Transcan®
Advance

User Reference Manual

novotruck GmbH
https://novotruck.eu
transcan@novotruck.eu
+49 5424 2070490

Transcan® *Advance*
User Reference Manual

Contents

Transcan® *Advance*

User Reference Manual

1.0 Introduction

1.1 Product Overview

The Transcan Advance has been designed specifically to meet the recommendations of Food Hygiene Regulations for the transport and delivery of chilled and frozen food products in refrigerated vehicles.

The Transcan Advance is available in three styles:

Transcan Advance Rigid for in-cab installation in a standard DIN sized radio slot

Transcan Advance Cab for in-cab installation on a vertical surface or bulkhead

Transcan Advance Trailer in weatherproof enclosure for external installation on trailers

1.2 Inputs and Outputs

Transcan Advance supports the following inputs and outputs:

- Eight channels of temperature measurement using precision thermistor sensors
- Eight status or ON/OFF inputs derived from switch (volt-free) contacts
- Audible alarm in case of out of range temperature conditions
- Recorder must be powered from a DC voltage supply between 9 – 36 volts
- One humidity sensor using one wire digital input

1.3 Principle of Operation

Transcan Advance measures temperatures and status switch conditions and automatically stores these in the form of internal files. A new file is normally created for each day. Transcan Advance may then provide a record of the day's measurements or any previous journey file retained in its memory as either a paper ticket printout or in a form that can be transferred to a PC via a USB device in a csv file format. The user can choose to print information in either Delivery Ticket (current temperatures) or Journey Ticket (recorded temperature and status conditions) formats.

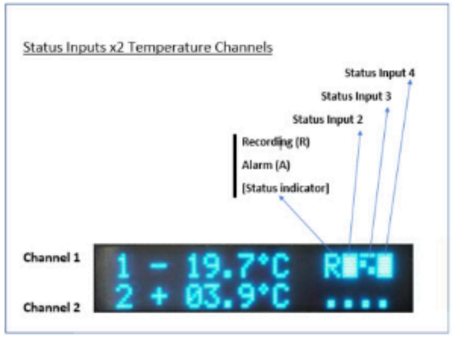
When the data memory is full, new recordings automatically replace the oldest recordings. The number of recordings that can be retained at any one time depends on the memory size, recording period and number of temperature channels in use.

1.4 Main Components

Transcan Advance comprises three main components: the Display, the Operator Keys and the Printer.

1.4.1 The Display

Normal mode is set to two channels showing temperature in 0.1°C and a secondary option of four channels showing temperature in 1°C. Status symbols indicate the current state of each enabled switch input.



1.4.2 The Operator Keys

The operator keys are colour coded and identified with symbols to indicate their function.

Main Screen


Menu / Cycle


Quick Print


Enter / Accept Alarm


Back / Toggle display

1.4.3 The Printer

The printer is fitted to the right of the Transcan display and uses a thermal paper roll and printer. When a ticket is requested the paper feeds automatically.

Replacement rolls and printers are available through the novotruck sales team.

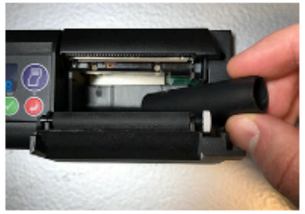
To replace the roll, pull on the tab on the right-hand side of the unit to open the drawer and remove the empty roll core. Drop in the new roll of paper, trailing the end of the paper roll over the roller on the door. Shut the door, ensuring that both sides of the door are fully shut.
If you run out of paper mid-print or if printing is disturbed, please discard the current print and re-print.

When a red line appears during the print-out the paper needs to be replaced. Caution: beware of sharp edges inside the printer drawer.

