

KO PROPO® VFS-1 Setting Card Manual

This product is a precision instrument that uses electronic parts internally. The wrong usage and/or storage method may damage this product. This may not only cause the breakdown but may also cause an unexpected accident and danger. Please, use this only after seeing how to prevent such an accident by reading this manual.



The contents of this product must be used with caution and danger. A serious injury and/or death may occur if improperly used. These displays and their content show the possibility of bodily injury and death that may occur due to disadvantageous accidents with high frequency are shown. Contents of this manual try to prevent disadvantageous accidents that may occur, due to the lack of attention by the user.

Should the main unit become damaged and inoperative, do not use it. - In this event, the unit is deemed dangerous and can lead to a fire, electric shock, and/or breakdown. Our service department should only perform repairs and the service of this unit.
The danger in this product is the combination of the use with the optional multi setting adaptor. Please note that it is not possible to use this for anything else. - Damage (including breakdown) might occur when using this for the purposes other than the recommend products.

Caution: Do not place foreign objects into the opening of the setting adaptor. This may cause damage, ignition, and generation of heat, bodily injury or death.
Caution: High temperatures such as mid-summer heat in a car or in a trunk can cause damage to the plastic case of this unit. Store this at room temperature to prevent damage.
Please note that the transformation and damage of the case may occur because of an impact by dropping or the use of chemical such as solvents due to this product being made from plastic.

Warning: If the following happens to this unit, release of smoke, abnormally hot, weird smells and sounds, discontinue its use and remove the batteries at once. Discontinue the use of this product if it becomes wet, exposed to excessive heat, or the case becomes damaged.

Our company cannot assume the responsibility with the results that may occur with this product. Please acknowledge this beforehand.

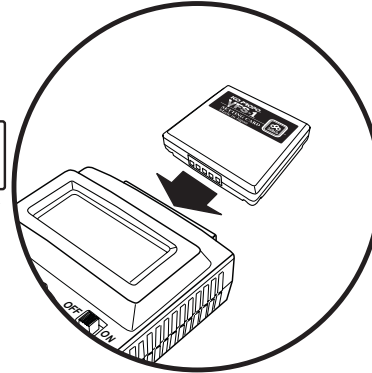
Connection

To use this product, the setting card is connected to the multi setting adaptor. To connect it, insert the card into the upper part of the multi setting adaptor opening. Please push it into the adaptor correctly.

- ※Please turn off the power supply of the multi setting adaptor when connecting and detaching.
- ※Setup the adaptor connections before connecting it to the VFS-1.
- ※There is an inserting direction. The case and the connector may be damaged when inserting incorrectly and pushing forcibly.

To confirm that this was connected correctly, turn on the power. If the display picture as shown in a right appears, then the connection has been correctly performed.

KO PROPO
VFS-1
Initial display



Connection of Setting Equipment

Connect the VFS-1 for setting to the left side of the setting card.

Turn off the power of the VFS-1 and the multi setting adaptor when connecting and disconnecting it.

Digital servos PDS-2300 series, 949 and 8044 can be set by using the servo setting card (optional No.61007) instead of the VFS-1 setting card.

It is necessary to connect the power supply of the VFS-1 and to put it in the communication setting mode.

- ① VFS-1 and a set adaptor are correctly connected.
- ② The power supply is connected with VFS-1.
- ③ Hold the set button down on the VFS-1 and turn the power on/off switch to the on position.
- ④ While holding the set button down, the LED light will come on.
- ⑤ Keep holding the button down until the LED light goes off and then release the set button. You are now in the communication mode.

The procedure for entering the communication mode is similar to that of the standard setting, so be sure not to make a mistake.

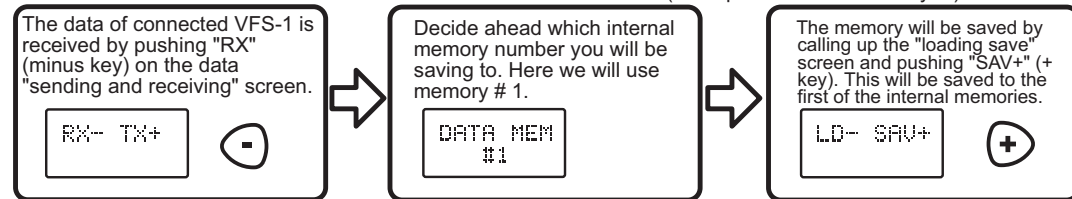
Sending and receiving of "Work memory" and data.

