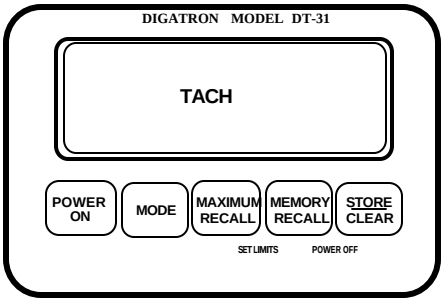
OPERATING INSTRUCTIONS MODEL DT-31K

KEYBOARD CONFIGURATION



POWER ON

When turned on, your instrument will begin a 10 second display test. At the end of the test, your instrument's serial number will be displayed. **To bypass this test press the MODE button.**

SETTING FUNCTION LIMITS

Before using your DT-31K, be sure to set the operating limits for each sensor. **The instrument will not allow limits to be set while the engine is running**. This is to prevent possible damage to your instrument.

Limits allow the instrument to give you a visual warning if any of the inputs exceed their limit. *Limits should be set at levels that allow you to react to the visual warning before engine damage occurs.* You will also need to set a calibration number so the instrument can display the correct RPM.

To set the limits, the instrument must be turned on and the kart's engine turned off. Press and hold the **MAXIMUM RECALL** and **MEMORY RECALL** buttons simultaneously until the display flashes. This will put the instrument into the Set Limits mode of operation, which is indicated by the display flashing. To increase the limit, press the **MAXIMUM RECALL** button. To decrease the limit, press the **MEMORY RECALL** button. To increase or decrease the limit by a large amount, press and hold either the **MAXIMUM RECALL** or the **MEMORY RECALL** button until the approximate limit value is reached. When finished setting the tach limit, press the **MODE** button to set the next limit. Repeat the above procedure to set the remaining limits. Set limits at levels high enough for normal operation, but not so high that engine damage can occur before you can respond to a problem.

The tach limit requires the setting of two separate parameters. The first is the maximum RPM for safe engine operation. The second number is for tach calibration. In order to display the correct RPM for different engine types, the instrument divides the tach input signal by the tach calibration number. This number can be between .5 and 31. Select this number so that it will provide the correct display for your application using the **MAXIMUM RECALL** and **MEMORY RECALL** buttons.

The most frequently used numbers are:

.5 - for some single cylinder 4 cycle motors

1 - for single cylinder 2 cycle and some 4 cycle motors

2 - for 2 cylinder 2 cycle and 4 cylinder 4 cycle motors

If you are unsure of the exact tach calibration number for your engine, experiment. If your calibration number is currently set at 1 and the RPM displayed is double what it should be, set the calibration number to 2. Alternately, if the RPM displayed is half of the correct value, decrease the calibration number to half of the current number.

To save the current limits and exit the Set Limits mode, press the **STORE** button or switch.

TACHOMETER

The tach displays RPM in thousands of RPM.
For example, if your display shows 9.50, your RPM is 9500 RPM.

STORING DATA

The **STORE** button or the optional **REMOTE STORE** switch can be pressed up to three different times to store the current value into memory. The display and the optional **WARNING INDICATOR LIGHT** will flash to indicate a successful store of information. After three sets of numbers are stored, additional attempts to store information will be ignored. In addition, the instrument automatically stores a maximum value during the current recording period.

MEMORY RECALL

The **MEMORY RECALL** button is used to recall the numbers stored in memory. To recall the first set of stored numbers, press and release the **MEMORY RECALL** button. The contents of the first memory will be displayed and the left decimal point will flash. Press **MEMORY RECALL** again to display the second set of information. The middle decimal point in the window will flash. A third press of **MEMORY RECALL** will bring up the last set of numbers and cause the right decimal point to flash. Press **MEMORY RECALL** once more to return to normal display mode.

MAXIMUM RECALL

The **MAXIMUM RECALL** button is used to display the maximum value recorded. Recording of this value takes place automatically and requires no input from the user. To display the maximum, hold down the **MAXIMUM RECALL** button. This value will be displayed until the button is released.

DISPLAY OF OVER LIMIT/OVER RANGE

When conditions exceed the set limit, the display will flash. When conditions exceed the range of the instrument, three bars will show at the top of the display. This condition can also be caused by a bad or disconnected sensor.

ELECTRICAL INTERFERENCE

If the instrument encounters excessive electrical interference it will display three vertical decimal points. This indicates that the stored data could be invalid. It can also indicate an incorrect instrument or sensor installation.

Severe electrical interference can cause the limit and calibration number to reprogram themselves. If your instrument is doing strange things, put it in the Set Limits mode and check to see that the limit and calibration number are still where you set them.

OPTIONS

There are three optional features that can be added to your DT-31K. To have any of these options added to your instrument, send it to the address at the end of these instructions.

WARNING INDICATOR LIGHT

The optional **WARNING INDICATOR LIGHT** flashes constantly when the limit is exceeded. It will stop flashing when the conditions fall below the set limit. The **WARNING INDICATOR LIGHT** will also flash once when the **STORE** button or switch is pressed. Memory is full if the switch is pressed and the **WARNING INDICATOR LIGHT** does not flash.

BACKLIGHT

The **BACKLIGHT** lights the display for use at night. To turn it on or off, press and hold the **MODE** and **MAXIMUM RECALL** buttons simultaneously. The **BACKLIGHT** is an optional feature; it will only work if installed.

REMOTE STORE

When mounted to your steering wheel, the **REMOTE STORE** switch allows you to store three sets of numbers while keeping your hands on your wheel.

BATTERY LIFE

An instrument not using a backlight will run for about 150 hours on a fresh set of AA alkaline batteries. With the backlight on, the battery life will be approximately 50 hours. Heavy duty batteries last about half as long as alkaline batteries. The percentage of battery life remaining will alternate in the window by holding down the **MAXIMUM RECALL** button. The instrument will also display “lo b” in the window to warn you of a low battery condition. At this time the tach will display accurate information for approximately one hour.

POWER OFF

The unit will turn itself off automatically after 10 minutes if no tach input is detected or buttons are pressed. You can also turn the instrument off manually by pressing the **OFF** and the **MODE** buttons at the same time.

Any stored data will be lost when the power is turned off. View all stored information before turning the instrument off.

REPAIRS

If you have any questions about the operation of your instrument, please call. One of our technicians will be happy to help you.

Your instrument is warranted to be free from factory defects and electronic failure for one year from the date of purchase. Physical damage during normal usage is not covered under the warranty. Be sure to fill out and return your warranty card for our records. If we do not have a card on file for your instrument, you will be charged for repairs unless you can provide us with proof of purchase date.

When returning an instrument for repair, enclose a note indicating your return address, phone number and a detailed description of the problem. Send your instrument and sensors so that we can check the complete system.

Send repairs to:

Digatron
8102 N. Freya St.
Spokane, WA 99217
www.digatron.cc
Phone: (509) 467-3128 Fax: (509) 467-2952

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