



**SIMDA**

*Serial  
Communication  
Protocol  
for  
SIMDA  
Random access  
Projectors  
3262,3462,3245,3445*

**5.0 VERSION**  
**Programming Manual Summary (July 16th, 1996)**



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# COMMANDS SUMMARY:

| <u>Text</u>                        | <u>Syntax</u>   | <u>Projector</u> |             | <u>Answers</u> |
|------------------------------------|-----------------|------------------|-------------|----------------|
|                                    |                 | <u>3245</u>      | <u>3262</u> |                |
| -Switch lamp off, go to slide xx   | <b>Axx&amp;</b> | yes              | yes         | [\$]           |
|                                    | <b>axx&amp;</b> | yes              | yes         | []             |
| -Go to slide xx                    | <b>Bxx&amp;</b> | yes              | yes         | [\$]           |
|                                    | <b>bxx&amp;</b> | yes              | yes         | []             |
| -Set light to level xx             | <b>Cxx&amp;</b> | yes              | yes         | [\$]           |
|                                    | <b>cxx&amp;</b> | yes              | yes         | []             |
| -Fade to xx                        | <b>Dxx&amp;</b> | yes              | yes         | [\$]           |
|                                    | <b>dxx&amp;</b> | yes              | yes         | []             |
| -Fade and step forward (time xx)   | <b>Exx&amp;</b> | yes              | yes         | [\$]           |
|                                    | <b>exx&amp;</b> | yes              | no          | []             |
| -Fade, no step                     | <b>Fxx&amp;</b> | yes              | yes         | [\$]           |
|                                    | <b>fxx&amp;</b> | yes              | no          | []             |
| -Reserved                          | <b>Gxx&amp;</b> | no               | no          | []             |
|                                    | <b>gxx&amp;</b> | no               | no          | []             |
| -Set fading time (up)              | <b>Hxx&amp;</b> | yes              | yes         | [\$]           |
|                                    | <b>hxx&amp;</b> | yes              | yes         | []             |
| -Set fading time (down)            | <b>Ixx&amp;</b> | yes              | yes         | [\$]           |
|                                    | <b>ixx&amp;</b> | yes              | yes         | []             |
| -Step forward                      | <b>J00&amp;</b> | yes              | yes         | [\$]           |
|                                    | <b>j00&amp;</b> | yes              | yes         | []             |
| -Step reverse                      | <b>J01&amp;</b> | yes              | yes         | [\$]           |
|                                    | <b>j01&amp;</b> | yes              | yes         | []             |
| -Switch light off and step forward | <b>J02&amp;</b> | yes              | yes         | [\$]           |
|                                    | <b>j02&amp;</b> | yes              | yes         | []             |
| -Switch light off and step reverse | <b>J03&amp;</b> | yes              | yes         | [\$]           |
|                                    | <b>j03&amp;</b> | yes              | yes         | []             |
| -Reserved                          | <b>J04&amp;</b> | no               | no          | []             |
|                                    | <b>j04&amp;</b> | no               | no          | []             |

|                                |                              |            |            |                  |
|--------------------------------|------------------------------|------------|------------|------------------|
| -Open the shutter              | <b>J05&amp;<br/>j05&amp;</b> | yes<br>yes | yes<br>yes | [\$]<br>[]       |
| -Close the shutter             | <b>J06&amp;<br/>j06&amp;</b> | yes<br>yes | yes<br>yes | [\$]<br>[]       |
| -Step focus forward            | <b>J07&amp;<br/>j07&amp;</b> | yes<br>yes | yes<br>no  | [\$]<br>[]       |
| -Reserved                      | <b>J08&amp;<br/>j08&amp;</b> | no<br>no   | no<br>no   | []<br>[]         |
| -Step focus reverse            | <b>J09&amp;<br/>j09&amp;</b> | yes<br>yes | yes<br>no  | [\$]<br>[]       |
| -reserved                      | <b>J10&amp;<br/>j10&amp;</b> | yes<br>yes | yes<br>yes | [string\$]<br>[] |
| -Reset projector               | <b>J11&amp;<br/>j11&amp;</b> | yes<br>yes | yes<br>no  | [\$]<br>[]       |
| -Get slide number              | <b>J12&amp;<br/>j12&amp;</b> | yes<br>yes | yes<br>yes | [num\$]<br>[]    |
| -Get light level               | <b>J13&amp;<br/>j13&amp;</b> | yes<br>yes | no<br>no   | [\$]<br>[]       |
| -Freeze fading                 | <b>J14&amp;<br/>j14&amp;</b> | yes<br>yes | yes<br>yes | [\$]<br>[]       |
| -Resume fading                 | <b>J15&amp;<br/>j15&amp;</b> | yes<br>yes | yes<br>yes | [\$]<br>[]       |
| -Abort fading                  | <b>J16&amp;<br/>j16&amp;</b> | yes<br>yes | yes<br>yes | [\$]<br>[]       |
| -Get status 2                  | <b>J17&amp;<br/>j17&amp;</b> | yes<br>yes | yes<br>yes | [num\$]<br>[]    |
| -Set fading time step 1 sec.   | <b>J18&amp;<br/>j18&amp;</b> | yes<br>yes | yes<br>yes | [\$]<br>[]       |
| -Set fading time step 0.1 sec. | <b>J19&amp;<br/>j19&amp;</b> | yes<br>yes | yes<br>yes | [\$]<br>[]       |
| -Set decimal mode              | <b>J20&amp;<br/>j20&amp;</b> | yes<br>yes | yes<br>yes | [\$]<br>[]       |

