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General:  
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We recommend using colored pens for most record keeping. Colored pens will allow the shooter to clarify and emphasize important information, while retaining permanence. In contrast, we recommend using a pencil for the zero summary and moving target charts, because the shooter may find that this data will change as the shooter obtains more data.

The shooter using the loose-leaf version of the data book should elect to leave completed data pages at home in a separate notebook to protect these pages. For future updates on the data book, visit: [www.ustacticalsupply.com](http://www.ustacticalsupply.com).

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Section: Zero Summary Chart  
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**Purpose:** To allow the shooter to track elevation deviations because of changes in temperature.

**Description:** The zero summary chart lists target ranges in the left column and temperature variations across the top of the sheet in either Fahrenheit or Celsius.

**Procedure:**

1. Check either the "Yard" or the "Meter" box to indicate system being used.
2. Indicate ammunition type in the space provided. For maximum efficiency use one sheet for each weapon/ammunition combination. 4 sheets are provided.
3. Once the shooter has obtained the point of aim/point of impact at a given distance, note the elevation setting in the boxes corresponding to temperature and distance. (Use a pencil, to correct data as necessary.)
4. The shooter can extrapolate data for unfired temperature/distance conditions that have not been fired by noticing trends in your chart.
5. The shooter either should mark cold bore zeroes with a red pencil or should designate a separate zero summary chart for cold bore zeroes.

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Section: Cold Bore Data and Remarks  
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**Purpose:** To allow the shooter to track deviations in zero when firing cold bore shots. This page is not for zeroing! The shooter should use these pages only after he has zeroed his rifle and he has started developing cold bore data.

**Description:** This section consists of two facing pages: the Cold Bore Data sheet with Deviation Summary, and the Remarks page. The columns marked 1-5 on the deviation the Data sheet are for 5 different cold bore shots and correspond to the rows marked 1-5 on the Remarks page.

**Procedure:** The shooter's first shot of the day should be his cold bore shot, and should be fired through the rifle as it would be deployed. For

rifle.

The following procedure is for one cold bore shot.

1. Complete the data in the first column on the Cold Bore Data sheet.
2. Fire your shot and indicate where you saw the crosshair (or, where you think the shot went) in the "call" box at the bottom of the column.
3. Place a number "1" on the impact grid where the shot actually impacted on the target.
4. Record any remarks in the corresponding remarks space on the Remarks page.
5. By tracking this information, you will be able to predict where your cold bore shots will impact in relation to your point of aim.

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Section: Zero Data  
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**Purpose:** To allow the shooter to develop a base "zero" for his weapon. Preferably, the shooter should do all zeroing from the same distance (we recommend either 100 yards or meters). The shooter should use the other data pages (e.g., Bullseye, Stationary, and Unknown Distance Data pages) for developing true zeros for distances other than the zero range.

**Description:** This page consists of three major data areas:

1. The "shooting conditions" area (top of sheet), used to record the place, date, time, etc., along with the ambient environmental conditions.
2. The "call" box (lower left), used to record where you saw the crosshair (or, where you think the shot went).
3. The "plot" area (lower right), used to note individual shot and shot group placement.

**Procedure:**

1. Fill in the shooting conditions. To plot light conditions lay the book on the ground facing downrange. Place the point of a pencil in the middle of the circle on the dot provided and keeping the pencil vertical note the direction of the shadow. Draw an arrow in the direction of the shadow. Note mirage and humidity as "L", "M", or "H" for light or low, medium, or heavy or high. Note barometric pressure if available.
2. Note the size of the target in the box in the lower left-hand corner of the plot area.
3. Note the elevation and windage settings in the boxes provided for the first shot.
4. Fire the shot and place a dot in the call box for that shot.
5. Write a number "1" on the larger plot target where the shot impacted the target. If the shot is outside of the limits of the plot target note the location in the remarks box. For example, "Shot #1 - 7 inches out at 5 o'clock."
6. Continue the process for the remaining shots in the group. Indicate windage and elevation changes as necessary.
7. When you have placed 5 consecutive shots in the aiming area of the target, you may consider the rifle zeroed for that distance and conditions.
8. If your scope has the ability to "slip scales" the windage should be slipped to reflect the wind conditions present (if

there is 2 minutes of wind blowing from the right, then the windage should read 2 moa right). The elevation should reflect the distance fired when using a scope with a "bullet drop compensator" such as the Leupold Mk. IV M3 or slipped to "0" if using target type turrets. Consult your scope owners' manual for specific instructions.

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Section: Bullseye and Stationary Target Data

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**Purpose:** To allow the shooter to develop known distance zeros for distances other than the base zero for his weapon. Normally, these pages are used when firing at targets on a known distance NRA-style range to ensure positive distances to targets. These "KD" zeroes should be obtained prior to shooting at targets on a field firing or unknown distance range.

**Description:** This page consists of three major data areas:

1. The "shooting conditions" area (top of sheet) used to record the place, date, time, etc., along with the ambient environmental conditions.
2. The "call" box (lower left), used to record where you saw the crosshair (or, where you think the shot went).
3. The "plot" area (lower right), used to note individual shot and shot group placement.

**Procedure:**

1. Fill in the shooting conditions. To plot light conditions lay the book on the ground facing downrange. Place the point of a pencil in the middle of the circle on the dot provided and keeping the pencil vertical note the direction of the shadow. Draw an arrow in the direction of the shadow. Note mirage and humidity as "L", "M", or "H" for light or low, medium, or heavy or high. Note barometric pressure if available.
2. Note the size of the target in the box in the lower left-hand corner of the plot area.
3. Note the elevation and windage settings in the boxes provided for the first shot.
4. Fire the shot and place a dot in the call box for that shot.
5. Write a number "1" on the larger plot target where the shot impacted the target. If the shot is outside of the limits of the plot target note the location in the remarks box. For example, "Shot #1 - 7 inches out at 5 o'clock."
6. Continue the process for the remaining shots in the group. Indicate windage and elevation changes as necessary.
7. When you have placed 5 consecutive shots in the aiming area of the target, you may consider the rifle zeroed for that distance and conditions.
8. Note the sight setting on the Zero Summary chart at the corresponding distance and temperature.

