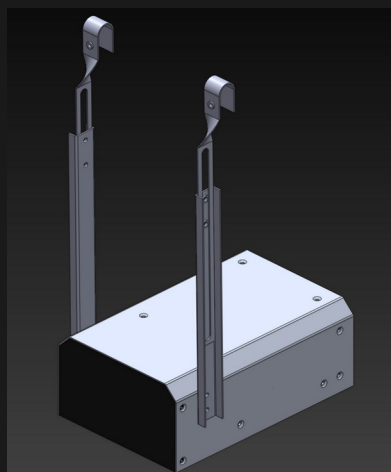




RANGEMOTION SYSTEMS

USER MANUAL

Android application



Document Rev. 0.6 | September 25, 2026

RangeMotionSystems.com

Connect. Practice. Review your results.

Clear instructions for everyday operation, online competition and firmware updates. Includes all 21 challenge patterns and their settings.

Illustrated edition with target photography and scoring guidance.

support@rangemotionsystems.com

Contents

Use the section you need. Each procedure names the controls to select and explains what happens next. The level reference is for lookup; it does not need to be read before first use.

Section	Page
Safety and product requirements	3
First use and home navigation	4
Connect to RMS	5
Accuracy Training	6
Reaction Training	7
Accuracy and Reaction Challenges	8
Take a scoring photo and review hits	9–10
Player account and public rankings	11
Challenge a Friend	12
Appearance and settings	13
Update RMS firmware	14
Troubleshooting	15
Care and customer support	16
Illustrated challenge levels 1–21	17–23
Revision and publication checklist	24

Reading the manual

Bold control names in the app may use uppercase text. “Tap” means select an item once. “Swipe” means slide a finger sideways through the home or settings tiles. BLE means Bluetooth Low Energy, the wireless link between the phone and RMS.

Firmware is the software inside RMS hardware. It is separate from the Android app. OTA means an over-the-air firmware update sent wirelessly.

Image placeholders

Each outlined screenshot space has a number and a short capture description. In Word, right-click the placeholder → Change Picture → choose your screenshot. Keep its proportions; avoid stretching or cropping away controls. The captions describe the required state.

The separate quick user guide will be prepared after this full manual is finalized.

Safety and requirements

STOP FIRING and make the range safe before approaching, adjusting or inspecting RMS. Keep clear of all moving components.

- 1. Use only an approved target, mounting arrangement, backstop and ammunition combination. Follow the range rules and approved RMS hardware instructions.
- 2. Check that mounts, guards, fasteners and cables are secure. Keep people, animals, hands, clothing and loose objects away from the mechanism.
- 3. Maintain visual control of the target area. A phone display, Bluetooth status or score is not proof that the area is safe.
- 4. If motion is unexpected or RMS becomes unresponsive, stop firing and keep clear. Follow the approved hardware shutdown procedure when safe.

Distance and target selection

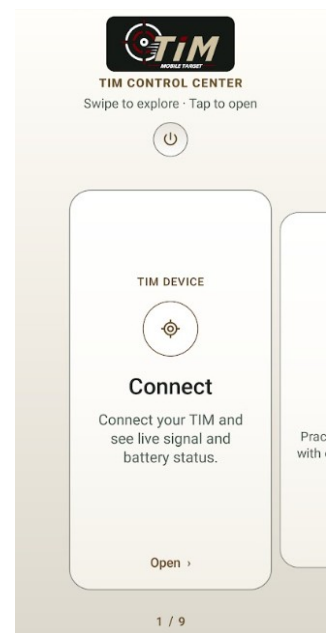
The supplied app displays a minimum distance of 10 yd (30 ft / approximately 9.1 m) before challenge play. This is an app competition rule, not a universal safe shooting distance. Use any greater distance required for your target, ammunition or range.

XXXX — Approved hardware model/revision, projectile limits, safe distances and hardware shutdown procedure. Confirm before customer publication.

Requirement	What you need
Phone	Android 13 or later is the stated customer support baseline; Bluetooth Low Energy and a working camera.
RMS hardware	A compatible RMS unit, power source and approved physical target. Hardware revision must match its own operating instructions.
Permissions	Bluetooth / Nearby Devices for connection; Camera for target photographs. Android wording can vary.
Internet	Required for accounts, cloud results, private challenges, rankings, website access and online firmware downloads.
Offline operation	Basic Bluetooth training and local photo analysis can work offline. Online results and synchronization need a connection.

Photo detection and scoring are training aids. Review the photograph and every hit marker before accepting a result.

First use and home navigation



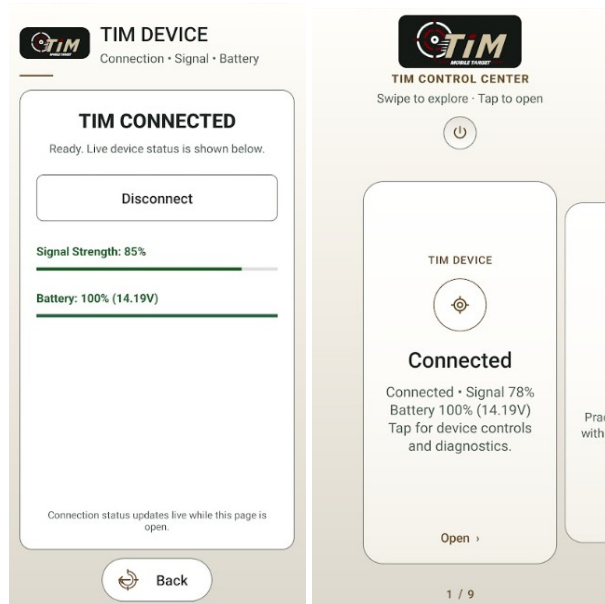
- 1. Install RMS from the approved Google Play listing. Open the app and read the Safety Agreement before accepting it.
- 2. Complete the introductory tutorial. Swipe horizontally through the home tiles; tap a tile to open its page.
- 3. Use BACK to return. The carousel remembers its previous position.
- 4. To close the app, use the Close RMS icon above the tiles, then confirm Close RMS. Cancel returns without closing.

