INSTRUCTIONS FOR DELUXE REM POD DR628

GENERAL REM POD OVERVIEW

Most rem pods are based on an electronic theremin kid's toy that use musical tones and four flashing leds. It uses an oscillator that changes its frequency when a hand comes close to the antenna. This is due the to added capacitance of a hand being introduced into the oscillator circuit. Nexgenrem uses the same oscillator but without the musical tones and four leds that flash to a preprogrammed routine. Some ghost hunters have made many unsure and speculative claims as to what these four leds are indicating. Nexgenrem uses one indicator led combined with a buzzer.

DELUXE REM POD DR628 OVERVIEW

The concept for the DR628 came during the Covid pandemic. To make the days at home go by, I found myself watching allot of ghost hunting teams (GHT) and yelling at the TV I could build a better rem pod that what was currently available. It took two weeks to design the original deluxe rem but five years to have a saleable unit built. The original one had many features. Due to time and expense constraints engineering and building the original, the deluxe rem ended up with a few less features than planned. Having said this, the deluxe rem has combined new features in a layered duality design that has not yet been available to GHT. The focus is always on increasing the opportunity to exploit and document these new pathways.

There has been no real innovation in the rem pod device just a myriad of platforms that add no new functional value. The DR628 is a well thought out rem pod that brings an improved and layered design for a long overdue rem pod revival. It ushers in the DR628 rem pod as a true instrument from an era of a musical kid's novelty toy hurriedly fit to function as a paranormal activity detector. From the custom aluminium housing, to its firmware and its PCB, the DR628 has been engineered from its inception for just paranormal research.

I am retired certified engineering technician previously employed by two major fortune 500 companies. During my career I was awarded a prestigious electronics-based innovation award that saved my company allot of expense. I have been a member of CTTAM for almost 35 years and electronic hobbyist since I was ten years old. The majority of my career was spent building test jigs that tested printed circuit boards (PCB's) with custom electronic hardware and firmware.

RRS INFARED SENSORS

Four RetroReflective Sensors (RRS) are used to create an infrared curtain around the rem antenna. This will test if entities that trigger the rem antenna can reflect infrared light. Their functionality is similar to the reflective cat toy balls used by GHT. They are arranged in a Left, Right, Front and Rear configuration that produces data displayed as directional information.

When a hand is first placed in front of a RRS it will trigger the led on it's top as well the associated front panel led will turn on. Subsequent hits will toggle the front panel leds off, so when checking the rem pod, if no front panel RRS leds are on, no RRS reflections have occurred. The colour of the RRS led matches the one of the four-front panel leds surrounding the jumbo red rem. They represent the left, right, front and rear positions around the rem antenna.

The two orange leds on either side of the front RRS indicate that a RRS has been triggered (single hit) or is blocked (multi-hits). If blocked, the associated led on the blocked RRS will flash along with its front panel led. All blockage warnings must be cleared to begin scanning for entities tripping the RRS's. Each RRS need approximately one foot of empty space around them. If the rear sensor is constantly tripping, the DR628 is too close to a wall or an object on a table as an example. If a table is not available, a fold up seat with a round solid top can provide a base for the DR628. It has been designed as a table top device.

DUAL ATTRACTION LEDS

The left and right RRS's will turn it's associated jumbo side attraction led off when triggered as well. This gives dual rem functionality in a single package for concrete yes or no responses by utilizing the side red and green jumbo leds. One can request an entity grab the green jumbo led for yes and grab the red jumbo led for no. This should trigger the associated RRS and side led to turn off momentarily along with the front panel led.

The two side leds can be used to attract entities to the REM antenna, pointing the side led towards a door opening. The incoming entity would see the side led inline with the antenna. The antenna can be angled over either side led to "assign" a single colour for REM activation.

OPERATION

Remove the four Phillips screws from the cover of the rear battery case and remove the two battery holders. Install four fresh 1.5-volt AA alkaline cells into a battery holder and connect it to the BAT battery snap in the rear case of the DR628. Repeat for the BBU. Close cover and screw the four screws into battery case. Never use 9-volt batteries as they will damage the unit.

