
TripTek

Motor Coach Trip Computer

Operator's Manual
MODEL 2500-X

Trademarks

**Sawtooth Embedded Systems is a registered trademark, and
TripTek is a trademark of Sawtooth Embedded systems.**

**Sawtooth Embedded Systems
12301 W. Explorer Dr. Suite 126
Boise, ID 83713**

**Telephone: (208) 658-0777
Fax: (208) 378-7400
www.triptek.net**

Patented

Table of Contents

Overview	1
Description	1
Display	1
Keypad Keys	2
Operating the TripTek Computer	3
Check List Screen	3
Today Screen	4
Leg Screen	5
Trip Screen	5
Coach Data Screen	6
Maintenance, Setup & Adjustment Screens	7
Maintenance Screen	7
Compass Zone Adjustment Screen	7
Customer Service Screen	8
Maintenance Setup Screens	8
Compass Calibration	9

Operator's Manual

Series 2500

02/01/02

Overview

TripTek is a trip and coach management computer designed for motorhomes. By receiving data from multiple sources, i.e. electronic engine computer, compass and temperature sensors (optional), and other sources, the system collects, analyzes, and saves data in memory and then displays information on the rear vision monitor.

Description

TripTek is comprised of multiple parts: a keypad, computer (behind dash), compass and temperature sensors (optional), and utilization of the rear vision monitor for display.

Display

When the ignition is turned on, a pre-trip CHECK LIST is displayed to guide the operator through a list of items to verify readiness of coach for travel.

To make efficient use of the data collected, and to best serve an actual vehicle trip, the system offers the operator four separate screens: TODAY, LEG, TRIP, and COACH DATA.

The TODAY screen is designed to give you daily information. It provides miles to scheduled destination, time to destination, miles traveled, time traveled, average MPG and average MPH. As an option, it will also give you both inside and outside coach temperature and compass heading.

The LEG screen is designed to give you information from fill to fill or for a trip. It provides average MPH, time traveled, miles traveled, gallons used (by engine), average MPG, and road speed.

The TRIP screen is designed for long term data tracking for a complete trip or longer. It provides average MPH, hours traveled, miles traveled, gallons used (by engine), average MPG and current MPG.

The COACH DATA screen is designed to give you both coach and engine/transmission performance and operational data. It provides gears select & monitor, turbo boost, engine temperature, transmission temperature, oil pressure, oil temperature and average MPG.

On a second level of screens there will be MAINTENANCE, COMPASS ZONE ADJUSTMENT, CUSTOMER SERVICE, MAINTENANCE SETUP, COMPASS CALIBRATION.

The MAINTENANCE screen displays when to change ENGINE OIL, ENG. FUEL FILTER, TRANSMISSION OIL, GENERATOR OIL and GEN. FUEL FILTER.

The COMPASS ZONE ADJUSTMENT screen is used to maintain compass accuracy by state. To achieve maximum accuracy, it is recommended to change the zone setting when traveling from state to state.

The CUSTOMER SERVICE screen is to give the operator easy access to the phone numbers and web page of the coach manufacturer.

The MAINTENANCE SETUP screen is to set the sequence (miles for engine and hours for generator) for maintenance.

The COMPASS CALIBRATION screen is for calibration of the compass after its initial installation or anytime the compass sensor is replaced or relocated.

Keypad Keys

(Maintain rear vision monitor in “on” position to display trip data)

Use the up  and down  keys to step through each line item of the CHECK LIST.

Use the VIEW key to move out of the CHECK LIST screen and go to the trip data screens.

The VIEW key displays the four screens: TODAY, LEG, TRIP, and COACH DATA. By pressing this key, with the monitor on, the computer will sequence through the four data screens and one blank screen. The system is also designed to sequence forward or backward, depending on which side of the key is pressed. After fifteen minutes with no user activity, data on current screen will go blank.

The SCREEN key will turn the rear vision image on or off.

Working the VIEW and SCREEN keys together will give you the following options:

Data on picture: The ability to view a data screen and still see the rear vision image.

Data only: View data screen only with a dark background for great contrast.

Picture only: View rear vision image only.

Standby: A dark screen.

The RESET key will zero all or part of the data on the currently viewed screen.

The up  and down  keys set miles to be traveled today. Holding down a key will scroll through numbers. This is operational only on the TODAY screen.

To get the second level SCREEN SELECTION screen, push the up  and down  keys simultaneously.

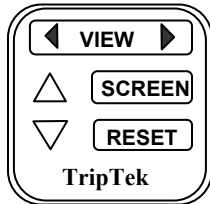
SECOND LEVEL

Use VIEW key to change selection.

Use RESET key to select screen.

