Command at Sea 4th Edition, Second Printing Errata

This errata records the changes made to the *Command at Sea*, Second Printing rules since they were first published on 27 March 2015. These have all been incorporated into the .pdf edition currently available on thewargamevault.com.

If you have any questions or comments, please contact us at adtrgroup.com.

Page 7: The 2006 and 2012 Damage Standards. In the right column of the sidebar, our web page is misspelled. The correct url is www.admiraltytrilogy.com.

Page 1-2, section 1.4 materials. Change "CaS Form 3" to "CaS Form 5"

Page 2-5, section 2.4 Ship Size classes, right hand column, third paragraph. Change the last sentence from:

"For example, a submarine that has a size class of D/Small is treated as an E/VSmall for visual detection."
> *to:*

"For example, a submarine that has a size class of D/Small is treated as a E/VSmall for visual detection."

Page 2-8, Startup Battle, 0021 turn. *Asashio's* Planned fire is missing a modifier. Although her target is illuminated, which removes the visibility modifier, firing at an illuminated target at night still suffers a -1 modifier. The total modifiers are +1, not +2, and the chance to hit is 44%, not 48%.

Page 2-8, Startup Battle, 0021 turn. At the bottom of the right column, replace the paragraph beginning with "The American player decides..." with:

The American player decides to fire in the **Reaction Fire** Phase. All he can see are the muzzle flashes from *Asashio*, which is at Long range for *Craven's* five-inch guns. The modifiers are: -2 (First salvo at long range), +1 (4 barrels firing), -1 (Size C quarter aspect) -6 (blind fire) = -8, multiplied by 2% and subtracted from the base chance of 15% at long range = -1%. *Craven* cannot fire.

Page 2-9, Startup Battle, right column, second full paragraph. The lead cruiser is *Aoba*, and *Kinugasa* is the second ship in line. Their positions are reversed in the narrative.

Page 3-3, section 3.3.3 Depths. In the first paragraph, change:

"Unguided or pattern-running torpedoes may be launched from the surface, Periscope/Snorkeling, Shallow, or Intermediate Depth I against a target at Periscope Depth or on the surface."
> *to:*

"Unguided or pattern-running torpedoes may be launched from the air, surface, Periscope/Snorkeling, Shallow, or Intermediate Depth I against a target at Periscope Depth or on the surface."

Page 3-6, Collision damage resolution (rule change) Make the underlined changes to the section:

"Damage Points: In a collision, each ship inflicts damage on the other based on its size. Each player rolls 3D10 (read as a value between 3% and 30%) and uses any of the applicable modifiers below:

• Armor: For each five points of belt armor reduce the percent damage inflicted by 1%.

Special case: If it is not a glancing collision, and the striking vessel has a ram or reinforced bow, then the ship struck cannot have its damage reduced by the armor modifier.

• Speed: Add 1% to the damage percentage for both ships for each five knots of relative speed. To determine the relative speed, in the case of a glancing blow, add the two speeds if the two bows are pointed toward each other, subtract the lower from the higher if the bows are pointed in the same direction. For a quarter collision, follow the same procedure for a glancing blow but multiply the sum by 0.75. Use the striking vessel's speed if it is a bow-on collision.

• Civilian construction. For calculating the damage a civilian vessel inflicts on the other ship, double its damage points. This compensates for the 50% modifier to its displacement used when calculating its damage points.

The final value (die roll plus armor and speed modifiers) is the percent of the ship's original damage points that is applied to the other vessel. Any resulting critical hits are rolled on the torpedo damage column of the Critical Hit Table. Damage results are applied immediately (during the Movement Phase).

Example: USS *Baltimore* rammed the *Fubuki* class DD in the side, so it will be a bow-on ram. The relative speed in this case is the speed of the cruiser, 30 knots. *Baltimore* has 359 damage points and the *Fubuki* has 60 damage points. The cruiser's belt armor rating is 16 and the destroyer's is zero. The heavy cruiser player rolls 3D10 and gets a "2, 3" and "7" for a total of 12%. The relative speed modifier adds 6% (30/5 = 6). This raises the final value to 18%. *Baltimore* inflicts .18 * 359 = 65 damage points on the *Fubuki*, basically cutting her in half.

