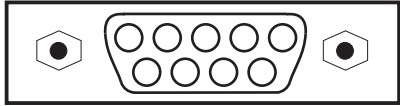


LinTronic

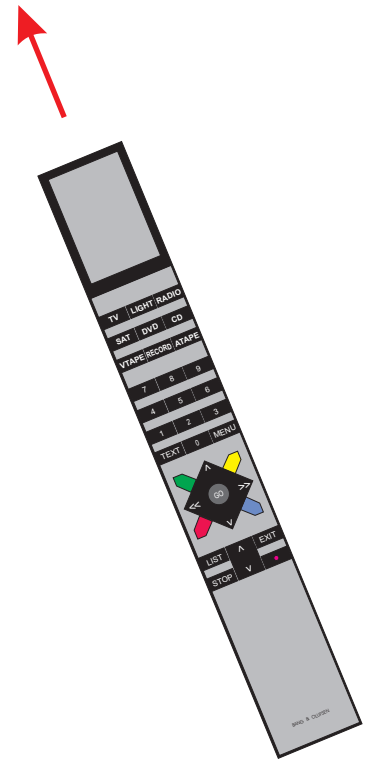
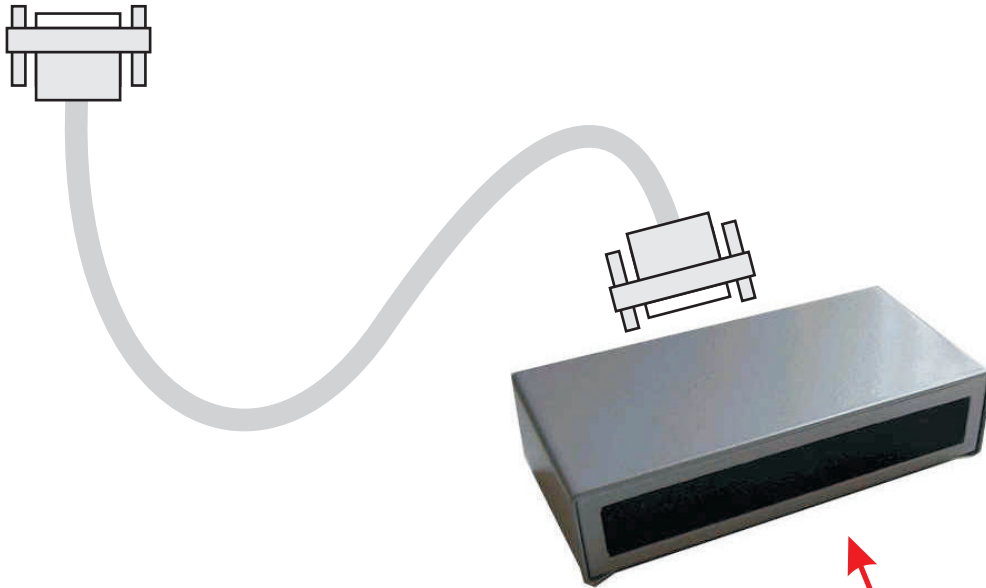
<http://www.lintronic.dk>



VelBus



VMB1RS RS232 interface



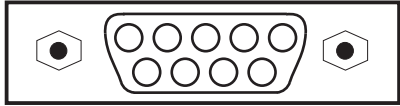
LinTonic's TT455-RT-238 Signal Converter may work as a standalone unit, configured to send optional RS232 commands to a device, when triggered by an infrared remote control, digital switches, contacts, relays, X10 signals, etc.

The triggers to control the TT455-RT-238, and the related commands to be executed or transmitted, are configured in our PC based Configurator program.

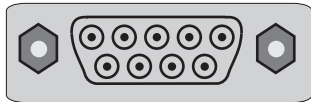
TT455-RT-238 can be re-configured at any given time.

LinTonic offer customized firmware to suite your needs.