Home tile	Purpose
CONNECT / CONNECTED	Connect the hardware and view live signal and battery status.
ACCURACY TRAINING / REACTION TRAINING	Free practice with adjustable movement controls.
ACCURACY CHALLENGE / REACTION CHALLENGE	Separate 21-level challenge paths.
CHALLENGE A FRIEND	Private matches, invitations, results and history.
LEADERBOARD	Accuracy and Reaction Hall of Fame.
HELP & USER MANUAL / SETTINGS	Help, appearance, accounts, system information and resets.

Closing sends stop/neutral commands when connected, then disconnects Bluetooth. Verify that the mechanism has stopped before approaching it. Closing is blocked while a firmware update or its verification is active.

XXXX — [Final Google Play listing link.](#)

Connect to RMS



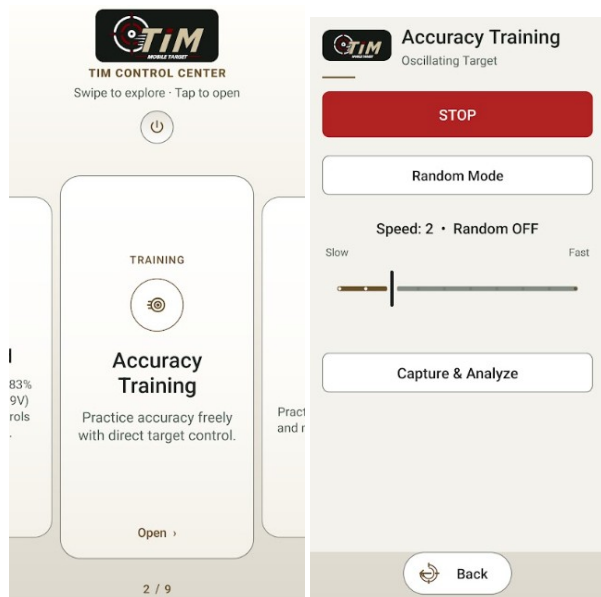
1. Power on RMS using the approved hardware procedure. Enable Bluetooth on your phone.
2. On home, open CONNECT. Tap Connect and allow the Bluetooth / Nearby Devices permission if requested.
3. Select your RMS device from the scan results. Wait for RMS CONNECTED.
4. Check signal and battery readings before opening a training or challenge mode.
5. To end the connection, stop the active mode and tap Disconnect.

Indicator	Meaning
RMS CONNECTED	The Bluetooth connection is active; it does not confirm motor position.
Signal Strength	Relative received signal. Green: 40–100%; yellow: 10–39%; red: 0–9%. It is not a distance measurement.
Battery	Reported percentage and voltage when available. Dashes mean the reading is unavailable; percentage is not a guaranteed remaining runtime.
Disconnected controls	Movement controls may be unavailable until RMS reconnects.

If connection fails

Check RMS power, Bluetooth and Android Settings → Apps → RMS → Permissions. Rescan and select the correct device. Improve the wireless link only from a safe location. A disconnected phone is not proof that all physical movement has stopped.

Accuracy Training



1. Connect RMS and open ACCURACY TRAINING. Keep the mechanism clear.
2. Press START. The Speed slider and Random Mode control become available.
3. For direct control, set Speed from 0 to 9. The numbers are device settings, not measured movement speeds.
4. Tap Random Mode to let RMS vary the movement and speed. Tap it again to return to direct control.
5. Press STOP to end the session. Stop firing and make the area safe before using Capture & Analyze.

Disabled controls

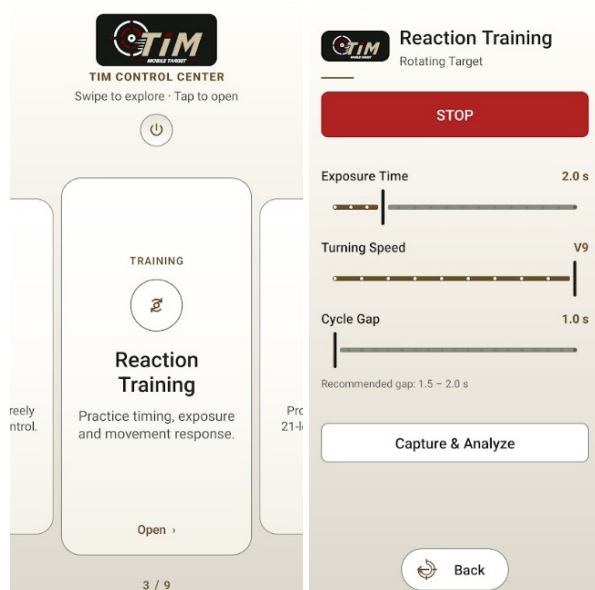
Controls are dimmed when the connection or running state does not allow an action. The app permits only one active target-control mode; stop the current mode before starting another.

Review a practice target

Capture & Analyze opens the photo workflow. Inspect the detected hits, correct genuine detection errors and select Confirm & Score. Practice results do not by themselves complete a challenge level.

Use STOP deliberately before leaving the screen or approaching the target. Do not use a navigation action as your safety check.

