

# Air War-Korea



**Air Combat Rules for 1/600, 1/300, and 1/144th  
miniatures for the Korean War 1950-1953**



**by David Child-Dennis**



# Air War-Korea

## Dawn of Jet Combat

Although jets were used in WW2 and most major powers had developed them by the end of the war, there were no jet vs. jet dogfights. After the war the U.S., England, and Russia frantically improved their engines and airframes, setting the stage for what would be a continual arms race for the next forty or so years.

The Mig-15 came as a shock to Western air forces when it made its debut over the skies of Korea at the start of the Korean War. The first jet to jet dogfights took place with P-80s, F-2 Banshees, and F-84s dueling it out with Mig-15s as

North Korean forces attacked down the Korean peninsula, then during the disintegration of those same forces with the UN counterattacks.

When the F-86 Sabre entered combat it completely changed the game and set in motion the classic duel between the Mig-15 and F-86 for the next few years.

Air Combat-Korea is an introductory level air com-

bat set of miniatures rules that recreates these legendary duels. Players can use F-86s, Mig-15s, carry out ground attacks, and basically any type of mission that was used in the Korean War.

Air Combat-Korea enables gamers to read through some basic rules, set up a game, and conclude the game in a few hours without having to learn 50+ pages of rules and dozens of charts. Players should first read through the rules, then use the templates to understand the basic systems and how things work such as movement and gunnery.



## Set Up

Players will need miniatures of any scale (1/600, 1/300, and 1/144 are highly recommended), an area (floor, tabletop, game mat, etc.) to play on, and six sided dice.

Print and cut out the gunnery, turning, and side-

slip templates along with the maneuver markers. There should be sufficient maneuver markers so that there is a set for each aircraft. It's a good idea to print the templates on cardstock or laminate them to protect them against wear

from continuous use during the game.

Although there are no scenarios provided, players are encouraged to set up their own by selecting a number of aircraft and then choosing their starting speed/altitude.

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# Sequence of Play

Each turn of Air War-Korea follows a set sequence of play. All players follow the sequence in order, performing the various functions before proceeding to the next step. Once Step 7 has been completed by all players, then a new turn begins with all players performing the items in Step 1.

1. Place altitude, manoeuvre and airspeed markers beside the aircraft model stand, **face down**.
2. Turn over markers.
3. Check Initiative – The fastest aircraft move first. Aircraft within 20cm and following another, *within the front arc of the gunnery template*, always move last provided they are not moving faster than the target. Move all aircraft in order of initiative.
4. Engage in air-to-air firing.
5. Engage in anti-aircraft fire against ground attack aircraft
6. Aircraft attacking ground targets conduct their attack(s)
7. Has the mission been completed? If not, go to 1 above and repeat game steps.



## Movement

Every aircraft model **MUST** move each game turn, unless shot down or in an unrecovered stall.

Aircraft following another, within 20cm, and with the target aircraft within the front arc of the following aircraft, may have the initiative, thus may chose to move after the aircraft they are behind. The front arc of an aircraft is defined as the arc from wingtip to wing tip across the nose.

The F86 and MiG15 both had similar airspeeds thus their maximum movement rate on the table is 30cm for 1:300 or 1:600 scale models. If players wish to use 1:144 scale, then double all ranges. If players are combining piston-engined aircraft (P51, F4U, B29 etc) with the jets, then reduce the piston engined aircraft movement and turning rates by half that indicated for the F86 and MiGs.

The other major Allied jets used in the

conflict were the Meteor F8 (RAAF/RAF) and the USAF F80C, mainly relegated to ground attack missions because of their inability to match the MiG15 in air combat. There were also small numbers of F9F Panthers from the Navy. These aircraft were all very similar in performance and use the **green** turning and speed indicator circle. Piston engine aircraft use the **red**.

### Maneuver Restrictions due to ordinance loads

Fully loaded ground attack machines are notoriously difficult to manoeuvre, thus if attacked by enemy aircraft, they should immediately dump their ordinance and attempt to defend themselves or exit the area as quickly as possible. While carrying ordinance, ground attack aircraft may only turn within the first manoeuvre segment of the turning circle. Aircraft carrying ordinance **MAY NOT** loop – it's

about destroying the aircraft and killing the pilot!

### Changing altitude

Fighter aircraft may change altitude by one level per game turn. Ground attack aircraft must remain at their inbound altitude, until they reach the target, at which time they may dive to Very Low to attack it. Air combat may only take place between aircraft on the same altitude level. Altitude bands are relatively broad, being approximately 10,000 feet at middle levels. As can be appreciated, 10,000 feet is quickly covered when a Sabre could make 30,000 feet from standing on the runway, in less than 5 minutes, while the MiG15 could climb at 9,850 feet per minute. It took the Spitfire 1a, 15 minutes, to make the same altitude under similar conditions.

Altitude bands are 'H' (High), 'M' (Medium) 'L' (Low) and 'VL' .

# Movement (cont.)

## Changing speed

This is one of the more difficult aspects to calculate, given the extreme differences aircraft operated in. Reheat or 'afterburning' had not been introduced into service use at this time, so acceleration was relatively steady and slow; although stunning in comparison to piston engine aircraft, especially when climbing. In 1946, the Royal Aircraft Establishment at Boscombe Down conducted a set of comparison test flights between a Vampire and Spitfire XIV (I believe). The Vampire was so superior in climb and acceleration that any suggestion the RAF should retain piston-engine aircraft instantly vanished. Both the MiG15 and Sabre had airbrakes fitted to the rear fuselage, which allowed extreme deceleration in combat – very handy when trying to make an opponent overshoot and become a target.



All other jet aircraft may **increase** or **slow** their speed by **TWO** increments per game turn.

Piston engine aircraft may **increase**

or **slow** their speed by **ONE** increment per game turn.

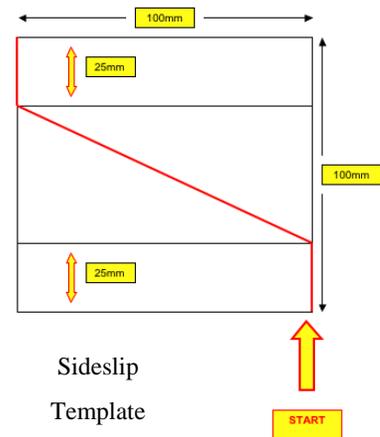
## Turning

The aircraft model is always aligned with the blue 'heading arrow' of the turn indicator, **BEFORE** any turn movement is calculated. This is their 'course heading' at the beginning of the game turn. The previous turn indicator speed-setting counter is left beside the model, until the new airspeed is calculated, then removed.

