Vari-PET-R2

2 Relay Model

2007

Programmable Effect Timer

COWLACIOUS DESIGNS
By Computer & Electronic Services

CAUTION!

Avoid Possible Safety Hazards!

- Please read the entire manual before attempting to use this device.
- When this device is connected to an AC outlet, some output terminal screws and output connections could shock you.
- When using AC voltage, always use a three-prong connection! Make sure your outlet is properly polarized or damage could occur to the unit and possibly the user.
- Do not use the VARI-PET in wet locations.
- This device is not recommended for outdoor locations unless it is properly protected.

Always unplug power to the VARI-PET before adjusting any of the terminal screws or making connections!

Introduction:

Congratulations on choosing one of the most versatile effect controllers on the market. The Programmable Effect Timer (VARI-PET) has been designed to meet the needs of the professional haunter at a cost that is appealing to the home haunter.

Please take the time to familiarize yourself with this manual. You will find that it can help you in achieving the most from this product and the effect (prop) that you desire to control.

The VARI-PET has many features that make it unique in the marketplace and it provides the user with many different set-up options. This unit is capable of the following types of settings:

- **Timer Interval Setting** – Allows the user to choose the time interval used for the On-Time and Off-Time settings. The choices are: 1, ½, ¼, 1/8, 1/16 seconds.
- **Initial Delay Setting.** This allows you to set some time between when the VARI-PET is triggered and when you want the effect to actually operate. This may be used when the location of the triggering device cannot be placed right where you want it to be triggered. The VARI-PET will not be able to be retriggered during this time.
- **On-Time Settings—**Up to 60 On Times can be programmed in either 1, ½, ¼, 1/8, 1/16 second resolution. This is the time that the effect will actually operate. The VARI-PET will not be able to be retriggered during this time.
- **Off-Time Setting—**Up to 60 Off Times can be programmed in 1, ½, ¼, 1/8, 1/16 second resolution (Note: The resolution is the same for both On and Off times). This is the time you would like the unit to remain off and not be able to be retriggered by someone. This prevents people from repeatedly activating the effect, one time after another.
- **Repeat Setting.** This function allows you to set how many times the effect will repeat the above On-Time and Off-Time settings after the Initial Delay Setting-- every time the VARI-PET is triggered.
- **Final Off-Time—**both in ½ second and/or minute intervals. This is the time you would like the unit to remain off and not be able to be retriggered by someone. This setting essentially takes place of the final Off-Time setting when used with the Repeat Setting.