At the same time, the destroyer's player rolls 3D10 and gets an "8, 5" and a "9" for a total of 21%. This is then modified by the relative speed +6%, but the cruiser gets an armor modifier of –3% (16/5 = 3.2), giving a final percentage of 23%. The *Fubuki* inflicts .23 * 60 = 14 points of damage on the cruiser, which is halved to 7 points because of the cruiser's bow-on ram, though *Baltimore* still has its speed reduced by 25%."

Page 3-7, right column, under 3.5.2 Nets and Booms, in the example of the *Fletcher*-class destroyer ramming the boom, the player controlling the books rolls 3D10, not 2D10.

In the following paragraph, change:

"The *Fletcher* inflicts 19% of its 84 damage points on the boom, or 16 points. The chance of the boom being destroyed is then 20/(200-20) = 20/180 or 9%. The American player rolls D100, and gets a 09, successfully destroying the obstacle."
> *to:*

"The Fletcher inflicts 19% of its 84 damage points on the boom, or 16 points. The chance of the boom being destroyed is then 16/(200-16) = 16/184, or 9%. The American player rolls D100, and gets a 09, successfully destroying the obstacle."

Page 4-1, section 4.4 Altitudes and Altitude Changes. In the third line, change "Altitude Table" to "Altitude Bands Table."

Page 4-3, section 4.5.3 launch (from carriers). Change the amount of time it takes to arm a group of 12 aircraft from 15 + D6 minutes to simply 15 minutes.

Page 4-4, section 4.9. The chance of crashing in normal flight operations, as described in 4.5.4, is 0.1%, not 1%.

Change "A "-" means that landings are prohibited." to "A "-" means that takeoffs and landings are prohibited."

Page 4-5, left column, first paragraph. Changes "CaS Form 3" to "CaS Form 5"

Page 4-6, Step 4 of calculating a planes range. The formula used for calculating the fuel burned at Full Power is incorrect. It should use the Full Power speed, not the Range Cruise speed. The correct formula is:

(Minutes at FP/60) * Full Power Speed *
FP Endurance Modifier = Cruise range needed

Page 5-1, In the right-hand column, change the fifth paragraph from

"Single periscopes and submarine masts are VSmall-size targets and cannot be detected by radar over sea state 4. Two or more masts are treated as a Small target. The only exception is late war German U-boat snorkel masts, which were coated with Radar-Absorbent Material (RAM) that allowed them to retain their VSmall rating even when raised with one periscope."

to:

"Single periscopes and submarine masts are VSmall-size targets. Two or more masts are treated as a Small target. The only exception is late war German U-boat snorkel masts, which were coated with Radar-Absorbent Material (RAM) that allowed them to retain their VSmall rating even when raised with one periscope.

They are also fleeting targets, since they are not exposed for the entire turn. See 5.2.6.1 for the rules on detecting periscopes."

Page 5-3, Change section 5.2.6.1.1 from:

"5.2.6.1.1 Detecting Periscopes. Unlike ships, periscopes are fleeting contacts nestled in the sea clutter return. Raised and lowered quickly, periscopes will be exposed for only a few sweeps of the radar, which reduces their chance of detection. When attempting to detect a single periscope by radar, there is a -10% modifier to the die roll. For each sea state above 3, there is an additional -10% modifier."

to:

"5.2.6.1.1 Detecting Periscopes. Single periscopes and submarine masts are VSmall-size targets. Two or more masts are treated as a Small target. The only exception is late war German U-boat snorkel masts, which were coated with Radar-Absorbent Material (RAM) that allowed them to retain their VSmall rating even when raised with one periscope.

