

NOTCOFACW-US

TECHNICAL INSTRUCTIONS

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7-CHANGING RECEIVER UNIT BATTERIES



ANRCH

AIRCHOC® Wireless

transmitter

1- Principle of Airchoc Wireless

AIRCHOC® wireless **AN INNOVATIVE** WIRFI ESS DESIGN

Standard Industrie has used the experience gained from over 30 years in the field of solving blockages and its ability for constant innovation to create the AIRCHOC® Wireless, THE FIRST WIRELESS AIR CANNON. Designed to easily remove blocking and encrustation while avoiding the limitations imposed by a wired installation, the AIRCHOC® Wireless can be operated remotely using a transmitter and a receiver box mounted on the 6V-5W pilot light.

This innovative design reduces wiring costs and makes it easier to maintain the AIRCHOC® while retaining the safety, effectiveness and reliability that the AIRCHOC® range is known for.



AIRCHOC

Receiver box mounted on AIRCHOC® Wireless



Silos equipped with AIRCHOC® Wireless Relief or obstacle

in a control room

LONG DISTANCE TRANSMISSIO

With a 300 meter-range (984 feet)

-up to 1km (0,62mi) in open spaces-, the wireless system enables you to operate the AIRCHOC® Wireless over large distances across any terrain and regardless of any obstacles.

Transmitter installed

UP TO 128 **AIRCHOC®** wireless UNITS WITH A SINGLE TRANSMITTER

Installed in your control room, the transmitter can be connected to your automaton or to a computer in order to manage all your AIRCHOC® Wireless units from a single point.



AIRCHOC® Transfer System

to simply and effectively programme blasting sequences for each AIRCHOC® Wireless on a computer.



2- AIRCHOC WIRELESS TRANSMITTER INSTALLATION

2-1. Control panel fixation

Attachment lugs are provided to mount the control panel on a wall.

Set of 4 brackets

- . Preserves the protection index
- . Possibility of vertical or horizontal mounting
- . kit consisting of 4 brackets + screws

brackets (internal dimensions)



2-2. Antenna Module Connection





keyed





Screw the antenna connector to the box presence of a label





NB. The antenna module is provided with 20 m of cable. If additional length is required, please contact us.

2-3. Antenna Module Placement

We suggest placing the antenna as high as possible in order to radiate towards the receiver unit and obtain better reception.

Communication between the transmitter Control panel and the receiver units takes place by means of this antenna module.

This antenna module is sealed and may be installed outdoors.

2-31 Wireless external antenna characteristics Standard Industrie Reference : COFANTENNA

Frequency [MHz]	Gain [dBi]	Impedance [Nom]	VSWR	Polarization	Electrical Length	Radiation	Color
868 - 928	3.0	50 Ω	≤ 2.0	Vertical	1/4, dipole	Omni	Black

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2-5. Control panel Electrical Hook-up







2-51. Control panel Electrical Characteristics

- -Control panel universal supply voltage 120Vac
- -Frequency 60 Hz
- -Consumption 15W Max
- -Protection, can withstand 105% of the initial power and the power source automatically cuts-off and turns back on.
- A connection to the earth of the control panel is required
- Electric cable used for connecting have to be in accordance with the standard IEC 60320-1, 60227
- If there is a power surge, the power source automatically cuts-off and turns back on after the repair.
- RF transmission module 915 MHz as per IEEE 802.15.4 -2003/2006

2-52. Environmental characteristics:

- Protection Index: IP66 IK 08
- Service temperature: Minimum: -10°C Maximum: +70°C
 Humidity : no more than 80%
- Max altitude e.g up to 2000 m
- Pollution degree 2
- Material : Polycarbonate UL

2-53. Additional exterior Characteristics :

- Operator interface: 4 line LCD backlit display of 20 characters each
 - 8-key keyboard
 - Indicator LED:
 - system (system operational)
 - fault (fault detected)
 - Front USB (software update and program upload)

2-54. Explanation of the different symbols on the labels :

The user must disconnect the control panel before access to the fuse.



2-55. Switching device :

The control panel is permanently connected to building installation, the installer must provide a current isolation device, easy accessible to operator and marked as disconnecting device to use in case of intervention in the control panel.



Attention : it is forbidden to clean the control panel in the high-pressure water. The protection is impaired if equipment is used in a manner not specified by the manufacturer.

2-56.Instructions :

Changes or modifications not expressly approved by Standard Industrie could void the user's authority to operate the equipment.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can





radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

-Reorient or relocate the receiving antenna.

-Increase the separation between the equipment and receiver.

-Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

-Consult the dealer or an experienced radio/TV technician for help.

This portable equipment with it's antenna complies with FCC's radiation exposure limits set forth for an uncontrolled environment. To maintain compliance, follow the instructions below :

- 1. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.
- 2. Avoid direct contact to the antenna, or keep contact to a minimum while using this equipment.

2-57. Control panel Circuit Board Operation



There are 16 servo-control inputs named **Ent1**, **Ent2**, **etc.** Normally open (NO) or normally closed (NC) dry contacts may be connected to it. These contacts may come from various systems (selector switch, sensor, automation output...). When programming a sequence, a number may be assigned to the servo-control that will start the sequence. *See page 20*

A sequence may therefore be started by the selected servo-control input number. If you do not want a servo-control, you must select *INACTIVE* in the selection





2-59. Alarm, Cycle, and Fault Relay Output



Relays used by these outputs:

-1 contact (NO and NC) for the alarm (emergency stop output).

-2 NO contacts for Cycle (operational report output), Fault (fault output).

-These outputs must be correctly configured based on the items connected to their terminals (sirens, flashing light, automation input...). An external power source is required for sirens, flashing lights...

The maximum switching current and voltage of Alarm, Cycle and fault relays

Alarm : 6A-240 Vac, Cycle and fault relays : 8A-240 Vac



2-60. Changing fuses

The user must disconnect the control panel before access to the fuse. The fuses cuts the phase of 110Vac/240Vac and 12VDC after power supply Meanwell





Two identical fuses

	Fuse desc	ription			
IEC 60127-2 · 250 VAC	· Time-Lag T			R :	us 🔐
Description - IEC Standard Fuse - L = Low Breaking Capacity (f Standards - IEC 60127-2/3 - UL 248-14 - CSA 022.2 no. 248.14 Approvals - VDE Certificate Number: 400 - UL File Number: 4159	Glass Tube) 116601	Applications - Primary Protection in Equipm References Pigtail Type FST 5x20 Pigtail Assembled Fuseholder OGN- Fuse Kit Fuse Kit 5x20 Weblinks pdf, html, General Product Info e-Shop, SCHURTER-Stock-Cl	ent SMD rmation, heck, Dis	, Approvals, RoHs	S, CHINA- heck
Technical Data		Dimensions		 	20 mr
Rated Voltage	250 VAC	-			
Rated Current	0.02 - 20A	-			
Breaking Capacity	35A - 200A	-			
Characteristic	Time-Lag T	=		10 ^{±0.2}	
Admissible Ambient Air Temp.	-55°C to 125°C	_		l ĕ ►l	
Climatic Category	55/125/21 acc. to IEC 60068-1	- 01			
Material: Tube	Glass	çċ▲			
Material: Endcaps	Nickel-Plated Copper Alloy	N .			
Unit Weight	1g				
Storage Conditions	0°C to 60°C, max. 70% r.h.	Q 🖡			
Product Marking	Current, Voltage, Characteristic, Breaking Canacity, Approvals	I		20 ^{±0.5}	
	breaking oupdoity, reprovaio	-			





Material : ABS + Aluminum Dimensions : 100 x 114 x 83 mm Weight: 195 g without batteries Supply voltage: 7.2V Service temperature: - 20 to +60°C Equipped with an 915 MHz RF module Standard Industrie reference: *REWCASEV*



3-1. Receiver Unit Batteries

You must use only our batteries, Standard Industrie reference: **BATACW**

Voltage : 7.2V-13Ah (2 x 3.6Vdc) Type : Lithium-ion non rechargeable Service temperature: - 20 to +85°C Max. storage temperature: 30°C Weight : 240 g for both



Recommendation

Do not recharge, short-circuit, dispose of in fire, expose to temperatures greater than 100°C, immerse, or alter its shape. Any one of these actions may damage the battery, or cause it to combust or explode. Store in a dry place at constant temperature.

3-2. Device Recycling (environment)



At the end of the batteries', receiver units', or Control panel's service life, you must not dispose of these produces with ordinary household waste. They must be disposed of at an electrical and electronic device recycling point. Comply with applicable regulations in your country.

3-3. Warranty

The warranty does not cover damage caused by external factors such as lightning, flooding, and fire.

No warranty shall apply if the device was repaired or modified by the purchaser or if its serial number has been modified, removed, or rendered illegible.

Comply with the instructions for use contained in the manual.





4- WIRELESS AIRCHOC RECEIVER UNIT START-UP

Use a flat screwdriver with a max. blade thickness of 0.5.