VelBus

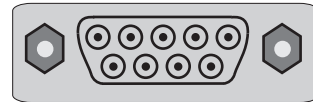


VMB1RS RS232 interface

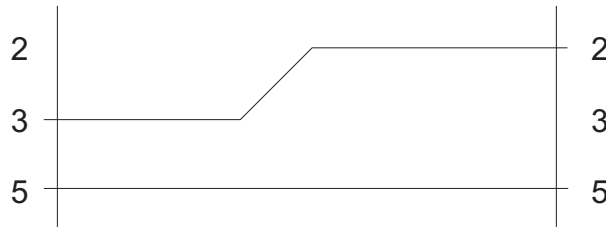


Male

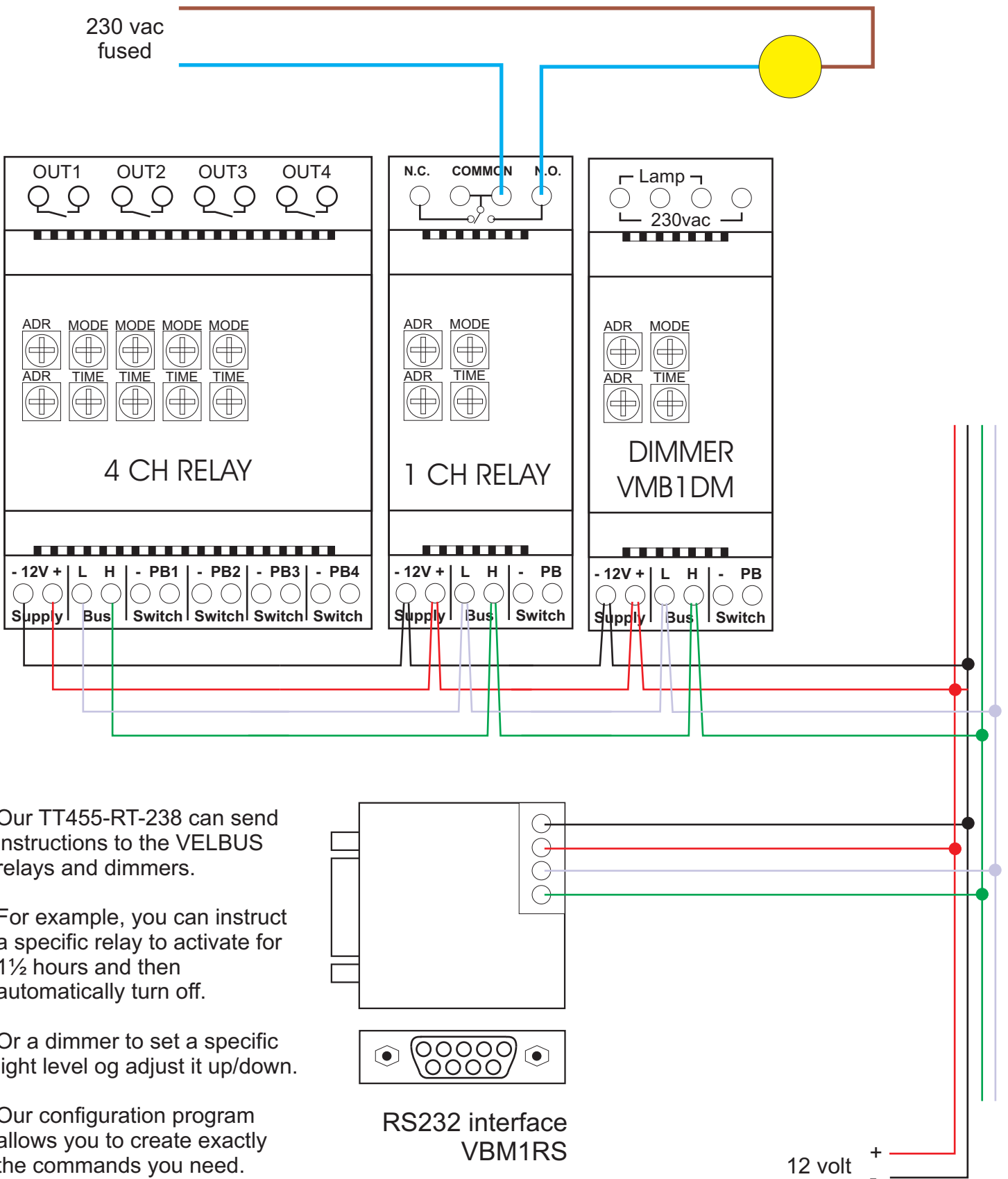
RS232 cable crossed



Male



Velbus, RS232 control

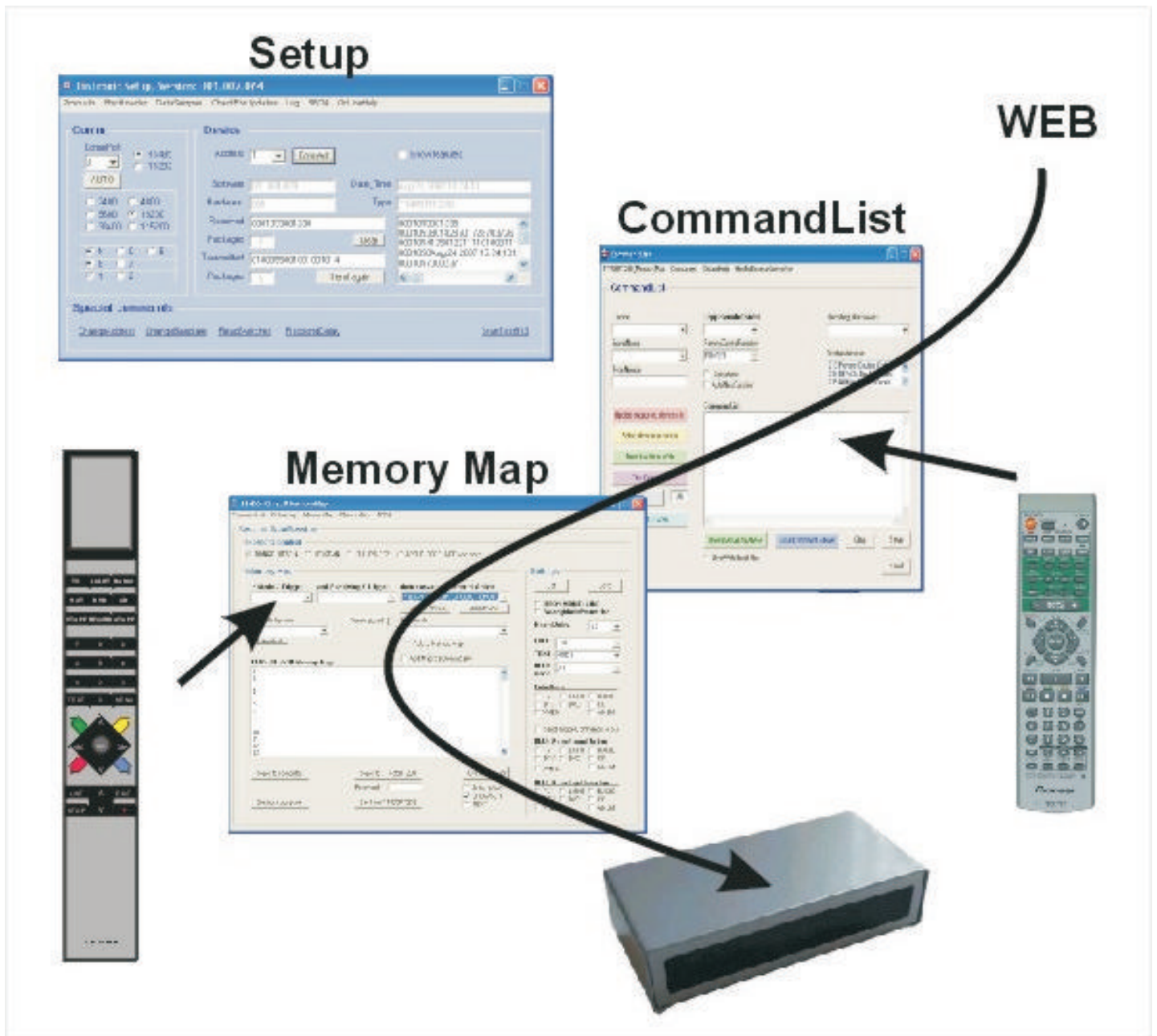


Our TT455-RT-238 can send instructions to the VELBUS relays and dimmers.

For example, you can instruct a specific relay to activate for 1½ hours and then automatically turn off.

Or a dimmer to set a specific light level og adjust it up/down.

Our configuration program allows you to create exactly the commands you need.