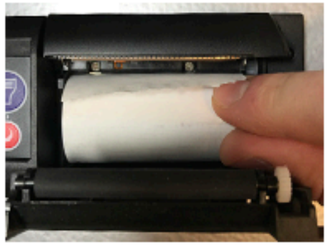
1.4.4 How to replace the printer paper roll

1- Open the printer cover

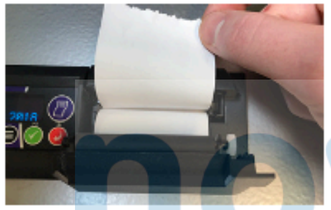
2- Remove the empty spindle



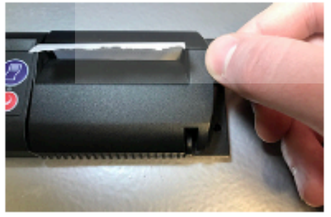
3- Insert the new paper roll supplied by Seven Telematics



4- The paper must be positioned so that it spools out from the top



5- The paper roll has now been properly replaced



6- Print out a test ticket to check that the paper roll is fitted properly.

Transcan® *Advance*

User Reference Manual

2.0 Getting Started

Before operating your Transcan Advance recorder for the first time ensure that it is set to operate to your requirements by carrying out a few simple checks in the following order:

2.1 Set the Language of Operation

If a language other than pre-set is required:

Press ☰ four times. The Display will show: "User Options".

Then press ✓. The Language message is displayed.

Press ✓ again to access the language menu.

Press ☰ to run through the alternatives available.

Press ✓ once to confirm your selection and ✗ twice to return to the normal display.

2.2 Print a Journey Ticket

Press ☰ once and the display shows Print Menu.

Then press ✓ again for the display to show Journey Ticket.

To print, press ✓

Examples of Journey Ticket printouts are shown below:

Journey Ticket (Graph)

Journey Ticket (Values)

2.3 Check the Vehicle Identifiers

Check that the Title and Vehicle descriptions are set correctly. The Title 1 / Title 2 is a total of 24 characters that is usually set to the vehicle operator's company name, and is printed on the first two lines of each report. The Vehicle number is an 8-character descriptor normally used for the registration number or trailer number. It is factory set to AB51 CDE for type "C" and "R" recorders and TRL 1234 for type "T" recorders. To change the Title and Vehicle descriptions, see section 5.2.6.

2.4 Check the Time and Date

The time and date printed at the end of the Journey and Delivery Ticket are set to UTC immediately prior to despatch from the factory. Once set the date should never need adjusting during the lifetime of the recorder. The clock includes automatic adjustment for winter/ summer time. This automatically adjusts the time between 2:00am on the last Sunday in March and 2:00am on the last Sunday in October. To check the time and date you can press  once from the default display screen if the unit is in two channel view. However, you will need to press  twice if the unit is in four channel view.

To adjust the time and/or date see 4.3

2.5 Check that all required inputs are being monitored

Transcan Advance supports up to eight temperature channels and eight switch inputs. Check the display (see 1.4.1) to determine if e.g. door monitoring is enabled by exercising these inputs (e.g. by opening and closing the compartment door) and that the input sensors are working correctly. When the switch is open a full square symbol will be displayed and when the switch is closed a hollow square symbol will be shown. (This signal can be reversed)

Please note that it takes a few seconds for these switches to update on the display.

Input 1 is dedicated to external alarm configuration (Ext. Alarm Cfg) e.g. refrigeration unit on or off, and will display either a flashing R or A (if alarms are enabled), this means that only switch inputs 2-8 should be otherwise used.

2.6 Check that Recordings are Being Made

Transcan Advance is factory set to record continuously 24 hours a day, 7 days a week. Data is recorded in separate complete 24-hour periods, or daily files, for ease of access. Although many different recording schedules are possible, this standard setting is very widely used. No action or adjustment is required to start or stop the recording process.

Check display to confirm that recording is in progress and shows a flashing 'R' or 'A'.

2.7 Check the Recording Period

The current recording period is shown in minutes. Transcan Advance is factory set to record every 10 minutes.

To check the recording period, press the back button twice  from the default display if it's in two channel View. Otherwise you will need to press  three times.

To change the recording period, follow the next steps:

Press three times and the display will show 'Recording Config'.

Then press to accept. Introduce the PIN code and press again.

The Recording Period message will be shown. Press to enter and adjust the recording period.

Once you are in the adjust recording menu press and the display shows the different alternative times available:

1, 2, 5, 10, 15, 20, 30, 60 minutes.