Periscopes (not snorkels) are fleeting contacts mixed in with the sea clutter. Raised and lowered quickly, they will be exposed for only a few sweeps of the radar, which reduces their chance of detection. When attempting to detect a single periscope by radar, there is a -10% modifier to the die roll. For each sea state above 3, there is an additional -10% modifier."

Page 5-3, In the example in the right hand column, fifth paragraph, the correct value for the Clutter from Sea State 4 is 4, not 3.

Page 5-3, **Section 5.3.1,** Hull-mounted Sonars. Change the fourth paragraph from:

"Of note, the Japanese developed some very simple omnidirectional passive systems for use by fishing vessels. These systems are listed in Annex K as "Omni" type sonars and are to be treated as sonobuoys with unlimited endurance."

to:

"Of note, the Japanese developed some very simple omnidirectional passive systems for use by fishing vessels. These systems are listed in Annex K as "Dipping" type sonars. The craft must be stationary to use them."

Page 5-8, right column, section 5.4.1.3 Sighting aircraft. Add a new paragraph at the end of the section.

"Aircraft flying at high altitude leave contrails, which can be seen up to 50 NM away, as modified by the visibility percentage. Contrails cannot be seen at night."

Page 5-11, The Surface -to-Surface Visibility Table has a math error that a

player discovered. The corrected page 5-11 is on page 3 of this errata.

Page 5-14, section 5.4.6.3 Using smoke for detection. Change the section to read:

"On relatively calm days, ships can detect stack smoke from other ships beyond the horizon. Merchant ships were frequent "smokers." Warships, because of better training and a desire to avoid detection, tended to emit less smoke, except at high speed.

If the wind speed is less than 20 knots, roll for each surface ship each 30-minute Intermediate Turn. Warships have a 50% chance of emitting heavy smoke, and a merchant ship has a 70% chance.

Ships at 75% or more of their maximum speed, automatically emit heavy smoke. If there are several ships present, then the group automatically emits heavy smoke.

Heavy stack smoke and smoke from burning ships extends high into the air and can be seen at twice normal sighting range during daylight, as long as the wind is less than 20 knots."

Pages 6-2 and 6-3, (Rules change)
Change the modifier for target silhouetted from -1 to -2.
Change the modifier for target illuminated from 0 to -1.

Pages 6-2 and 9-8, (Rules Change)
Aircraft may only perform gunfire spotting from Low altitude, not Medium.

Page 6-5, Overconcentration (Rule change). Replace the example with the following text:
Exception: Two ships close to each other (i.e., in the same formation) can fire on the same target at Long or Extreme range without penalty. A third ship firing from either inside or outside the formation will cause all three to suffer a -1 overconcentration penalty.
Example: A heavy cruiser is fired on by a battleship's main (15 inch) and secondary (5 inch) batteries, two heavy cruisers' main (8 inch) and secondary (4.5 in) batteries, and one destroyer (4 inch). All guns are firing at Long or Extreme Range. The overconcentration penalties are:
• BB main battery: no overconcentration, only one ship firing shells of that size.
• CA main battery: Two ships firing medium-sized shells, but in the same formation, no penalty.
• DD & BB & CA secondaries: 1 DD, 2 CA, 1 BB firing, four ships total, penalty of -2.

Page 6-6 (Rule Change) Add:
"**6.1.7 Point-Blank Fire.** If the visibility is 30% or better, and a ship is within half of the Short range band of a gun (round down), the firing ship has a +4 to hit modifier and does double the damage if it hits. Armor penetration is not affected.
Example: A U.S. 5in/38 gun firing Common ammunition inflicts 22 damage points out to 5.5 kyds (before applying the modifier for the number of barrels). If the firing vessel can close to within 2.7 kyds (always round down), it inflicts 44 damage points"

Page 6-12, DC Weapon Types. Change "DC Weapons Fit and Pattern Table" to "Annex E1a Surface Ship DC Patterns."

Page 6-22, Section 6.4.1.5 Depth Charge Attack Restrictions. Change the first sentence from:

"Ships dropping depth charges into Shallow and Intermediate I depth bands must be at a speed of at least 15 knots or automatically take damage from the depth charges' blast..."
to:

"Ships dropping depth charges into Shallow and Intermediate I depth bands must be at a speed of at least 15 knots or automatically take Major damage from the depth charges' blast..."

