

# VoiceOFF – Playback pre-recorded messages (or sounds) to either welcome, warn or inform

With a powerful built in 10W amp & speaker, and IP65 case you can use it in a lot of different applications.

It can be triggered by using hard-wired alarm inputs or even via RS232 commands from other electronic equipment such as a computer or Digital Recorder (DVR)

**20** alarm inputs trigger

**20** user recordable warnings!

**New** RS232 Input can trigger up to 9999 sounds!!

Warning sounds or voices stored on an SD card inside the unit in MP3 format.

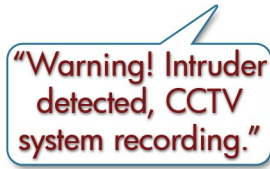
Input from DVRs, microphone etc allows talkback function with built in 10W amp.

Examples of messages: "barking dog!!", "Warning! intruder detected!!", "Welcome to our shopping centre", "This is a hard hat area!"

The VoiceOff is a new and innovative product. You can use it to playback a wide variety of sound files, these range from messages welcoming guests or even warning off intruders. You can even have informative messages such as telling visitors to a building site to "please wear a hard hat at all times" - complying with health & safety is big thing this days and the voice off makes it even easier to comply! (note – useful pre-recorded messages are available to download at the voiceOff website for a small fee). Alternatively you can store and play music using the VoiceOff as a digital media player for indoor or outdoor use. All the sound files are stored in the VoiceOff on a removable SD card so it's really easy to do quality recordings away from site in a suitable recording location.



Some people even use the VoiceOff to playback sound effects such as a dog barking or very faint police car in the distance to scare off unwelcome visitors who have entered restricted areas they shouldn't have.



It's really 2 products in 1 because of its 2 distinct features.

**Feature 1** is its ability to playback pre-recorded MP3 sound files through its built in amplifier and speaker. These sound files can be recorded and customised by the end-user for maximum flexibility.

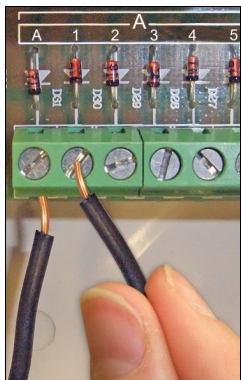
**Feature 2** is the audio amplifier. The VoiceOff can be used as an internal or external loudspeaker, to allow the operator to convey a message to visitors or even crowds in proximity to the VoiceOff speaker. In the security industry, the VoiceOff can be connected to the audio output of a Digital Video Recorder (more commonly known as a DVR) so that suitable DVRs with 2-way audio can have their audio output broadcast in different locations.

This feature can be used for security purposes to warn off an intruder for business and property management purposes by using it to communicate with a visitor. Councils use them for example to tell someone to pick up litter they have dropped or to warn them they are illegally parked.

For the majority of businesses that are not manned 24/7, using this talk back feature gives the owner/manager an extra pair of eyes and voice even when they are not there. If an intruder breaks into the property or its perimeter during the night, they can be alerted by an alarm input such as a break beam detector and then “warn off” the intruder.



### **Feature 1 - How the VoiceOff can be used to playback pre-recorded audio files**



The VoiceOff can store and play up to 20 audio files via its hard wired alarm inputs or 9999 audio files if you use RS232 commands from another device like the Alien DVR.

To playback an audio file, the VoiceOff is triggered by connecting one of its alarm inputs to a ground. It really is that easy to use the VoiceOff!

For example, to trigger audio file 0001.mp3, alarm input number 1 is simply connected to a ground (select from one of the grounds marked as A, B or C) similarly to play audio file 0002.mp3, alarm input 2 is connected to a ground and so on.

Each audio file is stored in the industry standard MP3 format. The VoiceOff is really easy to use and because the sound files are stored on removable media, it does not have the limitations of other products where files are stored on built in flash memory. This means that you can record, edit and store sound files at your own convenience.



The MP3 audio file can be any audio file you wish to play. It could be a voice recording of a welcome greeting or warning message. It could even be a dog barking or a police car in the distance!

You could, for example, have a message to welcome guests such as “Welcome to our garden centre”. This may be triggered using a PIR detector that starts the message when someone walks in through the entrance.

