INRECOIL

SHOOTER FAULT DIAGNOSTIC MANUAL

PRECISION MARKSMANSHIP ERROR ANALYSIS & TECHNICAL CORRECTIONS

Site: inrecoil.com
Discipline: Handgun & Precision Target Shooting
CALIBRATED FOR RIGHT-HANDED (MIRRORED FOR LEFT)



How to Read the Diagnostic Clock

In precision handgun marksmanship, bullet impacts that stray from the 10-ring are not random accidents; they are **geometric signatures** of specific neuromuscular flaws. By analyzing where your group is landing, you can reverse-engineer whether your error is rooted in finger placement, wrist firmness, sympathetic grasping, or optical fatigue.

This reference manual catalogues all 14 classical shooter faults, mapping their mechanical causes to precise target coordinates and actionable coaching corrections.

> **Left-Handed Marksman Orientation:** The descriptions and diagram reflect right-handed shooters. For left-handed athletes, horizontal drift is reversed (Left ↔ Right), while vertical displacement (High & Low) remains identical.

1. TRIGGER DYNAMICS & FINGER PLACEMENT FAULTS

MECHANICAL & FORCE VECTOR ERRORS

TERM	BIOMECHANICAL ERROR (ROOT CAUSE)	TARGET RESULT (RIGHT HAND)	INRECOIL TECHNICAL REMEDY
Snatching	Sudden, abrupt movement applying lateral pressure with the finger to the **outside** of the trigger shoe rather than straight rearward.	↘ Right & Low (4–5 o'clock)	Center index pad squarely; apply continuous, uninterrupted rearward pressure.
Jerking	Sudden, violent contraction applying lateral pressure with the finger to the **inside** of the trigger shoe during break.	↙ Left & Low (7–8 o'clock)	Isolate distal index phalanx; condition autonomous surprise break without snatching.
Pushing	**Too much finger** inserted through the trigger guard. The second joint (middle phalanx) levers against the shoe, physically pushing the muzzle off target.	↖ Left & (often) High (9–10 o'clock)	Back finger out until center of swirl on first pad rests on trigger shoe. Maintain daylight with frame.
Pulling	**Too little finger** applied to the trigger shoe (tip only). As pressure increases, the second joint curls inward, dragging the pistol off target to the right.	↘ Right & (often) Low (3–4 o'clock)	Increase finger depth slightly; ensure trigger vector runs parallel to bore axis.

2. RECOIL ANTICIPATION & FOLLOW-THROUGH BREAKDOWNS

NEUROLOGICAL & LATENCY FAILURES

TERM	BIOMECHANICAL ERROR (ROOT CAUSE)	TARGET RESULT (RIGHT HAND)	INRECOIL TECHNICAL REMEDY
Anticipating	Tensing arm, wrist, and shoulder musculature fractions of a second before discharge in an unconscious attempt to resist or fight upcoming recoil.	↗ Right & High (12–1 o'clock)	Ball-and-dummy live/dummy drills; accept recoil as a harmless post-shot event.
Lacking Follow-Through (a)	**Premature wrist relaxation:** The shooter relaxes carpal extensor muscles fractions of a second before or during discharge, collapsing the wrist joint.	↗ Right & High (1–2 o'clock)	Mandatory 2.0-second hold freeze after release; maintain isometric wrist lock.
Lacking Follow-Through (b)	**Premature elbow relaxation:** The shooter unlocks or bends the elbow joint during sear release, absorbing recoil prematurely through the forearm.	↖ Left & High (10–11 o'clock)	Lock elbow joint into solid skeletal alignment without hyperextending; hold position.