Its features include:
- Automatic Self Retriggerable operation. If you do not want to hook the device up to something to trigger it, you can hook it up so that it automatically continues to retrigger itself. It will go through any and all of the above settings and then start over, just as if someone had triggered it again.
- Multiple units can be hooked up to the same triggering device to provide more complicated animation of your props.
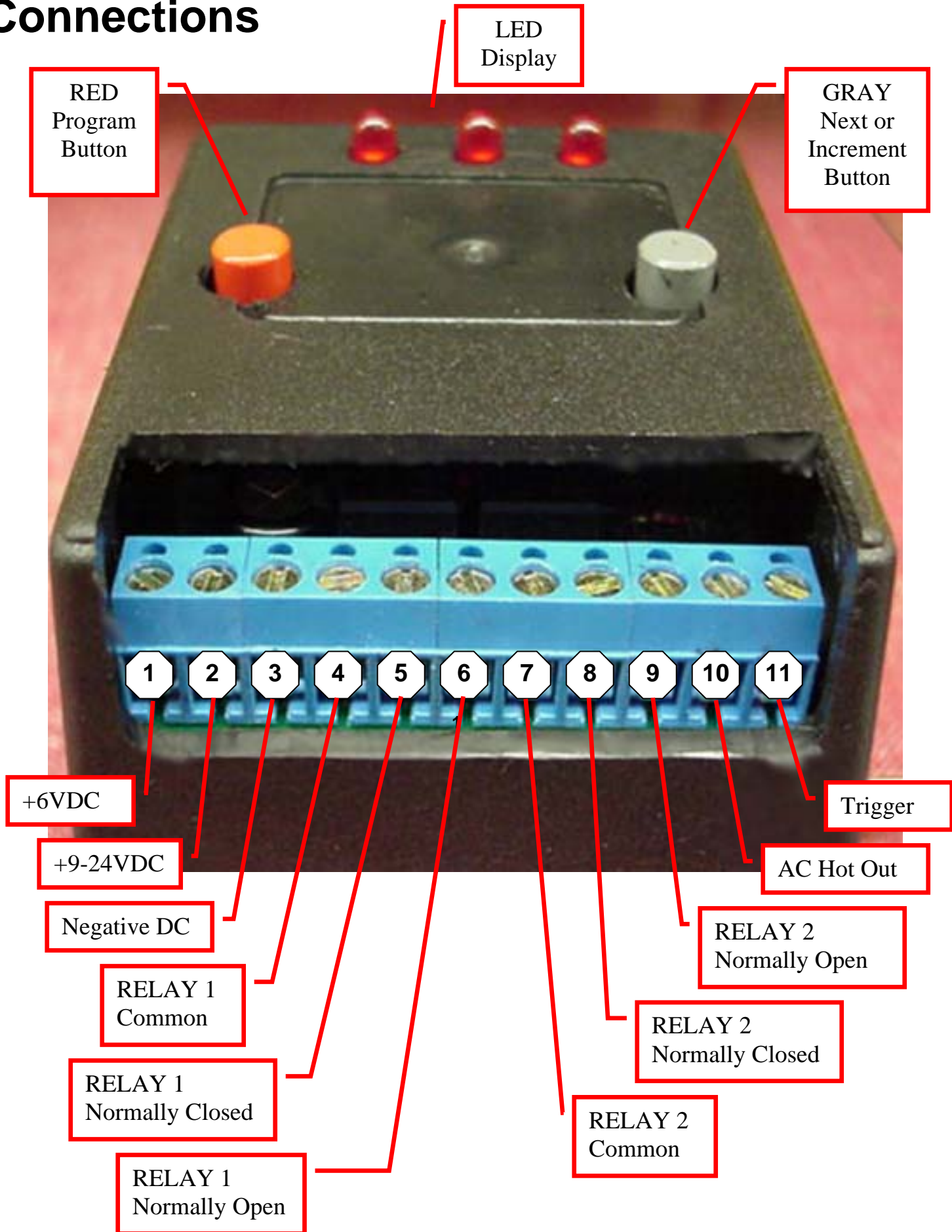- It never loses it programmed time settings even when the power is unplugged.

- It takes only a few seconds to program the times and settings you want to use.
- You can have one device hooked up to the normally closed contacts and another hooked up to the normally open contacts of each relay. When the VARI-PET is triggered it will turn off the device(s) connected to the normally closed contacts and turn on the device(s) connected to the normally contacts and vice-versa.
- The relay contacts can be used to switch AC or DC devices. It is important to use the optional diode(s) whenever the relay contacts are used to switch DC solenoids, valves, or motors. Please see the Sample Connection Digram.
- The VARI-PET can be powered by a 6VDC battery pack (included) or you can use a DC power supply (not included) or wall adapter (not included) in the range of 9-24VDC to power it off the AC line. We recommend using a supply with at least 300mA of current, though a 500mA supply is recommended.

