

Ameriscan®

DOCUMENTATION

AMERISCAN RX2-6 / TX2-6

Cabin and Trailer recorder

USER MANUAL



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AMERISCAN RX2-6/TX2-6 has four different user menus which are accessible via the keyboard:

- Print menu
- Alarm menu
- User settings menu
- Status menu

1. MENU 1 PRINT MENU

Press **blue** button. The last selected print choice will be displayed. Printing starts after 2 seconds. Repeatedly pressing the blue button will scroll between the available print options: delivery ticket, journey ticket graphical, and journey ticket numerical.

Delivery ticket
CURRENT VALUES

<-CNCL

By pressing the blue button for more than 2 seconds the following sub-menus are reached:

1.1. SELECT COMPARTMENT TO PRINT

By pressing the **green** button you confirm that you wish to change the settings. The chosen compartment can be selected by pressing **↑** **↓** and your choice can be confirmed with [edit].

1.1 Select compartment to print
(Compartment 1)
↑ ↓ EDIT <-MENU

1.2. TIME ZONE OFFSET FOR PRINTING

This option is intended to have the local time printed on your ticket. In case “0 hour(s)” is selected, the recorder time will be printed.

1.2 Time zone offset
for printing
(0 hour(s))
↑ ↓ EDIT <-MENU

1.3. PRINT EVENT REPORT

When pressing the **green** button/ **ACCEPT**, printing of the event report will start.

1.3 Print report
EVENTS
↑ ↓ ACCEPT <-MENU

1.4. PRINT PARAMETER REPORT

By pressing the **green** button/ **ACCEPT**, the parameter report will be printed after entering the correct pin code (1-2-1-2).

1.4 Print report
PARAMETERS
↑ ↓ ACCEPT <-MENU

1.5. SET PRINT DATE

With **EDIT** you can select a historical date for printing. After confirmation of the date with **ACCEPT** you can select the required report with the blue button. Printing starts after a delay of 2 seconds.

1.5 Set print date
↑ ↓ EDIT <-MENU

1.6.

DELIVERY TICKET SETTINGS

With **EDIT** you can set the desired information printed on the delivery ticket. You can select "actual value", "actual + average" or "actual, average and min-max values". By pressing the green button you confirm your choice.

1.6 Delivery ticket
settings

↑ ↓ EDIT <-MENU

1.7.

PRINT TIME PERIOD

With this option you define the total print period.

1.7 Print time period
(10 hour(s))

↑ ↓ EDIT <-MENU

1.8.

DAY START TIME

This option defines the time which is taken as start time for the printout (printout is done backwards till this time).

1.8 Day start time
(0:00)

↑ ↓ EDIT <-MENU

1.9.

DAY END TIME

This option defines the time from which the printout is done backwards (please note that printout is always done backwards, i.e. from the day end time till start time).

1.9 Day end time
(18:00)

↑ ↓ EDIT <-MENU

Examples:

- You want to make a printout for a certain date in the past for a time period which exceeds the day start time. Please change day start time to 0:00 h and enter the desired time period.
- You want to make a printout for 2 days. Please change time period to 2 days, day start time to 0:00 h and day end time to 0:00 h.

2.

MENU 2 ALARM SETTINGS

Up to four different alarm types can be allocated to up to four different compartments. The various alarms (and compartments) are only available if the supervisor has preset and configured them in the parameter menu.

Alarms

Comp 1

OFF

XX

Comp 2

OFF

XX

By pressing the **YELLOW** button you go to the alarm menu.

2.1.

COMPARTMENT 1

When pressing the yellow button a second time you reach the options which can be changed. With **↑** **↓** you toggle between the compartments available. The value given in brackets shows the actual setting. By pressing **EDIT** you can change alarms for the compartment **which has been chosen before**.

2.1 Compartment 1
(Off)

↑ ↓ EDIT <-MENU

With **<** **>** you select the desired alarm type (including alarm off). By pressing **ACCEPT** the chosen alarm will be activated. The display now changes to the prior menu.

