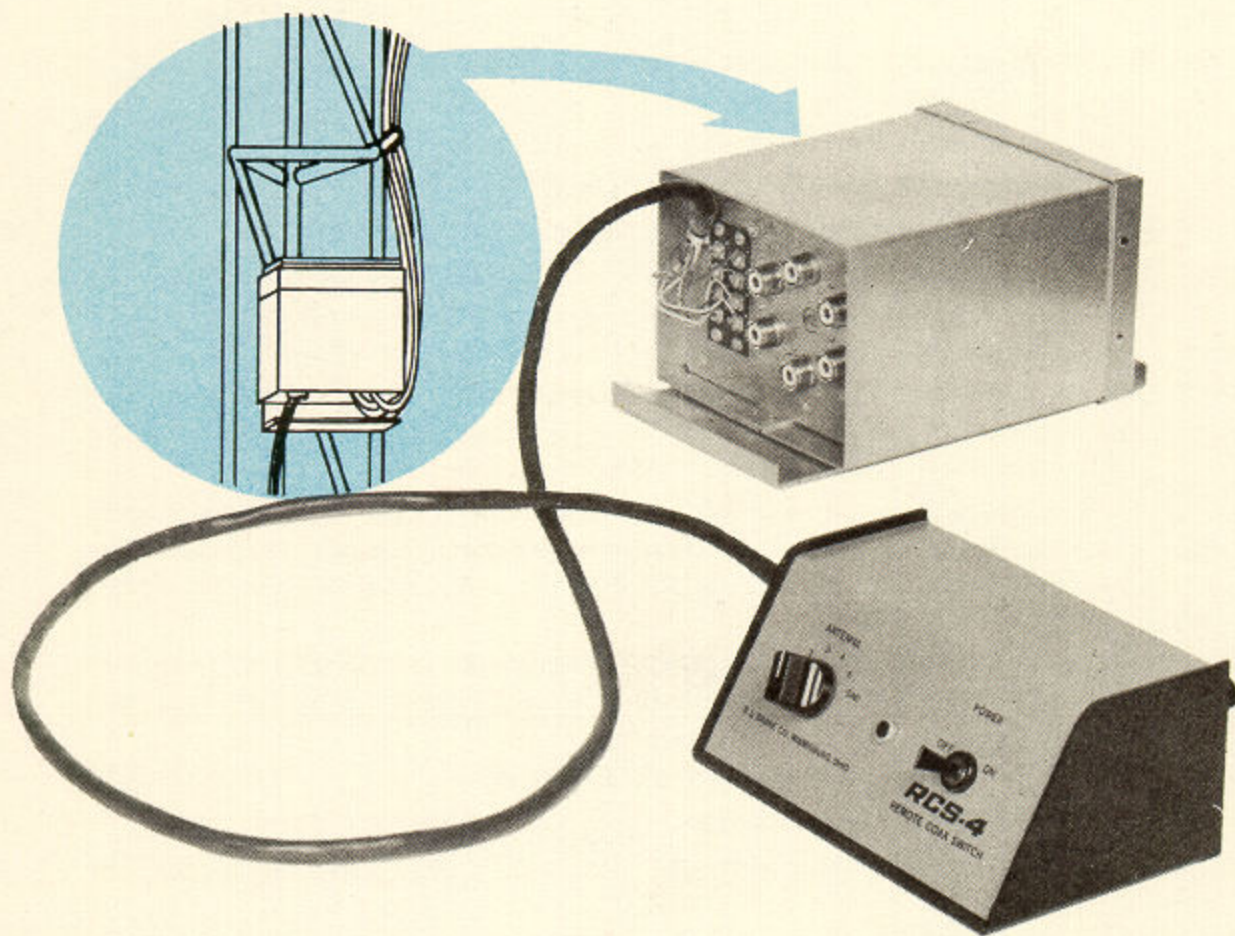




MODEL **RCS-4**

# REMOTE COAX SWITCH



## INSTRUCTION MANUAL



## LIMITED WARRANTY

*R. L. DRAKE COMPANY warrants to the original purchaser that this product shall be free from defects in material (except tubes and RF output transistors) or workmanship for ninety (90) days from the date of original purchase.*

*During the warranty period the R. L. DRAKE COMPANY or an authorized Drake service facility will provide free of charge both parts (except tubes and RF output transistors) and labor necessary to correct defects in material or workmanship.*

*To obtain such warranty service, the original purchaser must:*

- (1) Complete and send in the Warranty Registration Card.*
- (2) Notify R. L. DRAKE COMPANY or its nearest authorized service facility, as soon as possible after discovery of a possible defect, of:*
  - (a) The model number and serial number, if any;*
  - (b) The identity of the seller and the approximate date of purchase;*
  - (c) A detailed description of the problem, including details on the electrical connection to associated equipment and the list of such equipment.*
- (3) Deliver the product to the R. L. DRAKE COMPANY or the nearest authorized service facility, or ship the same in its original container or equivalent, fully insured and shipping charges prepaid.*