The data that is read from connected VFS-1 is memorized in the location called "Work memory" in the setting adaptor screen. Save your work memory before the unit is turned off, or you will lose your data. Current data can be loaded in the internal memory on the "Loading save" menu screen. The memory number is accessed by "Memory number setting" and must be specified because there are three available memory positions. The data is loaded by pushing a minus key in the

"Loading save" menu. The memory number will be read when you have selected this in the screen that displays "Memory number specification". The content of the loaded data is displayed on the screen.

On the other hand, "Data sending and receiving." will exchange VFS-1 data with the data between the work memories. Data that is received from the connected VFS-1 is (RX) and transmitting data to the VFS-1 is (TX).

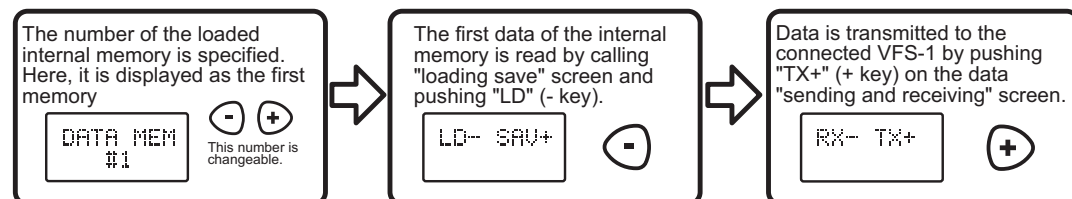
Saving data and received data. This is an example of the procedure on how to save your data in the internal memory once you have received it from the VFS-1. (Example to save to memory 1.)



※①Please push and hold the key operation for data sending and receiving and ⑭loading save until OK or NG is displays it. If the key is pushed for a short time, this action will not be executed.

Loading and transmission of data

Data is loaded from an internal memory (Memory # 1 is used an example) in the card and is transmitted to the VFS-1.



Switch of set screen

When it is connected correctly and the power supply is turned on, "Initial display" is shown. Here, when any of the four keys are pushed, the screen displays a set item. Improvement key (UP) or down key (DOWN) is used to switch a set item. The numerical value is used in each set item and plus key and a minus key are used to execute the change or operation.

Initial display

KO PROPO
VFS-1

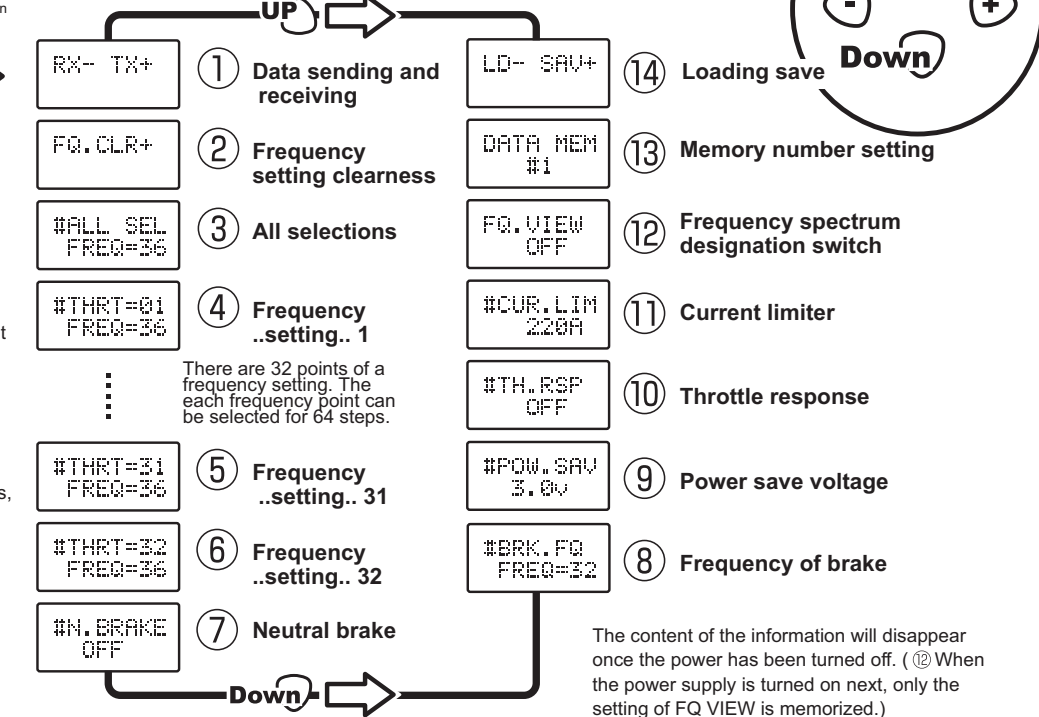
This is displayed when either of the keys is pushed from the set screen.

