TZM883V

8x8 GRAPHIC MATRIX

- **Variable time switching on the vertical**
- **Preview on output 8, programmable**
- **Control via RS232, Ethernet and IR**
- **8 recallable presets**
- **Saving of last configuration**
- **IR remote control (optional)**

Ed. 1 - 22 October 2008

ELPRO Video Labs s.r.l.
St.da della Pronda, 45/B 10142 Torino ITALY
Tel.+39 0117701583 – Fax +39 011703751

INSTALLATION AND USE OF THE TZM883V

SUMMARY

ELPRO Video Labs s.r.l.
St.da della Pronda, 45/B 10142 Torino ITALY
Tel.+39 0117701583 – Fax +39 011703751

When installing the TZM883V unit, please read this handbook carefully.

The manufacturer shall not be held responsible for damage due to use, even correct, of its products.

The data and characteristics of the product may be modified without prior notice.

All updates and news regarding this products are published in our site

www.elprovideolabs.com

ELPRO Video Labs s.r.l.
St.da della Pronda, 45/B 10142 Torino ITALY
Tel.+39 0117701583 – Fax +39 011703751

1.0 OVERVIEW

Thank you for purchasing this product. Check the contents of the packaging carefully. It contains:

- The TZM883V unit

- The instructions handbook and certificate of conformity

- The power cord

The IR remote control

(To be ordered separately)

The TZM883V is an 8X8 matrix for GRAPHIC signals from PC. It is possible to also connect YCbCr/YPbPr component video signals on the three RGB color components of the receptacle connector. The possibility of programming output 8 as preview promotes extremely versatile use of the matrix in certain multi-media applications. The possibility of saving and recalling 8 configurations via the keypad, serial line, Ethernet or IR remote control makes the TZM883V highly versatile in presentation environments.
The TZM883V performs through blank switching. The switching time is user-selectable to adapt more precisely to the characteristics of the destination. This solution makes it possible to avoid the typical annoying effects of LCD devices when a signal is switched at their input.

ELPRO Video Labs s.r.l.
St.da della Pronda, 45/B 10142 Torino ITALY
Tel.+39 0117701583 – Fax +39 011703751

2.0 POWER SUPPLY

The TZM883V unit must be powered at 90÷240 Vac 50/60Hz using the cable provided. The socket of the cable must be inserted in the related panel plug to the left on the back of the unit.
The panel plug is equipped with a fuse holder for 5X20 fuses. If the fuse blows, replace it with one of the **same rating** as specified on the back of the unit.

All operations must be carried out by qualified personnel only who must be informed of the risks of electric shock.

In some countries, the plug of the cable must be adapted to local standards. The wires are coded as follows:

- Brown PHASE (Identified with the letter L, may be red)

- Blue NEUTRAL (Identified with the letter N, may be black)

- Yellow/Green GROUND (Identified with the letter E, may be green)

WARNING

Connection of the conductor to ground is compulsory!

ELPRO Video Labs s.r.l.
St.da della Pronda, 45/B 10142 Torino ITALY
Tel.+39 0117701583 – Fax +39 011703751

3.0 PRESETS

The unit does not feature user presets.

Presets for functioning of the unit can be made directly from the keypad

4.0 INSTALLATION

a) Make sure that all the units to be installed are off.
b) Connect the sources and the destinations according to the screen-printed instructions on the rear panel.

4.1 Restart

At power-on of the machine, the firmware version installed is displayed and the input/output connections are set according to the mode configured:

- Last status before power-off, or
- Default status (if configured as active).

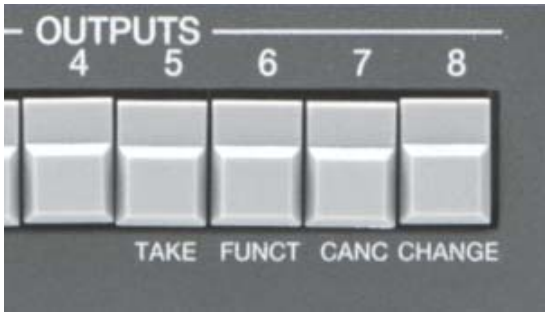
At initial power-on, the unit switches to the factory configuration which connects inputs and outputs with the same number (Input 1 with output 1, input 2 with output 2, etc.).

