4.0 Virpil HOSAS-T 1.4 Bindings Guide

Game Settings Configuration

Turn off Automatic Slowdown if desired.

Turn off the setting to allow pings outside of Scanning Operator Mode because the bindings have conflicts if you do not.

Turn on the setting to lock ship pitch and yaw if you are in salvage gimbal mode if you want to use that mode.

Mnemonics

The left stick has more of a focus on defensive and passive actions such as movement, while the right stick is more focused on active actions such as combat, mining, and salvaging.

The throttle is focused on actions that are less urgent and those that pressing implies you're not going to be using the ship much longer, such as self destruct or eject.

Up/right is "forward/increase." Down/left is "backwards/decrease." Most of these actions are on the right stick scroll wheel.

Master and Operator Modes are all controlled by the two-way HATs.

The right HAT on the top of the left stick controls engine-related things.

Moving left and right on the left HAT on the top of the right stick tends to be used to move between selections, such as gun groups and missile types.

Scanning is "back," both the Operator Mode setting binding and the MFD page selection binding.

Up is "aggression," such as the target status MFD being up and locking closest hostile being up on the targeting HAT.

Planetary Takeoff, Flight to Harbor Station, and Landing

Follow this guide for an introduction. More details for each category are listed later.

After entering your seat, you'll first need to turn on the ship's main power. **Switch T1** controls main power. Up for on, down for off. Then, you'll need to activate the engines. **Switch T2** controls engine power.

Shields and weapons will be on by default. They can be controlled by **Switch T3** and **Switch T4** respectively. Deactivate weapons if not needed to allow more power for other systems.

Next, you'll need to request takeoff permission. The **bottom-right button in the six-button grid** on the throttle is bound to this action.

Use the **twist axis on the left stick** to strafe up to take off, and hold the **right stick brake lever axis** partially down as needed to limit your maximum speed as you move out of the hangar.

To verify that the doors are open, use the **pinky button near the base of the right stick** to switch to external camera view. Press the **thumbstick on the right stick** to toggle free-look mode, and use it to look around. Be sure to press it again to turn off free-look when you're finished.

Once you've cleared the hangar, press the **top-right button in the six-button grid** on the throttle to retract your landing gear.

Use the **X and Y axes of the right stick** to pitch and yaw your ship to orient it facing up, and then use the **right stick X axis** to engage your throttle forward. Pull the **left flip trigger on the left stick** while the left stick is pushed forward to set the throttle trim, which will keep your ship moving even if you release the left stick.

Press in the **two-way HAT on the left side of the head of the left stick** to toggle Master Mode to NAV, which will allow a higher maximum speed after the ship's quantum drive has spun up. Push up on the **two-way HAT on the left side of the head of the left stick** to toggle Flight Operator Mode as you leave the atmosphere to remove the distracting Quantum Travel indicators which are not currently needed.

Once you're clear of the atmosphere, push up on the **two-way HAT on the left side of the head of the left stick** to toggle Flight Operator Mode again, which will return to the default operator mode for the current mode, which is Quantum Operator Mode, as your are in NAV, and point your ship toward the harbor space station.

Once your ship's quantum drive is calibrated, press and hold the **right trigger on the right stick** to engage your quantum drive.

When you get within seven kilometers of the station, press the **two-way HAT on the left side of the head of the left stick** to toggle Master Modes back to SCM mode.

When you get within five kilometers of the station, press the **bottom-right button in the six-button grid** to request landing permission, then flip up the **flip trigger on the left stick** while holding the stick forward to reset your throttle trim and return to manual throttle control.

You don't need to hold the stick forward to reset trim, but it will prevent sudden deceleration.

Use the **Y and Z axes of the left stick** to strafe, the **Z axis of your right stick to roll**, as well as the other axes you've already used to further control your ship to navigate to the landing site.

When you are within 200 meters of the landing site, press the **top-right button in the six-button grid** to deploy your landing gear. As you approach, use the **right stick brake lever axis** to limit your speed as you come in for a landing.

Once you've landed, turn off your engines and main power with **Switch T2** and **Switch T1** respectively.