As can be seen from the turn and bank indicator circle, aircraft movement is reduced by the amount of turn attempted. The tighter the turn the greater the loss of speed. Players must determine the amount of turn required, and at the beginning of the game turn, place a speed marker next to the model that indicates the speed the aircraft will finish at when the movement step of the game turn is completed. Players may move through three sectors in a game turn, but they must continue in the same direction from which they started the turn, except when side-slipping (see template for details). If they wish to turn in the opposite direction, they can only do so in the next game turn.



F86 and MiG15 aircraft may **increase** their speed by **TWO** increments or **slow** by **THREE** per game turn.



Whatever the turn and bank sector speed shows for that degree of turn, sets the maximum speed for the current turn. As the aircraft ceases turning, the pilot selects a new speed setting according to the 'changing speed rules' Players cannot increase their aircraft speed beyond that which is indicated on the turning and banking circle. If players voluntarily decrease speed below the maximum shown on the turning and banking circle, they must use the '**changing speed**' rules to do so.

## Stalling

If a player turns through three segments in the same movement phase, they must make an immediate stall check. Experienced pilots require anything but a '1' while inexperienced pilots require a '3' or better on a 1D6 roll to recover. If the stall cannot be recovered, the pilot automatically ejects. Given the reliability of the US and Russian ejection systems, and relatively low aircraft speeds, there is no requirement for a test for a successful bail out. Piston engine aircraft, not having ejection systems require a test. They require a '3,4,5, or 6' to successfully bail out. Aircraft lose one level of altitude recovering from a stall and spin.

# Visibility

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## Visibility – Target acquisition

This system is designed to take into account the relative movement between acquirer and target. It also allows for multiple crew-members, such as those in a B29, to individually locate a target. Visual detection is limited to 24 inches in clear weather conditions. Each target must be detected before it can be engaged. As the range between the observer and target decreases so does the score to detect the target. Aircraft with GCI support ADD +1 to their detection dice roll. The player attempting to acquire the target places the firing template across the front arc of his aircraft, in the same position as if he were attempting to engage a target. The calculation to acquire the target is made AFTER all movement has been com-

pleted. The observer(s) takes into account the same sector penalty applied to gunnery accuracy and subtracts it from their dice roll. Players must be aware that because of the different position of crew members in the same aircraft, their acquisition dice rolls may be different.

Once acquisition has been successful it remains so until the aircraft separate by more than 24 inches. Pilots in the same formation may hand on targets to other aircraft. Therefore, once a bomber cell locates a hostile aircraft, every other aircraft in that cell automatically does so. Each aircraft in each cell or formation may make a target acquisition check until one is successful. At that point all aircraft in that cell or formation have located the enemy aircraft.

If enemy aircraft are in a close formation, that is, the models are within 12cm of each other, the formation is located once any model within the formation is acquired.

## Visual Target Sighting (roll one six sided dice for each crew member)

Subtract any penalties as they apply, from the dice roll. The minimum adjusted score is:

Up to 24inches = 5+

Heavy Monsoon cloud = -1

Up to 18 inches = 4+

Up to 12 inches = 3+

Up to 6 inches = 2+

Rolling a '1' indicates the player failed to see the enemy aircraft.

# Gunnery

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## Gunnery

*Note: All gun ranges are measured from the centre of the firer's model base to the centre of the target's model base. Only one target may be engaged per game turn, unless a B29 (or similar bomber) defending itself from multiple attacks. Only one dice roll may be made against the target.*

Maximum gunnery range is 12cm with the target being somewhere in a direct line with the blue arrow on the gunnery template. It does not matter where the gunnery line crosses the target, just as long it makes contact with some part of the target model. One of the reasons for using this system is that small targets are more difficult to engage than large. A MiG15 is a more difficult target than a B29!

## Range and Dice Rolls to hit the target

## (1D6 dice roll per firing turn)

At 12cm it requires a '6' to hit the target. For each centimetre less than 12cm, reduce the dice roll by '1' to hit the target. Don't forget to add the gunnery modification penalties if they apply.

*Note: From the introduction of the Jenkins range limiter on the Sperry A1C(M) gun sight, in June 1952, the dice roll to hit a target is reduced by '1'. Most of these systems appear to have been fitted to F86D/E arriving from July 1953. The Hughes A4 gun sight fitted to the F86F should also have the same advantage.*

## B29/B50 ONLY

If the B29 is attacked from dead astern or directly from the front, the

gunnery table for fighter combat is used. If the attack is from any other direction, the dice roll to hit the attacker is **INCREASED** by '1'. This is to allow for multiple turrets engaging the target. Both the B29 and B50 were equipped with gunnery radar sets, but due to their short range and the high crossing speed of the attacking MiGs, proved relatively ineffective.

*In truth, the turrets of the B29 were barely able to traverse quickly enough to engage an attacking jet, as B17 crews found with Me262 attacks. This necessitated the crew being extremely vigilant for jet exhaust vapour, often seen some distance from the B29, allowing the MiG to be seen before it got into gun range.*

# Gunnery Damage

## Damage

*Note that the attacker is only permitted ONE damage dice roll per target per game turn.*

If the attacker hits the target, both attacker and defender immediately roll one six-sided dice each and compare the score. If the attacker's dice roll is twice that of the defender's, the defend-

ing aircraft is instantly destroyed. The pilot and crew have no chance of surviving. If the attacker's score is greater, but not twice that of the defender, subtract the lower from the higher and this is the *minimum* score required for the pilot and crew to bail out. We have incorporated this bail out dice roll to simulate the difficulty in ejecting from aircraft

suffering different degrees of damage. If the attacker's dice roll is less than the defender's, there is no damage.

## MiG15

Players using MiG15's will increase their damage dice rolls, against a defender, by +2.

