# TSB 082

## VIDEO AUTO SWITCHER

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(*) only for models with built-in alarm card TAC 081

> **This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.**

This unit is produced to comply with Directive 89/336/EEC.

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# PREFACE

The TSB 082 is a high quality microprocessor based video switcher which is suitable to connect up to eight cameras or other video sources. Two independent outputs allow to connect monitors, video tape recorders or other video equipment. Alarm input is suitable to connect eight alarm sensors.

Standard BNC-type input and output connectors enables the TSB 082 to be used with other CCTV switchers, cameras, monitors and video tape recorders.
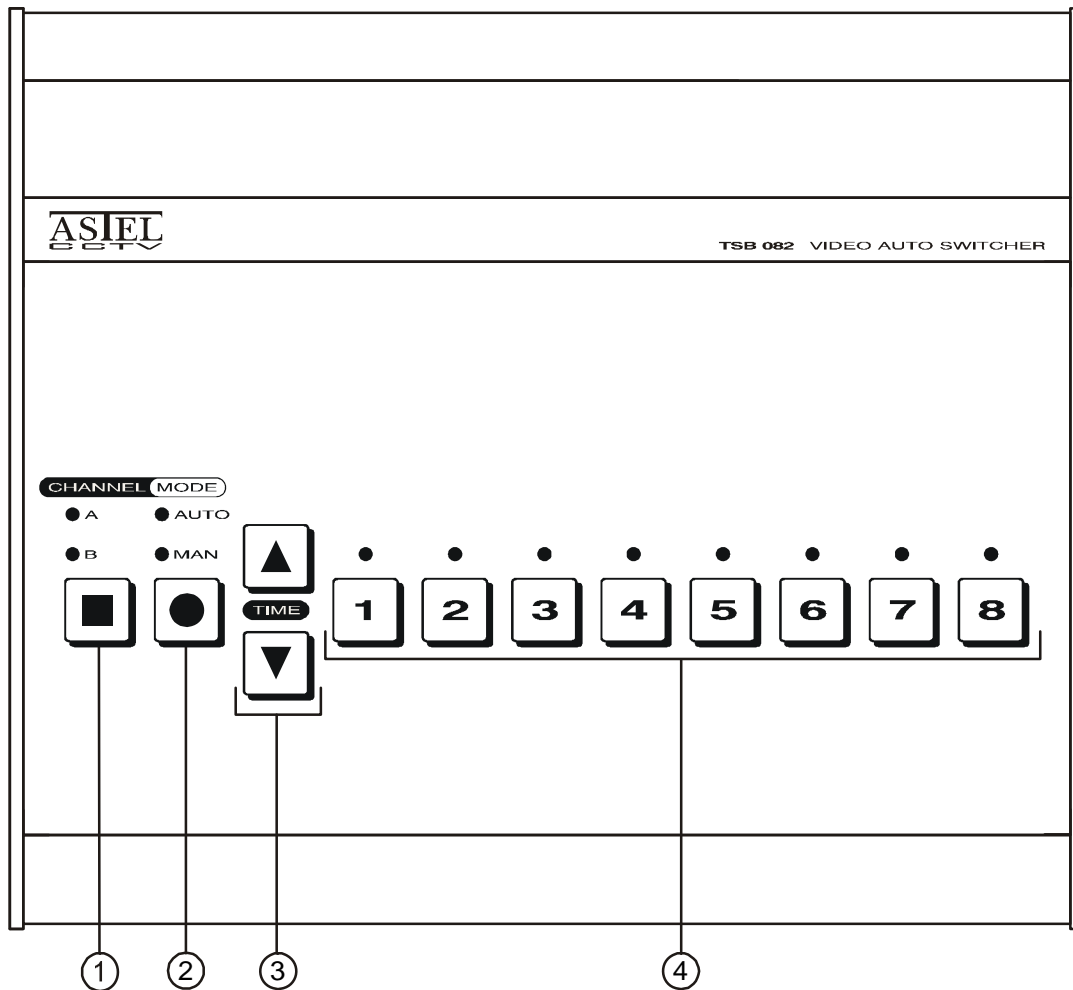
# FEATURES

- Microprocessor Based
- 8 Video Inputs
- 2 Video Outputs
- Vertical Interval Switching
- Nonvolatile RAM Backup
- 8 Alarm Inputs (Optional)
- Alarm Output (Optional)
- Built-In Buzzer (Optional)

# PRECAUTIONS

- Use only the power source specified on the rating label located on rear of the cabinet.
- Do not drop metallic parts through slots. This action could permanently damage this unit. Disconnect the power supply adaptor immediately and refer servicing to qualified service personnel.
- Avoid using this unit under the following conditions:
  -in extremely hot, cold or humid places,
  -in dusty places,
  -near appliances generating strong magnetic fields,
  -in places subject to direct sunlight, and
  -in badly ventilated places.
- Unplug this unit from the AC outlet and refer servicing to qualified service personnel under the following conditions:
  -if the unit does not operate normally following the operating instructions
  -if the unit has been dropped or the cabinet has been damaged
  -when the unit exhibits a distinct change in performance.