|                                   |                              |            |            |                       |
|-----------------------------------|------------------------------|------------|------------|-----------------------|
| -Get status 1                     | <b>J21&amp;<br/>j21&amp;</b> | yes<br>yes | yes<br>yes | <b>[num\$]<br/>[]</b> |
| -Get projector model              | <b>J22&amp;<br/>j22&amp;</b> | yes<br>yes | yes<br>no  | <b>[num\$]<br/>[]</b> |
| -Get software version number      | <b>J23&amp;<br/>j23&amp;</b> | yes<br>yes | yes<br>no  | <b>[num\$]<br/>[]</b> |
| -Enable Autoshow mode             | <b>J24&amp;<br/>j24&amp;</b> | yes<br>yes | yes<br>no  | <b>[\$]<br/>[]</b>    |
| -Enable Timer mode                | <b>J25&amp;<br/>j25&amp;</b> | yes<br>yes | yes<br>no  | <b>[\$]<br/>[]</b>    |
| -Disable Timer/Autoshow           | <b>J26&amp;<br/>j26&amp;</b> | yes<br>yes | yes<br>no  | <b>[\$]<br/>[]</b>    |
| -Enable Autofocus                 | <b>J27&amp;<br/>j27&amp;</b> | yes<br>yes | no<br>no   | <b>[\$]<br/>[]</b>    |
| -Disable Autofocus                | <b>J28&amp;<br/>j28&amp;</b> | yes<br>yes | no<br>no   | <b>[\$]<br/>[]</b>    |
| -Reserved                         | <b>J29&amp;<br/>j29&amp;</b> | no<br>no   | yes<br>yes | <b>[\$]<br/>[]</b>    |
| -Reserved                         | <b>J30&amp;<br/>j30&amp;</b> | no<br>no   | yes<br>yes | <b>[\$]<br/>[]</b>    |
| -Set Hexadecimal mode             | <b>J31&amp;<br/>j31&amp;</b> | yes<br>yes | yes<br>yes | <b>[\$]<br/>[]</b>    |
| -Reserved                         | <b>J32&amp;<br/>j32&amp;</b> | no<br>no   | yes<br>yes | <b>[num\$]<br/>[]</b> |
| -Reserved                         | <b>J33&amp;<br/>j33&amp;</b> | no<br>no   | yes<br>yes | <b>[num\$]<br/>[]</b> |
| -Get minimum light setting (glow) | <b>J34&amp;<br/>j34&amp;</b> | yes<br>yes | yes<br>yes | <b>[num\$]<br/>[]</b> |
| -Get fading time (up)             | <b>J35&amp;<br/>j35&amp;</b> | yes<br>yes | yes<br>yes | <b>[num\$]<br/>[]</b> |
| -Get fading time (down)           | <b>J36&amp;<br/>j36&amp;</b> | yes<br>yes | yes<br>yes | <b>[num\$]<br/>[]</b> |
| -Get fading curve number          | <b>J37&amp;</b>              | yes        | yes        | <b>[num\$]</b>        |