Reaction Training



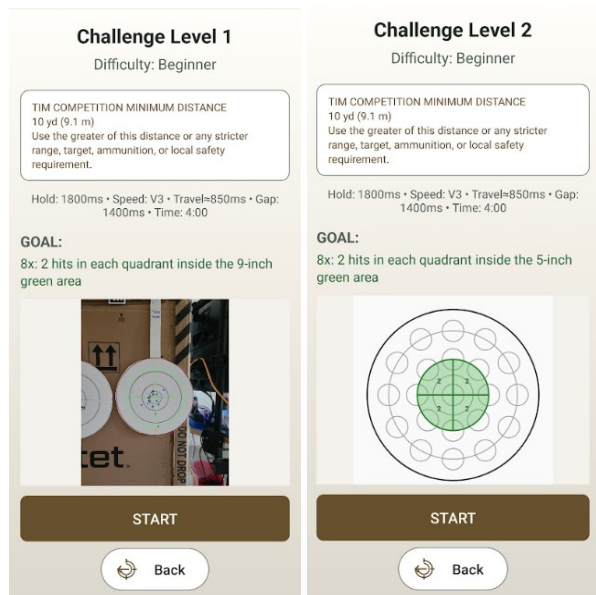
1. Connect RMS and open REACTION TRAINING. Press START to enable the controls.
2. Set Exposure Time: the interval during which the target faces you.
3. Set Turning Speed, then review the displayed recommended Cycle Gap.
4. Set Cycle Gap within the selectable range. The gap controls scheduling between cycles.
5. Press STOP when finished. RMS is commanded back to center; wait for motion to stop before approaching.

Control	Available range
Exposure Time	0.5–8.0 seconds, in 0.5-second steps.
Turning Speed	V0–V9; device rotation-speed settings.
Cycle Gap	1.0–10.0 seconds, in 0.5-second steps.

The current app schedules changing left/right commands. Actual movement depends on the installed firmware. Follow the behavior of the approved hardware/firmware combination.

Displayed gap guidance: V0–V3: 0.6–1.0 s; V4: 0.7–1.1 s; V5: 0.8–1.2 s; V6: 0.9–1.4 s; V7: 1.0–1.5 s; V8: 1.3–1.8 s; V9: 1.5–2.0 s. The slider starts at 1.0 s, so choose a selectable value within the recommendation.

Complete a challenge



1. Open ACCURACY CHALLENGE or REACTION CHALLENGE and choose an unlocked level.
2. Read its hit goal and study the green zones. Prepare a target where this attempt's hits can be identified clearly.
3. Press START, read the distance notice, check the acknowledgment, then select CONFIRM & START.
4. Complete the required pattern before time expires. Press STOP only if you want to finish the attempt early.
5. After time-up or STOP, select Capture & Analyze, review the photo and press Confirm & Score.

STOP ends the timed attempt; it does not pause it. RUN FINISHED, TIME UP or COMPLETED means that run cannot simply be restarted with START.

Accuracy and Reaction have separate progress. Pass the required level to unlock the next. Level 21 is Sharpshooter in Accuracy and Marksman in Reaction. The illustrated reference on pages 17–23 lists the patterns and settings.

Each required zone needs its specified hits. A sufficient total alone is not enough. Current public templates allow zero misses outside the target and zero hits outside required zones. One hit can satisfy only one zone.

Reaction capture can reposition RMS for its photograph. Stay clear until the mechanism settles, then make the range safe before approaching.

08 / TARGET PHOTOGRAPHY

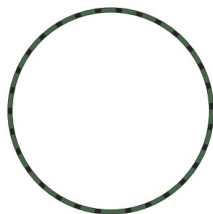
Take a scoring photo

A clear, square-on photograph is essential. Tilt or a mismatched capture outline can misplace scoring zones or cause analysis to fail. Check the whole target before taking the picture.

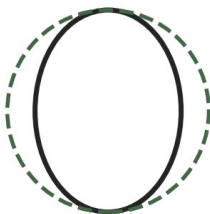
Before approaching: stop firing, make the range safe and wait for RMS to stop moving. Follow the range procedure before entering the target area.

1. Prepare the view. Clean the camera lens. Use even light so holes and printed lines are clear. Avoid glare and shadows from your phone or body. Keep the target flat and its reference markers visible.
2. Center the camera lens. Open Capture & Analyze and allow Camera access. Position the rear camera lens directly in front of the target center, at the same height. Align the lens—not the middle of the phone.
3. Keep the phone parallel. Hold the phone face parallel to the target face. Do not tip it up/down or turn it left/right. Move your body and phone together to center the view; do not lean the phone toward the target.
4. Match the outer edge. Move straight closer or farther away until the circular guide follows the actual outer target circle—not an inner ring or the paper edge. Check the top, bottom, left and right together. Keep the printed target upright.
5. Hold still and capture. Wait for a sharp, steady view. If the target looks oval, one side is larger, or only part of the edge matches, correct the angle and recheck the size. Take the photo only when the complete outline agrees.

MATCH THE EDGE



RETAKE: TILTED



RETAKE: OFF CENTER

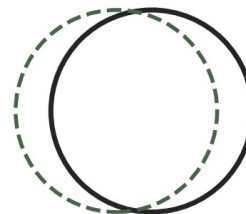
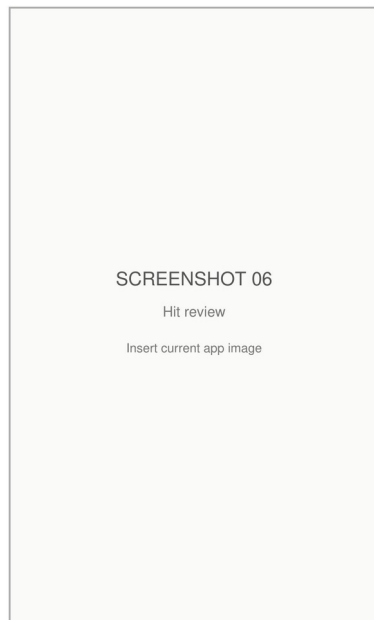


Illustration only. Dashed green = capture guide; black = target edge. Matching the center alone is not enough.

