Superelex STAND ALONE
Installation Manual

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[1.0] General

The STAND ALONE Superelex is a special lane computer for Scoring System that don't require the Main Desk.

This item was designed to be installed in small entertainment center, pub, hotels, little bowling centres (2, 4 or 6 lanes).
The system work connected to token box or switch, Stand Alone Superelex has one "coin input" for each lane.

Each Stand Alone Superelex could be used for equipped one pair of lanes. Pinsetter Interface (A.P.I.), monitors and bowlers' console options are the same of Standard Wins system.

Stand Alone Superelex could be interface to various kind of pinsetter, even with pinsetters that require a Camera (Sciba) for pins detection.

The Stand Alone Superelex software is pre-loaded on Superelex local HD by the factory. To vary Pinsetter, Coin and general parameters as need for the installation it will be necessary connect temporary a VGA monitor and Keyboard to Superelex.

For installation with the camera (Sciba) installer must be equip with PC (Laptop or other computer)+ Network hub. A special Sciba software need to be installed on PC, software installation must be perform directly by Steltronic S.p.A tech department.

For installation part list, we suggest to:

1) identify the pinsetter model for choosing the appropriate interface + cables kit and accessories.
2) choose Score monitors and bowler's console* model

*bowler's console is not mandatory for the system, is an optional

[1.0] Connection diagram
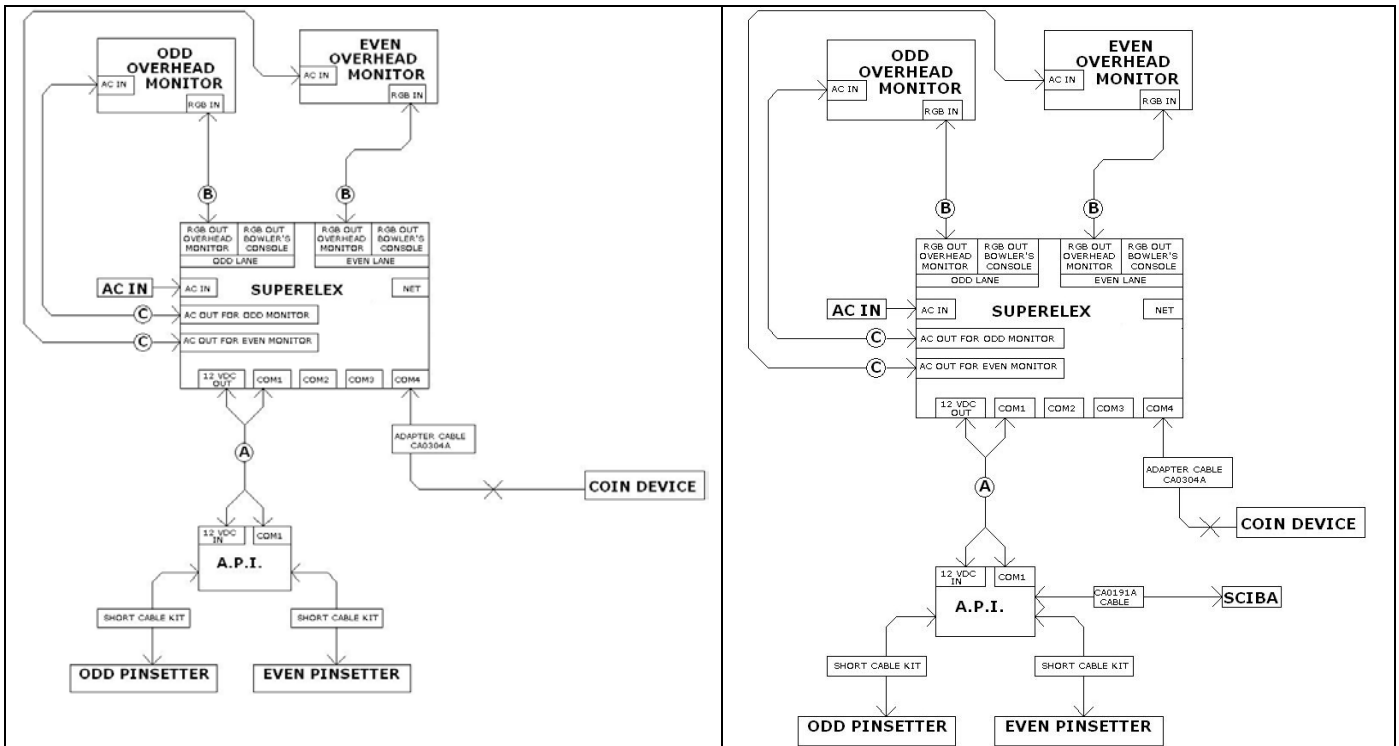
Sample of installation's without and with the camera (Sciba)

[A] CA0092 CABLE: RS 232 + DC cable for communication between lane computer and pinsetter interface. The model of the cable and the length depends by choose of Lane computer installation method:

1) Lane computer installed between the overhead monitor = CA0092A (length 33 meters)
2) Lane computer installed near A.P.I in pinsetter area = CA0092C (length 1 meter)

[B] Video signal cables for connecting Overhead monitor. Model and length depends by selected monitors.

[C] AC power cables for connecting overhead monitor. Model and length depends by selected monitors.

For a detailed list of available monitors & TV and bowler's Console for scoring system please contact the local vendor or visit our web site www.@steltronic.com

Note: for pre-installation, installation and connection of overhead monitor, bowler console and pinsetter interface please consult the Wins installation manual, procedures are the same.
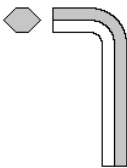
[2. 0] Tools requirement for installation

MANDATORY: For installation with Sciba (Camera) and camera calibration, the installer must be equipped with:
a) Laptop or PC with IBCMS software pre-loaded by Steltronic S.p.A.
b) Network switch or Network hub + 2 UTP CAT5 network cable
c) The 2 template for Sciba mechanical calibration

	Standard tools (note: all screws & nuts are metric) • Electric Drill or Battery drill + screw bit + drill bit for holing Ø 30mm (Sciba) • Screwdriver SET (Philips + standard) • 2 Spanner 10 • 1 Spanner 17 • 1 Spanner 13 • 1 Cutter + electric scissor • Pliers Set • Tubular key Set: 5 - 5,5 – 7 - 8 • 5 meter ruler
	Special keys for Sciba (camera installation) • 1 key 4 • 1 key 2,5 • 1 key 1,5
	Special crimping tools • RJ45 crimping tool (recommended AMP 853400)* • BNC (RG59) crimping tool • AMP crimping for AMP contact (recommended AMP F 9922) • AMP PINS EXTRACTOR *optional for CAT5 cables installation, not necessary using the commercial UTP cables.
	Items required Installer must provide a crimp Fast-on Set (see sample by side) in order to connect the scoring in parallel to pinsetter, Steltronic do not supply this material into shipment. To make a good installation is also required a set of ties, Steltronic supply only the installation set for Sciba.

[2.1] Items below are the requirements of Steltronic S.p.A.

- All zip ties must be cut.
- All wires must be placed and mounted in a way that they cannot be damaged by a bowling ball.
- All cables must be secured in a way that they cannot be pulled off or damaged by mechanic.
- The API cables must be secured. The camera cables must be secured so a bowling ball cannot damage it.
- All camera's need to be mounted on solid capping. The capping should to be cut (to accommodate the camera), and new #14X4" wood screws need to be installed on this new section of capping. Doing this will avoid the mechanic from lifting a section of capping for an underground ball.
- After installation, check the operation of the 10th frame (spare) extra cycle.
- Monitors need to be adjusted and sized with the test grid, games and status bar

> **AFTER THE INSTALLATION, PROCEED WITH THE SCORING TEST,**
> **USE THE SCORING INSTALLATION CHECKLIST**
> **(MAKE A COPY OF FOLLOWING PAGES) AND SEND IT**
> **TO LOCAL SERVICE OR AUTHORIZED VENDOR FOR CERTIFICATION**

[2.2] Scoring system test

1) All lanes receive 2ⁿᵈ ball signal :　　　　　　YES ☐　　　NO ☐

2) Foul line (if installed) tested :　　　　　　　YES ☐　　　NO ☐

3) All sensor are aligned :　　　　　　　　　　YES ☐　　　NO ☐

4) All pinsetters receive trigger* from Score :　　YES ☐　　　NO ☐

5) All pinsetters make short gutter cycle* :　　　YES ☐　　　NO ☐

6) All pinsetters make Fast Strike cycle*:　　　YES ☐　　　NO ☐

7) Score recognize pins correctly :　　　　　　YES ☐　　　NO ☐

8) Score recognize pins correctly even with glow light:　YES ☐　　NO ☐

9) Monitors screen are adjusted correctly:　　YES ☐　　　NO ☐

10) Bowler's console works properly*　　　　YES ☐　　　NO ☐

11) Ball return connection OK*　　　　　　YES ☐　　　NO ☐

12) Foul light power on OK*　　　　　　　YES ☐　　　NO ☐

* this parts or special cycle or software are optional, test when installed

Indicate which lanes are not tested or out of order: _____

Comments:_____
_____
_____
_____

Signature_____

Testing date:_____

[2.3] INSTALLATION: Step by step procedure

- Install Lane computer in the right position.
- Install A.P.I. near the pinsetter.
- Lay the RS232 (CA0092) cable from lane computer to A.P.I.
- Lay a 4 wires cable from Lane computer to coin device*
- Connect Lane computer to the monitors and other devices
- Connect the coin device to lane computer*
- Interface A.P.I. to pinsetters
- Install the Camera (Sciba)**
- Set the camera by Software**
- Set the lane computer and coin parameters

* to connect the COIN device to the lane computer, a 3-4 wires cable (wire gauge 0,35 mm2) need to be lay from lane computer to coin device.

** only if Camera (Sciba) is require for detecting pins

[3.0] Lane computer (Superelex) installation

Lane computer can be installed between the Overhead monitor, inside the bowler's Console (only in New look double 14" model) or near the pinsetter interface (A.P.I) on the pinsetter curtain wall, Superelex weight is approximately 3,5 kg.
Where the Winvision monitor are installed, the central panel could be used to place the Superelex.

> Note: the Superelex contains an Hard disk. It recommended to keep attention for placing and transport; Superelex must be place in horizontal or by side (only when installed with Winvision monitor with Central Plate).

The **Superelex lane computers** video output is RGB, negative Sync, The monitors or televisions used with Superelex lane computers are connected to the RGB input directly.
Switching monitors On and Off is piloted directly from the Superelex through the VDE exit on each monitor.

SUPERELEX LANE COMPUTER
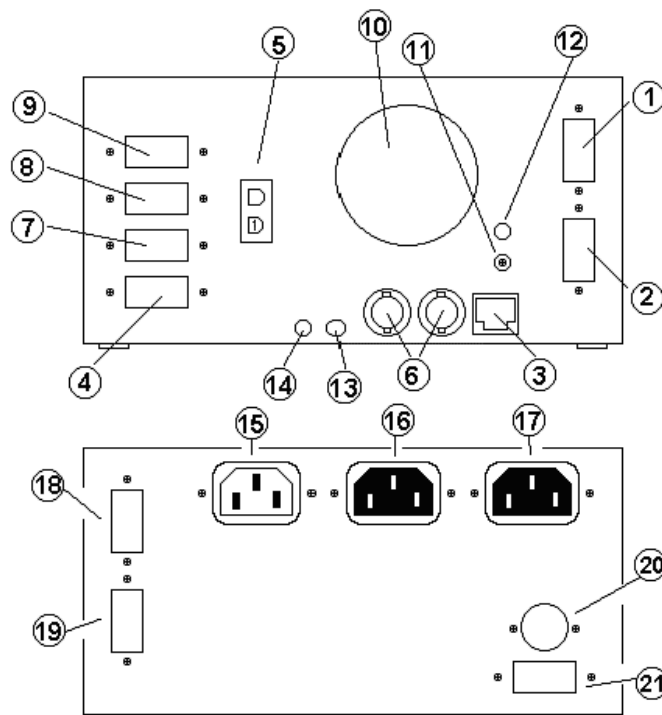
Superelex connectors view

1	RGB out for Odd 14" bowler console monitor	2	RGB out for overhead odd monitor
3	Network in 10 base T	4	COM1 (to CA0092A cable)
5	12 VDC out (to CA0092A cable)	6	CVBS in/out
7	COM2 (to touch screen driver)	8	COM3 (to Wireless Bowler console Receiver)
9	COM4 (COIN)	10	Fan
11	Network led	12	Reset Button (only for A05001C version)
13	Even Audio out	14	Odd Audio out
15	AC IN (110 – 240)	16	Ac out for Odd Overhead monitor
17	AC Out for Even overhead monitor	18	RGB out for even 14" bowler console monitor
19	RGB out for overhead even monitor	20	Keyboard in (maintenance only)
21	VGA Out (maintenance only)		

[4.0] COIN DEVICE: connecting lane computer to coin Device

Stand alone Superelex allow the bowler's to begin the game when receiving a "Coin Input".
Coin device must be connected on COM4 of Superelex lane computer.
Steltronic supply a small cable adapter, length 30 centimetres, installer must lay one cable from Lane computer to coin device.

The cable could contain 3 or 4 wires, it's necessary one wire for each coin input, one or 2 wire for common. Minimum suggest wire gauge:0,35 mm2.