ELPRO Video Labs s.r.l.
St.da della Pronda, 45/B 10142 Torino ITALY
Tel.+39 0117701583 – Fax +39 011703751

5.0 LOCAL CONTROL

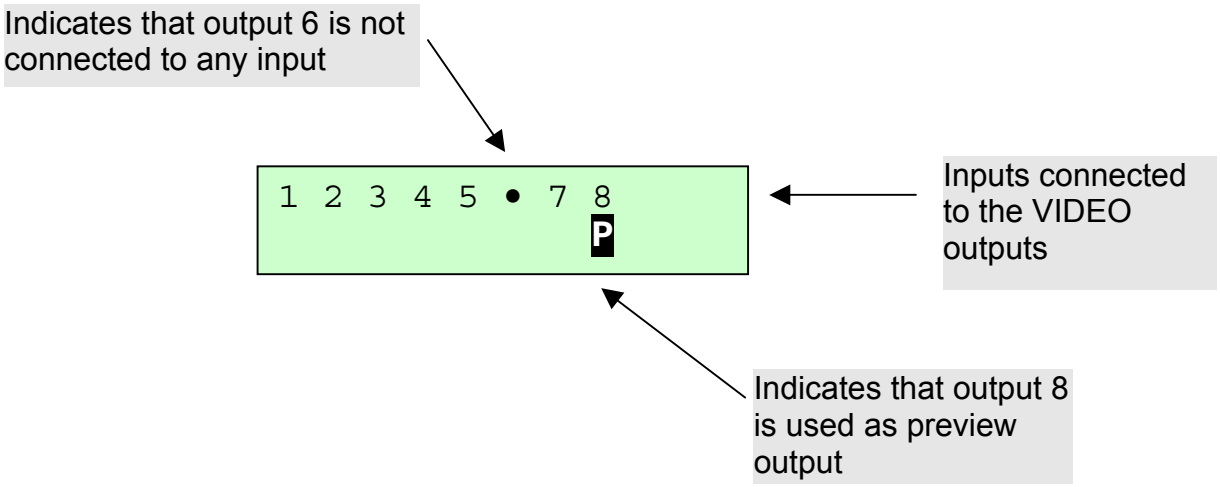
Local control permits video switching and setting of the configuration parameters for matrix functioning.

The double function buttons (**TAKE, FUNCT, CANC** and **CHANGE**) are used in the matrix configuration phase.



The status of the matrix is shown on the display, indicating the video sources switched on the destinations, whose number is screen-printed directly on the front panel. For output 8, preview active information is also displayed.

Normal display is as follows:



ELPRO Video Labs s.r.l.
St.da della Pronda, 45/B 10142 Torino ITALY
Tel.+39 0117701583 – Fax +39 011703751

5.1 Signal switching

a) Press one of the 8 "INPUTS" buttons with built-in led to select a source. The led lights up and the number of the source selected is shown on the display. If output 8 has been configured as preview output, the signal of the input selected is switched to this output

b) Press one of the 8 "OUTPUTS" buttons with built-in led switch the input selected previously to the output.

The new status of the matrix is shown on the display.

5.2 How to save and recall a PRESET

The current status of the connections can be saved on one of the 8 presets available. To save a preset, hold down one of the "INPUTS" keys corresponding to the number of the preset to be saved for 2 seconds. The following message is shown on the display:

Saving preset *n*
TAKE=yes CANC=abort

with which confirmation of the preset save operation is requested. Pressing the TAKE key, this operation is performed; with CANC or another key, the command is ignored.

To recall one of the 8 presets saved, hold down one of the "OUTPUTS" keys corresponding to the number of the preset to be recalled for 2 seconds. The following message is shown on the display:

Loading preset *n*
TAKE=yes CANC=abort

with which confirmation of the preset recall operation is requested. Pressing the TAKE key, this operation is performed; with CANC or another key, the command is ignored.
In this case, switching is not performed "through blank"

6.0 CONFIGURATION

Certain TZM883V functioning parameters can be configured via the keypad and with the aid of the LCD display. To activate the configuration phase, press the buttons indicated in the screen-printing with **MENU** at the same time, i.e. buttons **INPUT 8** + **OUTPUT 1.**

Possible options are shown on the display and the second function of the keys is activated:

TAKE Confirms the value set and moves to the next
FUNCT Moves to the next item
CANC Abort, or if pressed for 2 seconds terminates the configuration phase without making any modification
CHANGE Modifies the value of the item selected

Options of the main menu:

- **Setup**, enters functioning parameter configuration.
- **Default config.**, activates the default configuration with the current status of the connections. The next time the matrix is switched on, the currently set connections are applied.
- **Exit**, exits from this menu.

