Common YOLOL

From Starbase wiki

A collection of small common scripts meant to be easily copied and understood for the YOLOL beginners.

This page is a "Work In Progress". Don't hesitate to contribute! Just make sure to respect the following rules:

- Avoid complex codes. As said, These must be easily understood by beginners. If you can't simplify your scripts, please add some comments to explain the most technical parts.
- Avoid as possible to modify the device fields. If necessary, it must be specified which field has to be renamed (left column) and/or set to a given value (right column).

Contents

Flight Control Unit

Single Forward/Backward Lever

Requires a center lever bound to **"FcuForward"**. *Note: You can easily modify the default regular lever from most prebuilt ships and cockpit modules to be used as a center Lever. Just change the **"LeverMinOutput"** value from 0 to -100. Also don't forget to modify your control binds ("V" on keyboard by default).*

```
:FcuBackward=-:FcuForward goto1
```

Speed Limiter

Requires to modify the lever bound to **"FcuForward"** which shall be renamed **"Fwd"** and another regular lever with **"LeverState"** renamed **"Limiter"**. This script allow you to set a maximum forward speed to your ship, which is useful when you need more accurate movements (e.g. while mining or docking).

```
:FcuForward=:Fwd/100*:Limiter goto1
```

*Note: If you already modified your **"FcuFoward"** lever to be used as a **"Single Forward/Backward Lever"** (see above), you can use the **"Backward"** lever made useless as the **"Limiter"** lever. Just make sure you have **"FcuForward"** renamed **"FwdBwd"** instead so you can modify forward and backward thrust individually. This way your YOLOL scripts should be written as follows:*

```
:FcuForward=:FwdBwd/100*:Limiter goto1
```

```
:FcuBackward=-:FwdBwd goto1
```

Turtle Mode

Similar to the previous script but with a button instead of a lever. **"ButtonState"** should be renamed **"Turtle"** and **"ButtonStyle"** set to **"1"**. In addition set the **"ButtonOffStateValue"** to **"100"** and the **"ButtonOnStateValue"** to the desired speed reduction. For example having **"30"** means 30% of maximum speed when the button is active.

```
:FcuForward=:Fwd/100*:Turtle goto1
```

Fuel Chamber

The following scripts are made to be used with the ship "Laborer Module" rewarded during the tutorials. To make it compatible with other prebuilt or own-made ships, refer to the table below for the corresponding modifications in the device fields. *Note: Most scripts make the "Generator" button irrelevant as it replace its use. Some may make another use of it.*

Ship Part	Default Field Name	Laborer Module Field Name
Hybrid Button	ButtonState	Generator
Fuel Chamber	FuelChamberUnitRateLimit	Generator
First Battery	StoredBatteryPower	Battery_1
Second Battery	StoredBatteryPower	Battery_2

Also, ships will require enough batteries to act as buffers during the generator spool up time. *Note: When in use, all batteries discharge at the same rate. The more batteries you have, the slower the discharge is.*

Gradual Generator Script

Makes the fuel rate limit of the fuel chamber inversely proportional to the charge level of the batteries.

```
:Generator=100-:Battery_1/100 goto1
```

Alternatively, the script below will keep the batteries fuller by setting the fuel rate limit to its maximum when batteries are below 90% of charge.

```
:Generator=1000-:Battery_1/10 goto1
```

Additionally, you can use the "Generator" button by renaming it "Eco" so it switch fuel saving on and off with the following script. Useful for more power consuming activities like mining.

```
:Generator=100-:Eco*:Battery_1/100 goto1
```

Flagged Generator Script

This script set the fuel rate limit to 25% (just enough to supply 2 box thrusters with a bit of spare charge) if the level of the batteries is below 9999 and adding 50% if below 5000. 0.001% is enough fuel rate to let the generator "sleep" when the ship stand still and the batteries are full.

```
:Generator=25*(:Battery_1<9999)+50*(:Battery_1<5000)+0.001 goto1
```