Use VIEW key to return to TODAY screen (or as noted).

Operating the TripTek Computer Model 2500



Turn the ignition switch ON.

Turn the rear vision monitor ON. Display rear vision picture.

Press the **SCREEN** key on the keypad to eliminate the rear vision image, if desired. To re-display the image, press **SCREEN** again.

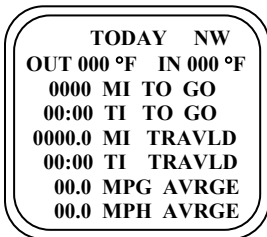
Note: If vehicle is put into reverse, the rear vision system will override the computer and clear TripTek data from the screen until transmission is taken out of reverse.



With the above steps completed, the “CHECK LIST” screen will be displayed on the backup monitor.

There will be multiple screens displaying checklist items.

“CHECK LIST” will only come up when ignition is first turned on.



Press the **VIEW** key on the keypad. The “TODAY” screen will display on the backup monitor.

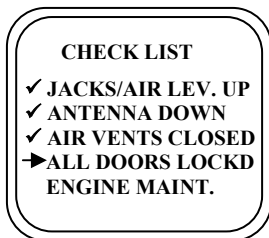
Note: If there is no interaction with the keypad for at least fifteen minutes, information on the screen will turn off.

0's on the screen represent the maximum available digits.

Text may precede data on some systems.

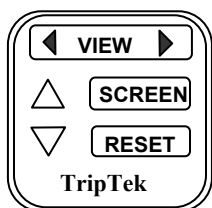
Check List Screen

The CHECK LIST screen is designed to give you a list of items to verify readiness of coach for travel.



This screen will give you a list of items to check off to insure readiness of coach for travel.

If a line item is blinking (i.e. “ENGINE MAINT.”), it would imply that service is required.



Using the up  and down  keys will let you step down each line item and check them off as you verify completion of task.

If a line item is blinking, press **VIEW**  to move to the appropriate screen (i.e. “MAINTENANCE”) to evaluate the problem.

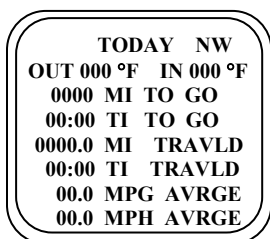
Press  **VIEW** key again to return to “CHECK LIST”.

Press **VIEW**  key to move out of “CHECK LIST” and into “TODAY” screen. Will function only on non-blinking lines.

The “CHECK LIST” is only visible when ignition is first turned on.

Today Screen

The TODAY screen is designed to give you daily information.



NW:	Compass Heading on all screens (optional).
OUT/IN TEMP:	Outside and inside coach temperature (optional).
MILES TO GO:	Remainder of user entered miles to scheduled destination.
TIME TO GO:	Approximate time to scheduled destination, utilizing “MILES TO GO” and “MPH AVERAGE”.
MI TRAVELED:	Miles traveled since “TODAY” screen reset.
TIME TRAVLD:	Time traveled since “TODAY” screen reset.
MPG AVERAGE:	Average miles per gallon since “TODAY” screen reset.
MPH AVERAGE:	Average miles per hour since “TODAY” screen reset.

Note: If a wrench is displayed next to compass heading on any screen, a maintenance item needs attention.

Press **RESET** and follow screen instructions to zero out “TODAY” screen.

Using the up  and down  keys, set the miles you will travel today. The longer the key is held down, the faster the number will scroll. Miles can be changed throughout the day.

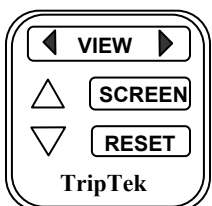
Press **VIEW**  to return to “TODAY” screen.

Note: As “MILES TRAVLD” changes, “MILES TO GO” and “TIME TO GO” will also change accordingly.

Press **SCREEN** to turn rear vision image on or off.

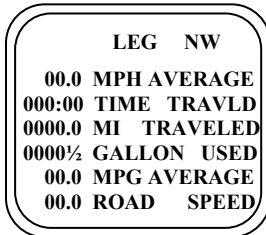
Press **VIEW**  to move to the “LEG” screen.

Note: To move forward or backward through the screens, press the side of the **VIEW** key that displays chosen direction.

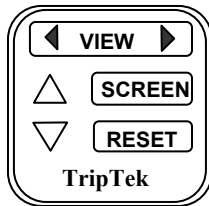


Leg Screen

The LEG screen is designed to give you information from fill to fill.