Please note:
Any type of switch may used to trigger the VARI-PET, but it cannot have any voltage going to the switch. This includes devices such as step pads that can be placed under the carpet or under door mats. Infrared devices such as motion sensors or beam break detectors can be used just as easily. You can even use proximity sensors. The important thing to remember is that the contacts that connect to the VARI-PET's trigger inputs cannot have any voltage on them at any time. The device you connect to the VARI-PET must never put voltage on trigger inputs of the VARI-PET. Please contact us if you have any questions about what can and cannot be used to trigger the VARI-PET.
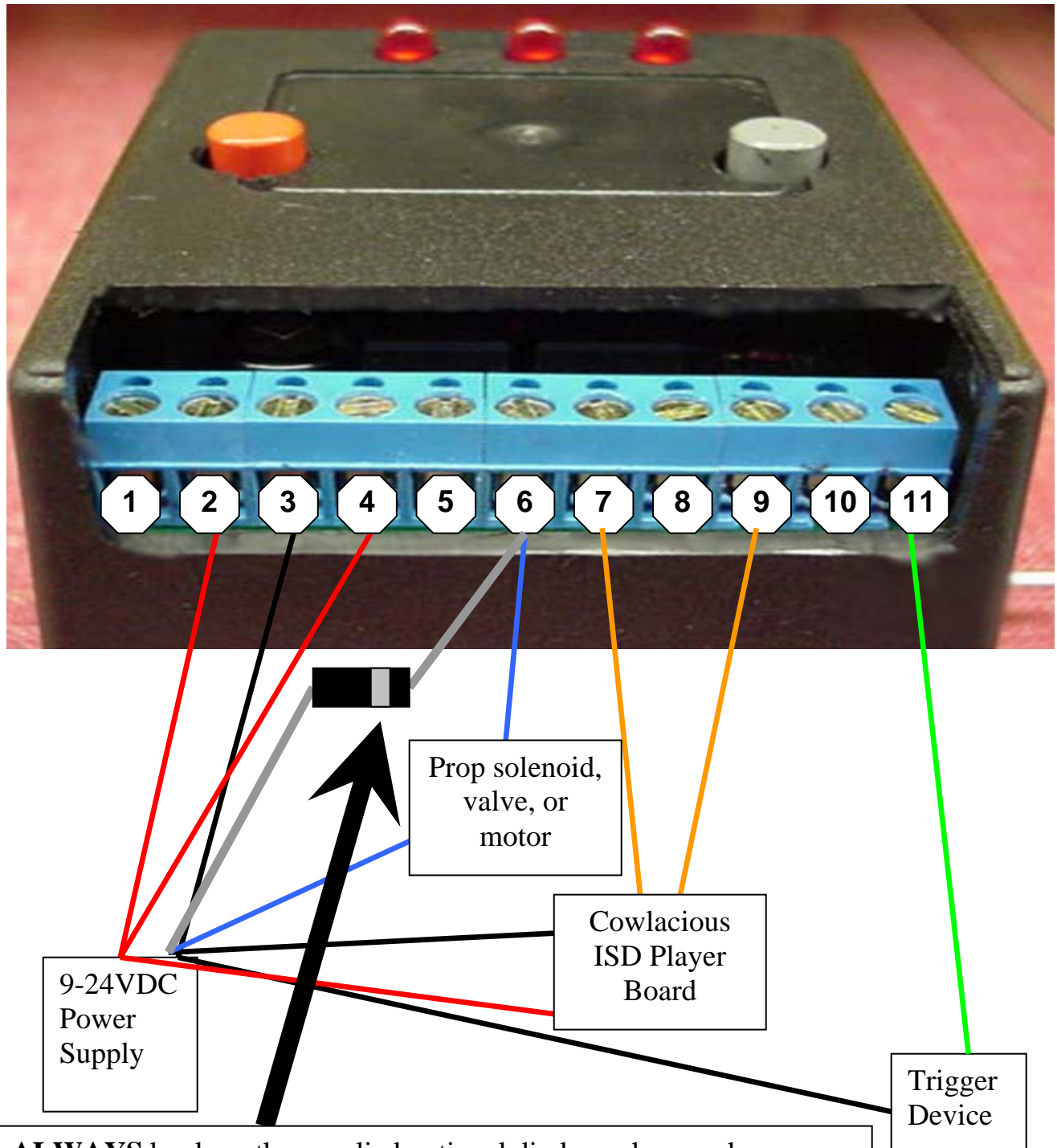
Please check out the SUPPORT section of our web site for simple instructions on converting a common motion sensor for use as a triggering device.