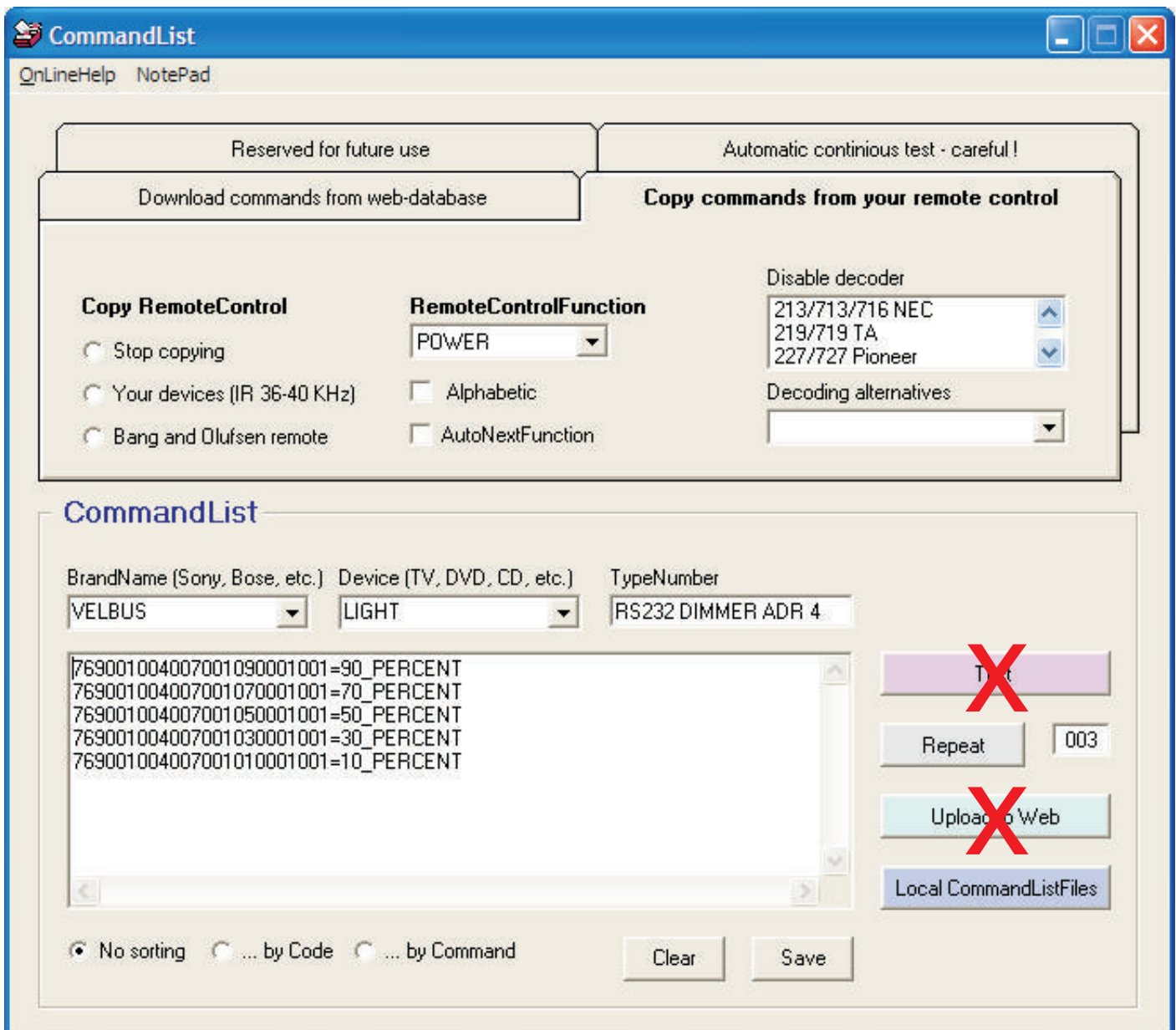
The commands to be executed are downloaded or created in the CommandList section of the Configurator, and the relation between the Trigger (for example a Bang&Olufsen remote control) and the commands, are configured in the Memory Map of the Configurator.

The customized configuration is saved in the TT455-RT-238 and the TT455-RT-238 may now be disconnected from the PC.

If the TT455-RT-238 is instructed to send out IR commands when triggered, it will work as a standalone unit. All that is required is a power supply.

Or you may connect the TT455-RT-238 to a computer or controller, enabling the TT455-RT-238 to control by for example RS232 or RS485.

A basic knowledge of how the TT455-RT-238 works is required. See our web-site: Support | GetStarted



Simply manually enter the commands as plain text and save when done.
You can always open the Local CommandsListFiles and add/delete/change commands.

Due to the dynamic nature of these commands, please do NOT upload your customized commands to our web-database. Your commands will most likely not work for other customers using other addresses for their dimmers/relays.

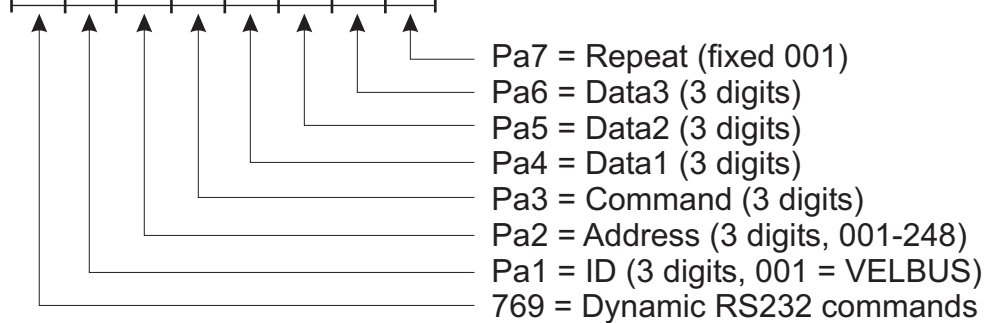
No need to TEST commands.
It will not work while connected to the computer as the TT455-RT-238 must be connected to an VELBUS system.

Customize your own VELBUS commands

The information (commands) controlling the TT455-RT-238 to send out VELBUS RS232 commands, consist of 8 pcs. 3-digit numbers. These commands can be created in the CommandList section of the TT455-RT-238's Configurator.

Structure:

769001000000000000000001= command



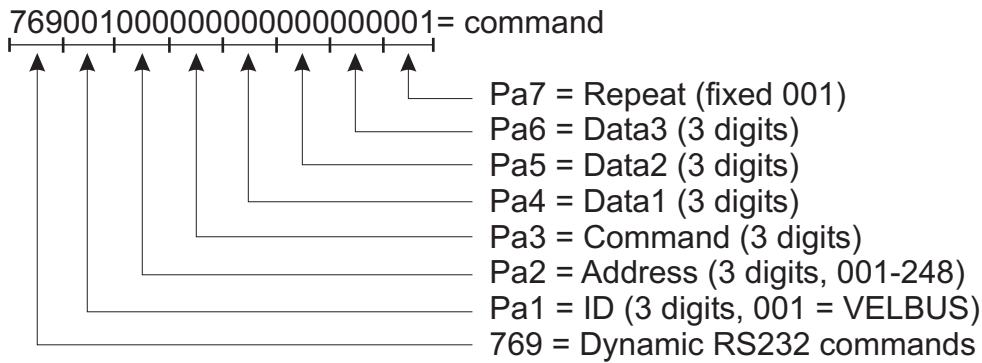
You create commands for your own personal use.

The commands you create are stored onto your computer for later use/modification.

