

**Freeko II**



# **Freeko II**

## **Supervised Wireless Alarm Panel**

### **Overview and Operation Manual**

**Version 1.4**

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*Edition II*

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## **Introduction**

The Freeko II alarm panel is an integrated wireless and wired alarm panel that provides wireless and wired sensors support within a professional security level. Keep in mind that this panel has two section; wired and wireless that been integrated to one powerful device.

The wired alarm panel section includes the AV-2008 Dublo or the AV-2008D (also other types are available, like series 3000 with SMS enabled) according to the ordered kit or other alarm panel to fit, make sure you read and have the panel's manual handy.

The wireless side is the Freeko II receiver. The receiver is interfaced to the panel with fast wire-to-wire connectors. When shipped the system is ready to use, unless the Freeko II sensors and wireless remote assigning, refer to Freeko II manual.

The alarm panel programming is applicable by local keypad or PC and EasyLoad software. The wired keypad can be removed or better kept after installation, as the arming and disarming can be done with the RF remote, however, the keypad provides more status and system reports.

### **FR2 8DBL1 and FR2 D1 Pack contains**

- 1 of Master ABS box with AV-2008 Dublo or AV-2008D and Freeko II receiver wired and assembled
- 1 of Freeko II RF remote (key fob)
- 1 of 5003TER 230V to 16V AC transformer
- English Manuals: Freeko II receiver, Freeko II remote, control panel manual (AV-2008 Dublo or D)

### **Ordering information**

5003TER 230V transformer (if not included in the pack)

TMP, Tamper for master ABS box

AV-702 wired keypad for LED (for programming and operation)

AV-707 wired keypad for Dublo (for programming and operation)

SVM-40, digital voice module, two channels

AV-208, Eight (8) Zone Expander for AV-2008 Dublo

AVG-15, AVG-16 GSM alarm backup

FR2\_PIR, wireless PIR sensor

FR2\_402, wireless outdoor PIR with Pet immunity

FR2\_MAG, wireless Magnetic Switch

FR2\_SMK, wireless Smoke Sensor

FR2\_RMT, wireless Remote Control

FR2\_WTR, wireless water (flood) sensor

FR2\_SIR, wireless Outdoor Siren

AV-745 or AV-745ST Indoor siren

Bella\_I or Bella 2 or 3 wired Outdoor Siren

Backup batteries

All wired sensors

## **Powering Up**

New customers, or ordered system with programmed assigned sensors: If your system supplied with wireless sensors that been programmed don't change the programmed sensors or remote, unless you must to do so or for training.

Connect the AC power to the alarm panel. Notice the Freeko II LCD display and refer to the Freeko II manual for steps 1-6:

1. First adjust the Freeko II Clock (unsetting the clock can cause an unexpected behavior) as instructed in the Freeko II manual.
2. Get in the Installer mode (the default password is 111) and change the password.
3. Program all the detectors and remotes that are required for the installation. It's recommended to mark the detectors according to the assigned zone.
4. Place the detectors and the Freeko II close to the point you want to install them and perform the RSSI test.
5. Pay attention to the Freeko II buzzer, sounds at supervision and low battery alerts.
6. Remove the thin protection cover from the Freeko II LCD area.

If the alarm panel requires programming use a compatible keypad or PC.

## **Factory pre-programmed Freeko II devices**

In some cases the Freeko sensors and siren are programmed by Av-Gad (requires sending us the system layout design). In such case the sensors been marked for the zone and group they been programmed to.

