

# VFS Setting Adapter Instruction Manual

Please read this manual thoroughly and store it for future reference.

**Note on Usage** For safe usage please read the notes in this section below.

## Warning

Failure to observe the following points may pose a serious threat of danger or severe injury.

- \*Do not get allow this unit to get wet. \*Do not dismantle or modify this unit. \*Ensure that the unit is switched off and disconnected from speed controller when you are not operating the frequency set up. \*Do not use batteries which are not recommended in this manual.
- \*Do not short circuit the motor wires when frequency set up is in operation. \*Ensure that the batteries are removed when the unit is stored.
- \*Do not use this unit if the unit becomes extremely hot or smells.

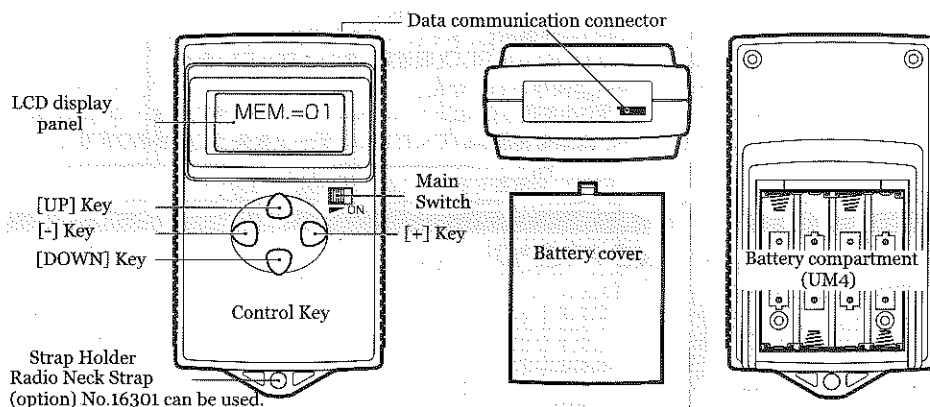
## Caution

Failure to observe the following points may pose the possibility of injury and great likelihood of damage to the equipment or property.

- \*Do not short-circuit the battery terminal. \*Do not use the unit near a source of heat. \*Ensure genuine KO Propo products are used for the transmitter, receiver, servo and other optional parts. We cannot assume any responsibility for the use of other company's products with this unit. \*This unit is designed for the use with VFS series speed controller only. Please do not use for any other purposes. \*Do not switch off the speed controller and the Setting Adapter switch. It may result in loss of data. \*Do not apply inappropriate force to this unit.

Because of the nature of radio controlled models, we cannot assume any responsibility for the result by use of our products, please understand in advance.

## Name of Parts



## Technical Data

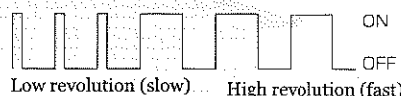
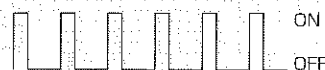
- Power supply: 4x AAA batteries (optional)
- Rechargeable batteries cannot be used.
- LCD display: 2lines 8 character dot matrix with backlight
- Current consumption: 30mA
- Input voltage: 6V
- Dimension: 65x133x36mm
- Weight: 103.5g (excludes batteries)

## What is Drive Frequency?

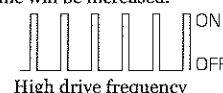
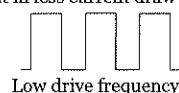
\*Speed controller controls the revolution (speed) not changing the current but cycling on and off with very high speed. This cycling is called drive frequency.

\*A revolution (speed) of motor is to change the time of on and the time of off.

\*Generally, the revolution of the motor is the same but selecting a low drive frequency will result in the motor becoming more powerful and the motor will draw more current which will decreases run time. On the other hand to select a high drive frequency will make the motor smoother but will result in less current draw and so run time will be increased.

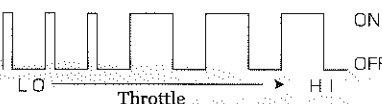


\*Drive frequency is not changed.