Or you could use the VoiceOff to warn people away. This message may say for example, “You have been detected on CCTV. Please leave the area!” Whatever you put your imagination too, the VoiceOff has an application - even now you are using the VoiceOff for another use - to playback information.

Visitors to an unmanned reception area could press a doorbell and the VoiceOff could give them information on what to do next - like “Please help yourself to a free coffee from the vending machine and someone will be with you shortly!” The VoiceOff is remarkably flexible.

You can also store music on the VoiceOff so that when someone enters a shop, or display area it will playback pleasing music. It could also playback what special offers are available. For example, in a DIY store it might playback today's special offers in the plumbing department!!

We heard of one customer who was using the VoiceOff in toilets and hospitals to inform people and staff who enter to "Now please wash your hands!"

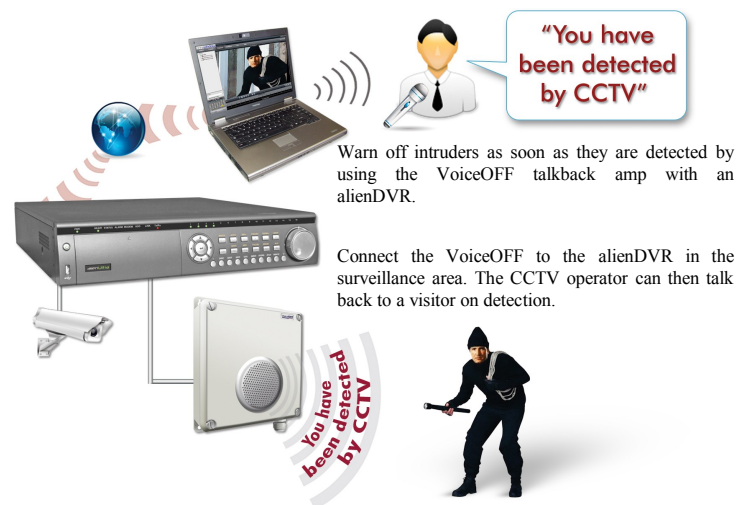
### **Feature 2 - Using the audio amplifier and loudspeaker**

The built in audio input, amplifier and speaker makes the VoiceOff a very useful live loudspeaker. It has an industry standard RCA, phono style connector for an audio input. Whenever audio is input, the VoiceOff plays that incoming audio. This could be from a DVR which is a "Digital Video Recorder" used for CCTV. Some DVRs have remote monitoring software bundled with them, that allows a person who is located remotely to the DVR, to talk into a microphone connected to their computer and the speech they say comes out of the DVR's audio output connector.

If the DVR's audio output is then linked to the VoiceOff, it will amplify this sound and play it back through its built in weatherproof speaker. Councils have been known to use this feature for example, to remotely tell someone to pick up litter they have dropped after being spotted on CCTV.

The VoiceOff has intelligence built in to it as well. For example, if it is playing back a sound file from the built in SD card, lets say its an in-store promotional audio file and the shop wants to play a live loudspeaker message through the VoiceOff, such as announcing the store closes in 5 minutes, the MP3 file is stopped as soon as the VoiceOff realises that audio is present at the phono input.

Similarly, in a security application, the VoiceOff would start to play a pre-recorded warning message whenever it is triggered by a PIR detector that detects an intruder. If the person using CCTV to remotely monitor this site, wanted to talk back to the area, the VoiceOff switches off the warning MP3 file and plays the operator's live message as soon as it detects audio coming from the DVR.



### **Recording your own files**

It's quite easy to record your own audio for the VoiceOff unit. You just need an audio recording device and a computer.

The VoiceOff only plays back audio files that are stored in the industry standard MP3 format, so you need to either record your messages or sound in this format or convert them to it.

Once you have recorded your messages or sounds you need to copy them to an SD card that is then inserted into the VoiceOff unit. The audio files need to be stored on the SD card in a certain way and the files need to be saved with names that allow the VoiceOff unit to know which MP3 file to play depending on which alarm input is triggered.

Inside the lid of the VoiceOff unit you will find a simple diagram, which is displayed in the wiring schematic below. This will help you to see what needs to be done.