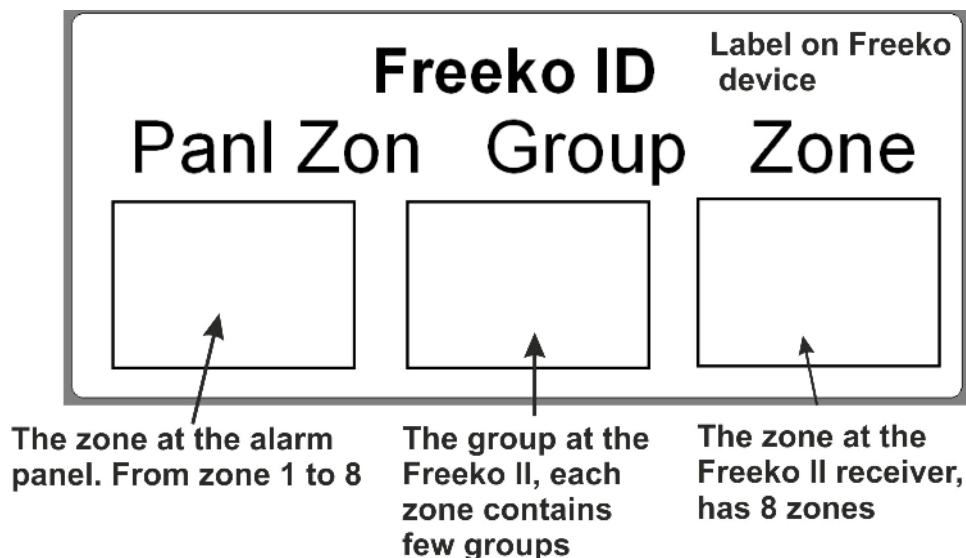


Figure 1: Factory programmed Freeko device

In case that the device been programmed make sure not to change the settings unless you are familiar and with the programming procedure.

## **Alarm Panel Programming**

The alarm panel supplied with the factory default programming, as indicated in the wired alarm panel installation manual.

For programming the dialer telephone numbers, delays and any other feature connect the keypad as shown in the alarm panel manual.

The factory default arming code is 1234 then #, enter this code at the keypad for arming or disarming.

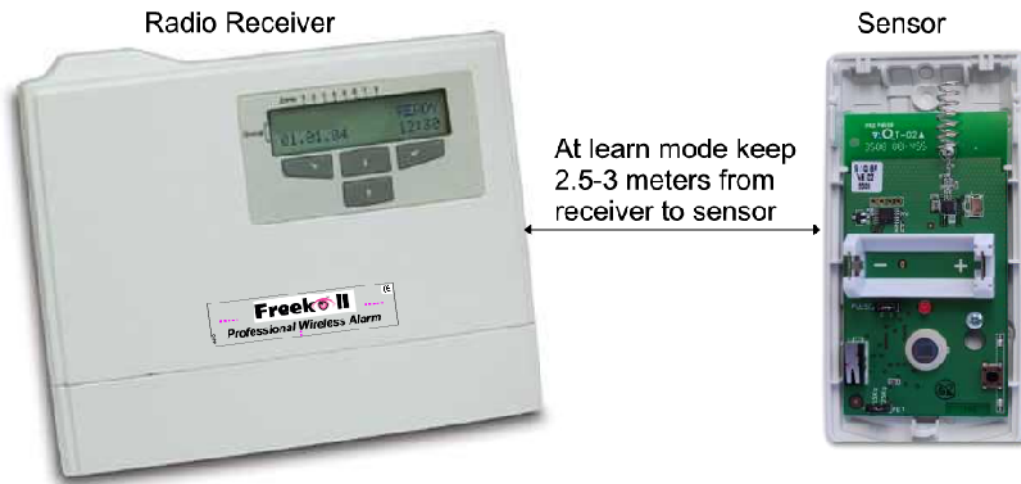



Figure 1: At Learn mode don't place sensors too close to receiver

## **Wiring notes**

The Freeko II (receiver) wire terminal cover is protected against remove or open with a tamper switch (TAMP terminal) that is wired to zone number 8 in the wired panel. It's recommended to program wired panel zone 8 as a 24H zone type.

The Freeko II STAT terminal is wired to the ON terminal. When system is armed the Freeko II LCD will display the  (lock) symbol for indication.

For application where wired sensors required it's recommended to use one of the expanded panels that provides adding an AV-208 or AV-816 expanders, the AV-208 is (compatible with AV-2008 Dublo) has slots holders at the Left side of the ABS main box, the AV-816 is compatible with AV-2016 Dublo.

## **Smoke detector**

When smoke detector included Fire alarm at the keypad and/or central station are optional; program the Freeko II so the smoke is in his own zone.

Wire the smoke detector zone from the Freeko receiver to a separate zone in the wired alarm panel and program it as Fire type.

## **Dialer and Communicator**

The communicator dials to the central station or to plain phone, refer to the manual of the alarm panel you are using.