*The MAC address will be used when registering the Airchoc and for communications between the Control panel and the receiver unit





ATTACH THE RECEIVER UNIT HOUSING TO THE SOLENOID VALVE









The housing must abut the base

8



Ensure than the manual solenoid valve control is correctly positioned in relation to the oblong hole



11



WIRELESS CONTROL PANEL OPERATION



It has 10 menus accessible using the ▼ / ▲ keys. Functions are accessed using the *VALID* key.

Access to all menus requires an access code, except for selecting the display, language, and communications test.

Generally:

- the keys ▼ ▲ are used to select a line
- the keys \triangleleft **>** are used to select a field
- the keys + are used to modify a field
- the VALID key is used to validate data and save
- the MENU key is used to enter the menu and get out of an action without saving





6-1. Menu Operation

6-11. MENU - DISPLAY

Display mode provides for viewing Airchoc program, sequence, and super sequence lines, as well as the counters and faults using the keys.



The manual firing menu provides for manually triggering an Airchoc whether it is active or inactive. This is used to check correct Airchoc operation





Display sub-menus

6-13. MENU - ERASURE

ERASURE choice : \rightarrow Faults Airchoc Sequence **Super - Sequences Reset by default**

6-13a FAULT PRESENCE

Red LED



Display fault type:

- : Transmission error
- : Receptor batt. < 25%
- : Solenoid valve cut
- : Airchoc Maintenance



Only the 4 faults in bold will be saved:

Each fault displayed will be dependent on an Airchoc and may be acknowledged one by one.













6-13e SEQUENCE DELETION







6-14. MENU - AIRCHOC PROGRAMMING

Main Menu: → Prog Airchoc Prog Sequence Prog Supsequence

From the main menu, press the key until the *Airchoc prog* line flashes. Then press the VALID key in order to enter the menu. The Airchoc, receiver unit MAC address, and configuration lines are displayed.





(g

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ADD AN AIRCHOC

Go to the last line saved, press and hold the key

DELETE AN AIRCHOC



Go to the Airchoc to be deleted, press and hold the key

CONFIGURING THE AIRCHOC



After selecting the Airchoc using the \checkmark and \blacktriangle keys, you may access the settings using the \triangleleft \triangleright keys.

3 fields are accessible for each Airchoc:

The **T1** field is 0.5 s by default. \geq

The Config field is used to deactivate an Airchoc. If an Airchoc is in inactive mode \triangleright and present in a sequence, the canon may not be triggered. It is inactive by default.









6-14c COUNTERS

Display Various Counters

Nb Name CustCount 01 AC01 0000000 02 AC02 0000000	Nb Name 01 AC01 02 AC02	Max Client 0050000 0000000	Nb Name 01 AC01	< Sindcount 0000000
02 AC02 0000000	02 AC02	0000000	02 AC02	000000

- Client counter (CustCount): number of Airchoc firings (may be reset).

The counter increases every time it communicates with the receiver unit.

COUNTER RESET

Simultaneously press VALID + <

- **Counter (MaxClient)** is an adjustable maintenance threshold. When the CptClient exceeds the MaxClient value a maintenance fault will be triggered. By default it is set to 0050000. The value may be increased or decreased from 50000 by 1000s with the keys



- **STANDARD INDUSTRIE counter (Sindcount):** The counter increases every time it communicates with the receiver unit. This counter may not be initialized. It is used for monitoring by our technical services.

5-14d RECEPTION LEVEL BETWEEN THE CONTROL PANEL ANTENNA MODULE AND THE RECEIVER UNIT

Nb	Name	< Signal Level
01	AC01	20
02 03	AC02 AC03	

The Airchoc **Signal Level** is a means of checking reception quality between the Control panel antenna module and the receiver units. This value may range from 0, meaning no signal, to 28, meaning perfect signal quality. This value must be greater than 5 for the facility to operate correctly.

A value less than 5 may cause communication faults.

6-14e NETWORK MONITORING

The presence or absence of the various components composing the network may be checked. Go to







wireless

6-15. MENU – SEQUENCE PROGRAMMING

Example of sequence programming



Programming a sequence

From the main menu, press the ▼ key until the **Prog Sequence** line flashes. Then press VALID to begin programming.

Always enter the access code to gain access to sequence configuration.



Servo-control Assignment

Move to the sequence of your choice and press the VALID key to select it.