Flight Axes and Flight Control

This binding setup assumes that the left stick is mounted at an angle with the VPC Flightstick Z-Extension, so that the stick movement in the twist axis corresponds to up and down.

The left stick strafes: Y forward and back (throttle), X left and right, Z up and down.
The right stick controls yaw, pitch, and roll, with X, Y, and Z respectively.

The right stick brake level controls the speed limiter. The left stick brake lever engages boost. Hold both down all the way to engage spacebrake implicitly. (It is not bound to this, but it will do the same thing in practice.)

The left stick flip trigger controls trim. Pulling it down will set trim, flipping it up will reset trim.

The left button on the top of the left stick toggles coupled mode (drift mode.)

Pressing the right HAT on the top of the left stick will toggle VTOL mode. Pressing left or right will toggle Gravity Compensation and G-Safety respectively. Clearing Gravity Compensation might be smart unless you use it, because it can be confusing and dangerous.

The right stick trigger engages the jump drive and QT.

The throttle main axis controls the acceleration limiter. Leave it forward all the way normally to keep it unlimited.

Ground Vehicles

Use the left stick Y axis to move backward and forward, and the right stick X axis to turn. Use the right stick Y axis to pitch (if applicable.)
Use the right stick brake lever to brake.

Targeting

Right stick top-left HAT controls this.

Press it to cycle in-view or lock the target under the reticle.

Directions:

- Up: Closest Hostile
- Down: Closest Attacker
- Left: Cycle Hostiles Forward
- Right: Cycle Hostiles Backward

The left dial on the bottom-right of the throttle cycles friendlies. Press to target closest.
The right dial cycles all targets. Press to target closest.

Press back on the HAT halfway down on the right stick to clear the current target.

Subtargeting is controlled by the left stick scroll wheel. Scroll up to cycle forward, down to cycle backward, and press to reset targeting to the main target.

Guns

The right stick trigger fires guns.

Use right and left on the left HAT on the top of the right stick to select the active gun group.

Turrets

If you are in a seat with remote turret access, you can switch to the remote turrets by using the closer of the two four-way HATs on the throttle main axis:

- Pressing will enter remote turret 1.
- Left (Up) will enter remote turret 2.
- Right (Down) will enter remote turret 3.

Missiles

Switch to Missile Operator Mode by pressing up on the left stick 2-Way HAT while in SCM mode, then use right and left on the left HAT on the top of the right stick to select the type of missile to launch.

Select the number of armed missiles by pressing the HAT on the left side on top of the right stick.

Launch missiles using the right stick trigger.

Bombs

Switch to Missile Operator Mode by pressing up on the left stick 2-Way HAT while in SCM mode, then select bombs by using right and left on the left HAT on the top of the right stick.

The right stick scroll wheel controls the bomb HUD. Clicking sets the desired impact point. Up and down increase and decrease HUD range.

Press the right stick trigger to drop a bomb. Clicking and holding the scroll wheel enables the bomb camera.

Precision and Untargeted Aiming

Flip the right stick flip trigger up to enable ADS. Hold it down to enable ADS stable max zoom.

Use the throttle "FLAPS" axis to manually control weapon convergence.

Press and hold the right stick scroll wheel to disable aim assists.

Defenses

Countermeasures

The left stick head right button (the red one) deploys Decoys (flares) and double-tapping will do a panic launch.
The right stick head left button (the red one) deploys Noise.

Shields

Shield facing is controlled by the throttle square HAT on the right side. Forward/Back/Left/Right strengthens the corresponding face, and clicking resets. The wheel that it is mounted above strengthens top and bottom shields (Are there any in the game?)

Emergency

Eject is the button on the front left of the main throttle axis, on the opposite side of the controller if you're looking at it from the normal control direction.

Self destruct is the red button on the bottom right of the main throttle axis.

Jettison volatile cargo with the button on the right side of the throttle.

View Control

Press the right stick thumbstick to control free-look. Use the same thumbstick to control view direction.

Press the pinky button on the right stick to view the exterior camera.