Move from one item to the next using the FUNCT key, confirming with the TAKE key. Pressing of the CANC key in this phase causes exit from the menu.

The **Setup** men comprises the following options:

Default configur.:	Activates or de-activates the default configuration. Select ENABLED or DISABLED with the CHANGE key and confirm with the TAKE key. (default value = DISABLED)
IR receiver:	Enables or disables the IR receiver for the remote control. Select ENABLED or DISABLED with the CHANGE key and confirm with the TAKE key. (default value = ENABLED)
Out preview:	Enables or disables output 8 as preview output. Select ENABLED or DISABLED with the CHANGE key and confirm with the TAKE key.

ELPRO Video Labs s.r.l.
St.da della Pronda, 45/B 10142 Torino ITALY
Tel.+39 0117701583 – Fax +39 011703751

	(default value = DISABLED, i.e. output 8 as normal output)
Seamless time: Out n	Sets the "through blank" switching time for each single output. The CHANGE key modifies the value for the output indicated, 300 msec, 500 msec, 1 sec, 2 sec. Move to setting of the time for the next output with the FUNCT. key The values set are confirmed with the TAKE key. (default value = 300 msec. for all the outputs)
Backlight:	Sets the value for backlighting of the display. Select a value between 1 (minimum) and 5 (maximum) with the INPUT1 ... INPUT5 keys. Confirm with the TAKE key. (default value = 4)
TAKE=save **CANC=abort**	Requests confirmation of the settings made. If confirmed with the TAKE key, the parameters are saved in the non-volatile memory. The CANC key cancels the settings made and restores the previous settings. In any case, moves to the next selection which makes it possible to display (but NOT to modify) the parameters relating to Ethernet communication
TAKE=exit **FUNC=view ethernet**	With the TAKE key, exits from setup and returns to normal functioning mode of the matrix, while with the FUNC key, the main network parameters set are displayed.

NOTE:
The network parameters displayed below are only some (the main) parameters set using **DST** software, necessary to configure the network interface installed on the matrix. For a more detailed description and for use of this program, refer to the document "**LAN202 – User Manual** ".
The software and related documentation can be downloaded from the Elpro site
http://www.elprovideolabs.com/

IP address: **xxx.xxx.xxx.xxx**	Network IP address. FUNC key to display the next parameter.
IP port: **xxxxx**	Number of the port used. FUNC key to display the next parameter.
Subnet mask: **xxx.xxx.xxx.xxx**	Subnetwork address mask. FUNC key to display the next parameter.
Gateway: **xxx.xxx.xxx.xxx**	Address for communications outside the local network FUNC key to display the next parameter.

IP protocol: **xxx**	Type of protocol used: TCp or UDP. FUNC key to display the next parameter.
Connection timeout: **xx**	Connection timeout expressed in minutes FUNC key to display the next parameter.
Routing mode: **xxxxxx**	Connection mode (master/slave) for network communication. With the key FUNC, the option of exit from this display is redisplayed.

If the CANC key is pressed at any time for at least 2 seconds, the configuration phase is exited with return of the matrix to normal functioning. Any modifications made are cancelled.

ELPRO Video Labs s.r.l.
St.da della Pronda, 45/B 10142 Torino ITALY
Tel.+39 0117701583 – Fax +39 011703751

7.0 REMOTE CONTROL FUNCTIONS

The unit is equipped with a receiver for the IR remote control. This must be ordered separately (Cod. IRTZM883) .

WARNING
The remote control is of the self-teaching type. After inserting the batteries and each time these are replaced, press the "Set" key followed by key IN8 with white edge

The unit is shipped with reception from remote control enabled.

