APPLICATION NOTE	PRODUCT: SENT INTERFACE II
AN9004	SENT II INTERFACE firmware upgrade V1.5U
	TYPE: upgrade
	SERIAL NUMBERS: 009-028 and higher
1.7.2018	NOTE: On request, older models can be upgraded (labeled)

Application notes is an integral part of the Manual for the product and the customer is obliged to follow it, to prevent damage to the product. If the product is damaged by use in conflict with the Manual or application notes, manufacturer reserves the right to reject warranty service and repair product to the customer's account

Firmware 1.5U brings one new feature to the function of the converter.

Basic function of the SENT converter is Conversion of the SENT signal 1 value to the analog voltage output. One of the secondary functions is to evaluate CRC checksum and indicate SENT signal integrity using CRC checksum status on convertor display.

- Original firmware concept up to V1.3U:
  In case of SENT signal valid CRC, the signal 1 is converted to the Analog Output. In case of invalid CRC, the Analog Output is immediately set to 90% Vcc (i.e. 4.5V). This behavior was implemented in order to be able to catch even very short CRC error events by a post processing the analog signal. This seems to be practical feature for laboratory purposes (e.g. a SENT sensor validation testing), but may bring controllability issues in severe application environment under certain conditions..

- Fw V1.5U:
  The feature of setting the Analog Output to 90% Vcc becomes selectable feature. Default setting is 'CRC OFF'.

  - CRC OFF - feature is disabled. CRC error does not affect Analog Output. Analog Output stays on the last valid value converted from SENT signal1
  - CRC ON - feature is enabled. Behavior is the same as V1.3U or older firmware.

How to switch between 'CRC OFF' and 'CRC ON':

1. Connect supply voltage to the converter POWER in connector.
2. Long press the button (approx. 10sec) until the screen shows the actual firmware version of the convertor. Fig1.
3. If the version is V1.5U or newer, then you can proceed with next steps. In case of an older firmware, you can't change the setting. Short button press will return you to the usual menu.
4. V1.5U or newer: short button press will show actual CRC feature setting. There are 2 possibilities. CRC is ON or OFF.
5. If you are happy with the setting, next short button press will return you to the usual menu.
6. If you want to change the setting, Long press of the button (approx. 3 sec) will do that and the screen will show the new feature setting. Fig2 and Fig3. Next short press will return you to the usual menu.

Fig1: screen showing the actual firmware version

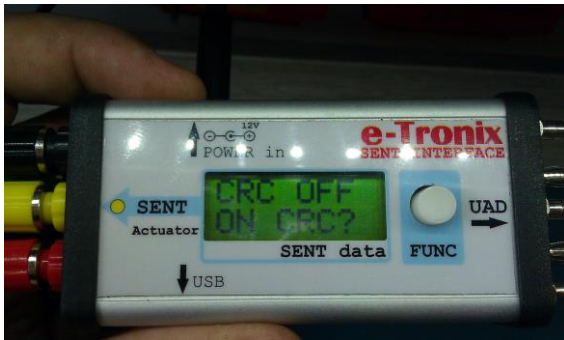Fig2: Screen showing CRC feature is ON. Long press (3sec) will switch it OFF.

Fig3: Screen showing CRC feature is OFF. Long press (3sec) will switch it ON.