Press to confirm your selection and return to the normal display pressing the back button twice.

Please note the default temperature unit used is Celsius. To change to Fahrenheit press three times, the screen shows Recording Config press , enter the PIN code.

Recording Period is displayed. Press Temp Units is displayed, press Degrees Celsius is displayed, press to scroll between Celsius and Fahrenheit. Press to confirm the chosen temperature unit. OK will be displayed.

3.0 Basic Operation

Basic operation covers the most commonly used facilities such as using the display, setting the print style, obtaining printouts, checking the time and date and setting/accepting alarms.
For additional operational information see 4.0 (Advanced Operation).

3.1 To Print a Delivery Ticket

A delivery ticket shows the temperatures as measured at the time it is printed and may be used to provide printed confirmation of these temperatures at the time of delivery. You can print a delivery ticket in two ways:

Quick Print mode:
Press once and a delivery ticket will be printed.

Menu Access Mode:
Press once and the display shows Print Menu. Press to enter this menu

Next, press once and again. The display shows delivery ticket.

Then press again and a delivery ticket will be printed.

3.2 To Print a Journey Ticket

A Journey Ticket shows the recorded temperature and status conditions. To print a Journey Ticket:

Press once, the display shows Print Menu.

Press again, the display shows Journey Ticket.

Then press again and a journey ticket will be printed.

Once the journey ticket has been printed you can wait around 30 seconds to get the unit back to the main screen or you can just press button.

Whilst a ticket is printing, the Cancel Print message will show on the screen. Press to cancel the print.

3.3 To Print any File from Memory

Transcan Advance stores data as Journey Files, each of which normally covers a complete 24-hour period. Other types of recording regimes are available to cover specific requirements.
(see section 5.2.2).

Individual Journey Files and multi-day tickets may be printed from the memory as often as required.

3.4 To Set the Display Mode

To change the display mode, press the back from the default display to bring up different display modes.

The Transcan Advance display can be set to any of the following options:

Summary Display (2 x temperature channels per screen) - Default Mode -
All enabled temperature channels are displayed two per screen (to 0.1 degree precision) together with symbols representing the enabled ON/OFF inputs.

Summary Display (4 x temperature channels per screen)
All enabled temperature channels are displayed four per screen (to 1.0 degree precision) together with symbols representing the enabled ON/OFF inputs. This is the factory default setting.

To set the display mode, press four times and user options will be shown on the screen.

Then press to enter in this menu. Pressing twice will show display mode message.

Then press display will show the active setting (Summary x2 or Summary x4)

Pressing you will have the option to set Summary x4, Summary x2, Date & Time and Recording Period. This order may vary.

Press to select your preference.

3.5 To set Alarm Operation

Transcan Advance is factory set with out of range temperature alarms disabled unless specifically requested. To check if temperature alarms are enabled:

Press six times and the display shows Alarms Config. Press to enter in Alarms Config menu. The screen will ask for a PIN code. The default PIN code is 1111

Press to cycle through the PIN code digits and then press to confirm. The screen will then show Ext. Alarm Cfg menu. Press again and the screen will show Alarm Set menu. Press to accept.

There are eight different alarm sets available.
Press to cycle through Alarm Set 1 - 8.

Once you have selected the required alarm set press to confirm.
The display shows Alarm Enable menu.
Then press again to access this menu.

Display will show the active setting, to scroll between off and on press and to confirm.

Pressing back button four times will restore the main screen. Otherwise the unit will automatically return to the main screen after around 30 seconds.

NOTE: It is usual to automatically disable alarms when the refrigeration system is switched off. This is to minimise the risk of false alarms. The disable signal is normally provided by a contact within the fridge control panel and must be connected to ON/OFF input #1 on Transcan Advance.

4.0 Advanced Operation

NOTE: Advanced operation covers the less commonly used facilities such as selecting data from memory and printing/offloading data to a USB device, setting user options, adjusting the time and date and programming out of range temperature alarms.

4.1 Transferring Data to a Computer

To remove data from the unit onto a USB device, first insert the device into the front of the unit. Note: this should be formatted to FAT32.

