

# MILVIZ



## F-4JS PHANTOM II TACPACK GUIDE



## TACPACK GUIDE

*by Jonathan Bleeker*

Installing this product will make a reversion to the original (nonTP) product impossible.  
When uninstalling this product, it will, by default, and with no other option, uninstall both the TP and the original product.

Please note that all technical support is conducted via the product support forums.  
For forum access please contact [kat@milviz.com](mailto:kat@milviz.com) with your proof of purchase and preferred username.

Here is a quick rundown of the active controls in this bird.

Some details on the AMS Commands: Radar Half action and Full action should only be used with a 2 stage trigger device. There are none available yet (unless you use 2 warthog sticks) but there will be sometime soon (I have contact with a new upcoming hardware dev). Use the Radar lock button instead. First press will engage half action, and if half action is successful, second press will engage full action. Third press will break lock.

## Radar & Countermeasures



### 1: ALE-29 DISP1 and DISP2 counters

Display chaff and flare counts respectively. Due to lack of information the program features are not simulated.

### 2: ALE-29

Chaff and Flares.

### 3: VC SWITCH

Adjusts the scale of the Vc (closing velocity) circle on the radar scope. In the LOW position, 11:00 o'clock is a closing rate of -100 kts (ie target distance is increasing). 12:00 is 0 kts, and every hour after multiplied by 100 will give closing rate in kts. If in the HIGH position, same principles as the LOW position, only multiply by 300 not 100. LOW VC light illuminates when the Vc switch in the rear is set to LOW

### 4: SCAN SWITCH

1, 2, 3 bar elevation area scan plus SS for super search, which is basically 4 bars.

### 5: AZ

BST is boresight mode, caged to 35 mils below fuselage reference line, as well as the display modes : Narrow and Wide.

### 6: ANT

GYRO OUT will disable pitch stabilization so best leave in NORM.

### 7: VEL COV CTR inop

### 8: MODE

The MODE knob works in conjunction with the VEL/PR/PD switch just to the left of it. The switch only applies to PD mode. H MAP and L MAP modes are inop. When the mode is in PD, use the PD Search switch just to the left of the mode knob to change between azimuth/velocity and azimuth/range. PD SRCH and VEL modes display closing velocity. P-R displays range. H MAP and L MAP modes are inop due to lack of information on operating them.

In A-G mode the radar beam is caged to the gunsight position which is 35 mils below fuselage





# ADVANCED PHANTOM II F-4JS

## Weapons



## Missiles

The active sidewinder is displayed on the left glareshield lights (1).

The active AIM-7 is displayed on the right glareshield lights (2), along with the centreline tank light which inhibits firing of the forward mounted sparrows

The position of the gun/missile select switch as assigned in the ACM (3) is displayed on the front RWR (the SW, GN, and SP lights).

### To fire AIM-7s:

- 1: Set the CW (1) switch on the armament control panel to PWR ON.  
INTLR can be set to IN or DOG FIGHT (IN will not allow the missile to be fired unless radar locked and within launch parameters).
- 2: GUN/MSK switch (2) set to ARM.
- 3: Gun/missile select switch (assigned in AMS) set to SP.
- 4: Press trigger to fire

### To fire AIM-9s

- 1: Set GUN/MSK switch to ARM.
- 2: Gun/missile select switch set to SW.
- 3: Get good tone and press trigger to fire.
- 4: HEAT REJECT switch (assigned in AMS) can be used to cycle through sidewinder stations.

## VTAS

(Visual Target Acquisition System) aka early helmet mounted sight operation:

- 1: Set VTAS POWER to on (3)  
(it is on the missile control panel like all other missile controls).
- 2: Set the MODE SEL switch to VTAS (4).  
In SEAM/PLM mode the AIM-9 is caged to the radar. In VTAS mode, it is still caged to the radar but the radar can be directed by the VTAS.
- 3: Use the cage command (assigned in the AMS) to put the radar into dogfight mode.
- 4: Place VTAS reticle on the target and press the NWS button to auto lock.  
Fire AIM-9 with trigger. Can be used with AIM-7 as well.





## Bombs

### For manual bombing mode on the gunsight

- Set the MIL setting on the wheel that is just to the left of the gunsight mode knob (1).