2.1 Compartment 1

Frozen

< **>** **ACCEPT** **<-CNCL**

2.2. COMPARTMENT 2 (SAME AS COMPARTMENT 1)

2.3. COMPARTMENT 3 (SAME AS COMPARTMENT 1)

2.4. COMPARTMENT 4 (SAME AS COMPARTMENT 1)

2.5. DIGITAL INPUT 1

The AMERISCAN X2-6 recorders are provided with 4 digital inputs that can be used for invoking alarms from door switches and refrigerators. An alarm condition is reached if ONE of the inputs remains toggled for a certain period of time (delay time).

2.6. DIGITAL INPUT 2 (SAME AS DIGITAL INPUT 1)

2.7. DIGITAL INPUT 3 (SAME AS DIGITAL INPUT 1)

2.8. DIGITAL INPUT 4 (SAME AS DIGITAL INPUT 1)

2.9. ALARM OUTPUT TEST

By pressing the green/**TEST** button, the alarm output "AO" on connector 1 will be toggled. This way, the alarm output can easily be tested without invoking an alarm by first configuring alarm conditions.

In case of an alarm condition, an acoustic signal will be heard and on the display, the corresponding temperature input or the corresponding symbol (in case the alarm was invoked by a digital input) will flash. After an alarm is accepted with the yellow button the acoustic signal will stop but the alarm remains active until the temperature is within the limits again or in case that the concerning digital input condition has been reset.

By pressing the **YELLOW** key for more than 3 seconds you define a starting point for a dedicated journey. The display will show this.

Printing will start from the defined journey start.

JOURNEY START

3. MENU 3 USER SETTINGS MENU

With the user settings several adjustments can be done to offer the user a maximum of user convenience. By pressing the green button the user setting menu will be activated.

Toggle with **↑** **↓** between the available menu options (3.1 to 3.2; 3.3; ...). Between brackets (...) the actual setting is displayed. With **EDIT** you enter the edit mode.

3.1 Set time
(14:00:31)

↑ **↓** **EDIT** **<-MENU**

ENTER PIN is required. The PIN CODE is 1212. In this menu you can change the settings to your convenience. The following pictures show the display in the edit mode.

3.1.

SET TIME

Select hours, minutes, and seconds with **<** **>** and adjust with **↑** **↓**. Confirm the setting with **[accept]** (green-red).

3.1 Set time
14:00:31

<-cncl	accept
↑	↓
<	>

3.2.

SUMMER/WINTER TIME CORRECTION

If you do not want an automatic adjustment of summer and winter time you could define this here. ENTER PIN is required. The PIN CODE is 1212.

3.2 Sum/Wint corr.
(Auto. adjustment)

↑	↓	EDIT	<-MENU
----------	----------	-------------	------------------

3.3.

SET DATE

ENTER PIN is required. The PIN CODE is 1212.

Select date, month, and year with **<** **>** and adjust with **↑** **↓**. Confirm setting with **ACCEPT** (green-red simultaneously).

3.3 Set date
18/02/2008

<-cncl	accept
↑	↓
<	>

3.4.

SELECT LANGUAGE

Select the desired language with **<** **>** and confirm with **ACCEPT**.

3.4 Select language
(English)

<	>	ACCEPT	<-CNCL
-------------	-------------	---------------	------------------

3.5.

SET DISPLAY CONTRAST

Set the desired display contrast **<** **>** and confirm with **ACCEPT**.

3.5 Set display
contrast

<	>	ACCEPT	<-CNCL
-------------	-------------	---------------	------------------

3.6.

SET DISPLAY BACKLIGHT

Set the intensity of the backlight to your convenience **<** **>** and confirm with **ACCEPT**. The light switches on when you press any button and switches off after 30 seconds.

3.6 Set display
backlight

<	>	ACCEPT	<-CNCL
-------------	-------------	---------------	------------------

3.7.

SET BUZZER VOLUME

Change the buzzer volume with **<** **>** and confirm with **ACCEPT**.

3.7 Set buzzer
volume

<	>	ACCEPT	<-CNCL
-------------	-------------	---------------	------------------

3.8.

SET BUZZER FREQUENCY

Change the buzzer frequency with **<** **>** and confirm with **ACCEPT**.

3.8 Set buzzer
frequency

<	>	ACCEPT	<-CNCL
-------------	-------------	---------------	------------------

3.9 Set buzzer
on-time

<	>	ACCEPT	<-CNCL
-------------	-------------	---------------	------------------

3.9. SET BUZZER ON-TIME

Change the buzzer on-time with < > and confirm with **ACCEPT**.

