

Boots & Saddles

Air Cavalry in the 80's

Soviet Scenario Information

Scenario 1: Probe

Description: Soviet forces must enter the board and probe U.S. positions. If the positions are weak, the probing force must push through and create a breach. If resistance is substantial, the force must vigorously attack the enemy to destroy the force or, failing that, tie them down and possibly draw reserves from other, more critical areas.

Victory: Victory points are awarded for the following:

For each step of U.S. units eliminated: 2 points.

For each step of Soviet AFVs exited off the west map edge before turn 12: 2 points.

For each step of Soviet AFVs exited off the west map edge before turn 18 but on or after turn 12: 1 point.

Total Scenario Length: 18 turns.

Command Ratings: Generate command ratings for 2 HQs.

Force Level 7

Units Required: 15, 21, A13, 1AD-92, 1A11.

Command Units: HQ15, HQ21.

Helicopter Types: Mi-24D, Mi-8C.

Victory Point Multiplier: 1.1.

Force Level 8

Units Required: 15, 21, A13, 1AD-92, 1A11.

Command Units: HQ15, HQ21.

Helicopter Types: Mi-24E, Mi-8E.

Victory Point Multiplier: 0.9.

Force Level 9

Units Required: 15

Command Units: HQ15

Victory Point Multiplier: 3.6.

Force Level 10

Units Required: 15, A13, 1A11.

Command Units: HQ15.

Victory Point Multiplier: 1.9.

Force Level 11

Units Required: 13, 15, A11, A22, 1AD-92, 3AD-92.

Command Units: HQ13, HQ15.

Victory Point Multiplier: 0.7.

Force Level 12

Units Required: 14, 21, A12, 1AD-92, 3AD-92.

Command Units: HQ14, HQ21.

Helicopter Types: Mi-24D, Mi-8C.

Victory Point Multiplier: 0.7.

Scenario 2: Meeting Engagement

Description: The front has been broken open and a Soviet division has been released to initiate the pursuit phase. The Soviet player, commanding the advanced guard of the division, must spearhead that advance in the face of scattered U.S. resistance and possible counterattack forces.

Victory: Victory points are awarded for the following:

For each step of U.S. units eliminated: 2 points.

For each step of Soviet AFVs exited off the west map edge before turn 18: 2 points.

For each step of Soviet AFVs exited off the west map edge before turn 24 but on or after turn 18: 1 point.

For each turn in which the off-board artillery is deployed: minus 5 points.

Total Scenario Length: 24 turns.

Off-Board Artillery: One battalion (six full-strength units: 1A23, 2A23, 1B23, 2B23, 1C23, and 2C23) of D-20 152mm howitzers is undeployed and 50 hexes off-board. The entire battalion must deploy together. The battalion is a regimental-level unit.

Command Ratings: Generate command ratings for 7 HQs and 1 TOC.

Force Level 7

Units Required: 11, 13, 15, 22, HQ-92, TOC-92, 1AD-92, 2AD-92, 4AD-92.

Command Units: HQ-92, HQ11, HQ13, HQ15, HQ22; TOC-92.

Victory Point Multiplier: 1.0.

Force Level 8

Units Required: 92, 11, 12, 13, 21, 22.

Command Units: HQ-92, HQ11, HQ12, HQ13, HQ21, HQ22; TOC-92.

Helicopter Types: Mi-8C, Mi-24D.

Victory Point Multiplier: 0.7.

Force Level 9

Units Required: 92, 11, 12, 13, 18, 22.

Command Units: HQ-92, HQ11, HQ12, HQ13, aHQ18, bHQ18, HQ22; TOC-92.

Helicopter Type: Mi-24E.

Victory Point Multiplier: 0.5.

Force Level 10

Units Required: 15, 18, 21.

Command Units: HQ15, aHQ18, bHQ18, HQ21.

Helicopter Types: Mi-8C, Mi-24D.

Victory Point Multiplier: 1.2.

Force Level 11

Units Required: 16, 19, 21.

Command Units: HQ16, HQ19, HQ21.

Helicopter Types: 19: Mi-8C; 21: Mi-8E, Mi-24E.

Victory Point Multiplier: 2.1.

Special Rules: Units of the 16th Battalion enter mounted in units of the 19th and 21st squadrons.

Force Level 12

Units Required: 16, 17, 19, 20, 21, HQ-93, TOC-92, ATG-93, 3R-93, 4R-93, 1AD-93, 2AD-93.