### For all bombing modes:

- Set the LABS switch to DIRECT (2)
- INST O/S switch to INST O/S

### On the dogbone:

- Set fuse to ARM NOSE & TAIL or NOSE
- Set WPN SEL knob to RIPPLE, PAIRS, or SINGLE (3)
- Set STA SEL knob to desired stations (4)
- Set INTRVL switch to desired interval.
- WPNS switch must be CONV ON, NUCL OFF.



### For CRV bombing, radar must be in A-G range mode.

- On the dogbone, set DL/BOMB switch to AUTO.
- Place gunsight reticle on the target.
- Press and hold pickle button.
- Pull up until bomb releases, indicated by pull up light on the canopy frame.

FDI gunsight mode is INOP due to lack of info

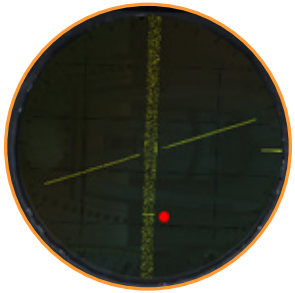
CDI gunsight mode is CCIP. Radar must be in A-G range mode.

### For CDI and MAN bombing modes

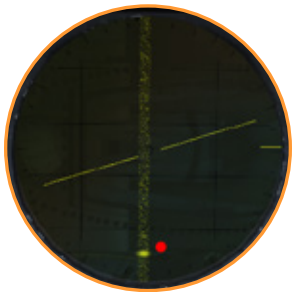
- set the DL/BOMB switch on the dogbone to MANUAL.
- Pickle button to release.



## Targetting



BST mode on the radar.  
To lock, move cursor onto target and initiate half action.



Half action lock on a target.  
The large blip (range strobe) must be placed on the target strobe before going to full action to complete lock.



Fully locked target.  
Outer circle is Vc (Closing rate), inner circle is ASE circle and Aim dot, the 2 marks to the left of the target are the Rmax and Rmin (Rmax2 is no escape zone for the AIM-7 in some conditions if target is far away enough)

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- 1: RWR screen: Short strobes extending out from the center indicate the azimuth and threat level of the return. The longer the strobe, the greater the threat.

- 1: Power light: Press this button to toggle power to the unit.
- 2: DIM knob: Controls the brightness of the warning panel lights.
- 3: Audio knob: Controls the volume of the audio alerts

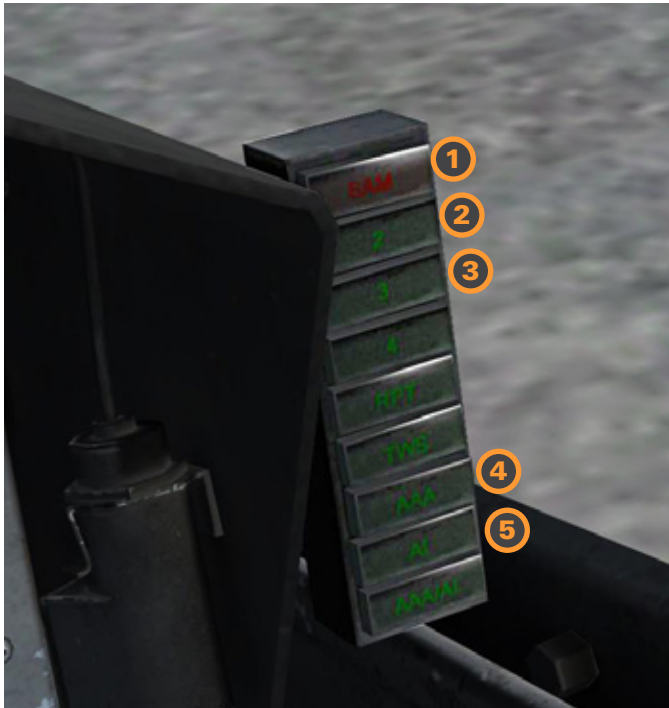




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- 1: LO light: This will light up when any search radar is detected
- 2: MID light: Inop.
- 3: HI light: Illuminates when a tracking radar is detected
- 4: Not used.
- 5: AAA DEFEAT: AAA strobes, and SA-2 strobes are identical. Pressing this button blanks out all AAA strobes allowing you to concentrate on SA-2 threats in the area.
- 6: AAA: Lights up if tracked by a AAA. AAA also has 2 distinct warning tones. No self test though.
- 7: Not used.
- 8: AI: Illuminates only when tracked by an AI (Airborne interceptor).
- 9: Not used.