Press twice to reach the file transfer menu. Then . Each of the print options are then available to transfer to USB Press to cycle through the options and then press to select your required option. The first option shown will be Download New. This option will download all new data since the last time data was downloaded. The other Download All option will download all data created since the beginning of the recording period.

Once all the data has been downloaded the unit will show "Download OK" message if the download process was successful and the files on the USB device can be analysed in a PC - open these in Seven Telematics TSAXpress **INSERT WEB PAGE LINK** or Microsoft Office software.

If a USB device has not been plugged into the Transcan Advance it will show an error message.

If the process to download the data is not finished properly, the Transcan Advance will show a Download Error message.

Please note: the USB socket present on the Transcan Advance should only be used for data transfer using USB devices specified by Seven Telematics. This port should not be used for any other purpose. It is not suitable for charging USB peripherals and you should only use a compliant USB device.

4.2 Setting User Options

It is possible to customise the operation of Transcan Advance through the User Options feature.

4.3 Adjusting the Time and Date

Transcan Advance displays the current time and date. The time and date are set to UTC prior to despatch from the factory. The clock includes automatic adjustment for winter/summer time. This automatically adjusts the set time between 02:00 on the last Sunday in March and 02:00 on the last Sunday in October.

4.3.1 Clock Protect

Adjustment of the real-time clock can be security protected by the Configuration Parameter 'Clk Protect'. This is factory set to 'on' but can be set to 'off' to allow adjustment of the time. To check if the clock protect feature is enabled check in the Eng Display mode in the menu.

When the clock protect is enabled the clock can only be adjusted by using the PIN-protected Eng Display.

4.3.2 Clock Adjustment (clock protect not enabled)

When clock protect is not enabled:

Press four times to reach the user options menu, and then press to confirm.

Press once and press to enter time and date.

Press once to enter the set clock function.

Adjust the clock by pressing to adjust the hour/min and pressing to accept the changes.

To cancel the new parameters press the button.

4.3.3 Clock Adjustment (clock protect enabled)

When clock protect is enabled:

Press ☰ four times and then press ✓ to confirm.

Press ☰ once and press ✓ to confirm. Enter PIN 1111

Press ☰ once to enter the set clock function.

4.3.4 Date Adjustment

The date is factory set and can be adjusted following the steps in the user options configuration menu.
Example:

Press ☰ four times, the display will show User Options, press ✓ to confirm.

Press ☰ once and the display shows Language, press ☰ once and the screen will show Time and Date.

Press ✓ to access.

If clock protect is enabled Enter PIN 1111, If not enabled the display will not show this PIN message.

Once the PIN code has been introduced the screen shows Set Clock.

Press ☰ again and the screen shows Set Date menu.

Press ✓ to enter.

Adjust the date by pressing ☰ to select the year and pressing ✓ to accept the changes. Press ☰ to move to month and day.
To cancel the new choices, just press ✗ button.

4.4 Temperature Alarms

Up to eight alarm sets may be defined (Alarm Sets 1 to 8) and each temperature channel is provided with configurable alarm which can be enabled or disabled.

All temperature alarms are recorded in the memory. An alarm will be triggered if the temperature is not within the acceptable ranges defined by these alarm sets.

4.4.1 Alarm Sets

Each temperature channel can be linked to a range of temperature alarms to advise the customer when a particular channel is out of the required range.

Transcan Advance has eight configurable alarm sets for each temperature channel.

Each alarm set contains the below parameters:

- Alarm High – upper threshold
- Alarm Low – lower threshold
- Alarm wait – time delay before an alarm becomes active
- Graph High – maximum value when printing in graphical format
- Graph Low - minimum value when printing in graphical format
- Alarm Name

Configure Alarm Sets

To configure an alarm set (up to 4 individual sets).
Press ☰ six times, Alarms Config will be displayed. Press ✓ and PIN code will be displayed. Enter PIN Code and Ext. Alarm Cfg will be displayed. Press ☰ and Alarm Sets will be displayed, Press ☰ and Config. Limits will be displayed. Press ✓ and the names of the pre-set alarms will be displayed. i.e. Frozen, Chill, Fresh and Ambient.