Please note when you buy your VoiceOff unit, it already comes with a pre-recorded SD card formatted and ready to go.

We recommend when you are playing about with new sound files you use an SD card other than the free one provided with the VoiceOff, so you always have a fallback solution.

## Using your own SD card

### Step 1 – This involves Formatting the SD or SDHC card

You need a standard SD or SDHC card. The VoiceOff can use up to a 32 Gigabyte SDHC card.

(The earlier version of the VoiceOff unit the VOX100 only worked on the FAT file system, but this model works with either FAT or FAT32 file system cards)

To format your new SD or SDHC card to the FAT32 file system, please place the card in a computer running the Windows Operating System. If your computer does not have an SD card reader you will need to obtain one. These do not cost a lot, and are typically used to read multimedia cards from digital cameras.

Using your computer mouse, navigate to the SD card using “My Computer” or “Computer” and right click on it using the mouse. Select the ‘Format’ option from the popup menu that appears, then select the FAT32 entry from the options presented in the drop list under ‘File System’. Now start the formatting process.

*NB: The SD card must not be write protected.*

### Step 2 – This involves creating a folder on the SD card to store the MP3 files in

Once the SD or SDHC card is formatted you need to create a folder on it to store the MP3 files that you wish to play. The VoiceOff has been pre-programmed to look for a folder on the card called “SYSQ”. You must create this folder on the SD or SDHC card if it does not already exist.



### Step 3 – Rename your audio files

The VoiceOff decides which MP3 file to play for each alarm input by how the MP3 files are named. For example, when alarm input 1 is triggered, the VoiceOff looks for an MP3 file that has been named 0001.mp3. It looks for this file in the folder called SYSQ on the card. Similarly if alarm input 2 is triggered, the VoiceOff looks for an MP3 file named 0002.mp3 and so on.

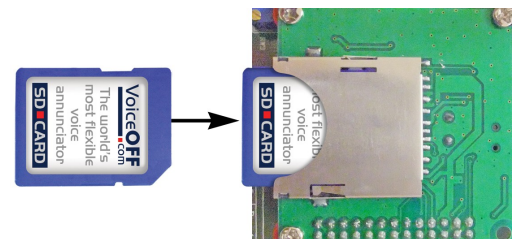
Please now name your audio files 0001.mp3, 0002.mp3 all the way up to 0999.mp3 if you wish to put on the maximum number of 999 MP3 files triggered on the VoiceOff.

### Step 4 – Copy your MP3 files to the SD or SDHC card

Once you have renamed your MP3 files correctly, you can copy them to the folder named SYSQ on your card using your computer.

### Step 5 – Insert the SD card into the VoiceOff unit

With your audio files done, renamed and copied to your SD or SDHC card, you need to insert it into the VoiceOff unit. Please look at the diagram on the lid to see how this is done and which way up the card needs to be when inserted into its holder. Please take great care when doing this as it is a delicate PCB and all electronic assemblies need handling with care. If you are a little heavy handed, please get someone with more nimble fingers to do this.