TMS X2 V2.08

Displays the actual firmware version of the recorder

TMS X2 V2.08
© 22/02/2008 11:57

[↑] [↓] <-MENU

4. MENU 4 STATUS MENU

Pressing the red button, the display mode will change between full menu information or only showing actual temperatures enlarged.

In order to return to the main display please press the blue, yellow or green button.

T1	11.2	T2	20.0
T3	-12.3	T4	-3.8
T5	-18.7	T6	OC

PARAMETER MENU

The **AMERISCAN TX2-6/RX2-6** recorder has been designed to fulfill a number of desired applications for individual customers. By using the corresponding parameter settings you can adjust the recorder functionality to the required needs. This chapter gives an overview and structure of the various parameters available.

To enter the parameter menu press the green button for 2 seconds. The display will show: "ENTER PINCODE".

The default setting of the pin code is 1111, but can be adjusted by the supervisor at any time (ask your distributor).

Parameter Settings
ENTER PINCODE

[-1 -] [-2 -] [-3 -] [-4 -]

After entering the correct pin code you have access to the parameter menu and the first menu level is displayed. Select the desired item with [↑], [↓] and press [EDIT] to enter one of the following options:

- 5 Temperature inputs settings
- 6 Digital inputs settings
- 7 Compartment settings
- 8 Alarm settings
- 9 Printer settings
- 10 General settings
- 11 Communication settings

5. MENU 5 TEMPERATURE INPUT SETTINGS

Inputs for temperature measurements can be switched on/off and assigned a name, depending on the sensor position. Default, input 1 is preset as 'Return air' and input 2 as 'Rear'.

5.1. T1 INPUT > ON/OFF

If „on“ input 1 will be measured, displayed and stored into memory. Printing of input 1 is assigned in the compartment setting (menu item 7). When 'Off', go to item 5.2.

5.1.1. TYPE > TEMPERATURE

You can select a sensor type (temperature or relative humidity)

Temperature input

Relative Humidity input (0..1V)

Universal input (0..2.5V)

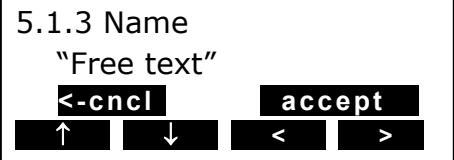
Current sensor input (4..20 mA)

5.1.2. NAME > RETURN AIR

You can select a sensor name from the table or enter a **free text** (free text is not translated when the language is changed!!!)

5.1.3. NAME > FREE TEXT

Enter a text as desired via the four buttons



5.2. T2 INPUT > ON/OFF, MENU STRUCTURE AS 5.1

5.3. T3 INPUT > ON/OFF, MENU STRUCTURE AS 5.1

5.4. T4 INPUT > ON/OFF, MENU STRUCTURE AS 5.1

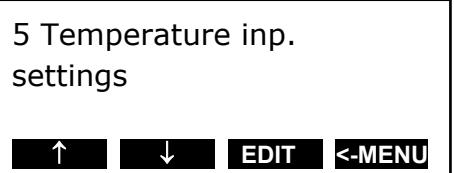
5.5. T5 INPUT > ON/OFF, MENU STRUCTURE AS 5.1

5.6. T6 INPUT > ON/OFF, MENU STRUCTURE AS 5.1

6. MENU 6 DIGITAL INPUTS SETTINGS

4 inputs for status recording, all inputs can be switched on/off, assigned with a name and inverted polarity. Some names are available as a factory setting and can be selected from a list.

In the operating mode you can see on the display which inputs are activated. A small rectangle indicates that the input is active and the status "low". When the status is "high", depending on the assigned function, a corresponding symbol is displayed (Refrigeration = *, Door contact = |, Defrost = ☂, Other = □)