Scroll using ☰, select required pre-set using ✓.
Alarm High will be displayed. ✓ scroll +/- and values using ☰ and ✓ to select. Once selected, confirm with ✓ OK will be displayed.
Press ☰ to access Alarm Low and repeat the above procedure. Press ☰ to access Alarm wait and repeat the above procedure.
Press ☰ to access Graph High and repeat the above procedure.

Press ☰ to access Graph Low and repeat the above procedure.

Press ☰ to access Alarm Name and pre-set alarm names will be displayed. i.e. Frozen, Chill, Fresh, Ambient and User Defined. Press ✓ to select required pre-set name, and these can be edited using 8 characters. Scroll characters using ☰ & ✓ and press ✓ to confirm.

Assign Alarm to Temperature Channel
It is possible to assign up to four individual alarm sets to each temperature channel. These are selected as described below.

Press ☰ six times, Alarms Config will be displayed. Press ✓ and PIN code will be displayed. Enter PIN Code and Ext. Alarm Cfg will be displayed. Press ☰ and Alarm Sets will be displayed, press ✓ Alarm 1 will displayed. Press ✓ and Alarm Enable is displayed, press ☰ and Alarm Limits s displayed, press ✓ and pre-set alarm names will be displayed. i.e. Frozen, Chill, Fresh, and Ambient. Select the required Alarm set (e.g. Chill) then press ✓ and the chill range will be assigned to temperature channel 1.

Repeat the above process for each active temperature channel.

4.4.2 Enabling/Disabling Alarms

The Transcan Advance is factory set to record 24hrs/day. If alarm monitoring is required, ensure that any alarms are deactivated when the fridge system is switched off for extended periods or when the vehicle is not in use to prevent false alarms.

To automate the process of disabling alarms, it's possible to connect an ON/OFF switch to status Ext. Alarm Cfg. so the alarms will only be active when the fridge is operational.
Refer to wiring diagram TWD1117.

Ext. Alarm Cfg. Factory default settings is set to OFF.
However in case the customer requires to change the logical control signal we provide the Alarm Control Reverse option (factory default setting is set to ON).

This enable action may be extended for a period after an off signal is received (e.g. to allow the fridge to be switched off briefly during delivery) via the parameter 'Extended Time'.

To set up the External Alarm Control
Press ☰ six times and then ✓ once and key in the PIN code. The screen should now show the Ext. Alarm Cfg message.

Control Enable:
Press ✓ again, the screen shows Control Enable, press ✓, the current status will be displayed. To change the status (ON/OFF) use the ☰. Press ✓ to accept the change

Control Reverse:
Although the option exists to reverse the signal it is not recommended

Extended Time:
Extended time can be used to enable the alarms to remain active for a given period once the refrigeration unit is switched off e.g. to facilitate door openings for deliveries.

Press ☰ twice and the screen will show Extended Time. Then press ✓ to enter this mode.

Now you can set the extended time and then revert to the main screen.

When recording is in progress and the alarm control is activated the recording indicator will show on the display as a flashing 'A' rather than a flashing 'R' when alarms are activated. When Extended Time is active the recording indicator on the display flashes 'E'

4.4.3 Alarm Indicator Light and Buzzer

The Transcan Advance can be supplied with an optional alarm indicator light. Please contact the Seven Telematics sales office for more information. Refer to the wiring diagram TWD1117 for connection details for this option.

All Transcan Advance recorders include an audible alarm which becomes active when an alarm condition occurs. To mute the buzzer press the ✓ button on the default display.

Please note this will only mute the buzzer and not cancel an active alarm.

A ticket will be printed to confirm acknowledgement of alarms.
If utilised, the external alarm light will only turn off when the alarm condition is cancelled (i.e. when temperature returns to within an acceptable range or when the alarm is set to 'OFF').

5.0 Configuration Parameters

5.1 Printing the Parameters

Before attempting to adjust any of the configuration parameters a printout of the parameters should be made.