Page 4-7, section 4.12 Barrage Balloons, in the third paragraph, change "400 yards/130 meters" to "400 yards/365 meters."

Page 5-9, section 5.4.1.8 Identifying Visual Contacts (optional rule), in the example, in the third paragraph, responding tot he enemy fire, the player fires starshell in the Planned Fire phase, not the Reaction phase.

Page 5-8, section 5.4.2 Periscopes. In the last paragraph of the section, change "Periscopes cannot be seen in Sea State 5 or greater" to "Periscopes cannot be seen in Sea State 7 or greater."

Page 6-23, section 6.4.2 Ahead-Thrown (ASW) Weapons. In the left column, change the depth band modifiers to:

Shallow and Intermediate I/II depth bands:	x1
Intermediate III depth bands:	x1/2
Intermediate IV depth band:	x1/4
Deep depth bands:	x1/8

Page 7.6, section 7.2.10 Special Starting Conditions. Under Surprise, in the fourth paragraph, the player attempting to attack from out of the sun must roll a D100, not a D10.

Page 7-8, Section 7.4.3 Attack execution. Add this to the end of the first paragraph:
"Only dive, glide, and torpedo attacks can be pressed home. Level bomb attacks cannot be pressed home, since they already overfly the target."

Page 7-9, section 7.4.6 Air-Launched Torpedoes. If specific information on a torpedo's drop requirements isn't listed in Annex F, use these generic restrictions:
Until 1941: 100 meters, 150 knots, except Japan 250 knots.
1942-1943 and on: 200 m, 300 knots.

Change the last sentence of the section, about anvil attacks, from:
"Each group of aircraft in the anvil attack makes its attack die rolls separately, but each group gets a positive die modifier"
    to:
"Each group of aircraft in the anvil attack makes its attack die rolls separately, but each group gets a positive row modifier"

Page 7-11, The dive bomber example on page 7-11 doesn't match the table on page 10. The corrected example, which starts on the lower part of the left column on page 7-11, is:
Example: A squadron of 12 SBDs attacks a Japanese cruiser steaming at 30 knots. They will attack in three sections of four, and intend to press home their attack. They have a Competent skill level. They successfully roll on the Attack Execution Table for a pressed home attack (1 - 4 on a D10). The target is steering evasively.
Size Class B dive bombing: Base Ph is 20%.
Pressed Home modifier is +2 rows
Competent Skill level, no change
AA rating ≤3.0, -1 row
Target Evasive modifier, -2 rows
Target Speed 26 - 35 kts, -3 rows
They are down four rows from the 20% line on the Combined Bombing Table, which puts them on the 12% row. Each four-plane flight rolls on the D100 and reads across the 12% row to Salvo = 4. If they roll 40% or less, they get one bomb hit. Of they roll 7% or less, two hits. If they can roll an 01, they get three bomb hits. The section cannot get four bomb hits.
In the right-hand column, in the second full paragraph, the Japanese

player rolling for the Val would roll on the Salvo = 1 section for each bomb, not the Salvo = 3.

Page 8-7, right column, Flight Deck critical hit. Change:

"Hits aft will prevent aircraft from landing."
    to:
"Hits aft or midships will prevent aircraft from landing."

Page 7-11 & 12, 7.4.8 Rockets. The example on page 7-12 is incorrect. The base chance of a is 0.01, but a pressed home attack raises the chance by two rows to 0.04, not 0.02. Raising it four more rows for target motion (lock of) results in a chance of 0.12, not 0.10, and chance of a hit is 32%, not 27%.

Page 7-14, section 7.5.2.3, in the example of the Pete floatplane dropping depth charges, the chance of minor damage is 25%, not 20%.