- 1: Red SAM light comes on if a SAM launch occurs.
- 2: Green 2 light comes on if a SA-2 is tracking you
- 3: Green 3 light comes on when tracked by newer radar systems like the aircraft carrier RIM-7 defense system.
- 4: AAA: Lights up if tracked by a AAA. AAA also has 2 distinct warning tones. No self test though.
- 5: AI: Illuminates only when tracked by an AI (Airborne interceptor).





- 1: SW light which indicates sidewinders are active for firing.
- 2: GN
- 3: SP (Sparrow, for AIM-7 Sparrow radar guided missiles)
- 4: Ready light
- 5: RWR Operation is identical to rear  
(Audio knob is hidden behind a part)



For IFF (identification friend or foe) purposes,

- 6: MODE 4 switch set to ON
- 7: MODE 3/A code must be set, and



Now for some basic ops....

To fire AIM-9s, simply select HEAT missiles via the command in the AMS (Use HEAT Reject AMS command to cycle through stations), Master arm on, get a good tone (use Air Refueling Release AMS command to uncage the seeker to track freely instead of being caged 35 mils down to RBL), and use TACPACK Trigger to fire.

To fire AIM-7s, RDR MSL switch must be on CW/ON, (CI tank light off in order to fire from forward missile bays), Master arm on, RADAR selected via command in AMS, and, if INTLK switch IN, a target must be locked and within launch params. Then use TACPACK Trigger to fire.

To fire nose gun, Gun station must be selected, Master arm on, Gun selected via AMS command. Use TACPACK trigger to fire. To fire gun pods, station must be selected, WPN REL knob on DIRECT, WPN SEL knob on RKTS&DISP, master arm on, Gun selected via AMS command. Use TACPACK trigger to fire.

To auto acquire a target on the radar, Radar must either be caged (AMS gunsight Cage command), or in BST mode with range at 10nm. Engage nose wheel steering using AMS command to start auto acquire mode. The range strobe will appear (cursor will disappear) and be constantly moving up the B-sweep. When it reaches the top it will start at the bottom again. If a target appears in the B-Sweep, the radar will lock it when the range strobe reaches it.

To release bombs, set desired release interval and quantity on AWRU. WPN SEL knob on BOMBs, stations selected, Master arm on, Arm Nose/Tail on Nose, Tail, or Nose/Tail. WPN REL knob must be on DIRECT, DT, DL, or L modes.

In DIRECT mode, use manual release methods like in the F-100 with manual reticule depression.

For all Auto release modes, a good INS alignment is required in order for good groundspeed data to be passed to the weapon release computer.

In DT mode, lock the radar blip on any point on the ground in A-G Ranging mode. Gunsight reticule will be caged at 35 mils along the radar beam, and drift stabilised. Carefully move it onto target, and press and hold pickle button. You can then reduce the dive angle (Dive glide), go to level flight (Dive level), or pull up to less than 10 deg pitch (doesn't matter if you lose radar lock once you have pressed pickle button as the weapon release computer is counting down from the A-G radar range at time of pickle button press). Bomb will automatically release at correct point. I should note that I have simplified the procedure here, as in the real aircraft a drag coefficient value must be entered into the weapon release computer in the rear pit. TACPACK doesn't support that at this time however.

In DL mode (Dive Laydown), manual release range must be entered on Weapon release computer in rear cockpit. Procedure is the same as DT mode for acquiring target. However, you must fly at a predetermined speed and altitude once target pickle button is pressed in order for bomb release distance to be accurate.

In L mode (Laydown), Initial target distance must be entered into weapon release computer in the ALT/RANGE section. Gunsight reticule is pitch and drift stabilised, and manual depression must be entered as calculated from green bombing computer. A-G radar lock is not needed, as the distance to target is established by flying at release altitude, and pressing and holding pickle button as soon as reticule is on the target. Maintain release altitude and speed until release.

## F-4JS ADVANCED Credits

Jonathan Bleeker - Radar, RWR, and weapons computer, TacPack guide

Alex Vletsas - Radar

Jamal Ingram - Fire control systems

Chuck Jodry - Effects

Mike Maarse - Sound

Bernt Stolle - Flight dynamics

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Dmitry Usat'y - Paint

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