As the commands are intended for your system (address match etc.) the commands cannot be uploaded to our web-database. Others would not be able to use them, unless they set up their VELBUS modules to match your addresses, timing, etc.

Button status

VELBUS COMMAND 0



Pa1 = 001 (VELBUS)

Pa2 = Address (001 - 248)

Pa3 = Command, Button Status = 000

Pa4 = Buttons just activated (Range 001 - 008)

Pa5 = Buttons released (Range 001 - 008)

Pa6 = Buttons activated for a longer time (> 0.85 sec, Range 001 - 008)

Pa7 = Fixed 001

NOTE:

PA4 - PA6 use binary numbers to indicate which buttons have been activated/released. Following an 8-bit pattern, insert 1's in the relevant places and calculate the decimal number (000 - 255) to be inserted in the relevant parameter.

Example:

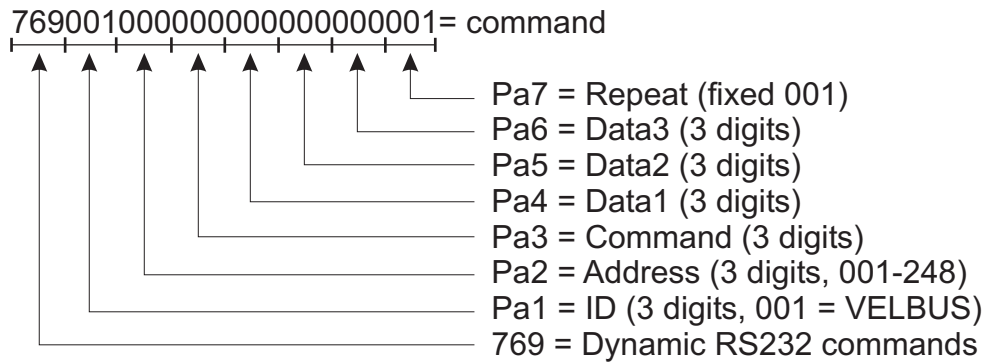
Switch 1 (bit 0) and switch 4 (bit 3) just activated = 0b00001001. PA4 = decimal 9.

Switch 2 (bit 1) and switch 7 (bit 6) released = 0b01000010. PA5 = decimal 66.

If no buttons have been activated for a longer time, PA6 = decimal 0.

Turn relay Off

VELBUS COMMAND 1



Pa1 = 001 (VELBUS)

Pa2 = Address (001 - 248)

Pa3 = Command, Turn relay off = 001

Pa4 = Relay number (Range 001 - 004)

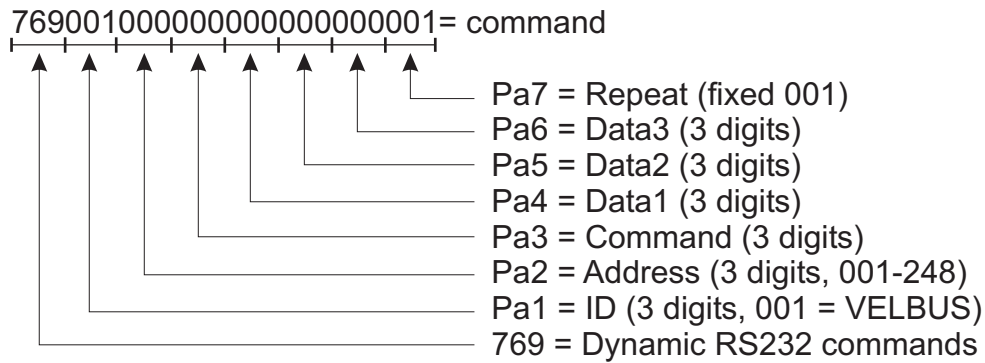
Pa5 = Fixed 000

Pa6 = Fixed 000

Pa7 = Fixed 001

Turn relay On

VELBUS COMMAND 2



Pa1 = 001 (VELBUS)

Pa2 = Address (001 - 248)

Pa3 = Command, Turn relay On = 002

Pa4 = Relay number (Range 001 - 004)

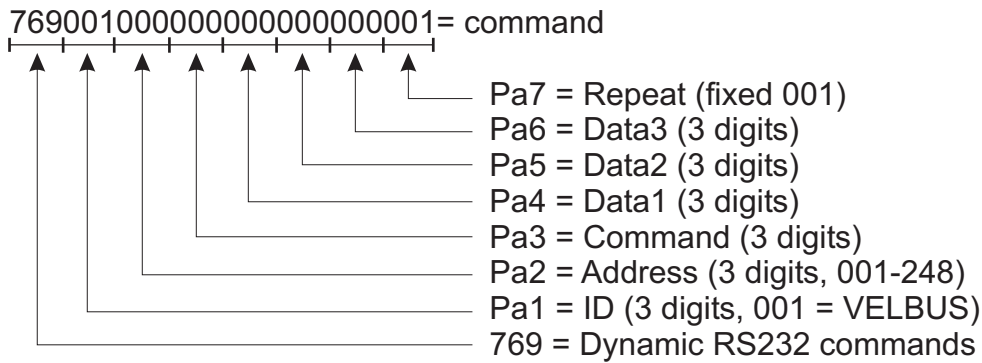
Pa5 = Fixed 000

Pa6 = Fixed 000

Pa7 = Fixed 001

Turn relay On, Timer

VELBUS COMMAND 3



Pa1 = 001 (VELBUS)

Pa2 = Address (001 - 248)

Pa3 = Command, Turn relay On, Timer = 003

Pa4 = Relay number (Range 001 - 004)

Pa5 = Timer High (Range 000 - 255)

Pa6 = Timer Low (Range 000 - 255)

Pa7 = Fixed 001

TIMER VALUE

Timer unit is seconds and value is calculated from "Timer High" * 256 + "Timer Low".

Example:

You want the relay to be turned on for 1½ hours = 1.5 * 60 * 60 = 5400 seconds.

Timer High = 5400 / 256 = 21.

Timer Low = 5400 - (256 * 21) = 24.

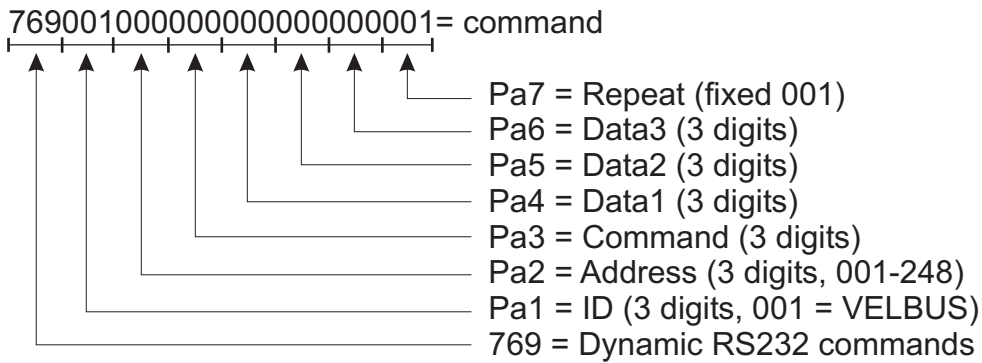
For relay to run for 1½ hours, set Pa5 to "021" and Pa6 to "024".