|  |                                    |            |            |                  |
|--|------------------------------------|------------|------------|------------------|
|  | <b>j37&amp;</b>                    | yes        | yes        | []               |
| -Get timer time setting                      | <b>J38&amp;</b><br><b>j38&amp;</b> | yes<br>yes | yes<br>no  | [string\$]<br>[] |
| -Get mains voltage level<br>(not calibrated) | <b>J39&amp;</b><br><b>j39&amp;</b> | yes<br>yes | yes<br>yes | [num\$]<br>[num] |
| -Reserved                                    | <b>J40&amp;</b><br><b>j40&amp;</b> | no<br>no   | yes<br>yes | [\$]<br>[]       |
| -Reserved                                    | <b>J41&amp;</b><br><b>j41&amp;</b> | no<br>no   | yes<br>yes | [\$]<br>[]       |
| -Reserved                                    | <b>J42&amp;</b><br><b>j42&amp;</b> | no<br>no   | yes<br>no  | [string\$]<br>[] |
| -Reserved                                    | <b>J43&amp;</b><br><b>j43&amp;</b> | no<br>no   | yes<br>no  | [string\$]<br>[] |
| -Reserved                                    | <b>J44&amp;</b><br><b>j44&amp;</b> | no<br>no   | yes<br>yes | [\$]<br>[]       |
| -Reserved                                    | <b>J45&amp;</b><br><b>j45&amp;</b> | no<br>no   | yes<br>yes | [\$]<br>[]       |
| -Reserved                                    | <b>J46&amp;</b><br><b>j46&amp;</b> | no<br>no   | yes<br>yes | [\$]<br>[]       |
| -Reserved                                    | <b>J47&amp;</b><br><b>j47&amp;</b> | no<br>no   | yes<br>yes | [\$]<br>[]       |
| -Cancel N.S.N.L. or A.C.D.                   | <b>J48&amp;</b><br><b>j48&amp;</b> | yes<br>yes | yes<br>yes | [\$]<br>[]       |
| -Restore N.S.N.L. or A.C.D.                  | <b>J49&amp;</b><br><b>j49&amp;</b> | yes<br>yes | yes<br>yes | [\$]<br>[]       |
| -Select A.C.D.                               | <b>J50&amp;</b><br><b>j50&amp;</b> | yes<br>yes | yes<br>yes | [\$]<br>[]       |
| -Select N.S.N.L                              | <b>J51&amp;</b><br><b>j51&amp;</b> | yes<br>yes | yes<br>yes | [\$]<br>[]       |
| -Get status 3                                | <b>J52&amp;</b><br><b>j52&amp;</b> | yes<br>yes | yes<br>yes | [num\$]<br>[]    |
| -Reserved                                    | <b>J53&amp;</b><br><b>j53&amp;</b> | no<br>no   | no<br>no   | [\$]<br>[]       |





|                                   |                 |     |     |      |
|-----------------------------------|-----------------|-----|-----|------|
| -Reserved                         | <b>J54&amp;</b> | no  | no  | [\$] |
|                                   | <b>j54&amp;</b> | no  | no  | []   |
| -Reserved                         | <b>J55&amp;</b> | no  | no  | [\$] |
|                                   | <b>j55&amp;</b> | no  | no  | []   |
| -Projector software reset         | <b>J56&amp;</b> | yes | yes | [\$] |
|                                   | <b>j56&amp;</b> | yes | yes | []   |
| -Record Timer setting             | <b>J57&amp;</b> | yes | yes | [\$] |
|                                   | <b>j57&amp;</b> | yes | no  | []   |
| -Reserved                         | <b>J58&amp;</b> | no  | yes | [\$] |
|                                   | <b>j58&amp;</b> | no  | no  | []   |
| -Set Timer value (seconds)        | <b>Kxx&amp;</b> | yes | yes | [\$] |
|                                   | <b>kxx&amp;</b> | yes | yes | []   |
| -Set Timer value (1/10 sec.)      | <b>Lxx&amp;</b> | yes | yes | [\$] |
|                                   | <b>lxx&amp;</b> | yes | yes | []   |
| -Increase light setting by xx     | <b>Mxx&amp;</b> | yes | yes | [\$] |
|                                   | <b>mxx&amp;</b> | yes | yes | []   |
| -Decrease light setting by xx     | <b>Nxx&amp;</b> | yes | yes | [\$] |
|                                   | <b>nxx&amp;</b> | yes | yes | []   |
| -Reserved                         | <b>Oxx&amp;</b> | no  | yes | [\$] |
|                                   | <b>oxx&amp;</b> | no  | yes | []   |
| -Reserved                         | <b>Pxx&amp;</b> | no  | yes | [\$] |
|                                   | <b>pxx&amp;</b> | no  | yes | []   |
| -Set minimum light (glow) setting | <b>Qxx&amp;</b> | yes | yes | [\$] |
|                                   | <b>qxx&amp;</b> | yes | yes | []   |
| -Reserved                         | <b>Rxx&amp;</b> | no  | yes | [\$] |
|                                   | <b>rxx&amp;</b> | no  | no  | []   |
| -Reserved                         | <b>Sxx&amp;</b> | no  | yes | [\$] |
|                                   | <b>sxx&amp;</b> | no  | no  | []   |
| -Set light table number           | <b>Txx&amp;</b> | yes | no  | [\$] |
|                                   | <b>txx&amp;</b> | yes | yes | []   |
| -Reserved                         | <b>Uxx&amp;</b> | no  | no  | [\$] |
|                                   | <b>uxx&amp;</b> | no  | no  | []   |