# CONTROLS AND CONNECTORS

**FRONT PANEL**



## (1) CHANNEL
Key to select the CHANNEL A or B to operate with TIME, MODE or 1- 8 keys.

## (2) MODE
Key to select operating mode - auto (sequential) or manual - or to reset the alarm* in the CHANNEL A.

In the MANUAL MODE LEDs from 1 - 8 show the selected input on the selected CHANNEL A or B.

In the AUTO MODE LEDs from 1 - 8 show the current input on the selected CHANNEL A or B. By pressing one of the keys from 1 - 8 input LEDs show the active inputs. The inputs are eliminated by pressing the selected keys from 1 - 8

After this operation the unit is returned to normal operation.

If all the inputs are eliminated, the switcher automatically switches the first input.
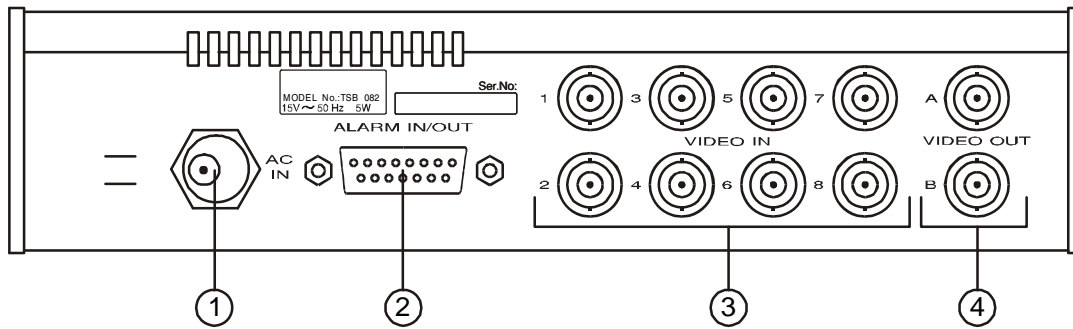
## (3) TIME
Keys to select the sequential time. When the UP or DOWN selector key is pressed LEDs from 1 - 4 show the selected sequential time. By every pressing of the TIME keys the sequential time is changed for 1 second.

| TIME (sec) | LED1 | LED2 | LED3 | LED4 |
|------------|------|------|------|------|
| 1 -7       | OFF  | OFF  | OFF  | OFF  |
| 8 - 15     | ON   | OFF  | OFF  | OFF  |
| 16 - 23    | OFF  | ON   | OFF  | OFF  |
| ……         | …..  | …..  | …..  | …..  |
| 120        | ON   | ON   | ON   | ON   |

