New Channel from 0 through 9.
3. Tap Set Channel and confirm.
4. Verify that the targets answer on the new channel.
5. Only after confirming operation, tap Save to Radio Memory if the channel should remain after a power cycle.

Note: Before Save to Radio Memory is used, a power cycle returns the base radio to its previously saved channel. Saving removes that recovery path.

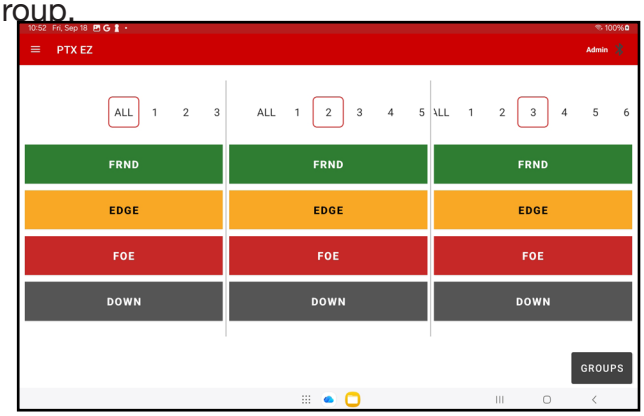
PTX EZ Menu

PTX EZ provides three independent quick-command lanes for manual target positioning without creating a Course of Fire.

Send a Command

1. Scroll or tap a lane's selector to choose ALL, a target number, or group G1, G2, or G3.
2. Tap DOWN, EDGE, FOE, or FRIEND.
3. The command is sent only to the selection shown in that lane.

ALL broadcasts to every target the base radio can hear. Individual target selections and group selections affect only the selected target or configured group.

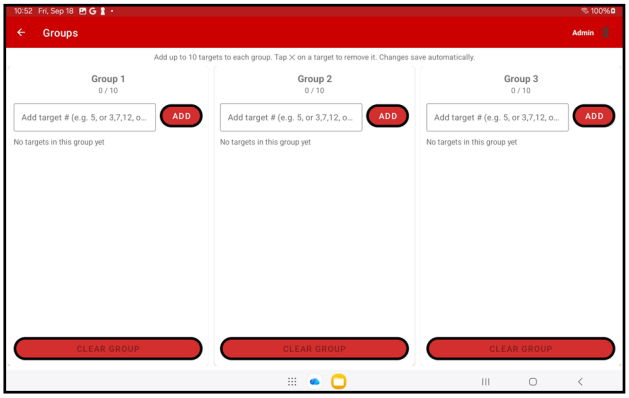


Groups

1. Tap Groups.
2. Select G1, G2, or G3.
3. Add a single target, comma-separated targets, or a target range.
4. To remove a target, tap the X next to the target. To remove all targets from the group, tap Clear Group.

Each PTX EZ group can contain up to 10 targets numbered 1 through 200. Group changes save automatically.

Note: PTX EZ groups are different from qualification target groups. PTX EZ group membership is stored for the quick-command interface.



Running Man Menu

Running Man provides manual control for Pro-Runner moving target systems. Two independent control lanes allow an operator to select dual Pro-Runner Targets and retain separate speed settings.

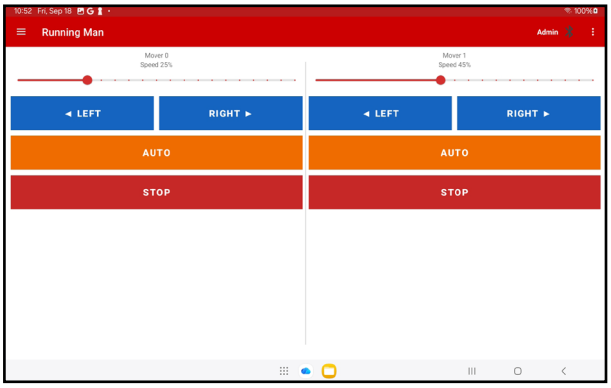
Drive a Mover

1. Select the mover address from 00 through 15 in the desired lane.
2. Set speed using the slider from 0 to 100%.
3. Tap LEFT or RIGHT to move in the selected direction, AUTO for continuous back-and-forth operation, or STOP to halt the mover.

Note: Mover addresses are separate from turning-target numbers. Mover 01 is not Target 1.

AUTO and STOP

While operating in Auto mode, the operator should maintain visual awareness of the Pro-Runner and its travel area throughout the exercise.



Note: For AUTO mode to operate properly, the target cannot be positioned at the far-right end stop. Before selecting AUTO, move the target away from the far-right position.

1. Press the orange AUTO button to activate automatic movement for the selected Pro-Runner.

Notes:

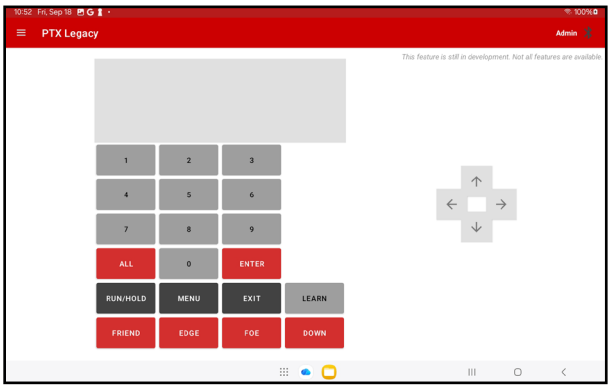
- A mover may travel briefly to the left when STOP is pressed. This is expected behavior.
- Pro-Runner movers do not report operating status back to Pro-Control. The screen shows the command sent, not confirmed physical movement. Verify mover operation visually.

PTX Legacy Menu

PTX Legacy provides a manual keypad interface modeled after the original PTX handheld controller. Some functions available on previous PTX controllers may not be supported.