# Ground Attack

## Anti-Aircraft Fire

*Each attacking aircraft must pass over the target at VL altitude to complete the attack and is subject to the defender's AAA fire, BEFORE they drop their weapons. Each attacking aircraft will be subjected to a single six-sided dice roll from the defender's AAA. Ground attack doctrine required that only one attack pass was made by an aircraft against the target, before they exited the area at the highest possible speed to avoid enemy AAA fire.*

Each attacking aircraft and defender will roll one six sided dice, and compare the result. If the defender's dice roll is double that of the attacker's, the aircraft instantly disappears in a ball of fire! It cannot release weapons or make a crew bailout check. For any other result, the difference between the two dice rolls determines the MINIMUM dice roll required for the crew to bail out. If the defender's dice roll fails to equal or beat the attackers', the attack proceeds as planned.

Examples:

AAA fire against an attacking aircraft.

If the defender rolls a '6' and the attacker a '5', the attacker had been shot down and the pilot will automatically bail out, it being impossible not to roll a '1'. If the defender rolls a '6' and the attacker a '1', then it requires a dice roll of '5' or '6' by the attacker to successfully bail out. The aircraft is so badly damaged that bailing out will be difficult. The varying dice roll represents the problems caused by battle damage to ejection systems.

## B29 and B50 high level bombing attacks

The North Koreans had no effective AA fire to use against B29 or B50 raids from high altitudes. Therefore, these raids will not be subject to AA fire as they attack their targets.

## Bomb Damage Assessment.

Each aircraft passing across the target at VL (or B29/B50 at high level) makes an attack check. Both attacker and defender roll one dice each with the highest dice roll winning. This competing dice roll off is to simulate the problem of accurate targeting under intense AAA fire or from high altitude. If the defender wins the dice roll, the attacking aircraft withdraws by the shortest route from the tar-

get. No attack is possible for the aircraft. The aircraft has either been driven off by intense AAA fire or failed to identify the target.

For each aircraft that obtains a hit against the target, make a second dice roll off between the attacker and defender. If the attacker makes a higher dice roll than the defender, subtract the lower number from the higher and for each number difference between the two dice rolls, it represents 10% damage to the target area. Therefore a difference of '3' would cause 30% damage to the target. If the defender's dice roll is higher, there is no



damage to the target. Players should attempt to alter the amount of damage a target can absorb by incorporating a penalty for large or dispersed targets. Rail yards are more difficult to damage than a warehouse complex. Bridges are difficult to hit, but are more easily damaged, so should attract a penalty to hit them, but a bonus to damage them.

# Korean Air War Overview

## Introduction

The Korean War that lasted from 25<sup>th</sup> June 1950 until 27<sup>th</sup> July 1953 was the transition between piston and jet engine combat aircraft. This necessitated the most radical change in thinking since the introduction of aircraft in World War One. Most of the skills learnt during World War Two became irrelevant. While aircraft manufacture remained essentially similar, the handling, servicing and pilot training required significant revision. My late father, a senior engineering officer in the RNZAF, always said there was a major difference between the 'propeller and jet' people. He reckoned the propeller people could fix anything, while the jet people were nothing but 'parts fitters!' There is



some truth in this claim but it must be remembered that a jet engine, even a 1950's Rolls Royce Nene, required materials and assembly skills often exceeding those needed for piston engines. To further complicate matters, aircraft speeds were higher than anything previously known, causing unexplained – at the time – structural failures. The certainties of piston-engine aircraft could no longer be relied upon.

By the beginning of the war, there were few WW2 veterans remaining in service and there were even fewer that had any experience flying jets. Both the Russian and United States air forces suddenly realised they would need to retain older, more experienced pilots and retrain them to fly jets. This was no easy task. The Americans were much better placed than the Russians, having more advanced training systems still retained after the war. They also seem to have devoted more time in dealing with the problems of high altitude flight and the effect of gravity on pilots during extreme maneuvers in jets. The Germans

had conducted a considerable amount of research in these fields which the Allies were fortunate enough to acquire as the war ended. The 'G' suit, as it became known, provided the US pilots with a much greater resistance to combat fatigue; something the Russians ignored at the beginning of the war.

## Assessing aircraft differences

Both Russian and American pilots reported that there was little difference between the

MiG15 and Sabre flight characteristics. The MiG enjoyed a much better rate of climb above 25,000 feet because it was lighter. The Sabre was better in a dive, especially after the all-flying tail had been fitted. Ironically, the MiG15 was powered by the Rolls-Royce Nene, which had turned the MiG15 from 'ordinary' to

'exceptional', a fact not lost on the Americans! The early F86A; the main variant that fought in the war, did not possess hydraulic assisted controls, so in this respect was similar in control characteristics to the MiG.

Gunnery in a jet aircraft is a significantly more difficult problem than in the piston-engine fighters of WW2, just 5 years earlier. The USAF embarked upon an innovative program to fit a small radar unit and linked gun sight to the F86 and P80. The idea was to have a radar unit measure the range and direct the gun sight to hold the target within firing parameters until the pilot could fire the linked guns. This worked at altitude against slow manoeuvring bombers, but failed miserably against highly manoeuvrable fighters, especially the MiG15. The biggest problem in Korea was relatively rough airstrips causing component failure, excessive moisture in the Asian climate and a lack of trained technicians to service faulty units. By early 1951, most F86A pilots had locked their Sperry sight to a manual

configuration and disregarded the tracking system. It required solid-state digital circuitry to solve the problem and that was not available until the Vietnam era.

The Sperry A1C radar gun-sight is often credited with providing the F86A with a significant advantage over the MiG15 when it came to shooting accuracy. This was not the case until the USAF introduced the Jenkins range limiter that reduced the radar to a maximum range of 1200 feet. This meant that in a tight turn the 'pipper' would centre on the target rather than wandering all over the gun-sight. But it was not until after June 1952 that a limited number of F86A aircraft began to be fitted with this device. It was decided that the F86D was to receive priority for the new Sperry A1C(M) gun-sight; this aircraft not arriving in strength in Korea until the early summer of 1953. It was with the debut of the 'Dog' that USAF kill ratios began to escalate against the by then aging MiG15. By 27<sup>th</sup> July 1953, the war had ended. However, there is little doubt that the disaster inflicted on Chinese and Korean MiGs in early July 1953, brought the Koreans to the negotiating table. They would have been painfully aware that once the MiGs had been swept from the sky, American strategic bombing would have reduced North Korea to rubble.