|                                |                 |     |     |      |
|--------------------------------|-----------------|-----|-----|------|
| -Reserved                      | <b>Vxx&amp;</b> | no  | yes | [\$] |
|                                | <b>vxx&amp;</b> | no  | yes | []   |
| -Reserved                      | <b>Wxx&amp;</b> | no  | no  | [\$] |
|                                | <b>wxx&amp;</b> | no  | no  | []   |
| -Reserved                      | <b>Xxx&amp;</b> | no  | no  | [\$] |
|                                | <b>xxx&amp;</b> | no  | no  | []   |
| -Record Fading table in EEPROM | <b>Yxx&amp;</b> | yes | yes | [\$] |
|                                | <b>yxx&amp;</b> | yes | no  | []   |
| -Reserved                      | <b>Zxx&amp;</b> | no  | no  | [\$] |
|                                | <b>zxx&amp;</b> | no  | no  | []   |



## **PHYSICAL INTERFACE :**

### **Serial interface**

Simda projectors have a full compatible RS232C interface

| <b><u>Connector</u></b> | <b><u>Din6</u></b> | <b><u>SubD9</u></b>                         |
|-------------------------|--------------------|---|
|                         | <b>Pin 1</b>       | not used (RS232)                            |
|                         | <b>Pin 2</b>       | not used (RS232)                            |
|                         | <b>Pin 3</b>       | 30V supply no regulated (200mA max.)        |
|                         | <b>Pin 4</b>       | not used (RS232)                            |
|                         | <b>Pin 5</b>       | <b>2</b> Transmit data (output to computer) |
|                         | <b>Pin 6</b>       | <b>5</b> Signal ground                      |
|                         | <b>Shield</b>      | <b>3</b> Receive data (Input from computer) |

### **Format**

**Speed** 9600 bauds  
**Length** 8 bits  
**Stop bits** 2  
**Parity** none  
**Handshake** SIMDA

## COMMUNICATION PROTOCOL :

Two communication protocols are available.

**With acknowledge**  
(Uppercase cmd char)

The projector sends an acknowledge character [**\$**] after completion of each command.  
Do not send any new command before reception of this answer. Once the character [**\$**] has been sent, the user knows that the projector is in the desired state and waits for a new command.

A command is never serviced when the projector is busy .  
For that reason,other incoming commands (buttons,12p plug) will delay any serial query.

**Without acknowledge**  
(Lowercase cmd char)

(only 3245/3445 and 3262/3462 projectors)  
The projector does not send any character after completion of a command (except for **BREAK**). In that mode commands modify a "virtual" projector in memory. Because these modifications take no time, one can send a continuous stream of commands or inquiries to the projector.

The projector microprocessor keeps the physical machine as close as possible to the virtual image.

- in that mode, Hexadecimal mode is set automatically (**J31&**) for 3262 and 3462 .For that reason it is strongly suggested to work always with the Hexadecimal mode

- for inquiries, no separator is sent between answers. Thus one must take care when sending multiple inquiries.

3245/3445

These projectors accept continuous stream of data for both Acknowledged and "non acknowledged" commands.However,the same restrictions may be applied to make a "driver" compatible.

3262&3462

The same command character is used for both modes.  
If it is UPPERCASE ,acknowledged mode is selected.  
If it is lowercase , "Without acknowledge" mode is selected.

## Commands structure:

### Software protocol

**Lengh,** 4 characters ASCII  
**Character 1,** Command Identifier (**CMD**)  
**Character 2&3,** Parameter . Two bytes ASCII.(**PARAM**)  
Represents a value between 00 and 99 in the decimal mode, or 00 and FF in the Hexadecimal mode.  
**Character 4,** End (**END**)

### Description

**CMD,** Either a letter betw. **A** and **Z** (acknowledged mode).  
or a letter betw. **a** and **z** (non acknowledged mode).

**PARAM,** This parameter may be either Decimal or Hexadecimal ,thus allowing values between 00 and 99 or 00 and FF. Mode selection is made through **J20&/J31&** commands .

For 3262 and 3462,Non acknowledged commands (lowercase) set hexadecimal mode.

**END,** Ends a command either **0Dh [ENTER]**  
or **26h [&]**

For a better understanding ,examples in this manual are always given using the **&** character .

**BREAK,** Resets the serial communication line : **2Fh [/]**  
(Resets the serial buffer but does not change any projector setting ( baud rate , etc ) ).The projector always acknolege this character with the same character **[/]** . This is the only exception to the normal ACK character **[\$]**

### Compatibility

for all  
specified for

**Projector,** Because all the projectors do not have the same characteristics ,some commands are not valid models or all software versions .This is each command.

