Miltech Simulations U-2

ASARS-2 Radar

The imaging radar in the nose: what it is on the real aircraft, what it does in the simulator and where you operate it.



The ASARS-2 nose, the default fit on a fresh install.

On the real aircraft. ASARS-2, the Advanced Synthetic Aperture Radar System, is an imaging radar. It uses the aircraft's own forward motion to act like an antenna far longer than the one it carries, which gives it photo-like detail from very far away.

A radar brings its own illumination, so it works day and night and through cloud. It has wide search modes and small high-resolution spot modes, and the real one also finds vehicles moving on the ground.

In the simulator. The RDR page builds its picture from real terrain elevation and land cover. Darkness, cloud and rain make no difference to it. There is no moving-target mode, and aircraft in the air are not shown.

Item	In short
Fit	EFB Aircraft tab, Nose: ASARS-2, 1,000 lb.
Start	MK IV MODE to STBY starts the warm-up. MODE 1-5 is PWR, and it radiates once airborne, so you can set it on the ground. MK IV MASTER only powers its SSA recorder. See Starting and Stopping the Camera.

Item	In short
SRCH	A ±60° fan ahead of the aircraft, out to 320 NM. The finer the resolution, the shorter the reach.
SPOT	A patch from 40 NM down to 0.1 NM across, imaged in 3 to 30 seconds and again about every 15 seconds.
Aiming	The viewsight hand control is the cursor in SRCH and moves the patch in SPOT.
Limits	No map below 5,000 ft above the ground. Past 20° of bank or 10° of pitch the page shows GIMBAL LIMIT and takes no picture; back inside, the last picture is on the scope again.



SPOT 2.5 NM: one airport.



SPOT 0.5 NM: parked aircraft and their shadows.

How to Operate

1. On the EFB **Aircraft** tab, set **Nose** to ASARS-2.
2. Set MK IV MODE to STBY. The warm-up starts: 30 seconds, or 12 minutes with the EFB option *Sensor warm-up time* on Realistic. MK IV MASTER is not necessary for the radar.
3. On an MFD press B5 PME, then RDR.
4. Set MK IV MODE to 1 - 5 (PWR). You can do this on the ground: the radar radiates once airborne. It makes a map from 5,000 ft above the ground.
5. In L3 SRCH, move the cursor with the viewsight hand control: left and right is the bearing (up to 60°), forward and aft is the range. R6 sets the resolution, R5 the part of the fan.
6. Press L3 for SPOT: a high-resolution patch around the cursor. The page counts down IMAGING (3 to 30 seconds), then takes the patch again about every 15 seconds. The hand control moves the patch.
7. Keep within 20° of bank and 10° of pitch, or the page shows GIMBAL LIMIT.
8. To stop, set MK IV MODE to OFF. The next start warms up again.

Mark IV Panel

The radar needs only MK IV MODE and the hand control. Every other control on the panel is for the cameras. The panel itself: Mark IV Camera Panel.



The Mark IV panel on the right console. The numbers match the table below.

No.	Control	With the ASARS-2
1	**OBLIQUE ANGLE INDICATOR**	Follows the hand control left and right.
2	**VIEWSIGHT HAND CONTROL**	The radar cursor. SRCH: left and right is the bearing, forward and aft the range. SPOT: moves the patch. **Set condition lever** puts the cursor straight ahead at half range.
3	**DRIFTSIGHT**	No function
4	**TRACKER**	No function

No.	Control	With the ASARS-2
5	**MK IV MASTER**	Powers the SSA recorder only. The radar does not need it.
6	**FRAME COUNTER**	No function
7	**OPTIC PWR**	No function
8	**KNOTS**	No function
9	**SHUTTER VELOCITY**	No function
10	**MK IV MODE**	OFF: radar off. STBY: warm-up, then standby. 1 - 5: PWR, radiating once airborne.
11	**A / B / C / D lights**	Light only with MASTER LT TEST.



The RDR page in SRCH. The viewsight hand control moves the cursor; the page has no cursor keys.

Every key on the page is under RDR - ASARS-2A Radar.

Related pages: Sensors · Mission Equipment (PME) · Mark IV Camera Panel · Targeting Points

Miltech Simulations U-2. SIMULATION USE ONLY. This documentation describes the simulated aircraft as delivered in the add-on and must not be used for real-world aviation.