



# **BLADE MANUAL**

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# 1. G10V SYSTEM OVERVIEW

# **1.1. DESCRIPTION**

USS G10V AM systems can detect any 58 kHz resonant circuit or any acousto magnetic tag passing through the detection area.

The system includes Digital Processing System (DPS) in order to achieve great detection range, filtering noise and avoiding possible false alarms.

The tuning is done easily via powerful software. The system can be accessed via laptop and optionally via Internet, Analog MODEM, GSM MODEM, etc....

USS 58 kHz systems can have several configurations:

Mono-antenna:	1 Transceiver pedestal
Dual System:	2 pedestals (TX-RX)
Split System:	3 pedestals (RX-TX-RX)

#### **1.2. SPECIFICATIONS**

1.2.1. TRANSCEIVER		
ELECTRICAL		
<b>Operating Frequency</b>	58 kHz	
Transmit Burst Duration	1.5 ms	
Transmit Burst Repetition Ra	tes	
50Hz 75 or 50 pulses/seco	ond (TX burst 1.5ms)	
60Hz 90 or 60 pulses/seco	ond (TX burst 1.5ms)	
Transmit coil Resistance	1.5 Ohm	
1.2.2. RECEIVER		
ELECTRICAL		
Operating Frequency	58 kHz	
Inputs	2	
Receive coil Resistance	1.5 Ohm	
1.2.3. POWER SUPPLY		
ELECTRICAL	PS-G10V-2-110	
Input	110Vac	
Output	2 Outputs (12V–0–2	12V)
Fuse	2A 250V Slow	
ENVIROMENTAL		
R. Humidity	0 to 85% non condensing	
Operating Temperature	0º to 50º C	
Noise level	30dBm	



# 1.3. TABLE: SYSTEM / DETECTION / NOISE

The system will perform as follows:

DR Label, Gain X5, Threshold 40 (SOLARIS SYSTEM)

LEDS BLINKING	MONO (*)	DUAL
0/1	110 cm	220 cm
1/2	100 cm	200 cm
2/3	85 cm	170 cm

Super pencil ferrite tag, Gain X5, Threshold 40

LEDS BLINKING	MONO (*)	DUAL
0/1	160 cm	350 cm
1/2	150 cm	330 cm
2/3	140 cm	320 cm

<sup>(\*)</sup> For Mono distances are on each side.



# 2. HARDWARE

**2.1. TRANSCEIVER BOARD** 



A: TRANSCEIVER UPPER LOOP

**B: TRANSCEIVER LOWER LOOP** 

C: RESONANCE ADJUSTMENT TRANSCEIVER UPPER LOOP

- D: RESONANCE ADJUSTMENT TRANSCEIVER LOWER LOOP
- E: VU METER (LED SIGNAL BAR)
- F: POWER CONNECTOR

G: RELAY

**H: COMMUNICATION** 

I: ALARM (LIGHT)

J: ALARM (BUZZER)

K: RED CHANNEL: CONNECTION TO THE GREY CONNECTOR ON A RECEIVER BOARD. ALSO RS 485 IN/OUT L: GREY CHANNEL: CONNECTION TO THE RED CONNECTOR ON A RECEIVER BOARD. ALSO RS 485 IN/OUT

M: SOUND ALARM LEVEL SELECTORS

N: 485 JUMPER

O: PEOPLE COUNTER AND LIGHTS CONNECTOR

P: MAGNET CONNECTOR

2.2. RX BOARD



A: RECEIVER UPPER LOOP

B: ALARM (LIGHT)

C: RECEIVER LOWER LOOP

D: GAIN LEVEL

E: RESONANCE LEVEL

F: CONNECTION TO THE GREY CONNECTOR ON A TRANSCEIVER BOARD. ALSO RS 485 IN/OUT

G: CONNECTION TO THE RED CONNECTOR ON A TRANSCEIVER BOARD. ALSO RS 485 IN/OUT

H: PEOPLE COUNTER AND LIGHTS CONNECTOR



#### 2.3. POWER SUPPLY

⇒ Power Supply for 2 Transceiver (TX) Antennas





#### **3. QUICK TUNING**

#### **3.1. QUICK INSTALLATION**

#### 3.1.1. PREVIOUS

- ⇒ Always connect the system to clean power lines (No other electrical devices connected)
- ⇒ In order to avoid damaging the electronics, do not place any TURNED OFF antenna near a TURNED ON Transceiver antenna. Please keep the minimum distance, not less than 50cm
- ⇒ Do not fix the system to the floor before testing its performance FIRST!
- ⇒ Do not place Receiver and Power line (220Vac/110Vac) cables along the same route.
- ⇒ Please Read this manual BEFORE installing systems!

#### 3.1.2. SYSTEM INSTALLATION

- ⇒ Check cabling / connection needs according to the kind of installation. (See Section <u>4. CONFIGURATION</u>). Check all the material is ready.
- $\Rightarrow$  Place the system in the installation area. (DO NOT fix the system to the floor).
- ⇒ Turn the system ON, and connect to the system (Follow Section <u>5. SOFTWARE</u>)
- ⇒ Check Electrical Noise, Synchro, TX Status, etc.... check everything is normal.
- $\Rightarrow$  Stabilize external electrical noise to the minimum.
- ⇒ Check Section <u>1.3. TABLE: SYSTEM / DETECTION / NOISE</u> to define the maximum detection distance.
- $\Rightarrow$  If any modifications, save parameters.
- ⇒ Disconnect your laptop and observe the system during some time making several detection tests (buzzer can be disabled to not cause disturbance).
- ⇒ If OK, fix the system to the floor , if not OK, see Section<u>3.2. TROUBLESHOOTING</u>

You are done!

#### **3.2. TROUBLESHOOTING**

#### **3.2.1. NO DETECTION**

- $\Rightarrow$  Try with other tag
- ⇒ Rise Gain (Up to 2-3 LEDS)
- ⇒ Lower Threshold
- ⇒ See Section <u>3.4. NOISE PROBLEM</u>
- ⇒ See Section <u>3.3. SYNCHRONIZATION PROBLEM</u>
- ⇒ See Section <u>3.5. DEAD TRANSMITTER</u>
- ⇒ See Section <u>3.6. DEAD RECEIVER</u>

#### 3.2.2. TOO MUCH DETECTION

- ⇒ Lower Gain
- ⇒ Rise Threshold

#### 3.2.3. FALSE ALARM

- ⇒ Look for TAGS near the antennas
- ⇒ See Section 3.7. FALSE ALARM (OR UNKNOWN ALARM)

#### 3.2.4. MAKES OTHER SYSTEMS FALSE ALARM

⇒ See Section <u>3.3. SYNCHRONIZATION PROBLEM</u>



#### **3.3. SYNCHRONIZATION PROBLEM**

#### How can I recognize a synchro problem?

- $\Rightarrow$  Externally: When you turn on your system:
  - It makes other 58 kHz systems near alarm
  - Your system is showing a high amount of noise in the LED bar (See Section 2. HARDWARE).
  - There is no detection or it is very poor.
- ⇒ Laptop:
  - Check Section <u>5.7.5. DISCOVERY TOOL</u>

#### How can I know the synchro problem has been solved?

- $\Rightarrow$  Externally all systems around will be working fine as well as yours.
- ⇒ Laptop: The situation in the discovery mode will be similar to this:





#### **3.4. NOISE PROBLEM**

#### How can I recognize a noise problem?

- ⇒ Externally: When you turn on your system:
  - The system shows a high amount of noise in the LED bar.
  - The detection might be poor.

#### ⇒ Laptop:

• In the scope you will see high amount of noise, in the 4 buffers.





#### How can I solve a noise problem?

⇒ Try to locate the source of noise:

- Turn off all electrical equipment in the area. If the noise disappears, start turning all the electrical equipment ONE BY ONE till you get noise again.
- Other way to locate the source of noise is moving the Receiver antenna while at the same time you are looking to the LED bar or the software. See how the orientation of the Receiver antenna affects the amount of noise and you will finally find the source.
- ⇒ Then you have to neutralize the source of noise. (It might be related with bad synchro, please check procedure in Section 5.7.5. DISCOVERY TOOL) Other techniques are:
  - Swap Transceiver antenna by Receiver antenna position.
  - Ground the noisy device correctly or try to put it as far as possible from the Receiver antenna.
  - Use advanced noise techniques 'New Noise fighting algorithms'



⇒ New Noise fighting algorithms

Depending on the level of electrical noise, it is recommended to select different positions in the noise selector. Each antenna is independent.