Maximum Timer value = 255 * 256 + 255 = 65535 seconds ~ 18 hours.

If Pa5 and Pa6 are both set to "000" then the relay will run for the time set by the dip switches.

BLIND STOP

VELBUS COMMAND 4



Pa1 = 001 (VELBUS)

Pa2 = Address (001 - 248)

Pa3 = Command, Blind Stop = 004

Pa4 = Blind number (Range 001 - 002)

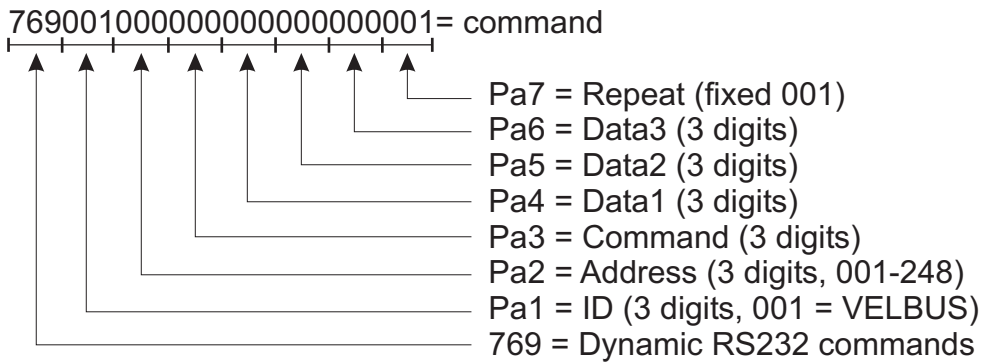
Pa5 = Fixed 000

Pa6 = Fixed 000

Pa7 = Fixed 001

BLIND UP

VELBUS COMMAND 5



Pa1 = 001 (VELBUS)

Pa2 = Address (001 - 248)

Pa3 = Command, Blind Up = 005

Pa4 = Blind number (Range 001 - 002)

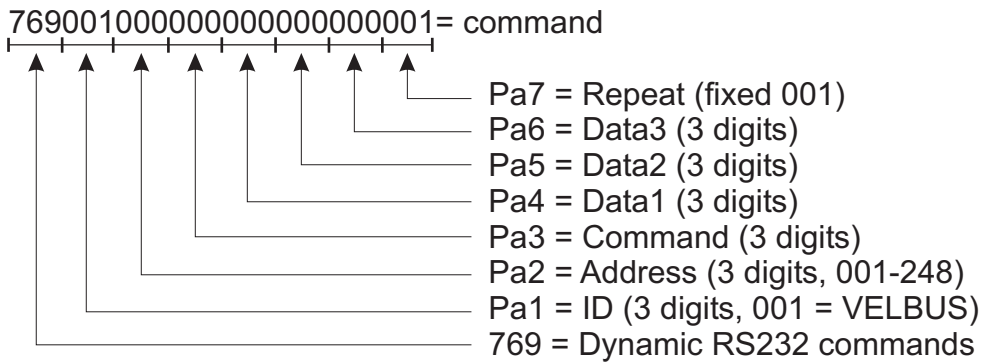
Pa5 = Fixed 000

Pa6 = Fixed 000

Pa7 = Fixed 001

BLIND DOWN

VELBUS COMMAND 6



Pa1 = 001 (VELBUS)

Pa2 = Address (001 - 248)

Pa3 = Command, Blind Down = 006

Pa4 = Blind number (Range 001 - 002)

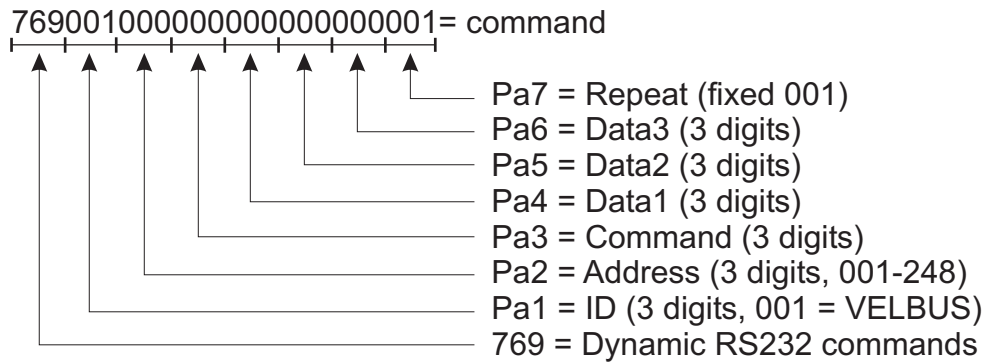
Pa5 = Fixed 000

Pa6 = Fixed 000

Pa7 = Fixed 001

Turn on light dimmer at "level" over "fade time"

VELBUS COMMAND 7



Pa1 = 001 (VELBUS)

Pa2 = Address (001 - 248)

Pa3 = Command, Turn on light dimmer = 007

Pa4 = Dimmer Channel (001 = dimmer channel 1)

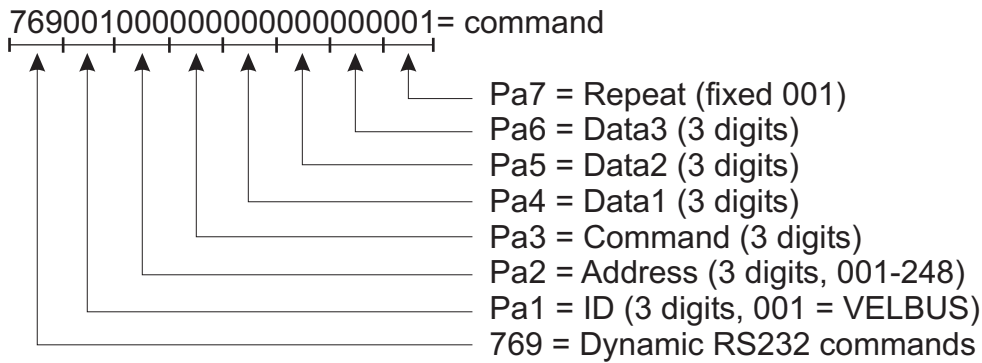
Pa5 = Level in percentage (Range 000 - 100)

Pa6 = Fade time in seconds (Range 001 - 250)

Pa7 = Fixed 001

Start dimmer timer "on time"

VELBUS COMMAND 8



Pa1 = 001 (VELBUS)

Pa2 = Address (001 - 248)

Pa3 = Command, Start dimmer timer on time = 008

Pa4 = Dimmer Channel (001 = dimmer channel 1)

Pa5 = Timer High (range 000 - 255)

Pa6 = Timer Low (range 000 - 255)

Pa7 = Fixed 001

TIMER VALUE

Timer unit is seconds and value is calculated from "Timer High" * 256 + "Timer Low".