## Projector answers :

**ACK,** acknowledge character = **24h** [\$]  
(except for **Break**)

**Num** Numerical value (for inquiries)  
decimal mode : 3 characters ASCII **012**  
Hexadecimal : 2 ASCII characters **0C**

**String** String of num. values separated by [\_]  
For example :  
**012\_145\_\$** (decimal)  
**0C\_91\_\$** (hexadecimal)

**BREAK,** Serial communication line reset character:**2Fh** [/]  
The projector always sends [/] after a BREAK  
command .

### Comments:

When acknowledged mode is used, one must wait for the [\$] to be sure that answer is fully received .In addition one must wait for the separator [\_] after each value in a string .

### Pascal example:

```
Text_Received := "";
Char_Received := "";
Repeat
  If Char_Available( Com1 ) then begin
    Char_Received := Read_Char( Com1 );
    Text_Received := Text_Received + Char_received;
  End;
Until Char_Received='$';
```

### WARNING 3245/3445:

**Once the ALC switch the projector to lamp2 , the lamp2 status is recorded in permanent memory .**  
**When the projector is serviced (bulb changed and projector set to L1),One must clear the L2 led by pushing both "timer" and "focus" buttons together during more than two seconds.**

# J12

|                                       |  |
|---------------------------------------|--|
| <b><u>Command :</u></b>               | Get slide number   |
| <b><u>Syntax :</u></b>                | <b>J12&amp;</b> (With acknowledge)<br><b>j12&amp;</b> (Without acknowledge)  |
| <b><u>Supported by :</u></b>          | 3245 3445      3262 & 3462   |
| <b><u>From Software Version :</u></b> | 0.1              2.5   |
| <b><u>Comments :</u></b>              | Slide number may be either decimal or Hexadecimal  |
| <b><u>Example:</u></b>                | <b>J12&amp;[021\$]</b> The slide which is in the gate is the 21th<br>(assuming that decimal mode is active)  |
| <b><u>Warning :</u></b>               | If the acknowledged command is sent while the tray is<br>moving, the answer is delayed until it reaches its position.<br>After power up, this value is wrong until the projector<br>reaches the zero position. |



# J13

|                                       |  |
|---------------------------------------|--|
| <b><u>Command :</u></b>               | Get light level  |
| <b><u>Syntax :</u></b>                | <b>J13&amp;</b> (With acknowledge)<br><b>j13&amp;</b> (Without acknowledge)                |
| <b><u>Supported by :</u></b>          | 3245&3445      3262 & 3462   |
| <b><u>From Software Version :</u></b> | 0.1                      3.0   |
| <b><u>Comments :</u></b>              | Gives the current light level .Value is either 00 to 99<br>or 00 to FF (hexadecimal mode). |
| <b><u>Example:</u></b>                | <b>J13&amp;[015\$]</b> Light level is 15.  |
| <b><u>Warning :</u></b>               |  |

# J17

**Command:** Get the Status 2

**Syntax :** **J17&** (With acknowledge)  
**j17&** (Without acknowledge)

**Supported by :** 3245&3445 3262 & 3462  
**From Software Version :** 0.1 3.0

**Comments:** The projector sends a byte (two (hexadecimal) or three (decimal) ASCII chars).

|                                       | <u>Cmd</u> | <u>=0</u>    | <u>=1</u>     |
|---------------------------------------|------------|--------------|---------------|
| <b>Bit 0,</b> twinkle mode            | <b>J40</b> | <b>NO</b>    | <b>YES</b>    |
| <b>Bit 1,</b> Slide number is true    |            | <b>NO</b>    | <b>YES</b>    |
| <b>Bit 2,</b> Timer available         |            | <b>NO</b>    | <b>YES</b>    |
| <b>Bit 3,</b> Autofocus available     |            | <b>NO</b>    | <b>YES</b>    |
| <b>Bit 4,</b> Fading under processing | <b>Dxx</b> | <b>NO</b>    | <b>YES</b>    |
| <b>Bit 5</b> Reserved                 |            | <b>NO</b>    | <b>YES</b>    |
| <b>Bit 6,</b> Fading time setting     | <b>J18</b> | <b>1..9s</b> | <b>1..99s</b> |
| <b>Bit 7,</b> Autoshow mode           | <b>J24</b> | <b>NO</b>    | <b>YES</b>    |

**Example:**

**j17&[00\$]**

- Bit 0=0,** No twinkling under processing
- Bit 1=0,** The projector has not seen yet the zero position, thus getting slide number will give a wrong result. One can initialize the counter with the **B00&** command.
- Bit 2=0,** This projector has no timer.
- Bit 3=0,** This projector has no auto-focus.
- Bit 4=0,** No fading under process.
- Bit 5=0,** Reserved
- Bit 6=0,** Time step is 0.1s (0.1 to 9.9 or 25.5 s) . Selected by **J18&** and **J19&**.
- Bit 7=0,** This projector has no auto-show.