Retake before scoring if the edge, sharpness or lighting is wrong. Hit-marker edits cannot correct a tilted or incorrectly framed photograph. Review the captured result using the next page.

Review the scoring photo



1. Allow Camera access. Photograph the full target straight on, in even light. Keep its printed reference markers visible.
2. Pinch to zoom and drag to inspect the photograph. Check every marked hit against an actual hole.
3. Tap a real, unmarked hole to add a manual marker. Tap an automatic false detection to exclude it; tap again to restore it.
4. Tap an unwanted manual marker to remove it. Retake a poor photo instead of forcing an unreliable result.
5. Press Confirm & Score only after reviewing the whole target. Read the result and any evidence message.

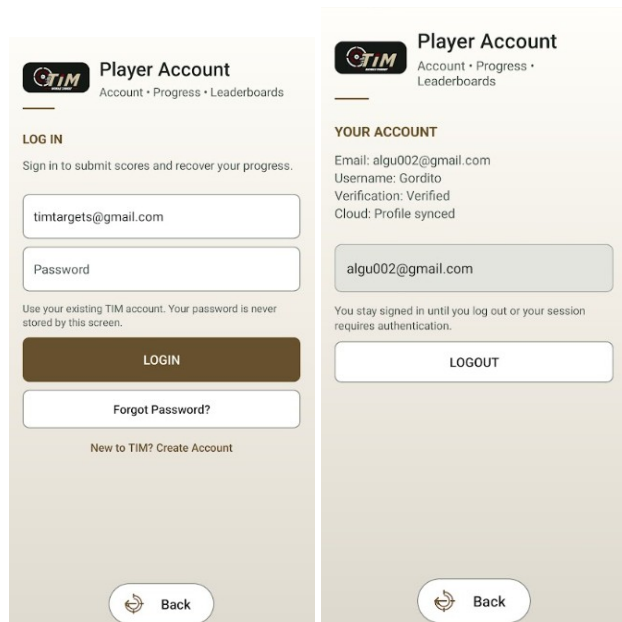
06 Capture the full target with automatic, manual and excluded markers, plus Confirm & Score.

Live review marker	Meaning
Red circle	Automatic detection.
Blue / cyan circle	Manual correction added by you.
Orange X	Excluded automatic detection. Additional debug overlays, if enabled, can also mark rejected hits.
Green geometry	Challenge zones when shown; compare with the active level.

Saved proof-image colors can differ from the live review overlay in this build. Use the live review controls and result message to interpret the attempt.

Retake requests mean improve framing, lighting or sharpness and photograph the same finished target again. Do not add shots to repair a completed attempt. SUBMIT FOR HUMAN REVIEW, when offered, sends an ambiguous result for review; it does not guarantee acceptance.

Account and public rankings



1. Open SETTINGS → ACCOUNT / LOGIN. Choose New to RMS? Create Account if the login form is showing.
2. Enter your email, password, password confirmation and unique public username. Check the username carefully before creating the account.
3. Create the account. RMS sends the verification email automatically. Read the notice, then check inbox and spam/junk.
4. Open the verification link and return to RMS to refresh your status. Use RESEND VERIFICATION EMAIL if the unverified-account view offers it.
5. For later visits, log in with your registered email and password. Use Forgot Password? for email recovery.

Your public leaderboard username is permanent and cannot be changed after account creation.

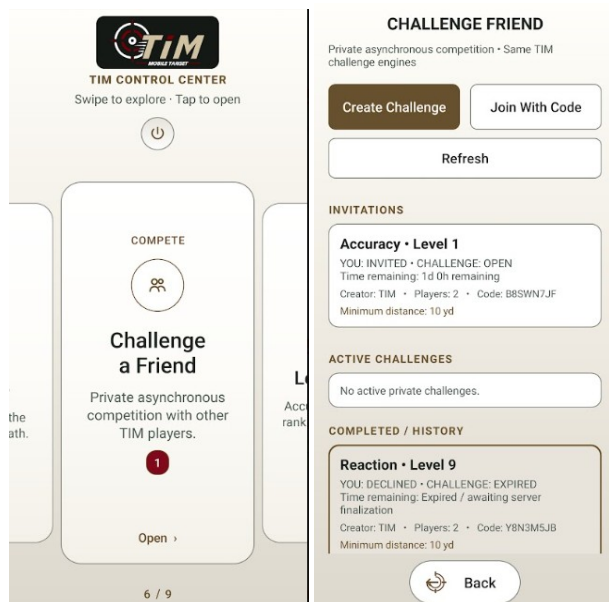
LOGOUT ends the signed-in session. Cloud progress recovery depends on successful synchronization; do not assume every local proof image or pending result has already been backed up.

Find public results

Home → LEADERBOARD → select Accuracy or Reaction rankings. Each level reserves the top three Hall of Fame positions. A local pass, an accepted online submission and a top-three position are different outcomes.

Online competition requires account eligibility, internet and accepted evidence. Check verification and review status if a result is missing. A valid score may still fall outside the top three.

Challenge a Friend



1. Open CHALLENGE A FRIEND with a verified account and internet access. Select Create Challenge.
2. Choose Accuracy or Reaction and a level. Search by the beginning of a permanent username and add 1-5 opponents.
3. Choose expiration: 1 hour, 24 hours, 3 days or 1 week. Create the match and share its code if needed.
4. To join, accept an invitation or use Join With Code. Accepting an invitation does not move RMS.
5. Open the match details, then use Start or Resume when offered. Complete the normal distance confirmation, timed attempt and photo review.

Players compete at different times. The match stores its settings when created; follow the match details if they differ from the public level reference. The home tile can show a pending-invitation badge.