Av-Gad panel's dialer provides a siren sound upon alarm; when the panel dials to programmed telephones a siren sound is heard. In case a voice message is required add the SVM-40 voice module. In new series 3000 SMS (short text messages) are available via the PSTN (wired telephone lines).

For installation without PSTN (land telephone line) it's recommended to add the AVG-14B that fits into the alarm panel enclosure.

## **DTMF Remote Control**

Av-Gad panels are capable of remote control from any telephone. Remote functions: Arming & disarming, zone bypass, alarmed zone number and more, refer to the system in use manual.

## **Tamper Output**

Freeko II tamper output is activated when the Freeko box Tamper is changing status or one of the Freeko sensor tamper was activated.

The Tamper output is also activated during: Sensor tamper, Low battery and supervision from sensors; the buzzer is activated and the Tamper output get into alarm for two seconds. If Tamper alarm from the sensor is activated the Tamper output stays on.

Notice: During test close the tampers switch.

## **Arming with RF remote (keyfob)**

This section (also called FR2\_RMT appendix) describes how to full and partial (home mode) Arm and Disarm a Freeko II wireless alarm (FR8\_DBL1, FR2\_8D1) by using the Freeko II RF remote (keyfob).

1. Power down the AC and battery. In the alarm panel board revise the wires that goes to the main wires terminal, remove the wire from terminal 7 (White) and terminal 8 (Black/White), exchange between them.

2. See the required programming:

<b>Feature</b>	<b>AV-2008 Dublo</b>	<b>AV-2008D (LED)</b>
Enable Arm & Group bypass by Key	073 (5)	073 (5)
2 <sup>nd</sup> key via zone 8	075 (5)	050 (3)
Options: Add verifications sound		
Siren test upon arming	070 (1)	070 (1)
Two siren beep @ key disarming	073 (6)	073 (6)

Notice: When using zone 8 as 2<sup>nd</sup> key it functions as arm & disarm. Note that Home Mode is not possible to activate via zone 8.

3. Program the desired zone/s to be included in the 1<sup>st</sup> (not 2<sup>nd</sup>) group bypass. Exit programming (999# for Dublo and LED panel).

4. In the Freeko II receiver enter to installer programming mode, have the RF remote you are going to use ready. Follow the steps below:

> Add remote > Pulse 1 sec. > relay 8 (home mode key).

The **Ready** screen opens and the unit beeps waiting for a remote key signal. Wait to Add Remote screen (as Fig. 1), press a button on the remote key unit.)

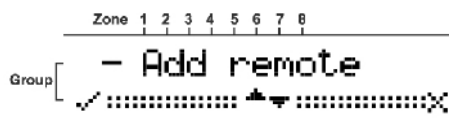


Figure 1: Add Remote screen

> Add remote > Pulse 1 sec. > relay 7 (Disarm key). The **Ready** screen opens and the unit beeps waiting for a remote key signal. Wait to Add Remote screen; press a button on the remote key unit.)

> Add remote > Pulse 1 sec. > relay 7 (Arm key). The **Ready** screen opens and the unit beeps waiting for a remote key signal. Wait to Add Remote screen; press a button on the remote key unit.)

Notice: Arm or Disarm keys can be exchanged, it's same function.

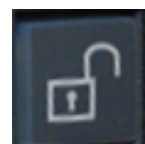
5. Exit the Freeko II programming.

Wait 30 seconds to device re-boot.

6. Testing:

- Close to the Freeko II receiver press the required keys, verify functionality.
- Take the RF remote to the user's locations to verify that range is fulfilled.

Refer to keys as described in figure 2.



FR2\_RMT



Figure 2: Keys applications at FR2\_RMT

### **Explanation Dublo 3.07 added Key function**

To provide arm and disarm for Dublo panels interfaced to Freeko II wireless panel, notice software few changes been applied.

New feature enables one key at the Freeko remote to arm and other key to disarm, not as on previous version that each key entry changed the alarm panel status.

To get this feature use the last zone (8 or 16) on the Dublo as two keys entry, resistors need to be added (same as on double zone).

The added feature:

Enable Freeko Key use on zone 8 or 16 (last zone), address 074 - 8

- Main key arms with Group Bypass 1 on -V
- Zone 8/16
- Close - No action
- Open - Disarms panel
- Tampered - Arms panel

Freeko Key response time is 800ms

Zone 8/16 must always return to close before another state is acknowledged. A new state is acknowledged only after 2 seconds from the previous change.