#### **Transceiver antenna**

- There are 2 active modes in noise fighting for Transceiver antenna.
- Position 0 turns off noise fighting algorithms in Transceiver antenna.
- Back Ground suppression

#### **Receiver antennas**

- There are 2 active modes in noise fighting for Receiver antennas.
- Position 0 turns off noise fighting algorithms in Receiver antenna.
- Back Ground suppression

System Trans	smitter Re	eceiver	People Cou	inter	Alarms	Systen	Trans	mitter	Receiv	/er	People Co	unter	Alarms
Transceiver	Red Chann	nel Grey	Channel			Tra	sceiver	Red Cl	hannel	Grey	Channel		
1 1	2 5	10	20	50	100	G	1	2	5	10	20	50	100
Threshol Mult: 1	d (dB) 18 ▼ 1	24	30 36	42	48	Mu	hreshol It: 1	d (dB) 1	8 2	4	30 36	42	48
Receiver	Loops Upper Loo	p	V Low	er Loop	,	⊂ R	eceiver I	Loops Upper	Loop		V Low	er Loop	,
Anti Noise Mode	e Algorithm	∎s ▼	Back	Ground	d	A	nti Noise Mode	e Algori e 0	ithms •		🔲 Baci	Groun	d
						R	esonanc Capacito	rs 9	•		Cut RX1 C	hannel ම	OFF

#### How can I know the noise problem has been solved?

⇒ Detection will improve. The signs of noise in the LED bar and in the scope will disappear.

#### **3.5. DEAD TRANSMITTER**

#### How can I recognize a dead transmitter problem?

- ⇒ Externally: When you turn on your system:
  - The system does not detect.
- ⇒ Laptop:
  - Voltage near to 0Vpp



#### How can I solve a dead transmitter problem?

- ⇒ If the Transceiver Board is not working, change it by a new one.
- $\Rightarrow$  Please check the connection cable between the Power Supply and the Transceiver Board.
- $\Rightarrow$  If the synchro pulse from the POWER supply is not OK, the system will stop the transmission.
- ⇒ If the problem persists, it can be caused by a blown fuse in the Power supply. Change the power supply by a new one.
- $\Rightarrow$  Check the power line frequency to be 50Hz+/- 1Hz or 60Hz +/- 1Hz.

#### How can I know the dead transmitter problem has been solved?

 $\Rightarrow$  The system is working normally.



#### **3.6. DEAD RECEIVER**

#### How can I recognize a dead receiver problem?

- ⇒ Externally: When you turn on your system:
  - The system does not detect. (Remember that there are 6 independent receivers one for every loop).
  - You can try if a dual system to change the receiver cable to red connector or grey connector

#### ⇒ Laptop:

• The signal is near 6 dB or less in all receiver buffers.



#### How can I solve a dead receiver problem?

- ⇒ The problem may come from the Transceiver-Receiver connection cable. It may be broken during the installation.
- ⇒ The problem may come from the Receiver Board. It might be damaged. Try another Receiver Board
- ⇒ The problem may come from the Transceiver Board. It may have one Receiver channel damaged. Try another Transceiver Board or test with the other Receiver channel.

#### How can I know the dead receiver problem has been solved?

 $\Rightarrow$  The system is working normally.



#### 3.7. FALSE ALARM (OR UNKNOWN ALARM)

#### How can I recognize a false alarms (or unknown alarm) problem?

- ⇒ The system is alarming when not expected to alarm. USS 58 kHz systems are very false alarm restrictive. It is almost impossible that a USS 58kHz system is alarming except when: ⇒
- There is a tag in the detection area
- ⇒ There is another 58 kHz system not in synchro.

#### How can I solve a false alarms (or unknown alarm) problem?

⇒ Look for tags near the system. Look in the scope in the software. If you see something similar to this:



- ⇒ Please Stop the TX system. If the alarm disappears, there are at least some LABEL/TAG near.
- ➡ If not, there might be another 58 kHz system out of synchro affecting our system. Follow procedure in Section <u>5.7.5. DISCOVERY TOOL</u>

# How can I know the false alarms (or unknown alarm) problem has been solved?

 $\Rightarrow$  The system is working normally, no unexpected alarms.



#### 4. CONFIGURATION

#### **4.1. CONNECTION METHOD**

USS 58 kHz systems have been designed to fit into every installation needs. They can be configured in multiple ways.

Connection between Transceivers or between Transceivers and Receivers is done through 10 ways telephonic cable which allows easy adaptation to the installation place needs.

#### 4.1.1. ANTENNA CABLES AND CONNECTION

Each Transceiver antenna can be connected to 2 independent Receiver antennas by a 10 ways flat cable with NOT polarized connectors. Please follow the instructions carefully in order to manufacture the cable correctly.



- ⇒ Connect the cable between Antennas following Section <u>4.2. CONFIGURATION EXAMPLES</u>
- $\Rightarrow$  Test the cable with a system to check that it is working correctly.



# 4.1.2. POWER SUPPLY CABLE AND CONNECTION

Each Transceiver antenna must be supplied by a 10 ways flat cable with Polarized connector. The maximum length for this cable is 15 meter.



#### PROCESS

 $\Rightarrow$  Follow the same process as in Section <u>4.1.1. ANTENNA CABLES AND CONNECTION</u>



# **4.2. CONFIGURATION EXAMPLES**

# 4.2.1. TRANSCEIVER BOARDS

The connectors from Transceiver Boards which connect to other antennas are red connector (K in the drawing) and grey connector (L in the drawing). Apart from the RX signal, they also take communication between Transceiver and the 2 local Receiver Boards and communication with further Transceiver Boards in the net, if any.



#### 4.2.2. RECEIVER BOARDS



The connectors in the Receiver Board are red connector (F in the drawing) and grey connector (G in the drawing).



# 4.2.3. DUAL SYSTEM CONFIGURATION (RX-TX)

Always connect a CAB-FL-10-I cable with CON-10-TEL-NOPOL (NOT POLARIZED) from RED connector of one board to the GREY connector of another board.



⇒ For Power Supply Connection, always use a CAB-FL-10-B cable with CON-10-TEL-POL (POLARIZED)





# 4.2.4. SPLIT SYSTEM CONFIGURATION (RX-TX-RX)

Always connect a CAB-FL-10-I cable with CON-10-TEL-NOPOL (NOT POLARIZED) from RED connector of one board to the GREY connector of another board.



⇒ For Power Supply Connection, always use a CAB-FL-10-B cable with CON-10-TEL-POL (POLARIZED)





#### 5. SOFTWARE

The interface of Tuning Software for EAS systems has been designed to allow an easy understanding of all features. Icons are highly intuitive permitting a quick assimilation of concepts.

#### **5.1. INSTALLATION PROCEDURE**

- ⇒ Before installation verify that you have Windows98se or higher.
- $\Rightarrow$  Close all the executing programs.
- $\Rightarrow$  Run the installer
- ⇒ Select the folder to install the software and click 'Install' button

Destination Folder	
	Browse
Space required: 19.1MB	
Space available: 611.8GB	

Show dotails
Tuning Dexilon Setup

- $\Rightarrow$  Run the software:
- Always connect to the Master to get access to any of the systems (You gain access to all the slaves through the master).



### 5.2. CONNECT



- $\Rightarrow$  Use an USB to Rs232 adaptor if the computer does not have a RS232 port.
- ➡ Connect the communication cable provided to the USB adaptor or directly to the system if the computer has RS232 port.
  - ➡ Run the software and press 'SETTINGS'



- ⇒ 1. Select Communication
- $\Rightarrow$  2. Select Serial Port.
- ⇒ 3. Select Serial Port Comm.
- ⇒ 4. Press Ok

1	Communication	Select Communication Serial Port Serial Port
	Password	Comm COM1 ▼
	License	C CP-IP
		4 Ok Cancel

⇒ Press 'Connect'



Software will search for all the systems connected and load them into the System window

Searching Machines		
	24s	Finish
Systems found: 2		



# 5.2.2. ANALOG MODEM

- ⇒ Parts needed: Analog Modem MDM58
- $\Rightarrow$  Connect the communication cable provided from the analog MODEM to the system.
- $\Rightarrow$  Connect the analog line to the analog MODEM.
- $\Rightarrow$  Test the MODEM sequence
  - ➡ Run the software and press 'SETTINGS'



- $\Rightarrow$  1. Select Communication.
- ⇒ 2. Select Modem
- $\Rightarrow$  3. Select Serial Port Comm.
- $\Rightarrow$  4. Enter Phone Number
- ⇒ 5. Press Ok

1	Communication	Select Communication Modem
	Date Format	Comm COM1
	Password	2 Modem 4 Phone Number 96256874565
-	License	
		5 Ok Cancel

⇒ Press 'Connect'

- Connect
- Software will search for all the systems connected and load them into the System window