**Warning :**

When (after power up) the projector has never seen the zero position (thus does not know slide number), bit 1 is zero.  
One can calibrate this counter with a **B00&** command which makes the projector to look for the physical zero. Answer is either decimal or Hexadecimal.

# J21

**Command :** Get the Status 1

**Syntax :** **J21&** (With Acknowledge)  
**j21&** (Without Acknowledge)

**Supported By :** 3245&3445 3262 & 3462

**From Software Version :** 0.1 2.5

**Comments :** The projector sends a byte (two (hexadecimal) or three (decimal) ASCII chars).

|                                      | <u>Cmd</u>     | <u>=0</u> | <u>=1</u> |
|--------------------------------------|----------------|-----------|-----------|
| <b>Bit 0</b> , Slide in the gate     |                | Yes       | No        |
| <b>Bit 1</b> , Tray position is zero |                | Yes       | No        |
| <b>Bit 2</b> , Timer                 |                | On        | Off       |
| <b>Bit 3</b> , Autofocus             |                | On        | Off       |
| <b>Bit 4</b> , Mechanical jam        |                | Yes       | No        |
| <b>Bit 5</b> , Lamp on               |                | Yes       | No        |
| <b>Bit 6</b> , Bulb                  |                | L1        | L2        |
| <b>Bit 7</b> , Shutter               | <b>J05,J06</b> | Closed    | Open      |

**Example:** **j21&[017\$]** means :(00010001)  
No slide in the slide gate (1)  
Slide tray is in the zero position (0)  
Timer off (0)  
Autofocus off (0)  
Projector OK (1)  
lamp on (0)  
(which is Lamp 1), (0)  
Shutter closed. (0)

**Warning :** Answer is either decimal or Hexadecimal.

# J22

**Command :** Get projector model.

**Syntax :** **J22&** (With Acknowledge)

**Supported By :** 3240 3262 & 3462

**From Software Version :** 1.3 2.5

| <b><u>Comments :</u></b> | <u>Model:</u>              | <u>Decimal value:</u> |
|--------------------------|----------------------------|-----------------------|
|                          | SIMDA 3232                 | [32]                  |
|                          | SIMDA 3232AF               | [33]                  |
|                          | SIMDA 3240                 | [40]                  |
|                          | SIMDA 3240AF               | [41]                  |
|                          | SIMDA 3262                 | [62]                  |
|                          | SIMDA 3462                 | [64]                  |
|                          | <b>Simda 3245&amp;3445</b> | [45]                  |
|                          | Compatible 3234            | [34]                  |
|                          | Compatible 6000            | [60]                  |
|                          | Compatible 7000            | [70]                  |
|                          | Compatible 8000            | [80]                  |

**Example:** **J22&[40\$]** 3462 projector (decimal mode)  
**J22&[40\$]** 3462 projector (Hexadecimal mode)

**Warning :** Answer DO NOT differs depending on the mode (decimal or Hexadecimal). the answer is always 2 bytes long for both decimal and hexadecimal modes .

# J23

**Command :** Get Software version number

**Syntax :** **J23&** (With Acknowledge)

**Supported By :** 3245&3445 3262 & 3462

**From Software Version :** 0.1 2.5

**Comments :** Gives 2 characters ASCII

**Example:** **J23&[30\$]** Version 3.0 Decimal mode  
**J23&[30\$]** Version 3.0 Hexadecimal mode

**Warning :** Answer DO NOT differs depending on the mode (decimal or Hexadecimal). the answer is always 2 bytes long for both decimal and hexadecimal mode

# J37

|                                       |   |
|---------------------------------------|---|
| <b><u>Command :</u></b>               | Get Fading curve number   |
| <b><u>Syntax :</u></b>                | <b>J37&amp;</b> (With Acknowledge)<br><b>j37&amp;</b> (Without Acknowledge)   |
| <b><u>Supported By :</u></b>          | 3245&3445 3262 & 3462   |
| <b><u>From Software Version :</u></b> | 0.1 3.0   |
| <b><u>Comments :</u></b>              | Gives the number of the fading curve (set by <b>Txx&amp;</b> ).<br>The byte returned has the following structure :<br><b>BIT 0,</b> {<br><b>BIT 1,</b> {<br><b>BIT 2,</b> {<br><b>BIT 3,</b> { Number of the table (0 to 15)<br><br><b>BIT 4,</b> Reserved - Always 0<br><b>BIT 5,</b> Reserved - Always 0<br><b>BIT 6,</b> =0 Read / =1 Write mode<br><b>BIT 7,</b> =0 ROM table / =1 EEPROM table |
| <b><u>Example:</u></b>                | <b>J37&amp;[128\$]</b> EEPROM table 0.<br>Bit 7=1 means EEPROM table.<br>Bits 0..3=0 means table number is 0  |
| <b><u>Warning :</u></b>               | .   |