Command Units: HQ-93, HQ16, HQ17, HQ19, HQ20, HQ21; TOC-93.

Helicopter Types: 19: Mi-8C; 21: Mi-8E, Mi-24E.

Victory Point Multiplier: 1.2.

Special Rules: Units of the 16th and 17th Battalions and the 93rd Brigade enter mounted in units of the 19th, 20th, and 21st squadrons.

Scenario 3: Counterattack

Description: Soviet forces have seized an airhead behind U.S. lines. The Soviet player must defend the airhead against U.S. reserve forces until relieved by Soviet advanced elements. If sufficient reinforcements become available, he must go over to the attack and destroy U.S. forces with which he is engaged.

Victory: Victory points are awarded for the following:

For each step of U.S. units eliminated: 1 point.

For each step of Soviet AFVs exited off the west map edge before turn 18: 2 points.

For each step of Soviet AFVs exited off the west map edge before turn 24 but on or after turn 18: 1 point.

For each of the following towns held (at least one Soviet and no U.S. units present in any hex of town) at the end of the scenario: 10 points.

Alverskirchen, Dössel, Enniger, Northeim.

Total Scenario Length: 24 turns.

Command Ratings: Generate command ratings for 8 HQs and 2 TOCs.

Initial Deployment: Initial units may be deployed, under cover if desired, anywhere on map D.

Force Level 7

Units Required: 93, 11, 16, 17.

Command Units: HQ-93, HQ11, HQ16, HQ17; TOC-93.

Victory Point Multiplier: 1.2.

Force Level 8

Units Required: 93, 11, 13, 16, 17, A22, 1AD-92, 3AD-92.

Command Units: HQ-93, HQ11, HQ13, HQ16, HQ17; TOC-93.

Victory Point Multiplier: 0.8.

Force Level 9

Units Required: 93, 11, 12, 13, 16, 17, 22, HQ-92, TOC-92, R-92, AD-92.

Command Units: HQ-92, HQ-93, HQ11, HQ12, HQ13, HQ16, HQ17, HQ22; TOC-92, TOC-93.

Subordination: 11, 12, 13, and 22 are subordinate to the 92nd Regiment. 16 and 17 are subordinate to the 93rd Brigade.

Victory Point Multiplier: 0.6.

Force Level 10

Units Required: 93, 16, 17, 18.

Command Units: HQ-93, HQ16, HQ17, aHQ18, bHQ18; TOC-93.

Helicopter Types: Mi-24E.

Victory Point Multiplier: 0.8.

Force Level 11

Units Required: 93, 16, 17, A18.

Command Units: HQ-93, HQ16, HQ17; TOC-93.

Helicopter Types: Mi-24E.

Victory Point Multiplier: 1.5.

Force Level 12

Units Required: 93, 13, 16, 17, A11, A18, 1AD-92, 3AD-92.

Command Units: HQ-93, HQ13, HQ16, HQ17; TOC-93.

Helicopter Types: Mi-24E.

Victory Point Multiplier: 1.1.

Introductory Scenarios

The following three scenarios are designed to introduce players gradually to the mechanics of the *Assault* system. All units are placed face up and are always spotted; the spotting rules are not used. The morale rules are not used. All HQ units have a command rating of 2. Game length is unlimited; victory goes to the last player to have a surviving unit on the board. All forces enter turn 1 from that player's side of the board (east for the Soviets, west for the U.S.).

Scenario A

This scenario may be played after reading only rules 1-16.

Forces: HQ11, A11, B11.

Scenario B

This scenario adds rules for artillery and smoke (rules 19-20).

Forces: 13, A11.

Scenario C

This scenario adds helicopters and air defense fire (the *Boots & Saddles* rules).

Forces: 13, 21, A11, 1AD-92.

Helicopter Types: Mi-8C, Mi-24D.