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Section: Unknown Distance Data

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**Purpose:** To allow the shooter to develop intermediate zeros for his weapon.

This is when the shooter fires at targets in simulated field firing conditions that require him to locate and determine the distances to the target prior to engagement.

Description: This section consists of two facing sheets, the Range card and the Data page. They are used in conjunction with each other.

1. Range card. a) Shooter sketches an aerial view of the field firing range and then plots the location of each target on the sketch. The shooter's location is in the open space at the bottom middle of the sheet. The radiating lines represent increasing distances from the shooters position. Actual distance represented depends on the scale of the range on which the shooter is firing. If maximum distance is 500 yards, each line should represent 50 yards; if 1000 yards is the maximum, then each line equals 100 yards, etc. b) Note the distance represented by each radiating line in the box on the left side of the arcs at the base of each line. c) Write the elevation setting used for each known distance in the box under the distance. d) If you know your alternate aiming point or hold-off for these distances write the hold-off in its box. Hold-offs are used when elevation adjustments are too slow to engage multiple or moving targets. e) The information boxes on the right side of the arcs are for targets once they are noted on the card. f) If you don't have a zero for a given distance at this time leave, it blank. Once you have fired and recorded data at the distance you will acquire the data.
2. This page consists of three major data areas: a) The "shooting conditions" area (top of sheet) used to record the place, date, time, etc., along with the ambient environmental conditions. b) The "call" box (lower left), used to record where you saw the crosshair (or, where you think the shot went). c) The "plot" area (lower right), used to note individual shot and shot group placement.

- Procedure:
1. Fill in the shooting conditions. To plot light conditions lay the book on the ground facing downrange. Place the point of a pencil in the middle of the circle on the dot provided and keeping the pencil vertical note the direction of the shadow. Draw an arrow in the direction of the shadow. Note mirage and humidity as "L", "M", or "H" for light or low, medium, or heavy or high. Note barometric pressure if available.
  2. Draw the terrain sketch and note the location of each target.
  3. Determine the distance to each target on the Range card and assign a letter or number indicator to each target. The Data sheet has space for 10 targets.
  4. Write the elevation setting and hold-off (if used) for each target to be used on the range card, if known.
  5. Fill in top portion of Data sheet.
  6. Note the target designator and distance in the target data area in order of engagement.
  7. Write the initial (what you will start with) elevation and windage settings for the first target.
  8. Fire the first shot and place a number "1" for the first shot on this target in the call box. Remember this is where you think the shot went.
  9. Place a number "1" in the plot box representing your hit location.
  10. Repeat this until point of aim/point of impact is reached.
  11. It is not necessary to record all of your intermediate sight adjustments. Record final set setting in the box labeled "correct".

12. You now have a zero for a target at this distance and temperature. Log it on the zero summary chart.
13. Repeat for the remaining targets. In the call and plot boxes restart with the number "1" for each target for clarity's sake.

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Section: Moving Target Lead Summary  
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Purpose: To allow the shooter to record leads for moving targets at given speeds and distances.

Description: This section has areas where leads for targets at 3 different distances at a given target speed can be recorded.

Procedure:

1. Fill in the target speed.
2. Indicate the distance to the target.
3. Draw the sight picture for the lead you have determined to work at this distance and target speed on the silhouette provided. Note the direction of movement.
4. If using mil dot holds write the number of mils you are using at the given distance and speed.

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Section: Moving Target Data  
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Purpose: To allow the shooter to develop leads for moving targets at known distances. Normally these pages are used when firing at targets on a known distance NRA style range to ensure positive distances to targets. The book is set up for targets alternating direction of movement (L-R then R-L etc).

Description: This page consists of three major data areas:

1. The "shooting conditions" area (top of sheet) used to record the place, date, time, etc., along with the ambient environmental conditions.
2. The "call" box (lower left), used to record where you saw the crosshair (or, where you think the shot went).
3. The "plot" area (lower right), used to note individual shot and shot group placement.

Procedure:

1. Fill in the shooting conditions. To plot light conditions lay the book on the ground facing downrange. Place the point of a pencil in the middle of the circle on the dot provided and keeping the pencil vertical note the direction of the shadow. Draw an arrow in the direction of the shadow. Note mirage and humidity as "L", "M", or "H" for light or low, medium, or heavy or high. Note barometric pressure if available.
2. Note the elevation and windage settings in the boxes provided for the first shot.
3. Using information elsewhere in the data book calculate your lead for the first shot.
4. When the target moves, fire the shot and draw the lead you used on the small call target for that shot.
5. Write the number "1" on the larger plot target where the shot impacted the target. Make sure to use the plot target indicating the correct direction of movement.

6. Continue process for remainder of shots.
7. Note the leads that work for a given distance and target speed and write them in the correct box. Note this data on the Moving Target Lead Summary sheet.

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Section: Mission Sheets  
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Description: This section of the book contains the following pages:

1. Target Dimensions
2. Observation Log
3. Field Sketch
4. Range Card
5. Barrel log.

For information on the use of the tactical range cards, observation logs and field sketch sheets consult the US Army FM 23-10, Sniper Training, TC 31-32, Special Operations Sniper Training and Employment or the USMC FMFM 1-3B, Sniping.

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