

RS232 control of the **SADV1245/DVD1235**

The SADV1245/DVD1235 can be controlled by any control device having a RS232 serial output port (PC, CRESTRON home automation system etc.) through the RS232/R-Link interface adaptor.

For details about connecting and operating the adaptor see the user manual of the adaptor "UM_RS232_Adapt.doc".

Settings for the RS232 interface of the control device are as follows:

| | |
|---------------|---------|
| Baudrate: | 115.200 |
| Data Bits: | 8 |
| Stop Bits: | 1 |
| Parity: | none |
| Flow Control: | none |

T+A RS_232 Protocol

The SADV1245/DVD1235 uses the standard T+A RS232 command protocol as described in detail in the documents "TA_RS232_protocol.doc" and "RS_232_Command_Codes.doc".

Format of the command telegrams

A command telegram to the SADV1245/DVD1235 consists of 6 bytes. The complete telegram should be sent without pauses between the bytes.

Example: SYSTEM_ON command

| Byte 1 | Byte 2 | Byte 3 | Byte 4 | Byte 5 | Byte 6 |
|-----------------------|--|----------------------------------|---|-------------|--|
| RS232 adaptor Address | R-Link command length (R-Link address + R-Link command + R-Link flag byte = 0x03) | R-Link Address (0x32=DVD) | R-Link command (here: SystemON = 0x57) *see table SADV1245/DVD1235 commands | R-Link byte | flagcheck sum = sum of bytes 1..5 mod. 0x100 |
| 0x01 | 0x03 | 0x32 (see below) | 0x57 | 0x02 | 0x8F |

Byte 1, 2, 3, 5 : for the SADV1245/DVD1235 these bytes have the fixed values as shown in the table below.

Byte 4 : R-Link command according to the table of RCII commands (see "RS_232_Command_Codes.doc")

Byte 6 : check sum == (byte1+byte2+byte3+byte4+byte5) modulo 0x100

Format of the acknowledge (ACK) telegrams

The SADV1245/DVD1235 will process each received command telegram and it will send an acknowledge telegram approx. 25...35 ms after receiving the command.

The ACK telegram consists of 2 bytes:

Byte_1 is the RS232 address of the command telegram received before (=byte 1 of the command telegram = 0x01).

Byte_2 is the acknowledge byte. If this byte is equal to the check sum of the command telegram (byte6 of the command) then the command was received correctly.

If byte 2 has a value different from the check sum of the command, an error has occurred (see table below).

Format of the ACK telegram:

| Byte 1 | Byte 2 |
|---------------|---|
| RS232 address | ACK byte |
| 0x01 | = check sum of command: command correctly received = check sum -1: command ignored (system busy) = check sum -2: command not executed |
| | Note: If no ACK telegram is received within 35 milli-seconds after sending a command, there is either a hardware problem (cable etc.) or the telegram is erroneous (wrong address, wrong check sum) |

After the ACK telegram, the SADV1245/DVD1235 is ready for the next command.

List of SADV1245/DVD1235 commands

| Command | Command Code (HEX) | toggle | Remark |
|--------------------|--------------------|--------|---|
| ON_OFF | 0x01 | x | better use discrete System ON + OFF codes |
| System ON | 0x57 | | |
| System Standby | 0x77 | | |
| System OFF | 0x7A | | |
| CD/DVD | 0x23 | | |
| CD | 0x45 | | |
| PLAY | 0x12 | | |
| PAUSE | 0x05 | | |
| STOP | 0x24 | | |
| NEXT/UP | 0x34 | | F10 cursor |
| PREV/DOWN | 0x2A | | F10 cursor |
| FastForward/RIGHT | 0x25 | | F10 cursor |
| FastBackwards/LEFT | 0x1A | | F10 cursor |
| OK | 0x26 | | |
| 0 | 0x03 | | |
| 1 | 0x3A | | |
| 2 | 0x06 | | |
| 3 | 0x16 | | |
| 4 | 0x02 | | |
| 5 | 0x09 | | |
| 6 | 0x3B | | |
| 7 | 0x31 | | |
| 8 | 0x11 | | |
| 9 | 0x39 | | |
| F1/F2 | 0x32 | x | |
| F3/F4 | 0x0B | x | |
| F5/F6 | 0x36 | x | |
| Mono/Stereo | 0x21 | x | same as F1/F2 |
| Filter/Invert | 0x2B | x | same as F3/F4 |

Note: For a complete list of all R-Link source commands refer to the document "RS_232_Command_Codes.doc".