The F86A was equipped with six .50 calibre heavy machine-guns. They were claimed to be effective between 500 and 1200 yards range and had certainly been so against WW2 aircraft. But jets were significantly structurally stronger than their WW2 counterparts, thus more resistant to damage from .50 cal solid shot. The MiG15 carried a single 37mm cannon and two 23mm cannon, giving it a considerable punch at 1200 yards range. Most Sabre pilots considered the six .50 cal machine-guns inadequate; reporting that many MiGs took multiple hits yet managed to survive the damage. The Sabre was unlikely to

## Korean Air War Overview (cont.)

survive more than two 37mm hits or three 23mm hits. The main difference between the US and Russian armament was the cannon armed MiGs, being designed primarily for the anti-bomber role, fired explosive shells that caused significant damage to anything they hit. The US .50 cal machine-gun was a solid projectile that needed to hit something vital in order to damage the target.

### Loss ratios

There has been considerable controversy over the matter of the loss ratio between MiGs and Sabres. The best information we can find is a US Airforce study that concluded a 3:1 kill ratio in favour of the Sabre. This appears credible given the lack of combat skill exhibited by the average Chinese and Korean pilots – they were after all new to any form of air combat and could not have been considered in any way equal to their US adversary.

As a matter of training doctrine, the USAF ensured their better and more experienced pilots returned to the US in order to pass on their skills and experience to those preparing to fight in Korea. This had a major impact on USAF fighter skills and ultimately the loss ratio they managed to inflict on the Korean and Chinese MiGs. However, the unknown quantity was the so-called ‘Russian volunteer force’. Many of these pilots had flown in The ‘Great Patriotic War’ and soon after converted to the MiG15. They were certainly no amateurs.

### According to Wikipedia...

“Consequently those units suffered great losses by the now better prepared US Sabre pilots. During the six months of February to July 1952 they lost 81 MiGs and 34 pilots were killed by F-86s, and in return they only shot down 68 US aircraft (including 36 F-86s). The greatest losses came on 4 July 1952, when 11 MiGs were downed by the Sabres, with one pilot killed in action. Con-

tributing to all this was the secret “Maple Special” Operation, a plan by the World War II ace Colonel **Francis Gabreski** to cross the Yalu river into Manchuria (officially forbidden) and catch the MiGs unaware during their takeoffs or landings, when they were at disadvantage: flying slow, at a low level, and sometimes short of ammunition and fuel. Even under these circumstances, MiG-15 pilots would score at least two important victories against American aces:

- 10 February 1952: 1st Lieutenant Mikhail Akimovich Averin shot down and killed Major **George Andrew Davis, Jr.**, an ace credited with 14 victories, 10 confirmed by Communist sources.<sup>[22][23][24]</sup>
- 4 July 1952: A few seconds after shooting down 1st Lieutenant M. I. Kosynkin, future ace Captain Clifford H. Jolley was forced to eject out of his crippled F-86E after being caught by surprise by MiG-15bis pilot 1st Lieutenant Vasily Romanovich Krutkikh<sup>[16][22]</sup>

At least two Soviet fliers became aces during that period: Majors Arkadiy S. Boytsov and Vladimir N. Zabelin, with six and nine victories respectively.<sup>[22]</sup>

New and better trained PVO divisions would replace the beaten 97th and 190th in July and August 1952, and though they could not take the aerial superiority away from the Americans, they could neutralize it between September 1952 and July 1953. Again, the figures of victories and

losses in the air are still debated by historians of the USA and Russia, but on at least three occasions, Soviet MiG-15 aces gained the upper hand against Sabre aces:

- 7 April 1953: Shortly after causing damage to a Chinese MiG and a Soviet one over **Dapu** airbase in Manchuria, the 10-kill ace Captain **Harold E. Fischer** was downed by future ace 1st Lieutenant Grigoriy Nesterovich Berelidze and taken prisoner.<sup>[25]</sup>
- 12 April 1953: Captain Semyon Alekseyevich Fedorets, a Soviet ace with eight victories, shot down the F-86E of Norman E. Green, but shortly afterward was attacked by the future top American ace of the Korean War, Captain **Joseph C. McConnell**. In the ensuing dogfight, they shot each other down, ejecting and being rescued safely.<sup>[22]</sup> “

20 July 1953: During a raid deep into Manchuria, and after shooting down two Chinese MiGs, Majors Thomas M. Sellers and Stephen L. Bettinger (the second an ace with five kills) tried to catch by surprise two Soviet MiG-15s that were landing in Dapu. The Soviet fliers skillfully forced the Americans to overshoot, reversed direction and shot both down: Captain **Boris N. Siskov** forced Bettinger to bail out and his wingman 1st Lieutenant Vladimir I. Klimov killed Major Sellers. This was Siskov's fifth victory, making him the last ace of the Korean War. Those were also the last Sabres downed by Soviet fliers in the war.<sup>[16][25][26]</sup>

So...as can be seen from the above *Wikipedia* entry, the matter of air combat outcomes was not at all certain. Between November 1950 and January 1952, 40 Soviet MiG pilots were credited with being aces; that is they each shot down 5 or more enemy aircraft. Nikolay Sutyagin was credited with 22 victories, Yevgeny Pepelyaev, 19 and Lev Shchukin with 17, to name just three.

We therefore believe the Sabre and MiG were not significantly different to accord either side an overwhelming advantage, rather, individual pilot skill made the difference. However, it was the mission parameters that also made a





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*Air War-Korea is the third in a series of introductory air combat games after Typhoon for modern air combat and Battle of Britain, which focuses on one day of the German air raids over England in the summer of 1940. All of these games are designed to get players quickly into the game by keeping the level of complexity to the bare minimum, but yet still giving the feel of air combat. All of these games are suitable for group or convention play and are ideal for those gamers who want to play a game of air combat, but don't want to invest several weeks learning complex systems. Air War-Korea is hopefully the first in a series of games that will focus on specific eras with the second game being set in the skies over Vietnam.*



