



***DIGITECH***

## *Central Telemetric unit*

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## 1 Connections



**Erni / JP/JC** This connector goes either to the Jetcat ECU direct or thru the DSP-CTU1/2 Adaptor. (Fadec or Jetcat V6 ECU or Projet)

**ECU Serial** goes to most Turbine ecu with a Serial bus output (Kingtech-Evojet-Xicoy)

**EX1 / EX2** Extended EX ports (Jeti only) for direct connection of more Telemetric sensors.

**RX** RX goes to a free EX bus on Jeti receiver

**SD Card** this is for future updates / Engine logger use a 1 GB card

**CAN-bus** is for future released Sensors or other hardware not used as to date.

## 2. CTU-Setup

Mount the CTU anywhere in your model , use double sided tape or the Optional Mount  
Connect your Turbine ECU to either the ERNI 6 pin connector (jetcat), Or the 2 pin serial bus  
Kingtech / Evojet etc etc.

1. Connect the CTU RX output to your Receivers input (Jeti EX port)
2. Connect Static port to outside your model **NOTE** : *if you have a Ducted turbine it is no need to use a Static port connection if you have a Open design (turbine open in fuselage) you MUST use a Static port to have a correct Pressure reading (altimeter)*
3. Done!

### 3.MENU SETUP JETI EXPLORER

When the CTU is connected to a Jeti Receiver ,you can go to model/Explorer to set the CTU.

If correctly connected and powered on , it shows as CTU in the Explorer menu.

**NOTE!. IF shown Device not found , you are missing the CTU.bin , this should be in the Devices folder on your Transmittor!**

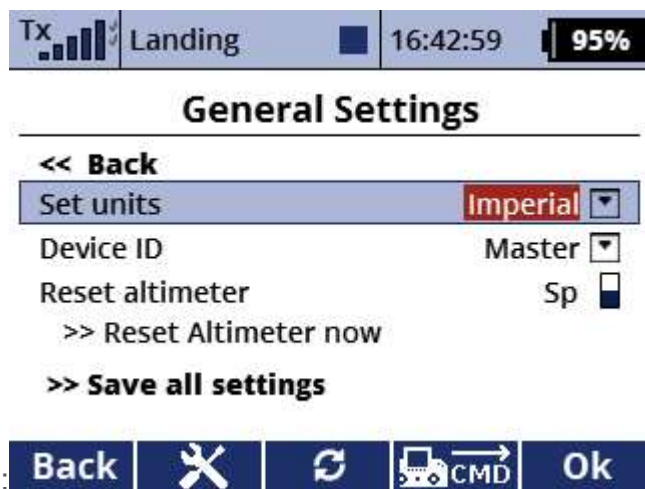


**Make sure the CTU is connected to a EX input on the Jeti receiver and that the port is configured for EX.**

**NOTE :** Jeti Assist users , you need a different FIRMWARE for your CTU.

First thing we need to do is let the CTU Communicate with the Turbine ECU.

We got to : General settings



Here we set the data in imperial or Metric system.

*Device ID :*

Here we set if the CTU is a standalone item , with multi engines you can set this device as a Master or optional 3 slave addresses.

This means you will have Double telemetry on both Engines or triple or quad engines.

NOTE: you can change the name of the CTU in sensors settings! , by example you name the first CTU to : Left or No.1.

## *4.Reset Altimeter:*

Your Air pressure is always changing around you , when the CTU powers on ,it will automatically be set to 0 meters at the ambient pressure.

when you want to make flights without repowering the CTU you easy assign a switch to the reset altimeter and this will set it to 0 meters again.

### Fuel reset:




It is possible to do a fuel counter reset while turbine is running.

This feature is needed when you have to wait for a take off or delayed take off , while connected to a overfill tank.

When this feature is used (you can assign any button or switch) the total fuel will return to 100% , while the total consumed will keep counting regardless of the times the button is pressed.


The Total reset will be done as soon the unit is powered off and on again.


### ECU Settings


Tx  Landing  16:43:10  95%

#### ECU Settings

<< Back


ECU TypeKINGTECH G2 




Tank size6.5 L 

Pump factor85 

Fuel left in tank100 % 6.5 L

>> Load default pumpfactor for engine

Engine loggerNo 

BackOk

ECU Type : select your turbine brand here , if its not listed mostly it will be supported but also used by another brand,Example : Projet ECU are used by Frank turbine , Jet italia , Hammer engines , etc etc

Wren : they have used : Fadec V6 – V10 – Xicoy – Projet.