Example:

You want the dimmer to be turned on for 1½ hours = 1.5 * 60 * 60 = 5400 seconds.

Timer High = 5400 / 256 = 21.

Timer Low = 5400 - (256 * 21) = 24.

For relay to run for 1½ hours, set Pa5 to "021" and Pa6 to "024".

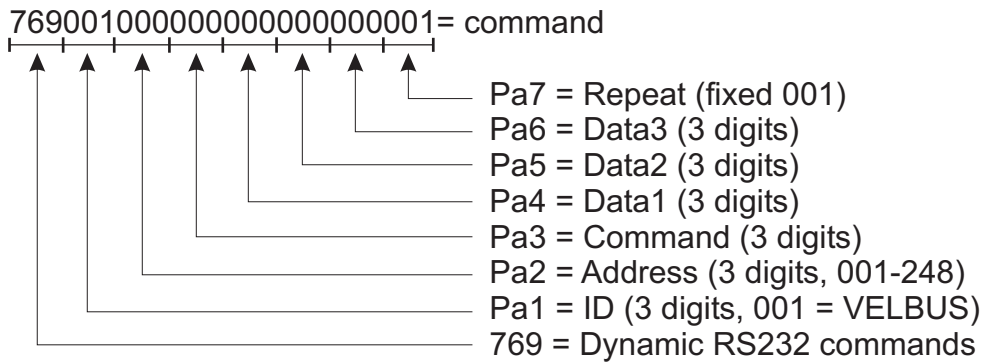
Maximum Timer value = 255 * 256 + 255 = 65535 seconds ~ 18 hours.

If Pa5 and Pa6 are both set to "000" then the dimmer will run for the time set by the dip switches.

PS: The dimmer must already be On. If off, it will not turn on first.

Start relay blink, Timer

VELBUS COMMAND 13



Pa1 = 001 (VELBUS)

Pa2 = Address (001 - 248)

Pa3 = Command, Start relay blink, Timer = 013

Pa4 = Relay number (Range 001 - 004)

Pa5 = Timer High (Range 000 - 255)

Pa6 = Timer Low (Range 000 - 255)

Pa7 = Fixed 001

TIMER VALUE

Timer unit is seconds and value is calculated from "Timer High" * 256 + "Timer Low".

Example:

You want the relay to blink for 1½ hours = 1.5 * 60 * 60 = 5400 seconds.

Timer High = 5400 / 256 = 21.

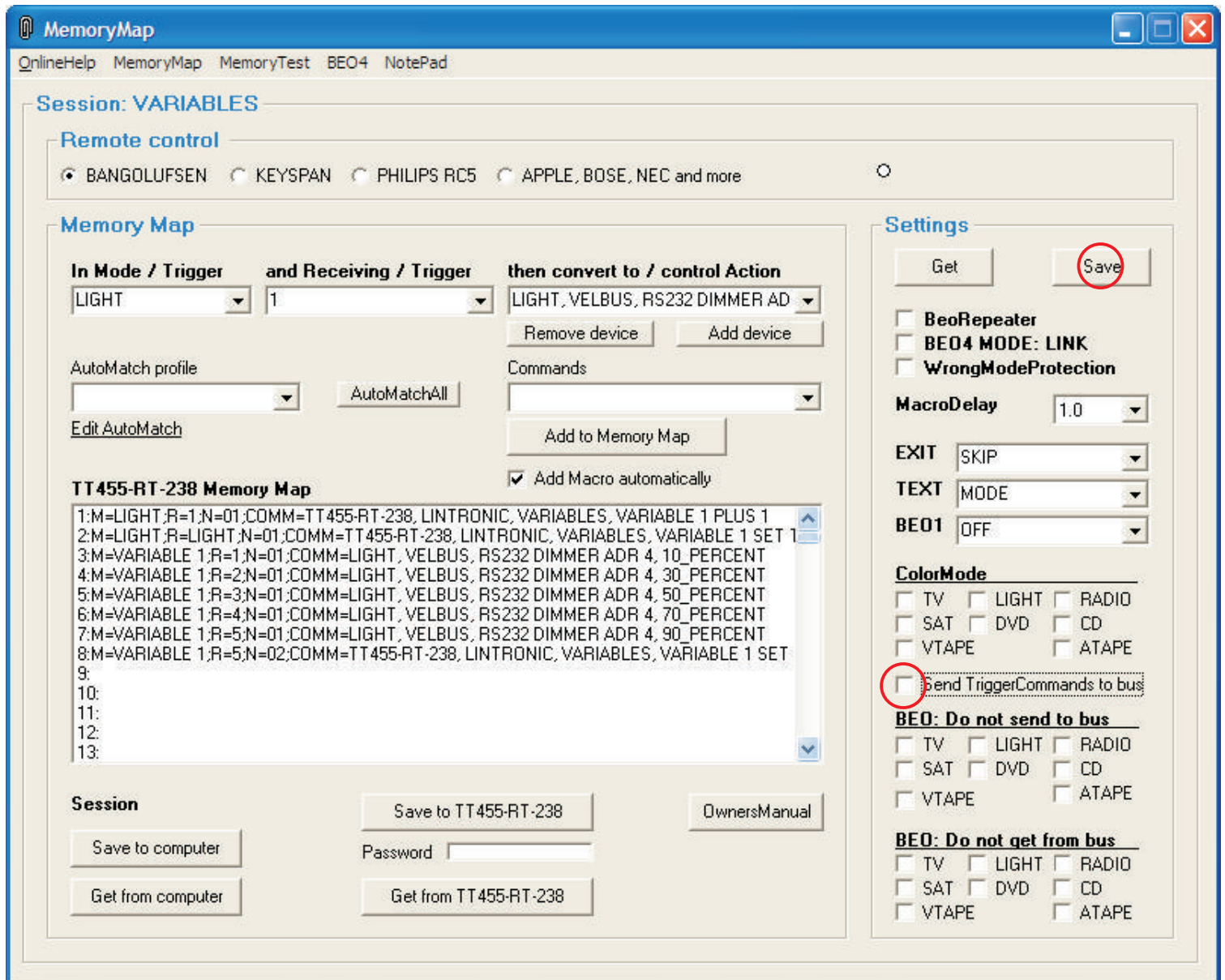
Timer Low = 5400 - (256 * 21) = 24.