Page 8-2, left column, minimum damage. Change:

"If the critical hit ratio is less than 1% of the ship's original damage points"
    to:
"If the damage inflicted is less than 1% of the ship's original damage points"

Page 8-3, Light Weapons Critical Hit Table. Add "Fire Control" as an eligible critical hit for the 37-45mm and 57-65mm calibers.

Page 8-4, section 8.1.7.1 Shallow-Running Torpedoes. In the second line of the table, change "5 - 10" to "6-10."

Page 8-8, left column, Secondary Battery critical hit. On the third line of the paragraph, change "Main" to "secondary."

Page 8-9, section 8.4 Repairs. For repairing the Bridge, change "1 hour" to "D6/2 Tactical Turns (one turn on small craft)."

Page 8-9, section 8.6 Search and Rescue. Change the last sentence from

"Remember to apply the sighting modifier for no wakes (half range)"
    to:
"Remember to apply the sighting modifier for low speed (less than 5 knots)."

Page 9-2, Land Attack Gunfire modifiers, Aerial Spotting (Rule Change)
Aircraft may only perform gunfire spotting from Low altitude, not Medium.

Page 9-3, Section 9.4.1. Replace the second and third paragraphs

"Attacks against land structures are resolved in exactly the same way as attacks against ships ... Since no additional modifiers apply, this is the final row for the attack. With a salvo of four bombs, each Avenger has a 34% chance of getting one hit, and a 5% chance of two hits."
    with:
"Attacks against land structures are resolved in exactly the same way as attacks against ships, and automatically get the target speed ≤5 knots modifier. First, find the base hit chance for the type of attack, given the target size, and modify the chance by moving up or down rows on the Combined Bombing Table.
Remember that a Pressed Home attack must be made from the Low Altitude band, and planes suffer light AA fire before the attack is resolved.
Example: Two American TBF Avengers with competent crews press home a low altitude (500 meters) glide bomb run on a Japanese heavy MG nest (three MGs with a total AA rating of 0.2) in a small earthworks open gun emplacement. The horizontal size class of the MG nest is F and the armor rating is 0, since it is an open emplacement. Each TBF has four M43 500 lb bombs that will be dropped in a single pass. For a glide bomb

attack against an F-size target, the base chance is 0.01. Since attack is from 500 m or lower, the player moves two rows up from the 0.01 chance on the Combined Bombing Table. The Pressed Home modifier increases it another two rows, and one more for a speed of 5 knots or less. The player then drops it one row because of the AA fire (≤3.0) to 0.8. This is the row used for the attack. With a salvo of four bombs, each Avenger has a 28% chance of getting one hit, and a 3% chance of two hits."

Page 9-6, Section 9.6.2 Runway attacks. Add this new paragraph after the second paragraph:

"Runway attacks must be made with bombs of at least 50 kg or 100 lbs. Larger bombs will make slightly larger craters, but don't increase the chance of making a cut, or the time it takes to repair the damage."

Delete the following paragraph, which begins with "The plane's entire bomb load…"

Change
"Example: Six B-17Es out of group of twelve … chance of one hit per aircraft on the runway."
   to:
"*Example:* Six B-17Es are assigned to attack the runway of a Japanese island airfield. They will make a level attack from 7,000 meters, each carrying eight 500 lb bombs. The base chance of a hit for a level bombing attack against an A size target is 0.08. Since the attack altitude is greater than 6,000 meters, the base Ph is reduced by three rows on the Combined Bombing Table. In addition to the automatic land-attack modifier (≤5 knots, up one row), the B-17Es also use the ballistic bombsight modifier (up one row). This makes the net modifier on the Combined Bombing Table down one row from 0.08 to 0.06. Eight bombs per aircraft quartered means that each plane will drop one salvo of two bombs, rolling on the 0.06 row. For each salvo, there is a 12% chance of one hit."