Searching Machines	
24s	Finish
Systems found: 2	



#### 5.2.3. GSM MODEM

- $\Rightarrow$  Parts needed: GSM MODEM.
- $\Rightarrow$  Input the SIM CARD into the GSM MODEM.
  - To enter or change PIN number, access the system using Serial Port connection (See Section <u>5.2.1.</u> <u>RS232 PORT</u>)
  - Select Command Transmission (See Section <u>5.4.5. COMMANDS TRANSMISSION</u>) and input !PNxxxx (xxxx=PIN number)
  - Save parameters (See Section 5.4.4. PARAMETERS)
  - Disconnect (See Section 5.4.3. DISCONNECT)
- $\, \rightleftharpoons \,$  Connect the communication cable from the GSM MODEM to the system
- At power on, the system will detect that it has a PIN number and will activate the GSM MODEM. Then it will be on hold waiting for the communication to come through.
- ⇒ Follow the same process than Section <u>5.2.2. ANALOG MODEM</u>



# 5.2.4. INTERNET MODULE

- ⇒ Parts needed: Internet Module ACC-TCP/IP
- ⇒ Connect the cable provided to the INTERNET MODULE and to the system.
- ⇔ Connect the ETHERNET/ADSL cable line to the INTERNET MODULE.
  - ⇒ Run the software and press 'SETTINGS'



- ⇒ 1. Select Communication.
- ⇒ 2. Select TCP-IP.
- ⇒ 3. Enter IP address and Port
- $\Rightarrow$  4. Select Client or Server operation.
  - For more information see TCP-IP Modules Manual.
  - It is possible to save, load or delete the IP/PORT information
- ⇒ 5. Press Ok

1 Communication Date Format Password License	Select Communication				
5 Ok Cancel					

⇒ Software will search for all the

into the System window



Connect



# 5.2.5. HOW TO KNOW THE COM PORT

- ➡ If you are using a USB to RS232 adapter, check which virtual port is assigned by the adapter. To do this, follow the steps:
  - 1. Click on **Start** and then **Control Panel**.
  - 2. Click on the Performance and Maintenance link.
  - 3. Note: If you're viewing the *Classic View* of Control Panel, you won't see this link. Simple double-click on the **System** icon and proceed to Step 4.
  - 4. In the System Properties window, click on the Hardware tab.
  - 5. With the *Hardware* tab selected, click on the **Device Manager** button.
  - 6. Select Ports (COM & LTP) and check port name used for the adapter.



### 5.3. ACCESS

- ➡ To access any of the systems in the line it is ONLY necessary to connect the PC/LAPTOP/MODEM/TCP-IP MODULE to the MASTER. You gain access to all the slaves through the master.
- $\Rightarrow$  Double click the SN of the system you want to gain access.

Systems		
Rew Search		
<ul> <li>SN: 08D8</li> <li>ID: 0001</li> <li>SN: 06A7</li> <li>ID: 0002</li> <li>SN: 0807</li> <li>ID: 0003</li> </ul>		
S/N:		
ID:		
Close		
Sound Alarm		
Change ID		
Change Pass		

- ⇒ Select Maintenance / Supervisor access
- ⇒ Input PASSWORD (Factory 12345678 for Maintenance)
- ⇒ Press OK

Level Access	
Maintenance	Supervisor
Password	
:	System S/N: 08D8
Password	
	8 Characters
	Ok Cancel



 $\Rightarrow$  The selected system is accessed

Settings Connected	Parameters Command Transmission Autotuning Report Alarm List Modules TCP-IP Languages Update Manual	Disconnect
Systems	System Transmitter Receiver People Counter Alarms	
New Search           □	Status           Serial Number         08D8         ID         0001         Model         1960         Version         04C3	Configuration Options Detection Enable modification
ID: 0002 ID: 0807 ID: 0003	System Totals     Total Alarms     Total Day Alarms     Total Hour Alarms       Antenna Tx     68     17     0       Red Channel     30     0     0       Grey Channel     3     3     0	Hard Filter Narrow Filter Test 1 Test 2
Reverse order	Power On Times Show in Led bar Power On Times 9 Power On Hours 210 © Rx © V1 © V2 © T1	<ul> <li>✓ Test 3</li> <li>✓ Test 4</li> </ul>
S/N: D: 20B9 FFFF Close Sound Alarm Change ID	Internal Clock         Date       17/04/2014         Image: Configuration       Image: Configuration         Update       Image: Configurat	Others   Alive Signal    Master   Net  Alarms Rs232
Con	nected. COM1: 19200baud 🔄 S/N: 08D8 ID: 0001 🖋 Master 🖋 Net Power Line Freq: 50Hz 🕕 Version 4.C3	.:



#### 5.4. MAIN MENU





- $\Rightarrow$  Communication:
  - Gain access to the system selecting the communication type (See Section 5.3. ACCESS)

Communication	Select Communication		
Date Format	🔲 🛶 Serial Port	IP 192.168.1.36	
Password	Modem	Port 1234	
License	V 🕵 TCP-IP	Operation 💿 Client 💿 Server	
		Optional	
	Assign IP and Port to a location name and save it		
		Location Laboratorio -	
		Save Delete	
		Ok Cancel	

- ⇒ Date Format
  - Select the date format

Communication Date Format Password	Select Date Format	Date Format Today Date 16/12/2011
License		
		Ok Cancel



- ⇒ Password
  - Check/Uncheck option to remember Maintenance or Supervisor password.

Communication	☑ Remember Maintenance or Supervisor Password
Date Format	
Password	
License	
	Ok

- ⇒ License
  - Enter a new key and then click 'Check License' to see when the period expires.

Communication	License:	sdasdfa6vwerf356vtrhik		Check Licer	ise
Date Format					
Password					
License					
			Ok	Cancel	



# 5.4.2. CONNECT / CONNECTED



- ⇒ Connect to the system(s)
- ⇒ When connection is active, then it is shown as 'Connected'
- Software will search for all the systems connected and load them into the System window

⇔



#### 5.4.3. DISCONNECT



Disconnect from the accessed system

## 5.4.4. PARAMETERS

Para	ameters		
t) 🔟 o	Reset Parameters Save Parameters Refresh Parameters	<ul> <li>⇒ Reset all parameters in the system to factory values</li> <li>⇒ Save all parameters into system memory</li> <li>⇒ Refresh all parameters in the software from the system memory</li> </ul>	
<b>*</b>	Load from File Save into File	<ul> <li>⇒ Load From File: Load parameters from a file into the system</li> <li>⇒ Save into File: Save system parameters into a file</li> </ul>	

#### 5.4.5. COMMANDS TRANSMISSION



⇒ Opens a command window in order to send any command directly to the system

Transmission		
Data to Send	<b>Ⅰ ▼</b>	Send
	A	
	!50 !60	
Reception	JAA E	
	IAF	
	IAS	
	!BY	<b>^</b>
	IBZ	
	ICP	
	ICV	
	IDA IDS	
	!FA	
	!HR	
	9E UM	-
	!LB	
	1L1	<b>-</b>
	1L2 1L3	Exit



# 5.4.6. AUTOTUNING



- ➡ Tune the systems selected with Threshold, Gain and Noise to get the best performance
- $\Rightarrow$  Select the systems you want to tune:

Select Systems	
(SN:06A7 - ID:0002)	
Door 3	
(SN:0807 - ID:0003)	
Ok	ixit
Ok	×it

 $\Rightarrow$  On this step, it is possible to customize the entrances/doors and systems:

#### **Edit Corridor**

Clicking the right mouse button in the corridor brings up the option to edit it.

#### Edit System

Clicking the right mouse button in the system brings up the option to edit it.

Select Systems	Select Systems
Door 1	Door 1
Door 2	Door 2
(SN:06A7 - ID:0002)	
Corridor	System
Edit Corridor: Aceptar Cancelar	Edit System: Aceptar Cancelar
Door 1	Master
Ok	Ok Exit



#### **Add Corridor**

**System Location** 

Clicking the right mouse button in the white space brings up the option to add a new corridor or clear all of them leaving one by default named "Corridor Name" Drag and drop systems to move them from one corridor to another.

Select Systems	Select Systems
Corridor Name	Door 1
	(SN:0807 - ID:0003)
	Door 2
	Master (SN:08D8 - ID:0001)
	Door 3
Add Corridor	
Clear All	
Ok Exit	Ok

- $\Rightarrow$  Click 'Ok'.
- ➡ Choose between Detection options (Threshold, Gain and Noise) and Other (Set People Counter ON, Set PC Date and Time and Reset Parameters).

Detection	Select Systems
<ul><li>✓ Threshold</li><li>✓ Gain</li></ul>	⊡…
Voise	
People Counter ON	Door 3
PC DateTime Reset Parameters	
	Start Autotuning Exit

 $\Rightarrow$  Click 'Start Autotuning' button to tune the systems.