Set the Dublo to panel address as following:

073 (5) > Enable group bypass (home) when arm by key

074 (8) > Enable Freeko Key use on zone 8 or 16

075 (5) > 2<sup>nd</sup> Aux key as last zone on the board

100 at: 1 2 3 4 5 – 7 8 > zone in use

116 at: - - - - - 7 - > Enable zone 7 as 24H (wired to Tamper output from Freeko)

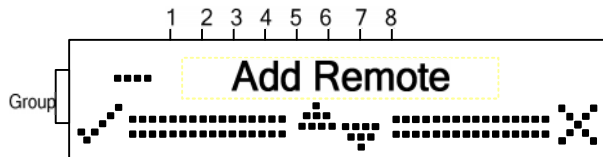
#### A. Set the Freeko II receiver

Get into installer mode at the Freeko receiver.

#### Setting the Disarm key on the remote, steps 1 to 4.

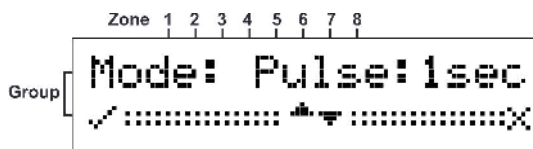
Add remote on relay 6 (remote, pulse, 1 sec), as drawing:

1. Press the ▼ button to scroll to the **Add Remote** Screen.



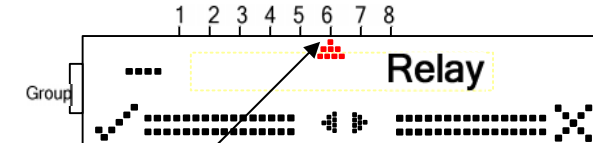
Press the ◀ button to confirm. Wait for buzzer OK sound, press the key you desire at the remote.

2. Press the ▼ button to display the 1-second screen.

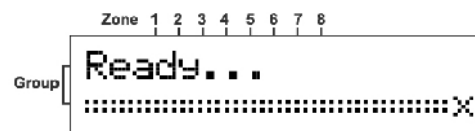


In this mode the output is activated for 1 second.

3. Press the ◀ button to set the mode. The **Relay** output screen opens.



Set output 6



The **Ready** screen opens and the unit beeps waiting for a remote key signal.

4. Press the disarm button on the remote key



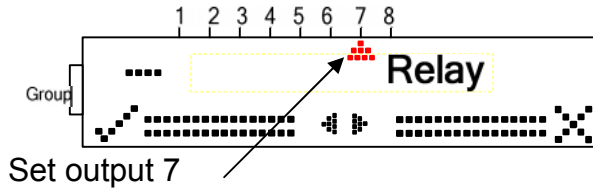
**Result:** Relay 6 is set as disarm key on your remote, pressing this key disarms the panel (considering zone 6 at Freeko wired in series with 2K2 resistor to AV-2008 Dublo panel zone 8)

#### Setting the Arm key on the remote

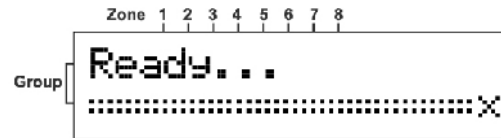
Repeat steps 1 to 2 (paragraph A), at step 3 below set output 7.



3A. Press the ◀ button to set the mode. The **Relay** output screen opens.



Set output 7



The **Ready** screen opens and the unit beeps waiting for a remote key signal.

4A. Press the arm button on the remote key

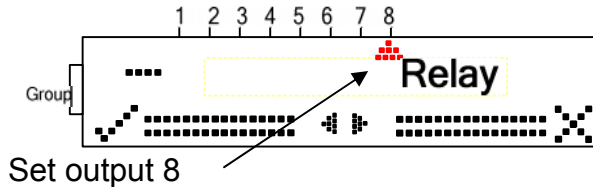


Result: Output 7 is set as arm key on your remote, press on this key arms the panel (considering zone 7 at Freeko wired in series with 4K7 resistor to AV-2008 Dublo panel zone 8)

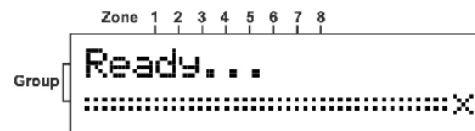
### Setting the Home mode arming key on the remote

Repeat steps 1 to 2 (paragraph A), at step 3 below set output 7.

