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 **tbl_USER** 1 to 8 (0x01 to 0x08) : first frame, 9 to 16 (0x09 to 0x10) : second frame, 17 to 24 (0x11 to 0x18) : third frame)
0x02yy	0x02 : Worng Size or Address/Size incompatibles	
0x04yy	0x04 : too much data into frame (more than 8 bytes)	

CAN1 or CAN2	Yy value							
	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