If the installation do not require COIN DEVICE (for example in a private apartment) , it's possible connect to each COIN INPUT a   N.O. button or to a ON/OFF switch for open/close the games

Superelex COIN INPUT diagram.
Diode and Resistor are included into cable adapter supplied by Steltronic.
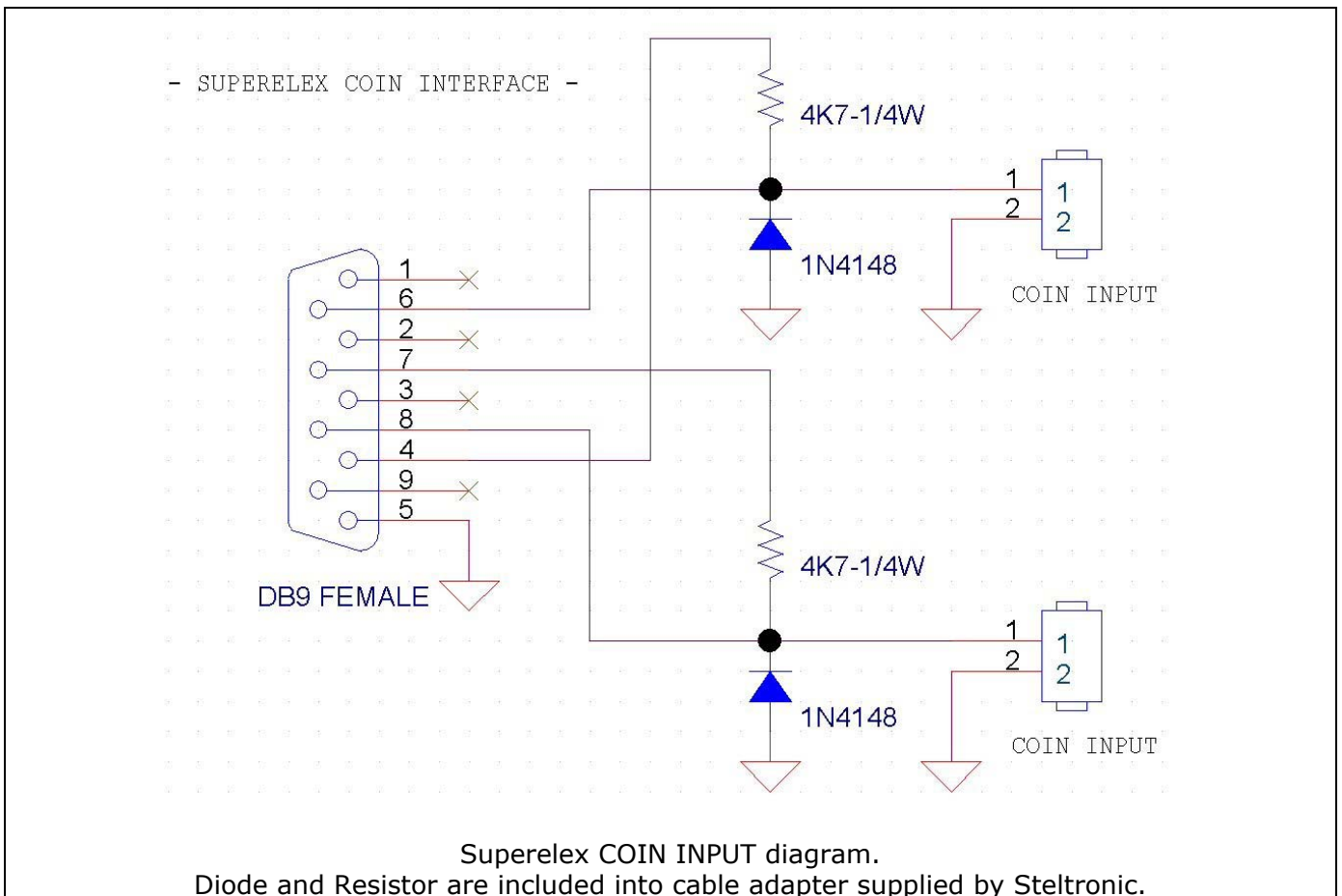
For settings the COIN INPUT method consult the next chapter.

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[5.0] Lane computer, Coin settings and general Parameters

Parameter's editing could be performed in 2 different ways:

   a) **connecting temporary keyboard and VGA monitor to the Superelex**
   b) **from the service PC connected via network to the Superelex**

the method B) is convenient when it's necessary use a service Pc for checking the Pins detection for installation that require Sciba.

[A] Parameters' editing using VGA monitor and keyboard connected directly to Superelex.

   - connect the VGA monitor and keyboard to Superelex
   - power ON the Superelex
   - after the boot, choose option 3: IBCMS STAND ALONE CONFIGURATION AND MAINTENANCE simply selecting the line with arrows, than press Enter.

The program will load the different options:

[1] Pinsetter choice – pinsetter model selection's
[2] Edit CONFIG.INI – options for edit the COIN selection and general parameter.
[3] Edit API.INI – editing of Pinsetter Interface parameters.
[9] Reset games file (clear all games in memory)
[0] Exit and Run LM program – Exit and load the standard program.

For [1] selection just choose the pinsetter model from the available list, this will charge the default settings for the vary parameters. For [2] and [3] menu, after the selection press a key to continue ("premi un tasto per continuare"), edit the necessary line, than click on ESC button for displaying the bar of the menu.

[B] Parameters' editing using the Service PC

   a) MANDATORY: Superelex MUST be powered OFF
   b) Connect the Service PC and Superelex to the network switch *(see Chapter 6.5 for further details)*
   c) Power ON the Network Switch
   d) Power ON the service PC, wait till Windows and service Manager start*
   e) Power ON the Superelex lane computer

***Important: do not power ON the Superelex with Service manager icon RED.
When Service manager is not running, Superelex will load the Stand alone menu, ignoring the Front desk program.
To solve the problem: first check the Network switch and UTP cable connection's, if the Main Desk do not communicate with the network switch, the Service manager cant' be load. At soon the network switch and the network communication between Main Desk are tested and OK, click (or double click) on Service Manager Icon , than click on RESTART or START button. Traffic light icon must became green in 2-3 seconds**

To edit the Lane computer parameters browse the Main Desk C drive, open the folder TCPSERV\LM\CONF.
In the CONF folder there are 2 INI files that must be edit only using NOTEPAD:

API.INI – configuration file for setting A.P.I. interface
CONFIG.INI – configuration file for setting the most common parameters (coin, etc.)

After the files modification ON the Main desk, restart the lane computer. Superelex automatically update the Parameters at next boot.

In the following pages there is explanation of Api.ini and Config.ini files

The line with **;** at begin is the explanation comment for parameter, do not edit. Please respect the syntax: after the = there is one space before the number.

Example: Via bowling MC2 pinsetter: **PINSET_CODE = 15**

WARNING FOR A.P.I. SETTINGS: most of the parameters are pre-set Ok in the factory. we recommend to change parameters only if is strictly necessary .

API.INI

PINSET_CODE = The number after equal must correspond to pinsetter code model:

1 = AMF 8230/823000	2 = AMF 8270 uP	3 = Brunswick GS10	4 = Brunswick A1/A2
5 = Spellman string	6 = Vollmer string	7 = Vilati string	8 = AMF8290 First G.
9 = AMF 8270	10 = Vps2000	11 = Funk KF3000	12 = Yangji Vision*
13 = AMF 8290 XL N.G	14 = Brunswick GSX n	15 = Via Bowling MC2	16 = Brunswick Eclipse
17 = Schmid 4482-51100	18 = SES 2003 string	19 = ZD8800	20 = Mendes M500 Pneus

ok also for Xima pinsetter

HARDWARE CONNECTION =Special cycle or particularly connection's:

0= NONE	*Amf 8270,Brunswick A1/A2, Amf 8230/3000/45, GS10 red chassis*
1= BALL CHANGE	*Amf 8270 with 1st-2nd button, Steltronic 8230 chassis with 1st-2nd button*
2= APS	*Amf 8270uP, Amf 8290 First Gen chassis*
3= gutter and strike out	*Via MC2 pinsetter, Yangi, Zhonda, Xima*
4= APS also on 2nd ball	*Amf 8270, Amf 8290 First Gen. chassis*

RESPOT_TYPE = 10th frame and no-tap respot type for reset pinsetter

0 = none	1 = modified cycle*	2 = extra cycle**

*Strike simulation **pinsetter make 2 cycle

10TH_RESPOT_DELAY = time in second before send an extra cycle pulse to the pinsetter. This delay is necessary for pinsetter that do not allow cycle before sweep is back in stand by position. The calculation of the time starts after the second ball light on.

DO_NOT_WAIT_2ND = enable/disable the checking of the second ball light on during the extra cycle.

0 = enable WAIT	1 = disable WAIT

MACHINE_OFF_DELAY = Delay in seconds before powering off the pinsetter

SPEED_DIST_O = Distance between ODD speed and start (trigger) sensors in cm. Default 23

SPEED_DIST_E = Distance between EVEN speed and start (trigger) sensors in cm. Default 23

DIAMETERS = Distance between start sensors and pinsetter cushion, versus ball diameter (396/22=18). Default 18. *Decrease this parameter to 9 when bumpers installed.*

PHOTO_DELAY_O = delay for ODD LANE for Sciba pins snapshot. The time starts after the ball pass the trigger sensors. The delay is in 19.2ms step (130 = 2.5s)*

PHOTO_DELAY_E = for EVEN LANE for Sciba pins snapshot. The time starts after the ball pass the trigger sensors. The delay is in 19.2ms step (130 = 2.5s)*

*Important for ViaMC2 pinsetter: the photo delay must not exceed 2,7 seconds.

CYCLE_AFTER_PHOTO = enable/disable cycle after pins read. It used for Brunswick a1/A2 pinsetter and when pinsetter cycle interfere with pins reading.

0 = Disable	1 = = cycle after pins read enabled ONLY for first ball cycle	2 = cycle after pins read enabled ONLY for second ball cycle	3 = cycle after pins read enable for first and second ball cycle

GUTTER_7-10 = Enable no cycle when gutter, pin 7 only or pin 10 only. It's working only if cycle after photo (first ball) is enabled:

0 = disable	1 = enabled

AUTO_FOUL = Enable emulation of foul cycle (for pinsetter without foul cycle, like Brunswick A1/A2) It's working only if cycle after photo (first ball) is enabled.

0 = disable	1 = enabled

FOUL_CYCLE_DELAY = Delay time in seconds for automatic foul cycle.

10TH_RESPOT2_DELAY = parameter for automatic foul. Time in seconds.

CHANGEBALL2_DELAY = parameter for automatic foul. Time in seconds

PARAMETER _17H= Settings **ONLY** for Sciba installation

= 0	One Sciba for lane pair (Standard)
= 0	One Sciba for ODD lane looking LEFT side (standard for odd lane)
= 56	One Sciba for ODD lane looking RIGHT side
= 88	Two Sciba cameras for two lanes (ODD->LEFT, EVEN->RIGHT)
= 120	Two Sciba cameras for two lanes (ODD->RIGHT, EVEN->RIGHT)
= 216	Two Sciba cameras for two lanes (ODD->LEFT, EVEN->LEFT)
= 248	Two Sciba cameras for two lanes (ODD->RIGHT, EVEN->LEFT)

Sample of API Settings configuration

PINSETTER MODEL : Amf 8230/3000/45 chassis

PINSET_CODE	1		HW_CONNECTION	0
RESPOT_TYPE	2		10^{TH}_RESPOT_DELAY	3*
DO_NOT_WAIT_2^{ND}	0		MACHINE_OFF_DELAY	2
SPEED_DIST_0	23		SPEED_DIST_E	23
DIAMETERS	18		CYCLE_AFTER_PHOTO	0
PHOTO_DELAY_O	100		PHOTO_DELAY_E	100

*Set for 2nd ball light on at the end of first cycle. vary this parameter to 2nd ball will be ON in the middle of the first cycle.

PINSETTER MODEL : Amf 8270uP

PINSET_CODE	2		HW_CONNECTION	2*
RESPOT_TYPE	1		10^{TH}_RESPOT_DELAY	0
DO_NOT_WAIT_2^{ND}	0		MACHINE_OFF_DELAY	2
SPEED_DIST_0	23		SPEED_DIST_E	23
DIAMETERS	18		CYCLE_AFTER_PHOTO	0
PHOTO_DELAY_O	130		PHOTO_DELAY_E	130

* it's possible choose also 4, depends by model chassis. With 4 chassis will receive the APS code even for the 2nd ball cycle.

PINSETTER MODEL : Brunswick GS10 (GS 92-GS96-GS98)

PINSET_CODE	3		HW_CONNECTION	0
RESPOT_TYPE	2		10^{TH}_RESPOT_DELAY	3
DO_NOT_WAIT_2^{ND}	0		MACHINE_OFF_DELAY	40
SPEED_DIST_0	60		SPEED_DIST_E	60
DIAMETERS	18		CYCLE_AFTER_PHOTO	0
PHOTO_DELAY_O	0		PHOTO_DELAY_E	0

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PINSETTER MODEL : Brunswick A1/A2

PINSET_CODE	4	HW_CONNECTION	0
RESPOT_TYPE	2	10^{TH}_RESPOT_DELAY	3
DO_NOT_WAIT_2ND	0	MACHINE_OFF_DELAY	30
SPEED_DIST_0	23	SPEED_DIST_E	23
DIAMETERS	18	CYCLE_AFTER_PHOTO	2 or 3*
PHOTO_DELAY_O	160	PHOTO_DELAY_E	160

*2= cycle after photo for first ball only   3= cycle after photo for first and second ball

PINSETTER MODEL : Spellman string pinsetter

PINSET_CODE	5	HW_CONNECTION	0
RESPOT_TYPE	2	10^{TH}_RESPOT_DELAY	2
DO_NOT_WAIT_2ND	1	MACHINE_OFF_DELAY	40
SPEED_DIST_0	100	SPEED_DIST_E	100
DIAMETERS	18	CYCLE_AFTER_PHOTO	0
PHOTO_DELAY_O	0	PHOTO_DELAY_E	0

PINSETTER MODEL : Vollmer (string pinsetter)

PINSET_CODE	6	HW_CONNECTION	0
RESPOT_TYPE	2	10^{TH}_RESPOT_DELAY	2*
DO_NOT_WAIT_2ND	1*	MACHINE_OFF_DELAY	40
SPEED_DIST_0	100	SPEED_DIST_E	100
DIAMETERS	18	CYCLE_AFTER_PHOTO	0
PHOTO_DELAY_O	0	PHOTO_DELAY_E	0

*change the parameters as needs

PINSETTER MODEL : Vilati (string pinsetter)

PINSET_CODE	7	HW_CONNECTION	0
RESPOT_TYPE	2	10^{TH}_RESPOT_DELAY	2*
DO_NOT_WAIT_2ND	1*	MACHINE_OFF_DELAY	40
SPEED_DIST_0	100	SPEED_DIST_E	100
DIAMETERS	18	CYCLE_AFTER_PHOTO	0
PHOTO_DELAY_O	0	PHOTO_DELAY_E	0

*change the parameters as needs

PINSETTER MODEL : Amf 8290 First Generation chassis

PINSET_CODE	8	HW_CONNECTION	2*
RESPOT_TYPE	1	10^{TH}_RESPOT_DELAY	0
DO_NOT_WAIT_2ND	0	MACHINE_OFF_DELAY	2
SPEED_DIST_0	23	SPEED_DIST_E	23
DIAMETERS	18	CYCLE_AFTER_PHOTO	0
PHOTO_DELAY_O	130	PHOTO_DELAY_E	130

it's possible choose also 4, depends by model chassis. With 4 chassis will receive the APS code even for the 2nd ball cycle.