Soviet Scenario Chart: Scenario 1

Unit	Force Level					
	7	8	9	10	11	12
1AD-92	5	5			7	5
3AD-92					7	5
1A11	5	5		5	5	
2A11					7	
3A11					7	
1A12						5
2A12						5
3A12						7
HQ13*					7	
1A13*	5	5		5	5	
2A13*	5	5		5	5	
3A13*	5	5		5	5	
1B13*					7	
2B13*					7	
3B13*					7	
1C13*					7	
2C13*					7	
3C13*					7	
OPM13*					7	
1M13*					7	
2M13*					7	
HQ14*						5
1A14*						5
2A14*						5
3A14*						5
1B14*						5
2B14*						5
3B14*						5
1C14*						7
2C14*						7
3C14*						7
OPM14*						5
1M14*						5
2M14*						5
HQ15*	3	3	3	3	3	3
1A15	3	3	3	3	3	3
2A15	3	3	3	3	3	3
3A15	3	3	3	3	3	3
1B15	1	1	1	1	1	1
2B15	1	1	1	1	1	1
1C15	1	1	1	1	1	1
2C15	1	1	1	1	1	1
HQ21	5	5				5
1A21	5	5				5
2A21	5	5				5
1B21	5	5				5
2B21	5	5				5
OPA22*					7	
1A22					7	
2A22					7	
Dummies	2/1	2/1	2/1	2/1	2/1	2/1
	1/3	1/3	1/3	1/3	1/3	1/3
	17/5	17/5	9/5	2/5	2/5	1/5
				7/7	2/7	

Soviet Scenario Chart: Scenario 3

Unit	Force Level						Unit	Force Level					
	7	8	9	10	11	12		7	8	9	10	11	12
HQ-92*			8				1C13*		8	8			8
TOC-92			8				2C13*		8	8			8
1R-92			4				3C13*		8	8			8
2R-92			4				OPM13*		8	8			8
3R-92			4				1M13*		8	8			8
4R-92			4				2M13*		8	8			8
1AD-92		8	8			8	HQ16	S	S	S	S	S	S
2AD-92			8				1AT16	S	S	S	S	S	S
3AD-92		8	8			8	2AT16	S	S	S	S	S	S
4AD-92			8				1A16	S	S	S	S	S	S
HQ-93	S	S	S	S	S	S	2A16	S	S	S	S	S	S
TOC-93	S	S	S	S	S	S	3A16	S	S	S	S	S	S
1R-93	S	S	S	S	S	S	1B16	S	S	S	S	S	S
2R-93	S	S	S	S	S	S	2B16	S	S	S	S	S	S
3R-93	S	S	S	S	S	S	3B16	S	S	S	S	S	S
4R-93	S	S	S	S	S	S	1C16	S	S	S	S	S	S
1AT-93	S	S	S	S	S	S	2C16	S	S	S	S	S	S
2AT-92	S	S	S	S	S	S	3C16	S	S	S	S	S	S
3AT-93	S	S	S	S	S	S	HQ17	S	S	S	S	S	S
1ATG-93	S	S	S	S	S	S	1AT17	S	S	S	S	S	S
2ATG-93	S	S	S	S	S	S	2AT17	S	S	S	S	S	S
1AD-93	S	S	S	S	S	S	1A17	S	S	S	S	S	S
2AD-93	S	S	S	S	S	S	2A17	S	S	S	S	S	S
3AD-93	S	S	S	S	S	S	3A17	S	S	S	S	S	S
OPM-93	S	S	S	S	S	S	1B17	S	S	S	S	S	S
1M-93	S	S	S	S	S	S	2B17	S	S	S	S	S	S
2M-93	S	S	S	S	S	S	3B17	S	S	S	S	S	S
HQ11	6	6	6				1C17	S	S	S	S	S	S
1A11	4	4	4			8	2C17	S	S	S	S	S	S
2A11	6	6	4			8	3C17	S	S	S	S	S	S
3A11	6	6	4			8	aHQ18				6		
1B11	6	6	6				bHQ18				6		
2B11	6	6	6				1A18				4	4	4
3B11	6	6	6				2A18				4	4	4
1C11	6	6	6				1B18				6		
2C11	6	6	6				2B18				6		
3C11	6	6	6				1C18				6		
HQ12			10				2C18				6		
1A12			10				1D18				6		
2A12			10				2D18				6		
3A12			10				HQ22*			10			
1B12			10				OPA22*		8	10			
2B12			10				1A22		8	10			
3B12			10				2A22		8	10			
1C12			10				OPB22*			10			
2C12			10				1B22			10			
3C12			10				2B22			10			
HQ13*		8	8			8	OPC22*			10			
1A13*		8	4			6	1C22			10			
2A13*		8	6			6	2C22			10			
3A13*		8	8			6	Dummies	5/S	5/S	5/S	5/S	5/S	5/S
1B13*		8	8			8		9/4	9/4	1/4	8/4	8/4	8/4
2B13*		8	8			8			2/8	5/8	1/6	9/6	3/6
3B13*		8	8			8				2/10			4/8
								Entr.	8	8	8	8	8

Boots & Saddles

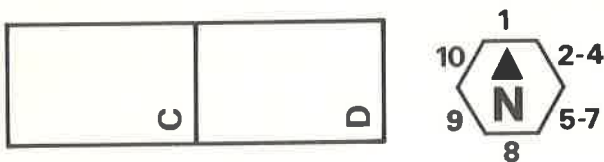
Air Cavalry in the 80's

U.S. Scenario Information

Scenario 1: Probe

Description: A U.S. screening and blocking force is in position to cover a gap between major U.S. units. The U.S. player must deny passage to a Soviet screening force and, if sufficient reinforcements become available, destroy it.