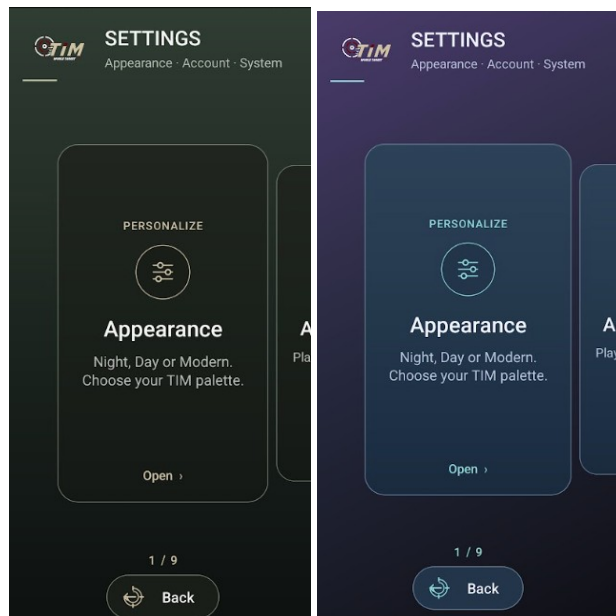
Results and recovery

Scores stay hidden until you finish your attempt or the match is finalized. Use Refresh for the latest state. RESULT SYNC PENDING means a saved result still needs synchronization: restore internet, tap Refresh and keep app data intact.

COMPLETED / HISTORY shows available results and proof images. Use Rematch when offered. Attempt availability is controlled by the current match; follow the actions shown.

The creator can cancel an unfinished challenge. Cancellation cannot be undone; completed results remain in history.

Appearance and settings



1. From home, open SETTINGS and swipe to the option you need.
2. Open APPEARANCE to choose Night, Day or Modern. The selection is saved on this phone.
3. Use SYSTEM INFORMATION for app and connected-device diagnostics, firmware information and updates.
4. Use SAFETY AGREEMENT to review the accepted terms or VIEW TUTORIAL AGAIN to replay onboarding.

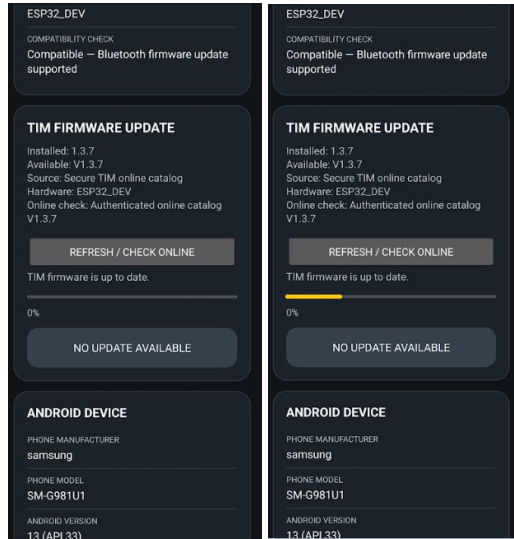
Option	What it does
ACCOUNT / LOGIN	Account creation, sign-in, email verification, password recovery and logout.
RMS STORE	Shows store information and opens RangeMotionSystems.com for purchasing. Internet is required for the website.
HELP & USER MANUAL on home	Opens local help, troubleshooting and support. Full manual/PDF links require published destinations.
RESET ACCURACY / RESET REACTION	Resets the selected challenge path to Level 1 and clears saved proof images.

RESET WARNING: The selected challenge reset cannot be undone. Read the confirmation and choose Cancel unless you intend to erase that progress and its saved proof images.

To reset intentionally: open the appropriate RESET tile, review the warning, then tap Reset. This is not an account-deletion command. Close RMS is now on the home screen, above the tiles.

Update RMS firmware

Before updating: stop training, keep clear of the mechanism, keep RMS powered on and keep the phone near it. Stay on the update page until completion is verified.



1. Connect RMS. Tap the home firmware notice when available, or open SETTINGS → SYSTEM INFORMATION.
2. Select REFRESH / CHECK ONLINE. Review the installed and available firmware, compatibility message and release notes.
3. When enabled, select UPDATE RMS TO V... . Read the confirmation and choose UPDATE RMS, or NOT NOW to postpone.
4. Wait through download, verification, Bluetooth transfer and RMS restart. The screen stays awake and dims during active Bluetooth transfer.
5. Wait for the update-complete message confirming that RMS restarted and reported the expected version.

Reaching 100% transfer is not the same as a verified installation. The app reconnects and checks the reported firmware after restart. Do not close the app or interrupt power during this process.

Online downloads need internet on the phone; the firmware is then sent to RMS over Bluetooth. An approved bundled fallback may be available without downloading a new package. Merely displaying the home notice does not install anything.

The supplied updater accepts only its supported hardware/protocol combination. A compatibility block must be resolved with the correct app and firmware; do not bypass it. If verification fails, note the exact message, reconnect when instructed and contact support.

Troubleshooting

Problem	First actions
RMS will not connect	Check RMS power, Bluetooth and Nearby Devices permission. Rescan and choose the correct unit.
START is disabled	Connect RMS and stop another active mode. A finished challenge run must be scored rather than restarted.
Connected but no motion	Check the displayed error and running state. Stop firing; inspect power or obstruction only after safe shutdown.
Bluetooth disconnects	Stop firing and keep clear. Reconnect from a safe location. Check signal and battery; do not infer motor position from link status.
Camera does not open	Allow Camera in Android app permissions. Close another app using the camera and try again.
Photo or hit detection is poor	Include the complete target and reference markers. Use even light and a square-on, steady photo. Correct only genuine detection errors.
Level remains locked	Check that the preceding level passed, including all zone requirements. Accuracy and Reaction progress are separate.
Public score is missing	Check account verification, internet, review status and ranking eligibility. Only three public places are reserved per level.
Private result is pending	Keep app data intact, restore internet and select Refresh in Challenge Friend.
Verification email is missing	Check spam/junk and email spelling. Use the available resend action, then return to RMS after following the link.
Update unavailable or blocked	Check connected-device identity, compatibility and internet. NO UPDATE AVAILABLE alone does not prove an online check succeeded.
Firmware reached 100%	Wait for restart, reconnection and version verification. Read the final success/failure message.
Manual/PDF link is disabled	The published destination may not yet be configured. Use local help and support email.