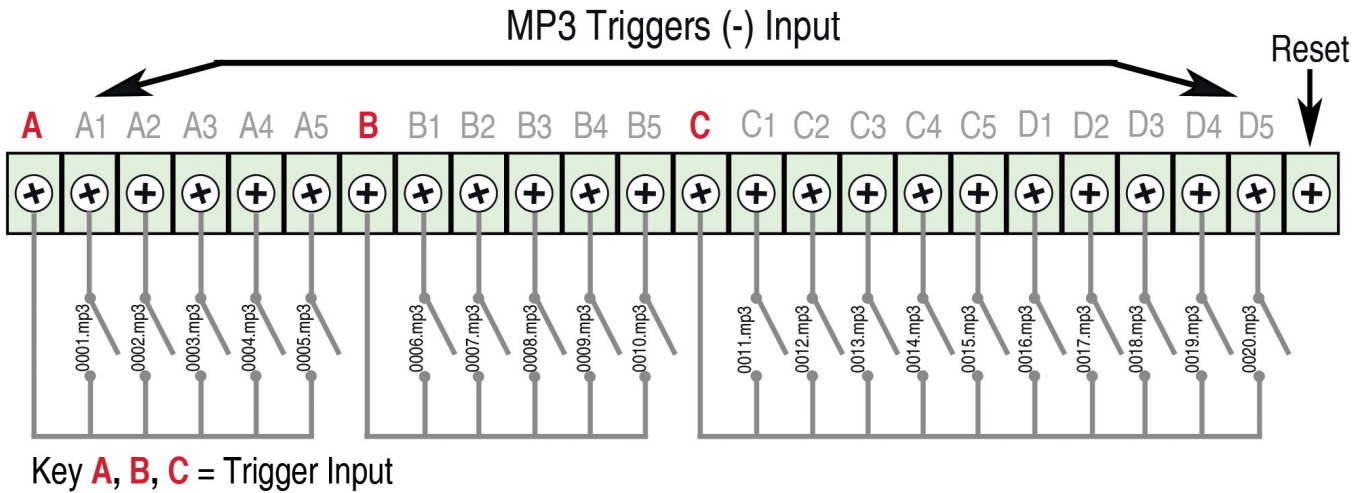




**Step 6 – Ready to play the files**

With the card now correctly inserted back into the VoiceOff unit, you can re-apply the power and trigger the sounds. A terminal strip displays the following:

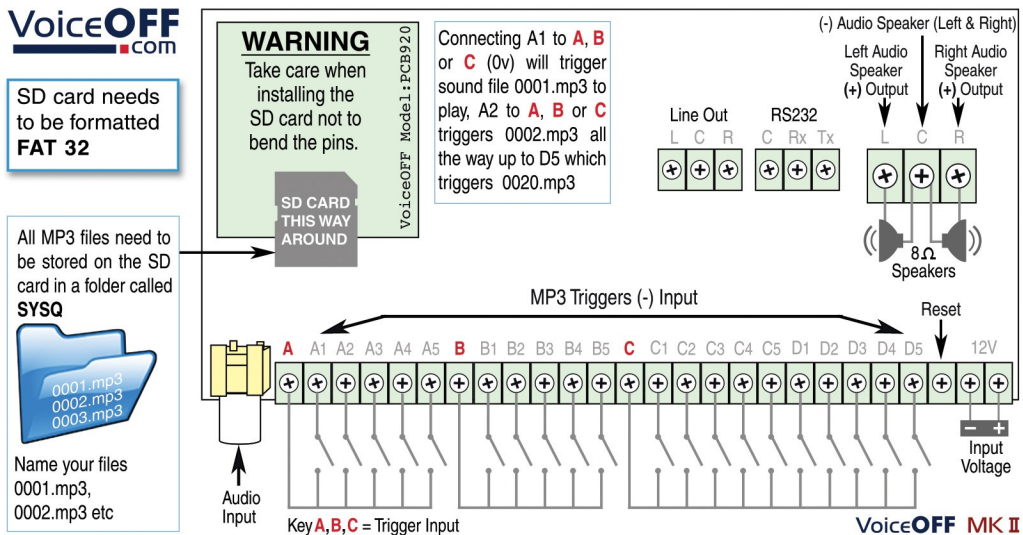
On the VoiceOff PCB, alarm inputs 1 to 5 are labelled up A1 – A5, alarm inputs 6 - 10 are labelled B1 – B5, alarm inputs 11 – 20 are labelled C1 - D5



If you wish to replace the messages recorded on the free SD card provided with the VoiceOff unit just make your own sound files and rename them so they overwrite the corresponding files on the card.

You can make your own sounds and record your own messages or alternatively you can download both free and paid for versions from the VoiceOff website. At the website you can also upload text and pay to have this converted to a message by a professional voice over artist. Please go to [www.voiceoff.com](http://www.voiceoff.com) for details and pricing.

