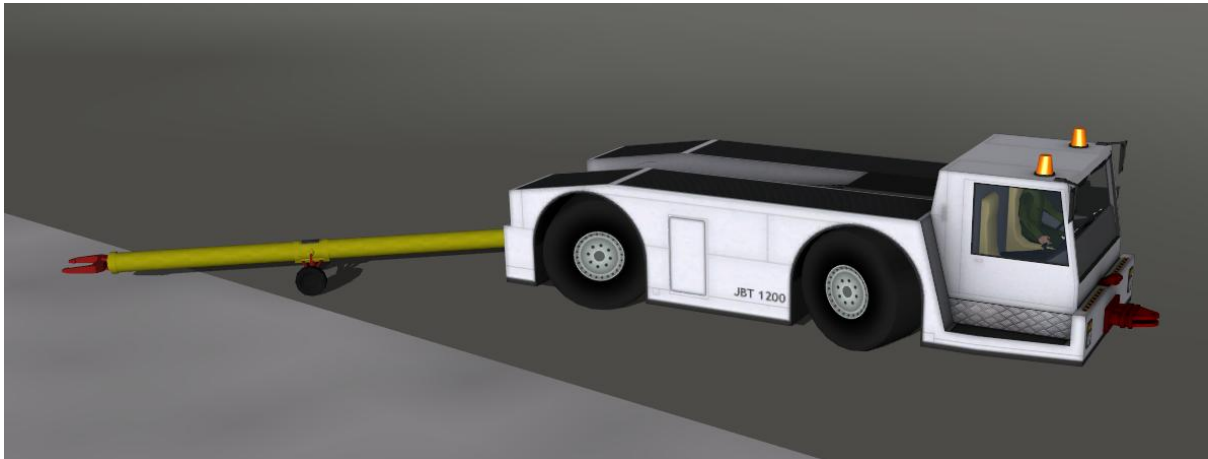


Lost Aerospace JBT B1200

The JBT B1200 is a extra large Aircraft Movement Vehicle. With the addition of a ballast pack, the JBT can exert a pull of 36,300 kg (356.1 kN). This is enough to pull a fully loaded A380 or 747. The Orbiter variant can pull a fully loaded XR-5.



The JBT B1200 has a range of options that are not included. This includes a 6/2 Manual Gearbox, Lift Cab, 2 or 4 wheel steer and fancy cabin heating. However an easy to use set and forget Automatic gearbox (With 3 settings each with 6 gears), rotating wheels and autoMagical (TM) vessel connect-o-tron are included as standard. A large fuel tank allows endless operations (If complex mode is not enabled or you can reach Ctrl F or the button) and a diesel engine provides all the power you need (Most of the time) (Lost Aerospace would like to point out that the diesel engine included does not require Oxygen).

An all purpose towbar connects the tug with the target vessel. The towing physics are not perfect, but are acceptable. Lights are included and allow safe night time operations. Automatic indicators show which direction you are turning and reversing lights tell you that you have selected reverse. Authentic sounds are played through the speakers to try and get you in the mood for towing.

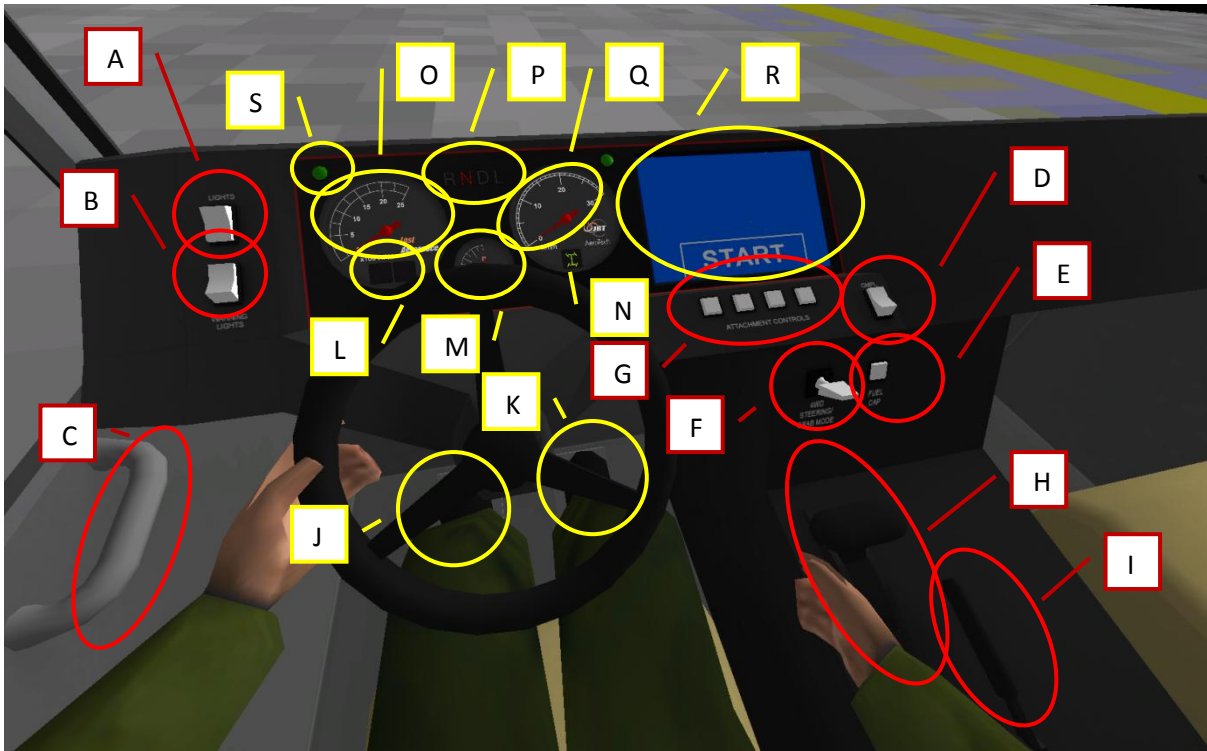
Features

That you should be aware of because they do funny things.