## **Korean Air War Overview (cont.)**

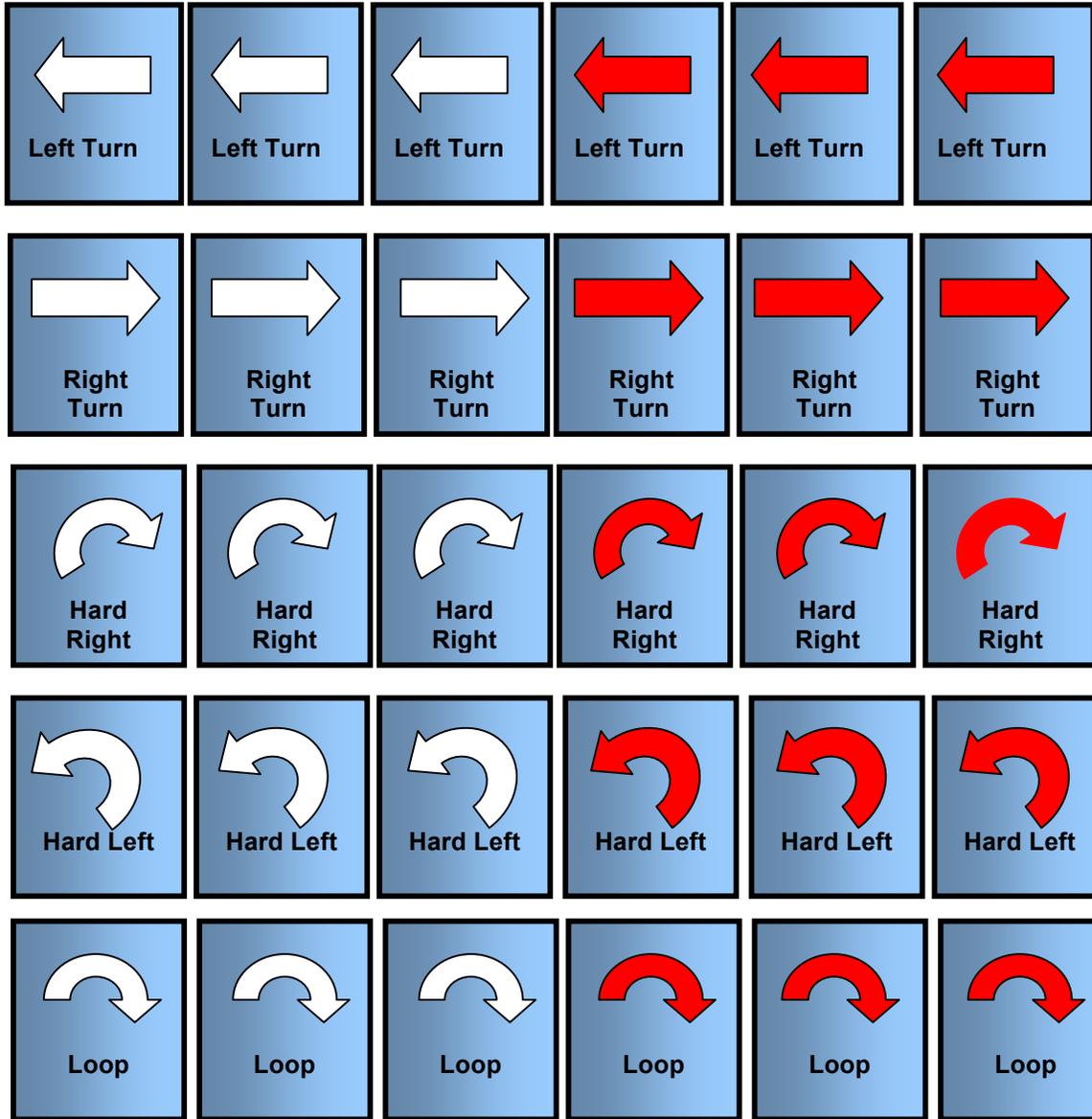
difference to the perceived capabilities of each aircraft. The Sabre operated best at lower altitudes that suited its air interdiction role against obsolete Soviet supplied WW2 piston engine aircraft. From late 1950 until mid 1952 the USAF was heavily committed to the ground support role in an effort to stem the Chinese advance down the Korean peninsula. The MiG15 was tasked with exactly the opposite mission, for which it was specifically designed, the interception of US B29 bombers at high altitude. Initially the USAF believed the B29 was capable of operating without fighter escort, until it began to suffer unacceptable losses to the surprise introduction of MiGs in late 1950. Immedi-



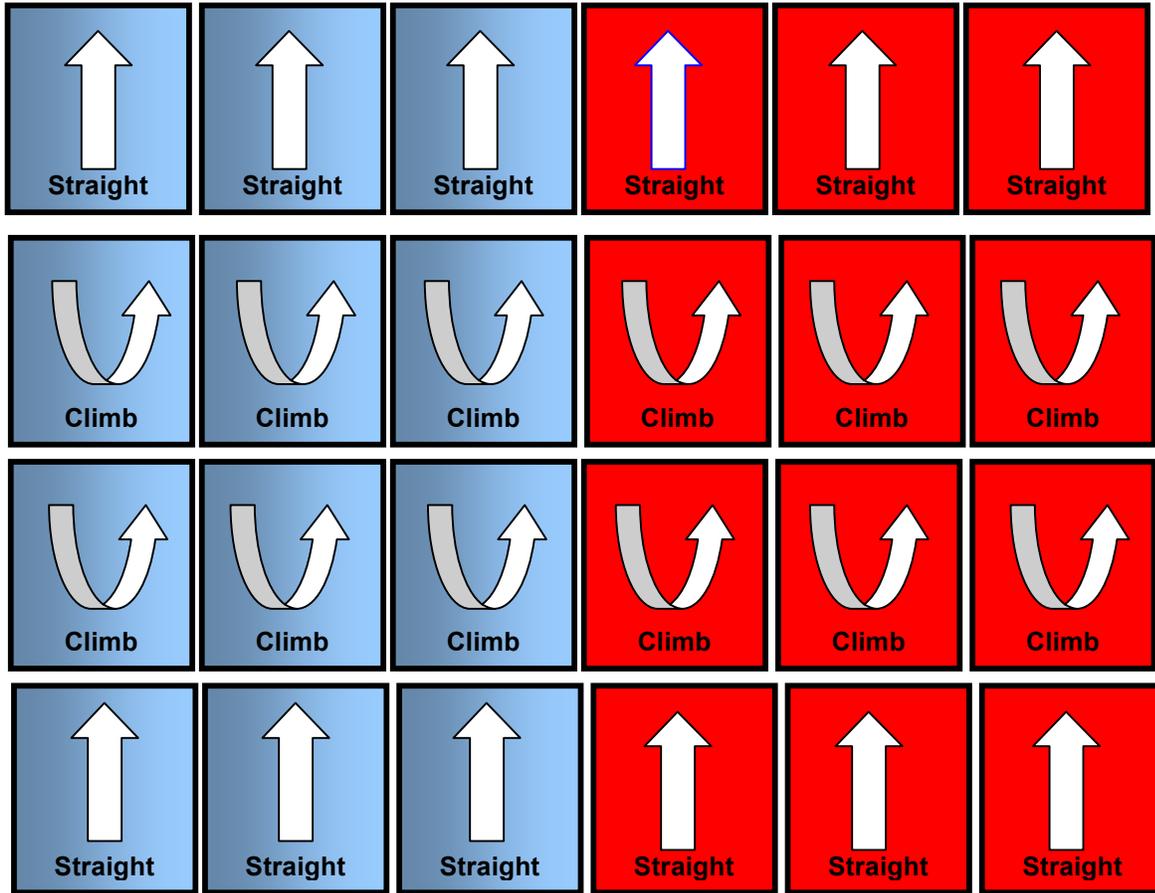
ately the USAF and RAF began to attach Meteor and F80C escorts to the B29 raids but they proved ineffective given the superiority of the MiG15. A small number of F86A was hastily brought to Korea in December 1950, in the hope of countering the MiG. However, the primary mission of the USAF remained ground support and interdiction missions against the Chinese and North Korean armies, until by late 1952, the front had stabilised north of Seoul and the USAF Sabres were released from the ground support role and able to deal with the MiG in an air-superiority campaign. By then, the Sabre had undergone significant improvement in the E