# J48

|                                       |  |
|---------------------------------------|--|
| <b><u>Command :</u></b>               | Cancels the N.S.N.L. or A.C.D. mode  |
| <b><u>Syntax :</u></b>                | <b>J48&amp;</b> (With Acknowledge)<br><b>j48&amp;</b> (Without Acknowledge)  |
| <b><u>Supported By :</u></b>          | 3245&3445      3262 & 3462   |
| <b><u>From Software Version :</u></b> | 0.1                      .3.0  |
| <b><u>Comments :</u></b>              | The shutter remains opened even if there is no slide.  |
| <b><u>Example:</u></b>                | <b>J48&amp;[\$]</b>  |
| <b><u>Warning :</u></b>               | If the power is switched off and on, standard mode is set again.<br>During a tray movement, shutter is always closed . |

# J49

|                                       |  |                       |
|---------------------------------------|--|-----------------------|
| <b><u>Command :</u></b>               | Enables the N.S.N.L. or A.C.D. mode again  |                       |
| <b><u>Syntax :</u></b>                | <b>J49&amp;</b>  | (With Acknowledge)    |
|                                       | <b>j49&amp;</b>  | (Without Acknowledge) |
| <b><u>Supported By :</u></b>          | 3245&3445  | 3262 & 3462           |
| <b><u>From Software Version :</u></b> | 0.1  | 3.0                   |
| <b><u>Comments :</u></b>              | The projector is set again in the mode chosen by <b>J50</b> and <b>J51</b> (N.S.N.L or A.C.D). |                       |
| <b><u>Example:</u></b>                | <b>J49&amp;[\$]</b>  |                       |
| <b><u>Warning :</u></b>               | If the power is switched off and on or after a reset, standard mode is set.                    |                       |



# J50

|                                       |   |                       |
|---------------------------------------|---|-----------------------|
| <b><u>Command :</u></b>               | Selects the "A.C.D." function (Auto Cooling Delay ).  |                       |
| <b><u>Syntax :</u></b>                | <b>J50&amp;</b>   | (With Acknowledge)    |
|                                       | <b>j50&amp;</b>   | (Without Acknowledge) |
| <b><u>Supported By :</u></b>          | 3245&3445   | 3262 & 3462           |
| <b><u>From Software Version :</u></b> | 0.1   | 3.0                   |
| <b><u>Comments :</u></b>              | If the <b>J49&amp;</b> function is on, the shutter is opened (after a slide change)only if a slide is in the gate <u>and</u> if the light level is more than zero.<br>This function suppresses "ghost images" due to lamp cooling delay after a slide change. |                       |
|                                       | required  |                       |
| <b><u>Example:</u></b>                | <b>J50&amp;[\$]</b>   |                       |
| <b><u>Warning :</u></b>               | When N.S.N.L or A.C.D. keep the shutter closed ,one cannot open it using <b>J05&amp;</b> .<br><b>J50&amp;</b> cancels <b>J51&amp;</b> .<br><b>J48&amp;</b> cancels both functions <b>J50&amp;</b> and <b>J51&amp;</b>   |                       |

# J51

|                                       |  |                       |
|---------------------------------------|--|-----------------------|
| <b><u>Command :</u></b>               | Selects the N.S.N.L. function  |                       |
| <b><u>Syntax :</u></b>                | <b>J51&amp;</b>  | (With Acknowledge)    |
|                                       | <b>j51&amp;</b>  | (Without Acknowledge) |
| <b><u>Supported By :</u></b>          | 3245&3445  | 3262 & 3462           |
| <b><u>From Software Version :</u></b> | 0.1  | 3.0                   |
| <b><u>Comments :</u></b>              | If there is no slide in the gate, the shutter keeps closed (No Slide No Light).  |                       |
| <b><u>Example:</u></b>                | <b>J51&amp;[\$]</b>  |                       |
| <b><u>Warning :</u></b>               | When N.S.N.L or A.C.D. keep the shutter closed ,one cannot open it using <b>J05&amp;</b> .<br>If the power is switched off and on, standard mode is set. |                       |