For relay to blink for 1½ hours, set Pa5 to "021" and Pa6 to "024".

Maximum Timer value = 255 * 256 + 255 = 65535 seconds ~ 18 hours.

If Pa5 and Pa6 are both set to "000" then the relay will blink for the time set by the dip switches.

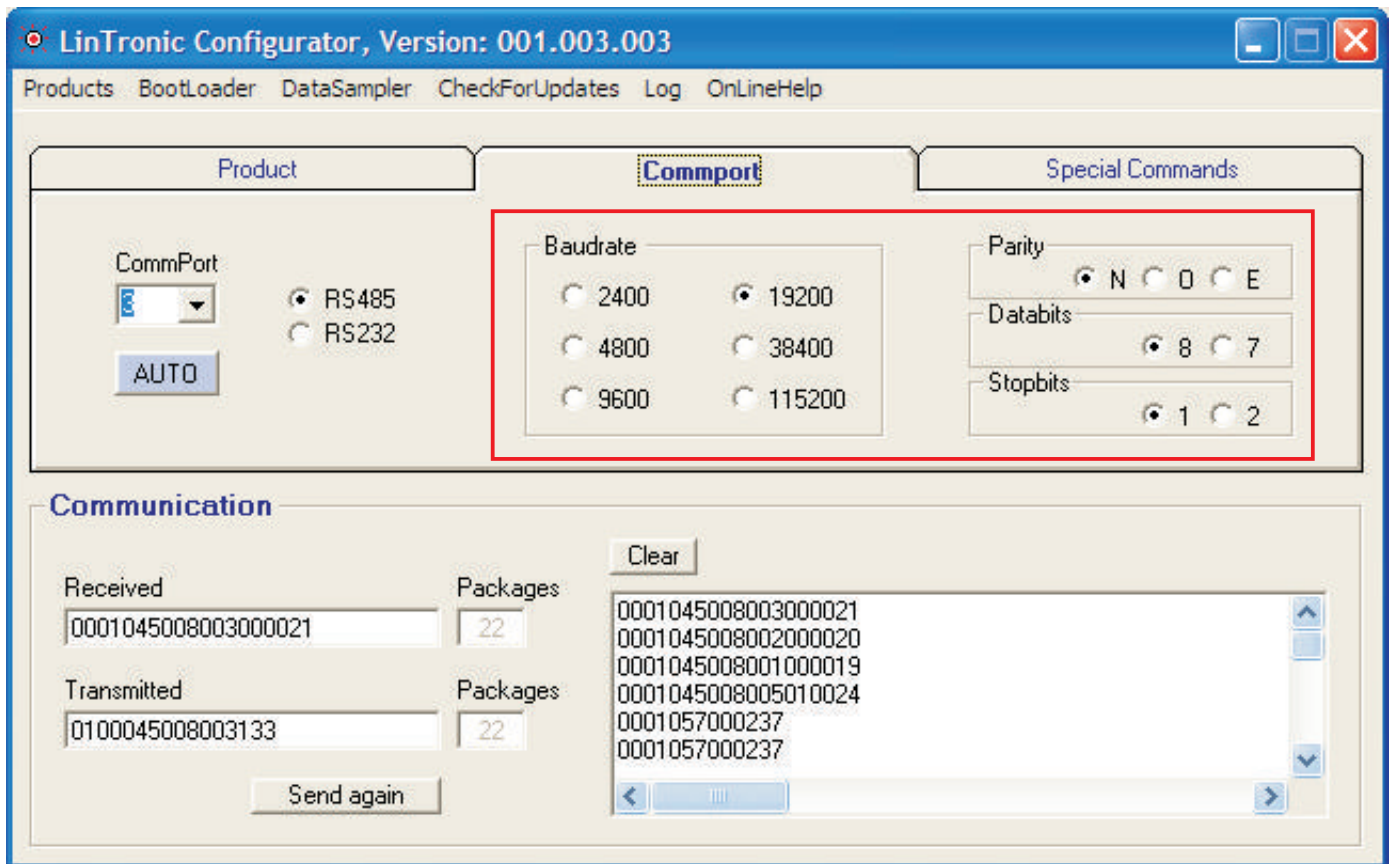
PS: Relay will start blink even if already off.



When you save a Memory Map to the TT455-RT-238, holding an RS232 command (732 static or 769 dynamic), then the Configurator will uncheck "Send trigger to Bus" and Save settings.

This will prevent the TT455-RT-238 from sending a command of the detected remote control command, so we do not confuse the receiving RS232 device.

