**UNITED STATES MARINE CORPS**

MARKSMANSHIP TRAINING COMPANY

WEAPONS TRAINING BATTALION

TRAINING COMMAND

27211 GARAND ROAD

QUANTICO, VIRGINIA 22134-5036

**STUDENT OUTLINE**

**COACH THE USE OF DATABOOK**

**0933-MARK-2004**

**COMBAT MARKSMANSHIP COACH (CMC) COURSE**

**M02M859**

**REVISED 6/16/2015**

APPROVAL\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ DATE\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. **LEARNING OBJECTIVES**

 a. **TERMINAL LEARNING OBJECTIVES**

Given properly equipped personnel to be trained, a training area and a data book, coach the use of the data book so that the shooter's data book is filled out in accordance with MCRP 3-01A. (0933-MARK-2004)

 b. **ENABLING LEARNING OBJECTIVES**

 (1) Given properly equipped personnel to be trained, a

training area, and a data book, reinforce the use of the data book in accordance with MCRP 3-01A (0933-MARK-2004a)

 (2) Given properly equipped personnel to be trained, a

training area and a data book, analyze the before firing data in accordance with MCRP 3-01A (0933-MARK-2004b)

 (3) Given properly equipped personnel to be trained, a training area, and a data book, analyze a shooter’s during firing data, so that the shooter’s data book is filled out in accordance with MCRP 3-01A (0933-MARK-2004c)

 (4) Given properly equipped personnel to be trained, a training area, and a data book, analyze a shooter’s after firing data, so that the shooter’s data book is filled out in accordance with MCRP 3-01A (0933-MARK-2004)

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2. **REINFORCE THE USE OFA DATA BOOK.**

 A. Purpose of the Data Book. The rifle data book is the single most important tool that is available for Marines to evaluate and improve their performance and consistency. The rifle data book is used to record sight adjustments, which enable a zero to be established and maintained. It is critical that all efforts be directed toward establishing a zero setting on the service rifle that can be taken into combat. The data book provides

 (1) A precise record of weather conditions and their effect from day to day and a place to record any observations regarding the application of marksmanship fundamentals.

 (2) A documented record of information that Marines analyze to improve shooting performance.

 (3) A ready reference of “must know” information regarding marksmanship.

 (a) Shooter information: On the cover page of your data book, you’ll find 10 blank spaces for your personal pedigree information. You’ll have to fill everything out from your name, unit, weapon serial number, range, target number, relay number, last 4 and blood type. You fill all this out in the even you lose your data book, it can be returned to you. If you forget your target point and relay number you can also reference the front page to find this information.

 (b) Gun information: You’ll see on the bottom right had side of the cover page a box that says “collimator setting”. This is for once your rifle is zeroed, insert the small arms collimator back into your weapon and observe where your reticle falls in the collimator. That alpha-numeric value should be annotated in this box, along with the elevation and windage adjustments you made to zero your back up iron sights (BUIS).

 (c) Pages 1-19: The first 19 pages of your NAVMC 116660 (Rev. 02-12) Annual Rifle Training Databook are filled with important exerts from prerequisite training before arrival at the range for your annual requalification rifle training. It includes the following

 1. Safety rules

2. Weapons handling

 3. Weapons conditions and weapons commands

 4. User Serviceability Inspection

 5. Function check

 6. Corrective actions

 7. 7 Common Factors of Shooting Positions

 8. Aiming

 9. Breath Control

 10. Trigger Control

 11. Follow Through/Recoil Management

 12. Wind

 13. Windage Holds M16A4

 14. Windage Holds M4

 15. RCO Nomenclature (reticle)

 16.Definitions

 a. Aiming point

 b. Hold (RCO)

 c. Zero (RCO)

 d. Zero (BUIS)

 e. True Zero (BUIS)

 f. BUIS Battlesight Zero (BZO)

 17. RCO Nomenclature (external)

 18. Mounting the RCO (Rail)

 19. Table 1 Course of Fire

 20. Table 1 Target Dimensions

 a. Pages 20-22. Examples of how to properly fill data book for a Able, Dog, and B-Mod target pages.

**3. ANALYZE A SHOOTER’S “BEORE” FIRING DATA**

 a. Before Firing. To save valuable time on the range, the BEFORE FIRING section of the data book can be filled out before firing information is recorded and before going to the firing line. See figure B-2. Record the following information in the BEFORE FIRING section of the data book:



(1) *Direction*. Determine the direction of the wind and draw an arrow through the clock indicating the direction the wind is blowing in the appropriate sections as follows:

 1. Value: under the VALUE column, circle either FULL or HALF to indicate the wind value as indicated by the wind on the clock.

 2. Speed: circle the appropriate flag indicating the wind’s velocity (i.e., speed).

 *3. Windage adjustment*. The chart beneath the flag in the different mph columns (i.e., 5, 10, 15,20, 25) *indicates* the inches required to offset the effects of the wind. Circle the number where the wind value and wind speed intersect for the weapon being fired. Hold: draw in the hold you will use to compensate for the wind to begin firing. Weather data: see figure B-3.