Surface-to-Surface Visibility Tables

100% Visibility Table

Target Unit	Observing Unit						
	A	*B*	*C*	*D*	*E*	*F/G*	*Per*
A	40.0	38.0	36.0	32.0	29.0	27.0	23.0
B	38.0	36.0	34.0	30.0	27.0	25.0	21.0
C	36.0	34.0	32.0	28.0	25.0	23.0	19.0
D	32.0	30.0	28.0	24.0	21.0	19.0	16.0
E	29.0	27.0	25.0	21.0	18.0	16.0	12.0
F/G	27.0	25.0	23.0	19.0	16.0	13.0	10.0
Per	4.0	4.0	4.0	4.0	4.0	4.0	2.0
Horiz	21.0	19.0	17.0	13.0	10.0	7.0	4.0

90% Visibility Table

Target Unit	Observing Unit						
	A	*B*	*C*	*D*	*E*	*F/G*	*Per*
A	36.0	34.2	32.4	28.8	26.1	24.3	20.7
B	34.2	32.4	30.6	27.0	24.3	22.5	18.9
C	32.4	30.6	28.8	25.2	22.5	20.7	17.1
D	28.8	27.0	25.2	21.6	18.9	17.1	14.4
E	26.1	24.3	22.5	18.9	16.2	14.4	10.8
F/G	24.3	22.5	20.7	17.1	14.4	11.7	9.0
Per	3.6	3.6	3.6	3.6	3.6	3.6	1.8

80% Visibility Table

Target Unit	Observing Unit						
	A	*B*	*C*	*D*	*E*	*F/G*	*Per*
A	32.0	30.4	28.8	25.6	23.2	21.6	18.4
B	30.4	28.8	27.2	24.0	21.6	20.0	16.8
C	28.8	27.2	25.6	22.4	20.0	18.4	15.2
D	25.6	24.0	22.4	19.2	16.8	15.2	12.8
E	23.2	21.6	20.0	16.8	14.4	12.8	9.6
F/G	21.6	20.0	18.4	15.2	12.8	10.4	8.0
Per	3.2	3.2	3.2	3.2	3.2	3.2	1.6

70% Visibility Table

Target Unit	Observing Unit						
	A	*B*	*C*	*D*	*E*	*F/G*	*Per*
A	28.0	26.6	25.2	22.4	20.3	18.9	16.1
B	26.6	25.2	23.8	21.0	18.9	17.5	14.7
C	25.2	23.8	22.4	19.6	17.5	16.1	13.3
D	22.4	21.0	19.6	16.8	14.7	13.3	11.2
E	20.3	18.9	17.5	14.7	12.6	11.2	8.4
F/G	18.9	17.5	16.1	13.3	11.2	9.1	7.0
Per	2.8	2.8	2.8	2.8	2.8	2.8	1.4

60% Visibility Table

Target Unit	Observing Unit						
	A	*B*	*C*	*D*	*E*	*F/G*	*Per*
A	24.0	22.8	21.6	19.2	17.4	16.2	13.8
B	22.8	21.6	20.4	18.0	16.2	15.0	12.6
C	21.6	20.4	19.2	16.8	15.0	13.8	11.4
D	19.2	18.0	16.8	14.4	12.6	11.4	9.6
E	17.4	16.2	15.0	12.6	10.8	9.6	7.2
F/G	16.2	15.0	13.8	11.4	9.6	7.8	6.0
Per	2.4	2.4	2.4	2.4	2.4	2.4	1.2

50% Visibility Table

Target Unit	Observing Unit						
	A	*B*	*C*	*D*	*E*	*F/G*	*Per*
A	20.0	19.0	18.0	16.0	14.5	13.5	11.5
B	19.0	18.0	17.0	15.0	13.5	12.5	10.5
C	18.0	17.0	16.0	14.0	12.5	11.5	9.5
D	16.0	15.0	14.0	12.0	10.5	9.5	8.0
E	14.5	13.5	12.5	10.5	9.0	8.0	6.0
F/G	13.5	12.5	11.5	9.5	8.0	6.5	5.0
Per	2.0	2.0	2.0	2.0	2.0	2.0	1.0