Maps and Wind Direction: The maps are laid out and wind direction determined as shown in the accompanying diagrams.



Victory: Victory points are awarded for the following:

For each step of Soviet units eliminated: 1 point.

If no Soviet AFVs exit the west edge of the map: 10 points.

Total Scenario Length: 18 turns.

Off-Board Artillery: One battery (two full-strength units: 1A11 and 2A11) of M-109 155mm howitzers is deployed 16 hexes off-board.

Command Ratings: Generate command ratings for 4 HQs.

Initial Deployment: Initial units may be deployed, under cover if desired, anywhere on map C.

Force Level 7

Units Required: C-5.

Command Units: HQC-5.

Victory Point Multiplier: 2.1.

Force Level 8

Units Required: C-5, A-6.

Command Units: HQC-5, HQA-6.

Victory Point Multiplier: 0.9.

Force Level 9

Units Required: S-4, A-4, C-5.

Command Units: HQA-4, HQC-5.

Victory Point Multiplier: 1.4.

Force Level 10

Units Required: S-4, A-4, B-4, C-5, 1A-7.

Command Units: HQA-4, HQB-4, HQC-5.

Victory Point Multiplier: 0.6.

Force Level 11

Units Required: A-6, B-8.

Command Units: HQA-6, HQB-8.

Victory Point Multiplier: 0.7.

Force Level 12

Units Required: A-6, B-9, C-10, 1AT-9, 2AT-9, 3AT-9, 4AT-9, HQB-10, 1B-10, 2B-10, 3B-10.

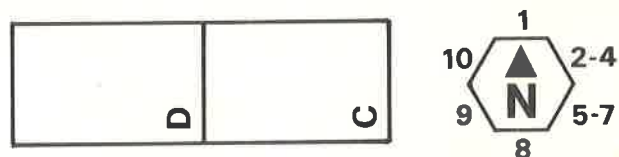
Command Units: HQA-6, HQB-9, HQB-10, HQC-10.

Victory Point Multiplier: 1.0.

Scenario 2: Meeting Engagement

Description: The U.S. front has been broken open and Soviet units in unknown strength are exploiting the breach. The U.S. player must delay the spearhead units and, if sufficient force is available, seal off and eliminate the penetration.

Maps and Wind Direction: The maps are laid out and wind direction determined as shown in the accompanying diagrams.



Victory: Victory points are awarded for the following:

For each step of Soviet units eliminated: 1 point.

If no Soviet AFV exits the map by the end of the scenario: 10 points.

If no Soviet AFV exits the map and there are no Soviet AFVs on map D by the end of the scenario: 10 points (in addition to those awarded above).

For each step of U.S. AFVs exited off the east edge of the map, provided no Soviet AFVs exited the west map edge: 2 points.

Total Scenario Length: 24 turns.

Off-Board Artillery: One battery (two full-strength units: 1A11 and 2A11) of M-109 155mm howitzers is deployed 16 hexes off-board.

Command Ratings: Generate command ratings for 6 HQs and 1 TOC.

Force Level 7

Units Required: C-5, B-8, A-9, A-10, 1AT-9, 1B-10.

Command Units: HQC-5, HQB-8, HQA-9, HQA-10.

Victory Point Multiplier: 1.5.

Force Level 8

Units Required: C-5, A-9, A-10, 1AT-9, 2AT-9, 3AT-9, 4AT-9, HQB-10, 1B-10, 2B-10, 3B-10.

Command Units: HQC-5, HQA-9, HQA-10, HQB-10.

Victory Point Multiplier: 2.6.

Force Level 9

Units Required: 8, C-5.

Command Units: HQ-8, HQA-8, HQB-8, HQC-8, HQC-5.

Victory Point Multiplier: 0.8.

Force Level 10

Units Required: 4, C-5, 1A-7.