- / 7	
).4./.	NEPUNI

and the second		
Re	eport	

 $\Rightarrow$  Displays all the system measurements and parameters saved on a file at a certain moment.

# 5.4.7.1 SAVE REPORT

⇒ Select

⇒ Select Save Report File:	Select Action  Select Action  Show Report  Save Report into File
Click 'Ok'.	Ok Cancel
Select the systems from which you want to create a report:	Select Systems

SN:0807 - ID:0003)

Exit

Ok

 $\Rightarrow$  Click 'Ok'.

⇒	Optionally,	you	can	set	the
	following	infor	matic	on f	rom
	the store a	nd the	e syste	em	

-	84
	store
Name	
Location	
( <sup>1</sup> )	Antennas
Model	
Distance	
Тад	
2	Technician
Name	
Phone Number	
Problem Description	
Ok	Cancel

⇒ Click 'Ok'.

 $\Rightarrow$  Enter a name for the Report file.



#### 5.4.7.1 SAVE REPORT

 $\Rightarrow$  Select Show Report:



- $\Rightarrow$  Click 'Ok' button
- $\Rightarrow$  Select the report file.
- $\Rightarrow$  The Report will show up as follows:

		1
Name	Status	Configuration Options
Hano		Detection
Location	Serial Number 08D8 ID 0001 Model 1960 Version 044	C3 Enable modification
ዓን Antennas	System Totals	Hard Filter
System	Total Alarms Total Day Alarms Total Hour Alarms Total Hour Near Tag	g Alarm Narrow Filter
▼.	Antenna Tx 396 8 0 0	
Model	Antenna Rx1 105 0 0	V Test 1
Distance	Antenna Rx2 134 0 0	Test 2
Tag	Power On Times Show in Led bar	Test 3
	Power On Times 30	
Sechnician	Power On Hours 66	V Test 4
Name	Internal Clock	Others
Dhone Number		Alive Signal
Phone Number	Date 11/04/2014 📑 Time 09:39:19 🔄 🕥 SW Time	
Problem Description		Master
	Green Function Working Hours	Net
	Weekday Friday	
		Metal ON
	0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	23 24

- $\Rightarrow$  Select System Serial Number.
- ⇒ Information of System, Transceiver, Receiver, People Counter and Alarms will be showed up.





⇒ It is possible to get the data during the last year from all the systems on the net by selecting the systems which are required to get historical data from. (Data is refreshed into memory every hour)

Select Systems
Door 1
Door 2
Door 3
Ok Exit

- $\Rightarrow$  In this window, it is possible to customize the entrance/doors and systems. (Read Section <u>5.4.6.</u> <u>AUTOTUNING</u>)
- ⇒ The Data Mining window will show up as follows:

∃ <b>V</b>	
Master (SN:08D8 - ID:0001)	
(SN:06A7 - ID:0002)	
Door 3	
(SN:0807 - ID:0003)	
Select Date	
From 01/10/2011	
Get List	
Parameters	
All None	
Systems People Counter	
Alarms Antenna IX	
Alarms Antenna Rx2	
Near Tag Alarm     Outs Corridor 1     Outs Corridor 2	
Jammer Alarm	
Power On Times Total Outs	
V Total Alarms	



⇒ Select Date ranges:

- Select Da	ate				
From	11/11/2011		То	17/11/2011	
		List			

⇒ Select Parameters to display:



 $\Rightarrow$  Press 'GET LIST' button to get the historical data from the selected systems:



### TABLE DATA

⇒ Data is displayed in a Table with columns as follows:

		Table Cha	rt Systems	Period	Day	•	
	ID:0001)				Perio	d: 01/10/2	011 - 18/11/2011
			Day	Total Alarms	Total Ins	Total Outs	
	2)	▶ 01.	10/11	0	0	0	
Door 3		02	10/11	0	0	0	
		03	10/11	2	74	66	
	3)	04	10/11	0	48	47	
		05	10/11	28	65	60	-
		06	10/11	0	43	41	=
Select Date		07	10/11	3	64	55	
From 01/10/2011	To 18/11/2011	08	10/11	0	3	3	
		09	10/11	0	0	0	
Get List		10	10/11	22	87	80	
		11/	10/11	0	60	53	
Parameters		12	10/11	0	0	0	
Ali 📃	None	13	10/11	0	40	37	
Systems	People Counter	14	10/11	1	54	48	
Alarms Antenna Tx	las Carridas (	15	10/11	0	2	2	
Alarms Antenna Rx1	ins corridor 1	16	10/11	0	0	0	
Alarme Antenna Py?	Ins Corridor 2	17	10/11	0	59	54	
	Outs Corridor 1	18	10/11	0	80	74	
Near lag Alarm	Outs Corridor 2	19.	10/11	0	57	55	
Jammer Alarm	Total Ins	20	10/11	0	42	34	
Power On Times	Total Outs	21	10/11	4	40	42	
Total Alarms	10.01 0010	22	10/11	0	0	0	
		23	10/11	0	0	0	
		24	10/11	1	67	60	
							·
							Export Data Print Data



⇒ Select Period:



• Only by selecting Hour Period, data displayed belongs to one day with periods of 24 hours.

able	Chart	Systems	Period	Hour	<ul> <li>Sele</li> </ul>	ect Day: 03/10/2011	Previous	Next	(
					Period: 0	3/10/2011			
		Hour	Total Alarms	Total Ins	Total Outs	_			
•	00		0	0	0				
	01		0	0	0				
	02		0	0	0				
	03		0	0	0				
	04		0	0	0				
	05		0	0	0				
	06		0	0	0				
	07		0	3	0				
	08		1	9	6				
	09		0	8	9				
	10		0	6	5				
	11		0	9	9				
	12		0	11	10				
	13		0	4	3				
	14		1	14	10	1			
	15		0	6	8				
	16		0	3	3				
	17		0	1	3				
	18		0	0	0				
	19		0	0	0				
	20		0	0	0				
	21		0	0	0				
	22		0	0	0				
	23		0	0	0				

• Select the day from which you want to get the historical data or click on 'Previous' and 'Next' buttons:



#### **CHART DATA**

 $\Rightarrow$  Change to Chart Tab to display the data in graphical style along a horizontal time axis.



 $\Rightarrow$  Select the style of the chart:



Chart Type	Line 🖵
	Point
	Line
	Spline
	Column
	Area
	StackedColumn

 $\Rightarrow$  Select perspective:



⇒ Chart visualization provides for major and minor settings to allow for zooming



 $\Rightarrow$  Data can be exported into txt file or printed:

Export Data	Print Data
-------------	------------

#### SYSTEMS DATA

⇒ Change to Systems Tab to display the data for each system individually.

	Table Chart Systems				
Door 1	TOTAL P	ERIOD DATA:	01/10/2011	- 18/11/2011	
	System Selection	Total	Total Ins	Total	
		Alarms 111	1900	1751	
(SN:06A7 - ID:0002)	Master (SN:08D8 - ID:0001)	111	1900	1751	
(SN:0807 ID:0003)	Door 2	1	0	0	
(38.000) - 12.0003)	(SN:06A7 - ID:0002)	1	0	0	
	Door 3	0	0	0	
Select Date	(SN:0807 - ID:0003)	0	0	0	
From 01/10/2011					
Get List		1			
Parameters	HOUR	DATA MINING	5: 18/11/2011	10:42:33	
All None	System Selection	Total Alarms	Total Ins	Total	
Systems People Counter	Door 1			Outs	
		2	9	Outs 7	
Alarms Antenna Rx1     Ins Corridor 1     Ins Corridor 2	Master (SN:08D8 - ID:0001)	2	9 9	7 7 7	
Alarms Antenna Rx1     Ins Corridor 1     Alarms Antenna Rx2     Outs Corridor 2     Outs Corridor 1	Master (SN:08D8 - ID:0001)	2 2 1	9 9 0	7 7 7 0	
Alarms Antenna Rx1     Alarms Antenna Rx2     Alarms Antenna Rx2     Outs Corridor 1     Near Tag Alarm     Outs Corridor 2	→ ₩ Master (SN:08D8 - D:0001) → ₩ Door 2 → ₩ (SN:06A7 - D:0002)	2 2 1 1	9 9 0 0	Outs           7           7           0           0	
Alarms Antenna Rx1     Alarms Antenna Rx1     Alarms Antenna Rx2     Outs Corridor 1     Near Tag Alarm     Outs Corridor 2     Jammer Alarm     Power On Times	Master (SN:08D8 - D:0001)     Oor 2     (SN:06A7 - D:0002)     Oor 3	2 2 1 1 0	9 9 0 0 0	Outs           7           0           0           0           0	
Alarms Antenna Rx1     Alarms Antenna Rx1     Alarms Antenna Rx2     Outs Corridor 1     Near Tag Alarm     Outs Corridor 2     Jammer Alarm     Power On Times     V Total Alarms	Master (SN:08D8 - D:0001) 	2 2 1 1 0 0	9 9 0 0 0 0	Outs           7           0           0           0           0           0           0	
Alarms Antenna Rx1     Alarms Antenna Rx1     Alarms Antenna Rx2     Outs Corridor 1     Near Tag Alarm     Outs Corridor 2     Jammer Alarm     Power On Times     V Total Alarms	Master (SN:08D8 - D:0001) Door 2 Door 3 SN:0807 - D:0003)	2 2 1 0 0	9 9 0 0 0 0	Outs           7           0           0           0           0           0           0	
Alarms Antenna Rx1     Alarms Antenna Rx1     Alarms Antenna Rx2     Outs Corridor 1     Near Tag Alarm     Outs Corridor 2     Jammer Alarm     Power On Times     V Total Alarms	Master (SN:08D8 - D:0001) Door 2 Door 3 SN:0807 - D:0003)	2 2 1 0 0	9 9 0 0 0 0	7           7           0           0           0           0	