model, whereas the MiG15bis had remained the same aircraft that had been available pre-war, three years earlier. The so-called 'turkey shoot' over MiG Ally, North Korea, in early July 1953, demonstrated the continued development of the F86F into an excellent jet fighter. But the enormous effort by the USAF and Navy put into preparing the new jet fighter pilots was a critical factor. The USAF and Navy pilots were, in the main, significantly better than their Chinese or North Korean adversaries, and more to the point, they believed their Sabre was superior to the MiG. Players need to consider the various roles each air force was required to fulfil when setting up games. We would recommend that USAF Sabres be given a +1 on all gunnery dice rolls for the period November 1952 until the end of hostilities in July 1953. The covers the superior Hughes A4 gun-sight and the arrival of better trained pilots and the Sabre F86F in quantity.

# Turn Markers



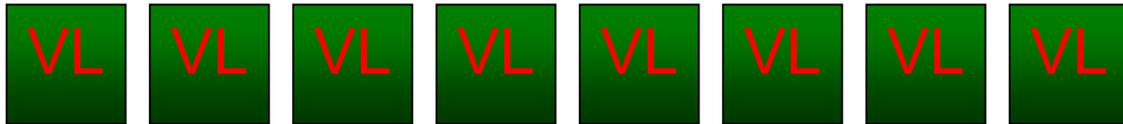
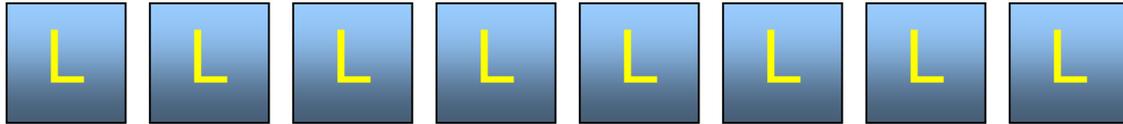
### Movement and Turning Counters 3



