

**Petronix Pet Patrol®**  
**Indoor and/or Outdoor Full Featured Pet Containment System**  
**Preliminary Users Manual**

**DRAFT COPY**

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## **INTRODUCTION**

Congratulations on your decision to manage your pesky family pets with the best pet containment system available today. Control of the roaming behavior of your household pets is a challenging goal that can also be exasperating. The Pet Patrol system is the first pet containment system on the market to provide both indoor and outdoor control for both dogs and cats. Pet Patrol also has many previously unavailable features, such as; programmability of up to twelve independent zones, outdoor out-of-bounds detection (free return in bounds, without correction), individual management of up to four pets, central control console to monitor and program functions, wireless network interconnections for ease of installation and use, attractive and comfortable styling, and many more.

## **LIST OF PARTS INCLUDED**

<u>ITEM</u>	<u>Quantity</u>
Central control and system information console	1
Indoor zone controller	1
Outdoor zone controller	1
Wall plug-in AC adapter power supply	3
Pet correction collar electronics module with self-adjusting probes	1
Pet correction collar battery	1
Pet correction collar 'Snap Lock' 'Comfort Fit' segment kit (8-numbered 'Snap Lock' segments, 2-each numbered 1 – 4) (22-plain 'Snap Lock' segments fits necks 6" – 28") (1-male 'Snap Lock' collar closure segment) (1-female 'Snap Lock collar closure segment)	1
Outdoor boundary wire (500 foot spool)	1
Set of training flags	1
Installation/Training video	1
Users manual	1

## **PRINCIPLE OF OPERATION**

### **Control Console**

The control console is the nerve center of your state-of-the-art pet containment system. All system configuration information is stored in this unit, and when necessary, individual component data is transmitted to the respective zone control or collar. The console contains a battery operated real time clock to manage programmed time functions. Recent pet activity history is maintained in electronic memory as long as power is supplied. System setup configuration data is stored in permanent memory, and will survive a power outage. Power is provided to the control console by the AC adapter provided, plugged into a nearby household outlet.

Communication to and from the zone controls and collars in your system is accomplished by 900MHz-radio networking. This is a background activity that continuously monitors the status of your installed system. When a new system is installed in your neighborhood, or when you add components to your own system, the radio network will intermesh your system functions automatically. Therefore, it is important to keep your console and zone controls powered at all times after installation. They use only a tiny amount of electrical power and should even remain on when you are on vacation. If not, you may come home from vacation and find on power-up, that your system will need to be completely re-configured. Re-configuration is automatic, but may take several minutes to complete and during re-configuration, your system is not available for use.

The control console provides many programmable features to simplify your duties as the one responsible for the care and feeding of your most dependant family members, your pets. A four line by forty-character display is provided to assist you in the operation of the console. There are four function keys above the display for accessing pet functions for up to four pets. The four keys are also status lighted in three colors, (red, green, and orange) to communicate pet status at a glance. Warnings of undesirable conditions use a steady red, or a flashing red button if very serious. Less serious warnings use steady or flashing orange button. A steady green button indicates normal conditions. Non-lighted buttons indicates unused pet channels. The individual pet names are indicated under each button in the display. There are also five programming function keys below the display, to assist you with your setup and operational tasks. These keys will have multiple functions depending on the operation being performed. The varied functions are labeled in the display directly above each button as the display prompted task proceeds. Display prompting is employed to guide you through the various programming tasks, such as; setting the time and date, adding, editing or deleting a pet name, programming feeding time room access, etc. An internal beeper is also employed to provide audible feedback of keystrokes and system warnings.

In addition to the keypad and display system, a serial port connector is located on the rear of the case to allow connection to a personal computer for simplified and expanded operations. The RS-232 connection to a personal computer allows the use of multiple Pet Patrol systems for the management of more than four pets in a single installation. Contact Petronix for the availability of the Windows® Pet Patrol Control Center software and serial cable for your personal computer.

## **Indoor Zone Control**

The indoor zone control is used by the Pet Patrol system to manage the access of an individual pet to household areas. These areas could be individual rooms or certain items of furniture. The zone control is mounted on a wall near the floor next to a doorway to control access to a room. Mounting under a table or couch is employed to control access to a selected furniture piece. The indoor zone control receives power from the AC adapter provided, plugged into a nearby household outlet.

The indoor zone control produces a harmless local magnetic field of warning to repel the pet from the zone of concern. The local zone resembles the shape of an imaginary three-dimensional football that can be adjusted in size from the control console.