PINSETTER MODEL : Amf 8270 Solid State chassis

PINSET_CODE	9	HW_CONNECTION	0
RESPOT_TYPE	2	10^{TH}_RESPOT_DELAY	3*
DO_NOT_WAIT_2ND	0	MACHINE_OFF_DELAY	2
SPEED_DIST_0	23	SPEED_DIST_E	23
DIAMETERS	18	CYCLE_AFTER_PHOTO	0
PHOTO_DELAY_O	100	PHOTO_DELAY_E	100

*Set for 2nd ball light on at the end of first cycle. vary this parameter to 2nd ball will be ON in the middle of the first cycle.

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PINSETTER MODEL : VPS2000

PINSET_CODE	10		HW_CONNECTION	2*
RESPOT_TYPE	1		10^{TH}_RESPOT_DELAY	0
DO_NOT_WAIT_2^{ND}	0		MACHINE_OFF_DELAY	2
SPEED_DIST_0	23		SPEED_DIST_E	23
DIAMETERS	18		CYCLE_AFTER_PHOTO	0
PHOTO_DELAY_O	130		PHOTO_DELAY_E	130

* it's possible choose also 4, depends by model chassis. With 4 chassis will receive the APS code even for the 2nd ball cycle.

PINSETTER MODEL : Funk KF3000 (without camera)

PINSET_CODE	11		HW_CONNECTION	0
RESPOT_TYPE	0		10^{TH}_RESPOT_DELAY	0
DO_NOT_WAIT_2^{ND}	0		MACHINE_OFF_DELAY	2
SPEED_DIST_0	23		SPEED_DIST_E	23
DIAMETERS	18		CYCLE_AFTER_PHOTO	0
PHOTO_DELAY_O	160		PHOTO_DELAY_E	160

*Set for 2nd ball light on at the end of first cycle. vary this parameter to 2nd ball will be ON in the middle of the first cycle.

PINSETTER MODEL : Yangij Vision

PINSET_CODE	12		HW_CONNECTION	3
RESPOT_TYPE	1		10^{TH}_RESPOT_DELAY	0
DO_NOT_WAIT_2^{ND}	0		MACHINE_OFF_DELAY	30
SPEED_DIST_0	23		SPEED_DIST_E	23
DIAMETERS	18		CYCLE_AFTER_PHOTO	0
PHOTO_DELAY_O	130		PHOTO_DELAY_E	130

PINSETTER MODEL : Amf 8290 XL small chassis

PINSET_CODE	13		HW_CONNECTION	4
RESPOT_TYPE	1		10^{TH}_RESPOT_DELAY	0
DO_NOT_WAIT_2^{ND}	0		MACHINE_OFF_DELAY	10
SPEED_DIST_0	23		SPEED_DIST_E	23
DIAMETERS	18		CYCLE_AFTER_PHOTO	0
PHOTO_DELAY_O	130		PHOTO_DELAY_E	130

PINSETTER MODEL : Brunswick GS NEX GEN

PINSET_CODE	14		HW_CONNECTION	0
RESPOT_TYPE	2		10^{TH}_RESPOT_DELAY	3*
DO_NOT_WAIT_2^{ND}	0		MACHINE_OFF_DELAY	30
SPEED_DIST_0	100		SPEED_DIST_E	100
DIAMETERS	18		CYCLE_AFTER_PHOTO	0
PHOTO_DELAY_O	100		PHOTO_DELAY_E	100

*change the parameters as needs

PINSETTER MODEL : Via bowling MC2

PINSET_CODE	15		HW_CONNECTION	3
RESPOT_TYPE	1		10^{TH}_RESPOT_DELAY	0
DO_NOT_WAIT_2^{ND}	0		MACHINE_OFF_DELAY	30
SPEED_DIST_0	23		SPEED_DIST_E	23
DIAMETERS	18		CYCLE_AFTER_PHOTO	0
PHOTO_DELAY_O	130		PHOTO_DELAY_E	130

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PINSETTER MODEL : Brunswick Eclipse (string pinsetter)

PINSET_CODE	16		HW_CONNECTION	0
RESPOT_TYPE	0		10TH_RESPOT_DELAY	0
DO_NOT_WAIT_2ND	0		MACHINE_OFF_DELAY	40
SPEED_DIST_0	100		SPEED_DIST_E	100
DIAMETERS	18		CYCLE_AFTER_PHOTO	0
PHOTO_DELAY_O	0		PHOTO_DELAY_E	0

MANDATORY: this pinsetter do not send the 2nd ball signal to the score. Set in the file CONFIG.INI
the phase check to zero: PHASECHECK_L = 0 PHASECHECK_R = 0

PINSETTER MODEL : Schmid 4482-51100 (string pinsetter)

PINSET_CODE	17		HW_CONNECTION	0
RESPOT_TYPE	2		10TH_RESPOT_DELAY	2
DO_NOT_WAIT_2ND	1		MACHINE_OFF_DELAY	45
SPEED_DIST_0	100		SPEED_DIST_E	100
DIAMETERS	18		CYCLE_AFTER_PHOTO	0
PHOTO_DELAY_O	0		PHOTO_DELAY_E	0

PINSETTER MODEL : SES 2003 (string pinsetter)

PINSET_CODE	18		HW_CONNECTION	0
RESPOT_TYPE	2		10TH_RESPOT_DELAY	2
DO_NOT_WAIT_2ND	1		MACHINE_OFF_DELAY	40
SPEED_DIST_0	100		SPEED_DIST_E	100
DIAMETERS	18		CYCLE_AFTER_PHOTO	0
PHOTO_DELAY_O	0		PHOTO_DELAY_E	0

PINSETTER MODEL : ZD8800

PINSET_CODE	19		HW_CONNECTION	3
RESPOT_TYPE	1		10TH_RESPOT_DELAY	0
DO_NOT_WAIT_2ND	0		MACHINE_OFF_DELAY	30
SPEED_DIST_0	23		SPEED_DIST_E	23
DIAMETERS	18		CYCLE_AFTER_PHOTO	0
PHOTO_DELAY_O	130		PHOTO_DELAY_E	130

PINSETTER MODEL : Mendes M500 Pneus (string pinsetter)

PINSET_CODE	20		HW_CONNECTION	0
RESPOT_TYPE	2		10TH_RESPOT_DELAY	2
DO_NOT_WAIT_2ND	1		MACHINE_OFF_DELAY	10
SPEED_DIST_0	100		SPEED_DIST_E	100
DIAMETERS	18		CYCLE_AFTER_PHOTO	0
PHOTO_DELAY_O	0		PHOTO_DELAY_E	0

CONFIG.INI

NOTE: EDIT ONLY THE SUGGEST PARAMETERS

STANDALONEMODE = Set the modality for the COIN INPUT:

= 0	Stand alone Superelex require Main Desk for opening the games.
= 1	1 coin pulse= one player with 1 game. Each pulse add another player with him game. At the end of the game, score and pinsetter will be close.
= 2	1 coin pulse= one time unit. Score will add one bowler, player could add more bowler using bowler's console. Each pulse increase the time with one unit.
= 3	1 coin pulse= one bowler with one time unit. The following coin pulse add more bowler's , but will not increase the time unit
= 4	ON-OFF Switch: coin device must be substitute with On/off switch. Switch ON= The score add one bowler + one game, player could add other bowlers with his game using bowler's console. Switch OFF= end of the game.

TIMEUNIT = this parameter describe how many minutes of games are available with one coin with Stand alone in mode 2 or 3. Time is in minutes, default parameter is 30.

ERASEGAMESONSTART = this parameter enable/disable the erase of the game games on both lanes after lane computer reboot =0 disable, =1 enable

LGCROSSEDFRAMES= Selection of the league play mode: =1 STANDARD BOWLING =2 CANADIAN DUCKPINS

PARTIALTOT = Enable – Disable the display of the partial total of the game 1=YES, 2=NO (DEFAULT 1)

TCWBC = Wireless bowler's Console frequency: =1 USA =0 other country

;VIDOFFSX = 98 this parameter enable the off set screen for 16:9 monitor. To enable the parameter, just remove the **;** at begin of the line.

SWAP_ENA = enable/disable the fast league swapping is the play mode is league (0=disable, 1=enable)

LEAGUEPLAY = enable/disable the league play mode (0=disable, 1=enable)

HDPFIRST = enable/disable the addiction of the Handicap at begin of play when league play mode is enable (0=disable, 1=enable)

FLOWFILE =it's possible create a flowing strip text into the folder E:\LM\DATA and display it permanently on the Score. Type between the 2 " the file name with TXT extension.

TOUCHSCREEN = enable/disable the bowler's console touch screen (0=disable, 1=enable)
AUXSCREEN = enable/disable the bowler's console monitors (0=disable, 1=enable)

VOLUME_L = Set a value for movies sound (left lane). Default 5
VOLUME_R = Set a value for movies sound (right lane). Default 5

VCRUSAGE_L = enable/disable /choose option for displaying TV on ODD Overhead monitor: 0= disable 2= always TV ON 2=Auto: TV on with empty lane, TV OFF when game is active
VCRUSAGE_R = enable/disable /choose option for displaying TV on EVEN Overhead monitor: 0= disable 2= always TV ON 2=Auto: TV on with empty lane, TV OFF when game is active

VCR_CONTRAST = set for adjust contrast on the TV screen when VCRUSAGE. Default 70 this parameter do not change the Score picture.

VCR_BRIGHTNESS = set for adjust brightness on the TV screen when VCRUSAGE. Default 149 this parameter do not change the Score picture.

VCR_COLORS = set for adjust brightness on the TV screen when VCRUSAGE. Default 64 this parameter do not change the Score picture.

TVMODE = set the Standard for CVBS TV signal= 0 = PAL, 1 = NTSC, 2 = SECAM

CUMTOT_L = Enable – Disable the display of the cumulative total of the game for the odd lane (0=disable, 1=enable)

CUMTOT_R = Enable – Disable the display of the cumulative total of the game for the even lane (0=disable, 1=enable)

SPEED_L = Enable – Disable the display of the ball speed for the odd lane (0=disable, 1=enable)

MPH_L = Ball speed visualization for odd lane: =0 MP\H   =1 KM\H

SPEED_R = Enable – Disable the display of the ball speed for the even lane (0=disable, 1=enable)

MPH_R = Ball speed visualization for even lane: =0 MP\H   =1 KM\H

MAINSCR_L = POWER ON Settings for overhead odd monitor : =0 always ON, =1 always off =2 AUTO: monitor on when game is active.

MAINSCR_L = POWER ON Settings for overhead even monitor : =0 always ON, =1 always off =2 AUTO: monitor on when game is active.

STRIKESTILE_L = selection for the STRIKE display (odd lane). 0=Cross 1= Box

STRIKESTILE_R = selection for the STRIKE display (even lane). 0=Cross 1= Box

STRIPNUML = Number of maximum the visible bowler's for ODD lane. The score could display simultaneously max 5 bowler's (parameter: 1,2,3,4,5)

STRIPNUMR = Number of maximum the visible bowler's for EVEN lane. The score could display simultaneously max 5 bowler's (parameter: 1,2,3,4,5)

GRIDCHOICE_L = selection of static grid for odd lane
=0 BIG ONLY =1 BIG+MEDIUM   =2 BIG+MEDIUM+SMALL

GRIDCHOICE_R = selection of static grid for even lane
=0 BIG ONLY =1 BIG+MEDIUM   =2 BIG+MEDIUM+SMALL

MOBGRIDSENA_L = enable/disable the movie grids for odd lane.=0 disable =1 enable

MOBGRIDSTYLE_L = grid stile for odd lane. Available grids model: 1 2 3 4 5 6

MAXMOBGRIDS_L = number of visible player on movie grids for odd lane. From 1 to 5

MOBGRIDSENA_R = enable/disable the movie grids for even lane.=0 disable =1 enable

MOBGRIDSTYLE_R = grid stile for even lane. Available grids model: 1 2 3 4 5 6

MAXMOBGRIDS_R = number of visible player on movie grids for even lane. From 1 to 5

ONLYBUMPERS = enable\disable the available option for bowler's console menu: when enable the bowler can choose only enable the bumper, when disable bowler's can also edit name. =0 disable   =1 enable
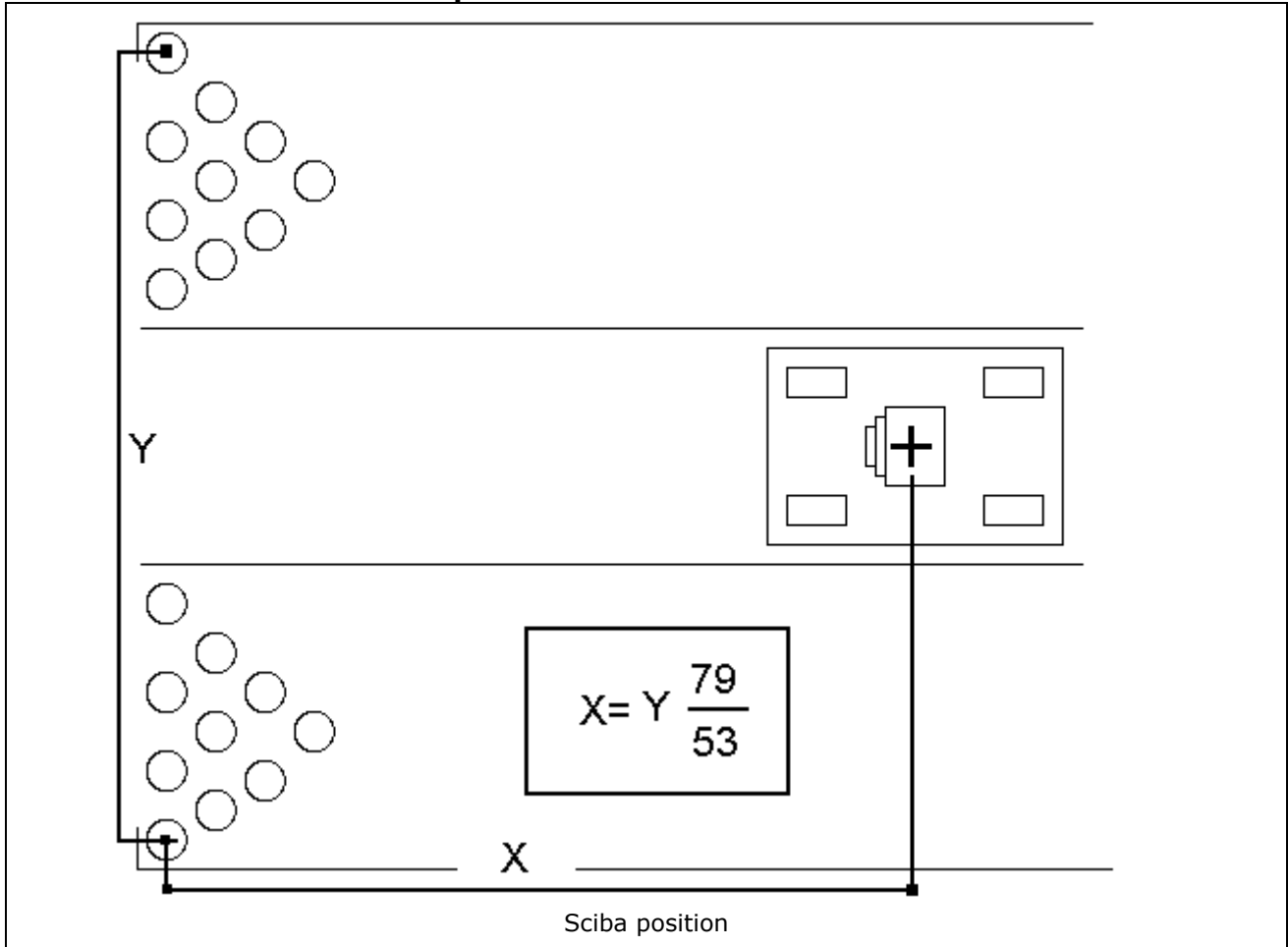
The following chapters
are ONLY for Stand alone installation + Sciba (camera) for pins detection.