# J52

**Command :** Get status 3.

**Syntax :** **J52&** (With Acknowledge)  
**j52&** (Without Acknowledge)

**Supported By :** 3245&3445 3262 & 3462

**From Software Version :** 0.1 3.0

**Comments :** Sends back some system flags :

|   | <b>cmd</b>    | <b>=0</b>   | <b>=1</b>  |
|---|---------------|-------------|------------|
| <b>BIT 0</b> ,Fading curves are in EEPROM Txx | <b>No</b>     | <b>Yes</b>  |            |
| <b>BIT 1</b> ,Shutter mode                    | <b>J50</b>    | <b>NSNL</b> | <b>ACD</b> |
| <b>BIT 2</b> ,Shutter is closed by A.C.D.     | <b>No</b>     | <b>Yes</b>  |            |
| <b>BIT 3</b> ,Reserved                        | <b>No</b>     | <b>Yes</b>  |            |
| <b>BIT 4</b> ,Bright/Economy switch position  | <b>Bright</b> | <b>Eco</b>  |            |
| <b>BIT 5</b> ,IN/OUT switch position          | <b>IN</b>     | <b>Out</b>  |            |
| <b>BIT 6</b> ,Don't care                      | <b>No</b>     | <b>Yes</b>  |            |
| <b>BIT 7</b> ,Tray is moving                  | <b>No</b>     | <b>Yes</b>  |            |

**Example:**

**J52&[80\$]**  
**BIT 0**,=0 ROM fading curve  
**BIT 1**,=0 NSNL mode  
**BIT 2**,=0 Shutter not closed by "A.C.D."  
**BIT 3**,=0 Don't care  
**BIT 4**,=0 BRIGHT position  
**BIT 5**,=0 "IN" position  
**BIT 6**,=0 Don't care  
**BIT 7**,=1 Tray is moving

**Warning 3245/3445 :**  
compatibility

**j52&** Set automatically the **Hexadecimal** mode for  
with 3262/3462 drivers.(j52& means : j31& + j52&)  
This is the only lowercase cmd which set the hexadecimal  
mode (for 3262/3462, any lowercase cmd set the  
hexadecimal mode)

# T..

**Command :** Select light table number

**Syntax :** **Txx&** (With Acknowledge)  
**txx&** (Without Acknowledge)

**Supported By :** 3245&3445 3262 & 3464

**From Software Version :** 0.1 3.3

**Comments :** Allows to select different fading curves (see Appendix A)  
The meaning of the byte to send is :

**BIT 0,** {  
**BIT 1,** {  
**BIT 2,** {  
**BIT 3,** { Number of the table (0 to 15)

**BIT 4,** Reserved - Always 0  
**BIT 5,** Reserved - Always 0  
**BIT 6,** =0 Read / =1 Write mode  
**BIT 7,** =0 ROM table / =1 EEPROM table

**Example:** **T00&[\$]** reset setting (table 0, ROM)  
**T01&[\$]** table 1 (ROM)  
**T80&[\$]** Table 0 , EEPROM  
**TC1&[\$]** Write mode , EEPROM table 1

**Warning :** Bits 4 and 5 **must** be "0"  
After table loading, you **must** set the read mode  
Reset selects the table "0" (ROM)  
Rom tables are factory defined and cannot be changed .  
Eeprom tables may be either read or written ,thus allowing  
the user to define his own light variation law.  
Table 0 (ROM) = U rms. proportionnal to input  
Table 1 (ROM) = Light proportionnal to input (physio)  
Table 2 (ROM) = Reserved for future soft versions.

**Warning:** **For test Version01, ask Table03 for physio curve .**  
**(this bug will be corrected in future versions)**

.....  
Table 0 (EEPROM) = User defined  
Table 1 (EEPROM) = User defined

(See **Yxx** for EEprom table write)

# Y..

**Command :** Record Fading Tables in EEPROM

**Syntax :** **Yxx&** (With Acknowledge)

**Supported By :** 3245&3445 3262 & 3462

**From Software Version :** 0.1 3.3

**Comments :** This function allows to load user's fading tables in EEPROM (up to 2 tables)  
- one must select the table and enter the written mode with **Txx&**  
- for each point in the table (00 to FF)  
1) select the point using **Cxx&**  
2) send the light value using **Yyy&** ( yy en hexa )  
(this gives light level yy for the requested value xx)  
**- Exit the written mode with Txx& function**

**Example:**

**TC0&[\$]** Write mode EEPROM Table 0  
**C00&[\$]** For the requested light value 0...  
**Y05&[05\$]**Gives light level 5  
**C01&[\$]** For .....1  
**Y0C&[0C\$]** .....12  
**C02&[\$]** .....2  
**Y1E&[1E\$]** .....30  
...  
**T80&[\$]** **Enter read mode** EEPROM Table 0

**Warning :** See Appendix A for light control management.  
(The table is not erased when the projector is switched off ).