Unit runs on one power battery bank at time and the BAT switch selects between BAT and BBU. Move switch sideways to LHS to point to the BAT label for BAT selection, and point switch to the RHS for BBU (no label) selection.

The BBU is just monitored by the voltage monitor when BAT is selected and vise versa. If BAT gets drained, switch BAT to the RHS to remove BAT and engage the BBU battery bank. See DUAL IN OUT FUNCTION to mount the batteries in the side or OUT position.

Attach the SMA antenna to the female gold-plated SMA jack on top of DR628 and finger tighten until snug then extend antenna and keep the last section collapsed. Avoid a loose antenna as it could affect the REM functionality.

Turn PWR switch on, upon power up the DR628 has a quick partial led test combined with a constant buzzer. This start up routine can be used as an exit delay so the operator will not trigger the rem pod.

Test REM operation by reaching towards antenna with your hand, unit will trigger within a six-inch radius around the antenna. To help avoid the RRS sensors bring your hand towards the top of antenna. The center jumbo red led will light up along with a long buzzer beep. A RRS sensor hit by contrast has a short buzzer beep. This is use full when a direct sight line to the rem pod is blocked. When a RRS sees a reflection it’s on board led lights temporality and it’s associated front panel led turns on. The intended scenario is to have an entity trip one of the four RRS on its way to the antenna then a REM hit in succession.

The buzzer switch has three positions HI-OFF-LOW and controls the dual rear mounted buzzers.

If unit gets exposed to freezing temperatures replace batteries.

Keep rem pod out of direct sunlight.

REMOTE CAMERA TRIGGER

The cellphone's camera has decimated the sales of personal cameras, making used digital and 35mm cameras a bargain to buy. Kodak™ announced in 2025 that it has stepped up it's 35mm film production due to increased demand. Only serious GHT use either Polaroid™ instant film or 35mm film. Film removes the possibility of digital manipulation of any captured image. The camera control cluster is located on the LHS of the DR628 rear panel.

Besides the automatic shutter control the DR628 has a manual shutter control switch. The manual switch can be used for an operator to take a picture with the rem pod if the need or want arises and to test if remote trigger set up is functional. The supplied camera shutter control cable is 25 ft long and it is intended for the rem pod to be in the camera view. The goal is to use the automatic trigger to capture an entity that interacts with the rem pod with a remote shutter-controlled camera.

The ALL/RRS switch selects the outputs that trigger the automatic picture feature. ALL uses both REM and RRS outputs while RRS uses only RRS hits to automatically trigger the CAM OUT via the 2.5 mm female jack. The AFC/PIC operates like a wired camera remote, with the switch remaining in the middle OFF position. To trigger a manual picture, move the switch bat downwards toward the PIC label. Move the switch up for the AFC function (Automatic Focus Control).

The shutter control hardware is wired to conform with common wired Canon™ camera remotes. To initiate a remote shutter control, the DR628 grounds the tip of the 2.5 mm male 3 pole jack. The CAM OUT female jack connects to the camera via a male to male 25-foot extension cable. There are many adaptors available online to fit this common remote hardware system so most remote equipped cameras can be interfaced to the DR628.

DUAL IN OUT BATTERY FUNCTION

Keeping with the duality theme, the two battery packs BAT and BBU can be used in their rear compartment or attached to each side of the DR628 using the custom designed docking bays. A single zip tie is used to secure the battery pack to the side docking bays. This configuration combined with the jumbo attraction side leds and the dual voltage monitors creates a battery offering waiting to be drained and documented.

Attach the battery pack so it's two connection pins are facing downwards. Install the supplied zip tie into the slot in the middle of the side housing. When tightening zip tie around each battery bank keep the head of the zip tie on the rear side panel for the tightest bond. Remove waste length of the zip tie with a pair of side cutters. To connect the batteries to the DR628 in the OUT mode a pair of cables is supplied for this purpose. Attach the battery snap to each battery and insert the male end into the remote rear battery DC chassis jack labeled BAT or BBU. Hand tightens the outer screw ring until snug.

Turn power switch on and observe the blue 5 led voltage monitors. With fresh batteries all five leds are lit up bright, when the top three are dim and the last two lower leds are bright replace the batteries. Unit is designed to run below this point however the sensitivity of the REM antenna will decrease.