## [6.0] INSTALLATION WITH THE CAMERA: placing the Sciba

The ideal position for the SCIBA is as follows:

$$X = Y \frac{79}{53}$$

Sciba position

The cross is the Center of the Detection Device 398 cm is the recommended distance. Calculate the distance between the Sciba's centres to the last pins line (pins 7,8,9 & 10).

398 cm

PIN 7

Sciba <>pin distance
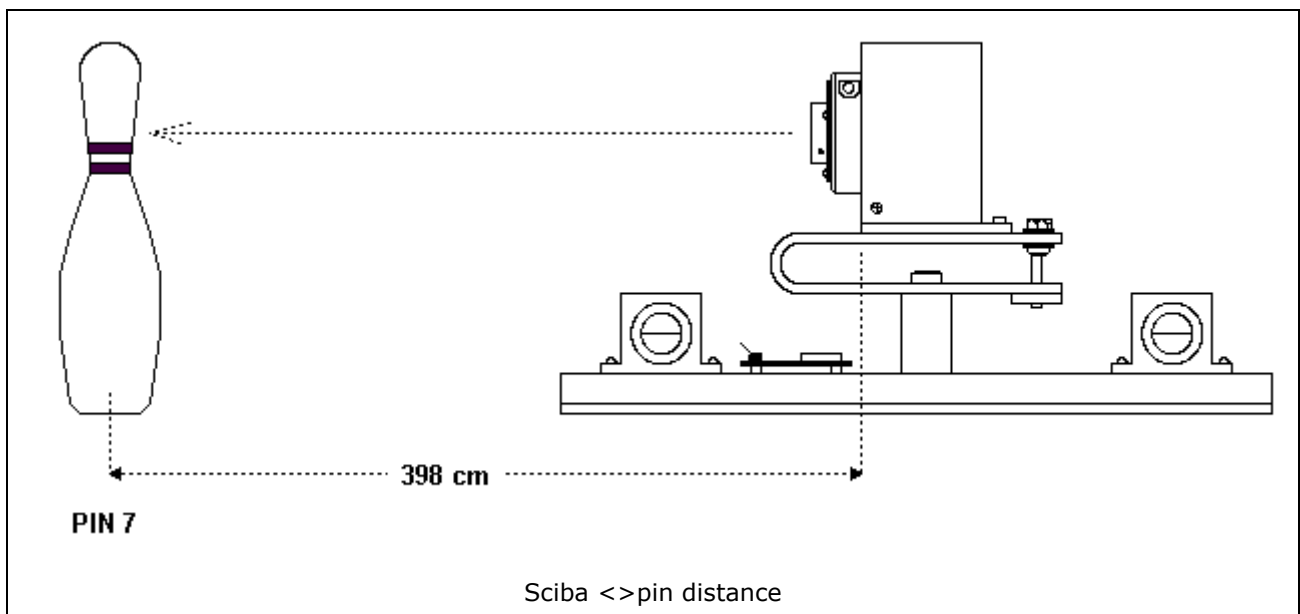
Lay the **CAB-Y-CA0191A** cable through the hole and connect it to A.P.I. device.

Sciba installation
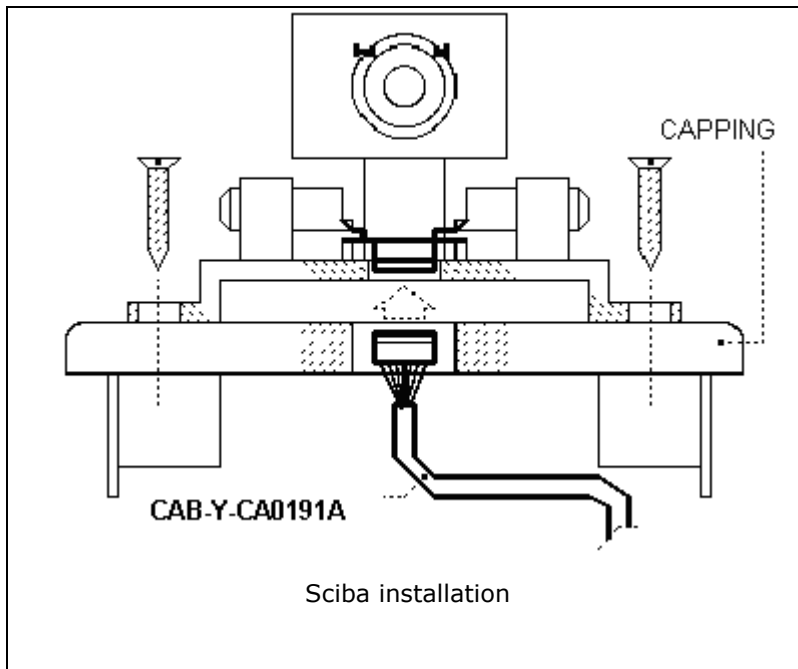
Warning: the cable must not cross the ball return canal, as the returning ball may cut it.

If the surface on which you are fixing the device (capping) is not flat, use the two plastic strips supplied, to compensate (the Sciba must be level).

Using the six Long Fixing Screws, install the Detection Device (see over diagram).
Note: All six screws must pierce the capping fully and go through to the wooden slats, in order to guarantee the stability of the device.

WARNING! The 4 edge hole need to be keep to screws the Plastic cover, do not use it for fix the Sciba.

Reflector installation
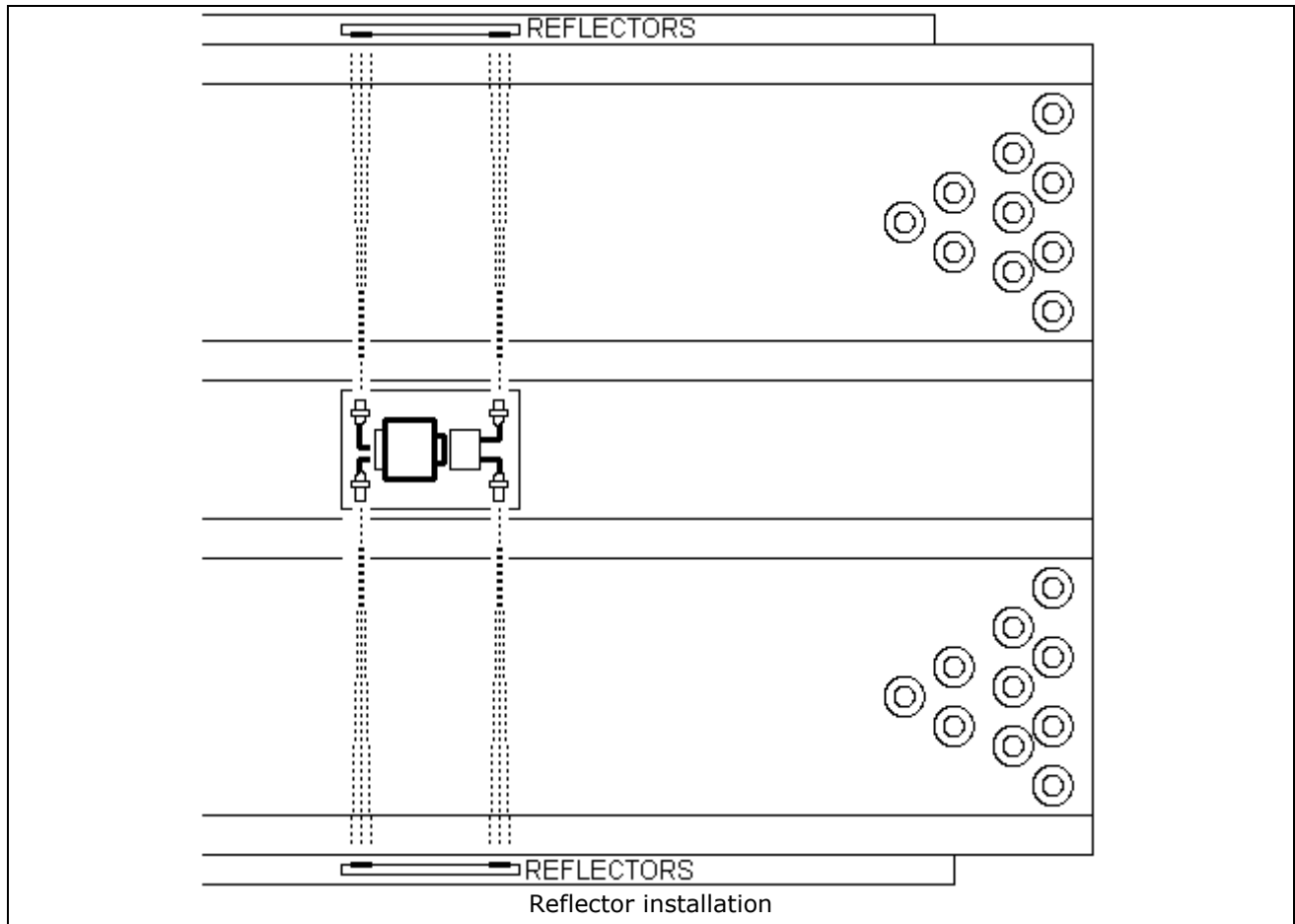
Fix the reflectors directly opposite the sensors. Sensors are in the correct position, when the red LED on the sensor is on.
Please note: the sensor must point directly to the center of the reflectors.

Sciba installation with small pillar
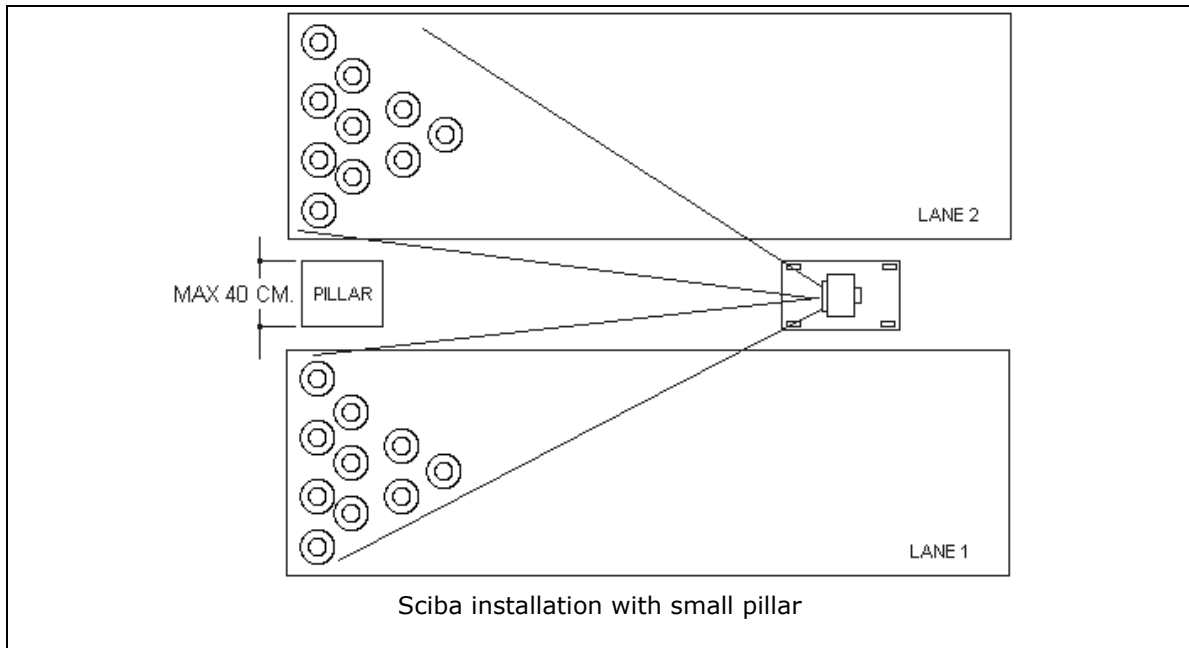
If an object like pillar (or something else is placed between to pair of lane (example lane 1 and 2), its necessary move the Sciba in a different position of standard 396-398 cm.
If the distance between the two lanes are less than 40 centimetres, one Sciba could be provide 2 lanes, simply move the Sciba a little bit far from the original position.
To know where use the formula described at begin of chapter "Positioning the Detection Device".
When the distance between the two lanes are more than 40 centimetres, it's necessary place two Sciba in order to read both lane (see the following diagram)

2 Sciba installation with big pillar
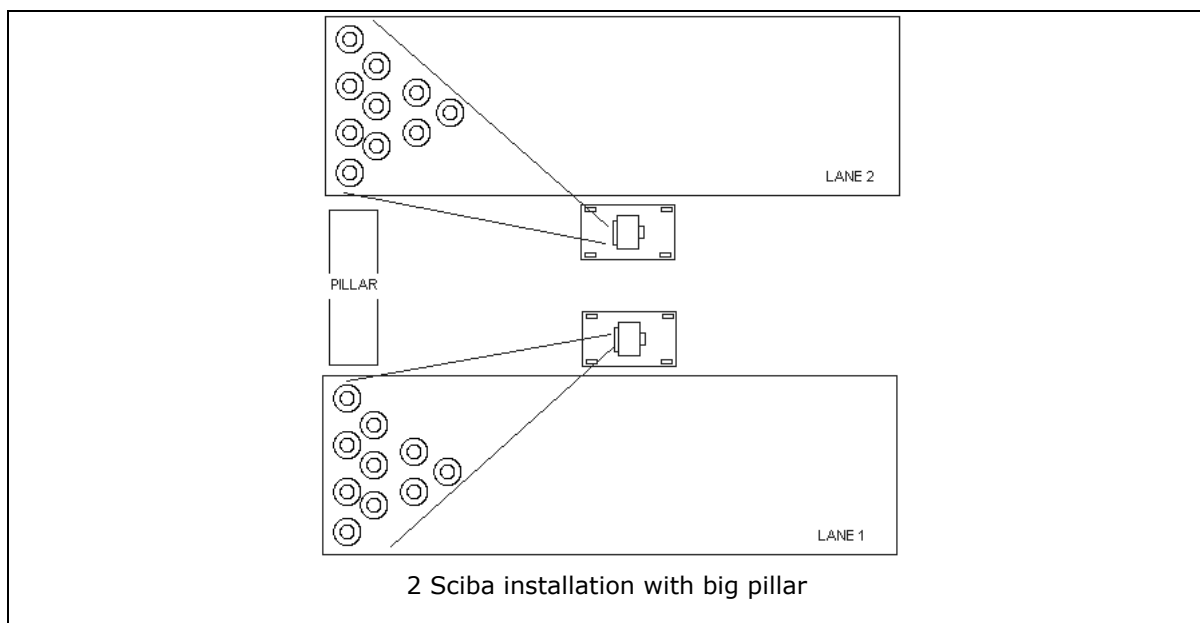
[6.1] Placing the Template for mechanical calibration

Once the Sciba is correctly positioned between the lanes, the next stage is adjusting the CCD so that it scans the necessary part of the image in order to detect whether or not the pins have been knocked over.