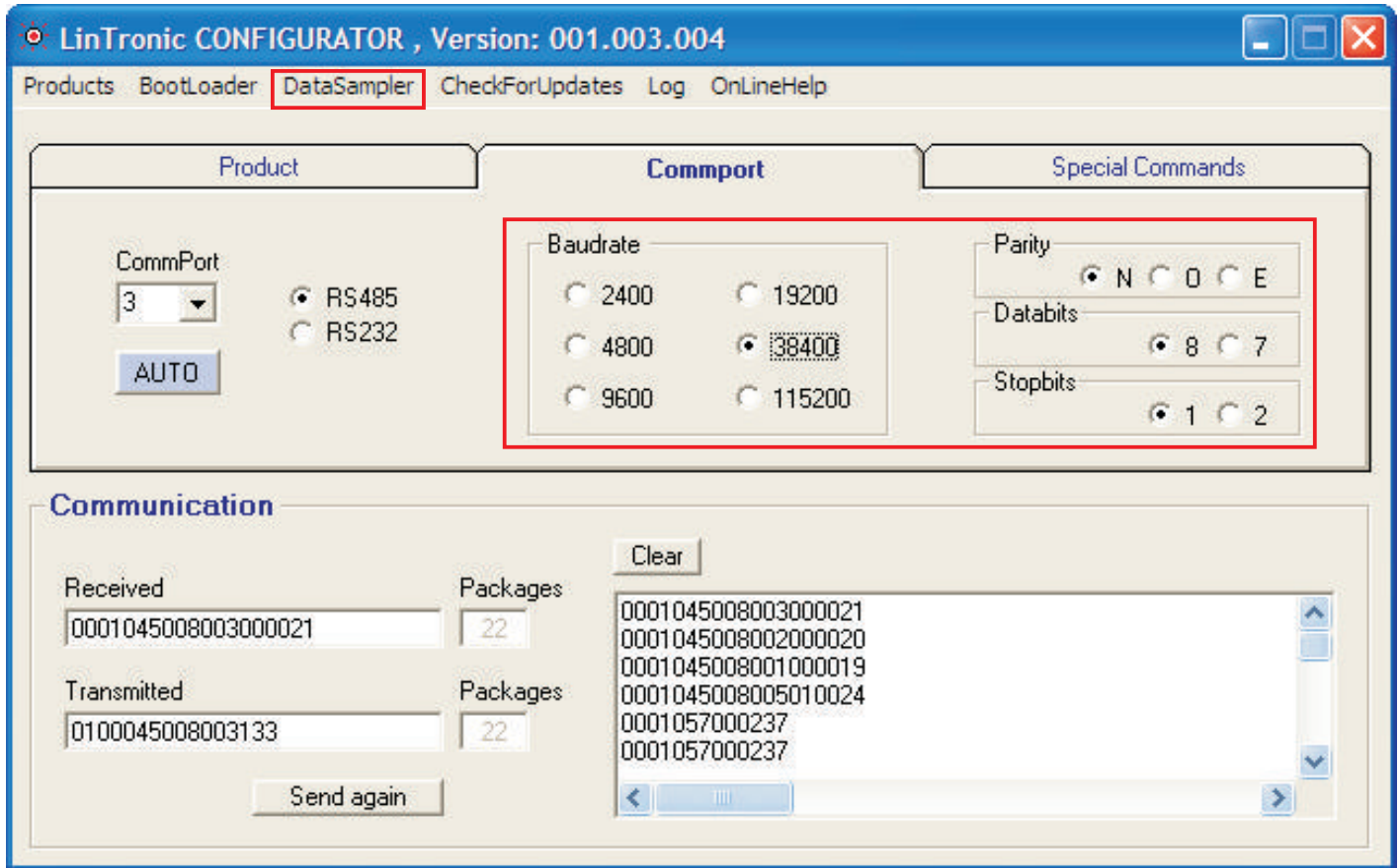
You can mix InfraRed and RS232 commands in your Memory Map as you want.



It is NOT necessary to change the default baudrate/settings of the TT455-RT-238.

The TT455-RT-238 will continue working with the Configurator on 19200 bps, n,8,1 although your system might require something else.

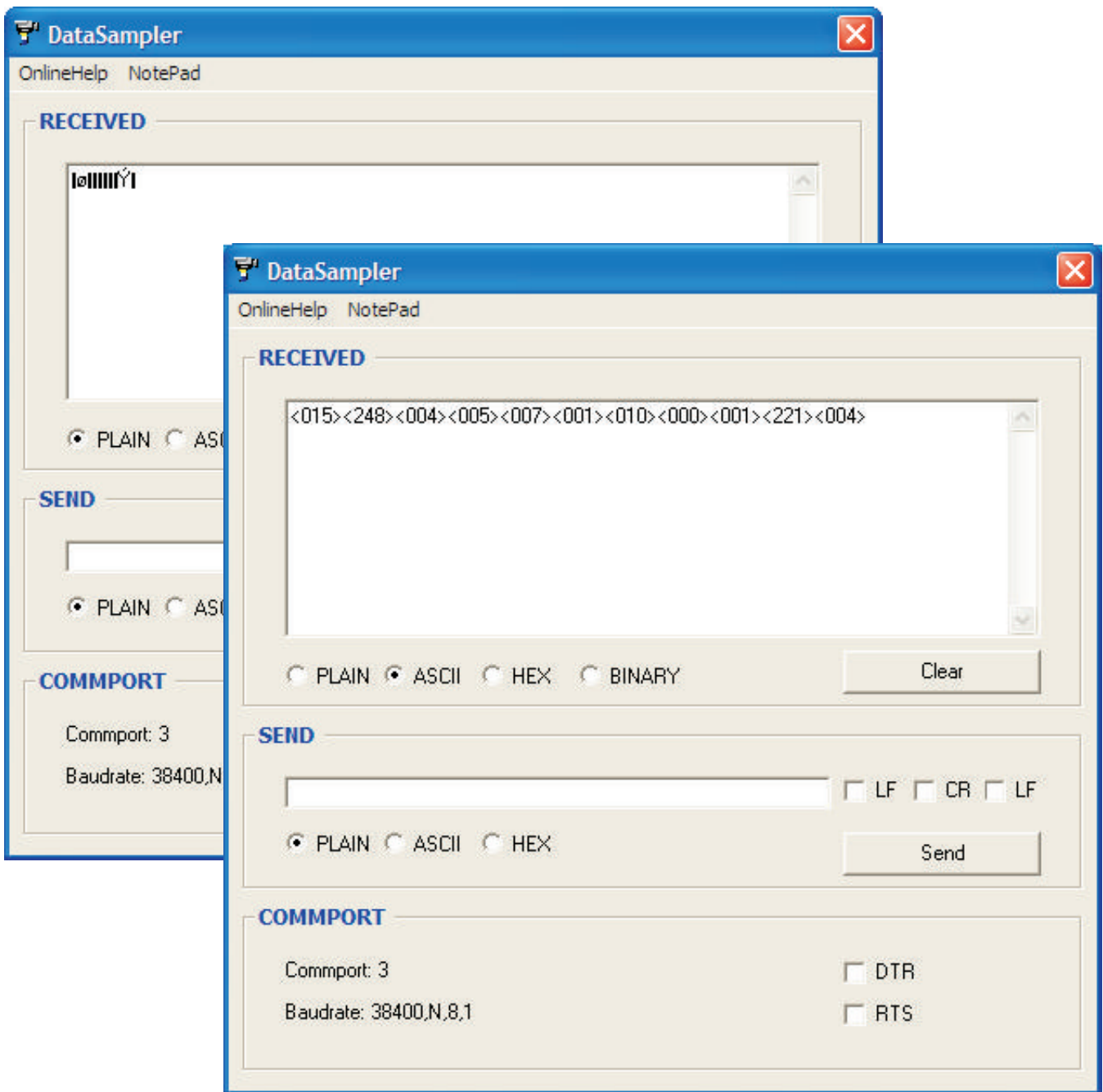
The firmware is designed to automatically send out the commands at the correct baudrate/settings as required by the system to be controlled.



However, if you want to use our DataSampler ... see next page ... to verify/test the commands being send by the TT455-RT-238, then you MUST set the expected baudrate and settings.

Then remove power of the TT455-RT-238 ... wait 5 seconds ... and reapply power, which will remove the internal ram-based information of "Send Trigger to Bus" in the TT455-RT-238.

Then click DataSampler in the menu and goto next page.



Then activate the remote control to trigger the TT455-RT-238 to send out the RS232 commands. View them in PLAIN or ASCII format as you wish.