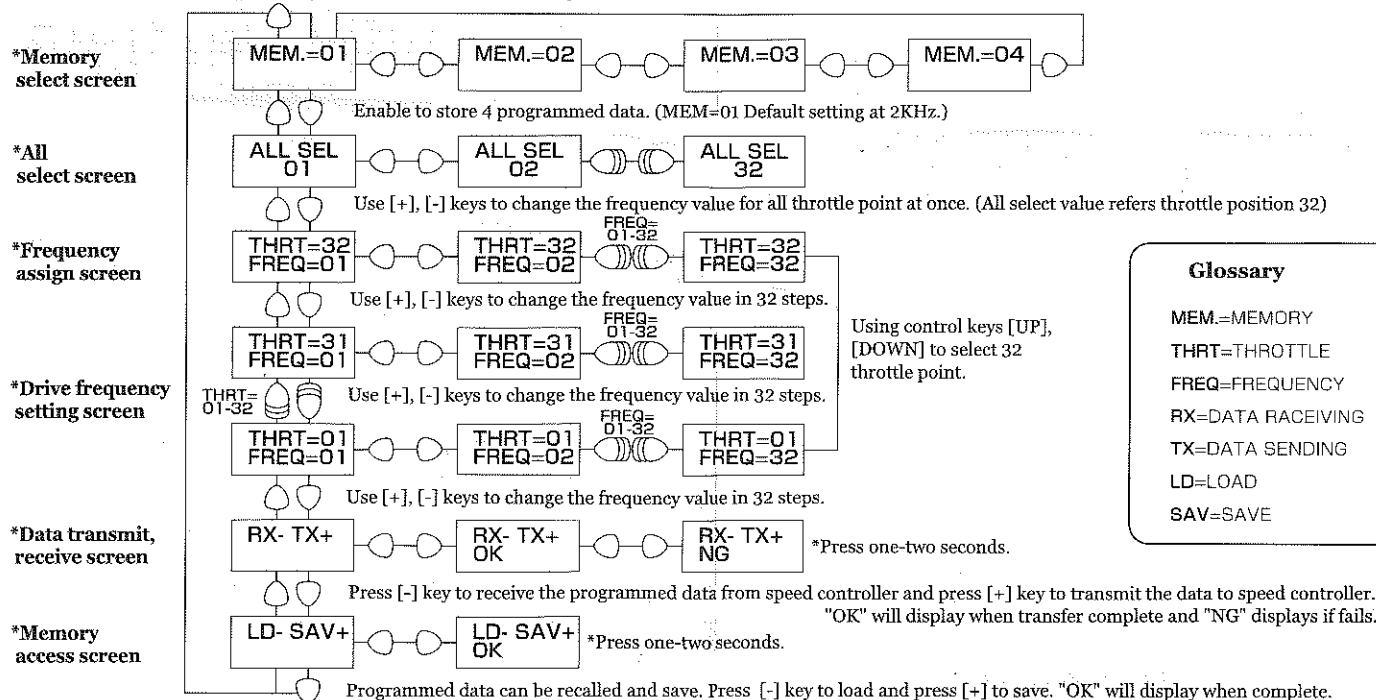
\*Current speed controller has a fixed drive frequency from low speed to high speed; in other words fixed gear ratio which current electric cars systems need to compromise around in setting up the motor. Setting the frequency too low can result in good acceleration but cannot produce a good top speed. Setting the frequency too high can result in a good top speed but will not produce good acceleration.

\*VFS-2000 can change the drive frequency (PAT.P) according to the throttle position and enable the operator to select a suitable speed range frequency to obtain superb acceleration, powerful mid range and smooth high speed.



## Explanation of LCD screen

The screen changes by pressing UP, DOWN, [-] and [+] keys.



## How to Set Up

### Before starting the set up procedure.

Insert batteries into the battery compartment of the Setting Adapter. Be sure to charge the battery fully.