The same two side attraction jumbo leds can be used to direct an entity to drain the associated battery bank. The hope here is to record the battery monitor decreasing, thus providing real evidence an entity is draining it after be being requested to do so.

LONG TERM POWER OPTIONS

Long term operation greatly increasing the chances of recording evidence of paranormal activity. A two person GHT on TV would stay at their investigation sites for a three day stay, this inspired engineering the DR628 for long term operation. Increasing the time an investigation is performed is a powerful tool when gathering evidence.

The four cell battery holders can power the DR628 for days while a small remote 6-volt lead acid battery would power it for weeks. A fully charged 6-volt golf cart battery can be used to power the DR628 for…well basically forever. The lead acid battery adaptor cables are available as an option.

OTHER

Practice radio silence when using walkie-talkies as they and random RF (radio frequency) can falsely trigger the rem pod. If recording consider announcing that walkie talkies are off and radio silence has begun.

If rem pod begins too repeatedly trigger grab the antenna for a few seconds and release. If still repeating hits, cycle power switch.

To keep the rem pod sensitive to it’s surrounding it may self trigger on occasion as described above.

Always depress spring with battery when installing and removing, avoid popping the battery out of the it’s case.

The unit has an internal auto-reset fuse, if rem pod fails to power up remove both battery banks from unit and wait 5 min. This will reset the auto-fuse. Check that all of the cells are oriented properly in both battery holders. Reinstall battery packs and turn power switch on.

In dry carpeted locations avoid walking around and touching the antenna.

EPILOGUE

The DR628 can fully be utilized where an entity has been seen repeatedly, and setting it up paired with a remote triggered camera. Using site information to strategically set it up with the rem pod's RRS scanning for reflections. If objects are seen to move, the trigger object can be set up just "out of range" of the front RRS, tripping the unit after it moves. The deluxe rem has enough layered features that video recording its front panel can yield lots of exciting documented hits without the use of a remote triggered camera. Keep rem pod centered for any camera in order to capture both jumbo side leds.

With its multitude of new features and put together with fore thought the DR628 rem pod delivers performance unseen in current rem pod equipment. Every device has been scrutinized to exploit its maximum output and many uses from a single part.

I was a member of a quality team that's focus was PCBs. I have certificates in Quality Management from Red River Poly Tech and the University of Manitoba, both with Honours. The PCB designed for the DR628 has followed industry quality standards from its layout and to parts like hermitically sealed relays.

My lifetime of working with PCB's has led me to avoid connectors of any kind where possible. The are no connectors in the DR628 as the PCB is designed for point-to-point soldering. This along with many other quality innovations creates an end product that will continue to perform for a long time.

Thread locking gel has been used on any part that requires it.

LCD versus LED for data display was considered and LED's won out. The 19 output led's are easily seen and video recorded from a distance while an LCD is not. If recording try to keep the area around the unit in the view as well, providing the opportunity to capture an entity along with the front panel.

The decision to add battery offering and monitoring to the DR628 came from statistical analysis of many GHT on TV. Drained batteries from various equipment were the number one reported experience across all GHT. Choosing any other starting point or device detection would not be supported by the data readily at hand.

UNIT TERMINOLOGY

PWR	POWER
BUZ	BUZZER
BAT	BATTERY MAIN
BBU	BATTERY BACK UP
ALL	REM + RRS
RRS	RETROREFLECTIVE SENSOR
AFC	AUTOMATIC FOCUS CONTROL
PIC	MANUAL PICTURE
CAM	CAMERA
OUT	REMOTE CAM SHUTTER CONTROL 2.5MM 3 POLE FEMALE JACK

INSTRUCTION TERMINOLOGY

SMA	"SubMiniature version A"
REM	REM POD
GHT	GHOST HUNTING TEAMS
RRS	RETRORELECTIVE SENSORS
PCB	PRINTED CIRCUIT BOARD
LHS	LEFT HAND SIDE
RHS	RIGHT HAND SIDE
CTTAM	CERTIFIED TECHNOLOGISTS and TECHNICIANS ASSOCIATION OF MANITOBA