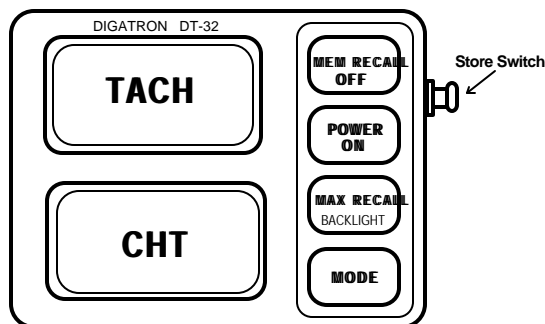# OPERATING INSTRUCTIONS MODEL DT-32K1

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-32K1, 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 **MAX RECALL** and **MEM RECALL** buttons simultaneously until the bottom display flashes. This will put the instrument into the Set Limits mode of operation, which is indicated by a flashing display. To increase the limit, press the **MAX RECALL** button. To decrease the limit, press the **MEM RECALL** button. To increase or decrease the limit by a large amount, press and hold either the **MAX RECALL** or the **MEM RECALL** button until the approximate limit value is reached. When finished setting the first 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 **MAX RECALL** and **MEM 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** switch.

CYLINDER HEAD TEMPERATURE

Cylinder head temperatures (CHT) usually run in the 300°F to 475°F range. The best way to determine the correct temperature for your particular motor is to tune for proper plug or piston color and then observe what the head temperature is for various throttle settings and atmospheric conditions.

Temperatures of 450°F or over will damage the standard CHT sensor. If your motor frequently runs at cylinder head temperatures over 450°F your instrument should have an exhaust gas temperature function, which can use a thermocouple CHT sensor. This sensor can be used without damage at higher temperatures, but it is not as accurate as our standard CHT sensor.

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** switch, or the optional **REMOTE STORE** switch, can be pressed up to three different times to store the current values of each function into memory. The displays 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 for each sensor during the current recording period.

MEMORY RECALL

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

MAXIMUM RECALL

The **MAX RECALL** button is used to display the maximum values recorded for each input. Recording of these values takes place automatically and requires no input from the user. To display maximums, hold down the **MAX RECALL** button. These values will be displayed until the button is released.

DISPLAY OF OVER LIMIT/OVER RANGE

When conditions exceed the set limits, the display where the overlimit condition is occurring will flash. The instrument automatically switches to this function if it is not being displayed.

When conditions exceed the range of the instrument, the display will show three bars at the top of the display where the over range condition occurs. 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 in the tach display. 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 limits and calibration to reprogram themselves. If your instrument is doing strange things, put it in the Set Limits mode and check to see that the limits and calibration are still where you set them.

OPTIONS

There are three optional features that can be added to your DT-32K1. 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 any of the set limits are exceeded. It will stop flashing when the conditions fall below the set limits. The **WARNING INDICATOR LIGHT** will also flash once when either **STORE** switch is pressed. Memory is full if the switch is pressed and the **WARNING INDICATOR LIGHT** does not flash.

BACKLIGHT
The **BACKLIGHT** lights the displays for use at night. To turn it on or off, press and hold the **MODE** and **MAX 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 lower window by holding down the **MAX RECALL** button. The instrument will also display "lo b" in the lower window to warn you of a low battery condition. At this time the temperature functions will become inaccurate, but 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