Press ☰ once and the screen shows Print Menu

Press ✓ once to confirm

Now ☰ five times and the screen shows: Parameter List

Then press ✓ to confirm and print the actual parameters for which the Transcan Advance has been programmed.

5.2.1 Product Description and Sign-on Message

The product description and sign-on message appear on the parameter printout (see 5.1), but are not accessible in configuration mode. The initialising message appears whenever the power to the recorder is restored and is of the following format:

5.2.2 Recording Regime

Start time > 00:00
Stop time > 00:00

These define the daily start and stop times for recording and represent factory settings.

These settings can be adjusted if required but this is not recommended as this provides 24/7 monitoring.

In the unlikely event that these settings require changing please contact Seven Telematics for assistance.

5.2.3 ON/OFF Inputs

Press ☰ seven times and the display will show Inputs Config. Press ✓ to gain access to Input 1 menu. Press ☰ to go through the remaining (Input 2-7) and press ✓ to enter each menu.

Each of these inputs can be configured as required, see below examples

Door switch (Door Sw – default on input 1)
ON means that the status input is to be used as the main door switch contact. A normally closed contact represents a closed door. To set an alternative input as a Door switch input, please follow the below instructions.

Input 7 menu config: At this menu the screen shows Input Enable. Press ✓ to enter menu, the screen will show the current status (ON/OFF). To select a different option press ☰ and then press ✓ to confirm.

Door Switch Reverse: In Input menu press ☰ button once and the screen shows Input Reverse. Press ✓ to confirm, the screen will display the current status (ON/OFF). To select a different option press ☰ and then press ✓ again to confirm.

De-Ice switch (De-Ice – default on Input 2)
ON means that the status input is to be used as the De Ice (Defrost ON/OFF) switch. A normally closed contact represents defrost on. This can be reversed as required.

Inputs 3-7
Please follow the above instructions for additional switch inputs e.g. Side Door etc.
When in switch inputs 3-7, to select the required name and symbol follow the below instructions:

Input name
An 8-character description can be entered for user defined inputs.

Press 3 times and Input Name is displayed, scroll through the 8 characters using and to name the input, press to confirm name and screen displays OK

Input symbol
A symbol can be selected from the following characters for user defined inputs. After naming the input and confirming, press once and Input Symbol is displayed, press to enter menu, scroll through options using and select required symbol using
The options are: , , ,#, ! <Add character image>

5.2.4 Temperature Channels and Descriptions

Channel 1-8 enable
Temperature 1 input (T1) will be measured and displayed when set to ON. An OFF reply to this prompt will turn the measurement off and there will be no display for T1 on the display or in reports.

The name of T1 is shown on the display and in reports. An 8-character description can be used.

Other channels (T2 to T8) are similarly programmed using below instructions.

For channel configuration menu press five times and the screen shows Channel Config. Then press to accept.

The PIN 1111 is required to enter this menu.
To scroll through the channels press

Once the desired channel is selected, press to enter menu.

The screen will show Channel Enable. Then press

The screen displays the current channel status (ON/OFF). To select a different option press and then press to confirm.

Channel 1-8 name
To name a temperature channel, follow below instructions:
Enter channel configuration menu, press five times and the screen shows Channel Config.
Then press to accept.

The PIN 1111 is required to enter this menu.
Channel 1 is displayed, to scroll through required channels press

An 8-character description can be entered for each channel

Once the required channel is selected, press , Channel Enable shows on the screen. Press once and Channel Name is displayed. Press to enter pre-set names (Front, Rear, Air Ret, Product, Fr A Ret, Centre, Chill, Freeze, User Defined), scroll using and select required name using . If a bespoke name is required, scroll to User Defined, press , scroll through the 8 characters using and to name the channel, press to confirm name and screen displays OK

Humidity Sensor
Displays the reading from the external humidity probe. To activate, press three times and press to access the menu.

Enter PIN code (1111), press to accept.

The screen displays Recording Period. Press three times and the screen will show Humidity Enable. To enter this menu press and the current states is displayed. The screen displays the current status (ON/OFF).

To select a different option press and then press to confirm.

It is possible to set alarms using the Humidity Sensor, if these are required please follow the below instructions.