The CCD is of a linear type, which means that the image acquired is a single line split into 2048 sections called pixels. From the distance at which the Sciba is positioned, the image is the following size:
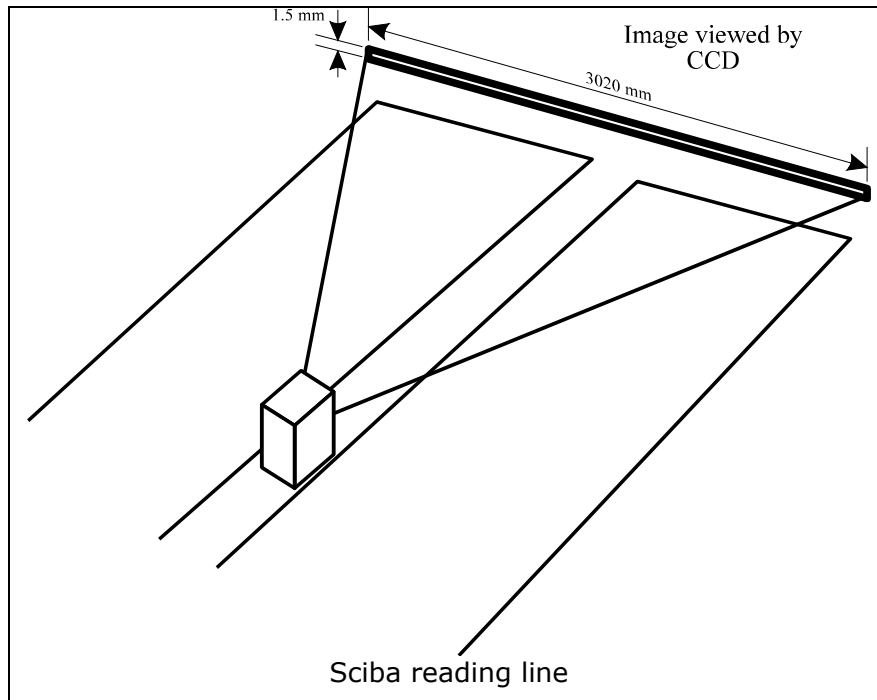
The previous image shows how the Sciba should be positioned, so that the scan line passes through the necks of all twenty pins on the two lanes. It is ideal for the line to pass through the necks of the pins, as the pins are thinnest at that point and thus allow the pins to be viewed as distant from one another as possible. To position the line correctly, use the two positioning template marker sheets as shown.

<div style="border:1px solid black; text-align:center; color:red; font-weight:bold;">

Warning!
Placing the template on the lane deck is dangerous with
pinsetter motor on.
Before to proceed, disconnect all pinsetter motor
keep only the pinsetter pins light on

</div>

Switch on the 2 pinsetters.
Before to begin, please wait some minutes cause the pit light must be hot.

The template should be placed symmetrically at the centre of the pins spot as shown in the next diagrams. Position depends also by lane installed:

Standard installation: one Sciba per one pair of lane
ODD installation: one Sciba per each lane

WARNING: for ODD installation remember to set up the CONFIG.INI file configuration
(chapter 5)

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Standard Installation: one Sciba per one pair of lane

Standard Template position
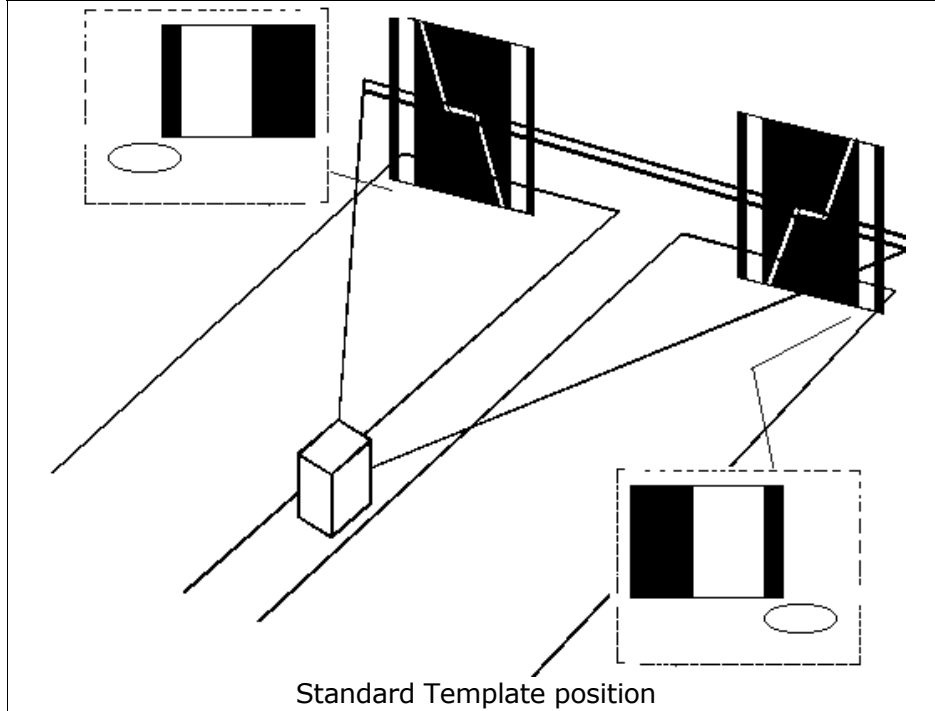
Installation with ODD lane: Sciba mount at the right side of the lane

ODD Template position
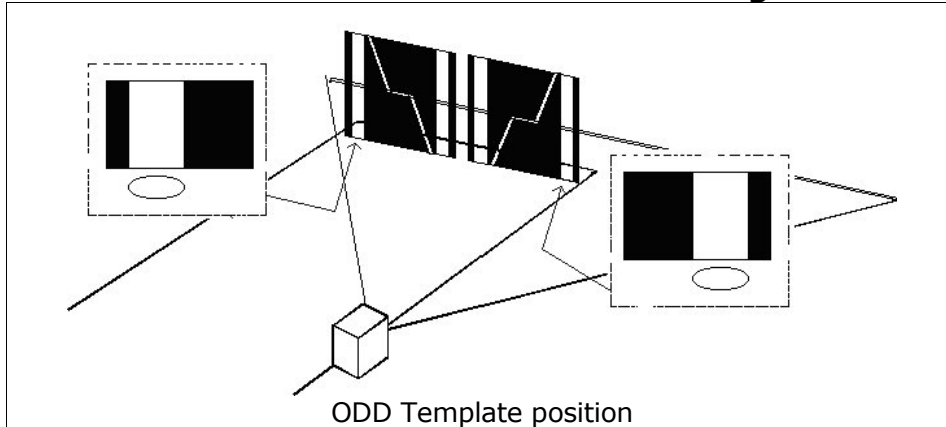
Installation with ODD lane: Sciba mount at the left side of the lane

ODD Template position
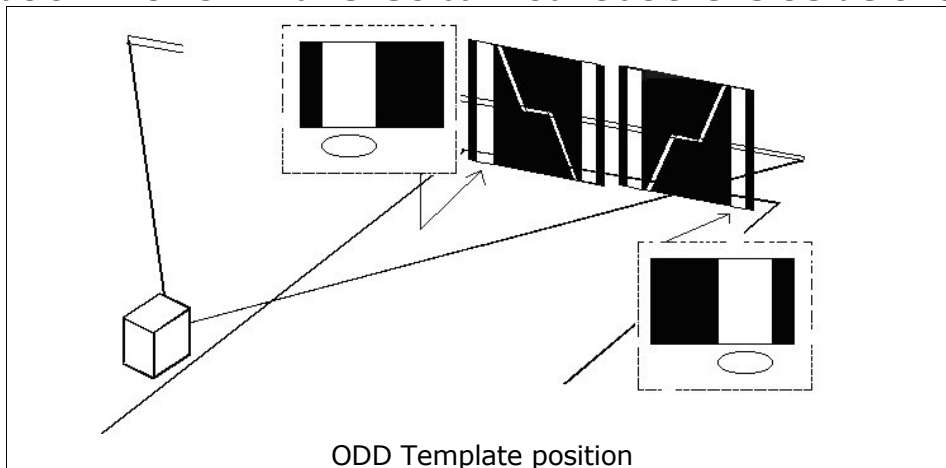
[6.2] Begin the mechanical calibration

With the Sciba in calibration mode, LED 10 starts flashing and the other LED's indicate how the position should be adjusted, if adjustment is required. The machine is correctly adjusted when all four GREEN LED's are lit.

**Activation of calibration mode for standard Sciba installation
(one Sciba for one pair of lanes)**

Move the switch on Sciba board in CALIBRATE MODE(on top)
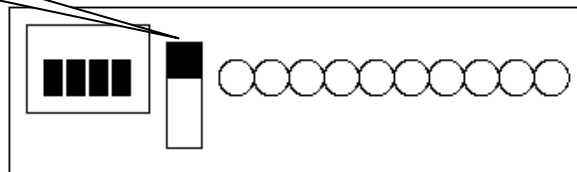
**Activation of calibration mode for ODD Sciba installation
(one Sciba for each lane)**

Set the number 1 switch of S1 to "ON" (Dip Switch) and leave it on

Move the switch on Sciba board in CALIBRATE MODE(on top)
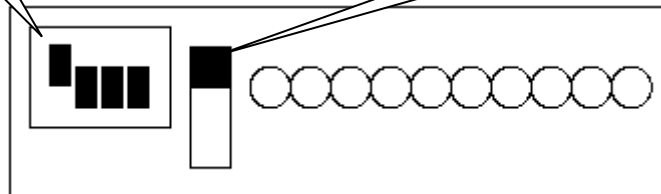
BEGIN TO ADJUST MANUALLY THE SCIBA

The scan line can be mechanically adjusted in three ways:

1) Rotation on its vertical axis
2) Rotation on the optical axis
3) Raising / lowering the scan line.

First loosen (a little bit) all the mounting bolts. Adjustments should be carried out in the following order - first the vertical axis, then the optical axis and lastly the height. The Led's indicate in which direction the Sciba should be adjusted. After each adjustment, tighten the relative adjustment bolt.

Rotation on it's vertical axis
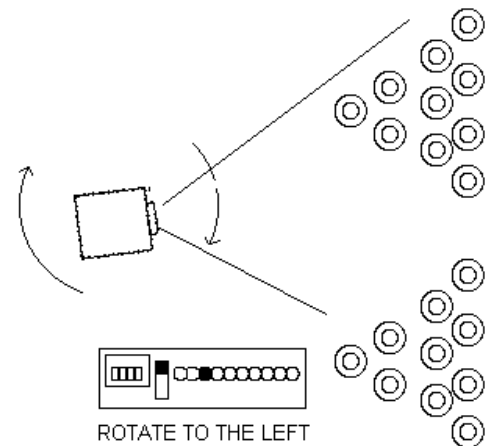
WARNING! MOVE THE SCIBA LITTLE BY LITTLE [PUSH VERY GENTLY THE SCIBA BY ONE SIDE, WAIT THE RESPONSE FROM THE LED, THEN PROCEED AS NECESSARY].