Command Units: HQ-4, HQA-4, HQB-4, HQC-4, HQC-5; TOC-4.

Victory Point Multiplier: 1.2.

Force Level 11

Units Required: 6, 1A-7.

Command Units: HQ-6, HQA-6, HQB-6, HQC-6, HQD-6; TOC-6.

Victory Point Multiplier: 1.2.

Force Level 12

Units Required: A-6, A-8, B-9, C-10, 1A-7, 1AT-9, 2AT-9, 1B-10, 2B-10.

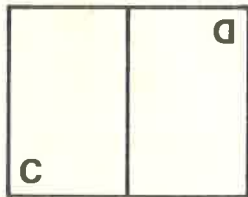
Command Units: HQA-6, HQA-8, HQB-9, HQC-10.

Victory Point Multiplier: 1.3.

Scenario 3: Counterattack

Description: The Soviet local advance has been halted and the Soviets have attempted an airmobile assault to gain new ground. Soviet airmobile units now hold an airhead. The U.S. player must counterattack to prevent relief of the airhead and, if possible, to destroy the Soviet defending forces.

Maps and Wind Direction: The maps are laid out and wind direction determined as shown in the accompanying diagrams.



Victory: Victory points are awarded for the following:

For each Soviet step eliminated: 1 point.

If no Soviet AFV exits the west map edge by the end of the scenario: 10 points.

Total Scenario Length: 24 turns.

Off-Board Artillery: One battalion (six full-strength units: 1A11, 2A11, 1B11, 2B11, 1C11, and 2C11) of M-109 155mm howitzers are deployed 12 hexes off-board; one battery (two full-strength units: 1A12 and 2A12) of M-110 203mm howitzers are deployed 20 hexes off-board.

Off-Board Command: The U.S. player receives 4 off-board operations points each movement phase.

Command Ratings: Generate command ratings for 18 HQs and 2 TOCs.

Initial Deployment: All initial units may be deployed, not under cover, anywhere on map C.

Force Level 7

Units Required: 4, 6, HQA-7, 1A-7, 2A-7, 3A-7, 4A-7.

Command Units: HQ-4, HQA-4, HQB-4, HQC-4, HQD-4, HQ-6, HQA-6, HQB-6, HQC-6, HQD-6, HQA-7; TOC-4, TOC-6.

Victory Point Multiplier: 0.8.

Force Level 8

Units Required: 6, A-4, C-5, D-5, A-7.

Command Units: HQ-6, HQA-6, HQB-6, HQC-6, HQD-6, HQA-4, HQC-5, HQD-5, HQA-7; TOC-6.

Victory Point Multiplier: 0.9.

Force Level 9

Units Required: 4, 9, 10, C-5, B-6, D-6, A-7.

Command Units: HQ-4, HQA-4, HQB-4, HQC-4, HQD-4, HQ-9, HQA-9, HQB-9, HQC-9, HQAT-9, HQ-10, HQA-10, HQB-10, HQC-10, HQC-5, HQB-6, HQD-6, HQA-7; TOC-4, TOC-9.

Victory Point Multiplier: 0.7.

Special Rules: Units of the 9th Battalion enter mounted in units of the 10th Battalion. At the beginning of the scenario, the player chooses as many units from the 9th Battalion as the 10th Battalion can carry and mounts them on the transport units. Once made, this decision may not be changed. Units in excess of the 10th Battalion's capacity are not received; however, command units not received may function from off-board.

Force Level 10

Units Required: 8, 9, 10.

Command Units: HQ-8, HQA-8, HQB-8, HQC-8, HQ-9, HQA-9, HQB-9, HQC-9, HQAT-9, HQ-10, HQA-10, HQB-10, HQC-10; TOC-9.

Victory Point Multiplier: 0.7.

Special Rules: The special rule detailed in force level 9 above is also used in force level 10.

Force Level 11

Units Required: C-5, D-5, A-8.

Command Units: HQC-5, HQD-5, HQA-8.

Victory Point Multiplier: 1.7

Force Level 12

Units Required: 8, C-5, D-5.

Command Units: HQ-8, HQA-8, HQB-8, HQC-8, HQC-5, HQD-5.

Victory Point Multiplier: 0.8.

Introductory Scenarios

The following three scenarios are designed to introduce players gradually to the mechanics of the *Assault* system. All units are placed face up and are always spotted; the spotting rules are not used. The morale rules are not used. All HQ units have a command rating of 2. Game length is unlimited; victory goes to the last player to have a surviving unit on the board. All forces enter turn 1 from that player's side of the board (east for the Soviets, west for the U.S.). Map C is used, oriented as shown in the diagram at left.