Display of voltage warning

RX- TX+
LOW BATT

While in use, a "LOW BATT" might be displayed as

shown in the figure. (flashing display) Also, the backlight of the liquid crystal screen will darken at the same time. This shows that the battery is low. Please change the batteries for new ones, because this message will continue to be shown during the operation.



The content of the information will disappear once the power has been turned off. (Ⓜ When the power supply is turned on next, only the setting of FQ VIEW is memorized.)

Menus of the setting card

It is possible to change all contents of VFS-1 settings.

- ① Data sending and receiving Data is sent and received between the setting adaptor and VFS-1. (-)When the key is pushed, data is received from VFS-1. (+)The content of the work memory being displayed will be transmitted to the VFS-1 when pushed. When both are successful, "OK" is displayed.
- ② Frequency setting clearness All the frequency settings, of all the points on the advancement side are returned to an initial value. Also, if VFS-1 is connected, the set values of the VFS-1 side are returned to the initial value. The initial value is FREQ=36(3.98KHz).
- ③ All selections Change "all" values of the frequency setting with the same increments. This will not go lower than the possible lowest value nor go higher than the possible highest value. This data displays the entire rough mean value of the frequencies.
- ④ Frequency ..setting.. 1 This is the first frequency-setting step. In the VFS-1, there are 64 different frequencies that can be set for each step until you reach the throttle high point. The frequency setting can be set in each step and there are a total of 32 steps. The display can switch the frequency spectrum designation to the number displayed by Ⓜ "Frequency spectrum designation switch".
- ⑤ Frequency ..setting.. 31
- ⑥ Frequency ..setting.. 32
- ⑦ Neutral brake The amount of the brake that is applied when the throttle position is a neutral can be adjusted. It is possible to be setup off or up to 100 stages. The amount of the brake at a set value of 100 is about 50% of the amount of the maximum brake when the throttle is operated. You will increase the effect from a set value about 10, although this will differ with factors like the weight of the body, the motor, and the gear etc.
- ⑧ Frequency of brake The frequency on the brake side can be set. 64 steps can be set, and an initial value is 3.45KHz. Generally, if the frequency is raised, the operation of the brake becomes mild.
- ⑨ Power save voltage The voltage of the power supply can greatly fall by internal resistance of the battery etc. Also, when a lot of current flows to the load of the motor and it is connected to other operating equipment such as receivers and servos. This can happen easily when the throttle operation is not smooth or the amount of battery left is very minimal towards the end of a race. In the VFS-1, the voltage decrease is suppressed by controlling the throttle when it has detected to fall below a set voltage and a set voltage is not cut. 2.5V in VFS-1Pro and 3.5V in J are the initial values but the initial value of the adaptor side is 3.0V.
- ⑩ Throttle response The response feeling of the throttle can be changed. Nine stages (turning off and 1-9) can be set, one with a large numerical value becomes a set value, and touch becomes mild. Please test and look at the conditions of the track because the effect will differ. Nine is the greatest value and decrease this value to find the effect that you are seeking. This may be effective when combined with the throttle punch function of the transmitter when the track conditions are slippery and the motor is too aggressive.
- ⑪ Current limiter An excessive current can be prevented from flowing to the motor by controlling and detecting the throttle flowing current. A set value can be set at 40A to 12 stages and turning off in the 20A step up, to the maximum value 260A as the minimum value. An initial value is 220A.
- ⑫ Frequency spectrum designation switch This switch allows you to display the actual frequency spectrum or a numerical value for a frequency on the display screen. For example: 3.98KHz to be figure mark 1-64. This setting is memorized in the memory in the card even if the power supply is turned off.
- ⑬ Memory number setting The memory number that it uses in the card of the setting adaptor is specified. The memory number that is set by this becomes the location in the loading save. Please note this memory location before turning off the power, because this memory is not memorized (unless saved). Three # 1-#3 can be specified for the memory.
- ⑭ Loading save Ⓜ To read = loading (LD-: minus key), and preservation = save (SAV: plus key) against the memory number specified by the memory number specification. The preserved data is data of the work memory being displayed on a set screen at this moment. "OK" is displayed when it has been successful.

When a repair is requested

Please include the usage condition when this item has malfunctioned, the symptoms, your return address, name, and contact phone number when sending this in for repairs.

When there is an abnormal generation of heat and there is a nasty smell coming from VFS-1, we would recommend discontinuing usage and send it in to your local authorized service department.

KONDO KAGAKU CO.,LTD.
116-0014 Tokyo Japan 4-17-7 Higashinippori Arakawa-ku

PAT. The variable frequency system of the VFS-1 is a patented technology of Kondo Kagaku Co., LTD.

KO PROPO®
website:www.kopropro.co.jp