# Air War - Korea

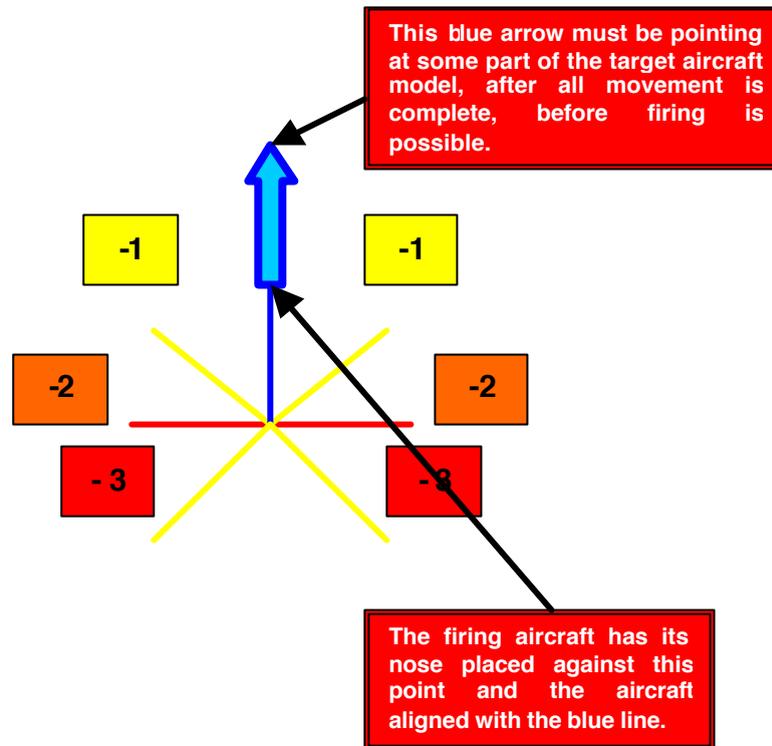
Altitude and speed markers

## Altitude and Speed Markers



## Gunnery calculator

Air Combat - Korea

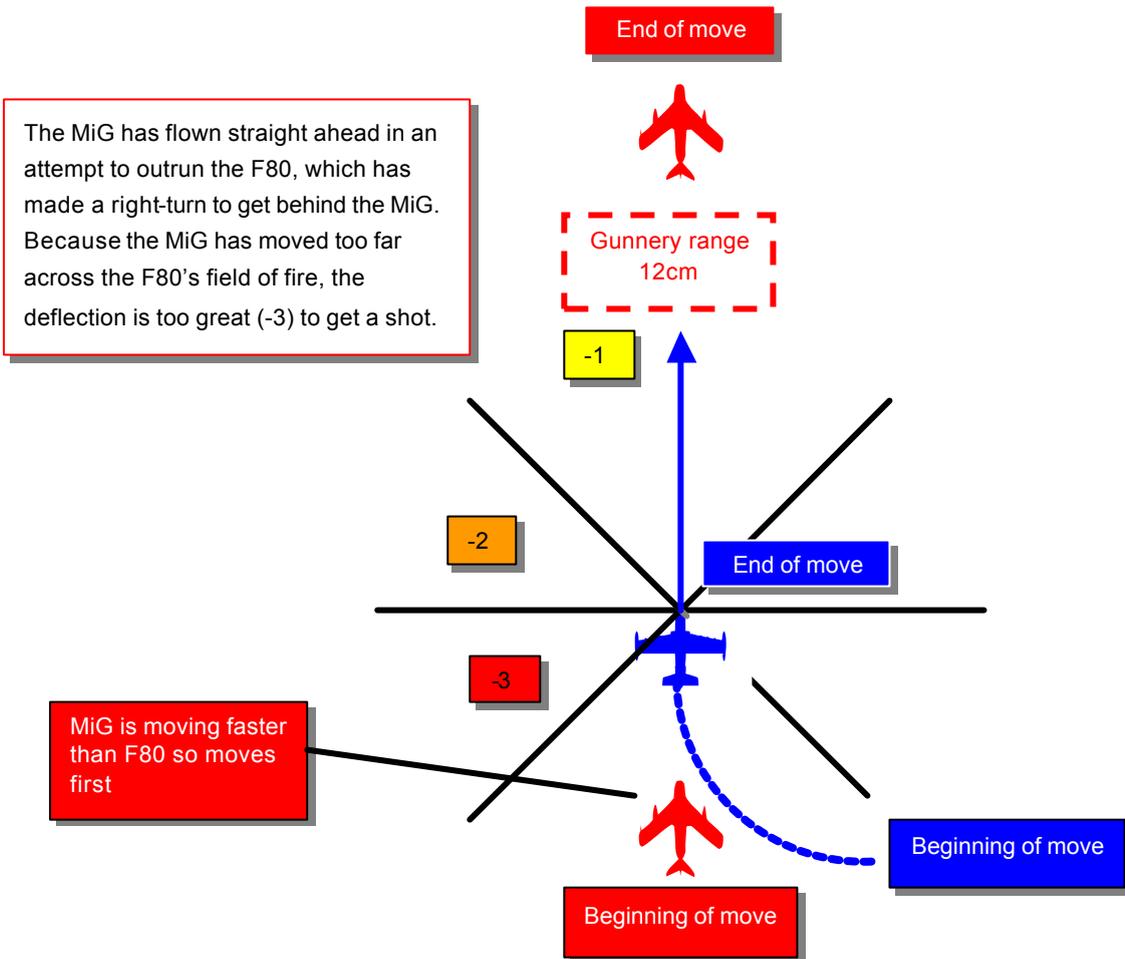


The gunnery calculator is designed to calculate the relative motion penalties of the target in relation to the firer.

As can be seen from the negative numbers in the various boxes, the further from the line of fire the relative movement of both firer and target commences, the greater the penalty. Note that penalties are not cumulative. Only the highest penalty is used. Therefore, if the target moves from behind the firer – say overshoots due to speed difference - the penalty is -3.

The blue arrow is the direction of travel of the firer. The nose of the firing aircraft, or gun turret, is placed at the base of the blue arrow. It is important to note the position the target aircraft was originally in BEFORE the firer moved into position to engage the target aircraft.

## Air War- Korea Gunnery example

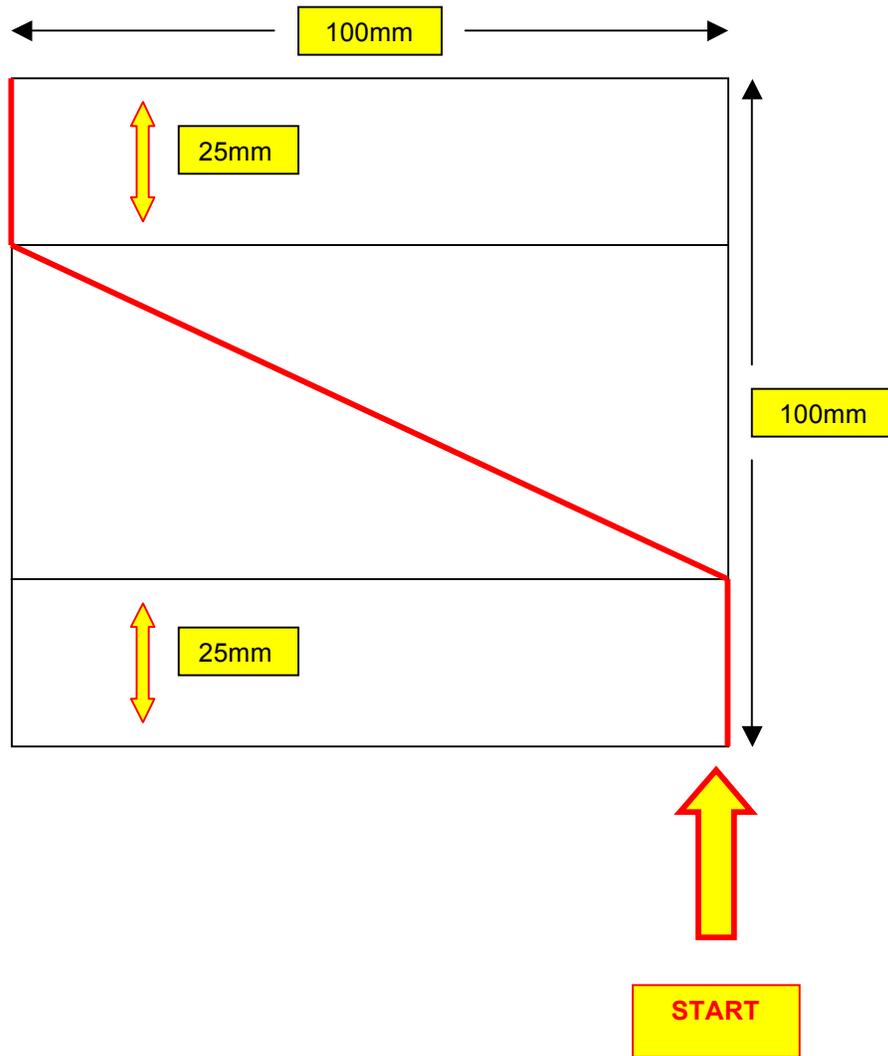


### Gunnery Calculation Example

The NVAF MiG-15 moves first, being the fastest moving aircraft. The USAF F-80 moves last.

