

# PowerMaster PG2 Wireless Alarm System Review

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## Introduction

It is a few years since Visonic (now part of the Tyco group) introduced the PowerMaster range of wireless alarm systems. Its initial release was received with a bit of scepticism among the traditionalists – as indeed was the whole wireless alarm concept. Indeed for installations requiring a high security grade (grade 3 or above), wireless alarms are a non-starter as they can only ever achieve a grade 2 security rating. Nonetheless, for domestic and low-risk commercial installations, grade 2 is generally more than sufficient. When this is coupled with the introduction of the narrowband 868MHz (actually 868.95MHz) frequency, specifically intended for security applications, to replace the overcrowded 433MHz frequency, wireless alarm systems finally grew in stature as a reliable alternative to hard-wired installations.

The Visonic PowerMaster system has been designed from the bottom up to be a fully integrated 2-way wireless system. This contrasts with wireless offerings from the likes of Texecom, Pyronix and others who have tended to modify their existing hard-wired systems to accommodate wireless connectivity.

The ease of installation is a huge plus for wireless alarm systems, massively cutting the installation time and the cosmetic effects of installing hard-wired systems. An average wireless alarm system can be installed in a couple of hours compared to a day or more for a similar hard-wired system.

Admittedly, early wireless alarm systems were not very refined and also suffered from poor or non-existent wireless transmission/reception problems. But as the technology has advanced the connectivity, reliability and stability has improved to such an extent that even those dyed-in-the-wool traditionalists have come to accept that they are a very viable alternative to hard-wired systems even though some installers are only dipping their toe in the water by using a combination of wired and wireless (Hybrid) systems.

Many wireless systems such as Visonic's PowerMax range use 1-way wireless technology which is still very stable and reliable. The introduction of the Visonic PowerMaster range employed a brand-new technology – true 2-way wireless systems. In 2-way systems the control unit constantly polls the devices connected to check their status as compared to 1-way systems where the control unit simply listens to connected devices. Visonic have variously termed their technology as PowerG or PG2. The advantages of 2-way systems are typically an increased battery life in detectors due to the ability to turn detectors off when they are not in use, the early reporting of potential faults and the ability to add, modify and delete devices on the system from the control unit. In fact, where the control unit is connected remotely all the actions can be carried out remotely.

## The Products

The PowerMaster system is based around three control panels - the PowerMaster 10, 30 and 33 models. For more information and the differences between the control panels refer to the article [PowerMaster Systems Overview](#).

The system can accommodate a large range of detectors, two types of remote keypads and 2 sounder shapes. Please go to the [PowerMaster](#) section of our website to see all the available products in the range.



**PowerMaster 10**

**PowerMaster 30**

**PowerMaster 33**

All three control panels seem quite well designed and well manufactured. Our favourite was the PowerMaster 33 which is the one of the three without a keypad on the panel - it is operated by one or more remote keypads (RKPs). It is only available in kit form as [here](#). The PowerMaster 33 panel has a high gloss plastic finish and an aesthetically pleasing fascia and in any case because it has to be operated via an RKP it can be hidden away. Both the PowerMaster 10 and 30 can also be operated by remote keypads or remote commanders if required.

The other two variants are less aesthetically pleasing and are designed to be accessible, although again they can be hidden and programmed using an RKP. The PowerMaster 10 has a small footprint (200mm (w) x 180mm (h) x 55mm (d)). The PowerMaster 30 is slightly wider and has more available zones.

In general, once the panels have been programmed, users operate the alarm using remote keyfobs (KF235) so the accessibility is usually only required during programming.

For the purpose of this review we used a PowerMaster 10 control panel with a Powerlink 3 fitted, and used 2 door contacts, a CAM-PIR and a remote keyfob (KF235). None of the devices were initially enrolled to the control panel.



Also for the purpose of the review, we decided to use the self-monitoring service and signed up for 12 months connection to a PowerManage server at a cost of £36 per annum.

Connection to the PowerManage server can be achieved by GPRS (GSM350PG2) or the Powerlink 3 broadband module. The Powerlink 3 requires a network cable from the control panel to a spare port on the router. For our test set-up we used the Powerlink 3.

Note that if the GSM350PG2 is used then notifications can also be sent through the GSM (Mobile phone) channel.

Opening the delivered package we were pleased to see that all the manuals were supplied as hard copies and e-versions on a CD, as were all the batteries and fixings.

The supplied manuals were easy to understand, especially when compared to the manuals for the Visonic PowerMax system.

All three control panels have similar software features such as Home and Away setting and Partitioning, along with a host of features and parameters.

## **The Programming Menu System**

Programming the system from the control panel or a connected RKP is by a layered menu system. Before starting programming we familiarised ourselves with the menu navigation keys and the menu structure.

## **First Power-up**

The control panel is loaded with a set of factory defaults which can be left untouched during the initial set-up.

Before applying any power to the panel we installed the Powerlink 3 module and connected it to our router.

Similarly if the GSM350 is used this should be fitted before applying power. As an aside, if a pay-as-you-go SIM card is used in the GSM350 it should be registered through the provider over the internet. This will ensure that you can see the available credit on the SIM card.

We didn't require a land-line telephone connection, hard-wired zone or PGM output connections.