Before clearing data or reinstalling

This can remove local settings, proof images and pending results. Preserve needed evidence and check synchronization first. Contact support with diagnostics if the app or hardware remains unresponsive.

Care and customer support

Before each session

1. Inspect the target, mounts, guards, fasteners, wiring and moving parts for damage, looseness or obstruction.
2. Stop using damaged or unstable equipment. Follow approved hardware instructions before touching or servicing it.
3. Replace damaged targets and consumables as specified by RMS. Keep the phone camera lens clean for reliable photographs.

XXXX — Approved charging, battery/charger specifications, cleaning method, environmental limits, consumables and service procedure.

Get help

Email: support@rangemotionsystems.com

Website: RangeMotionSystems.com

In the app: home → HELP & USER MANUAL. For diagnostics: SETTINGS → SYSTEM INFORMATION → COPY DIAGNOSTICS.

1. Describe the problem and the steps that caused it. Include the mode, challenge level and exact error message.
2. Include phone model, Android version, app/source revision, connected RMS hardware identity and firmware version where reported.
3. Attach a screenshot or target photograph if it helps explain the problem. Remove private account details and never send a password.

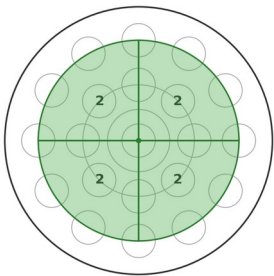
Common questions

Question	Answer
Do I need an account to practice?	Basic local practice does not require an online account. Online competition uses account and verification checks.
Can both modes run together?	The app enforces one active target-control owner. Stop the current mode first.
Does STOP pause a challenge?	No. It ends that timed run early and enables scoring.
Can I change my username?	No. The public username is permanent.
Does an app update update RMS too?	No. App software and RMS firmware are separate. Use the firmware update process when offered.

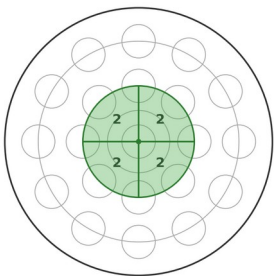
Challenge levels 1 to 3

Both modes use these patterns. Green marks required zones. Numbers show hits per zone; unnumbered green zones need one hit each. Time is minutes:seconds.

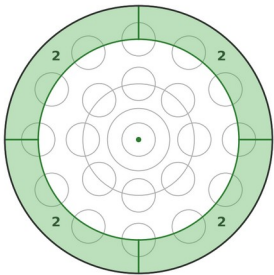
Level 1

Target pattern	Goal and settings
	8 hits Time limit 4:00 2 hits in each quadrant inside the 9-inch green area. Accuracy: Fixed speed 0. Reaction: exposure 1.80 s; speed V3; gap 1.40 s.

Level 2

Target pattern	Goal and settings
	8 hits Time limit 4:00 2 hits in each quadrant inside the 5-inch green area. Accuracy: Fixed speed 1. Reaction: exposure 1.80 s; speed V3; gap 1.40 s.

Level 3

Target pattern	Goal and settings
	8 hits Time limit 4:00 2 hits in each quadrant of the outer ring. Accuracy: Fixed speed 2. Reaction: exposure 1.80 s; speed V3; gap 1.40 s.

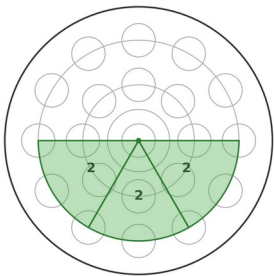
All levels: zero misses outside the target and zero hits outside required zones. One hit can satisfy only one zone. Reaction uses randomized direction commands; firmware determines physical response.

Reference illustrations only. Use approved RMS target artwork at its specified physical size.

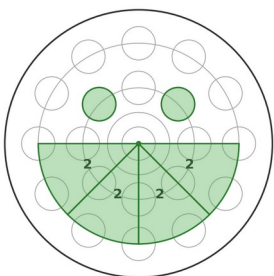
Challenge levels 4 to 6

Both modes use these patterns. Green marks required zones. Numbers show hits per zone; unnumbered green zones need one hit each. Time is minutes:seconds.

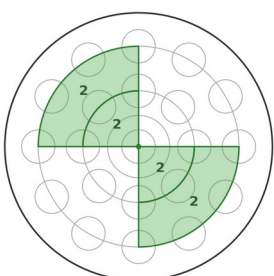
Level 4

Target pattern	Goal and settings
	6 hits Time limit 3:45 2 hits in each of 3 lower target sectors. Accuracy: Fixed speed 3. Reaction: exposure 1.60 s; speed V4; gap 1.20 s.

Level 5

Target pattern	Goal and settings
	10 hits Time limit 3:45 2 in each of four lower sectors + 1 in each top circle. Accuracy: Fixed speed 4. Reaction: exposure 1.60 s; speed V4; gap 1.20 s.

Level 6

Target pattern	Goal and settings
	8 hits Time limit 3:45 2 hits in each inner/outer zone of the two diagonal quarters. Accuracy: Fixed speed 5. Reaction: exposure 1.60 s; speed V4; gap 1.20 s.

All levels: zero misses outside the target and zero hits outside required zones. One hit can satisfy only one zone. Reaction uses randomized direction commands; firmware determines physical response.

