



SAAB TWICE immo emulator

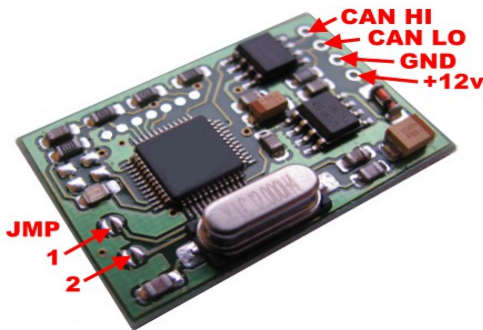
CAN BUS

Purpose:

For cars with TWICE immobilizer system. (up to 2003). Emulator is NOT Plug&Play, must store 6 bytes of SYNC first.

Installation:

Connect device directly to PT-CAN, attach ground wire and power supply (terminal "15", hot when ignition switched on).



Mode is selectable by applying solder joints – JMP 1 and JMP 2 (see picture).

0 means joint is left open,
1 means joint is shorted.

Both joints OPEN = config mode,
Any joint shorted = normal mode (no configuration allowed and SYNC update prohibited).

How to store SYNC into emulator:

- emulator must be in configuration mode (JMP 1 and JMP 2 both open).
- Using CAN logger request actually stored SYNC - `770 7 DD 00 00 00 00 00 00` , emulator must respond with `771 7 EE xx xx xx xx xx xx xx` , where xx are 6 bytes of SYNC.
- Store SYNC into emulator - `770 7 CC xx xx xx xx xx xx xx` , emulator must respond as previously, with 6 bytes of actual SYNC: `771 7 EE xx xx xx xx xx xx xx` - response must match the request.
- Another option is to use MBCan and configurator software.
- Place solder joint(s) to disable possible SYNC update by accident.

LED on emulator board:

- one long blink (about 1 second): ECU is authorized, start allowed.
- Short blink after power on: emulator is ready, but no authorization request received;
- Eight short blinks: ECU not authorized, error (possibly wrong SYNC bytes);
- One short blink at startup – no communication.