Location of Controls, Displays, & Connections

LED Display

RED Program Button

GRAY Next or Increment Button

1 — +6VDC

2 — +9-24VDC

3 — Negative DC

4 — RELAY 1 Common

5 — RELAY 1 Normally Closed

6 — RELAY 1 Normally Open

7 — RELAY 2 Common

8 — RELAY 2 Normally Closed

9 — RELAY 2 Normally Open

10 — AC Hot Out

11 — Trigger

Sample Connection Diagram 1

When triggered the unit will turn on the prop and trigger the sound player.

Prop solenoid, valve, or motor

Cowlacious ISD Player Board
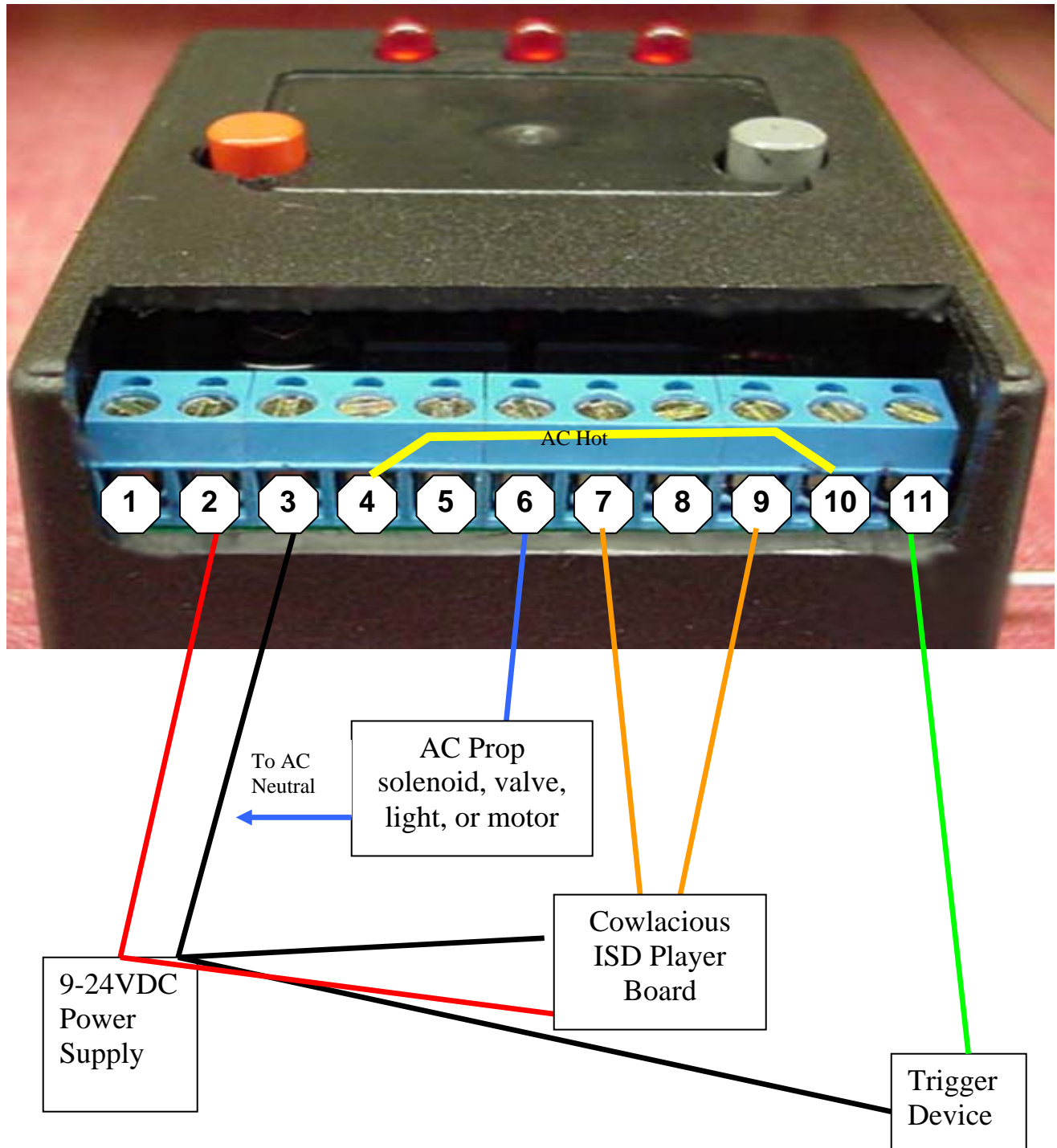
9-24VDC Power Supply