Indoor zone controls have no local adjustments or controls. They are managed from the control console over the 900MHz-radio network previously discussed. The steady green indicator light provides confirmation of ready status, and flashes to inform the pet of feeding time. An internal beeper will sound to call the pet to dinner if the light is not visible. System malfunctions may also use the light and beeper, but are best resolved using the control console display.

## **Outdoor Zone Control**

The outdoor zone control is used by the Pet Patrol system to manage the access of an individual pet, to lawn and property areas outdoors. The outdoor areas must be bounded by a shallow buried wire loop encircling the area to be access allowed or encircling the area to be access disallowed. For example, encircling a lawn area for pet exercise, versus encircling a garden area within the lawn for protection from pet encroachment.

The outdoor zone control is mounted indoors, in a garage or basement area, and wired to the desired outdoor protection zone. Power is provided using the AC adapter provided, plugged into a nearby household outlet. The outdoor wire loop produces a harmless magnetic field along the path of the wire, warning to repel the pet from encroachment of the boundary. The magnetic field is polarity sensitive. This means that the pet will be repelled or not repelled depending on the direction of current flow in the wire. In other words, a pet that has escaped a boundary by being lured by the irresistible urge to chase a squirrel, will be allowed back in the yard with no penalty. Obviously, current flow direction must be observed and managed in the wire installation process for the system to operate correctly. More on this later.....

Like indoor zone controls, outdoor zone controls also have no local adjustments or controls. They are also managed from the control console over the 900MHz-radio network. The size of the magnetic field produced by the buried wire is adjusted from the control console.

## Correction Collar

The correction collar is the only component of the system using battery power. The battery is designed to deliver long life, but is an easily replaceable, standard, 3V lithium #2450 coin cell. The collar is automatically powered off during periods of animal inactivity. When the pet resumes activity, the collar automatically powers up and contacts central control by 900MHz radio for possible instructions. All operational communications to and from the collar use the internal 900MHz-radio transmitter and receiver.

The collar also contains a low frequency radio receiver at 10KHz, to internally signal proximity to the pet containment boundaries.

FCC ID: NWY-916 – This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received that may cause undesired operations.

## HOW IT WORKS

Your Pet Patrol system uses state-of-the-art electronic microcontroller technology combined with radio control, to manage the freedom of your pets. The central control console keeps track of the working status of the entire system at all times by two way radio contact. When your pet approaches the boundary of an outdoor zone wire or an indoor zone control, his collar unit gives him a short series of warning beeps. If he is well trained, he will immediately move clear of the warning zone in order to avoid receiving the mild electrical correction from the collar probes. While this correction is not harmful to your pet, it is definitely uncomfortable, and he will seek to avoid it if possible.

The collar will produce five warning beeps before starting the electrical correction, and will stop both immediately, upon relocation outside of the warning zone. If your pet is moving toward the boundary rapidly, the warning may be reduced or even eliminated, depending on the approach speed of your pet. Your pet will quickly learn to respect the boundaries with normal behavior. However, during moments of extreme excitement, your pet may run through the boundary. If he is outdoors, he will be allowed to re-enter the exercise zone with no penalty.

The level of electrical correction (including zero) produced by a specific collar, is adjustable by pushbutton entry at the console. This information is then radio transmitted to the appropriate collar for future use. The size of the warning zone transmitted by the outdoor-buried wire or indoor zone control is also adjustable at the console and then transmitted to the respective zone controller. Many setup and operational parameters are input at the console and subsequently transmitted to the appropriate collar or zone controller as needed. These operating parameters are saved in permanent memory in the zone control or collar until a future adjustment is desired.

System status and event data is radio transmitted to your control console by the collars and zone controls in your system, and displayed for you on your console. This includes things like low battery status for a particular collar, or the time and date that a particular pet

violated a specific system zone boundary. Each installed system has a unique operating address, assigned at installation, in order to prevent interaction between neighboring systems. This address is used to assign a private time slot to each neighboring system so that garbled simultaneous transmission can not occur.

## **INSTALLING THE SYSTEM**

### **System Setup**

After unpacking your new Pet Patrol system, use a small table (such as a kitchen table), to perform the initial system setup. Locate the Control Console and apply power using one of the wall plug-in AC adapters supplied. To avoid errors, all components of the Pet Patrol system use the same type of AC adapter. Allow the Console to warm up and listen to the neighborhood for other installed systems. The display will prompt you when the Console is ready for the next system component to be powered up. Please wait for the Console prompt before applying power to any other system component.