Disconnect the motor and be sure not to short-circuit.

Connect the receiver connector of the speed controller to the communication connector of the Setting Adapter.

Connect the battery to the speed controller.

### \*Feel the difference of drive frequency

1. Switch on the Setting Adapter first.
2. Press and hold the power switch of speed controller until the LED lights on, goes out and on again.
3. Memory select screen displays first. Select MEM=02 by pressing [+] key.
4. Press [UP] key to go on to "Data transmit, receive" screen. Pressing [-] key to receive the data of speed controller.
5. Press [DOWN] key to select "All select" screen. It displays ALL SEL 17 (drive frequency 2KHz).
6. Let's try to change frequency lower to 14 (drive frequency 1.5KHz) by pressing [-] key.
7. Press [UP] key to go on to "Data transmit, receive" screen and press [+] key to transmit the data to speed controller.
8. The switch of the speed controller flashes and transfer is complete. In order to save this setting, go on to "Memory access" screen by pressing [DOWN] key and press [+] keys to save this data to Setting Adapter.
9. Now let's try to change frequency higher. Perform the procedure described above (1-5) and you can see "ALL SEL 14" Press [+] key to change the value to "ALL SEL 22" (drive frequency 3KHz).
10. Press [UP] key to go on to "Data transmit, receive" screen and press [+] key to transmit the data to speed controller.
11. The switch of the speed controller flashes and the transfer is complete.
12. Did you feel the difference of drive frequency? However this is the same as other speed controller. Now let's try to set up frequencies by using sample data sheets.