- 6.1 DIGITAL INPUT 1 > ON/OFF**
If "on", every input status change on D1 will be displayed and recorded with a date/time stamp.
- 6.1.1. NAME > REFRIGERATION**
Select a sensor name from the list or enter a free text (free text is not translated when changing the language).
- 6.1.3. ACTIVE > HIGH/LOW**
Input polarity switch. Switch function if "high": contact closed = input active. If "low": contact open = input active (applicable for door contacts, active = open)
- 6.1.4. ALARM > ON/OFF**
ON in order to activate alarm for this input. In this case you get the following options:
- 6.1.4.1. Delay time > 10 minute(s)**
Alarm delay time given in minutes
- 6.1.4.3. Store position when alarm active > Yes/No**
Here, the position at the moment of the ALARM can be stored (*This indicates the GPS position of the vehicle when the alarm of the sensor is activated.*)
- 6.1.5. STORE POSITION WHEN INPUT ACTIVE/INACTIVE OR BOTH > Yes/No**
- 6.2. DIGITAL INPUT 2 > ON/OFF, MENU STRUCTURE AS 6.1**
- 6.3. DIGITAL INPUT 3 > ON/OFF, MENU STRUCTURE AS 6.1**
- 6.4. DIGITAL INPUT 4 > ON/OFF, MENU STRUCTURE AS 6.1**

7. MENU 7 COMPARTMENT SETTINGS

In this menu you have to configure the print and alarm functions for up to maximum 4 compartments. Per compartment, one name can be assigned like FRONT, BACK, SIDE. The user is able to print a ticket or activate an alarm per compartment

- 7.1. COMPARTMENT 1 > ON/OFF**
Activates or deactivates compartment 1.
- 7.1.1. COMPARTMT. NAME > (COMPARTMENT 1)**
The name for a compartment needs to be set as a free text and will not be translated when changing the language.
- 7.1.2. PRINT T1 > YES/No**
- 7.1.3. ALARM ON T1 > YES/No**
- 7.1.3.1. Store position when alarm T1 active > Yes/No**
Stores the GPS position of the vehicle when the alarm of the sensor is enabled and activated (with/without delay)

7.1.3.2. Store position when alarm T1 inactive > Yes/No

Stores the GPS position of the vehicle when the alarm of the sensor is not enabled (with/without delay)

7.1.4. PRINT T2 > YES/No

7.1.5. ALARM ON T2 > YES/No

7.1.5.1. STORE POSITION WHEN ALARM T2 ACTIVE > YES/No

Same as T1

7.1.5.2. Store position when alarm T2 inactive > Yes/No

Same as T1

7.1.6. PRINT T3 > YES/No

7.1.7. ALARM ON T3 > YES/No

7.1.7.1. Store position when alarm T3 active > Yes/No

Same as T1

7.1.7.2. Store position when alarm T3 inactive > Yes/No

Same as T1

7.1.8. PRINT T4 > YES/No

7.1.9. ALARM ON T4 > YES/No

7.1.9.1. Store position when alarm T4 active > Yes/No

Same as T1

7.1.9.2. Store position when alarm T4 inactive > Yes/No

Same as T1

7.1.10. PRINT T5 > YES/No

7.1.11. ALARM ON T5 > YES/No

7.1.11.1. Store position when alarm T5 active > Yes/No

Same as T1

7.1.11.2. Store position when alarm T5 inactive > Yes/No

Same as T1

7.1.12. PRINT T6 > YES/No

7.1.13. ALARM ON T6 > YES/No

7.1.13.1. STORE POSITION WHEN ALARM T6 ACTIVE > YES/No

Same as T1

7.1.13.2. Store position when alarm T6 inactive > Yes/No

Same as T1

7.1.14. STORE POSITION ON ALARM SWITCHED ON OR OFF > YES/No

7.1.15. PRINT D1 > ON/OFF

7.1.16.	PRINT D2	> ON/OFF
7.1.17.	PRINT D3	> ON/OFF
7.1.18.	PRINT D4	> ON/OFF
7.2.	COMPARTMENT 2	> ON/OFF, MENU STRUCTURE AS MENU 7.1
7.3.	COMPARTMENT 3	> ON/OFF, MENU STRUCTURE AS MENU 7.1
7.4.	COMPARTMENT 4	> ON/OFF, MENU STRUCTURE AS MENU 7.1

8. MENU 8 ALARM SETTINGS

4 groups – each with a name to assign, upper and lower temperature limit and a delay time. Each enabled alarm type can be activated by the user for any compartment, although per compartment only one alarm group can be set at the same time.