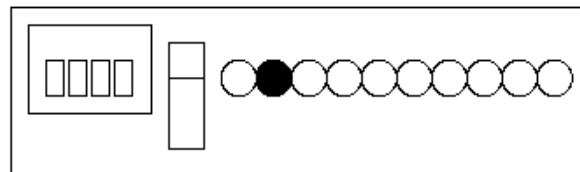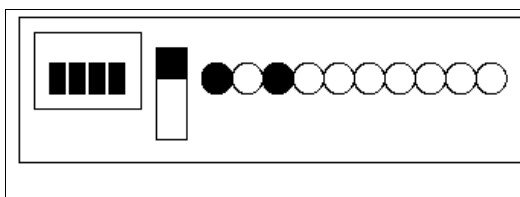1^ REGULATION

LOOSEN THIS NUT
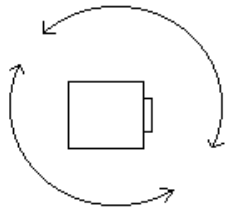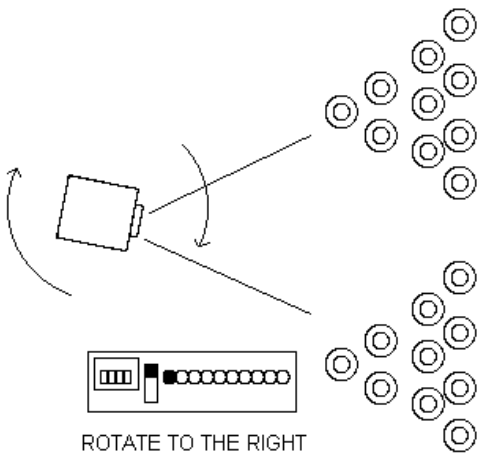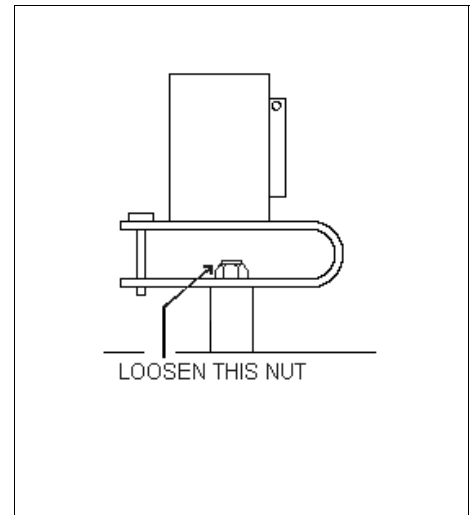
ROTATE TO THE RIGHT

ROTATE TO THE LEFT

**OK! THE VERTICAL AXIS IS ADJUSTED CORRECTLY. LOCK THE NUT.**

If both LED 1 and LED 3 are lit, it means that the Sciba cannot identify the marker sheets

1] Check the Sciba position (maybe the Sciba is placed at the wrong distance)

2] TRY TO CHANGE THE INTEGRATION TIME: the neon light (from pinsetter) is not enough or is too much for the Sciba; try to implement more integration time 1 by 1 or 2 by 2 and try to make the calibration. If the problem persist decrease the integration time (SEE THE CHAPTER "CONNECTION WITH SERVICE PC")

Rotation on the optical axis

Allen key type bolts, on the front of the Sciba (the three projecting bolts, not to be confused with the two, more flush bolts used to set the lens when it has been focused) must be loosened. After the adjustment close STRONGLY.

USE THIS 2 SCREWS TO ADJUSTAMENT THE AXIS

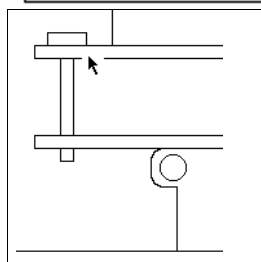ALLEN KEY BOLTS TO BE LOOSENED BEFORE ADJUSTMENT [A-B-C]
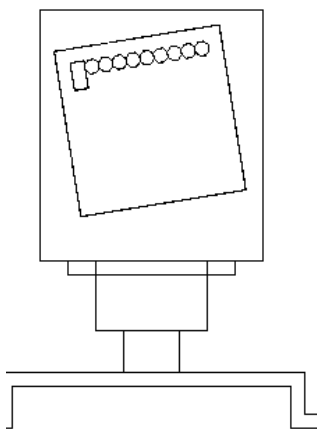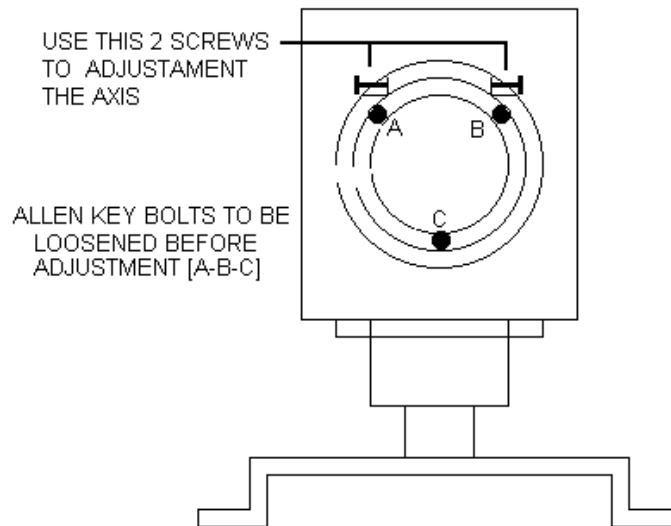
ROTATE ANTI-CLOCKWISE
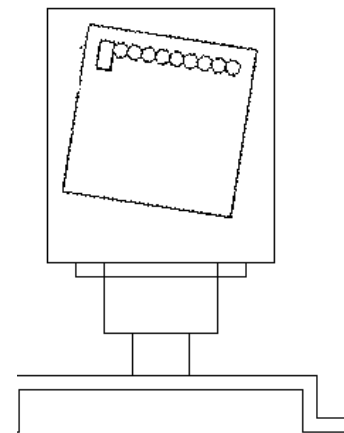
ROTATE CLOCKWISE
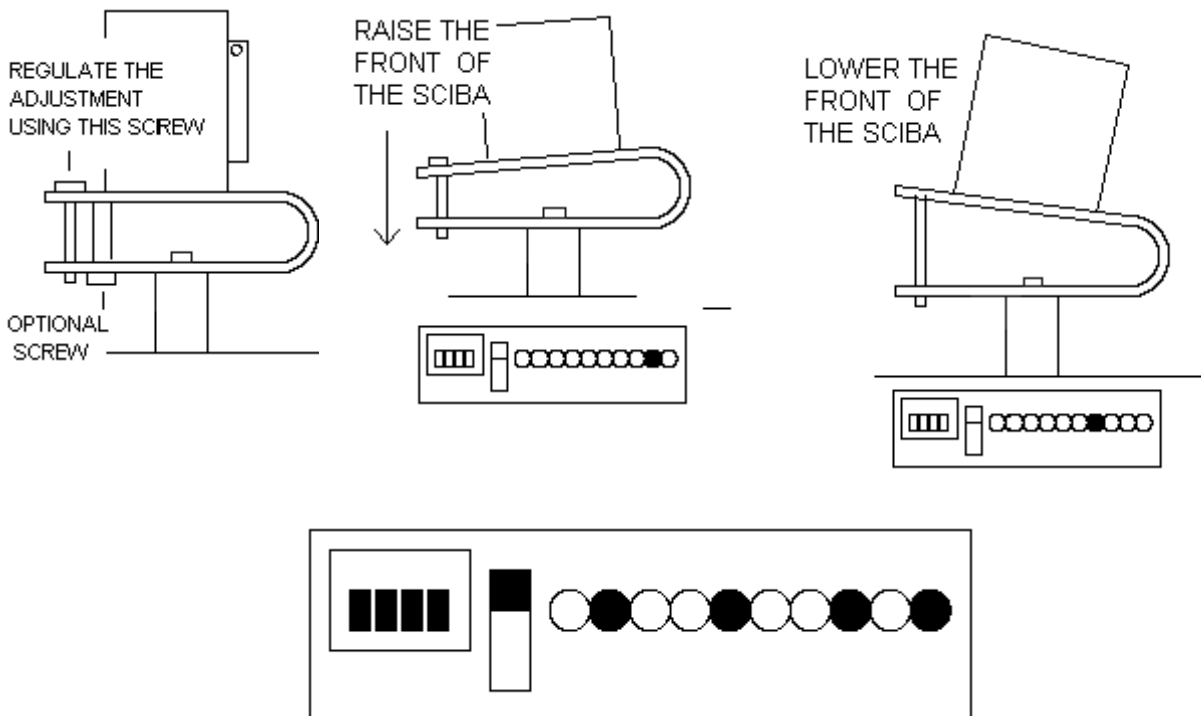
OK! ROTATION ON OPTICAL AXIS CALIBRATE SUCCESSFULLY!
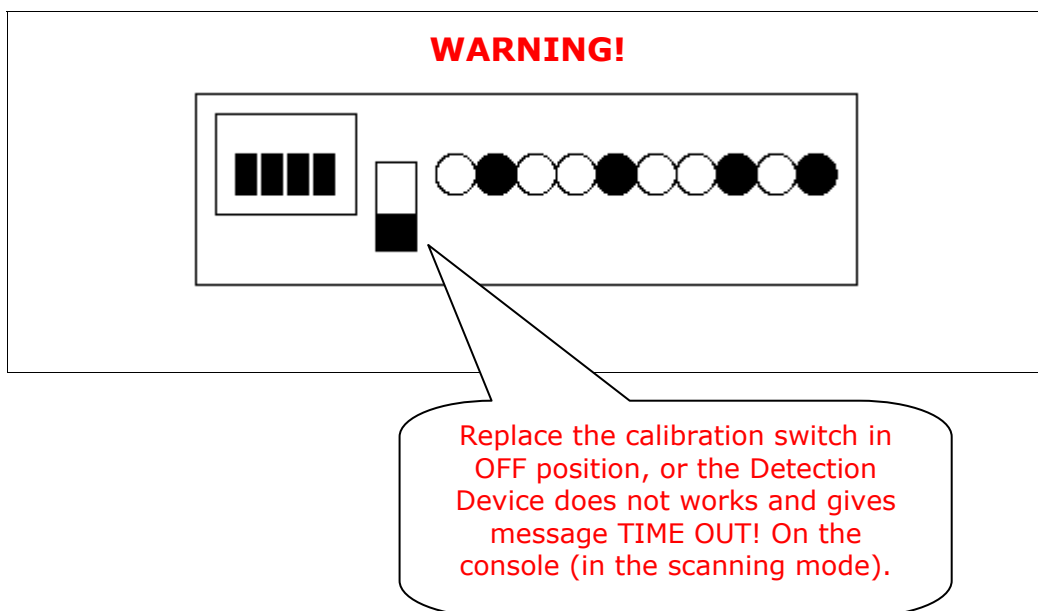CLOSE VERY TIGHT THE 3 BOLT.

IF IS HARD ADJUST THE OPTICAL AXIS:
Try to lose or thigh the BOLT as indicated in the diagram in left side, then adjust the Sciba.

Raising/ Lowering

REGULATE THE ADJUSTMENT USING THIS SCREW

OPTIONAL SCREW

RAISE THE FRONT OF THE SCIBA

LOWER THE FRONT OF THE SCIBA

ALL DONE! **The Sciba is now fully mechanically adjusted.**

When the Sciba has been correctly adjusted, the above three green LED's (central in each of the settings) remain on, the 10th LED stops flashing also remaining on.

WARNING!

Replace the calibration switch in OFF position, or the Detection Device does not works and gives message TIME OUT! On the console (in the scanning mode).

[6.3] Suggestions about pins positions

Each of the pins must be fully visible by the Sciba (not partly hidden by other pins).
The distance between the following pairs of pins is of **vital** importance:
- ① pins 1 and 8 on the left lane
- ② pins 4 and 7 on the left lane
- ③ pins 1 and 9 on the right lane
- ④ pins 6 and 10 on the right lane

The distance between each pair may not be enough, and although moving the Sciba may improve the view, it may, in the same instant make the view of another two pins worse, so it is usually better to move the pins (slightly).
E.g. Improving ① may alter ② and vice versa. As improving ③ may alter the view of ④ and vice versa.

Some problems that may arise, with hard to see pins and how to solve them.

① and ③ (vital) ➜ Move the Sciba closer to the two pins keeping to the center of the lane, until a point is reached where the situation improves.

② and ④ (vital) ➜ Move the Sciba farther from the pins keeping to the center of the lanes.

① and ④ (vital) ➜ If the lanes are not symmetrical, forcing the Sciba to be positioned
'Off 'center, then in this case, move the Sciba to the right and if necessary, a little forward (towards the Pinsetter).

② and ③ (vital) ➜ Move the Sciba to the left of the center line and if necessary, a little back (towards players table).

Irrespective of how the Pinsetter places the pins, the best position for the Sciba is on the line between the following two points:

Point 1: Where a line passing through the centres of pins 7 and 4, on the left lane meets a line passing
through the center of pins 6 and 10, on the right lane.

Point 2: Where a line passing through the center of pins 1 and 8, on the left lane meets a line passing
through the center of pins 1 and 9, on the right lane.

If the segment between points 1 and 2 is traced, the ideal position for the Sciba is within the segment and is much closer to point 2 than point 1. The points can be calculated on paper using the pin grid, as actually drawing out the relative lines takes rather a long time!

NEXT STEPS:
a) Settings pins position by software (prepare the Sciba and the lane for the scanning)

[6.4] Setting the pins position by software: prepare lane hardware for scanning

By "scanning" we mean, verify the direction the Sciba is pointing in respect to the position of the pins. This operation is carried out at the Main Desk computer, <u>without any mechanical adjustments to the Sciba CCD itself.</u>
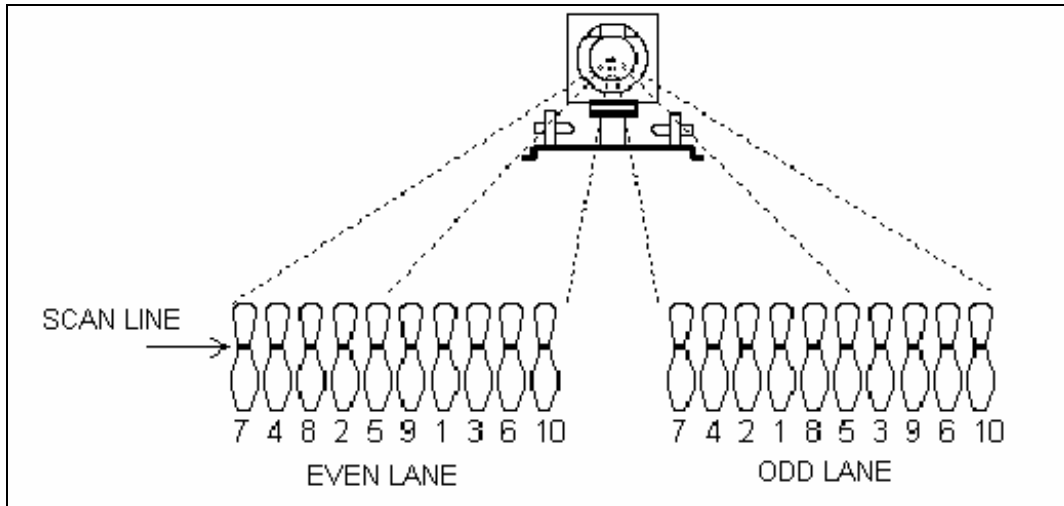
The Sciba CCD is a "Linear camera" which 'reads' the pins on a "ideal line" as can be seen on the above diagram. All 20 pins (2 lanes) can be seen on the 'ideal line'. The 'ideal line' is little bit up to the neck of the pins which, seen from 4 meters, is the point that the pins are furthest from one another.