- $\Rightarrow$  Total Period Data is the sum of all period data for each system separately.
- ⇒ Hour Data Mining is the sum of the actual hour for each system separately and is refreshed every new hour.



# 5.4.9. MANUAL



 $\, \Rightarrow \,$  Open the Manual Menu to browse this Tuning G10V Manual

# 5.4.10. LANGUAGES



All labels are supported in other languages. You can add new language or delete it.

Options	Select La	inguage: English 🗸	
Add Language	English	Español	
	▶ Ok	Ok	E
Delete Language	Cancel	Cancelar	
	Exit	Salir	
Save Changes	Settings	Ajustes	
	Select Communication	Selec. Comunicación	
Restore Default	Serial Port	Puerto Serie	
	Comm	Com	
	Modem	Modem	
	Phone Number	Número Teléfono	
	TCP-IP	TCP-IP	
	IP	IP	
	Port	Puerto	
	Client	Cliente	
	Server	Servidor	
	Password	Clave	
	Level Access	Nivel de acceso	
	Maintenance	Mantenimiento	
	Supervisor	Supervisor	
	Alarm List	Histórico	
	Select Date	Fecha	-

#### Add language

	Select	Language: English 👻	
Add Language	English	Español	
	▶ Ok	Ok	
Delete Language	Cancel	Cancelar	
	Exit	Salir	
Save Changes	Settings	Ajustes	
	Write Language	× 1	
		Cancelar	
	Client	Cancelar	
	Client Server	Cliente	
	Client Server Password	Cancelar Cliente Servidor Clave	
	Client Server Password Level Access	Cliente Servidor Clave Nivel de acceso	
	Client Server Password Level Access Maintenance	Cliente Servidor Clave Nivel de acceso Mantenimiento	
	Client Server Password Level Access Maintenance Supervisor	Cliente Servidor Clave Nivel de acceso Mantenimiento Supervisor	
	Client Server Password Level Access Maintenance Supervisor Alarm List	Cancelar Cliente Servidor Clave Nivel de acceso Mantenimiento Supervisor Histórico	



 $\Rightarrow$  Write all the words you need.

	English	Español	
▶	Ok	Ok	
	Cancel	Ca	
	Exit		
	Settings		
	Select Communication		
	Serial Port		
	Alarm List		
	Select Date		

 $\Rightarrow$  Save the changes and select the language.





⇒ Click on 'Update' Menu to check if new versions are available.



#### 5.5. SYSTEMS



- $\Rightarrow$  Options for this section:
  - Start a new search to load systems.
  - Visualization of systems found with their Serial Number and ID
  - Close channel from accessed system or get access to selected system
  - Sound the alarm of selected system
  - Change ID of selected system (once you gain access)
  - Change password (once you gain access)



#### 5.6. SYSTEM TAB

System	Transmitter	Receiver	People Counter	Alarms		
- Stati	us Serial Number	08D8	ID 00	01	Model 1960 Version 04C3	Configuration Options Detection Enable modification
Syst	em Totals Antenna Tx Red Channel Grey Channel	Total Alarm 68 30 3	s Total	Day Alarms 17 0 3	Total Hour Alarms 0 C Reset Alarms 0 0	<ul> <li>Hard Filter</li> <li>Narrow Filter</li> <li>Test 1</li> <li>Test 2</li> </ul>
Pow	er On Times Powe Powe	r On Times r On Hours	9 210		Show in Led bar	<ul><li>✓ Test 3</li><li>✓ Test 4</li></ul>
Inter	Date 17/04	4/2014 🗐	Time 10:	10:50 🚖	Update 👽 SW Time	Others           Image: Constraint of the second sec
Gree	en Function Weekday Co	Thursday nfiguration	0 1 2	2 3 4 5	Working Hours Stop Hours	Net Alarms Rs232

#### 5.6.1. STATUS ⇒ The following information can be found: (Only INFO) Serial Number ٠ Current ID • Model • • Version Status 1960 Serial Number ID 0001 Model Version 04C3 08D8

#### 5.6.2. SYSTEM TOTALS

- $\Rightarrow$  The following information can be found:
  - Total Alarms / Total Day Alarms / Total Hour Alarms in Transceiver Antenna
  - Total Alarms / Total Day Alarms / Total Hour Alarms in Red Channel Receiver Antenna
  - Total Alarms / Total Day Alarms / Total Hour Alarms in Grey Channel Receiver Antenna
  - Reset Alarms button: Click on this button to clear all alarms counting.

– <b>S</b> j	stem Totals				
		Total Alarms	Total Day Alarms	Total Hour Alarms	
	Antenna Tx	68	17	0	Ċ
	Red Channel	30	0	0	Reset Alarms
	Grey Channel	3	3	0	



#### 5.6.3. POWER TIMES

- $\Rightarrow$  The following information can be found:
  - Total number of Power ON
  - Total Number of Power ON hours (working hours).

Power On Times						
Power On Times	30					
Power On Hours	66					

#### 5.6.4. LEDS

- $\Rightarrow$  This selector is used to choose what information to be displayed on the LED bar (See Section <u>2.</u> <u>HARDWARE</u>)
  - RX: Receiver noise/signal
  - V1: Voltage of Transceiver Upper Loop
  - V2: Voltage of Transceiver Lower Loop
  - T1: Temperature in board system

Show in Led ba	ır		
Rx	🔘 V1	© T1	

5.6.5. CLOCK

⇒ Set Date and Time and click 'Update' button to adjust the system clock

Internal Clock			
Date 17/04/2014	Time 10:10:50 🚔	Update	SW Time

#### SUMMER / WINTER TIME (DAYLIGHT SAVING TIME)

- ⇒ This option is only available for firmware versions higher than V4.AE
- ⇒ Select 'S/W Time' and press button to configure daylight saving time for your region.



For Europe or USA, system automatically determines whether Daylight Saving Time is in effect for a specified time zone and updates the corresponding local time For other countries, specify month, day and hour to update the time and click 'Send' button to save daylight saving time.

Summ	er Time	© W	inter Time
Select Zone			
	🔘 Eu	rope	
	🔘 US	A	
	Ot	her Countri	es
	Month	Day	Hour
Summer/Winter	r 10 🚽	26 👻	3 🚽
Winter/Summe	r 3 🚽	25 🗸	2 🚽
	S	end	

2014 S	ummer W	/inter Time	eTable	
Select Summer/Win	ter Time			
Summe	r Time	Wir	nter Time	
Select Zone				
	🔘 Eu	rope		
	🔘 US	А		
	Other	ner Countrie	s	
	Month	Day	Hour	
Summer/Winter	10 👻	26 👻	3 👻	
Winter/Summer	3 👻	30 👻	2 🗸	
	S	end		
Sunday 26 10 2014	03:00 clo	ok is turned	backward	one hour



# 5.6.6. SAVE ENERGY

#### **STOP HOURS**

- ⇒ This option is for versions lower than V3.B0/V4.B0
- ⇒ The system is automatically turned off during the hours period selected. If same hour, no action (Always ON)

#### **STOP DAYS**

- ➡ This option is available for versions V3.AD/V4.AD and V3.AF/V4.AF
- ⇒ The system can be automatically turned off for two independent days. Select the days of the week to have the system turned off. If Disable is selected, no action for this day.