3B. Press the ◀ button to set the mode. The **Relay** output screen opens.



Set output 8



The **Ready** screen opens and the unit beeps waiting for a remote key signal.

4B. Press the Home mode arm button on the remote key



Result: Output 8 is set as Home mode arm key on your remote, press on this key Home mode arm the panel (considering zone 8 at Freeko wired to the Key input on the AV-2008 Dublo, left side on the PCB)

B. Wires interfacing AV-2008 to Freeko II receiver

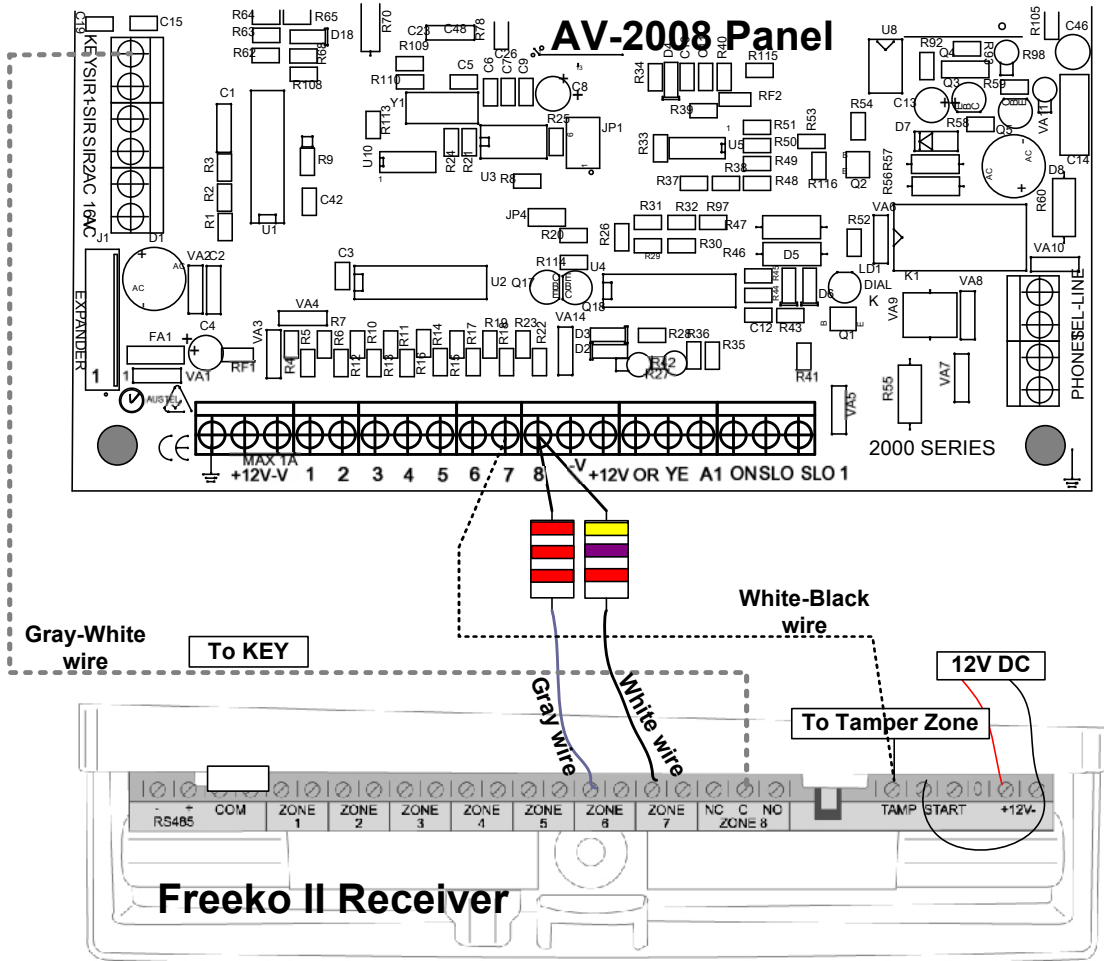


Fig 1: Wiring diagram for dedicated keys arming & disarming