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This is printed on recycled paper.

Provisions for Free Repair
1. If the unit does not work properly despite the fact that the customer used it properly and in line with the User's Manual, the unit shall be repaired free of charge from the distributor from which you purchased the unit.
2. If the customer requests free repair because of trouble within the warranty period, bring or send the unit along with the warranty to the dealer. A service charge may be added if a repairperson must be sent out to the place of use for repair.
3. If you have purchased after purchasing, or the product was received as a gift, or there are some difficulties contacting the shop from which you purchased the unit, please contact us directly for free repair.
4. Free repair is not available in the following cases even though it is within the warranty period:
   1. Trouble or damage was caused by careless operation, natural disaster, fire, public pollution, or use of a power source other than specified.
   2. If repair, adjustment, disassembly or modification of the unit has been carried out by a person other than a T&D authorized engineer.
   3. Trouble or damage was caused by transportation, movement or dropping of the unit after purchase.
   4. Failure to keep the Warranty or warranty to fill in all items required in the Warranty.
   5. The Warranty cannot be reissued. This Warranty only promises customers free repair within the period and conditions clarified in this Warranty. Therefore, the legal rights will not be limited by this Warranty. For further information on repair and other service questions that arise during the termination of the warranty period, contact your dealer.

Vehicle Recorder Expansion Unit VR-00P1

Thank you for purchasing our product. Carefully read this instruction manual before using this unit.

WARNING
This Service is not waterpoof.

\*FCC Compliance Statement for American Users
The device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

NMBG: This equipment has been tested and found to comply with the limits for a Class A Digital Device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the device to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Do not use or allow others to use the unit if it has a Class A compliant digital device, pursuant to Subpart E of Part 15 of the FCC Rules. Only peripheral computer input/output devices, terminals, printers, etc. certified or verified to comply with the Class A 6-B limits may be attached to this equipment. Operation with non-certified or non-verified personal computer input/output peripheral equipment is likely to result in interference to radio and TV reception. The connection of a non-certified equipment interface cable to this equipment may cause a malfunction. If any damage or changes are made, the warranty is void.

DANGER
If water or a foreign body enters into this unit, immediately remove the batteries and stop using. Continued use may cause fire or electrocution.

CAUTION
Do not use any batteries other than Alkaline battery.

If any smoke or strange smells are emitted from the unit, immediately cease using it. Continued use may cause fire or electrocution.

We are not responsible for any malfunction or trouble caused by the use of your product or by any problem caused by the malfunction of the unit. Please be fully aware of this before using our product.

This product has been designed for private or industrial use only. It is not for use in situations where strict safety precautions are necessary such as in connection with medical equipment whether directly or indirectly.

Do not drop the unit or expose the unit to a strong impact. If that happens to the unit, immediately remove the batteries and stop using.

Battery terminals may provide insufficient contact due to age or vibration. Please be careful not to lose data due to insufficient contact.

Battery life depends on the measurement environment, communication frequency, recording interval and battery quality.

Remove batteries from any unit that will not be used for a long period of time. Batteries left in a unit not being used for a long time may leak and cause a malfunction.

NOTICES ABOUT THIS USER'S MANUAL

Do not take apart, repair or modify the main unit. It may cause fire, electrocution or damage. Ask the shop where you purchased the product or T&D Corporation to carry out any repairs.

If any smoke or strange smells are emitted from the unit, immediately cease using it. Continued use may cause fire, electrocution.

Do not use any batteries other than Alkaline battery.

It may cause fire or damage.

Package Contents
- Expansion Unit VR-00P1 x 1
- AA Alkaline Battery VR-VR00P1 x 1
- Connection Cable VR-VR101C x 1
- Wall Attachment Unit TR-00GC x 1
- User Manual (Warranty) x 1
- Example of Installation using Wall Attachment

To prevent any fire or damage to our customers, other people and/or property, and to ensure the proper use of our products we ask that before using our product you carefully read, understand and follow the safety rules and precautions for our products as outlined below.

Safety Precautions and Instructions
- Please carefully observe the following safety measures when using our product to prevent any fire or damage to our customers, other people and/or property, and to ensure the proper use of our products.
- Do not use it for any other purpose than it was designed for.
- Operate the units with the latest version of [Voltage Recorder for Windows™]. The latest version software can be downloaded from our home page.
- Do not connect the expansion unit connection cable to connect to any other device other than the Voltage Recorder. Before disconnection of the cable, make sure to first stop recording and then disconnect. This may cause damage including malfunction.
- Do not use any batteries other than Alkaline battery.
- Do not drop the unit or expose the unit to a strong impact. If that happens to the unit, immediately remove the batteries and stop using.
- Battery terminals may provide insufficient contact due to age or vibration. Please be careful not to lose data due to insufficient contact.
- Battery life depends on the measurement environment, communication frequency, recording interval and battery quality.
- Remove batteries from any unit that will not be used for a long period of time. Batteries left in a unit not being used for a long time may leak and cause a malfunction.
- Do not use or store the unit in places such as listed below:
  - May cause electrocution; fire to damage to the unit or to your computer
  - Areas exposed to direct sunlight
  - Areas exposed to high pressure water flow
  - Areas exposed to organic solvents and corrosive gas
  - Areas exposed to strong magnetic field
  - Areas exposed to static electricity
  - Areas near fire or in excess of extreme heat
  - Areas prone to smoke, dust and dirt

* The Unit's Manual for this and all T&D products can be downloaded free of charge from our Web Site.

http://www.tandd.com/

On screen messages, figures or illustrations in this manual may vary slightly or be simplified from the actual messages and product.