- Save Ene	rgy (Stop Days	s)			
Day 1	Sunday	•	Day 2	Disable	•

To 24

🔶 h

Save Energy (Stop Hours)

From 24 🚔 h

## **GREEN FUNCTION**

⇒ This option is available for versions V3.B1/V4.B1 and higher

Green Function Weekday	Friday	Ŧ	]						Wo	orkir	ng	Ηοι	ırs							Sto	p H	lou	rs					
	Configuration			0 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	

#### ⇔ Click 'Configuration' button to set up to four intervals for working hours for each day of the week



⇒ Click 'Save' button to save the configuration.



#### 5.6.7. CONFIGURATION OPTIONS

Configuration Options						
Detection						
Enable modification						
✓ Hard Filter						
Narrow Filter						
✓ Test 1						
Test 2						
✓ Test 3						
✓ Test 4						
Others						
☑ Alive Signal						
✓ Master						
Vet						
Alarms Rs232						

- $\Rightarrow$  Detection:
  - This should be left as from factory settings.
- $\Rightarrow$  Others:
- Alive Signal: Activates or deactivates "alive light", which shows that the system is running correctly and it is not "hung"
- Master & NET (ONLY INFO)
- Ignore switches (option available for systems with versions lower than V3.B4 and V4.B4). With this function selected, the system will ignore any change or parameter introduced from the switches. This is to prevent unauthorized access even from the hardware / switches
- Alarms RS232 (option only available for systems with versions V4.BD or higher). Enable Beeper alarms in order to receive alarm events via Rs232



# **5.7. TRANSMITTER TAB**



5.7.1. START / STOP TX	
Start / Stop Tx	<ul> <li>⇒ From here the Transmission can be stopped, this can be used to confirm if an alarm is coming from tags / labels.</li> <li>⇒ If the Transmission is stopped and the alarm stops, then the alarm was caused by a tag.</li> </ul>
5.7.2. TX LOOPS	
Tx Loops           V Upper Loop           V Lower Loop	<ul> <li>⇒ Turn ON/OFF any of the 2 independent Transceiver loops in the Transceiver antenna. (Default ON).</li> <li>⇒ TX Loops states can be saved.</li> </ul>



 $\Rightarrow$  Main tool to synchronize the system.

Discovery	Follow Master 📃		
0	6.6ms	13.3ms	20ms
Discovery	ON	Delay: 0.2	▼ ms

- ⇒ In 99% of cases this adjustment is not necessary. Anyway, it is always good to take a look at the environmental electric noise throughout the 'Discovery Mode' feature.
- $\Rightarrow$  When Discovery Tool is ON, the transmitter is then turned off, and the system ONLY receives.
- ⇒ Standard Synchro delay value is 0.2ms

Discovery						
	ON	Delay:	0.2	•	ms	

- $\Rightarrow$  For Slave systems, 'Follow Master' enabled will set the same delay than the Master.
- ⇒ This option is available for systems with version 3.A0 and 4.A0 or higher.

Follow Master 🔽

⇒ Once the Discovery Tool is ON, transmission loops on the selected system are stopped and electrical noise and other possible systems out of phase are shown on the screen. In the scope is represented the amount of noise in 58 kHz through the 0° to the 360° phase in the mains. (From 0 ms to 20 ms in one 50 Hz period).



#### ⇒ THE FOLLOWING POINTS SHOULD BE CONSIDERED BEFORE USING DISCOVERT TOOL:

- ⇒ Discovery can be made with transceiver or receiver antennas (Red and Grey Channels). Recommended order is:
  - 1. Red Channel (In case you have receiver antenna on this channel):
    - 1.1 Disable Transceiver receiver loops
    - 1.2 Enable Red Channel receiver loops
    - 1.3 Disable Grey Channel receiver loops

Transceiver	Red	Channel	Grey 0	hannel			Transce	ver	Red Cl	hannel	Grey (	Channel			Tra	nsceive	r Red	Channel	Grey	Channel		
Gain							Gain								r.	Bain						
1	2	5	10	20	50	100	1		2	5	10	20	50	100		1	2	5	10	20	50	100
		Ó					-			0						-		<u> </u>				<u> </u>
Threshol	ld (dB)						Three	hold	(dB)						ſ	hresho	old (dB)					
Mult 1	¥	18	24 3	0 36	42	48	Mult	1	•	18 2	4 3	0 36	42	48	м	ult 1	•	18 	24	30 36	42	48
Receiver	Loops						Recei	ver L	oops						C F	leceiver	r Loops	5				
	Uppe	r Loop		🔲 Lov	ver Loo	p		<b>V</b>	Upper	Loop		🔽 Lov	ver Loo	p			Upp	er Loop		Lov	ver Loo	р

- 2. Grey Channel (In case you have receiver antenna on this channel)
  - 2.1 Disable Transceiver receiver loops
  - **2.2** Disable Red Channel receiver loops
  - 2.3 Enable Grey Channel receiver loops

Transceiver Red Channel Grey Channel	Transceiver Red Channel Grey Channel	Transceiver Red Channel Grey Channel
Gain	Gain	Gain
1 2 5 10 20 50 100	1 2 5 10 20 50 100	1 2 5 10 20 50 100
·	·	·
Threshold (dB)	Threshold (dB)	Threshold (dB)
18 24 30 36 42 48	18 24 30 36 42 48	18 24 30 36 42 48
Receiver Loops	Receiver Loops	Receiver Loops
Upper Loop 📄 Lower Loop	Upper Loop 📄 Lower Loop	Vpper Loop Vower Loop

#### • 3. Transceiver

3.1 Enable Transceiver receiver loops

Transceiver	Red 0	hannel	Grey C	hannel			Transcei	ver	Red Cł	hannel	Grey C	hannel			Trans	ceiver	Red C	Channel	Gre	y Char	inel		
Gain							Gain								Ga	in							
1	2	5	10	20	50	100	1		2	5	10	20	50	100		1	2	5	10	2	0	50	100
		Ó				_	-			Ó				_				Ó					<u> </u>
Threshol	ld (dB)						Thres	hold	(dB)						Th	reshol	d (dB)						
Mult 1	•	18	24 3	0 36	42	48	Mult	1	1	8 2	24 3	0 36	42	48	Mult	1	•	18	24	30	36	42	48
Receiver	Loops					7	Receiv	er L	oops						Re	ceiver	Loops						
	/ Uppe	r Loop		Low	ver Loop	2		V	Upper	Loop		Lov	er Loo	p		V	Uppe	r Loop			Low	er Loop	

➡ Furthermore, Discovery should be done with the Master system as long as you have more than one transceiver antenna in a net (slave systems). For these cases, DISABLE "Follow Master" option on every Slave system. Otherwise you could see transmission loops from slave systems which may confuse the scope.



When you click on 'ON' button, a new scope window will appear: 

> Discovery Delay: 0.2 ON • ms

- System transmission blocks (A, B, C) will be represented in the negative area in green colour •
- Other transmission blocks are represented in red colour. •
- Noise is yellow colour .
- Signal detection blocks are represented in purple colour in the negative area (always after system • transmission blocks)



#### ⇔ Zoom for AXIS Y.

Auto Fixed

Select Auto or fixed to set the Y maximum level. ZOOM AXIS Y



50

#### ⇔ Zoom for AXIS X.

ZOOM AXIS X Normal Blocks 🔿 A 🔘 B 🔘 C

Select Normal to display 3 blocks (A, B and C) or Blocks in case you want to display one only Block (A, B or C) with more resolution. (This option is available for versions 4.C0 or higher)

#### ⇒ AM 58kHz Timing

AM 58	KHZ	TIMIN	G	
Delay:	0.2		Ŧ	ms
TX Blocks	RX :	Signal	Le	vel
V A		8		
🔽 В		4		
C		3		
_				

#### Delay:

Change the delay manually to synchronize the transmission with other systems around. (0.2ms is default time)

#### **TX Blocks**

Enable/disable transmission blocks. It is recommended to have three blocks enabled unless you have tag detection signal on any of these blocks too high. In this case, you can disable the involved block.

#### **RX Signal Level**

This is the level for tag signal for each TX Block (A, B C)



#### **FIELD SITUATIONS**

#### ⇒ 1. Systems perfectly in phase (99% of times), NO NEED TO SYNCHRONIZE

• Transmission loops are displayed in the negative area. The presence of another system which is correctly synchronized with yours, can be seen right over system transmission blocks (For versions 4.CO



or higher)

#### $\Rightarrow$ 2. Systems out of synchro, NEED TO SYNCHRONIZE, Only one external reference

• When another 58 kHz transmitter is transmitting out of synchro, it can be easily seen from the scope screen. The positive area is reserved for these situations. In the following picture, the presence of another 58 kHz transmitter can be easily seen on that area. Only one external reference means that only 3 TX blocks from other system can be seen in the upper side of the screen.