The following functions can be carried out with the IR remote control:

Keys	Functions
V A A+V Lock	Keys not active
INPUTS1...8	Selection inputs as from keypad
OUTPUTS1...8	Selection outputs as from keypad
preview Video mute ON	De-activates video on the preview output
preview Video mute OFF	Re-activates video on preview output
preview Audio mute ON	Key not active
preview Audio mute OFF	Key not active
SAVE/RECALL + key INPUTS1..8	Saves status on preset 1…8
SAVE/RECALL + key OUTPUTS1..8	Recalls preset 1…8

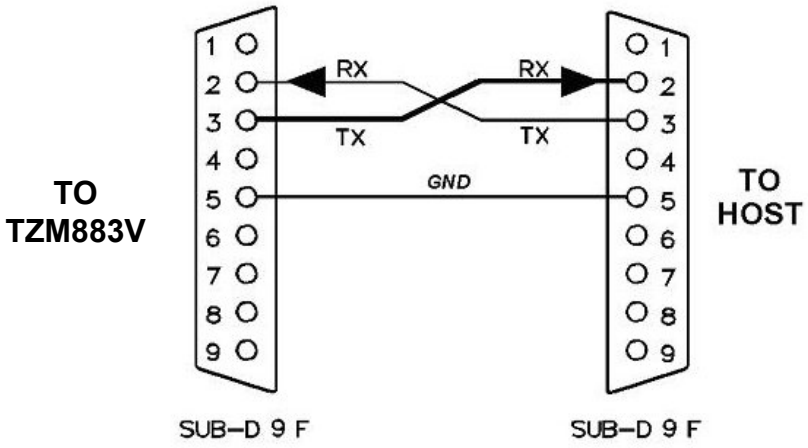
8.0 CONNECTION TO REMOTE HOST

A remote host can be connected to the TZM883V on an RS232 serial line and also via an Ethernet 10/100 base T network.

8.1 RS232 serial connection

The serial connection must be made with an RS232 cable crossed wired as follows:

- TZM883V side	sub-D9p.f.	pin 2 RX, pin 3 TX, pin 5 GND
- Host (PC) side	sub-D9p.f.	pin 2 RX, pin 3 TX, pin 5 GND



Data exchange via RS232 envisages:
speed 9600 baud, 8 data bits, no parity, 1 stop bit.

8.2 Ethernet connection

The TZM883V can be controlled from a LAN if suitably configured (IP address IP, protocol, etc.).
The matrix does NOT permit direct configuration of network connection parameters and the Ethernet module installed on the matrix must be configured using appropriate software.
To do this, download from the Elpro site www.elprovideolabs.com both the **DST** configuration software and the user annual of the network interface **LAN202 – User Manual**

ELPRO Video Labs s.r.l.
St.da della Pronda, 45/B 10142 Torino ITALY
Tel.+39 0117701583 – Fax +39 011703751

In the Windows © environment, it is possible, for those applications that do not directly interface IP protocols, to manage ELPRO appliances connected via LAN, by creating virtual serial ports.
A virtual serial port is created associating a COM port, in addition to those physically existing on the PC, to an IP address of the Ethernet/Internet network.
This always possible via DST software.

9.0 COMMANDS FROM REMOTE HOST

Regardless of the type of connection used, all matrix functions can be controlled through sending by a host of strings of hexadecimal and ASCII characters.

The protocol requires:

- command strings, sent by the host to the matrix. These consist of ASCII characters closed with the CR character (hexadecimal 0D). The matrix can reply with the ACK confirmation character (hexadecimal 06) or with NAK (hexadecimal 15) in the case of an error.

- status requests, sent by the host to the matrix. The matrix replies with a string of ASCII characters closed with the CR character (hexadecimal 0D).

NOTE:
A command or status string is closed with a single CR character and not with the pair of characters CR+LF that is normally sent when the ENTER key of the keyboard of a PC is pressed.

The commands accepted by the matrix and related parameters are described below; in the description of the commands, the control characters are indicated as follows:

<CR> closing character of an ASCII command or status string hexadecimal **0D**
<ACK> positive response character to a command hexadecimal **06**
<NAK> negative response character to a command hexadecimal **15**

9.1 Video switching command

To switch a video input towards an output, the host must send the following sequence:

V	1 control character (Hex 56)
uu	2 characters that indicate the number of the output (from “01” to “08”)
vv	2 characters that indicate the video input (from “01” to “08") if vv = “00”, the video output will be set to high impedance
<CR>	1 end of string character(Hex 0D)
The matrix replies with:	
<ACK> **<NAK>**	if the command has been performed successfully if transmission errors or invalid control parameters have been detected