1. Both players take note of the position of the MiG in relation to the F80 before it moves.
2. The F80 player moves their aircraft according to the manoeuvre and speed counters they placed beside the F80.
3. The MiG player moves his aircraft according to his manoeuvre and speed counters.
4. The F80 player places the gunnery template at the front of the aircraft and checks to see if the MiG is in range and arc.
5. The F80 is in range and arc, but because the MiG started out at the -3 position on the gunnery template, the F80 player must adjust his gunnery dice roll by -3.
6. The range to the target is 12cm that requires a '6' to hit the target. However, as the adjustment is a -3 penalty, the adjusted dice roll can only make '3' maximum, so no shot is possible.

Template measurements for sideslip - 1:144<sup>th</sup> scale models  
Halve measurements for 1:350 – 1:300 scales

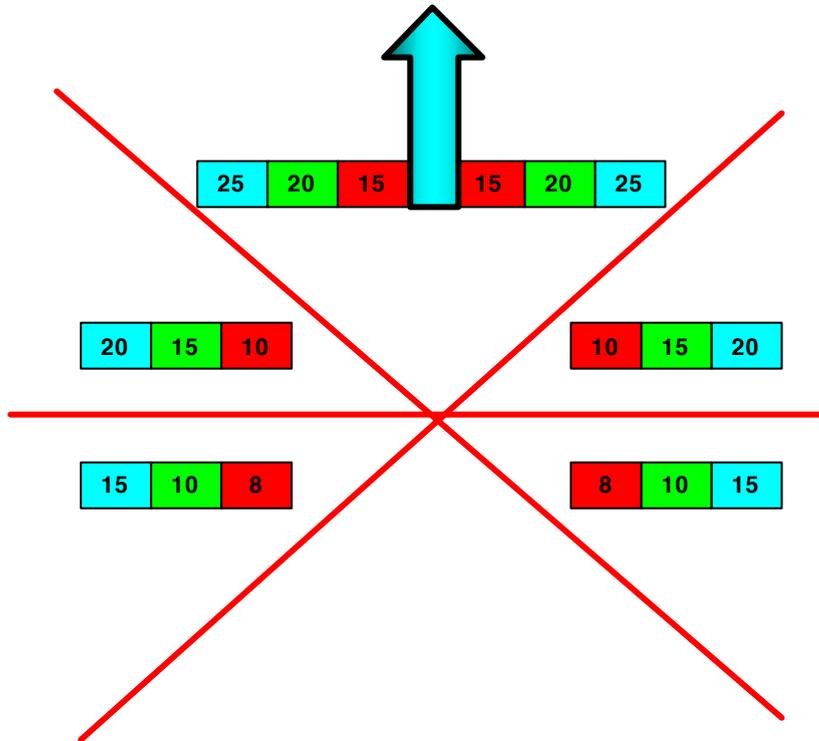


# Air War – Korea

## Turn and Bank Indicator

TURNING CIRCLE – all measurements are in centimetres

30	F86-MIG15
25	Other jets
15	Piston engine



# Air War Korea

## Quick Reference Sheet

### Sequence of play

#### The Game Turn

1. Place altitude, manoeuvre and airspeed markers beside the aircraft model stand, **face down**.
2. Turn over markers.
3. Check Initiative – The fastest aircraft move first. Aircraft within 20cm and following another, *within the front arc of the gunnery template*, always move last provided they are not moving faster than the target. Move all aircraft in order of initiative.
4. Engage in air-to-air firing.
5. Engage in anti-aircraft fire against ground attack aircraft
6. Aircraft attacking ground targets conduct their attack(s)
7. Has the mission been completed? If not, go to 1 above and repeat game steps.

#### Changing Speed

F86 and MiG15 aircraft may **increase** their speed by **TWO** increments or **slow** by **THREE** per game turn.

All other jet aircraft may **increase** or **slow** their speed by **TWO** increments per game turn.

Piston engined aircraft may **increase** or **slow** their speed by **ONE** increment per game turn

#### Visual Target Sighting (roll one six sided dice for each crew member)

Subtract any penalties as they apply, from the dice roll. The minimum adjusted score is:

Up to 24inches = 5+

Heavy Monsoon cloud = -1

Up to 18 inches = 4+

Up to 12 inches = 3+

Up to 6 inches = 2+

Rolling a '1' indicates the player failed to see the enemy aircraft.

#### Range and Dice Rolls to hit the target (1D6 dice roll per firing turn)

At 12cm it requires a '6' to hit the target. For each centimetre less than 12cm, reduce the dice roll by '1' to hit the target.

Don't forget to add the gunnery modification penalties if they apply.

#### Gunnery

*Note: All gun ranges are measured from the centre of the firer's model base to the centre of the target's model base.*

Only one target may be engaged per game turn, unless a B29 (or similar bomber) defending itself from multiple attacks.

Only one dice roll may be made against the target.

Maximum gunnery range is 12cm with the target being somewhere in a direct line with the blue arrow on the gunnery template. It does not matter where the gunnery line crosses the target, just as long it makes contact with some part of the target model.

#### Damage

*Note that the attacker is only permitted ONE damage dice roll per target per game turn.*

If the attacker hits the target, both attacker and defender immediately roll one six-sided dice each and compare the score.

If the attacker's dice roll is twice that of the defender's, the defending aircraft is instantly destroyed. The pilot and crew have no chance of surviving. If the attacker's score is greater, but not twice that of the defender, subtract the lower from the higher and this is the minimum score required for the pilot and crew to bail out. We have incorporated this bail out dice roll to simulate the difficulty in ejecting from aircraft suffering different degrees of damage. If the attacker's dice roll is less than the defender's, there is no damage.

#### MiG15

Players using MiG15's will increase their damage dice rolls, against a defender, by +2.

## **Air War Korea**

### **Quick Reference Sheet**

#### **AAA Fire against attacking aircraft**

Each attacking aircraft and defender will roll one six sided dice, and compare the result. If the defender's dice roll is double that of the attacker's, the aircraft instantly disappears in a ball of fire! It cannot release weapons or make a crew bailout check. For any other result, the difference between the two dice rolls determines the MINIMUM dice roll required for the crew to bail out. If the defender's dice roll fails to equal or beat the attackers', the attack proceeds as planned.