• Change the delay manually to synchronize with the system out of synchro and match the system transmission blocks with the other systems around



- As it can be seen on the picture above, our TX blocks (green blocks) are being moved until the position matches with the other system TX blocks. The synchro can be followed and verified visually.
- After a good synchronization process, press "OFF" button
- ⇒ 3. Systems out of synchro, NEED TO SYNCHRONIZE, More than one external reference
  - When there is more than one reference to synchro, then a correct synchronization is not possible. This means that previous to the installation, there were already at least 2 systems out of synchro, probably these systems are already not working. In order to fix the problem it is necessary to previously synchronize between them the existing systems.
  - 3 blocks of abnormal duration, means at least 2 previously not synchronized systems





• After synchronizing ALL external systems, the situation will be as follows:



- Then the system can be correctly synchronized using this unique and only external reference.
- Please follow step 2, to synchronize de system in accordance.



- ⇒ Transceiver Voltage
  - Shows the Voltage in the TX loops. It should be always in the range of 1200 to 1400V (GREEN)
  - If it is lower, it might be because a defective transmitter or bad resonance. Then it might be necessary to retune the Transceiver resonance (Hardware).

⇒ Transceiver Temperature

- Shows the current Temperature in the Transmitter Board.
- Should be always in the green area (10° to 55°).



#### **5.8. RECEIVER TAB**

- ⇒ Transceiver antenna is also a Receiver antenna, so it has its own receiver side.
- ⇒ Each Transceiver antenna is able to support 2 Receiver antennas.
- ⇒ Selecting 'Transceiver' allows selecting parameters for receiver side of Transceiver antenna
- ⇒ Selecting 'Red Channel' allows selecting parameters for the Receiver Antenna connected to the red connector on the Transceiver board.
- ⇒ Selecting 'Grey Channel' allows selecting parameters for the Receiver Antenna connected to the grey connector on the Transceiver board.



#### 5.8.1. GAIN

 $\Rightarrow$  Gain feature is used to adjust the receiver sensitivity to get the best reception signal.



⇒ In order to adjust Gain, simply select the value until you get the required detection.

#### 5.8.2. THRESHOLD

- ⇒ Threshold feature is the signal level at which each receiver will trigger an alarm.
- ⇒ If you need higher threshold, then increase the Multiplier. With higher threshold detection is reduced. The system is less sensitive and more quantity of signal will be needed from the tag to trigger an alarm.
- ⇒ It is recommended, for maximum sensitivity to keep the Threshold at minimum (18 dB) & Multiplier=1.
- $\Rightarrow$  In order to adjust Threshold, simply select the value until you get the required detection





# 5.8.3. START/STOP RECEIVER LOOPS

⇒ From here, each Receiver loop can be independently turned on and off. If there is a high disturbance in any of them, it can be disabled. Receiver Loops states be saved.

Receiver Loops	
🔽 Upper Loop	🔽 Lower Loop

#### 5.8.4. ANTI NOISE ALGORITHMS

- Anti Noise algorithms are used to minimize the electrical noise. Depending on the level of electrical noise, it is recommended to select different positions in the noise selector. Each antenna is independent.
- $\Rightarrow$  There are 2 active modes in noise fighting.
- ⇒ Position 0 turns off noise fighting algorithms in mono-antenna.
- ⇒ Back Ground suppression is also OFF by default.

Anti Noise /	Algor	ithms	
Mode	0	-	BackGround



#### 5.8.5. SIGNAL AND NOISE

- ⇒ In the scope area there is a digital oscilloscope display that will help to analyse the noise and signal. Real time electrical noise signals icon will show current electrical signal (Noise and tags if there is any).
- $\Rightarrow$   $\;$  There are 4 different reception areas shown on the Signal Bars / Digital Scope:

Upper Loop Signal (S1) Upper Loop Noise (N1) Lower Loop Signal (S2) Lower Loop Noise (N2)

#### SITUATION 1 (When there is no tag near)

- ⇒ In the 4 different reception Bars/Areas, only electrical noise in the environment is shown, as there is no tag near.
- ⇒ All 4 reception Bars/Areas MUST HAVE SIMILAR values
  - ⇒ The reception areas shown on the Signal Bars / Digital Scope should look as follows:



#### SITUATION 2 (When there is a tag near)

⇒ The reception areas shown on the Signal Bars / Digital Scope should look as follows:

 $\Rightarrow$  In the 4 different reception Bars/Areas, the 2 reception Bars/Areas reserved for noise keep the same as in SITUATION 1 <u>BUT</u> the 2 Bars/Areas reserved for tag signal, show higher values than the ones reserved for noise.



⇒ This way, an alarm caused by tags can be easily identified



#### **5.9. PEOPLE COUNTER TAB**

The people counter consists of two modules: IR-RX Modules and IR-TX Modules using infra-red technology in order to count the number and direction of people crossing an entrance.

#### 5.9.1. IR-RX MODULES (ACC-PCA-G10V PEOPLE COUNTER A)

- ⇒ IR-RX Modules are located in the light alarm board at the top of the Transceiver Antennas.
- ⇒ Each side of the board has two infra-red receivers to count ins and outs, which means that an IR-RX Module can control up to two entrances (People Counter 1 and People Counter 2)



People Counter 1			
		Total	Total Hour
Reverse	Ins	2	0
	Outs	2	0

**People Counter 1**: Ins and Outs counting on the board side which contains the white connector

People Counter 2			
		Total	Total Hour
V Reverse	Ins	12799	1
	Outs	12096	2

**People Counter 2**: Ins and Outs counting on the board side which does not contain the white connector



### 5.9.2. IR-TX MODULES (ACC-PCB-G10V PEOPLE COUNTER B)

- ⇒ IR-TX Modules are located in the light alarm board at the top of the Receiver Antennas.
- ⇒ Each side of the board (Side 1 and Side 2) has one infra-red led transmitter to emit the IR pulses



**RX** Antenna

Side 1 IR pulses transmissions are from the infra-red led located at the same layer than white connector.

Side 2 IR pulses transmissions are from the infra-red led located in the layer where there is not white connector





## 5.9.3. PEOPLE COUNTER INSTALLATION

- $\Rightarrow$  There are two important points to take account at the installation time:
  - 1. Position of the IR-RX and IR-TX Modules inside the antenna: Set the position of all the IR-RX modules (People Counter A) and IR-TX modules (People Counter B) so that all white connectors are looking at the same point.
  - 2. Connection of the receiver antennas:

#### Version V4.B4 and higher

- ⇒ People Counter 1 (white connector) should be looking at Red Channel Receiver antenna
- ⇒ People Counter 2 (no white connector) should be looking at Grey Channel Receiver antenna



Version lower than V4.B4

- ⇒ People Counter 1 (white connector) should be looking at Grey Channel Receiver antenna
- ⇒ People Counter 2 (no white connector) should be looking at Red Channel Receiver antenna





- ⇒ Select People Counter Tab to display the configuration of the systems and IR-Modules states.
- $\Rightarrow$  Click over IR-Modules icons (red-green) to switch its state.

Click the	IR-Modules i	cons (red-green	) to switch it	s <mark>stat</mark> e	Ping Pon	g Transmission		Au	uto Configuration
		Side 1		PC	ounter 1		tide 1		
		2-1			Seered and a second sec				
						and the second se			
				4	TRANSCEIVER	16 3	RECEIVER R	k2	
				4	TRANSCEIVER	14 3		K2	
				4	TRANSCEIVER	<b>₩</b> 3		K2	
				4	TRANSCEIVER	K 3		K2	
Peop	le Counter	1		1	TRANSCEIVER	eople Counter	RECEIVER R	K2	
Peop	le Counter	1	Total	Total Ho	TRANSCEIVER	eople Counter	RECEIVER R	Total	Total Hour

⇒ Counting Ins and Outs are updated on time.

People Counter 1		Total	Total Hour
Reverse	Ins	4	0
	Outs	3	0
People Counter 2			
People Counter 2		Total	Total Hour
People Counter 2	Ins	Total 22	Total Hour 0
People Counter 2	Ins Outs	Total 22 22	Total Hour 0 0

⇒ Check 'Reverse' option to switch ins-counts by outs-counts and viceversa

#### PING PONG TRANSMISSION

- ⇒ This feature is an optional way of transmission for IR-TX Modules in order to prevent bouncing cases when the IR-RX-Modules are fully exposed
- ➡ For this type of transmission, it is necessary to install the systems following Section <u>5.9.3. PEOPLE COUNTER INSTALLATION</u>

#### AUTO CONFIGURATION

⇒ Click 'Auto Configuration' button to enable IR-TX Modules corresponding to entrances and set the People Counter ready to count.