**Schematic**



**Installation Instructions**

1. The VoiceOff unit can be installed either internally or externally using four screw locations, one on each corner of the unit.
2. A free SD card is provided with the unit containing professionally recorded voice messages and sounds. They are as follows:

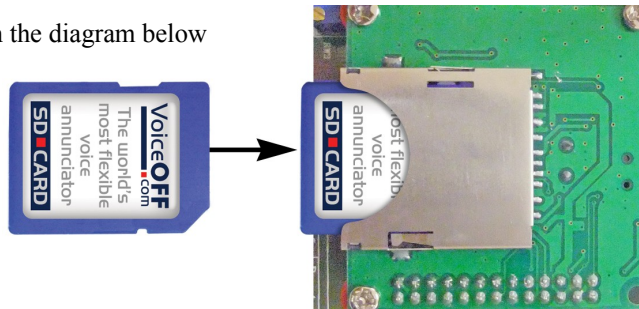
Filename	Description/text
0001.mp3	Warning message - "You have been detected in an unauthorised area, please leave the area or the police will be called."
0002.mp3	Warning message - "This is a restricted area and trespassing is forbidden, you have been caught on CCTV and your images will be saved as evidence against you."
0003.mp3	Warning message - "Warning ! Intruder Detected! CCTV System recording."
0004.mp3	Welcome message - "Welcome, this area has time limits on parking. Please observe the restrictions printed on the warning signs to prevent penalties being imposed."
0005.mp3	Welcome message - "Welcome, please help yourself to the self service coffee and someone will attend to you shortly."
0006.mp3	Police Siren in the distance.
0007.mp3	Sample of background music.
0008.mp3	Introduction to VoiceOff Unit
0009.mp3	Tips & Tricks
0010.mp3	How to record voice files

You can record or download your own files onto an SD or SDHC card for use in the unit but the card must be formatted to the FAT32 file system. It should also be no larger than 32GB in size. Additional voice and sound files for use can also be downloaded from the website: [www.voiceoff.com](http://www.voiceoff.com)

3. Each MP3 file must be created in a folder called SYSQ and the file must be called <nnnn> <description>.mp3 where <nnnn> = 0001 ~ 9999 <description> = recording title. Note: <description> is not mandatory but useful for identifying recording. Note that file numbers greater than 20 are only triggered using an RS232 interface.

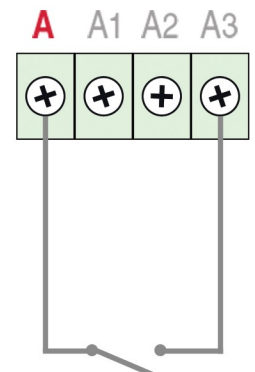
For example the first file could be called 0001siren.mp3,  
 the second file for example 0002welcome.mp3,  
 the third file for example 0003dogbarking.mp3,  
 the fourth file for example 0004.mp3 etc.

4. The SD card is fitted as shown in the diagram below



5. The internal SD reader is located on the topside of the PCB and must be entered the correct way as shown above.

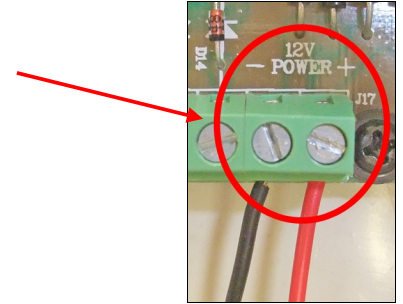
6. Now connect the alarm connections, one of which must be to either A,B, or C (ground) and the relevant alarm connection, which triggers the required alarm recording. For example you have a dog barking on 0003dogbarking.mp3 that you require triggering when a PIR detects something, so connect the PIR to GND (any ground A, B or C) and A3.



7. Note that the MP3 file will only run once on being triggered, it will not play in a loop, even though an alarm may continue for a much longer period. If you require the VoiceOff alarm to continue, then the length of the recorded file will dictate the run time.

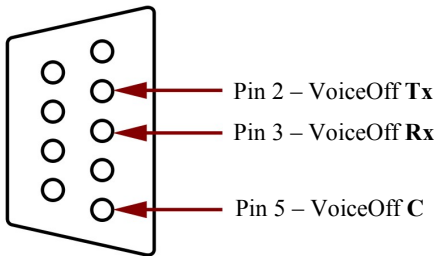
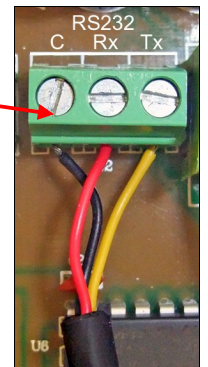
8. You may have a special or different use for the VoiceOff that does indeed require instant termination of any message that is playing. Of course, provision is provided for this with a “RESET” terminal. You can immediately terminate a triggered recording by connecting a switch to GND (and ground A, B or C) and RESET.