Trigger Device

ALWAYS hook up the supplied optional diode as shown whenever you are using the relay to switch power to a **DC** solenoid, valve, or motor. Using the diode will prevent this unit from sending out spikes that could falsely trigger other timers in your haunt.

NEVER use the diode when the relay is used for switching **AC** solenoids, valves or motors.

Sample Connection Diagram 2

When triggered the unit will turn on power to the AC device and trigger the sound player.

AC Hot

1 2 3 4 5 6 7 8 9 10 11

To AC Neutral

AC Prop solenoid, valve, light, or motor

9-24VDC Power Supply

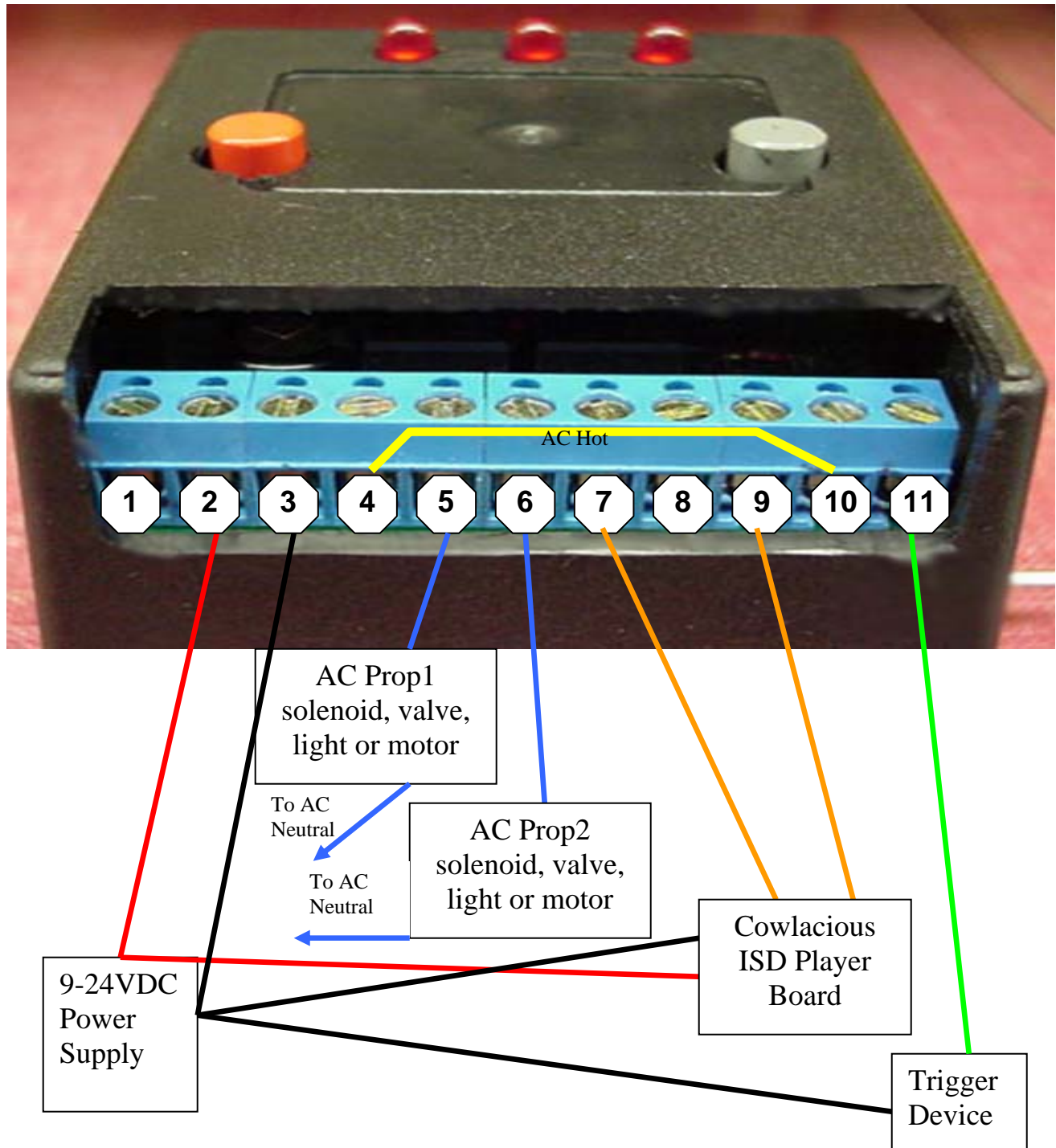Cowlacious ISD Player Board

Trigger Device

The WHITE wire coming out of the PET should be a Neutral wire when the PET is plugged into an AC outlet.

The GREEN wire is the GROUND.

Sample Connection Diagram 2

When triggered the unit will turn off power to the AC Prop1 and turn on power to AC prop2 and trigger the sound player.

AC Hot

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |

AC Prop1 solenoid, valve, light or motor

To AC Neutral

AC Prop2 solenoid, valve, light or motor

To AC Neutral

9-24VDC Power Supply

Cowlacious ISD Player Board

Trigger Device

The WHITE wire coming out of the PET should be a Neutral wire when the PET is plugged into an AC outlet.

The GREEN wire is the GROUND.

Operation

This unit comes pre-programmed with the following settings:

1	seconds initial delay
3	varied On times
3	varied Off times
0	Repeat