3. GRIP PRESSURE DYNAMICS & HAND TORQUE

CONTACT DISTRIBUTION & CLAMPING ERRORS

TERM	BIOMECHANICAL ERROR (ROOT CAUSE)	TARGET RESULT (RIGHT HAND)	INRECOIL TECHNICAL REMEDY
Under-Gripping	Lack of firmness in grip (<30% tension). The loose purchase allows the firearm to roll and slip toward the open side of the hand (away from palm) during trigger compression.	↙ Left & Low (7–8 o'clock)	Maintain steady 50% "firm handshake" pressure front-to-back into web of hand.
Heeling	Gripping excessively tight with the lower palm, forcing the heel of the hand (hypothenar eminence) forward and driving the muzzle upward and outward.	↗ Right & High (1–2 o'clock)	Adjust palm shelf down; relieve pressure from lower heel; seat gun high in beaver-tail.
Thumbing	Applying excessive lateral inward pressure with the thumb against the frame or thumb rest, pushing the muzzle out of alignment at release.	↘ Right & Low (3–5 o'clock)	Rest thumb passively forward on the shelf; never squeeze inward or clamp down.
Fingertipping	Squeezing too hard with the tips of the bottom fingers (ring and little/pinky digits). Flexor digiti minimi activation pulls the wrist joint downward and left.	↙ Left & Low (6–7 o'clock)	Relax the pinky finger completely; support firearm mass predominantly with middle finger.

4. OPTICAL ALIGNMENT & SIGHT GEOMETRY ERRORS

PARALLEL VS. ANGULAR DISPLACEMENT

TERM	BIOMECHANICAL / OPTICAL ERROR	TARGET RESULT	SEVERITY & TECHNICAL FIX
Parallel Error	The in-focus relationship between front post and rear notch is **flawlessly aligned**, but the entire sight picture has drifted slightly off the bullseye center within the wobble zone.	• Ring 8, 9, or 10 (Centered Dispersion)	**Least Harmful Error:** Accept the Minimum Arc of Movement! Continue smooth trigger squeeze.
Angular Error	The front sight post is **misaligned within the rear notch** (unequal light bars or unlevel tops), even though the sights may be hovering directly in the center of the aiming area.	× Anywhere (Wild 5, 6, 7 or Miss)	**Catastrophic Error:** Never fire on misaligned sights. 100% visual focus on front blade serrations.

✓ Parallel Error (Area Aiming Acceptable)

A 2mm parallel displacement of the gun at 10m/25m results in exactly 2mm displacement on the target. The bullet still scores a high 9 or 10. Do not panic when the gun wobbles!

⚠ Angular Error (Fatal to Score)

A mere 1mm error in front-to-rear sight notch alignment magnifies over distance into a massive 150mm–300mm flyer at 25m/50m. Alignment trumps target positioning every time!

5. TEMPORAL, NEUROLOGICAL & PHYSIOLOGICAL BREAKDOWN

THE 8-SECOND WINDOW

TERM	PHYSIOLOGICAL BREAKDOWN	RESULT ON TARGET	INRECOIL TECHNICAL REMEDY
Overholding	Holding the firearm in position **beyond the optimal 5–8 second window**. Causes acute retinal oxygen depletion (rhodopsin foveal blur), lactic acid accumulation in the deltoid, and motor-unit tremors. As the eye loses the ability to resolve front-sight contrast, panic triggers compound faults (snatching or jerking on an enlarged wobble).	¤ Highly Erratic (Magnifies All Faults)	**The 8-Second Abort Rule:** If shot does not break cleanly by second 7 or 8, bench the gun immediately, breathe, and reset.

★ The 4 Cardinal Laws of Precision Shot Delivery

1. **Consistent Stance & Natural Point of Aim:** Establish a relaxed, skeletal platform where the gun settles naturally on the target without muscular forcing.
2. **Unbroken Front Sight Focus:** Keep dominant eye locked on the sharp top edge of the front sight post; allow the background target bullseye to remain softly blurred.
3. **Straight-Back Trigger Isolation:** Squeeze the trigger shoe smoothly, progressively, and straight rearward parallel to the bore, isolating the index finger from the grip.
4. **Focus on Process Delivery, Not Score Outcome:** Concentrate exclusively on executing mechanical steps (stance, breathing, sight, squeeze, follow-through)—never on shooting a "10".

⌖ The InRecoil Training Remedy

While mechanical and cognitive faults can creep into any marksman's routine, disciplined practice protocols will systematically inoculate your technique against error:

- **Dry-Firing** — Eliminates recoil flinch & verifies trigger vector
- **Wall-Holding** — Builds isometric shoulder endurance & shrinks wobble
- **SCATT Diagnostics** — Measures coordination factor & micro-trace speed

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