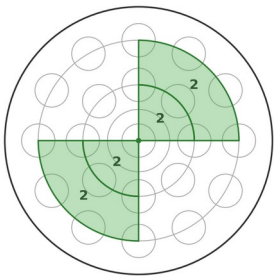
Reference illustrations only. Use approved RMS target artwork at its specified physical size.

A / RMS MOBILE TARGET

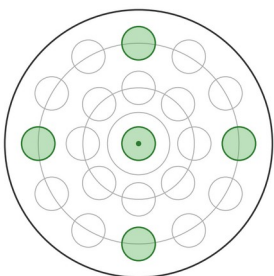
Challenge levels 7 to 9

Both modes use these patterns. Green marks required zones. Numbers show hits per zone; unnumbered green zones need one hit each. Time is minutes:seconds.

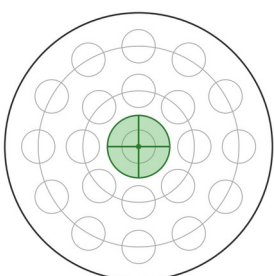
Level 7

Target pattern	Goal and settings
	8 hits Time limit 3:30 2 in each inner/outer zone of the upper-right and lower-left quarters. Accuracy: Fixed speed 6. Reaction: exposure 1.40 s; speed V5; gap 1.00 s.

Level 8

Target pattern	Goal and settings
	5 hits Time limit 3:30 1 hit in each outer cardinal circle + 1 center hit. Accuracy: Fixed speed 7. Reaction: exposure 1.40 s; speed V5; gap 1.00 s.

Level 9

Target pattern	Goal and settings
	4 hits Time limit 3:30 1 hit in each quadrant of the small center circle. Accuracy: Fixed speed 9. Reaction: exposure 1.40 s; speed V5; gap 1.00 s.

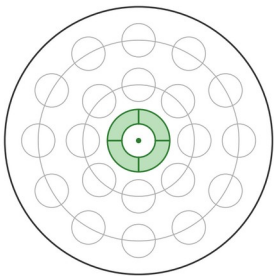
All levels: zero misses outside the target and zero hits outside required zones. One hit can satisfy only one zone. Reaction uses randomized direction commands; firmware determines physical response.

Reference illustrations only. Use approved RMS target artwork at its specified physical size.

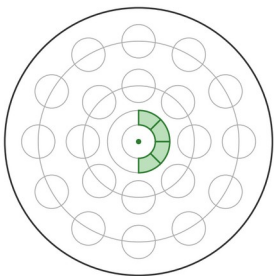
Challenge levels 10 to 12

Both modes use these patterns. Green marks required zones. Numbers show hits per zone; unnumbered green zones need one hit each. Time is minutes:seconds.

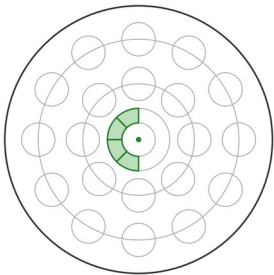
Level 10

Target pattern	Goal and settings
	4 hits Time limit 3:15 1 hit in each quadrant of the small green ring. Accuracy: Random speeds 5–9; pulse updates 0.5–0.9 s. Reaction: exposure 1.20 s; speed V6; gap 0.90 s.

Level 11

Target pattern	Goal and settings
	4 hits Time limit 3:15 1 hit in each right-side small-ring sector. Accuracy: Random speeds 5–9; pulse updates 0.5–0.9 s. Reaction: exposure 1.20 s; speed V6; gap 0.90 s.

Level 12

Target pattern	Goal and settings
	4 hits Time limit 3:15 1 hit in each left-side small-ring sector. Accuracy: Random speeds 5–9; pulse updates 0.5–0.9 s. Reaction: exposure 1.20 s; speed V6; gap 0.90 s.

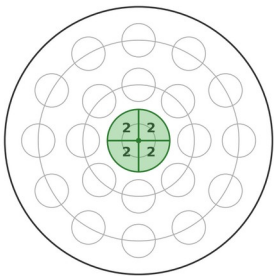
All levels: zero misses outside the target and zero hits outside required zones. One hit can satisfy only one zone. Reaction uses randomized direction commands; firmware determines physical response.

Reference illustrations only. Use approved RMS target artwork at its specified physical size.

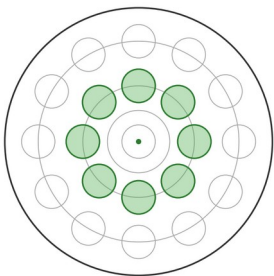
Challenge levels 13 to 15

Both modes use these patterns. Green marks required zones. Numbers show hits per zone; unnumbered green zones need one hit each. Time is minutes:seconds.

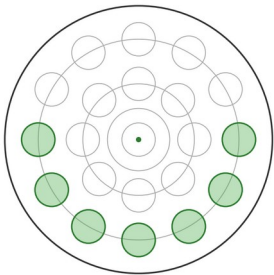
Level 13

Target pattern	Goal and settings
	8 hits Time limit 3:00 2 hits in each quadrant of the small center circle. Accuracy: Random speeds 5–9; pulse updates 0.5–0.9 s. Reaction: exposure 1.00 s; speed V7; gap 0.80 s.

Level 14

Target pattern	Goal and settings
	8 hits Time limit 3:00 1 hit in each inner-ring green circle. Accuracy: Random speeds 5–9; pulse updates 0.5–0.9 s. Reaction: exposure 1.00 s; speed V7; gap 0.80 s.

Level 15

Target pattern	Goal and settings
	7 hits Time limit 3:00 1 hit in each bottom outer-ring green circle. Accuracy: Random speeds 5–9; pulse updates 0.5–0.9 s. Reaction: exposure 1.00 s; speed V7; gap 0.80 s.

