

SRT-SRAE SOFTWARE DOCUMENTATION SUPER-USER

16. "CAN User"

chapter 16

Release: 1.0





REVISIONS DOCUMENT

Release	Author	Date		Modifications
1.0	F.Charbonnel	17/09/2008	•	Creation





16.1 CAN USER

User can define for each CAN link (CAN1 and CAN2) a set of 3 frames of 8 byte to be sent..

16.1.1 CONFIGURATION

User must define, for each frame, an identifier, a frequency and the content of the frame

16.1.1.1 IDENTIFIERS

If Id is 0, frame will be ignored (no emission)

CAN1

Map: Can1 User: Ids (3 WORDS) Hexadecimal

1	2	3
CAN1 – FRAME1 Id	CAN1 – FRAME2 Id	CAN1 – FRAME3 Id

CAN2

Map: Can2 User: Ids (3 WORDS) Hexadecimal

1	2	3		
CAN2 – FRAME1 Id	CAN2 – FRAME2 Id	CAN2 – FRAME3 Id		

16.1.1.2 FREQUENCIES

If Frequency is 0, frame will be ignored (no emission)

Allowed values are: 1, 2, 4, 5, 8, 10, 20, 25, 40, 50, 100, 125, 200, 250, 500, 1000 Hz

CAN1

Map: Can1 User: Frequencies (3 WORDS) decimal

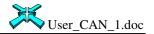
1	2	3	
CAN1 – FRAME1 Freq	CAN1 – FRAME2 Freq	CAN1 – FRAME3 Freq	

CAN2

Map: Can2 User: Frequencies (3 WORDS) decimal

1	2	3		
CAN2 – FRAME1 Freq	CAN2 – FRAME2 Freq	CAN2 – FRAME3 Freq		





16.1.1.3 FRAMES CONTENT

An Adr field (DWORD) is made of:

Address : 24 bits	Size: 8 bits
Field (Hexadecimal)	Size

Field can be

1. A "real" address from SYM file. In this case, Size must be filled according to type.

Ex: Lambda into SYM file

< FD.Acq.Lambda T_USHORT 0021004c 2 >

Map value : 21004C02

Address: 24 bits	Size: 8 bits
21004C	2

2. An Index from CLL file. In this case, Size must be filled according to type.

Ex: Lambda into CLL file

<Lambda Volts Selected Lambda measurement 0x00000000 113* uWord>

Map value: 00007100

Address : 24 bits	Size: 8 bits
71 (113 converted to hexadecimal)	2

CAN1 frames content

Map: CanU1.tbl USER: Addresses (8 * 3 WORDS)

	1	2	3	4	5	6	7	8
Frame 1	Adr1	Adr2	Adr3	Adr4	Adr5	Adr6	Adr7	Adr8
Frame 2	Adr1	Adr2	Adr3	Adr4	Adr5	Adr6	Adr7	Adr8
Frame 3	Adr1	Adr2	Adr3	Adr4	Adr5	Adr6	Adr7	Adr8

CAN2 frames content

Map: CanU2.tbl USER: Addresses (8 * 3 WORDS)

	1	2	3	4	5	6	7	8
Frame 1	Adr1	Adr2	Adr3	Adr4	Adr5	Adr6	Adr7	Adr8
Frame 2	Adr1	Adr2	Adr3	Adr4	Adr5	Adr6	Adr7	Adr8
Frame 3	Adr1	Adr2	Adr3	Adr4	Adr5	Adr6	Adr7	Adr8

Frame content is at maximum of 8 bytes.

Frame composition is chosen by user regarding data types.

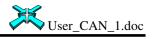
Byte: 1 byte long Word, Sword: 2 bytes long Float, Dword: 4 bytes long

Frame can be build by user into 8 bytes limitation. A frame can contains only one byte or any combination Correct frames for 8 byte sample:

• 8 byte (8x1=8), 4 words (4x2=8), 2 float (2x4=8), 2 words + 1 float (2+2+4=8),

1 byte, 1 dword, 1 byte, 1 word (1+4+1+2=8)





16.1.1.4 DIAGNOSTICS

Diagnostics are shown into StsTblUser1 for CAN1 and StsTblUser2 for CAN2.

StsTblUser1 or StsTblUser2 content

If one user CAN configuration is correct, corresponding value is 0. If configuration is wrong, theses word gives indication.

- If a configuration error is detected, the frame is cut before the error.
- If there is more than one error, only the **first** diagnostic is shown. Addresses are verified frame by frame

Value	Meaning					
0x01yy	0x01 : unreachable or wrong address	yy: Hexadecimal index of wrong field into				
0x02yy	0x02 : Worng Size or Address/Size	tbl_USER				
	incompatibles	1 to 8 $(0x01 \text{ to } 0x08)$: first frame,				
0x04yy	0x04 : too much data into frame (more than 8	9 to $16 (0x09 \text{ to } 0x10)$: second frame,				
	bytes)	17 to 24 (0x11 to 0x18): third frame)				

CAN1 or CAN2	Yy value									
	Adr1	Adr1 Adr2 Adr3 Adr4 Adr5 Adr6 Adr7 Adr8								
Frame 1	01	02	03	04	05	06	07	08		
Frame 2	09	0A	0B	0C	0D	0E	0F	10		
Frame 3	11	12	13	14	15	16	17	18		