## (4) VIDEO INPUT 1 - 8
Keys to select the input in MANUAL MODE or to eliminate the inputs in AUTO MODE.

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## REAR PANEL



**(1) AC IN**
Standard connector to connect AC adaptor 15V AC.

**(2) ALARM IN/OUT***
Alarm input / output control connector (D-15F). It allows to connect up to eight alarm sensors. Built-in relay output is suitable to control video and other equipment.
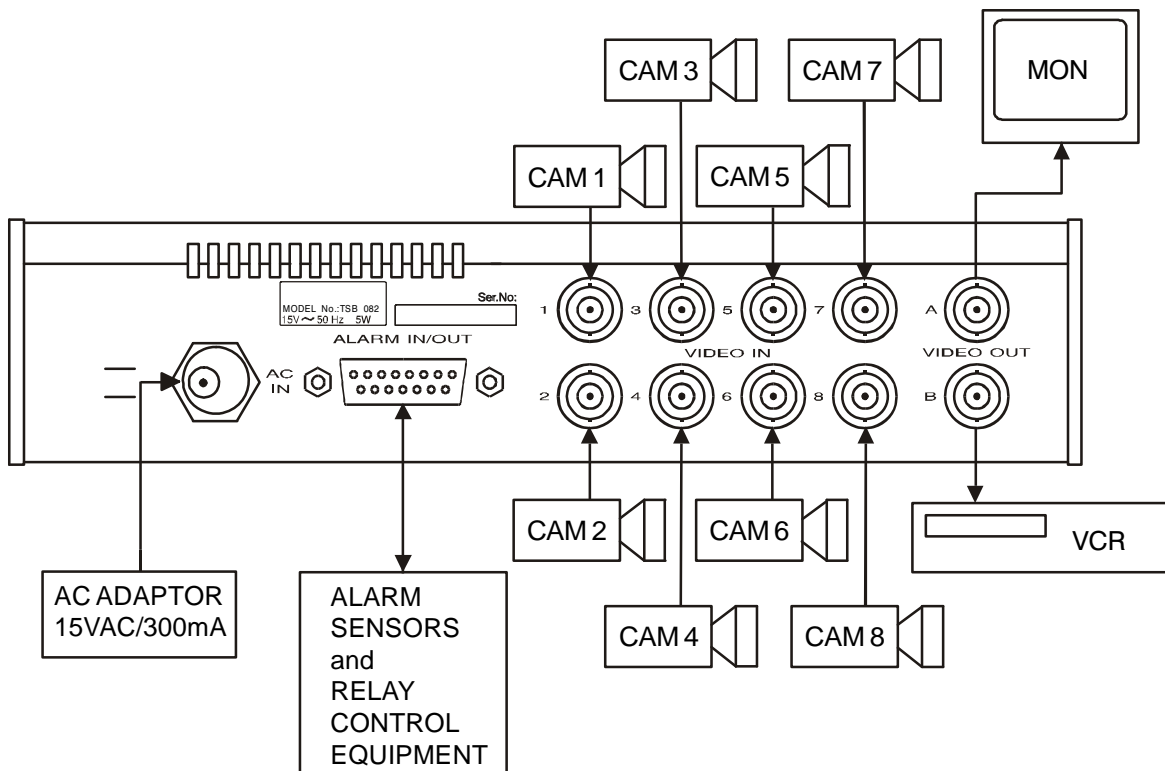
**(3) VIDEO IN**
BNC video input connectors. They allow to connect up to eight video cameras or other video sources.

**(4) VIDEO OUT**
BNC video output connectors of the CHANNEL A and B.

# CONNECTIONS

- Be sure to disconnect the power supply adaptor before connecting to other equipment.

- Also refer to the instruction manual of the equipment to be connected.

## VERTICAL INTERVAL SWITCHING

This unit includes an electronic circuit which allows smooth switchings without picture roll or flutter. When the cameras and this unit are line-locked this function appears.

## ALARM SPECIFICATION*

When only one alarm input is activated, the alarmed video input appears on the CHANNEL A and the buzzer is activated. On the CHANNEL A "AUTO" and "MANUAL" LEDs blink and the alarm output is activated. When more then one alarm input is activated the alarmed video inputs appear sequentially on the CHANNEL A.
Alarm sequential time and alarm duration time are adjusted in the SET-UP. Alarm activity and alarm triggering are defined for every alarm input separately. Alarm reset mode enables the return, after the alarm duration time, to normal operation or to the last alarmed camera.
The manual reset is achieved by pressing the MODE key.

## SET-UP

SET-UP is made by the help of the keys and LEDs located on the front panel of the unit. All settings are as follows:

> ALARM DURATION TIME (1 - 120 sec.)
> ALARM SEQUENTIAL TIME (1 - 120 sec.)
> ALARM ACTIVITY (enable/disable)
> ALARM TRIGGERING (negative/positive)
> ALARM RESET MODE (normal/last alarmed)
> SYNCHRONISATION MODE (PAL/NTSC)

Press the keys "1" and "2" together for 3 seconds. CHANNEL A and B LEDs light. By pressing the UP/DOWN selectors one of alarm settings is selected:

| SET-UP | LED1 | LED2 | LED3 |
|---|---|---|---|
| DURATION TIME | OFF | OFF | OFF |
| SEQUENTIAL TIME | ON | OFF | OFF |
| ACTIVITY | OFF | ON | OFF |
| TRIGGERING | ON | ON | OFF |
| RESET MODE | OFF | OFF | ON |
| SYNC. MODE | ON | OFF | ON |

If the ALARM DURATION TIME is selected press "MODE" key.
Adjust the ALARM DURATION TIME by pressing UP/DOWN selectors:

| DURATION TIME (sec) | LED1 | LED2 | LED3 | LED4 |
|---|---|---|---|---|
| 1 -7 | OFF | OFF | OFF | OFF |
| 8 - 15 | ON | OFF | OFF | OFF |
| 16 - 23 | OFF | ON | OFF | OFF |
| ...... | ..... | ..... | ..... | ..... |
| 120 | ON | ON | ON | ON |

To exit the ALARM DURATION TIME press "MODE" key.

