APG-68(V5) OPERATIONS GUIDE (OG-APG68)

UPDATE A

This update package contains new ‘inserts’ for the radar guide. The inserts update the radar guide to cover the new e1.10 release and also correct a few mistakes in the guide. The inserts are numbered with a letter following them so that the sheets can be placed in the correct location with the minimum of fuss.

Any corrections will be marked on the sheet as such, it is recommended that you place a line through any of the old information that has now been changed.

The insert sheets also contain information on new features and items that were unfortunately missed in the last release of the guide, no action other than placing them in the correct location should be taken. Any new additions will be marked as such on the sheet.

A new cover sheet is included in the guide to represent the new e1.10 revision status. A new table of contents is not provided, however it is recommended that you manually write these new inserts in after the existing table of contents.

I have chosen not to release a completely new version of the guide at this time as the amount of corrections is minimal, and these update sheets will suffice. If there is sufficient cause for a complete re-release at a later date then I will do so.

One final update is that I will not be producing an AIM-7 guide, so references to the OG-AIM7 should be ignored.

AN/APG – 68 (V5)
Operations Guide

This guide is written for eFalcon 1.10 – EPAF + Chevron patches enabled

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Range Step

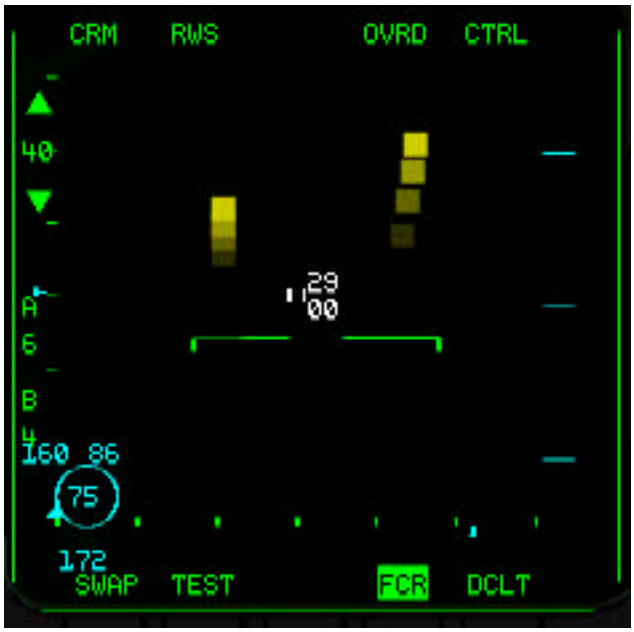
Unfortunately the range step function was missed from the last OG. The range step is a time saving feature that automatically adjusts the range of the radar when in any of the CRM modes. It works by moving the target acquisition cursors to the top of the screen, when the TAC reaches the very edge, it will 'bump' up the range (if on the top edge) or 'bump' down the range (if on the bottom edge). If you are on the highest range setting, you will not be able to 'bump' up the radar, the same goes for the lowest range setting, you will not be able to 'bump' down the range any further.

Azimuth Step

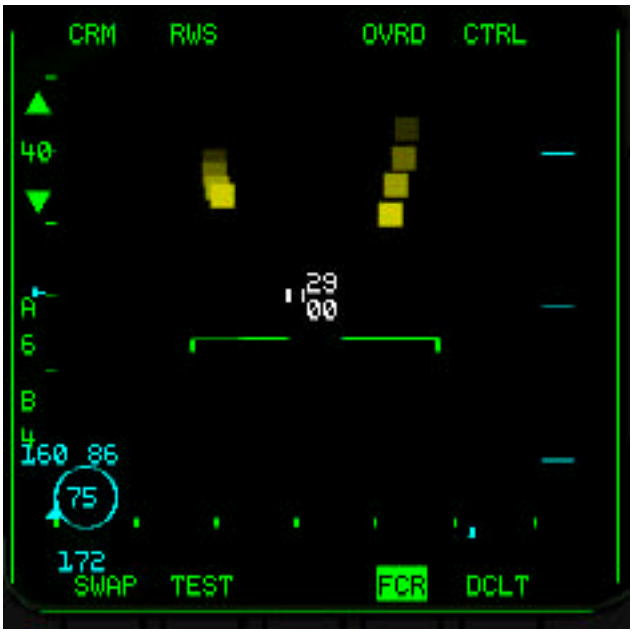
A new feature for the upgraded radar is the Azimuth step, this works like the range step function, moving the TAC to the side edges of the radar screen will toggle between 60° and 30° azimuth scan. The TAC will reset to the centre of the radar after the azimuth changes.

Diagrams for Target History

These diagrams were unfortunately left out of the guide.



In this diagram the contacts are moving away from you. The contact on the right is moving away at a faster rate than the contact on the left. You can always tell relative closure by the distance between the target histories.



In this diagram the target is getting closer to you. The target histories are fading towards the top of the screen. Once again you can tell relative closure by how far apart the target histories are. In this example the contact on the right is closing at a much faster rate than the contact on the left.

Remember, if you radar screen is getting to cluttered, you can switch the target history function off, or reduce the number of histories that are displayed

MISSING EXPLANATIONS

Contact Information

When a target is ‘bugged’ the radar provides extra information on that contact. This information not only appears as the ‘tadpole’, but also along the top of the radar screen on the second line.

The extra information consists of the following (left to right): Aspect, Contact Heading, Airspeed (kts) and closure. This information is presented in numerical format. For information on Aspect, refer to one of the AIM series missile operations guides, a discussion of target geometry is available in the appendix of these guides (OG-AIM120, OG-AIM9)

The heading information shows the magnetic heading of the target, this allows you to work out where he is going. The Speed information allows you to assess the energy state of the target, finally the closure information allows you to see how fast the contact is closing or opening the distance.

Contact Colours

The radar contacts will change colour under certain circumstances. If they go red and start to flash it indicates that the contact is about to disappear from the screen, this will occur if the contact is destroyed, or if they are beaming your radar. In the later case, it may be possible to keep/regain the contact by bugging or moving to single target track mode. The contact also turns red if you have fired a missile at it. For more information on the effects that weapons systems has on the radar see one of the AIM series of guides (OG-AIM-120, OG-AIM9).

APG-68(V5) Mechanisation – Long Range Scan

Another new mode for the upgrade. The LRS mode is functionally identical to the RWS mode. It is however designed to operate in the 80-160nm range modes, and is intended to detect larger contacts at distant ranges. The LRS mode is slower than the RWS mode. It also increases the chances of being detected by enemy radar warning receivers.

The LRS mode can be operated in any range mode, however the slow speed of the scan makes it unwise to do so. The real use for the LRS mode is to detect long-range bombers on approach whilst flying combat air patrols. Using the LRS mode alerts you to their presence at a much longer range, allowing you to intercept them whilst they are hopefully outside of their weapons range.

The LRS mode can also be used to find and attack enemy early warning aircraft, AWACS aircraft being large will be detected at a great range, allowing you to plan your attack from a distance.

The LRS mode cannot detect smaller fighter sized targets at the same kind of distances, as such all long-range contacts are transports, other support aircraft or strategic bombers.