On UK models the control panel is powered directly from a 220-24v AC mains supply through an internal transformer. A mains lead is not supplied with panel. Ideally it should be powered from an un-switched fused spur with a 3 amp fuse fitted. The control panel has a back-up rechargeable battery and it can be powered from this alone, but only for a relatively short period. In our case we temporarily connected the panel to the mains using a plug and lead. No earth connection is required. We did not fit the battery.

With the panel closed we applied the mains power and simply ignored any warning messages that flashed up.

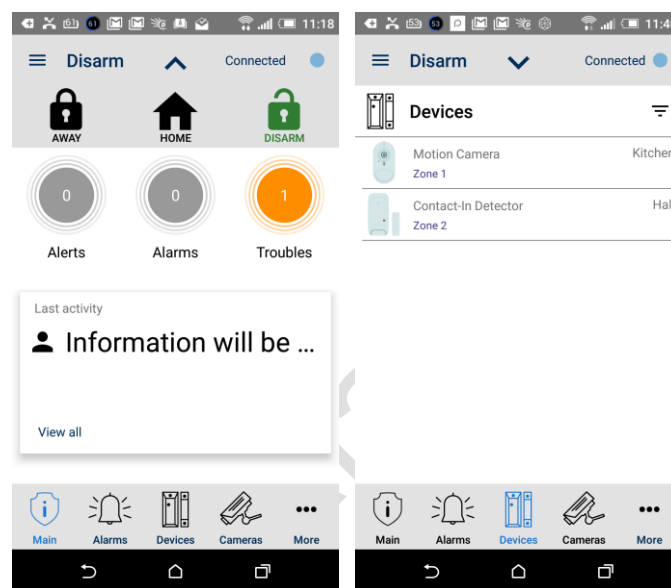
Note: PSTN FAIL is enabled by default, if no telephone line is connected to the panel the PSTN FAIL needs to be set to Do Not Report.

## Server Connection

The server connection we signed up for was simply to allow us to self-monitor the system through a 3<sup>rd</sup> party server. Other providers may provide additional services such as active monitoring but it is likely that these services will incur substantially increased costs.

Shortly after signing up we were contacted by the server provider and told what settings we needed to enter into the control panel. We installed the Visonic-GO app on both an android device and an i-Os device. Within minutes we had a connection to the server and were able to sign in to the app using the server address and our panel ID. All we had to do to log into our panel was to enter the panel's user code.

We also found another App for both Android and I-os called 'Tyco Alert' which performs exactly like the 'Visonic-GO' App.



The App's home screen (above) showed the App status as 'Connected', the alarm status as 'Disarm'. The screen also showed one 'Trouble'. Clicking the 'Trouble' showed a 'Control Panel - Low Battery' trouble which was as expected – we hadn't fitted the back-up battery. The display on the control panel also indicated a 'READY TRBL/MEMORY' message and the amber warning light was lit. With regard to the MEMORY message on the panel; this refers to previous troubles which have cleared but are still in the recent trouble log. These MEMORY TROUBLES will clear when the system has been set and unset.

## Adding Devices

We found adding devices to the system extremely easy. Because the system is 2-way, all the parameters associated with a particular device are carried out at the control panel. Each device, whether it is a detector, keyfob, sounder etc. has a unique 7 digit code in the form DDD-NNNN where the DDD identifies the device type and the NNNN is the devices unique ID number. It should also be noted that panels and devices are country specific – i.e. UK panels are only compatible with UK devices. For more information on compatibility, refer to the article [PowerMaster Systems Overview](#).

Devices can be added to the control panel in two ways – by device ID or by device activation. We found that using the device ID was the easiest. When the device ID is entered and accepted by the panel the panel knows what sort of device it is and then gives the available parameters for the particular device type.

For detectors it is simply a matter of choosing the zone number or letting the panel automatically go to the next available zone. Choosing the location from the pre-designated names or defining a custom name, and setting the zone type. It is important to understand the functions of the zone types. An explanation of the zone types is given in the manual.

## System Set-up

We intended to set the system as a simple system where the two door contacts are fitted to the front and rear entrance doors and the CAM-PIR in the lounge. The front door will be used to enter/exit the property and its zone number set to 'Zone 1' and its type set as 'Entry 1', we left the entry/exit timers at their default setting. The rear door was enrolled onto 'Zone 2' and its type set as 'Perimeter'. The CAM-PIR was enrolled onto 'Zone 3' and its type set to 'Interior'. With this configuration arming in 'Home' mode will alarm the front and rear doors but not the CAM-PIR thus allowing movement within the premises. Arming in 'Away' mode will set the whole system.

## Testing

Logging into the Visonic-GO App we could see all of our enrolled devices and the system as healthy (apart from our non-installed battery trouble).

We next tested the system by setting carrying out a PERIODIC TEST and found all our devices were operating correctly.

Finally we tested the system by actually setting the alarm and testing that the entry/exit worked and that the other sensors caused an alarm and sent the expected notification to the App on the mobile device.

## Conclusion

We have to admit, after being initially sceptical, that we were very impressed with the PowerMaster system. Compared to the Powermax system the programming is much simpler and more intuitive. We also notice that we didn't get some of the memory glitches associated with Powermax system.

We were also impressed with the number of detectors available and the relatively low cost of the CAM-PIRs.

We also tested the broadband connection from remote locations and found no problems.

All-in-all this is a great little system and one of the easiest to install that we have encountered.