Access the settings using the ▼ ▲ keys. 3 fields are accessible for each sequence:

Change fields using the keys

- The Config field activates or deactivates the sequence. If a sequence is deactivated, no servo-control is assigned to that sequence. If a sequence is in inactive mode and it is present in a super sequence, it may not be triggered.
- The Servo-control is used to assign the corresponding servo-control to a dry contact On/Off controller input. 16 servo-controls are possible.(See page 7)
- The state field provides for defining the type of servo-control assigned to the sequence: 5 statuses are possible: NO Reset, NC Reset, NO Pause, NC Pause, and Inactive. "Reset" reinitializes the cycle, "Pause" stops the cycle, "NO" and "NC" define the status type. "Inactive" deactivates the servo-control input.



Sequences are programmed line by line. Each line corresponds to a step in the sequence. For each step, an Airchoc – its address – must be assigned.

Moreover, between 2 steps, a time (T2) must be indicated, except for the last sequence step which will have a time (T3) before the cycle repeats.







6-16. MENU - SUPER SEQUENCE PROGRAMMING

Program creation:

Super sequences are programmed line by line. Each line corresponds to a step in the super sequence. For each step, a sequence must be assigned by number. Moreover, between 2 steps, there is a time (T3) corresponding to the T3 time programmed in the sequence. Lastly, the last sequence step has a time (T4) before the cycle repeats.

Example of super sequence programming:





6-17. MENU-ACCESS CODE MANAGEMENT

This menu is used to create, modify, or initialize access codes used to enter the various menus.

To access this code management menu, you must enter code 2 (by default this code is 0000).

We suggest you change this code the first time you use the Control panel.



6-17b CODE LEVELS

- *Code 1*: this code provides access to manual Airchoc firing, the view menu, and language selection.
- **Code 2**: this code provides access to all menus and programming, allows resetting counters, except for the Standard Industrie counter. Fault deletion.
- **Code 3**: this code is exclusively reserved for Standard Industrie access. Using this code a Standard Industrie technician has access to all Control panel functions and may reset the Standard Industrie counter.



6-17c CODE TABLE INITIALIZATION



From the main menu press the ▼ key until the *Language setting* line flashes. Then press VALID to save the language.

L	a n	g	u	a	g	е		S	е	t	t	i	n	g		
	\rightarrow	F	r	а	n	С	a	İ	S							
		Ε	n	g		j	S	h								
		Ε	S	р	a	g	n	0								
		D	е	u	t	S	С	h								
			t	а		i	а	n	0							

6-19 Menu – Control USB Key

Menu USB Key

Enter code: XXXX

This menu is used to upload a new program or download a program from the Control panel with our "AIRCHOC TRANSFER SYSTEM" software.

wireles





HANDLING

6-20a SAVE PROGRAM

-Insert the key into the Control panel which has been turned on.



- Go to the menu USB Key on the Control panel



- When you return to the main menu, remove the key.
- Insert the key in the PC where the "AIRCHOC TRANSFER SYSTEM" software is installed.



- Run the "Airchoc Transfer System" software
- Select "Load"
- The "Select" to find the location on the USB key
- (for example "removable disk (D:)").
- Then validate

- The 3 boxes Airchoc – Sequences – Super Sequences are displayed.

The Control panel settings are present in these 3 tables.

Here, you can modify or add an Airchoc for example. Each time you press "modify," "add," or "delete" it is saved to the key!



6-20b UPLOADING PROGRAMS TO THE CONTROL PANEL







Control USB Key

Code Entry : XXXX

- Go to the menu USB Key on the Control panel
- Select "Upload"

All the changes made are now in the Control panel.

6-20c UPDATING THE CONTROL PANEL VERSION



6.21- COMMUNICATION TEST

Using this menu, you may check the connection between the Control panel and the receiver units at any time.

Select the menu

Main Menu: Language Setting Control USB Key → Communication Test



The same functions as when starting-up the Control panel are available.





7- CHANGING RECEIVER UNIT BATTERIES

Use a flat screwdriver with a max. blade thickness of 0.5





If the Airchoc is hard to reach, remove the receiver unit from the solenoid valve









BATTERY INSTRUCTIONS, REMINDER



Do not recharge, to short circuit, do not throw into fire, to expose above 100°C, to dump, to deform : one of these actions make damages, fire or explosion of the battery. To be stocked into dry area and stable temperature.

INSTALLING NEW BATTERIES







6









Press the connectors until you hear a click



ATTACH THE HOUSING TO THE SOLENOID VALVE









ATTACH THE HOUSING TO THE SOLENOID VALVE



The housing must abut the base



Ensure than the manual solenoid valve control is correctly positioned in relation to the oblong hole





Press down on the cover until you are in front of the screw hole