Example: to switch video input No. 1 on output No. 4, the following hexadecimal characters must be sent on line:
56 30 34 30 31 0D
The matrix replies:
ACK (Hex 06) if the command has been performed successfully
NACK (Hex 15) if transmission errors have been detected

9.2 Switch video on preview command

A video input can be switched on the preview output if this has been configured; the host must send the following sequence:

v	1 control character(Hex 76)
vv	2 characters that indicate the video input (from “01” to “08") if vv = “00”, the video output will be set to high impedance
<CR>	1 end of string character(Hex 0D)
The matrix replies with:	
<ACK> **<NAK>**	if the command has been performed successfully if transmission errors or invalid control parameters have been detected

ELPRO Video Labs s.r.l.
St.da della Pronda, 45/B 10142 Torino ITALY
Tel.+39 0117701583 – Fax +39 011703751

Example: to switch video input No. 5 onto the preview output, the following hexadecimal characters must be sent on line:
76 30 35 0D
The matrix replies:
ACK (Hex 06) if the command has been performed successfully
NACK (Hex 15) if transmission errors have been detected

9.3 Mute on preview output command

The mute condition can be set on the preview output, if configured. The host must send the sequence:

M	1 control character(Hex 6D)
X	1 character that indicates the type of mute for the preview output: "0" : mute off "2" : mute video
<CR>	1 end of string character(Hex 0D)
The matrix replies with:	
<ACK> **<NAK>**	if the command has been performed successfully if transmission errors or invalid control parameters have been detected

Example: To set mute on the preview output, the following hexadecimal characters must be sent on line:
6D 32 0D
The matrix replies:
ACK (Hex 06) if the command has been performed successfully
NACK (Hex 15) if transmission errors have been detected

9.4 Create preset command

Via a command from host, the matrix can create and perform up to 8 internal presets. The presets are created by the current status of the matrix and are maintained in the case of a blackout.

Remember that presets can be created and recalled also from the keypad of the matrix. The presets are overwritten; therefore, the settings applied by the host can cancel and replace those of the keypad and vice versa.

The host must send the following sequence:

S	1 control character(Hex 53)
pp	2 characters that indicate the number of the preset to be saved (from “01” to “08”)
<CR>	1 end of string character(Hex 0D)
The matrix replies with:	
<ACK> **<NAK>**	if the command has been performed successfully if transmission errors or invalid control parameters have been detected

Example: To save the current status of the connections on preset number 08, the host will send on line the following hexadecimal characters:
53 30 38 0D
The matrix replies:
ACK (Hex 06) if the command has been performed successfully
NACK (Hex 15) if transmission errors have been detected

9.5 Recall preset command

Via a command from host, the matrix can activate one of the presets saved previously.

The host must send the following sequence:

R	1 control character(Hex 52)
pp	2 characters that indicate the number of the preset to be recalled (from “01” to “08”)
<CR>	1 end of string character(Hex 0D)
The matrix replies with:	
<ACK> **<NAK>**	if the command has been performed successfully if transmission errors or invalid control parameters have been detected

Example: To recall preset 5, the host will send on line the following hexadecimal characters:
52 30 35 0D
The matrix replies:
ACK (Hex 06) if the command has been performed successfully
NACK (Hex 15) if transmission errors have been detected

ELPRO Video Labs s.r.l.
St.da della Pronda, 45/B 10142 Torino ITALY
Tel.+39 0117701583 – Fax +39 011703751

9.6 Set/clear default configuration command

When the default configuration is activated, the current status of the video connections is set as default. At subsequent power-on, the matrix is set to this configuration regardless of its status at power-off.

The host must send the following sequence:

C	1 control character(Hex 43)
X	1 character that indicates the enable status of the default configuration: "0" : de-activates the default configuration "1" : activates the default configuration and sets the current status of the connections as default
<CR>	1 end of string character(Hex 0D)
The matrix replies with:	
<ACK> **<NAK>**	if the command has been performed successfully if transmission errors or invalid control parameters have been detected

Example: To activate the default configuration, the host sends on line the following hexadecimal characters:
43 31 0D
The matrix replies:
ACK (Hex 06) if the command has been performed successfully
NACK (Hex 15) if transmission errors have been detected

9.7 Set/clear preview output command

The host must send the following sequence:

p	1 control character(Hex 70)
x	1 character that indicates the enable status of the last output as preview: "0" : last output used normally "1" : last output used as preview output
<CR>	1 end of string character(Hex 0D)

The matrix replies with:	
<ACK> **<NAK>**	if the command has been performed successfully if transmission errors or invalid control parameters have been detected

Example: To program the last output as preview output, the following hexadecimal characters must be sent on line:
70 31 0D
The matrix replies:
ACK (Hex 06) if the command has been performed successfully
NACK (Hex 15) if transmission errors have been detected

9.8 Set Seamless Times command

The seamless switching times can be set for each single output or for all the outputs.