NW:	Compass Heading (optional).
MPH AVERAGE:	Average miles per hour since “LEG” screen reset.
TIME TRAVELED:	Time traveled since “LEG” screen reset.
MI TRAVELED:	Miles traveled since “LEG” screen reset.
GALLONS USED:	Gallons of fuel utilized by engine from the time of “LEG” screen reset. Data is received from engine computer.
MPG AVERAGE:	Average miles per gallon since “LEG” screen reset.
ROAD SPEED:	Current coach speed.



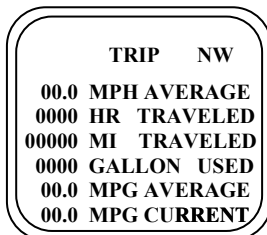
Press **RESET** and follow screen instructions to zero out “LEG” screen.

Press **SCREEN** to turn rear vision image on or off.

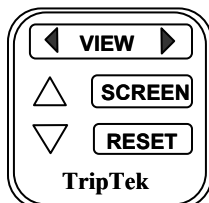
Press **VIEW** ► to move to the “TRIP” screen.

Trip Screen

The TRIP screen is designed for long term data tracking for a complete trip or longer.



NW:	Compass Heading (optional)
MPH AVERAGE:	Average miles per hour since “TRIP” screen reset.
HRS TRAVELED:	Hours traveled since “TRIP” screen reset.
MI TRAVELED:	Miles traveled from time of “TRIP” screen reset.
GAL USED:	Gallons of fuel utilized by engine from time of “TRIP” screen reset. Data is received from engine computer.
MPG AVERAGE:	Average miles per gallon since “TRIP” screen reset.
MPG CURRENT:	Instantaneous miles per gallon.



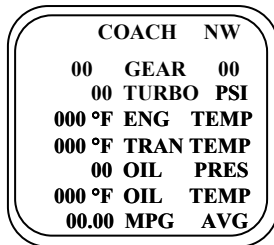
Press **RESET** and follow screen instructions to zero out “TRIP” screen.

Press **SCREEN** to turn rear vision image on or off.

Press **VIEW** ► to move to the “COACH DATA” screen.

Coach Data Screen

The COACH DATA screen is for coach and engine performance.



NW:

Compass Heading (optional)

GEAR:

Transmission gears selected and attained.

TURBO PSI:

Turbocharger boost pressure.

ENG TEMP:

Engine coolant temperature.

TRAN TEMP:

Transmission oil temperature.

OIL PRES:

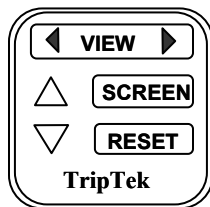
Engine Oil Pressure.

OIL TEMP:

Engine oil temperature.

MPG AVERAGE:

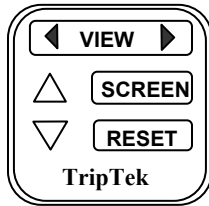
Average miles per gallon for life of coach.



Press **SCREEN** to turn rear vision image on or off.

Press **VIEW** ► to move to the "BLANK" screen.

Maintenance, Setup and Adjustment Screens



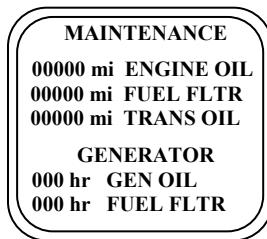
Press the up Δ and down ∇ keys simultaneously to get the second level screens (“SCREEN SELECTION”).

Press **VIEW** key to change selection. Select “MAINTENANCE SCREEN”.

Press **RESET** key to display screen.

Maintenance Screen

The MAINTENANCE screen displays when to change oil and filters.



ENGINE OIL:

Miles since last oil change.

FUEL FLTR:

Miles since last fuel filter change.

TRANS OIL:

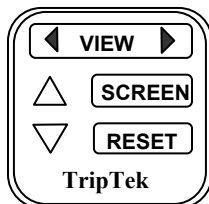
Miles since last transmission oil change.

GEN OIL:

Hours since last generator oil change.

FUEL FLTR:

Hours since last generator fuel filter change.



Press the up Δ or down ∇ key to select the line item desired.

Press **RESET** and follow screen instructions to zero out line item after oil or filter change.

Press **VIEW** key to return to “TODAY” screen.

Press the up Δ and down ∇ keys simultaneously to return to the “SCREEN SELECTION” screen.

Press **VIEW** key to change selection. Select appropriate screen.

Press **RESET** key to display screen.

Compass Zone Adjustment Screen

The SET COMPASS STATE screen is to maintain compass accuracy by state.

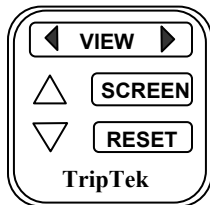


STATES:

Alphabetical listing of all states to easily set zones to maximize compass accuracy.

