The "Snooper"

*Reg. U.S. Pat. Off.

Model 108
Geiger Counter

Precision Radiation Instruments, Inc.
2235 South La Brea Avenue
Los Angeles 16, California

World's Largest Manufacturer of Portable Radiation Instruments

The "Snooper"

OPERATING INSTRUCTIONS:

To use the "Snooper" simply plug in the earphone, turn the on-off switch to the "on" position and press the button 3 or 4 times until clicks are heard in the earphone. The button should not be held down as this will wear out the battery. It should be pushed all the way down and then immediately released in a quick motion. The button should *not* be pressed when the clicks are being heard as this will materially shorten the life of the Geiger Tube which is the most expensive part of the instrument. As the instrument is being used the sound will gradually get weaker. When this happens, press the button once or twice more to restore the volume.

USE FOR PROSPECTING:

The instrument will normally produce clicks in the earphones at the rate of about 30 to 50 per minute. This is the normal background count caused by cosmic rays and does not indicate the presence of radiation. When radiation is present the number of clicks per minute will increase. A fair amount of radiation will cause the clicks to be as rapid as the firing of a machine gun. This can be demonstrated by bringing the sample supplied with the instrument up to the Geiger Tube which is located under the three holes in the case. To prospect, first take the background count in your particular location. This is done by simply counting the number of clicks per minute. As this varies somewhat for each location and from one minute to the next, several counts should be made and the average taken if accuracy is desired. Then go to the location where the presence of Uranium is suspected and again take the count. If the count increases by 50% Uranium may be present. In other words, if the normal count is 50 per minute in your area and this increases to 75 per minute in the presence of ore, this is significant. Higher counts than this are very significant. For best results a sample of the ore should be picked up and placed right next to the Geiger Tube. For more detailed instructions on prospecting we recommend the book "PROSPECTING FOR URANIUM" for sale by the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C., Price 55 cents. When a prospector believes he has discovered Uranium he should first have a sample tested by an instrument with a meter such as our Model 106 or 107.

(The "Snooper" may be traded in on these models). If the sample shows promise, at least one pound of the ore should be sent to the U. S. Geological Survey, Geochemistry and Petrology Branch, Building 213, Naval Gun Factory, Washington, D. C. They will assay the sample without charge and give their report to the individual submitting the sample and to no one else. If their report indicates the ore has commercial value it should be offered to the U. S. Atomic Energy Commission, 70 Columbus Ave., New York 23, N. Y., Attention: Raw Materials Operations.

USE FOR CIVILIAN DEFENSE:

The use of the "Snooper" for civilian defense is limited since it will not measure the exact quantity of radiation present. The "Snooper" will only indicate whether radiation is present or not.

The presence of radiation is by no means a cause for alarm. Humans can tolerate large amounts of radiation without injury. Sufficient radiation may be present to cause the "Snooper" (or any similar instrument) to click continuously without indicating any danger. In order to evaluate radiation hazards, more elaborate instruments (such as our models 106 and 107) are required. Even such instruments cannot be used to determine dangerous levels of radiation except when used by trained persons. We do not recommend the use of any of our instruments for this purpose unless the user has taken a government course in civilian defense and is trained in the use of the Geiger Counter. Geiger Counters can even be detrimental to the defense effort by causing alarm without cause. We therefore wish to clearly point out that the use of the "Snooper" for civilian defense is strictly limited to determining the presence of radiation. It does not indicate whether danger exists.

BATTERY REPLACEMENT:

The "Snooper" uses one ordinary flashlight battery and one 22½ volt hearing-aid type battery. The 22½ volt battery is available from any hearing-aid dealer and from most radio supply houses as well as from some hardware stores and drug stores. It should be obtained locally if replacement is required. This battery will last six months to a year with ordinary use and will work even when its voltage has dropped to half the initial voltage. The flashlight battery must be replaced more frequently. To replace batteries, simply remove the screw in the end of the case and the case will then slide

off. The batteries snap into position. Note carefully which way they face and be sure to put the new ones in the same way. They will not work if put in backwards.

CAUTION

TURN OFF SWITCH WHEN INSTRUMENT IS NOT IN USE. IF SWITCH IS LEFT ON FOR LONG PERIODS THE BATTERIES WILL CORRODE AND DESTROY THE INTERIOR OF THE INSTRUMENT.

PRINCIPLE OF OPERATION:

1½ volts is momentarily applied to the primary of a high impedence transformer by the operation of the push button. This induces a voltage of about 300 volts in the secondary. The secondary voltage charges a condenser which remains charged for long periods of time at this voltage. The condenser applies this voltage to a 300 volt Geiger tube. When a radio-active ray passes through the Geiger tube it causes the gas in the tube to ionize and current flows through the tube momentarily. This causes a pulse to be applied to the grid of a simple amplifier tube which amplifies it for the earphones.