Scenario A

This scenario may be played after reading only rules 1-16.

Forces: D-6.

Scenario B

This scenario adds rules for artillery and smoke (rules 19-20). The wind is light and comes from the north.

Forces: A-6.

Scenario C

This scenario adds helicopters and air defense fire (the *Boots & Saddles* rules).

Forces: C-5, A-6.

U.S. Scenario Chart: Scenario 1

Unit	Force Level					
	7	8	9	10	11	12
1S-4			S	S		
2S-4			S	S		
3S-4			S	S		
HQA-4			S	S		
1A-4			S	S		
2A-4			S	S		
3A-4			S	S		
HQB-4				11		
1B-4				11		
2B-4				11		
3B-4				11		
HQC-5	S	S	8	8		
1C-5	S	S	8	8		
2C-5	S	S	8	8		
3C-5	S	S	8	8		
4C-5	S	S	8	8		
HQA-6		8			S	S
1A-6*		8			S	S
2A-6*		8			S	S
3A-6		8			S	S
4A-6		8			S	S
MA-6		8			S	S
1A-7				11		
HQB-8					8	
1B-8					8	
2B-8					8	
3B-8					8	
4B-8					8	
1AT-9						11
2AT-9						11
3AT-9						11
4AT-9						11
HQB-9						8
1B-9						8
2B-9						8
3B-9						10
HQB-10						11
1B-10						11
2B-10						11
3B-10						11
HQC-10						8
1C-10						8
2C-10						8
3C-10						8
4C-10						8
5C-10						10
6C-10						10
Dummies	7/S	7/S	5/S	5/S	4/S	4/S
	9/8	9/8	9/8	4/8	4/8	1/8
	3/10	3/10	3/10	3/10	3/10	
Entr.	3	3	3	3	3	3

U.S. Scenario Chart: Scenario 2

Unit	Force Level						Unit	Force Level					
	7	8	9	10	11	12		7	8	9	10	11	12
HQ-4				7			1A-7				7	7	3
TOC-4				7			HQ-8		5				
1S-4				3			HQA-8		3				9
2S-4				3			1A-8		3				9
3S-4				3			2A-8		3				9
1M-4				7			3A-8		3				9
2M-4				7			4A-8		3				9
HQA-4				3			HQB-8	9	5				
1A-4				3			1B-8	9	5				
2A-4				3			2B-8	9	5				
3A-4				3			3B-8	9	5				
HQB-4				5			4B-8	9	5				
1B-4				5			HQC-8		7				
2B-4				5			1C-8		7				
3B-4				5			2C-8		7				
HQC-4				5			3C-8		7				
1C-4				5			4C-8		7				
2C-4				5			1AT-9	5	5				7
3C-4				5			2AT-9		7				7
HQD-4				7			3AT-9		7				
1D-4				7			4AT-9		7				
2D-4				7			HQA-9	3	3				
3D-4				7			1A-9	3	3				
HQC-5	1	1	1	1			2A-9	3	3				
1C-5	1	1	1	1			3A-9	5	5				
2C-5	1	1	1	1			HQB-9						5
3C-5	1	1	1	1			1B-9						5
4C-5	1	1	1	1			2B-9						5
HQ-6					7		3B-9						7
TOC-6					7		HQA-10	3	3				
HQA-6					3	3	1A-10	3	3				
1A-6*					1	1	2A-10	3	3				
2A-6*					1	1	3A-10	3	3				
3A-6					3	3	4A-10	3	3				
4A-6					3	3	5A-10	5	5				
MA-6					3	3	6A-10	5	5				
HQB-6					5		HQB-10		7				
1B-6*					5		1B-10	5	5				7
2B-6*					5		2B-10		7				7
3B-6					5		3B-10		7				
4B-6					5		HQC-10						5
MB-6					5		1C-10						5
HQC-6					9		2C-10						5
1C-6*					9		3C-10						5
2C-6*					9		4C-10						5
3C-6					9		5C-10						7
4C-6					9		6C-10						7
MC-6					9		Dummies	1/S	1/S	1/S	1/S	2/S	2/S
HQD-6					7			3/5	3/5	3/3	1/3	4/3	3/3
1D-6					7			10/7	4/7	2/5	1/7	3/7	3/7
2D-6					7			3/9	8/9	5/7	8/9		3/9
3D-6					7					8/9			