→ :

Pointer to state you are presently in.



Using the up Δ or down ∇ key will let you scroll through the list of states to pick that state you are presently in.

Pressing **RESET** will change the zone to that state chosen and return to “TODAY” screen.

Press the up Δ and down ∇ keys simultaneously to return to the “SCREEN SELECTION” screen.

Press **VIEW** key to change selection. Set appropriate screen.

Press **RESET** key to display screen.

Customer Service Screen

The CUSTOMER SERVICE screen is to give operator easy access to phone numbers and web page of the coach manufacturer



1-800-:

Phone number of customer service department for coach manufacturer.

www. :

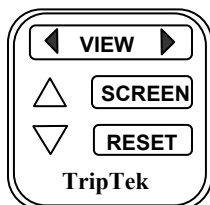
Web page of coach manufacturer.

Press any key to return to the “TODAY” screen.

Press the up Δ and down ∇ key simultaneously to return to the “SCREEN SELECTION” screen.

Press **VIEW** key to select appropriate screen.

Press **RESET** key to display screen.



Maintenance Setup Screen

The MAINTENANCE SETUP screen is to preset the service duration of miles or hours.



ENGINE OIL:

Selected maintenance item to set. Ref. ENGINE OIL, ENG. FUEL FILTER, TRANSMISSION OIL, GENERATOR OIL and FUEL FILTER

6000 mi:

Resetable miles or hours for maintenance replacement sequence.

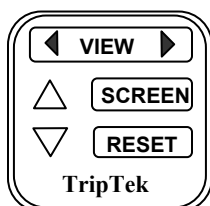
Press **VIEW** key to change maintenance line item.

Press the up Δ or down ∇ key to set desired miles (eng or trans) or hours (genset) for maintenance replacement sequence.

Press **RESET** to exit back to “SCREEN SELECTION” screen.

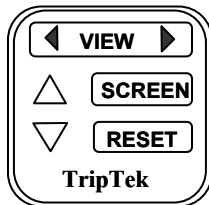
Press **VIEW** key to select “TRIPTEK COMPUTER”.

Press **RESET** key to display screen.



Compass Calibration

The compass must be calibrated after its initial installation or at anytime it is replaced or relocated. Compass calibration can be accomplished at two levels of accuracy. **Standard Calibration** – more than adequate for normal use. This is where the coach is driven in a full circle. **4 Point Calibration** – where greater accuracy is sought or when the sensor has been put in an environment that affects compass accuracy. The procedure requires the coach to be pointed in each of the four true compass headings, i.e. North, East, South and West..



Press the up  and down  keys simultaneously to return to the “SCREEN SELECTION” screen.

Press VIEW  key to select “CALIBRATE COMPASS”.

Press RESET key to display screen.



Press RESET key to begin compass calibration.

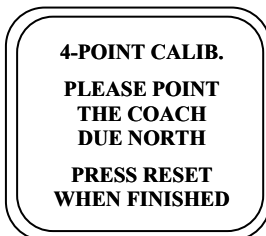
Press VIEW  key to skip calibration and return to the “TODAY” screens.



Drive the coach in a full circle.

Press VIEW  key after successful calibration and proceed to “COMPASS ADJ.” Ref. below.

Press RESET key to proceed with 4-point calibration if desired.



Follow screen and point coach true North and then press RESET.

Screen will then instruct you to point coach true East, press RESET again.

Continue process through South and West pressing RESET after each step.



Using the up  or down  key will let you scroll through the list of states to pick that state you are in.

Pressing RESET will change the zone to that state chosen and return you to the “TODAY” screens. Calibration is complete.

TripTek Product Warranty

Coretronics, Inc. (the Company) warrants the Triptek computer to be free of defects in material and workmanship under normal use and service maintenance for a period of 12 months. In the event the Computer shall prove to be defective in material or workmanship during said 12-month warranty period, Sawtooth will, at its option, repair or replace the Computer, at no charge to Customer except as set forth below. All replaced parts and equipment shall become the property of Coretronics.

This limited warranty does not apply to any damage to the Computer resulting from accident, physical or electrical misuse or abuse, improper installation, alteration, any use contrary to its intended function, unauthorized service (i.e. service by anyone other than the Company or its authorized service personnel), fire, flood, lighting, or other acts of God.

This warranty limits the Company's liability to the repair or replacement of the product. The Company shall not be responsible for removal and/or reinstallation charges, loss or damage in transit and shipping and mailing costs to the warranty service location.

The Company reserves the right to make changes or improvements in its products without incurring any obligation to similarly alter products previously purchased.



SAWTOOTH EMBEDDED SYSTEMS

(208) 658-0777

BOISE, IDAHO