Carefully read and fully understand these instructions before using this unit.

Do all rights of this User's Manual belong to T&D Corporation. It is prohibited to use, duplicate and/or manage a part or whole of this User’s Manual without the permission of T&D Corporation.

We sincerely hope that the contents of this manual are true and complete. If you find any information to have been omitted, or if the information within is confusing or mistaken please, contact your retailer or T&D Corporation.

Company names and product names are trademarks or registered trademarks of each company.

The warranty that is included in this User’s Manual cannot be reissued, so please keep it in a safe place.

The User’s Manual for this and all T&D products can be downloaded free of charge from our Web Site.
Outline of the Expansion Unit

This expansion unit includes functions that allow you to transmit a preheat signal to sensors and also allows you to simultaneously record with up to 4 VR-71 units.

- The preheat function transmits a preheat signal that is synchronized with the VR-71 recording timing to turn sensors or other devices ON and OFF. The output timing of the ON/OFF signal can be set into the voltage recorder via your computer.
- The simultaneous recording function allows you to simultaneously record with up to 4 VR-71 units. After having made settings via your computer to assign one of the voltage loggers as a Master Unit and the others as Slave Unit(s), connect all the loggers to the Expansion Unit. The Slave Unit(s) will receive an output signal from the Master Unit that will call for the Slave(s) to measure recording at the same time as the Master.

The Expansion Unit can have 1 Master and up to 3 Slave Units connected.

Part Names

[LEFT SIDE]  [FRONT]  [RIGHT SIDE]

1. The Check LED will light up in the following situations.
   1. When pressing the Check button (Manual output of pre-heat signal / Checking battery power)
   2. When the preheat output is ON.
   3. When the simultaneous recording timing is synchronized.
2. Check Button
3. Slave cable connector jacks
4. Pre-heat output terminal
5. Master cable connector jack

How to Use

1. Making Operational Settings
   Settings can be made via the software [Voltage Recorder for Windows].
   1. Check to make sure that the power of the main unit is ON.
   2. From the [Communication] Menu, select [Recording Start].
   3. The Recording Start window will appear where you can make all necessary settings concerning recording.

   [Pre-heat Function Settings]
   1. Make all normal operation settings necessary to use the voltage recorder.
   2. With the Expansion Unit Settings, check the various items as listed below and set the preheat time or how many seconds beforehand you wish the power to be turned ON.
   3. By clicking the [Send Settings] button, the settings will be completed.
      If you have selected a programmed recording start, by clicking the [Send] button the unit will be put into recording waiting status.

   [Simultaneous Recording Function Settings]
   Settings can be made for 1 Master and up to 3 Slave Units for that Master.

   1. Master Unit Settings
      1. Connect the Voltage Recorder to your computer and make the normal operational settings. For details, see the [Help] Menu in the software.
      2. With the Expansion Unit Settings, check the various items as listed below. If using the preheat function, make sure to check Pre-heat.
      3. By clicking the [Send Settings] button, the settings will be completed.
      If you have selected a programmed recording start, by clicking the [Send] button the unit will be put into recording waiting status.

   [Slave Settings]
   1. Connect the Voltage Recorder to your computer and in the Expansion Unit Settings, check the various items as listed below.
   2. Make the basic operational settings. For details, see the [Help] Menu in the software.
   3. By clicking the [Send Settings] button, the settings will be completed.
      If you are using a multiple number of units, repeat steps 1-3.

2. Connect

1. Connect the Voltage Recorder and sensors to the Expansion Unit.
   - Both the preheat function and the simultaneous recording function will work at the same time.

   [Example of a Pre-heat Connection]
   - Manual output of pre-heat signal
     By pressing the CHECK button you can manually turn the pre-heat output signal to ON without having to deal with the Voltage Recorder. Activated as long as you are pressing:

   [Example of a Simultaneous Recording Connection]

3. Recording Start

By pressing in on the REC button for more than 2 seconds the REC mark will appear in the LCD and recording will start.

- When using the simultaneous recording function, only the Master buttons will be active. By pressing in on the [REC/STOP] button on the Master Unit, the Slave Unit(s) will also start or stop recording accordingly.
- When using the Expansion Unit, the Voltage Recorder’s LCD will show [REC] before starting a recording and after a recording session has been started will change to show the value of the previous measurement.

NOTE: For our Customers using Data Collector TR-57U and/or RTR-57U

Although VR-71 may be set up by the user as a Master and Slave, when using Data Collector TR/RT57U to download recorded data, the Data Collector will not be able to recognize the Master / Slave relationship. Please carry out the following operations.

- If you wish to use VR-71 units in a 'Master / Slave' relationship and see a Data Collector TR/RT57U collect recorded data from those units, before starting a recording session please set the recording interval of "Slave" units to set as that of the "Master" unit. After downloading "Slave" data from a Data Collector TR/RT57U, please use the software to make sure to set the Recording Start time for the "Slave(s)" to the same as that of the "Master."