Manual Target Command

1. Enter a target number on the number pad, or select ALL.
2. Tap FRIEND, FOE, EDGE, or DOWN.
3. To repeat a command on the same target, press another command without entering a new target number.



The screen maintains a command history. Additional keys mirror the legacy handheld interface, including ENTER, RUN/HOLD, MENU, EXIT, LEARN, and the directional pad.

Settings Menu

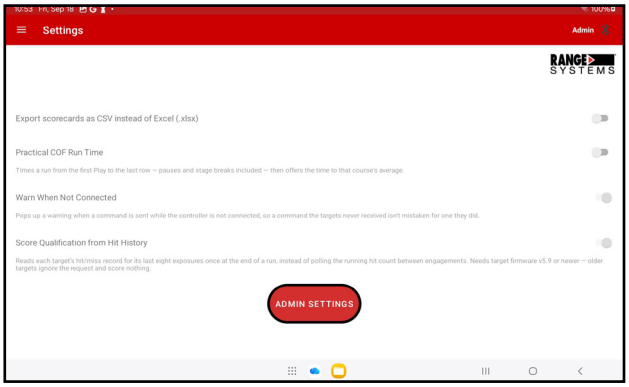
The Settings menu contains application preferences and administrative controls.

Export Scorecards as CSV

- When disabled, scorecards export as Excel (.xlsx). Enable this option to export scorecards as CSV instead. The selected format is used by Export and Email actions.

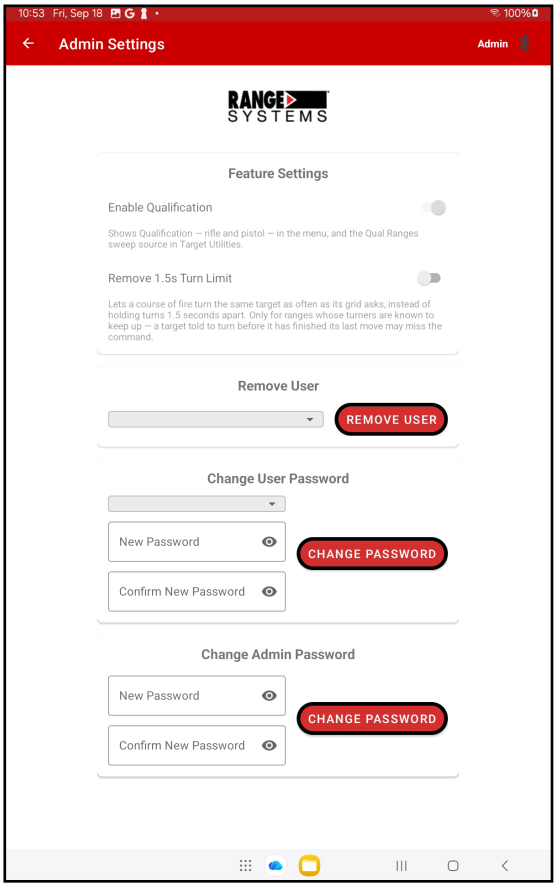
Score Qualification from Hit History

- When disabled, Pro-Control polls the running hit count after each engagement. When enabled, the system reads the target's hit/miss history at the end of the run so no score polling occurs during the course of fire.



FIRMWARE REQUIREMENT

- Hit History qualification scoring requires target firmware v5.9 or newer. Leave this option off unless the entire qualification Range is compatible.



Admin Settings

Remove User

- Permanently delete a user profile.

Change User Password

- Set a new PIN for a user.

Change Admin Password

- Replace the Admin PIN. Change the default 1234 PIN before operational use.

Operational Notes

- Verify the Bluetooth status icon is blue before beginning a training event.
- Confirm the correct Range and target assignments before running a COF or qualification.
- Use Range Sweep to identify communication, battery, firmware, and scoring issues before training.
- Do not use the Radio tab while a COF or qualification is running.

Troubleshooting

Symptom	What to Check
Bluetooth icon is gray	Confirm the target controller and Pro-Tab are powered, Bluetooth is enabled, and the paired controller is available. Pro-Control retries the connection automatically.
Targets do not move	Confirm the Bluetooth icon is blue and verify that the selected Range uses the correct physical target numbers.
No response on scorecard	Check target power, battery, and radio communication, then use Retry Unanswered Targets when available.
Range Sweep shows all dashes	The target did not answer. Retry the row or incomplete targets, then check target power, range, and radio channel.
Range Sweep has dash under Hits only	The settings were read but the score was not. Tap the row to retry only the score poll.
Old firmware reported	Update the target firmware if the desired scoring feature requires newer firmware.
Every lane shows ? with Hit History enabled	Targets may be older than firmware v5.9. Disable Hit History scoring or update the targets.
Export / Email missing	Save the qualification session first.
COF cell refuses a command	The 1.5-second turn guard is preventing a turn command too close to the target's previous turn.
Pro-Runner Auto Mode not working	The target is positioned at the far-right end stop. Move the target away from the end stop, then press AUTO again to begin.
Pro-Runner does not move	Verify connection, mover power, radio range, mover address, and speed. Pro-Runners do not provide status feedback.
Targets stop responding after channel change	Return the base radio and target radios to the same channel. If the new channel was not saved, power-cycle the base radio to restore the previous saved channel.
Admin feature is hidden	Log in as the Admin user.
Invalid PIN / User not found	Re-select the user and enter the PIN again. Admin can reset a user PIN in Admin Settings.
Target Count Mismatch Warning	The COF contains more target columns than the selected Range. Select Run Anyway to ignore the extra columns and send commands only to the targets available in the selected Range. To correct the mismatch, edit the COF and remove any lanes that are no longer needed or available in the selected Range.