40% Visibility Table

Target Unit	Observing Unit						
	A	*B*	*C*	*D*	*E*	*F/G*	*Per*
A	16.0	15.2	14.4	12.8	11.6	10.8	9.2
B	15.2	14.4	13.6	12.0	10.8	10.0	8.4
C	14.4	13.6	12.8	11.2	10.0	9.2	7.6
D	12.8	12.0	11.2	9.6	8.4	7.6	6.4
E	11.6	10.8	10.0	8.4	7.2	6.4	4.8
F/G	10.8	10.0	9.2	7.6	6.4	5.2	4.0
Per	1.6	1.6	1.6	1.6	1.6	1.6	0.8

30% Visibility Table

Target Unit	Observing Unit						
	A	*B*	*C*	*D*	*E*	*F/G*	*Per*
A	12.0	11.4	10.8	9.6	8.7	8.1	6.9
B	11.4	10.8	10.2	9.0	8.1	7.5	6.3
C	10.8	10.2	9.6	8.4	7.5	6.9	5.7
D	9.6	9.0	8.4	7.2	6.3	5.7	4.8
E	8.7	8.1	7.5	6.3	5.4	4.8	3.6
F/G	8.1	7.5	6.9	5.7	4.8	3.9	3.0
Per	1.2	1.2	1.2	1.2	1.2	1.2	0.6

20% Visibility Table

Target Unit	Observing Unit						
	A	*B*	*C*	*D*	*E*	*F/G*	*Per*
A	8.0	7.6	7.2	6.4	5.8	5.4	4.6
B	7.6	7.2	6.8	6.0	5.4	5.0	4.2
C	7.2	6.8	6.4	5.6	5.0	4.6	3.8
D	6.4	6.0	5.6	4.8	4.2	3.8	3.2
E	5.8	5.4	5.0	4.2	3.6	3.2	2.4
F/G	5.4	5.0	4.6	3.8	3.2	2.6	2.0
Per	0.8	0.8	0.8	0.8	0.8	0.8	0.4

10% Visibility Table

Target Unit	Observing Unit						
	A	*B*	*C*	*D*	*E*	*F/G*	*Per*
A	4.0	3.8	3.6	3.2	2.9	2.7	2.3
B	3.8	3.6	3.4	3.0	2.7	2.5	2.1
C	3.6	3.4	3.2	2.8	2.5	2.3	1.9
D	3.2	3.0	2.8	2.4	2.1	1.9	1.6
E	2.9	2.7	2.5	2.1	1.8	1.6	1.2
F/G	2.7	2.5	2.3	1.9	1.6	1.3	1.0
Per	0.4	0.4	0.4	0.4	0.4	0.4	0.2

5% Visibility Table

Target Unit	Observing Unit						
	A	*B*	*C*	*D*	*E*	*F/G*	*Per*
A	2.0	1.9	1.8	1.6	1.5	1.4	1.2
B	1.9	1.8	1.7	1.5	1.4	1.3	1.1
C	1.8	1.7	1.6	1.4	1.3	1.2	1.0
D	1.6	1.5	1.4	1.2	1.1	1.0	0.8
E	1.5	1.4	1.3	1.1	0.9	0.8	0.6
F/G	1.4	1.3	1.2	1.0	0.8	0.7	0.5
Per	0.2	0.2	0.2	0.2	0.2	0.2	0.1

2% Visibility Table

Target Unit	Observing Unit						
	A	*B*	*C*	*D*	*E*	*F/G*	*Per*
A	0.8	0.8	0.7	0.6	0.6	0.5	0.5
B	0.8	0.7	0.7	0.6	0.5	0.5	0.4
C	0.7	0.7	0.6	0.6	0.5	0.5	0.4
D	0.6	0.6	0.6	0.5	0.4	0.4	0.3
E	0.6	0.5	0.5	0.4	0.4	0.3	0.2
F/G	0.5	0.5	0.5	0.4	0.3	0.3	0.2
Per	0.1	0.1	0.1	0.1	0.1	0.1	0.1

All Distances are in Thousands of Yards (kyds)