Press forward on the HAT halfway down the right stick to toggle look-ahead so your view stays forward at all times instead of moving with your ship.
Press the same HAT backward to turn on locked target padlock, which will cause your head to turn automatically to look at your current target.

Master and Operator Modes

The two-way HATs on the top left and right sides of the of the left and right sticks control your operator modes.

Pressing in on the left stick two-way HAT toggles between NAV and SCM master modes.

Pressing forward on that HAT toggles Flight Operator Mode (in NAV) and Missile Operator Mode (in SCM.) Pressing it again will toggle back to the default Operator Mode (Guns in SCM and QT in NAV.)

Pressing backward toggles Scanning Operator Mode, and will go back to the default Operator Mode for the current Master Mode.

Power

Switches T1, T2, T3, and T4 turn on and off main power, engines, shields, and weapons respectively.
The 4-Way HAT halfway down the left stick controls shield power: Forward to increase/hold for max, backward to decrease, hold for min.

The right HAT on the top of the left stick controls engine power. Forward to increase/hold for max, backward to decrease, hold for min.

The left HAT on the top of the right stick controls weapon power. Forward to increase/hold for max, backward to decrease, hold for min.

Press the 4-Way HAT halfway down the left stick to reset power assignments.

Ship Physical Configuration

Expand and retract configurations with the two-way HAT on the throttle. Click it to cycle configurations. This applies to ships like the MISC Reliant and HULL series.

Use the top-right button on the six-button grid to toggle landing gear.

Use the three back/forth switches, from left to right, up/down to: open/close doors, unlock/lock doors, and unlock/lock ports.

Press the button on the right side of the top of the right stick to toggle ship exterior lights.

Ground Vehicles

Press the left button on the top of the right stick to use the horn.

MFDs

The left stick top-left HAT navigates the MFD focus up, down, left, and right. Pressing cycles MFD pages on the currently focused MFD.

Holding a direction sets a page:

- Up for Target Status.
- Down for Scanning.
- Left for Self Status.
- Right for Power Management.

Scanning

Use back on the left stick two-way HAT to toggle Scanning Operator Mode.

Hold down on the HAT on the top left of the left stick to set the currently focused MFD to the scanning page.

Increase and decrease the radar ping angle with the right stick scroll wheel. Press it to ping.

Use the left trigger to start a scan.

Mining

Refer to Scanning for locating and scanning mining deposits.

Press the right stick two-way HAT to switch to Mining Operator Mode.

Press the left stick trigger to toggle the mining laser.

Use the right stick brake lever to control mining beam power. You can also use the right stick scroll wheel if you prefer, up to increase and down to decrease.

Press the right stick scroll wheel to switch mining lasers. (Vacuum and normal.)

Use the left HAT on the top of the right stick to select mining gadgets:

- Left for Gadget 1
- Press for Gadget 2
- Right for Gadget 3

Jettison volatile cargo with the button on the right side of the throttle.

Salvage

Press the right stick two-way HAT to switch to Salvage Operator Mode.
Use the right and left stick triggers to toggle the right and left salvage heads, respectively.

Use the left HAT on the top of the right stick to select salvage beam modes. Left and right cycle the left and right heads' modes respectively.

Click the right stick scroll wheel to toggle Salvage Gimbal Mode. Note that you probably want to configure the game settings as described in Game Settings Configuration if you want to use this mode.

Press the left HAT on the top of the right stick to reset the salvage gimbals after leaving this mode if you want beam spacing to work.

Use the right stick scroll wheel to adjust salvage beam spacing. Up is wider and down is narrower. Note that it won't work unless your salvage beams are on a salvage target.
You can also use the throttle FLAPS lever to control this.

Press up on the right stick two-way HAT to toggle Fracture Mode, and down to toggle Disintegrate mode.

Tractor Beam

The tractor beam is engaged by the trigger, either the right trigger on a ship with only a tractor beam or the left trigger if the left salvage head is the one with a tractor beam option.

Use the right stick scroll wheel to adjust tractor distance. Up increases it, down decreases it.

Stopwatch

The left stick pinky button will activate the stopwatch. Holding it will reset. The stopwatch is not displayed on the current HUD.