8.1.	ALARM GROUP 1	> ON/OFF
8.1.1.	NAME	> FROZEN
		You can select a preset alarm group from a list or enter a free text (free text is not translated when changing the language).
8.1.3.	TEMPERATURE UPPER LIMIT	> + 5 °F
8.1.4.	TEMPERATURE LOWER LIMIT	> -22 °F
8.1.5.	% UPPER LIMIT	> 0..100%
8.1.6.	% LOWER LIMIT	> 0..100%
8.1.7.	INITIAL DELAY TIME (FIRST ALARM ACTIVATION) >	>45 MIN.
8.1.8.	DELAY TIME (BEFORE ALARM ACTIVATION) >	> 45 MIN
8.2.	ALARM GROUP 2	> ON/OFF, MENU STRUCTURE AS MENU 8.1
8.3.	ALARM GROUP 3	> ON/OFF, MENU STRUCTURE AS MENU 8.1
8.4.	ALARM GROUP 4	> ON/OFF, MENU STRUCTURE AS MENU 8.1

9. MENU 9 PRINTER SETTINGS

Following settings enable you to configure the printer functions as desired:

9.1. GRAPH UPPER LIMIT > + 5 °F

Upper limit for graphical printout

9.2. GRAPH LOWER LIMIT > -22 °F

Lower limit for graphical printout

Please note: If the total temperature range between upper and lower limit can be divided by 9 you achieve an optimal result for the printout

9.3. GRAPH MM PER HOUR > 0.39 INCH

A graphical printout consumes a lot of paper. This parameter enables you to set the scaling of the printout (mm of paper per hour). Set a value to avoid wasting paper.

9.4. USER MENU > YES/No

If set to 'Yes', the following 4 parameters will be available for the user in the print menu (see chapter 3.1 for detailed description).

9.5. DELIVERY TICKET SETTING

Actual only/Actual + average/Actual + average + min/max.

9.6. PRINT TIME PERIOD > 10 HOURS

Set time period (see chapter 1.6)

9.7. DAY START TIME > 06:00

Set day start time for printing (see chapter 1.7)

9.8. DAY END TIME > 18:00

Set day end time (see chapter 1.8)

10. MENU 10 GENERAL SETTINGS

General settings for the unit can be entered:

10.1. TEMPERATURE UNIT > °C/°F

10.2. DATE FORMAT > DD/MM/YYYY

10.4. SAMPLE RATE > 10 MINUTE(S)

The interval time in minutes (1, 2, 3,...,15, 20, 25, 30,..., 60 minutes) for storing a temperature measurement into memory

10.5.	VEHICLE ID	> ABCDEF
		16 characters are available for assigning vehicle identification. It is necessary to enter an identification like registration number or chassis number in the case of a trailer. The vehicle ID will be shown on every printout in the header together with the serial number and header text.
10.6.	HEADER TEXT	> ABCDEF
		16 characters are available for assigning a header title (usually the company name). The header text will be shown on every printout.
10.7.	CUSTOMER ID	> ()
10.8.	PIN NUMBER	> 1111 (DEFAULT PIN CODE)
		The pin code is intended to prevent unauthorised people access to the parameter menu. Select a code between 1111 and 7777 (7 = highest possible number, digit „0“ is not available).
		Please note: Do not forget to write down the new pin code and store it in a safe place. There is no master code available to get later access to the parameter menu.
10.9.	CORRECT. FACTOR	> RECOMMENDED: +XX / SETTING: +XX
10.10.	SERIAL NUMBER	> 12400005
		Displays the serial number of the recorder. The number will be set at factory and cannot be changed. The serial number will be on every printout.

11.	MENU 11	COMMUNICATION SETTINGS
11.1.	COM 1	
		The following options are available:
		<ul style="list-style-type: none"> - No protocol - Old ES protocol - TMS protocol 9k6 - TMS protocol 38k4 - Bluetooth protocol - Fridge switch protocol - Mitsubishi fridge - ThermoKing fridge
11.2.	COM 2	SIMILAR TO COM 1
11.3.	COM 3	RESERVED FOR FUTURE APPLICATIONS
11.4.	COM 4	SIMILAR TO COM 1

ATTACHMENT B REPLACE PAPER ROLL

A coloured line appears on the last meter of paper and indicates that the paper roll needs to be replaced.