9. Connect a power supply (12V D.C) to connections shown here



**RS232 Setup**

The VoiceOff can trigger up to a total of 9999 MP3 files. As explained earlier the first 20 files can be triggered on the PCB board but using an RS232 connection to a PC, a total of 9999 different MP3 files can be triggered. To use RS232 you will need to obtain a null modem cable wired as shown. RS232 connections on the PCB are shown here.



The setup for the serial port is as follows:

- Baud Rate: 9600
- Data Bits: 8
- Stop Bits: 1
- Parity: None
- Flow Ctrl: None

RS232 Commands			
RS232 Command	Action	Command to Stop	Example
SQPlaynnFxxxx	Play File	SQStop	Where nn = number of times to play and xxxx = the file number to play  e.g. SQPlay15F0002 play file 0002.mp3 15 times.
SQRepeatFxxxx	Play File Continuously	SQStop	SQRepeatF9999 play file 9999.mp3 indefinitely.
SQStop	Stop playback	N/A	SQStop stop file playback whether it was started using SQPlay, SQRepeat or from the input terminal strip.

**DVR Talkback function using Audio Line In Connection**

1. A DVR talkback function is also available. This allows you to connect a microphone directly to the DVR using the Audio in connection or a remotely networked PC running remote monitoring software. Anything the operator then says will be amplified by the Voiceoff and played back by the weatherproof speaker.

2. The audio output from the DVR is connected to the yellow audio input phono connector in the Voiceoff.

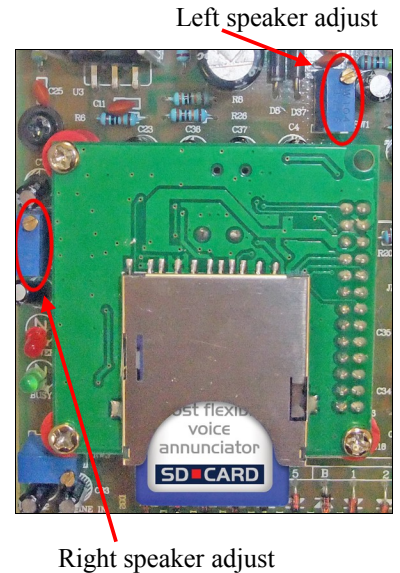


**Volume Control**

The VoiceOff has a volume control that is set on installation to match the site requirements. For example, if you are installing the unit to play warning messages to deter unwanted visitors to a secure parking lot, you may want the volume on maximum as you want those intruders to hear your message loud and clear. However, if you are installing the VoiceOff to play in-store promotions in a supermarket, you want the volume turned quite low so the message can just be heard, so as to not annoy the customer but perhaps help direct their buying choices of what's on offer that particular day.

On the VoiceOff PCB, you will see two blue volume controls; they don't look like the volume controls you would see on a TV or Hi-Fi as they are only for the engineer to use on initial set up so they are deliberately discrete to stop people fiddling with them. To find them, look for two blue rectangular items on the PCB, notice that each has a small adjustable screw on the top of it. When you have located them you will soon observe you need a small precision screwdriver to adjust them, obviously use the right tools for the job, so if you don't have a small precision screwdriver please purchase one as you don't want to damage the volume controls by accident using the wrong tools.

There are two separate volume controls. One is to the left of the PCB for adjusting the output volume of the speaker that is built in (right speaker) to the VoiceOff's lid. The other volume control at the top (left speaker), pre-adjusts the output when you use a second slave speaker connected to the VoiceOff. This is because you may have speakers in different areas such as one inside and one outside, in this instance you may want different levels of volume in the two areas, hence two controls are provided. When you are adjusting the volume control don't turn up the volume too high or you will simply get distortion and the clarity of the message you are delivering will be lost or the quality of sound poor.



When you receive the VoiceOff unit, the volume levels will have already been adjusted to a mid way point to suit most applications, so if it sounds right when you get it out of the box why not leave it at that setting. Note that the volume controls have a wide range adjustment, so you may find that the volume is slow to adjust if you are making major changes to the volume setting.