Press six times, Alarms Config will be displayed. Press and PIN code will be displayed. Enter PIN Code and Ext. Alarm Cfg will be displayed. Press three times and Humidity Alarm will be displayed. Press and Alarm Enable will be displayed, press and Current Status will be displayed (ON/OFF). Edit using and press to to confirm. Press Alarm Limits is displayed, press Alarm High is displayed, press to set parameters as a numerical percentage and press to confirm. OK is displayed. Press Alarm Low is displayed, repeat the above process. Press Alarm Wait is displayed, repeat the above process. The Humidity Alarm is now configured.

5.2.5 Engineering Display
To enter press eight times from the default display and then press Eng Display is shown.

The PIN 1111 is required to enter this menu.
SetPIN > 1111 (Factory default value)
View System ID is shown.

View SystemI/D> TA00000001
This is an individual 10-character identifier which is always set to the serial number of the recorder. The identifier is recorded with the data. The unit ID is printed on each report. This parameter can't be changed. See 5.2.1

Press the screen shows View System ID, Press the screen shows Set Vehicle ID

SetVehicle ID>VEH12345
This is an 8-character identifier which may be used to identify the vehicle registration or trailer ID number which is printed on each report.

NOTE: When the vehicle ID is changed a new recording is started and the message NEW FILE will appear on the display.

The screen is showing Set Vehicle ID Press and scroll characters using and press to confirm

A further two 12-character identifiers are used together to specify a user-defined 24-character title line which is printed as lines 1 and 2 of each report.

To change the title and vehicle descriptions:
Press the screen shows Set Title 1
Title 1>XXXXXXXXXXXX
Press and scroll characters using and press to confirm.

Press to scroll to Set Title 2
Title 2> XXXXXXXXXXXX
Press and scroll characters using and press to confirm
The screen shows OK, press , the screen shows Set PIN

Set PIN > 1111 (factory default value)
The PIN can consist of any four digits in the range 0-9
To adjust the PIN, press and scroll characters using .
Press to confirm.

Baud Rate > 19200
This is the speed of communication when the recorder is connected to a PC or other device via the serial port, this cannot be adjusted.

Clk Protect
Set the clock protect function to on or off using the and
See 4.3.1

Auto Clk Adjust> ON
Set this parameter to ON to automatically adjust the time by one hour at 02:00 on the last Sunday in March (add 1 hour) and 02:00 on the last Sunday in October (subtract 1 hour). See 4.3.2

Other menus
The following four menus contain information accessible by Seven Telematics only.

Upload config
Upgrade access
View access code
Manufacturing ID

5.2.6 Print Reason Code
The reason code for file creation is printed on the file list.

The reason code appears within the printed file/upload list:

P	Settings before change
E	Recording start (initiated by start time or day code)
F	No journey files
T	Start and stop time same
H	Channel count change (2 to 8channel or vice-versa)
C	Clock changed
B	Clock set back
W	Clock set forward
A	Firmware version change
N	Channel name change (1-8)
V	Vehicle identity change (registration)
I	Recording period change (1-60 minutes)
Z	File size
R	To mark a file that has been created due to a change in a critical parameter
K	To indicate that the humidity sensor is enabled or disabled

5.2.7 Reboot
In the unlikely event that the Transcan should require a reboot, press and hold  for 7 seconds and then release. The Transcan will reboot and normal operation will be restored.

6.0 Specification

Transcan temperature recorders are designed to meet the requirements of EN12830, WELMEC and other national standards to support the objectives of Directive 92/1/EEC (amended by 93/43/EEC), the Quick Frozen Food Directive.

Please note: there is a risk of fire if the recorder is not installed as per instructions (including fuse and power supply specifications)

6.1 Type of Application
Transcan temperature recorders are suitable for recording storage temperatures and transport temperatures.

6.2 Temperature Measuring Range
Temperature Recording Range and Accuracy:

-50 to +50C accurate to ±1C
-40 to +40C accurate to ±0.5C
Resolution: 0.1°C

6.3 Autonomous Power
The battery powers the real-time clock. The battery is not user-replaceable and the Transcan should be returned to the manufacturer before the end of the 10-year expiry period for the battery to be replaced.