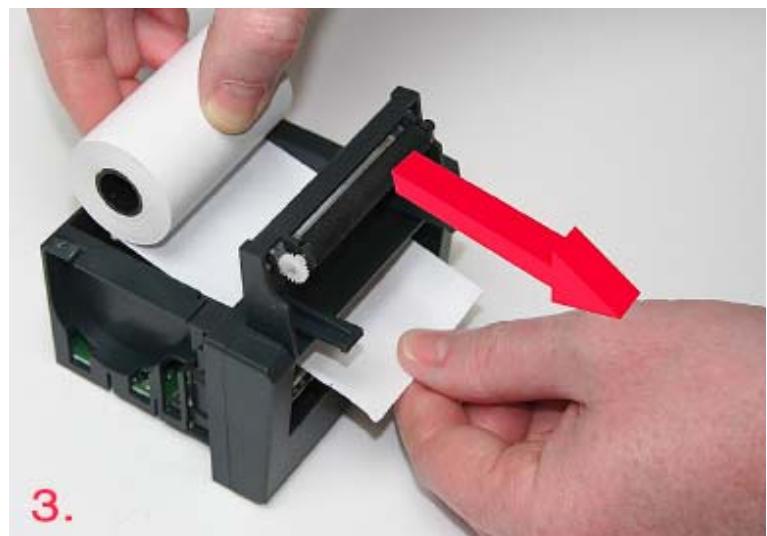
To change a paper roll please proceed as follows:

- Pull down the transparent plastic lever and pull out the printer towards you (in the direction of the arrow).



Remove empty roll.

- Put the new paper roll into the printer and make sure that the paper is fed in the correct way.
- After changing the paper please install the printer with the flap open and close the flap only after the printer is fully inserted.



ATTACHMENT C FACTORY SETTINGS

Check with menus

5. Temperature inputsFactory settings

- 5.1. T1 input.....On
 - 5.1.1. TypeTemperature
- 5.2. T2 Input.....On
 - 5.2.1. TypeTemperature
- 5.3. T3 Input.....Off
- 5.4. T4 Input.....Off
- 5.5. T5 Input.....Off
- 5.6. T6 Input.....Off

6. Digital inputs

- 6.1. D1 input.....Off
- 6.2. D2 input.....Off
- 6.3. D3 input.....Off
- 6.4. D4 input.....Off

7. Compartment settings

- 7.1. Compartment 1On
 - 7.1.1. Compartment nameComp. 1
 - 7.1.2. Print T1Yes
 - 7.1.3. Alarm on T1Yes
 - 7.1.4. Print T2Yes
 - 7.1.5. Alarm on T2Yes
 - 7.1.6. Print T3No
 - 7.1.7. Alarm on T3No
 - 7.1.8. Print T4No
 - 7.1.9. Alarm on T4No
 - 7.1.10. Print T5No
 - 7.1.11. Alarm on T5No
 - 7.1.12. Print T6No
 - 7.1.13. Alarm on T6No
 - 7.1.14. Print D1No
 - 7.1.15. Print D2No
 - 7.1.16. Print D3No
 - 7.1.17. Print D4No
- 7.2. Compartment 2Off
- 7.3. Compartment 3Off
- 7.4. Compartment 4Off

8. Alarm settings

- 8.1. Alarm group 1Off
- 8.2. Alarm group 2Off
- 8.3. Alarm group 3Off
- 8.4. Alarm group 4Off

9. Printer settings

- 9.1. Graph upper limit+ 5 °F
- 9.2. Graph lower limit-22 °F
- 9.3. Graph mm. per h.....5 mm
- 9.4. User menuYes

- 9.5. Delivery ticket setting.....Actual only
- 9.6. Print time period.....10 hour(s)
- 9.7. Day start time.....00:00
- 9.8. Day end time.....18:00

10. General settings

- 10.1. Temp. unit°F
- 10.2. Date format.....dd/mm/yyyy
- 10.3. Sample rate.....10 min.
- 10.4. Vehicle IDAB-1234
- 10.5. Header.....Abcdef
- 10.6. Pin code1111
- 10.7. Corr. Factor+/- X
- 10.8. Serial number

11. Communication settings

- 11.1. COM 1No protocol
- 11.2. COM 2No protocol
- 11.3. COM 3Reserved
- 11.4. COM 4No protocol