Miltech Simulations U-2

Optical Bar Camera (OBC)

The panoramic film camera in the Q-bay: what it is on the real aircraft, what it does in the simulator and where you operate it.



The Q-bay window with the OBC fitted, seen from below, the left wing root on the right.

Under the fuselage

1. **Q-bay window** - Shows with the OBC fitted. A door takes its place otherwise.
2. **Belly sensor 4** - A separate fit, not part of the camera.

On the real aircraft. The OBC is a panoramic film camera. A 30-inch lens on a rotating optical bar sweeps a strip of ground from horizon to horizon onto a roll of film 10,500 ft long, about 1,600 frames, one every 6.8 seconds or so. Nobody saw a picture until the film had been developed after landing. The U-2 flew its last OBC mission in 2022.

In the simulator. The film is a live feed, so you see what you shoot: a black-and-white picture with grain, built from the same satellite imagery as the SYERS-2A. It runs ten times faster than the real camera, so the 1,600 frames last a flight and not a whole day: 33 minutes on SHUTTER VELOCITY 1, 18 minutes on 2 - 4.

Item	In short
Fit	EFB Aircraft tab, Q-bay: OBC camera, 1,050 lb. It flies with the Standard nose only.

Item	In short
Start	DRIFTSIGHT ON, MK IV MASTER ON for the boot, MODE OFF for the self-test (the C light is the go), then MODE 1-5 at or above 5,000 ft. See Starting and Stopping the Camera.
Exposure	MODE 1-5 is a slit width: 1 for a low sun, 5 for a high one. The wrong one shows in the picture.
Film	SHUTTER VELOCITY sets the frame rate and the coverage named on the page. FRAME counts the frames used, self-test included. At 1,600 the camera stays on its last picture and A lights steady.
Zoom	Up to 15×.
Aiming	The camera cannot move. The hand control looks left and right on the feed, up to 45°, and there is no ground lock or GIMBAL LIMIT.
Lens	Its heaters bring it to 75 °F in about 5 minutes, shown as LENS on the page.
From outside	The bar sits lens up when off and lens down in STBY, and spins while it photographs, one turn per frame.

How to Operate

1. On the EFB **Aircraft** tab, set **Nose** to Standard and **Q-bay** to OBC camera.
2. Set DRIFTSIGHT ON. With it OFF the OBC stays in standby.
3. Set MK IV MASTER ON. The boot starts by itself: 30 seconds, or 90 seconds on Realistic, with A flashing.
4. Set MK IV MODE to OFF. After the boot the self-test runs: five frames. C comes on after the fourth frame: that is the go.
5. On an MFD press B5 PME, then CAM (the page reads OBC).
6. Set SHUTTER VELOCITY: 1 gives a frame every 1.2 s (about 33 minutes of film), 2 - 4 a frame every 0.7 s (about 18 minutes).
7. At or above 5,000 ft, set MK IV MODE to the slit for the sun: 1 for a sun about 12° up, 2 for 16°, 3 for 24°, 4 for 35°, 5 for 53° or higher. The OBC photographs. Below 5,000 ft it waits and starts by itself as you climb.
8. The hand control looks left and right on the feed, up to 45°. L5 PAUSE holds the picture; the film keeps running.
9. To stop, set MK IV MODE to STBY. At 1,600 frames the film is out and A comes on steady.

Mark IV Panel

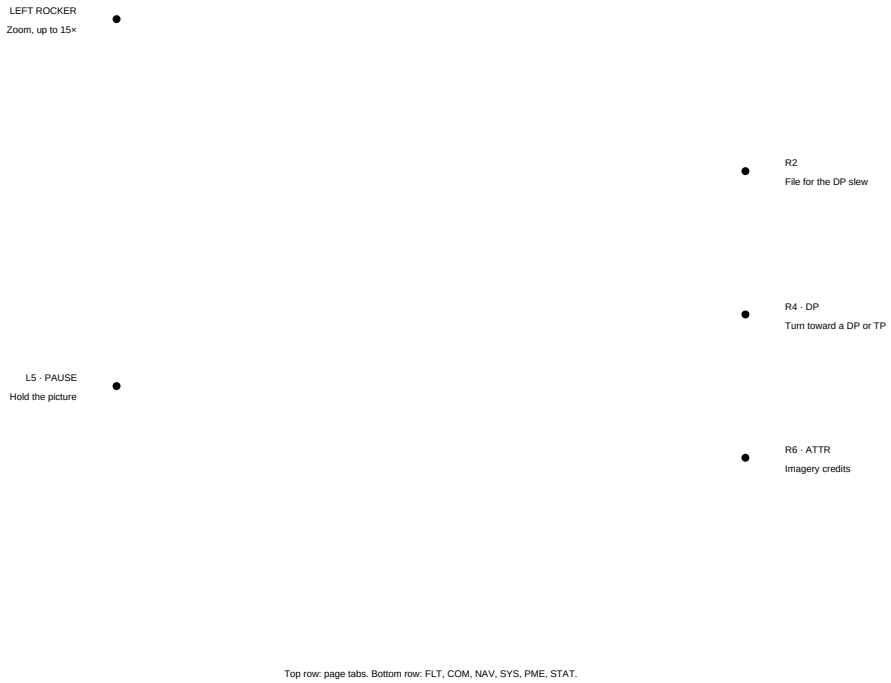
The OBC uses most of the panel. TRACKER, OPTIC PWR and KNOTS have no function. The panel itself: Mark IV Camera Panel.



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

No.	Control	With the OBC
1	**OBLIQUE ANGLE INDICATOR**	Follows the hand control left and right (45° travel).
2	**VIEWSIGHT HAND CONTROL**	Looks left and right on the feed, up to 45°. Forward and aft has no effect: the camera cannot move.
3	**DRIFTSIGHT**	ON / OFF. Must be ON: it powers the MODE and SHUTTER VELOCITY inputs.
4	**TRACKER**	No function
5	**MK IV MASTER**	Powers the camera, its air compressors and lens heaters. ON starts the boot.

No.	Control	With the OBC
6	**FRAME COUNTER**	Counts the frames, self-test included, to 9999. The round button sets it to 0000; the film used is FRAME on the CAM page.
7	**OPTIC PWR**	No function
8	**KNOTS**	No function
9	**SHUTTER VELOCITY**	1: a frame every 1.2 s. 2 - 4: a frame every 0.7 s.
10	**MK IV MODE**	OFF: self-test. STBY: standby. 1 - 5: photographs, each with its own slit width.
11	**A / B / C / D lights**	**A**: flashes during the boot, steady when the film is out. **C**: self-test go; flashes in 1 - 5 without INS data. **B**, **D**: no function.



The CAM page with the OBC at 62,000 ft, SHUTTER VELOCITY 4. R1 ENT confirms the DP slew.

The page is under CAM - SYERS-2A and OBC Camera.

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

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.