**NOTES**:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

4. **ANALYZE SHOOTERS “DURING” FIRING DATA**

 a. The DURING FIRING portion of the data book consists of targets used to call and plot shot groups (see fig. B-4). The method for calling and plotting slow fire shots in the data book during slow fire is called the shot behind method. It allows Marines to spend less time recording data and more time firing on the target. This is because all of the calling and plotting is accomplished while the target is in the pits being marked. This information is recorded in the DURING FIRING portion of the data book; the proper and most efficient method for recording data during KD slow fire stages is as follows:

 **(1)** *Fire the first shot*. Then immediately check the wind flag to see if the speed or direction of the wind changed.

 **(2)** *Call the shot accurately*. As soon as the shot is fired and the target is pulled into the pits, record the exact location of the crotch of the chevron on the target at the exact instant the shot was fired—record this in the block marked CALL 1. If your hold changed at any time during firing, draw the reticle on the target provided in the block marked HOLD 1. Note that there is an extra (EX) CALL block in case the coach has the Marine fire another shot.

 **(3)** *Prepare to fire the second shot*. As soon as the call for the first shot has been recorded, prepare to fire the second shot.

 **(4)** *Look at where the first shot hit*. As the target reappears out of the pits, look where the first shot hit the target. Remember this location so that it can be plotted after firing the second shot.

 **(5)** *Fire the second shot*. Fire the second shot. Then check the wind flag to see if the wind changed speed or direction.

 **(6)** *Call the second shot and plot the first shot*. As soon as the second shot is fired and the target is pulled into the pits, record the call of the second shot. Now plot the precise location of the first shot by writing the number 1 on the large target diagram provided in the block marked PLOT.

 **(7)** *Prepare to fire the third shot*. Repeat these steps until the remaining shots have been fired. Indicate each slow fire shot with the appropriate number (e.g., 1, 2, 3, 4, 5).



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5. **ANALYZE SHOOTERS “AFTER” FIRING DATA**

The bottom portion of the data book is used to record any remarks that will help with the next stage of firing in addition to the sight picture (see fig. B-5). If an adjustment in sight picture is needed, draw the sight picture adjustment on the target in the block marked SIGHT PICTURE ADJUSTMENT (WITHOUT WIND). Record any remarks that will help improve firing in the REMARKS block to include any analysis made after firing by reviewing called and plotted shots.



**6. USE OF THE DATA BOOK FOR RAPID FIRE**

 a. Before Firing Record the following information in the BEFORE FIRING section of the data book (see fig. B-6 on page B-6):

 **(1)** *Zero*. The correct zero for the range fired is shown in the first block of the BEFORE FIRING information. The crotch of the chevron is held center mass on the target at 200 meters/yards.

 **(2)** *Wind*. Prior to firing, make a wind call by observing your surroundings and by using the flag method and the data book.

 *(3) Direction*. Determine the direction of the wind and draw an arrow through the block, indicating the direction the wind is blowing.

 (4) Value: under VALUE, circle FULL or HALF to indicate the wind value as indicated by the wind on the clock.

 (5) Speed: circle the appropriate flag indicating the wind’s velocity (i.e., speed).

 *(6) Windage adjustment*. The chart beneath the flag indicates the inches required to offset the effects of the wind. Circle the number where the wind value and wind speed intersect.

 (7) Hold: draw in the hold you will use to compensate for the wind to begin firing.

 **(8)** Weather Data: see figure B-3.



 **1.** *Light*. Under LIGHT, check the box that describes the light conditions. Draw an arrow

through the clock to indicate the direction the sun is shining. It is important to record light conditions as they affect perception of the target.

 **2.** *Precip*. Under PRECIP, check the box that describes the precipitation conditions.

 b. **During Firing**

 (1) In rapid fire, the firing sequence and the way data are recorded are different from that of slow fire. The following procedures should be used for recording data in the DURING FIRING portion of the data book page for KD rapid fire stages (see fig. B-7):

 **1.** Call *shots mentally while firing*. While firing the rapid fire string, call the shots. Make a mental note of any shots called out of the group.

 **2.** Plot *all hits with an X*. When the target is marked, plot all visible hits with an X precisely where they appear on the target provided in the block marked PLOT. If a change in hold is required, record it in the block marked 2ND STRING HOLD. Plot all visible hits for the second string with an X on the second target.

 c. **After Firing**

After firing, record any data or information that may be helpful in improving shooting in the future in the AFTER FIRING section of the data book. See figure B-8. Anything done or observed should be recorded. These items will be helpful when analyzing the daily shooting performance each evening. If an adjustment in sight picture is needed, draw the sight picture adjustment on the target in the block marked SIGHT PICTURE ADJUSTMENT (WITHOUT WIND).