If the ALARM SEQUENTIAL TIME is selected press "MODE" key.
Adjust the ALARM SEQUENTIAL TIME by pressing UP/DOWN selectors:

| SEQ. TIME (sec) | LED1 | LED2 | LED3 | LED4 |
|---|---|---|---|---|
| 1 -7 | OFF | OFF | OFF | OFF |
| 8 - 15 | ON | OFF | OFF | OFF |
| 16 - 23 | OFF | ON | OFF | OFF |
| …… | ….. | ….. | ….. | ….. |
| 120 | ON | ON | ON | ON |

To exit the ALARM SEQUENTIAL TIME press "MODE" key.

If the ALARM ACTIVITY is selected press "MODE" key.
Change the ALARM ACTIVITY of selected alarm input 1 - 8 by pressing one of 1 - 8 keys:

| ACTIVITY | LED1 | LED2 | LED3 | LED4 | LED5 | LED6 | LED7 | LED8 |
|---|---|---|---|---|---|---|---|---|
| ENABLE | ON | ON | ON | ON | ON | ON | ON | ON |
| DISABLE | OFF | OFF | OFF | OFF | OFF | OFF | OFF | OFF |

To exit the ALARM ACTIVITY press "MODE" key.

If the ALARM TRIGGERING is selected press "MODE" key.
Change the ALARM TRIGGERING of selected alarm input 1 - 8 by pressing one of 1 - 8 keys:

| TRIGGERING | LED1 | LED2 | LED3 | LED4 | LED5 | LED6 | LED7 | LED8 |
|---|---|---|---|---|---|---|---|---|
| NEGATIVE | ON | ON | ON | ON | ON | ON | ON | ON |
| POSITIVE | OFF | OFF | OFF | OFF | OFF | OFF | OFF | OFF |

To exit the ALARM TRIGGERING time press "MODE" key.

If the ALARM RESET MODE is selected press "MODE" key.
Select the ALARM RESET MODE by pressing UP/DOWN selectors:

| RESET MODE | LED1 | LED2 | LED3 | LED4 |
|---|---|---|---|---|
| LAST | ON | ON | ON | ON |
| NORMAL | OFF | OFF | OFF | OFF |

To exit the ALARM RESET MODE press "MODE" key.

If the SYNCHRONISATION MODE is selected press "MODE" key.
Select the SYNCHRONISATION MODE by pressing UP/DOWN selectors:

| SYNC. MODE | LED1 | LED2 | LED3 | LED4 |
|---|---|---|---|---|
| NTSC | ON | ON | ON | ON |
| PAL | OFF | OFF | OFF | OFF |

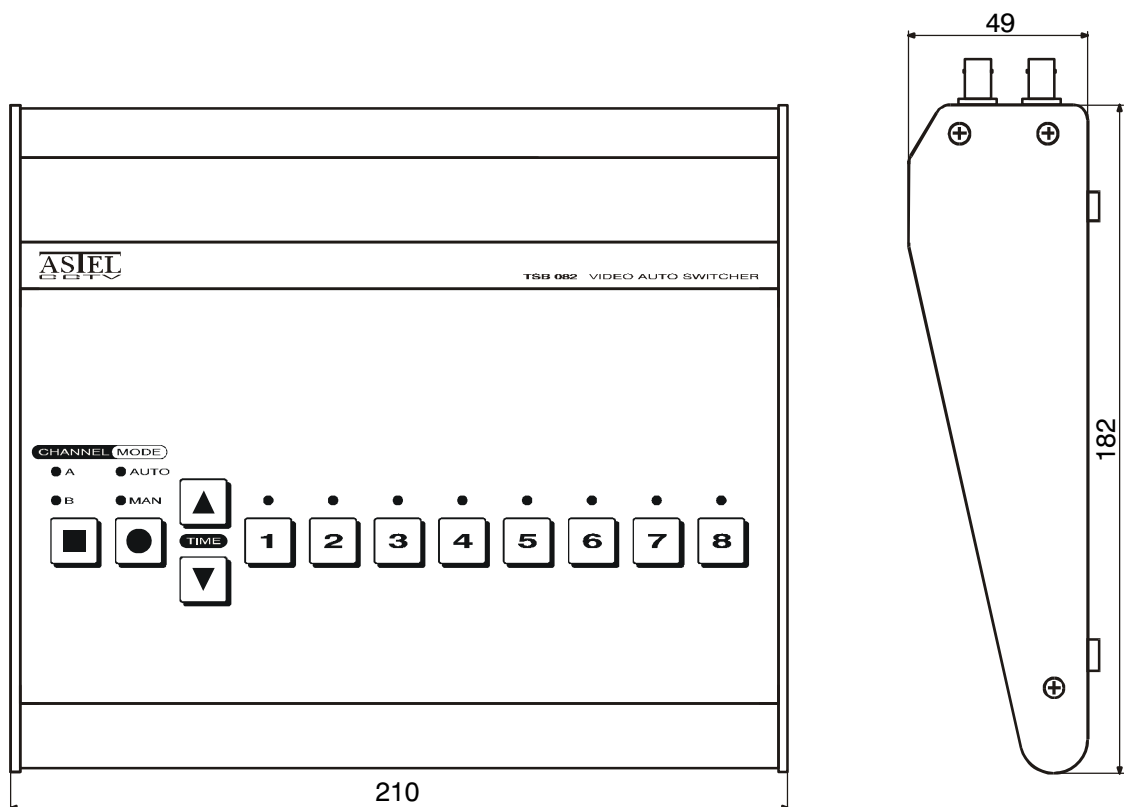To exit the SYNCHRONISATION MODE press "MODE" key.

