

<b>OBSERVED FIRE REFERENCE CARD</b>	
<p><b>GRID COORDINATE</b></p> <p>(1) "___ DE ___ AF/FFE, k"</p> <p>(2) "GRID _____, k"</p> <p>(3) (TGT DESC) "_____ IN EFFECT, k"</p> <p style="text-align: center;">(DIR SENT AFTER M. T. O.)</p> <p><b>I. GRID:</b></p> <p>A. DETERMINE A TWO CHARACTER, SIX DIGIT GRID FOR THE TARGET.</p> <p>B. DETERMINE A GRID DIRECTION TO THE TARGET AND SEND AFTER THE CALL FOR FIRE AND BEFORE ANY SUBSEQUENT CORRECTIONS.</p>	<p><b>GTA 06-07-005</b></p> <p><small>APRIL 2016</small></p>
<p><b>POLAR PLOT</b></p> <p>(1) "___ DE ___ AF/FFE, POLAR k"</p> <p>(2) "DIR ___ DIST ___ UP/DOWN ___, k"</p> <p>(3) (TGT DESC) "_____ IN EFFECT, k"</p> <p><b>II. POLAR:</b></p> <p>A. DETERMINE THE GRID DIRECTION TO THE TARGET.</p> <p>B. DETERMINE THE DISTANCE FROM THE OBSERVER TO THE TARGET.</p> <p>C. DETERMINE IF ANY SIGNIFICANT VERTICLE INTERVAL EXISTS.</p>	
<p><b>SHIFT FROM A KNOWN POINT</b></p> <p>(1) "___ DE ___ AF/FFE, "SHIFT (TGT#/REG PT#), k"</p> <p>(2) "DIR ___ R/L, ___ DD /DROP ___ UP/ DOWN ___, k"</p> <p>(3) (TGT DESC) "_____ IN EFFECT, k"</p> <p><b>III. SHIFT:</b></p> <p>A. DETERMINE THE GRID DIRECTION TO THE TARGET.</p> <p>B. DETERMINE THE LATERAL SHIFT TO THE TARGET FROM THE KNOWN POINT.</p> <p style="margin-left: 20px;">W = R sin <math>\theta</math> (MIL RELATION FORMULA)</p> <p style="margin-left: 20px;">W = WIDTH OF LATERAL SHIFT (THE UNKNOWN)</p> <p style="margin-left: 20px;">R = DISTANCE TO THE KNOWN POINT DIVIDED BY 1000 AND ROUNDED TO ONE DECIMAL PLACE</p> <p style="margin-left: 20px;"><math>\theta</math> = MEASURED ANGLE IN MILS FROM THE KNOWN POINT TO THE TARGET</p> <p>C. DETERMINE THE RANGE SHIFT FROM THE KNOWN POINT TO THE TARGET</p>	

**OBSERVED FIRE REFERENCE CARD**

INCHES 1 2 3

<p><b>FIST REPORT</b></p> <p>OBS I.D. DATE TIME GROUP LOCATION ALT ° VISIBILITY ENEMY ACTIVITY FPF (GRIDS) °</p> <p><b>INTELLIGENCE SPOT REPORT</b></p> <p>IDENTIFICATION S SIZE A ACTIVITY L LOCATION ° U UNIT ° T TIME E EQUIPMENT ° ENCODE FLASH-TO-BANG TIME ELAPSED TIME BETWEEN IMPACT AND SOUND x 350 M (DISTANCE IN METERS)</p>	<p><b>TGT LOCATION - SHIFT FROM KNOWN POINT</b></p> <p>Complete Target Location Direction 3570, Right 290, Add 500</p> <p style="text-align: right;">BMP</p> <p>AA 4165 DIR 3500 mil DIS 4200 meters 70 mil DIR 3570 mil RG FACTOR: 4.2 <math>4.2 \times 70 = 294</math> 294 expressed as 290</p>	<p><b>OT FACTOR</b> Distance to the target expressed in thousands Example: 1800 QT Factor 2 2600 QT Factor 3 800 QT Factor 0.8 2500 QT Factor 2</p> <p><b>ADJUSTMENT PROCEDURES</b> Deviation Correction IL R from the round to the target W R x mil. R is the OT Factor. mil is mils from round to tgt Range Adjustment (Add Drop from the round to the target) Successive Bracket Technique 400 200 100 50</p> <p><b>FIRE FOR EFFECT</b> when you are within 50 meters</p>								
<p><b>MEASUREMENT OF ANGLES WITH THE HAND</b></p> <p>1000 900 800 700 600 500 400 300 200 100 0</p> <p>30 70 100 125 180 300</p>	<p><b>NAVAL GUNFIRE REQUEST DATA</b></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>SEGMENT</th> <th>TRANSMITTED</th> </tr> </thead> <tbody> <tr> <td>Firing Alert</td> <td>Spotter Identification Warning Order Target Number</td> </tr> <tr> <td>Target</td> <td>Grid, Polar, or Shift Location from a Known Point</td> </tr> <tr> <td>Attack Data</td> <td>Target Description Method of Engagement Method of Fire and Control</td> </tr> </tbody> </table> <p>break and read back break and read back</p>	SEGMENT	TRANSMITTED	Firing Alert	Spotter Identification Warning Order Target Number	Target	Grid, Polar, or Shift Location from a Known Point	Attack Data	Target Description Method of Engagement Method of Fire and Control	<p><b>CAS REQUEST</b></p> <p>OBS I.D. WARNING ORDER (REQUEST CAS) TGT LOCATION (GRID COORDINATES) TGT DESC - FRIENDLY LOCATION - ADA THREAT</p> <p><b>RESULTS DESIRED</b> DESIRED TIME ON TARGET (TOT)</p> <p><b>ATTACK INFORMATION</b> DIRECTION IP TO TGT (DEGREES) DISTANCE IP TO TGT (NAUT MILES) TYPE MARKING ROUND REIDENTIFY TGT (DESC) REIDENTIFY ADA THREAT/ RESTRICTIONS</p>
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HEADQUARTERS, DEPARTMENT OF THE ARMY  
GPO : 2002 732-405

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