Ping Pong Transmission

📸 Auto Configuration



 $\Rightarrow$  Select the systems in the net you want to configure the People Counter:

Select Systems
Door 1
Door 2
Door 3
Ok Exit

- $\Rightarrow$  Click 'Ok'.
- ⇒ Check Ins and Outs for all the systems in the net in Data Mining Menu:

Table Chart Systems		46/44/2044	22/44/2044
System Selection	Total Alarms	Total Ins	Total Outs
🔽 📑 Door 1	3	305	275
	3	305	275
🔽 📑 Door 2	11	0	0
(SN:06A7 - ID:0002)	11	0	0
Door 3	0	0	0
		0	0
	0	0	U
	HOUR DATA MINING	5: 22/11/2011	08:35:47
	HOUR DATA MINING Total Alarms	5: 22/11/2011 Total Ins	08:35:47 Total Outs
(SN:0807 - ID:0003)	HOUR DATA MINING Total Alarms 0	5: 22/11/2011 Total Ins	08:35:47 Total Outs 3
(SN:0807 - ID:0003) 2 System Selection 	HOUR DATA MINING Total Alarms 0 0	5 5 5 5	08:35:47 Total Outs 3 3
(SN:0807 - ID:0003) 2 System Selection Door 1 (SN:08D8 - ID:0001) Door 2	HOUR DATA MINING Total Alarms 0 0 0	5 5 5 5 0	08:35:47 Total Outs 3 3 0
(SN:0807 - ID:0003) 2 System Selection Door 1 (SN:08D8 - ID:0001) Door 2 (SN:06A7 - ID:0002)	HOUR DATA MINING Total Alarms 0 0 0 0 0	5 22/11/2011 Total Ins 5 5 0 0	08:35:47 Total Outs 3 3 0 0
(SN:0807 - ID:0003) 2 System Selection Door 1 	HOUR DATA MINING Alarms 0 0 0 0 0 0 0	5 5 0 0 0	08:35:47 Total Outs 3 3 0 0 0
(SN:0807 - ID:0003) 2 System Selection Door 1 	HOUR DATA MINING Total Alarms 0 0 0 0 0 0 0 0 0	5 5 5 0 0 0 0 0	08:35:47 Total Outs 3 3 0 0 0 0 0

 $\Rightarrow$  1. Total Period Data is the sum of the whole period for each checked system separately.

⇒ 2. Hour Data Mining is the actual hour data for each checked system. (Data is reset to 0 every new hour)



#### 5.10. ALARMS TAB

⇒ This section allows you to configure the different alarms patterns in the system.

System	Transmitter	Receiver	People Co	unter	Alarms						
D	etection						🛋 🜒 🔽 🛛 Tag	Alarn	n		
	Tag Alarm	m									
	- Near Tag Ala	rm			Sound	Ті	mes to Sound	8	•		
p. p	Power Syncl	hro Signal Fa	ilure		2		OffTime	0.1	•	S	
	Ins				Lights	Fi	rst Beep Time	0.3	•	S	Test Sound
	···· Outs					Eve	ns Beep Time	0.3	•	s	
	Blocked Peop	ole Counter				Od	ds Beep Time	0.3	Ŧ	S	
						Time Relay (	On (On Alarm)	0.4	•	S	
							🔏 📄 Me	ssage	e to	display on Pager	
									_		
						LCD Line 1:			(	11 Characters)	Save Message
						LCD Line 2:				11 Characters)	•

#### 5.10.1. SOUND OPTIONS

 $\Rightarrow$  Select number of times to sound and customize beep duration time.

Times to Sound	8	•	
Off Time	0.1	•	S
First Beep Time	0.3	•	s Test Sour
Evens Beep Time	0.3	•	S S
Odds Beep Time	0.3	•	s

#### 5.10.2. PAGER OPTIONS

- $\Rightarrow$  Type the messages to display on Pager in order to receive a message when an alarm event occurs.
- ⇒ Check this option to enable messages on Pager

📓 📄 Message to display on Pager							
			,				
LCD Line 1:		( 11 Characters)		Save Message			
LCD Line 2:		( 11 Characters)		•			



#### 5.10.3. ALARM TYPES

📢 🔽 🛛 Tag Alarm

- ⇒ Standard alarm for a 58 kHz tag. Click on the icon to enable or disable sound alarm.
   ⇒ Relay:
  - When an alarm occurs, the alarm closes a relay and triggers anything connected to it.
  - RELAY SPECIFICATIONS: 240V & 250mA.
  - Normal Open(NO) & Normal Close(NC) contacts

0.4 👻	s
	0.4 🗸

- ⇒ Light Options:
  - Select the number of flashes. This feature is available for each antenna.
  - Select 'Change all at once' to apply changes in all antennas

Change all at once						
Antenna Tx		Antenna Rx1		Antenna Rx2		
Times	8 🔻	Times	8 👻	Times	8 🗸	
OffTime	0.2 👻	OffTime	0.2 👻	OffTime	0.2 👻	
On Time	0.2 🗸	On Time	0.2 👻	On Time	0.2 👻	
		·				

#### 🛒 📄 🛛 Jammer Alarm

- $\Rightarrow$  This alarm occurs when system finds an inhibitor of 58 kHz
- ⇒ Check ON/OFF to enable or disable alarm detection. (Disable by default)
- $\Rightarrow$  Enable / disable alarm sound.
- $\Rightarrow$  Select threshold level when activating this alarm (>7 recommended).

Threshold 0 

Sensitivity (Maximum: 1 / Minimum: 15)

#### 🛒 📄 🛛 Near Tag Alarm

- ⇒ This alarm occurs when a 58kHz label/tag is located near the antennas
- ⇒ Check ON/OFF to enable or disable alarm detection. (Disable by default)
- $\Rightarrow$  Enable / disable alarm sound.

⇒

#### 📢 🔽 🛛 Power Synchro Signal Failure

- $\Rightarrow$  Synchro Signal: It is used to synchronize transmission blocks with zero crossing power line.
- ⇒ The signal comes out from the Power Supply and goes to the Transceiver Board Supply.
- ⇒ Enabled by default. When Power Synchro Signal fails, system would not run properly and alarm event occurs.

# 🛒 📄 Ins

- $\Rightarrow \quad \text{This alarm occurs on entrance people detection}$
- $\, \Rightarrow \,$  Disable by default. Click on the icon to enable or disable In-counting sound

This alarm occurs on exit people detection

⇒ Disable by default. Click on the icon to enable or disable Out-counting sound



🛒 📄 Blocked People Counter

- ⇒ This alarm occurs when IR-TX Module has been blocked during 1 minute at least.
- $\Rightarrow$  Disable by default. Click on the icon to enable or disable sound.

#### 5.11. CUSTOM SETUP

5.11.1. CUSTOMIZING INSTALLATION PROCESS

➡ Customize the way installation setup runs including software name, shortcut on the start menu and display settings:

Custom	Select the directory to install Software Name	
Image	Destination Folder	
3	C: Shortcut Name Software Name	Browse
	Space required: 14.8MB Space available: 615.3GB	
Tuning	Cancel Nullsoft Install System v2.40	Install

- ⇒ Open the file InstallerConf.txt from the Installation package.
  - 1. Enter a name for the shortcut on the start menu after the text: "menuprogramname:" menuprogramname: Shortcut Name softwarename: Software Name
  - 2. Enter a name for the software after the text "softwarename:" menuprogramname: Shortcut Name softwarename: Software Name
- ⇒ 3. Open the file InstallerLogo.bmp from the Installation package and customize the image for the installation process.

#### 5.11.2. CUSTOMIZING SOFTWARE ICON

Replace the icon from the InstallerIco.ico file located at the Installation package with the new icon you want to use for the software.



# 6. SAFETY AND DECLARATIONS

# **6.1. SAFETY GUIDELINES**

- ⇒ Any manipulation of the system should be done BY QUALIFIED AND TRAINED personnel ONLY.
- Power Supply gets 220V 50Hz (Europe) 110V 60Hz (USA & Canada) AC from Power Source. Transceiver Antenna may hold high Voltage and current when working. To change blown fuses or manipulate antennas ALWAYS UNPLUG from power source (mains).
- ⇒ To avoid system damage, always unplug the system from the AC Source to Power Supply connection. NOT FROM POWER SUPPLY TO TRANSCEIVER ANTENNA CABLE.
- ⇒ Route the Receiver-Transceiver cable and power supply cables through places where cannot be easily damaged.
- ⇒ Do not use the system in water condensing conditions. Do not use the system in explosive environmental conditions.

# 6.2 FCC Satement

"This equipment has been tested and found to comply with the limits for Class A digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction's manual, may cause interference to radio communications. Operation of this equipment in a residential area is likely to cause interference in which case the user will be required to correct the interference at his own expense. The user is cautioned that changes and modifications made to the equipment without approval of the manufacturer could void the user's authority to operate this equipment."