- Gearbox has 4 settings (**Low**, **Drive**, **Neutral**, **Reverse**). Low can pull twice as much as Drive, but at half the speed.
- When attaching a vessel, the sim will use an already created towbar if it is close (500m). Otherwise it will create one.
- There are 2 UMMU seats
- The UMMU entry area's are the doors
- Complex mode enables fuel consumption
- To attach a vessel in complex mode, a UMMU will need to use the action area's near the end of the towbar. The towbar will still attach automatically.
- Drive Speed Forward 24 km/hr
- Drive Speed Reverse 24 km/hr
- Steering Angle $\pm 20^\circ$
- It has sound
- Is an XR 5 cargo and fits in the centre slots
- It can pull anything with complex mode off
- With complex mode on, it can tow a fuelled XR-5, slowly

Commands

VC



Controls		Visual Only	
A	Headlight Switch (Down-Off, Up-On)	J	Brake Pedal (Direct Input)
B	Warning Light Switch	K	Throttle Pedal (Direct Input)
C	UMMU Eva (On other side too)	L	Park brake and Headlight Indicator
D	Complex Mode Switch	M	Fuel Gauge
E	Refuel Button	N	Steering Mode Indicator
F	Steering Mode Selector	O	Rev Counter
G	Buttons for Attachment	P	Gear Position
H	Gear Stick (Pull and Push)(N, R, D, L)	Q	Speedo
I	Hand Brake	R	Display
		S	Indicator

Movement

- Standard controls for speed. Throttle and brakes
- L-Shift P sets the park brake on and off
- W moves the gear up (**R -> N -> D -> L**) when stopped
- S moves the gear down (**L -> D -> N -> R**) when stopped

Lights

- L-Shift H toggles the headlights (Default off)
- L-Shift F toggles the Warning Light (Default on)

UMMU

- E EVA's the selected Crew Member
- 1 and 2 Selects the Crew Member to EVA
- 4 Adds a Crew Member

Attachment

- A controls the rear vessel attachment point
- D controls the front vessel attachment point
- B controls the rear towbar
- V controls the front towbar
- L-Shift will detach the appropriate point

Other

- L-Control O swaps the complex flight mode option
- L-Control E starts and stops the Engine
- L-Control F refuels the tug when stopped
- Adding a tow point on a vessel:
 - Attachment point should have a Dir in Direction of travel and parallel to the ground, Rot should point Up to the sky
 - Attachment point must be a child of ID "T"

Lua

- `speed()` -> Returns the speed of the tug in m/s. Negative values means it is going backwards.
- `mode()` -> Returns the mode of the tug
 - -2, Vessel attached to the back
 - -1, Towbar attached to the back
 - 0, Nothing attached
 - 1, Towbar attached to the front
 - 2, Vessel attached to the back
- `transmission(int location)` -> Sets the transmission. Recommend coming to a stop before changing.
 - -1, Reverse
 - 0, Netural
 - 1, Drive
 - 2, Low Range (50% speed reduction, 100% torque increase)
- `starter(int on)` -> 1 turns the engine on, 0 turns the engine off
- `getFuel()` -> Returns the mass of fuel left (kg)
- `refuel()` -> Refuels the tug to max fuel
- `lights(int headlight, int warning, int park)` -> Turns lights on or off. 1 for on 0 for off. Park also sets the park brake.
- `attachIndex(int attachpoint)` -> Returns the attachment point index. All attachment points are constant and all are parents.
 - attachpoint:
 - -2 Back vessel attachment point
 - -1 Back towbar attachment point
 - 1 Front towbar attachment point
 - 2 Front vessel attachment point
- `attach(int attachpoint)` -> Attaches a vessel or a towbar. attachpoint uses the same index above. Returns 0 if not successful. Returns 1 if successful.
- `detach(int attachpoint)` -> Detaches a vessel or towbar. attachpoint uses the same index above. Returns 0 if not successful. Returns 1 if successful.
- For movement, use the default vessel functions:
 - `set_thrustergrouplevel (THGROUP.MAIN,)`
 - `set_adclevel(AIRCTRL.RUDDER,)`
 - `set_brakelevel()`

Known Bugs

The tug might not go sometimes (Even with fuel and the engine on). This is an Orbiter issue where the throttle input is disable because the propellant resource is empty. Restarting the scenario normally fixes this.

There can be cases when the VC fails to load properly on scenario start. Pressing F8 will fix this.

Miscellaneous

You're going to need [Visual C++ Redistributable for Visual Studio 2012](#), [Orbiter Sound](#) and [UMMU](#).

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Sounds from:

- [Shuttle Endeavour Moves from VAB to OPF-2](#) The video was produced by NASA and is in the Public Domain.
- [UCGO](#) by Dan Steph
- jasonLon at [freesound.org](#)
- [Car Screech And Crash Sound](#)

Thanks to Loru for meshing the tug, Woo482 for meshing the towbar and DaveS for the sounds, ideas, motivating and testing.

Thanks

tl8