GUARANTEE AND FACTORY SERVICE:

All parts except the batteries are guaranteed for a period of ninety days from date of purchase against defects in workmanship and material. The batteries cannot be guaranteed as they may be easily damaged by misuse. Always check the batteries before returning the instrument for service. The instrument should be returned in the original packing material or be covered on all sides with a thick layer of soft packing material.

To obtain service, pack the instrument carefully as described above, and return it insured and prepaid to your nearest Authorized Service Station. The following list of service stations is not necessarily complete as we are continually adding additional new facilities for your convenience. If you do not find a service station listed in your area, write us and we will advise you of the name of your closest factory Authorized Service Station. Enclose a note stating exactly in what way the instrument has not been performing properly, from whom it was purchased and the date of purchase. Ship to:

P.R.I. AUTHORIZED SERVICE STATIONS

Engineers Syndicate, Ltd.
5011 Hollywood Boulevard
Los Angeles, California

Warren Television & Radio Co.
28 South Main Street
Salt Lake City 1, Utah

P.R.I. AUTHORIZED SERVICE STATIONS (Cont'd.)

G & H Uranium
Post Office Box 1467
Durango, Colorado

Geiger Center
105 East Colfax Avenue
Denver, Colorado

Industrial Instrument Service Co.
606 North Ventura Avenue
Ventura, California

Minerals Engineering Company
801 Fourth Avenue
Grand Junction, Colorado

Roberts Electric
821 Palm Avenue
Imperial Beach, California

Sam's Radio Service
218 Vassar, S. E.
Albuquerque, New Mexico

Vinson-Carter Electric Co.
325 North Fourth Street
Phoenix, Arizona

Pat's Radio & Electronic Service
Bowman, North Dakota

Fonville Music Company
120 South Oak
Pecos, Texas

Commercial Radio Corporation
747 North Stone
Tucson, Arizona

Anchorage Radio & Television, Inc.
443 Fourth Avenue
Anchorage, Alaska

The Robert Dollar Company
Marine Division
50 Drumm Street
San Francisco 11, California

Conant Electronic Specialties Co.
1801 East Mitchell St.
Arlington, Texas

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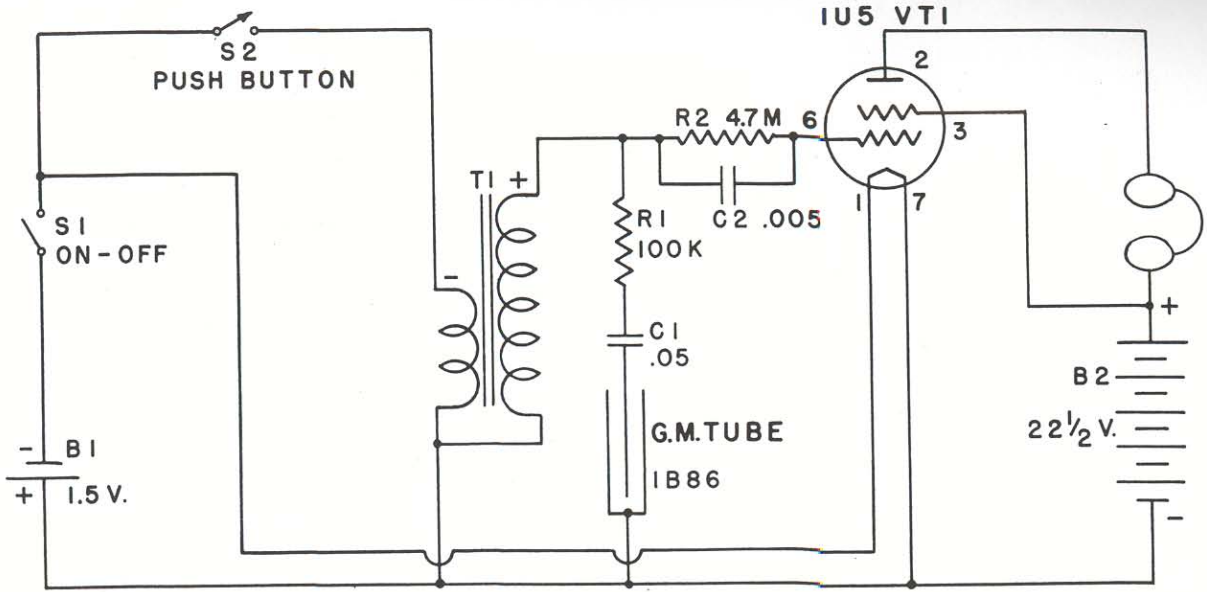

PRECISION RADIATION INSTRUMENTS, INC.
THE SNOOPER
MODEL 108

DRAWN BY LRDow
CHECKED BY [illegible]
DATE JAN. 1, 1954

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