

# THE BURNING BLUE

## The Battle of Britain, 1940



### SUPPLEMENT #2

This supplement details the formulae for calculating raid Victory Points (VPs) and Response Levels (RLs).

*DESIGN NOTE: We have not given players the opportunity to construct their own raids. In addition to the reasons given in the designer's notes, this is because it was felt that a raid construction system would lead to generic raids, or raids that are optimized to deliver the highest VPs rather than the most historical experience.*

*However, some players may wish to construct their own raid tables, maybe to explore some alternate history options. This supplement lays out the means to calculate Victory Points and Response Levels. The player will still have to select their own targets and raid forces, but these formulae fill in the final blanks.*

#### S2.1 Calculating Victory Points

*DESIGN NOTE: The VPs are calculated simply as a fraction of the maximum points that the bombers in a raid force can possibly score.*

The following procedure assumes that you have defined a raid force from which one or more raids can be created. This force will comprise bombers and some fighters that can be used as escorts or Freie Jagd. The force will have one or more targets and an alternate target. Use the format of the Historical Raid Tables for defining such a force.

You will have assigned a raid chit to this force. The following procedure will help you calculate the VP and RL values of that raid chit.

To calculate the VPs for a raid force you should follow this procedure:

- (1) Calculate the maximum bombing VP the raid force can score.
- (2) Calculate the raid force fraction.
- (3) Multiply the maximum bombing VP by the raid force fraction and round to the nearest whole value to obtain the raid VPs.

##### S2.1.1 CALCULATING MAXIMUM BOMBING VP

For a raid force with bombers or jabs, calculate the maximum bombing VP the bombers in the force can score. Normally, this is as follows:

- Per bomber Gruppe: 10 VP
- Per bomber Staffel: 3 VP
- Per fighter Gruppe: 6 VP
- Per fighter Staffel: 2 VP

If any of the units are eligible for the dive bombing or low level attack bonus, add the effect of the -1 column shift.

The column shift would give an effect as follows:

- Per bomber Gruppe: 15 VP
- Per bomber Staffel: 5 VP
- Per fighter Gruppe: 9 VP
- Per fighter Staffel: 3 VP

Do not add raid matching column shifts, even if raid matching rules are in force for the scenario being played.

*EXAMPLE: In scenario 2 the raid chit EE raid force comprises 1 Gruppen of Do17 for 10 VP and 1 Staffel of Ju88 for 3 VP. In addition it has 1 Staffel of Do17s permitted to attack as a low level raid for 5 VP. The maximum bombing VP would be 18 VP.*

##### S2.1.2 CALCULATING RAID FORCE FRACTION

To calculate the raid force fraction, first figure out the base fraction. The base fraction is a function of the range to the raid's primary target(s).

Figure out whether the raid falls into one of these range categories: Shallow, Medium, Far, Deep and Very Deep. The base fraction for each raid category is as follows:

<b>Shallow</b>	0.9
<b>Medium</b>	0.7
<b>Far</b>	0.6
<b>Deep</b>	0.5
<b>Very Deep</b>	0.4

Luftflotte 2 raids define the range categories as follows:

<b>(0.9) Shallow</b>	East Kent, i.e., east of a line from Beachy Head to Eastchurch.
<b>(0.7) Medium</b>	Sussex, the Essex coast and northern Kent: on or west of a line from Beachy Head to Eastchurch. Includes Rochford, Gravesend, Brighton.
<b>(0.6) Far</b>	The airfields on the southern and eastern periphery of London such as Biggin, Croydon, Hornchurch and Kenley.
<b>(0.5) Deep</b>	Anything beyond Far, in particular Surrey, London and North Weald.
<b>(0.4) Very Deep</b>	Targets at extreme range, such as Duxford.

Luftflotte 3 raids define the range categories as follows:

<b>(0.9) Shallow</b>	There are no shallow Luftflotte 3 raids
<b>(0.7) Medium</b>	The south coast, including Weymouth, Poole and Portsmouth.
<b>(0.6) Far</b>	Eastleigh, Worthy Down
<b>(0.5) Deep</b>	Yeovil, Middle Wallop.
<b>(0.4) Very Deep</b>	Bristol, Farnborough.

There is 'wiggle' room in these definitions for some choice as to the range category or base fraction. You may alter the base fraction if a target falls on the cusp between two categories.

If there is more than one target and the targets fall into different range categories, find the mean base fraction of all the targets.