IN ORDER TO OPTIMISE THE PIN COUNT BY THE SCIBA CCD WE ADVISE:

a) Change pins that are damaged or broken at the neck.
b) The neon lights on the lane pair must have the same brightness and intensity, any changes to lighting should be made per pair of lanes.
c) The Sciba is able to read (up to a certain point) even the 'off spot' pins, we suggest that the pinsetter positioning arms be checked on a regular basis.
d) Do not use pins which have black necks area.
e) The pinsetters should be on first ball with ALL 10 pins standing on each lane.
f) The Sciba CCD is able to see the red pins, we advise however to make the calibration settings with standard white pins.
g) Switch the hall lights on just like when there are bowlers; sometimes neon's placed too close to the pins change the light conditions and therefore the pin detection.

<div style="text-align:center; color:red">

Now, Turn the pinsetters on that need to be checked.
WAIT: the pinsetter pin deck light needs to warm up before giving the correct light.

</div>

NEXT STEP:
a) connecting the Superelex to Network and Service PC
b) Settings pins position by software

[6.5]connecting Superelex to Network and Service PC

MANDATORY: next operations require the following items:
a) Laptop or service PC with IBCMS software pre-loaded by Steltronic S.p.A.
b) Network Switch or network hub + 2 UTP cables CAT5

FIRST STEP: CONNECTING THE NETWORK LINE FROM SUPERELEX TO SERVICE PC.
NOTE: The Network connection could be temporary: after the Pins scanning and API settings, the Service PC, network switch and UTP cables could be removed. For Center with more than 2 Superelex, we recommend to keep Network switch + UTP cables (from Superelex to Network switch) permanently connected, in order to make easy the camera maintenance. MAX LENGTH FOR EACH UTP CABLE: 100 meters.


Network connection

UTP RJ45 connector
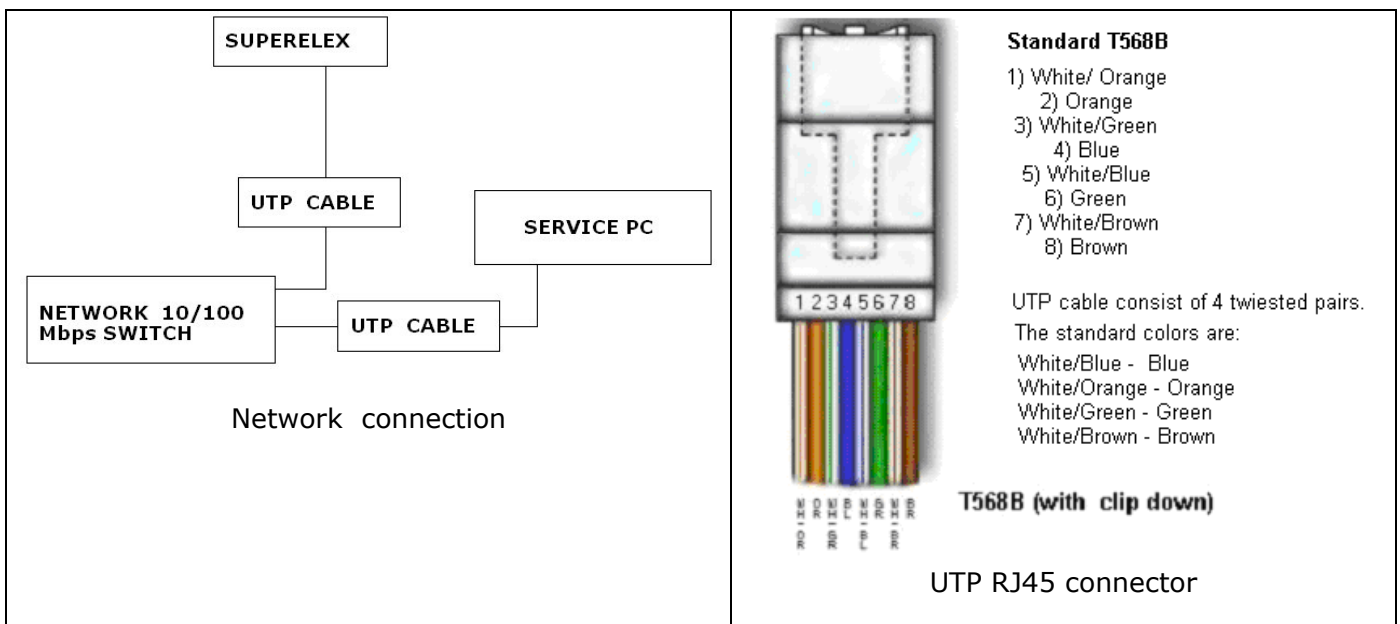
Please follows the next steps one by one:

1) MANDATORY: Superelex MUST be powered OFF
2) Connect the network switch to Service PC and the Superelex as describe in the above diagram
3) Power ON the Network Switch
4) Power ON the service PC, wait till Windows and service Manager start
5) Power ON the Superelex lane computer
6) load the Front Desk program and follow the next chapter instructions

[6.6]Load Front Desk software and check the pins position

Note: each Superelex has an unique IP address for communicating with the Service PC.
For each Stand Alone shipment, Steltronic S.p.A. pre-load the IP on Service PC.
If the Superelex must be substitute,
please contact Steltronic Customer Service (+39 030 2190830 – service@steltronic.com)
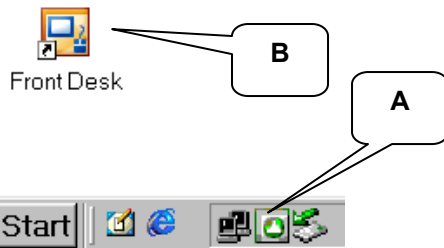
[A] SERVICE MANAGER ICON. This icon display the status of the service protocol for lane computer → Main Desk communication. Icon must be green.

[B] Front Desk program icon.

WARNING: IF THE SERVICE MANAGER ICON REMAIN RED, the communication with the lane computer cant' be establish.

Important: do not power ON the Superelex with Service manager icon RED.
When Service manager is not running, Superelex will load the Stand alone menu, ignoring the Front desk program.
To solve the problem first , check the Network switch and UTP cable connection's:
if the Main Desk do not communicate with the network switch, the Service manager cant' be load.At soon the network switch and the network communication between Main Desk are tested and OK, click (or double click) on Service Manager Icon [B], than click on RESTART or START button. Traffic light icon must became green in 2-3 seconds

Begin login operation's

1) Switch ON the Superelex and wait till

2) Click (or double click) on Front Desk icon to load the program.
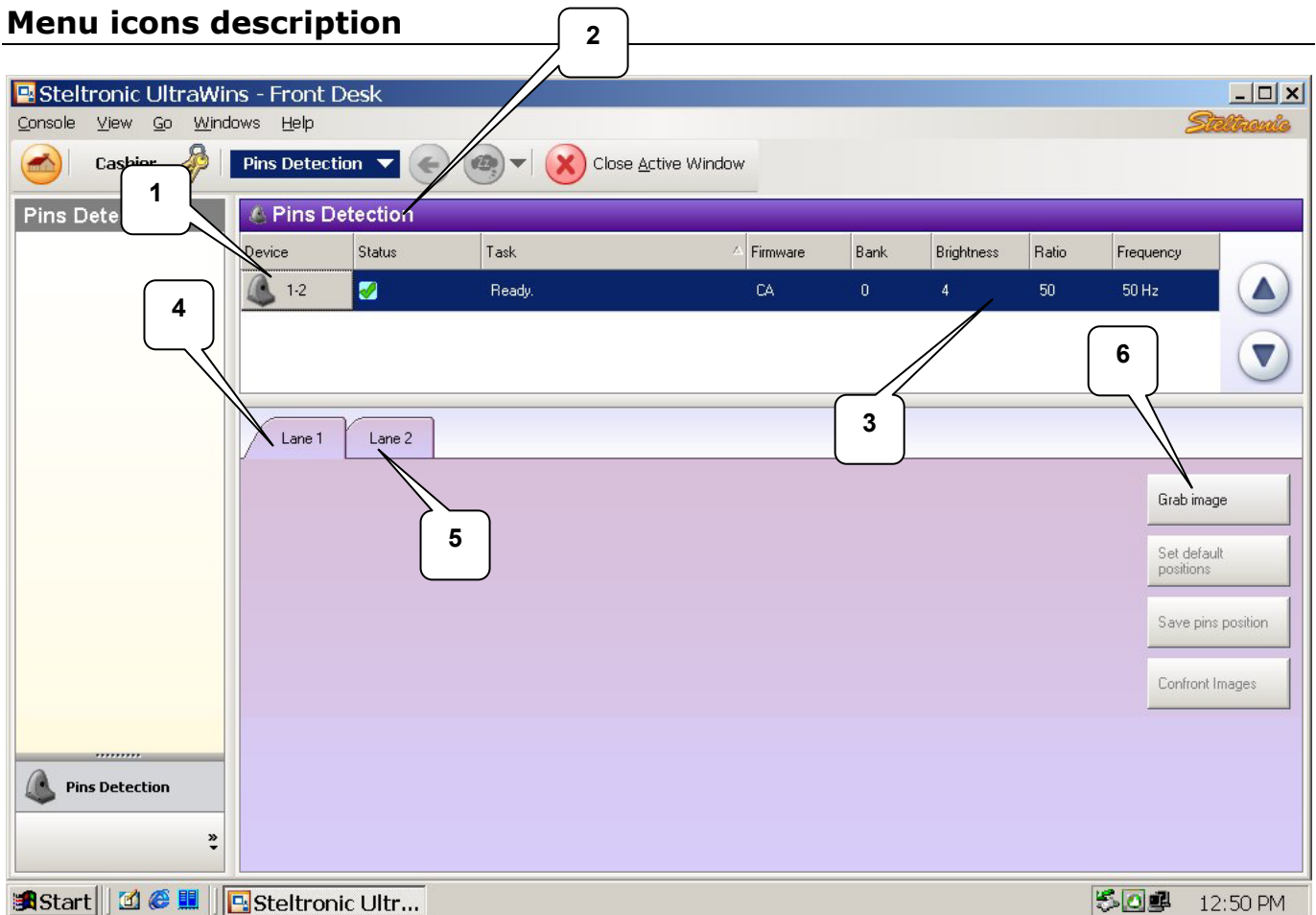
The first operation is LOGON on the program: click on CASHIER (or OWNER) than click on LOGIN button.

NO PASSWORD IS REQUIRED.

The program automatically will load the Pins Detection menu.

Menu icons description

[1] Camera Icon: clicking directly on the icon, will send the configuration to the camera. This button is used also for restart the communication with the camera, simply clicking on it.

[2]ON-LINE Status indication: when the link with lane computer and Camera is Ok, the status is READY. If the Camera or the lane computer do not respond the status is FAILED.

[3]Camera parameters: clicking directly on this line will open the CAMERA PARAMETERS window. In the Camera parameter window is possible change Brightness, Ratio, Frequency and Bank.

[4] [5] Lane selection: clicking on the tag will change the lane view selection

[6]GRAB IMAGE: clicking on GRAB IMAGE button will send a command to the camera for load in memory a pins photo shot.


The next operation's will be:

   a) Changing the camera parameters
   b) Select a lane and Grab Image
   c) Set Default position
   d) Save PINS position

   NOTE: If the installation is Standard, one camera per one pair of lanes, select the lane twin, than repeat the steps from B to D, than Confront the image.

Changing the Sciba (Camera) parameters

Clicking directly on the blue line will open the CAMERA PARAMETERS window.
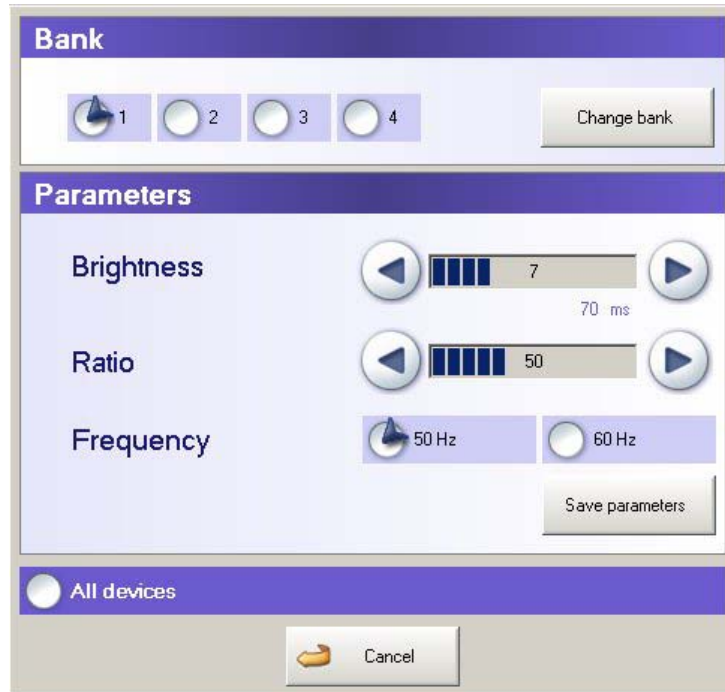
Brightness: is the value given to the amount of light in the Sciba area. By lifting or lowering this value you let more or less light into the Sciba, just as if it where a standard camera diaphragm. a default settings is 4 (40 Ms).

Ratio: is the light variation when the pin has been knocked down. In practical terms if the ratio is set to 50, the Sciba CCD will detect a pin as fallen when the light, in the area where the pin was when the first photo was taken, varies by at least 50%. This parameter need to be change only in EXTREME situation (pins dirty or light too dark), the default value is 50

Frequency: refers to the amount of 'Hertz' electricity. Set the value in accord to your local AC frequency: EUROPE = 50 HERTZ   USA= 60 HERTZ   CHINA=50 HERTZ

Bank: the BANK is a conventional "point" for pre-set a brightness value. Bank 1 is used for saving the brightness value for white light.
During '**glow in the dark**' bowling the pinsetter neon is turned off, the only light is a 'black' florescent light. The Brightness set for the white light is not enough for the camera to see the pins correctly. It is necessary to increase the light that enters the camera by lifting the BRIGHTNESS value. In order to make the operation quicker, a second 'Bank' (2 or 4) is assigned to the Glow settings (with higher integration time).

> IMPORTANT: the STAND ALONE Superelex could be set for works with GLOW or WHITE light, it's not possible choice to exchange the light after the settings.

FIRST OPERATION: select the current 'bank' which is needed for this calibration: 1 or 3 for with light, 2 or 4 for glow bowling. Click on **CHANGE BANK** button to confirm. The screen will come back to main menu.