#### *Projet settings:*

ECU must be set to enable "Wireless telemetry" for Comport 1.

3 SYSTEM -> 3.6 WIRELESS TELEMETRIE -> ON 5x/SEC -> COM CHANNEL 1

#### *Jetcat settings :*

V6 Make sure comport is set to 1

V10 turn telemetry settings to off.

IF communication is ok , the BLUE led next to the connection is on

**Tank size** : Fill in your Tank size , do NOT count your hoppertank volume , this is none usable fuel!.

## 5. Fuel Factor & Calculation

Our fuel prediction is based on Pump voltage and or Pump rotations.

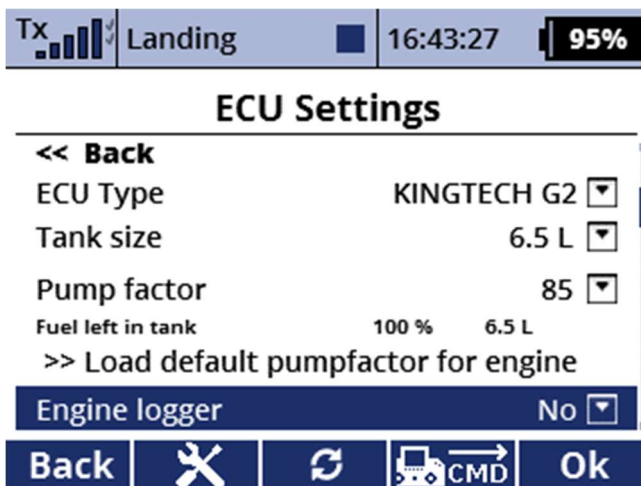
Since every installation is different , and therefor the pump rotation is different , the fuel calculation is a bit tricky, but it can be found out easily!

*Step 1* : Mark your fuel tank with lines of 1 liter , or use a Weight scale (1 liter of jetfuel is 0.8Kg)

*Step2* : turn all on , start turbine.

*Step3* :Go in CTU menu / ECU settings





*Step 4 :*

Now when your first Mark is reached **Press reset fuel.**

This then will show fuel left in tank 100% and your Tank volume.

*Step 5:* Do a few throttle ups , full throttle , half throttle like a normal flight would go.

Watch closely until the next marker is there at this point you **stop** the turbine.

Do NOT turn off CTU/Receiver!

Now you change the pump factor , until the total Volume is 1 liter **less then** the total fuel.

This is then your new fuel factor.!

If you did your first flight , with a full tank , confirm the settings! Better to be safe then sorry..

**Load Default Pump factor for engine**

These are standard setting for most engines.

## *6 Sensors*

Sensors available in the Jeti sensor setup :

Tx
Default
8:47:10
100%

Tx
Default
8:47:17
100%

Sensors/Logging Setup

CTU			
1	RPM	rpm	Yes
2	RPM2	rpm	Yes
3	EGT	°C	Yes
4	Fuel tank size	mL	Yes
5	Fuel remaining	%	Yes

Sensors/Logging Setup

5	Fuel remaining	%	Yes
6	Fuel used	mL	-
7	ECU Batt	V	Yes
8	Pump	V	Yes
9	State		Yes
10	Off condition		Yes
11	Throttle	%	Yes

Auto
(20)
X
Ok
Auto
(20)
X
Ok

Tx
Default
8:47:26
100%

Sensors/Logging Setup

8	Pump	V	Yes
9	State		-
10	Off condition		Yes
11	Throttle	%	Yes
12	G Force	g	Yes
13	Altitude	m	Yes

Auto
(20)
X
Ok

## 7. *LUA scripts*

The CTU works with many LUA scripts , we also made a CTU dashboard as a example.

This Lua works with the DS and DC24 versions and is “as is” “Freeware” and is not supported by us .

However feel free to comment or change the LUA to your personal need.

But its is also Forbidden to sell or use parts of the LUA without mentioning the Author.

## *9. Upgrading Firmware CTU*

If firmware is available :

Copy the file \*.sfw onto the SD card (formatted card)

Insert SD card into CTU.

Turn CTU on or apply power .

The leds will blink and after 5 seconds it will reboot again.

Now its ready to use.