Having calculated the base fraction, add a value to it based on the number of fighters attached to the raid force. The following table lists the values added based on the number of Me109 Gruppen in a raid and the number of Me110 Gruppen there are in the raid. (CR.42 or G.50 units count as Me110s for this purpose.)

# Gruppen	Me109	Me110
<b>1 or less</b>	0.05	0.025
<b>2</b>	0.08	0.04
<b>3</b>	0.12	0.06
<b>4-5</b>	0.16	0.08
<b>6-7</b>	0.2	0.1
<b>8-9</b>	0.25	-
<b>10 or more</b>	0.3	-

*EXAMPLE: A raid force is attacking a Medium range target, for a base fraction of 0.7. It is accompanied by 2 Me109 Gruppen, for an additional 0.08 and a Me110 Gruppe for an additional 0.025, making a total raid force fraction of 0.805.*

If there are Staffeln in the raid force, *pro-rata* the additional fraction.

*EXAMPLE: There are 1 Gruppe and 1 Staffel of Me109s in the raid force. The added value will therefore be between 0.05 and 0.08. The pro rata value is 0.06, so this is added to the base fraction.*

The total raid force fraction may not exceed 1.0.

### S2.1.3 CALCULATING BOMBING RAID VP

To find the raid chit VP, multiply the maximum bombing VP by the raid force fraction.

Round to the nearest whole VP. Values of 0.5 round down.

The rounded final value may never be less than 1 or equal the maximum bombing VP. If the value is 0, increase to 1. If the value equals the maximum bombing VP, subtract 1 from the total.

*EXAMPLE: A raid force of 2 bomber Gruppen has a maximum bombing VP of 20. It is a Medium range raid with 2 Me109 Gruppen and 1 Me110 Gruppe in support, for a raid force fraction of 0.805. 20 multiplied by 0.805 equals 16.1. This rounds down to 16 VP.*

### S2.1.4 CALCULATING FREIE JAGD RAID VP

If a raid force comprises only fighters, it is treated as a Freie Jagd raid.

*EXAMPLE: Raid chit Q, scenario 3.*

To calculate the VP for the raid, find the additional raid force fraction based on the number of fighter Gruppen, as for a regular raid.

Multiply this fraction by 40 and round as for a regular raid.

*EXAMPLE: A raid force comprises 3 Me109 Gruppe and no bombers. The added fraction for 3 Me109 gruppe is 0.12. Multiplied by 40, this equals 4.8 which rounds up to 5 VP.*

## S2.2 Calculating Response Levels

To calculate the raid chit's Response Level (RL) simply multiply the total number of Gruppen in the raid (bombers and fighters together) with the RL Multiplier for the scenario (see table below). Round the result to the nearest whole or half value to obtain the RL.

Staffeln count as 0.33 of a gruppe for the purposes of this calculation.

*EXAMPLE: A raid comprises 2 bomber Gruppen, 1 bomber Staffel and 4 fighter Gruppen. The total number of Gruppen is 6.33. In scenario 3 this is multiplied by 1.45 to obtain a result of 9.18, which is rounded to an RL of 9.*

### S2.2.1 RESPONSE LEVEL MULTIPLIER

*DESIGN NOTE: The response level multipliers are derived from an analysis of each phase of the battle, in which the strength of waves of raids, in total Gruppen-equivalents, was compared against the RAF response, defined as the number of squadrons scrambled. The mean values for each phase are employed directly as the RL multiplier.*

The response level multiplier is defined by the scenario, as follows:

<b>Scenario 1: Opening Bat</b>	1.06
<b>Scenario 2: Leg Before Wicket</b>	0.81
<b>Scenario 3: Bodyline</b>	1.45
<b>Scenario 4: Knocking 'Em For Six</b>	1.4
<b>Scenario 5: 'Owzat!</b>	1.5

## Battle of Britain Notes

### SQUADRON NUMBERS

The pronunciation of unit numbers differs between the USAAF and RAF. Whereas the Americans will refer to units thus: "Three-fifty-fourth Fighter Squadron" for the 354th FS or "Ninety-fourth Bombardment Group" for the 94th BG, the RAF will use "Nineteen Squadron" for 19 Squadron or "Seventy Four Squadron" for 74 Squadron. Above 100, units are pronounced by their numerals, so 253 Squadron becomes "Two Five Three Squadron" and 609 Squadron becomes "Six Oh Nine". There are exceptions to this; for example, 111 Squadron would usually be referred to as "Treble One" rather than "One One One".

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