**Example of Uses**

**Deterring Vandals**

The VoiceOff is a great tool to warn off unwanted visitors in vulnerable areas prone to vandalism.



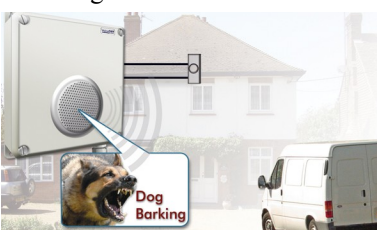
**Welcoming Visitors**

Use the VoiceOff to automatically welcome visitors to your premises and promote your business.



**Protecting Property**

Use a door bell, door contact or an external PIR to detect visitors on your property and use a recording such as a barking dog, TV recording or even voices to deter them when you are not at home.



**Warning Off Intruders**

Using a DVR with talkback function, you can deliver real time voice warnings from the VoiceOff from a local or remote location.





### What can be used to trigger the VoiceOff unit?

The VoiceOff is triggered by simply connecting any of its alarm input terminals to ground or zero volts. Obviously you can do this using a piece of wire and simply connect the alarm terminal to ground but most people want to do this automatically. For example when a person walks through a doorway, the VoiceOff is triggered and a message starts playing.

To do this you have quite a few options. By fitting a “magnetic door contact” to the door you can use it to automatically connect to one of the VoiceOff’s alarm inputs to ground and start VoiceOff playing back that corresponding audio file when the door opens. You will need a door contact that has what’s called “normally open” contacts, these are readily available items.

Similarly, you could use a movement detector such as PIR. Again, when the PIR detects movement you will use its “normally open” contacts to connect one of the VoiceOff’s alarm inputs to ground. This in turn makes the VoiceOff start playing the related audio file, be it a welcome message, a warning or something else perhaps a barking dog!

Other devices can be used to trigger the VoiceOff, these includes Digital Video Recorders, burglar alarm panels, bell boxes, key fobs and so on. Almost every one has a different way of triggering the VoiceOff and what it is used for.

Instead of having a burglar alarm with just a siren why not have an additional sounder that tells passers by to call the police or another telephone number?

### What happens when more than one alarm is triggered in quick succession?

A common question people ask about the VoiceOff is “what happens if its playing back one message and another alarm input or perhaps the same alarm input is re-triggered?” The answer is the original message plays out until it reaches the end of that message. This is a deliberate feature. Its so that if you are using a VoiceOff unit to warn away intruders and a message is played when a PIR detects the intruder you want the message to complete even if the PIR is re-triggered by movement again. If this did not happen, the warning would sound a bit fake especially if it’s cut off midway through and restarts again. Ideally you want the listener to believe its possible (even if only at a subconscious level) that a real person is delivering the message. Similarly you may be using the VoiceOff to deliver a welcome message, you will want the welcome message to play out in full and not be cut off midway through delivery because the unit is re-triggered by someone else.

Over time, some of the more unusual uses will be published on the VoiceOff website to show the ingenuity people have. The website address is [www.voiceoff.com](http://www.voiceoff.com).

### Technical Specifications

Operating Voltage	12V D.C
Power Supply recommended	POW802 12vDC 1.2A
Current Consumption	120mA Standby, 200mA max (depending on volume)
Alarm Inputs	20 internally triggered or 9999 using RS232 interface
Case	Ivory ABS
IP Rating	IP65
Mounting	Wall
Speaker	8w 8ohms
Usage	Internal or External
Dimensions	234mm x 188mm x 85mm
Memory	SD or SDHC card 32Mb, 64Mb, 128Mb, 256Mb, 512Mb, 1Gb, 2Gb, 4Gb, 8Gb, 16Gb, 32Gb.
Formats available	MP3
Voltage Noise	≤ 50Mv
Signal to Noise Ratio	≤ 86dB
Audio Decoder	DAC 24bit/s stereo, 196KHz

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This symbol on the products and/or accompanying documents means that used electronic equipment must not be mixed with general household waste. For treatment, recovery and recycling please return this unit to your trade supplier or local designated collection point as defined by your local council.