To use these setting just apply power to the VARI-PET by installing the batteries or by replacing the battery pack with the optional AC-to-DC wall adapter and plug in the adapter. You will see the timer go through its initialization stage where all the LED's turn on, then off, then on and then off again (the LED's will flash twice) – the circuit is then operational. Plug in the VARI-PET to an AC outlet. Plug the device that you want to control into the VARI-PET's AC outlet. You can test the VARI-PETs operation by pressing the GRAY button. The GRAY button is internally connected to the same place as you connect the triggering device (i.e. switch, step pad, IR detector's relay, and etc.), so pressing it is just like having one of those devices activate it.

LED Display	What you will see when you press the GRAY button with the above time settings.
▯ ▯ m	The ON/OFF LED will flash for each ½ second of delay time that was set. In this case two times. During this time the unit cannot be retriggered.
m ▯ m ▯ ▯ m	Next, you will see the Seconds LED start flashing on and off. It will flash very quickly as it goes through the three various On/Off Times. The ON/OFF LED will remain on indicating that it is counting down a time in the ON/OFF state. During this time the unit cannot be retriggered.
▯ ▯ ▯	Finally, all the LED's will turn off indicating that the unit is ready to be triggered and go through the whole routine all over again.

Programming

If you want to make your own custom times for DELAY, ON-TIME, OFF-TIME, REPEAT, and FINAL OFF-TIME , then follow the steps below. Although the steps to programming the VARI-PET may look a little daunting to the inexperienced user, after going through the programming routine once or twice it will become very easy and familiar to you.