The host must send the following sequence:

W	1 control character(Hex 57)
uu	2 characters that indicate the number of the output for which to set the time (from "01" to "08") If uu = "00" the time is set for all the outputs.
t	1 character that indicates the wait time: "0" : 300 msec. "1" : 500 msec. "2" : 1 second "3" : 2 seconds
<CR>	1 end of string character(Hex 0D)
The matrix replies with:	
<ACK> **<NAK>**	if the command has been performed successfully if transmission errors or invalid control parameters have been detected

Example: To set a seamless time of 1 second for output 4, the following hexadecimal characters must be sent on line:

ELPRO Video Labs s.r.l.
St.da della Pronda, 45/B 10142 Torino ITALY
Tel.+39 0117701583 – Fax +39 011703751

57 30 34 32 0D

whereas to set 1 second for all the outputs, the following hexadecimal characters must be sent:

57 30 30 32 0D

The matrix replies:
ACK (Hex 06) if the command has been performed successfully
NACK (Hex 15) if transmission errors have been detected

9.9 Connection status request

The host must send the following sequence:

D	1 control character (Hex 44) no other parameters are required
<CR>	1 end of string character(Hex 0D)
The matrix replies with a string indicating the status of the connections:	
D	1 character that identifies the status requested (Hex 44)
vv_1 **0 0** ... vv_n **0 0**	16 pairs of characters each of which indicates the number of the video input connected to output ***n*** followed by the pair of characters "**00**" The values of vv range from "01" a"08". Note 1: if vv = "00" this means that the corresponding output is in high impedance. Note 2: In this case, the only function of the pair of characters "**00**" is to make the reply comply with the standard of this command, which is generic for all ELPRO matrixes.
<CR>	1 end of string character(Hex 0D)

Example: The host sends on line the following hexadecimal characters:

44 0D

A matrix that has all the inputs connected to the outputs of the same name will reply with the following hexadecimal characters:

44 30 31 30 30 30 32 30 30 30 33 30 30 30 34 30 30 30 35 30 30 30 36 30 30 30 37 30 30 30 38 30 30 0D

9.10 Global status request

The host must send the following sequence:

d	1 control character (Hex 64) no other parameters are required
<CR>	1 end of string character(Hex 0D)
The matrix replies with a string of status connections consisting of:	
D	1 character that identifies the status requested (Hex 64)
vv1 ... vvn	8 pairs of characters each of which indicates the number of the video input connected to output ***n*** The values range from "01" a"08". Note 1: if vv or aa = "00" this means that the corresponding output is in high impedance. Note 2: in this case, as opposed to command "D", the pair of characters "00" is not present.
D	1 character that indicates the status of the default configuration: "0" : default configuration not activated "1" : default configuration activated
I	1 character that indicates enable status of the IR receiver: "0" : IR receiver disabled "1" : IR receiver enabled
P	1 character that indicates if the output is used as preview output: "0" : last output used normally "1" : last output used as preview
M	1 character that indicates mute status on the preview output: "0" : mute off "2" : mute video active
t1...t 8	8 characters that indicate the seamless switching time on the outputs, the first character corresponds to output 1, the second to output 2, etc.: "0" : 300 msec. "1" : 500 msec. "2" : 1 second "3" : 2 seconds
<CR>	1 end of string character(Hex 0D)

Example: The host sends on line the following hexadecimal characters:

64 0D

ELPRO Video Labs s.r.l.
St.da della Pronda, 45/B 10142 Torino ITALY
Tel.+39 0117701583 – Fax +39 011703751

A matrix that has:

- all the inputs connected to the outputs of the same name
- the default configuration not activated
- the IR receiver active
- The 8th output used as Preview
- Mute active
- Seamless switching times set to 500 msec. for all the outputs

will reply with the following hexadecimal characters:

