## A & A GAME ENGINEERING PRODUCT SUPPORT

Product Support sheets come in the following types:

- Clarifications these are more general clarifications about game play in response to questions from players.
- Corrections and Amendments these include corrections to errors in game data, typing errors, and mistakes in game play that have come to light. These may come in two alternatives:
  - applicable to the most recent edition.
  - applicable to previous editions. These items will all have been incorporated into the latest edition on sale.
- New Rules These rules will have been developed in response to requests from players. They may also have been developed from House Rules (see below).
- House Rules and player suggestions. House rules that are tested and work well may be incorporated into the basic rules if the author(s) approve.

The content of the sheets follows the same order as the rules in the book and the first sheet shows a summary of these sections and indicates those that are affected by the current sheet.

## **SCRAMBLE**

RULES UPDATE 1.5

REVISED: 11 APRIL 2014

This revised sheet is now limited to one set of new rules which do not appear in the current edition of the rules (3.2). All the other rule changes and updates have already been incorporated in the current edition.

- 1. INTRODUCTION
- 2. MEN AND MACHINES
- 3. SETTING UP A GAME AND DEPLOYMENT
- 4. FLIGHT FUNDAMENTALS
- 5. SHOOTING
  - ⇒ 5.17 Resolving attacks on high DV targets ("an impossible shot") (September 2010)
- 6. ATTACKING A SURFACE TARGET
- 7. BIBLIOGRAPHY
- 8. GROUND DEFENCES AGAINST AIR ATTACK
- 9. NIGHT ACTIONS
- 10. OPTIONAL RULES
- 11. SETTING UP A TYPICAL GAME
- 12. AIRCRAFT DATA AND THEATRES OF USE
- 13. EXPANDED AIRCREW TRAINING

APPENDIX C - TABLE OF AIRCRAFT WEAPONS

APPENDIX D - DESIGNERS' NOTES

FIGHTER RECORD CARDS

BOMBER RECORD CARDS

## **Background**

These new rules are developed to take account of high DVs encountered at the end of World War Two. They are applicable to most allied aircraft and reflect developments in the war to counter the problem which has been encountered in the rules by players.

Some of the problem is down to a 'miscalculation' on our part when doing the DVs and using the methanol boost values for the late German fighters. These values have been revised and corrected and are available on a download sheet. This does not solve the problem with the German jets or with fast Japanese fighters, which were a problem for allied airmen in battle.

## Resolving attacks on High DV targets ("an impossible shot") (New Rule 5.17)

Players will recall that earlier editions of Scramble had some aircraft which had excessive DV values, caused by our overlooking the inclusion of the effects of methanol boosting in some of our source data. That issue was resolved when some data was recalculated to provide a more realistic value by removing the effects of the boost. Nevertheless there are aircraft in the data lists which have a DV in excess of 20, which means that they are difficult or even impossible to hit. In addition we have done some calculations to provide aircraft data for the Korean War (available as a download on our website). Nearly all of these new aircraft have very high DV values, which make them impossible to actually hit under normal circumstances.

Clearly it was necessary to address this issue at the same time. The following new rule has been created and is also compatible with the rest of the rules system and can be used to resolve attacks which would otherwise not be possible due to the tactical situation or lack of skill on the part of the shooting player's pilot or crewman.

Firstly, the condition that must apply is that when you add the gunnery skill, the tactical and gun-based modifiers, plus 10 (the maximum score on the "to hit" roll) and the result is LESS than the DV of the target, the rule may be used. If you are using the optional computing gun sights rule, then you must also add 6 to this calculation. (If you are using these rules in the Korean war then you should assume that both sides are using such gun sights on their fighters). This condition may look complicated but is in fact the reverse of the automatic hit rule (5.9).

In this case, the shooting aircraft sacrifices damage dice to gain a to hit bonus. Each group of weapons on an aircraft is treated separately when using this rule.

A Spitfire with 2x20mm and 4x.303 guns would treat each of these gun groups separately when calculating the bonus (as you would in fact when shooting because the to hit modifiers are different).

It may be the case that you only need to sacrifice damage with one of the gun groups on an aircraft because the other would hit. When making this sacrifice, the damage reduction is applied sequentially to the gun mounts on an aircraft. If you only have rifle calibre machine guns, then you must have at least two mounts to apply the rule.

A Hurricane with 8x.303 guns has four mounts. It could sacrifice up to three of these, retaining 1d6 of damage, but potentially gaining a considerable to hit bonus.

Each damage dice sacrificed gives a cumulative attack bonus of 1d6 to the resolution of all the remaining dice rolls for the group of guns. For the sake of simplicity, the bonus d6s are rolled once, and the resulting score is then added to each of the actual d10 attack dice.

If our Hurricane decided to sacrifice 2 of the damage dice, he then rolls 2d6 to calculate the to hit bonus, scoring 2 and 2 for a total of 4. He then rolls 2d10 for the remaining pairs of guns, adding 4 to each of the scores.

If the attacking plane is a Hellcat with 6x0.5 cal heavy machine guns, 3 attack rolls and 2d6 damage per attack, the player might choose to sacrifice 3 damage dice, gaining a 3d6 to hit bonus. He has two attacks left, but must roll these separately because one of the attacks will only do 1d6 damage, while the other retains its full 2 dice of damage.

If the attacking aircraft is a MiG-15 with 1x37mm and 2x23mm, these have 7 and 4 damage dice respectively. The 37mm gun shoots at -3 normally due to the type and the single gun. It can however sacrifice up to 6 damage dice to gain a to hit bonus if necessary. Similarly the 23mm guns can also gain a good to hit bonus. If this aircraft chose, for instance, to sacrifice 4 and 2 dice respectively, the attacks are resolved by rolling 4d6+1d10 for the 37mm gun, doing 3d6 damage if it hits, and 2d6+1d10 for the 23mm guns doing 2d6 damage if they hit. Bear in mind that the bonuses are always rolled separately for each gun group, vene if they have sacrificed the same number of damage dice.

When using these rules, all other tactical and gun mount modifiers apply as usual, as do any optional rules you have chosen to apply. You must always roll to hit, even if the random to hit bonus was not enough to get a hit on the target, because you may deplete the gun. Obviously, depleted guns cannot provide a to hit bonus.

You cannot apply these rules to gain the automatic hit bonus.

You can also apply these rules to Air to Air rockets and light antiaircraft guns by sacrificing some of their damage dice. You can also apply the rules to aircraft with multiple mounts, however the guns must all be of the same calibre and must all bear on the target. Damage calculation follows the multiple mount rules, however the gun mount being used to resolve the attack may not sacrifice any of its damage dice. The damage bonus applied to the resulting hit is 1 per damage dice in excess of the basic damage for the mount (which is how the combined fire extra damage is assessed).

If we take as an example a B-29A Superfortress being attacked by a MiG-15, it has a total of 6 0.5cal mounts each doing 2d6 damage plus one 20mm mount doing 3d6 damage. For our purposes we will ignore the 20mm and use the 0.5 for the attack. The gunner chooses to sacrifice 3d6 damage from two mounts to gain 3d6 to hit bonus. This means that he has 5 0.5 mounts left for the attack as he did not sacrifice all the dice from one of the mounts. This means that he will gain another +4 to hit for the extra mounts being used. He makes one to hit roll at +4 and +3d6. If he hits he will do 2d6 + 7 damage (there are 4 extra mounts left which would normally give him 2 points each, but one of those has sacrificed a damage dice so it only gives one dice).