SECOND OPERATION: once again click on blue line for opening the camera parameters window, vary (if necessary) the Brightness or other parameter, then click on **SAVE PARAMETERS** to confirm and exit.

Grab the image and save the pins position.

First select one lane side, than clicking on **GRAB IMAGE** button will send a command to the camera for load in memory a pins photo shot.
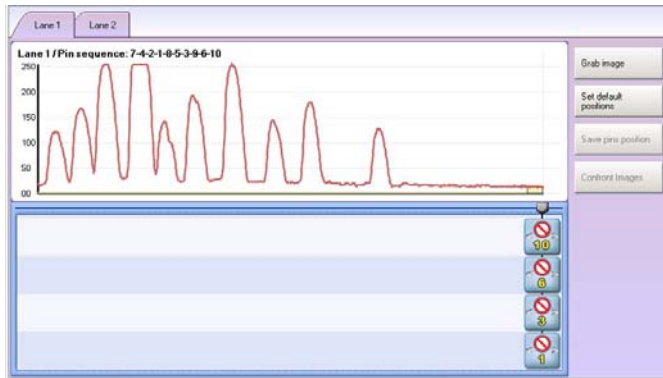
The Screen shot of the lane
is load as a graphic. All the pins cursor are
overlapped on right side of the screen.
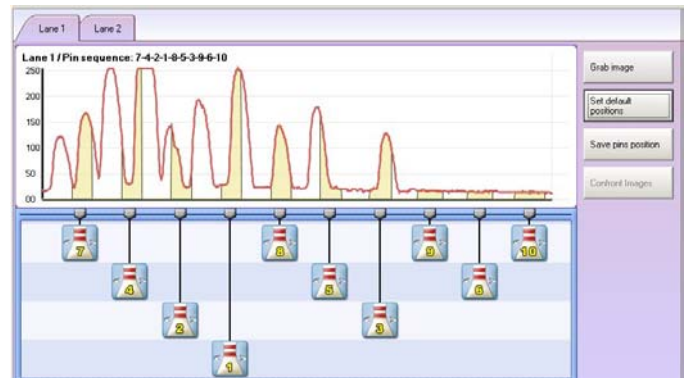
Click on **SET DEFAULT POSITION BUTTON**
The pins cursor will be displayed on the
approximate position.
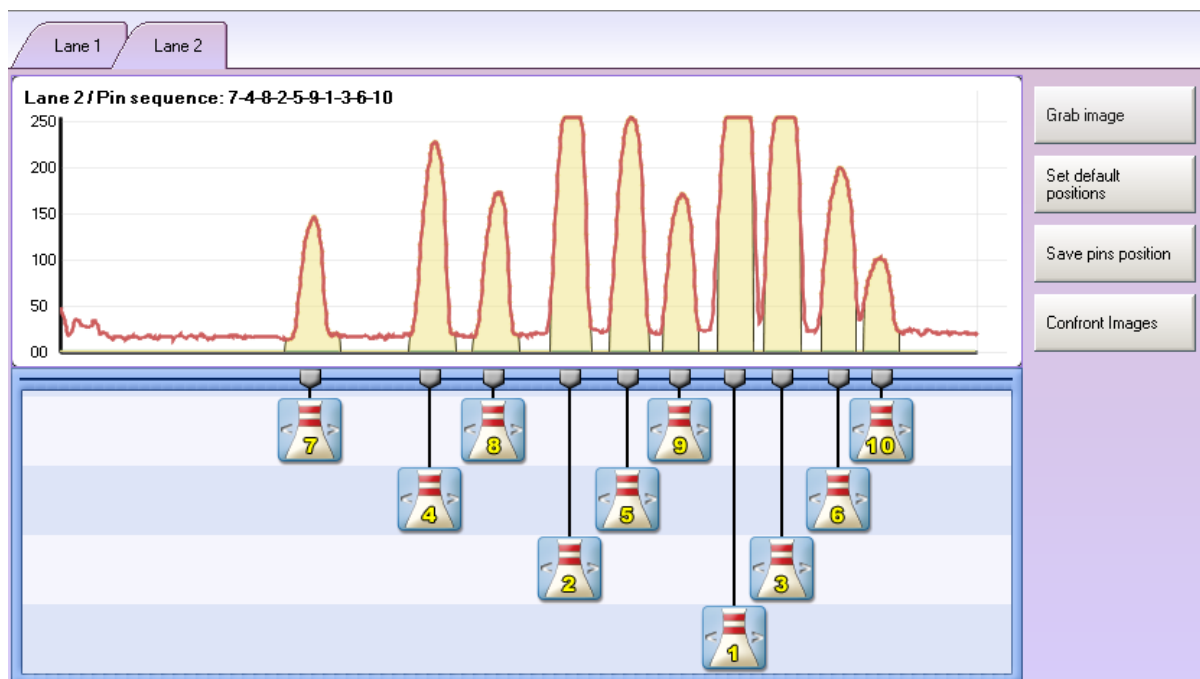
To Moving the pins cursor, click on the pin number button, keep the mouse button pressed,
move to left or right the cursor, for finish the operation realise the mouse button.

The pins are represented by the **'peaks'** of different heights. The height depends on the distance from the neon light the pin is. Pins 1,3,2 and 5 are the highest 'peaks' as these pins are closet to the light, while pins 7,8,9 and 10 are further away and therefore receive less light resulting in lower 'peaks'. As the example shows the 10 pin 'peak' height is 100, less than half of the height of the pin 1 'peak' (250).This is okay but a 'peak' lower than 50 would not be detected.

The yellow vertical window shows the searching area where Sciba looking for the pin. The windows must be in the center of the base of the peak, it's mandatory that all the near window's do not overlap each other, otherwise the Sciba cant' read the right pins.

At the end of the operation click on **SAVE PINS POSITION** button, than wait till the Save pins position button became invisible, it's means that the pins position is saved.

Confront Images

Note: this operation is required only for installation with One Sciba per one pair of lanes, for a odd lane installation confront image is not necessary.
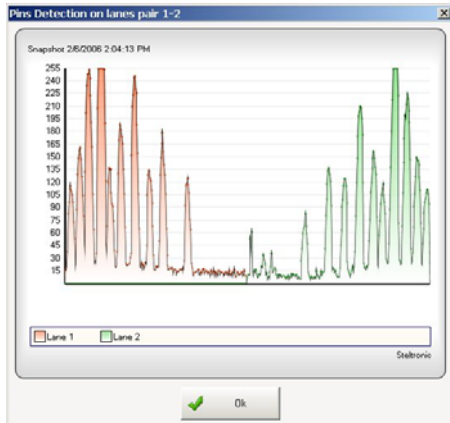
1) Select ODD (or EVEN) lane, grab the image clicking on **GRAB IMAGE** button.

2) Select EVEN (or ODD) lane, grab the image clicking on **GRAB IMAGE** button.

3) Click on **CONFRONT IMAGE** button.

The snapshot picture displays the graphic of both lane together. The height of the peaks must be similar: for example, pin 10 of odd lane, is approximately the same height of pin 10 of even lane.
If the difference between the 2 lanes is too much, probably the camera is rotate clock-wise or anti clock-wise.

Suggestions for a good pins reading

It is important that the pins 'peaks' are a good distance from one another so that the pin detection is good. In cases where it is difficult to get good peaks, move the window slightly to allow more distance between them.

If the Sciba CCD position is not correct or the 'focus' is out it can be regulated, the worst thing is the overlap of pin peaks, causing the Sciba CCD to detect one pin in place of another on the 'ideal line' and scoring it incorrectly.

Brightness value is same for both lanes. Depending by pins illumination's condition, even and odd lanes could display different peaks height, for same pins. It's important to keep a Brightness media value in order to calibrate both lane as well.

It is also possible, when the Brightness is too high, that the light saturates the lens and the peaks overlap (they tend to become one line at the top).

If it is not possible to fix the problem by altering the Brighteners you need to MECHANICALLY CALIBRATE THE SCIBA; If this does not work, replace the Sciba CCD.

The higher the peak is the more the peak tends to flatten. This phenomenon is known as IMAGE SATURATION when a pin peak is too saturated the Sciba CCD tends to 'see' the pin even when it has been knocked down.

Set the light that enters into the Camera by changing the Brightness.
If the pin 'peaks' are too high, being saturated with light, the Sciba CCD tends to 'see' them all the time, if the pin 'peaks' are too low the Sciba CCD has a hard time 'seeing' them.

Integration time is the value given to the amount of light in the Sciba area. By lifting or lowering this value you let more or less light into the Sciba, just as if it where a standard camera diaphragm.
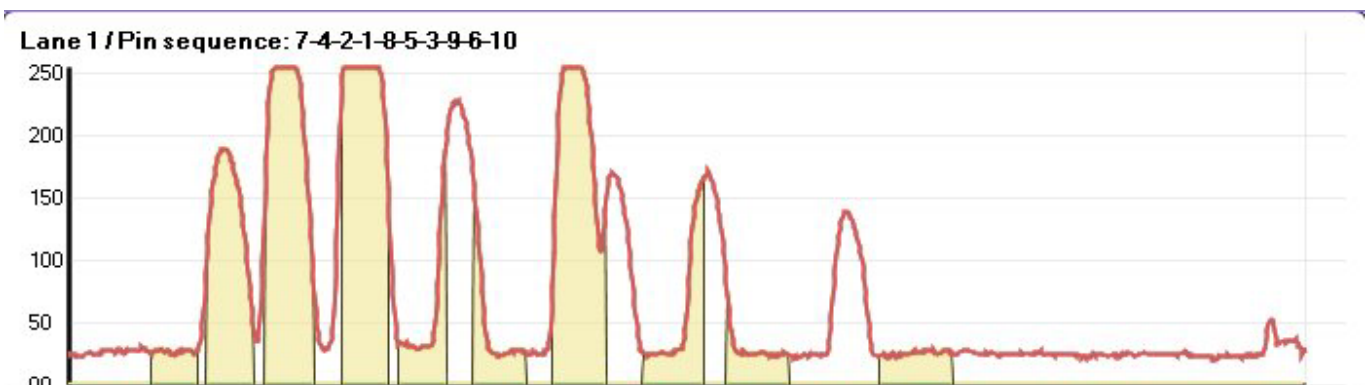
Example of wrong calibration
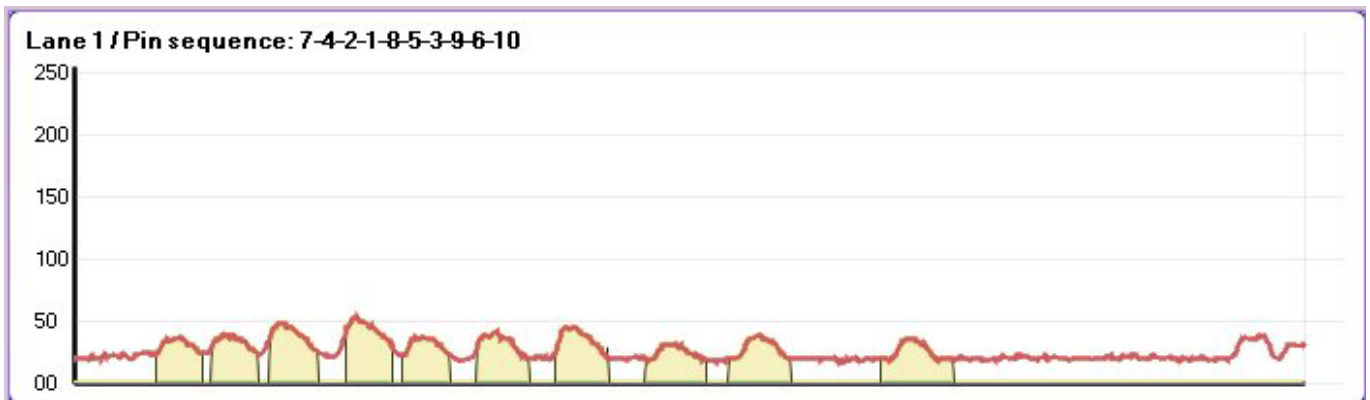
The peaks are too LOW; not enough light is entering the lens and the Sciba does not recognize the pins. Lift the Brightness
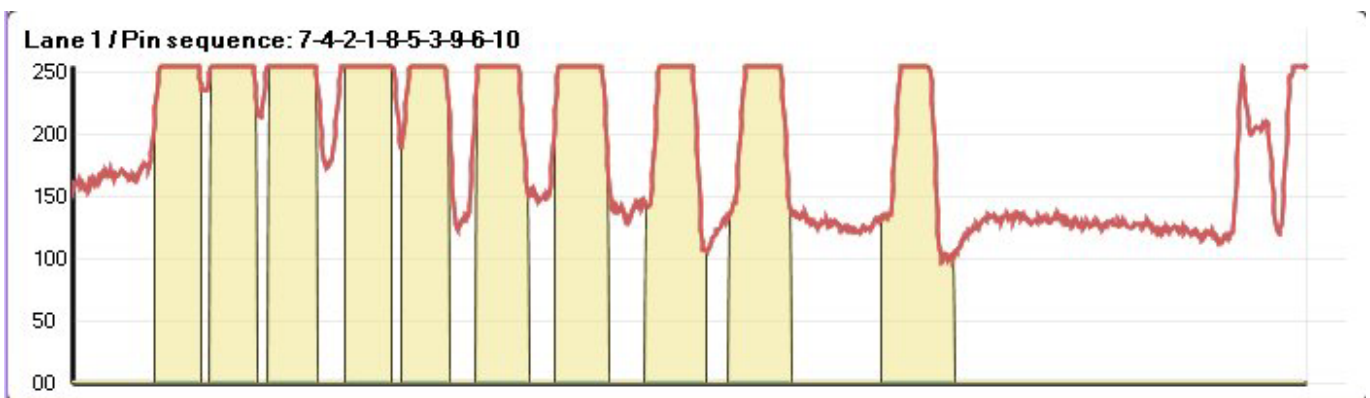
The peaks are too high; too much light is entering the lens; the Sciba recognizes the pins ALL the time, even when they have been knocked down. Decrease the Brightness.

The peaks are overlapped; the Sciba recognizes one pin in place of another, or worse it recognizes the pin in place of the one next to it. The Sciba may be out of focus. Lover the Brightness.
IF THE OPERATION IS NOT SUCCESSFUL MAKE A MECHANICAL CALIBRATION.

Finish the pins position by software

At the end of the calibration, close the Front desk program simply clicking on the X.

Checking the pins position by software is an operation that it's necessary if the Score do not read the pins well.

Superelex Stand Alone installation manual-
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