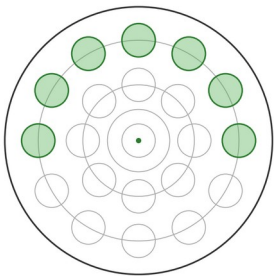
All levels: zero misses outside the target and zero hits outside required zones. One hit can satisfy only one zone. Reaction uses randomized direction commands; firmware determines physical response.

Reference illustrations only. Use approved RMS target artwork at its specified physical size.

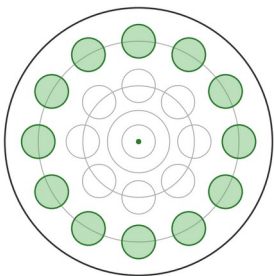
Challenge levels 16 to 18

Both modes use these patterns. Green marks required zones. Numbers show hits per zone; unnumbered green zones need one hit each. Time is minutes:seconds.

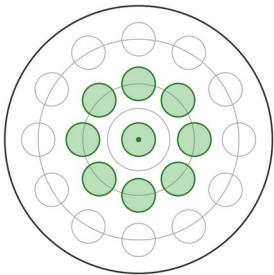
Level 16

Target pattern	Goal and settings
	7 hits Time limit 2:45 1 hit in each top outer-ring green circle. Accuracy: Random speeds 5–9; pulse updates 0.5–0.9 s. Reaction: exposure 0.85 s; speed V8; gap 0.70 s.

Level 17

Target pattern	Goal and settings
	12 hits Time limit 2:45 1 hit in every outer-ring green circle. Accuracy: Random speeds 5–9; pulse updates 0.5–0.9 s. Reaction: exposure 0.85 s; speed V8; gap 0.70 s.

Level 18

Target pattern	Goal and settings
	9 hits Time limit 2:45 1 hit in every inner-ring circle + 1 center. Accuracy: Random speeds 5–9; pulse updates 0.5–0.9 s. Reaction: exposure 0.85 s; speed V8; gap 0.70 s.

All levels: zero misses outside the target and zero hits outside required zones. One hit can satisfy only one zone. Reaction uses randomized direction commands; firmware determines physical response.

Reference illustrations only. Use approved RMS target artwork at its specified physical size.

Challenge levels 19 to 21

Both modes use these patterns. Green marks required zones. Numbers show hits per zone; unnumbered green zones need one hit each. Time is minutes:seconds.

Level 19

Target pattern	Goal and settings
	8 hits Time limit 2:30 1 hit at each outer cardinal + inner diagonal circle. Accuracy: Random speeds 5-9; pulse updates 0.5-0.9 s. Reaction: exposure 0.70 s; speed V9; gap 0.65 s.

Level 20

Target pattern	Goal and settings
	20 hits Time limit 2:30 1 hit in every outer + inner green circle. Accuracy: Speed 9; pulse commands at start. Reaction: exposure 0.70 s; speed V9; gap 0.65 s.

Level 21 / Sharpshooter and Marksman

Target pattern	Goal and settings
	21 hits Time limit 2:15 1 hit in every green circle including center. Accuracy: Speed 9; pulse commands at start. Reaction: exposure 0.60 s; speed V9; gap 0.60 s.

All levels: zero misses outside the target and zero hits outside required zones. One hit can satisfy only one zone. Reaction uses randomized direction commands; firmware determines physical response.

Reference illustrations only. Use approved RMS target artwork at its specified physical size.

Revision and publication checklist

Document Rev. 0.6 | September 25, 2026

Prepared against the supplied Android app source dated September 21, 2026 (online OTA test build). The included Gradle file declares app version 1.0; source release status remains TEST. Confirm the production app label before publication.

Revision	Change
0.1	Original screenshot-led manual and challenge appendix.
0.4	Current home/settings navigation, home close action, firmware notices and updates, private challenges, revised level goals and labeled screenshot spaces.
0.5–0.6	Rev. 0.5 added target-photo alignment and retake guidance. Rev. 0.6 rebranded the manual to RMS / RangeMotion Systems and updated web/support references.

Items to approve before release

XXXX — Production app version, supported customer hardware revision, hardware safety/charging limits, store link, published manual/PDF links and warranty/service terms.

The updater in this source is gated to ESP32_DEV hardware and BLE protocol 2. Confirm the customer hardware profile before publishing a general firmware-update promise. Physical firmware behavior was not tested for this document.

The 10 yd app distance rule is marked pre-production in source. Approve it separately from hardware safety distances. Live review and saved proof-image marker colors differ in this build; verify final screenshots against the installed release.

Screenshot replacement checklist

- 01 Home screen — Show a home tile, swipe hint, Close RMS icon and a firmware notice if available.
- 02 RMS Device — Capture the connected state with Connect/Disconnect, signal percentage and battery voltage visible.
- 03 Accuracy Training — Capture connected, running controls with Speed and Random Mode visible.
- 04 Reaction Training — Capture the three sliders, recommended gap, START/STOP and Capture & Analyze.
- 05 Challenge level — Capture a ready level with target pattern, goal, timer and START; use a second image later for the distance dialog if needed.
- 06 Hit review — Capture the full target with automatic, manual and excluded markers, plus Confirm & Score.
- 07 Player Account — Capture registration fields and the permanent username notice; hide personal information.
- 08 Private challenge — Capture match details showing level, participants, expiration and Start/Resume; hide private codes.
- 09 Settings carousel — Capture Settings with the Appearance tile; optionally replace with a small montage of the three themes.
- 10 Firmware update — Capture installed/available version, source, progress and update button in System Information.

Capture one consistent appearance theme, use a demonstration account, and show the entire relevant control area. Replace each placeholder without stretching the screenshot. Recheck page breaks and captions after insertion.