64 30 31 30 32 30 33 30 34 30 35 30 36 30 37 30 38 30 31 31 32 31 31 31 31 31 31 31 31 0D

9.11 Seamless times request

Request for seamless switching times set for the 8 outputs.
The host must send the following sequence:

w	1 control character (Hex 77) no other parameters are required
<CR>	1 end of string character(Hex 0D)
The matrix replies with a connection status string:	
w	1 character that identifies the switching times request (Hex 77)
s_1...s_8	8 characters that indicate the seamless switching time on the outputs, the first character corresponds to output 1, the second to output 2, etc.: "0" : 300 msec. "1" : 500 msec. "2" : 1 second "3" : 2 seconds
<CR>	1 end of string character(Hex 0D)

Example: The host sends on line the following hexadecimal characters: **77 0D**

A matrix that has a seamless switching time of 500 msec set on the first 4 outputs and a time of 1 second on the other outputs will reply with:

77 31 31 31 31 32 32 32 32 0D

9.12 Matrix identifier request

It is possible to request the identifier of the matrix connected.
The host must send the following sequence:

I	1 control character(Hex 69) no other parameters are required
<CR>	1 end of string character(Hex 0D)
The matrix replies with its own identifier:	
I	1 character that identifies the identifier request (Hex 69)
and **0**	1 character identifier of the TZM883 matrix (Hex 65) 1 character identifier of the firmware version (Hex 30)
<CR>	1 end of string character(Hex 0D)

Example: The host sends on line the following hexadecimal characters: **69 0D**

The matrix will reply with the following hexadecimal characters:

69 65 30 0D

ELPRO Video Labs s.r.l.
St.da della Pronda, 45/B 10142 Torino ITALY
Tel.+39 0117701583 – Fax +39 011703751

10.0 UPGRADE FIRMWARE

As for all Elpro latest generation units, remote update of the firmware is possible. This is very useful as, when capabilities are added to the appliances, customers who purchased the product earlier can also benefit from these.

The firmware of the TZM883V can also be updated via RS232 using the **UPLOADER** program. This program must be downloaded from the site www.elprovideolabs.com and installed on a PC under Windows ©.

To update the firmware:

-Download the .hex file of the firmware version to be installed from the Elpro site and save it on the PC.

- Switch on the TZM883V holding down the INPUT 8 button. Upgrade condition is indicated with the message "Enter in Upgrade mode..." and then with “Upgrade” on the first line of the display.

- Start the UPLOADER software and upload according to the instructions of the program.
WARNING: do not switch off the machine during this procedure!

- On completion of upgrade, switch the unit off and on again to make the new firmware operative

WARNING
Before carrying out any Firmware Upgrade, it is advisable to contact ELPRO technical personnel in order to carry out upgrade operations correctly.

11.0 TECHNICAL DATA

VIDEO GRAPHIC	
Inputs	8, GRAPHIC or Y Pb Pr with HDD 15 p.F.
Input coupling	DC
Input impedance	75 Ω
Crosstalk (worst case)	50 dB at 50 MHz
Bandwidth	500 MHz at -3 dB
Outputs	8, independent with HDD 15 p.F.
Synchronism	H+V separate, TTL level, High Z

GENERAL	
Remote control	IR, RS232, LAN
Main input	90 to 230 Vac
Power consumption	15 VA
Size (WxDxH)	483x204x44 mm
Weight	3 Kg
Operating temp. range	0 to 45 °C
Safety	according to EN 60065
EMC	according to EN 55103-1 and EN 55103-2

CE Mark

ELPRO Video Labs s.r.l.
St.da della Pronda, 45/B 10142 Torino ITALY
Tel.+39 0117701583 – Fax +39 011703751

12.0 NOTES

This product is warranted for 5 years from the date of purchase.

If the fault in the product is due to improper use or operations carried out by third parties, the warranty is forfeited.

During the warranty period, Elpro will repair the faulty units free of charge.

The faulty units must be sent CARRIAGE FREE to the Elpro offices in Turin with a regular accompanying note.

The units repaired will be returned CARRIAGE FORWARD to the addressee.

Outside the warranty period, Elpro will repair the faulty units EX its Turin offices, charging the cost of the repair to the customer.

For any problems during installation of the TZM883V,
call the Elpro hot-line Tel. +39 011 7701583
or e-mail: info@elprovideolabs.com