Advanced Generator Script

This script is tweakable to your ship configuration. Field names are those of the Laborer Module, except for the **"Generator"** button which should be renamed **"PWR"** so the script can control the fuel rate while the button still being functional. Optionally you can add an override lever with **"LeverState"** renamed **"PWR"** as well.

```
MaxBattery=20000            // total capacity
LowBattery=0.99*MaxBattery // start charging below 99%
MinBattery=0.20*MaxBattery // max charge rate below 20%
MaxGenerator=100           // max fuel rate
MinGenerator=2             // min fuel rate (near 100% charge)
h=MaxGenerator c=MinGenerator          // auxiliary variables,
f=MaxBattery l=LowBattery e=MinBattery // no need to change these
r=(h-c)/(f-e) z=h-r*l a=r*(f-l)     // reboot: remove "goto9" briefly
y=:PWR-z-r*(:Battery_1+:Battery_2)+c*(y>c)+a*(y>0) :Generator=y goto9
```

It is assumed that the following device fields are set as explained (*Note: The "PWR" button is already set up in the Laborer Module*):

Ship Part	Field Name	Set Field value
"PWR" Button	ButtonOnStateValue	100
"PWR" Button	ButtonOffStateValue	0
"PWR" Button	ButtonStyle	1
"PWR" Lever (optional)	LeverMinOutput	0
"PWR" Lever (optional)	LeverMaxOutput	200

"PWR" Lever (optional) LeverCenteringSpeed 0

Material Point Scanner

Material Point Scanner Script

Requires two displays for **"Material"** and **"Volume"**, two buttons to toggle the **"Active"** and **"Scan"** fields of the scanner, and a third button with **"ButtonState"** renamed **"Next"** and **"ButtonStyle"** set to **"1"**.

```
:Index=(:Index+:Next)*(:Index<:ScanResults) :Next=0
:Material=:Material :Volume=:Volume goto1
```

Automatic Material Point Scanner Script

This is a modified version of the above script so it can be used when the scanner is **"Active"** without the need of any additional buttons. *Note: launching a new scan reinitialize the index to "0".*

```
:Scan=1
//Pause
:Index=Next
Next=(Next+1)*(Next<:ScanResults)
:Material=:Material :Volume=:Volume goto1
```

Mining Laser

Note: Mining Lasers were updated to have an activation cost, which is why pulsing lasers is not economic anymore.

Pulsed Mining Laser

Requires a button with **"ButtonState"** renamed **"Mining"** and **"ButtonStyle"** set to **"1"**. Reduces power consumption by continuously switching mining laser "On" and "Off" while the button is active.

```
:MiningLaserOn=(1-:MiningLaserOn)*:Mining goto1
```

Configurable Pulsed Mining Laser

Similar to the previous script but with configurable timers for the "On" and "Off" phases of the laser. *Note: Each phase is calculated in a number of YOLOL "tick" (0.2sec). So in the example, the "On" phase last 2*0.2=0.4sec and the "Off" phase 3*0.2=0.6 sec, which makes the power comsumption just a bit lower than the power production of a regular generator module (= one fuel chamber and three generator units, all in tier 1).*

```
On=2 Off=3 :MiningLaserOn=(T<On)*:Mining T++ T*=T<(On+Off) goto1
```

Navigation Receiver

Received Signal Display

Requires a text panel with **"PanelValue"** renamed **"Nav"**.

```
if :SignalStrength>0 then goto2 else :Nav="No Signal" goto1 end
:Nav=:Message+"\n"+(1000000-:SignalStrength)/1000+"km" goto1
```

Ore Collector

Mining Laser/ Ore Collector Swapping Power

Requires a button with **"ButtonState"** renamed **"Collecting"** and **"ButtonStyle"** set to **"1"**. Reduces power consumption by switching ore collector "On" only if the button is active And the mining laser is "Off". *Note: this script works best alongside the "Pulsed Mining Laser" scripts.*

```
:ToggleOn=(1-:MiningLaserOn)*:Collecting goto1
```

Ship Transponder

Outside Safezone Warning

Requires an active transponder and either a warning button or a safety lid button. The button blink whenever you're outside of the safe zone. *Note: the button needs to be active in order to blink.*

```
:ButtonEnableBlink=1-:InsideSafeZone goto1
```

Stations Building Availability

Same as the previous one, but the button blink wherever you're allowed to build a station.

```
:ButtonEnableBlink=:StationsAllowed goto1
```

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