To exit the SET-UP press "CHANNEL" key.

# STANDARD SETTING

Press the key "CHANNEL" and key "MODE" together for more than 3 seconds. All settings are as follows:

CHANNEL A:           -auto (sequential) mode
                                 -8 inputs
                                 -seq. time - 1 sec.
CHANNEL B:           -auto (sequential) mode
                                 -seq. time - 1 sec.
                                 -8 inputs
ALARM*:                -disable
                                 -seq. time - 1 sec.
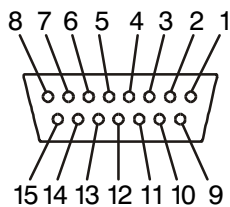                                 -duration time - 20 sec.
                                 -trigger - negative
SYNC. MODE:          -PAL

# APPEARANCE

# SPECIFICATIONS

| | |
|---|---|
| Video inputs | 8, 1 Vpp / 75 Ω, BNC |
| Video outputs | 2, 1 Vpp / 75 Ω, BNC |
| Video bandwidth | 10 MHz ± 3 dB |
| Signal / noise ratio | > 60 dB |
| Crosstalk | 56 dB (4.5 MHz) |
| Switching interval | adjustable, 1 to 120 sec. (CH A, CH B, alarm*) |
| Alarm inputs* | 8, activity adjustable, D-15F connector |
| Alarm output* | free-voltage relay output 30V/0.5A, D-15F connector |
| Alarm duration* | adjustable, 1 to 120 sec. or manual reset |
| Nonvolatile RAM backup | 100 years data retention. |
| Power Requirement | 15 V AC, 50/60 Hz |
| Consumption | max. 300 mA AC |
| Humidity Range | 45% - 85% |
| Temperature Range | 10° - 35°C |
| Dimensions (W x H x D) | 210 x 49 x 195 mm |
| Weight (incl. AC adaptor) | 1.5 kg |

# ALARM CARD INSTALLATION*

- Disconnect the power supply adaptor from the AC outlet.
- Remove the four screws on the casing's lower panel and open the lower lid.
- Insert the Alarm Card TAC 081 into the slot on the rear panel and mount with D-15F connector screws.
- Connect the flat cable into the K101 connectors on the switcher board and alarm card.
- Close the casing of the TSB 082 Video Auto Switcher.

## PIN ASSIGNMENT*

Alarm input / output connector D-15F:

| PIN No. | FUNCTION |
|---|---|
| 1 | ALARM 1 |
| 2 | ALARM 2 |
| 3 | ALARM 3 |
| 4 | ALARM 4 |
| 5 | ALARM 5 |
| 6 | ALARM 6 |
| 7 | ALARM 7 |
| 8 | ALARM 8 |
| 9 | Relay - NO |
| 10 | Relay - Com. |
| 11 | Relay - NC |
| 12 | GND |
| 13 | GND |
| 14 | GND |
| 15 | GND |

8 7 6 5 4 3 2 1

15 14 13 12 11 10 9

# OPTIONAL ACCESSORY

- Alarm card TAC 081

Web: [www.astel-cctv.com](www.astel-cctv.com)