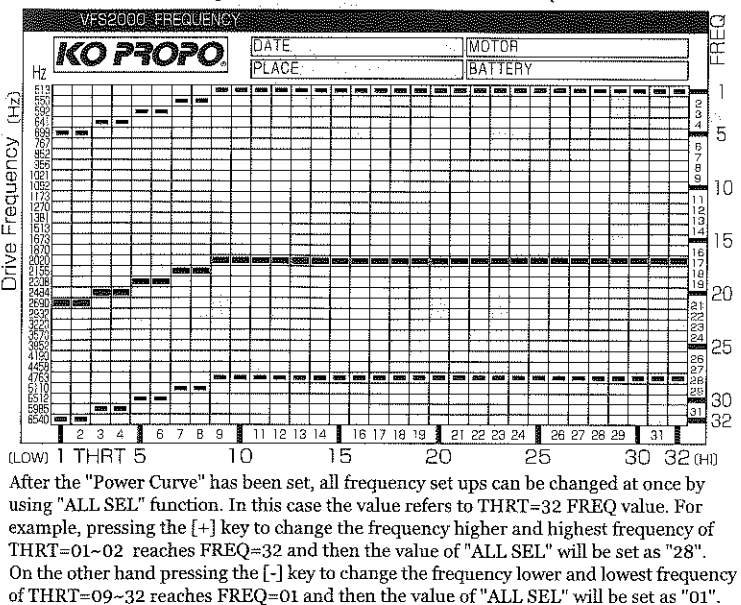
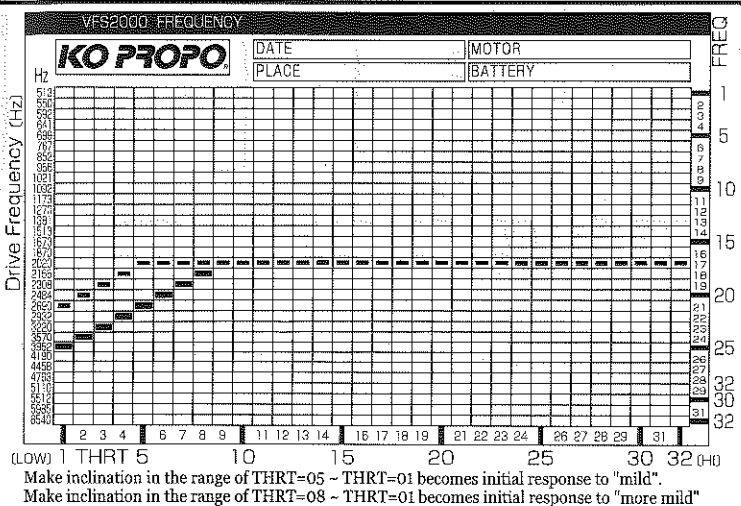
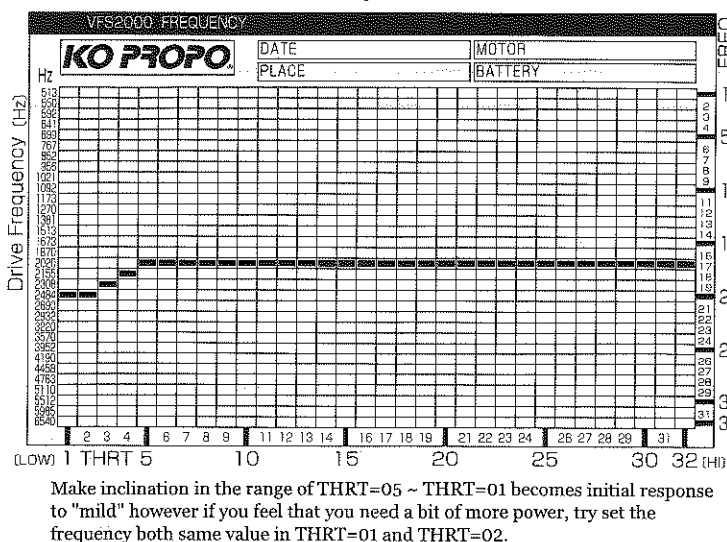
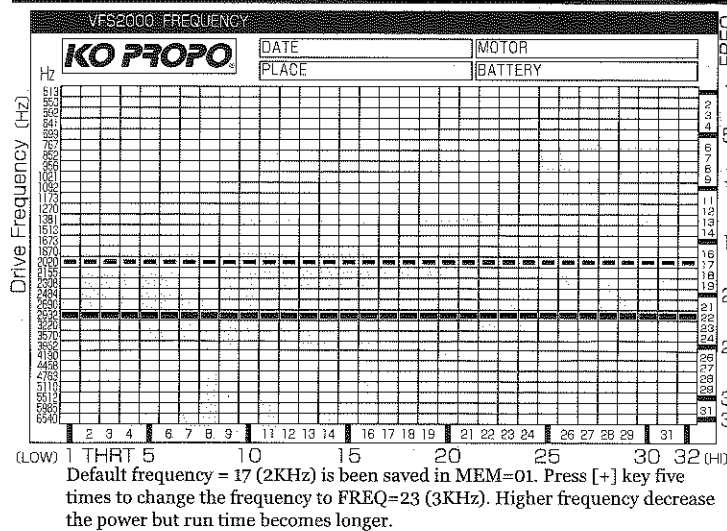
**Note 1.** In order to use saved data be sure to select the memory number first and load the saved data by pressing LD ([ - ]) key on "Memory access" screen. All THRT FREQ is set to 01 when you switched the unit on.

**Note 2.** The data cannot be saved if you switch off the unit after transfer the data from VFS-2000. To save the data, be sure to save on "Memory access" screen. \*This is useful for copying the data between other VFS speed controllers.

**Note 3.** During the frequency setting, do not switch off both units. It may result in loss of data.

## Sample Data Sheets

This graph shows "Power Curve". Increase the frequency to decrease the power and decrease the frequency to increase the power.



## Trouble Shooting.

"NG" appears when performing data transmission and receipt. The LED is not flashing when the data was transferred from Setting Adapter to speed controller.

\*Be sure to connect data communication connector and receiver connector of speed controller. Loose connection may result in malfunction of data transmission.

## If the unit still does not function correctly.

Please contact our service department and have the following information available • your name, address or phone number and situation when trouble occurred.

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