Note: When pressing the GRAY button to increment the SECONDS or MINUTES, if you hold the button down it will start to increment the count automatically (flashing the appropriate LED for each increment) until you release the button. Using this method will help you to quickly program in large values.

Brief Programming Instructions:
Hold down the program button until all three LED lights begin flashing to put it into program mode.

The LED lights will continue if the program button is held down. Release the program button

Choose the timing resolution for the ON/OFF times by pressing the GRAY button:

    0 X X   1 second (default) (0 = LED on & X = LED off)
    X 0 X 1/2 second
    X X 0 1/4 second
    X 0 0 1/8 second
    0 0 0 1/16 second

Press the red button to go to delay settings

The lights will blink twice

Set the delay by pressing the green button 1 time for each 1/2 second of delay that you want, if any. Press the RED button when you are done setting the delay or if you don't want a delay.

You are now in the real-time programming mode. Every time that you press the GRAY button it will begin a new ON time. Every time you release the GRAY button it will begin a new OFF time. Up to 60 ON times and 60 OFF times.

When you are done programming ON/OFF times, press the red button.

You are now in the repeat mode. Press the GRAY button once for each time you would like your above ON/OFF times to repeat.

Press the RED button when you are done programming the Repeat number or if you don't want it to go through the routine more than once.

You are now in the final OFF seconds time setting. Press the GRAY button once for each off second off final off time.

Press the red button to go to the final OFF minutes setting. Press the GRAY button once for each minute of off time desired. When finished press the red button.

All the lights will blink twice.

The unit is now ready to use.

Detailed Programming Instructions

LED Display	PROGRAMMING INSTRUCTIONS
m m m ☐ ☐ ☐ **m m m** ☐ ☐ ☐	**Initiating PROGRAM MODE** Apply power to the timer. Wait for all the lights to flash twice and turn off. Press and hold the RED button until all the LED's begin flashing simultaneously. If you continue to hold down the RED button then they will continue to flash about once a half second. At this point release the RED button. You will then be ready to begin programming and will be in the On/Off Time Interval Mode.
m ☐ ☐ **m m m** ☐ ☐ ☐ **m m m** ☐ ☐ ☐	**On/Off Time Interval Mode** Press the increment button to choose which time interval you would like to use for the On/Off Seconds Time Settings. Each press of the increment (GRAY) button will take you to the next timing option and change the LED display as follows: **m** ☐ ☐ **1 second increments** ☐ **m** ☐ **½ second increments** ☐ ☐ **m** **¼ second increments** ☐ **m m** **1/8 second increments** **m m m** **1/16 second increments** Press the RED button when finished to continue to the Delay Setting Mode programming stage. You will see the three LED's simultaneously flash twice. You will then be in the Delay Setting Mode.
☐ ☐ **m**	**DELAY SETTING MODE** The On/Off Time LED will turn on.
☐ ☐ **m**	If you wish to set an Initial Delay time, press the GRAY button. For each press of the GRAY button the ON/OFF LED will turn off briefly, ☐ ☐ ☐**.** Each press of the GRAY button adds a ½ second delay. Press the RED button when finished to continue to the SECONDS-ON programming stage. OR Press the RED button to continue to the next programming stage (SECONDS-ON), if no initial DELAY is desired.