6.4 Environment
In the event of the printer being subject to drips or spillage, it should be allowed to dry out before use. To ensure that printouts can be made on demand, a spare printer roll should be carried at all times.

Recording Operating Temperature: -30 to +70C
Printing Operating temperature: -10 to +50C
Storage Temperature: -40 to +85C
Vibration – meets requirements of EN 60068: 1993
Degree of protection:
IP65 for Trailer version – suitable for outdoor use
IP20 for rigid version – suitable for indoor use only.

6.5 Power

The DC supply should be either from a vehicle battery fused in-line with an automotive spade type 2A fuse or from an approved mains-operated SELV power supply rated for 3A peaks and either rated as a limited power source (LPS) or limited to 65VA. The mains-operated power supply should be suitable for IEC installation category II.

Power:

Input Voltage:	9-36V DC
Input Power:	25W
USB Output Voltage:	5V USB Output
Current:	0.5A

6.6 Recording Period

This may be set from one minute to 60 minutes. For the installation to comply with current legislation, the user must not set the recording period less frequently than 10 minutes.

6.7 Recording Duration

The memory capacity for the Transcan is 4MB. This allows for all eight temperature probes to be recorded continuously with the following capacity:
10 minute record interval – 786 days

6.8 Data Archiving

To satisfy the requirements of national legislation, data must be retained for at least one year. The files may be printed, stored locally upon the recorder, printed on the internal printer or transferred via a USB device to a PC. It is recommended that this is done at least once a month. Records from the internal printer should be kept in a clean dry place to ensure that they are legible after one year.

6.9 Time Recording Error

Relative error over seven days, maximum one minute.

6.10 EMC

TUV Rheinland.
Test Report Num: 21276432_001

6.11 Power Surge

Conforms with BS AU 243 (ISO7637-1) grade 4.

6.12 Electrical Safety

Conforms with EN 61010-1. Safety may be impaired if installation instructions are not adhered to.

6.13 Periodic Verification

In accordance with EN13486

6.14 IEC Symbols Used


Direct current


Consult manual


Caution

6.15 Power Consumption

Transcan Advance: 58mA

Transcan® *Advance*
User Reference Manual

7.0 Cleaning and Maintenance

Visible surfaces may be cleaned with a damp cloth and mild detergent.
No general maintenance procedures are required.

Figure 1.2
Wiring Diagram
TWD1117

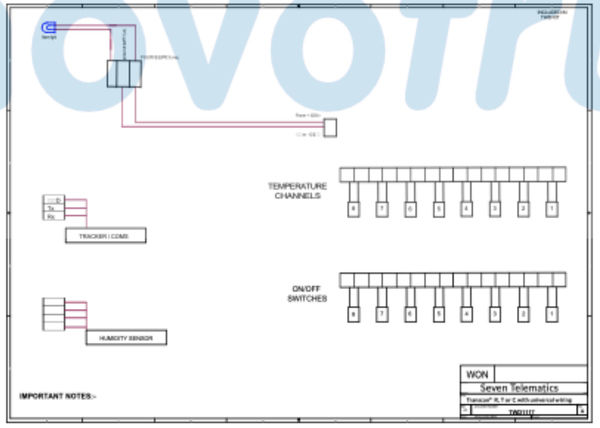


Figure 1.4.1
The Display
Status Inputs x2 Temperature Channels

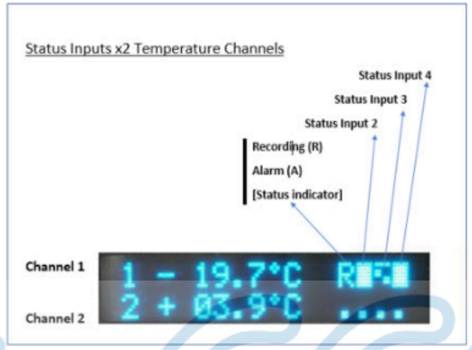


Figure 1.4.2
The Operator Keys


Menu / Cycle


Quick Print


Enter / Accept Alarm


Back / Toggle display