m ▯ ▯	**REAL TIME PROGRAMMING MODE** The Seconds LED will be on and the On/Off LED will be on.
m ▯ ▯	No timing will start until you press the GRAY button. As soon as you press the GRAY button (you will hear the relay click on), the first On Time begins. Release the GRAY button (you will hear the relay click off) to begin the first Off Time. This can be repeated for up to 60 On Times and 60 Off Times. Press the RED button, when finished, to continue to the next programming stage.
m m m	**REPEAT PROGRAMMING STAGE** All the LEDs will be illuminated.
m m m	You should now be in the REPEAT programming stage. This sets how many times the VARI-PET will repeat the programmed On/Off times when triggered. Press the GRAY button for each time you would like to repeat the previously set On-Time(s) and Off-Time(s). The Seconds LED and the Minutes LED will simultaneously turn off for a brief moment, ▯ ▯ m, with each accepted press. Press the RED button when finished to continue to the SECONDS OFF programming stage. OR Press the RED button to continue to the next programming stage (SECONDS OFF), if no REPEAT function is desired.
m ▯ ▯	**FINAL SECONDS-OFF PROGRAMMING MODE** The Seconds LED will be the only one illuminated.
m ▯ ▯	You should now be in the SECONDS-OFF programming stage. This sets how many ½ second intervals your prop will be off after it goes through it cycle(s). Press the GRAY button for each ½ second of Off-Time that is desired. The Seconds LED will turn off briefly, ▯ ▯ ▯, with each accepted press. Press the RED button when finished to continue to the MINUTES OFF programming stage. OR Press the RED button to continue to the next programming stage (REPEAT MINUTES-OFF), if no REPEAT SECONDS-OFF is

	desired.
☐ **m** ☐	**FINAL MINUTES-OFF PROGRAMMING MODE** The Minutes LED will be the only one illuminated.
☐ **m** ☐	You should now be in the MINUTES-OFF programming stage. This sets how many minutes your prop will be off after it goes through its cycle(s). Press the GRAY button for each minute of OFF-Time that is desired. The Minutes LED will turn off briefly, ☐ ☐ ☐, with each accepted press. Press the RED button to finish programming the VARI-PET. OR Press the RED button to continue to finish programming the VARI-PET.
m m m ☐ ☐ ☐ **m m m** ☐ ☐ ☐	**FINAL STAGE OF PROGRAMMING** The unit will simultaneously flash all the LEDs twice (blink twice) to indicate that all the programming stages have been completed and the unit is now ready for operation.
	TESTING YOUR PROGRAM Press the GRAY button to trigger the VARI-PET. You should see the LEDs go through all the time settings that have just been programmed. You will probably also hear the relays click on and off as it goes through the On-Time(s) and Off-Time(s).

Hints & Troubleshooting:

Hints:

- For longer operation using a batteries for a supply use a 'C' or 'D' size battery pack, such as the Radio Shack 270-390 or 270-396 respectively.
- Remove batteries before storing the VARI-PET for extended periods.

Troubleshooting:

- **Problem:** The VARI-PET has been programmed and appears to be running the program, but the relay doesn't engage to turn on my effect.

  Solution: First try disconnecting the battery pack and reconnecting it to make sure you have a good connection. (Note: To ensure your safety, unplug the VARI-PET if it is currently plugged in.) If that doesn't work, try a new set of batteries.

- **Problem:** The Vari-PET seems to be causing other timers to trigger whenever it goes off. I am switching a DC device with this Vari-PET

  Solution: Please see the sample connection diagram and properly attach the supplied diode as shown.

Accessories:

Optional Accessory Kit

- AC adapter to replace the battery pack on the PET III.

- 'Y' Power connecter so that the Vari-PET and the AC adapter only use up one plug.

Available at:
www.cowlacious.com

Features:

- **Safe DC Operation.**
- **Direct access to Relay Contacts, two Normally Open and two Normally Closed, via terminals rated up to 250VAC & 28VDC @ 8 Amps.**
- **Easily programmable timing settings.**
- **Keeps program settings even when power has been disconnected.**
- **Initial delay from 0 to 255, ½ seconds intervals.**
- **Up to 60 Variable On Times.**
- **Up to 60 Variable Off Times.**
- **Repeat the above timings up to 255 times without having to be retriggered.**
- **Delay after the repeat cycle is finished (unit cannot be retriggered during this time).**
- **Device can be set to retrigger itself for repeated automatic operation of effects.**
- **Only use the timing setting that you need.**