*Correct maintenance, repair and use are important to obtain proper performance from this product. Therefore, carefully read the Instruction Manual. This warranty does not apply to any defect that R. L. DRAKE COMPANY determines is due to:*

- (1) Improper maintenance or repair, including the installation of parts or accessories that do not conform to the quality and specifications of the original parts.*
- (2) Misuse, abuse, neglect or improper installation.*
- (3) Accidental or intentional damage.*

*All implied warranties, if any, terminate ninety (90) days from the date of the original purchase.*

*The foregoing constitutes R. L. DRAKE COMPANY'S entire obligation with respect to this product, and the original purchaser and any user or owner shall have no other remedy and no claim for incidental or consequential damages. Some states do not allow limitations on how long an implied warranty lasts or do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation and exclusion may not apply to you.*

*This warranty gives specific legal rights and you may also have other rights which vary from state to state.*

**R. L. DRAKE COMPANY**  
540 Richard Street • Miamisburg, Ohio 45342





## GENERAL

The DRAKE Model RCS-4 consists of a remote motor-driven switch, controlled by a master switch housed in an attractive console cabinet. The remote weather-protected unit accepts up to five (5) coax-fed antennas, while providing for one main coax feed-line. This minimizes the amount of coax needed for a multi antenna installation, plus provides grounding of unused antennas.

## SPECIFICATIONS

MAXIMUM INPUT POWER	2000 Watts PEP
FREQUENCY RANGE	Up to 30 MHz, insertion of switch changes VSWR no more than 1.05:1. From 30 MHz to 150 MHz, insertion changes VSWR no more than 1.5:1.
OPERATING TEMPERATURE RANGE	-40°F to +150°F.
SUPPLY VOLTAGE	Available in 120 VAC or 240 VAC, 50/60 Hz. 50 Watts.

## INSTALLATION

Carefully remove the unit from the shipping carton, and examine it for evidence of damage. If any damage is discovered, immediately notify the transportation company that delivered the unit.

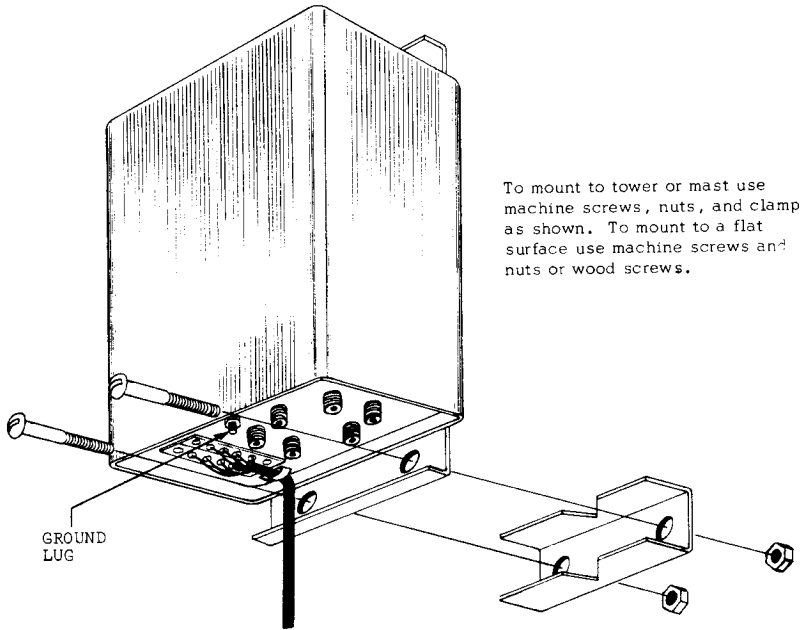


FIG. 1 ANTENNA SWITCH Installation



Be sure to keep the shipping carton and packing material, as the transportation company will want to examine them if there is a damage claim. Keep the carton and packing material even if no shipping damage occurs. Having the original carton available makes packing the unit much easier should it ever be necessary to store it or return it to the factory for service.

#### NOTE

Fill out the enclosed registration card and return it to the factory immediately to insure registration and validation of the warranty.

The universal mounting bracket on the ANTENNA SWITCH allows it to be easily mounted to the side of a tower or to a flat surface if desired. It's "Rain-Hat" construction makes it capable of operating in adverse weather conditions.

After mounting as shown in Fig. 1, connect terminals #1 through #8 on the ANTENNA SWITCH to terminals #1 through #8 on the console using a good grade of 8 conductor cable. Be sure to use the cable clamp on the ANTENNA SWITCH to relieve strain on terminal strip connections.

It is advisable, even if ANTENNA SWITCH is mounted to a tower, to connect strap from the ground lug on ANTENNA SWITCH to a good earth ground or to tower if this type of installation is used. This will assure good grounding of antennas. Grounding of ANTENNA SWITCH is absolutely necessary to assure good grounding of antennas if ANTENNA SWITCH is mounted to structure which is not a good earth ground.

Connect antennas to coax receptacles on ANTENNA SWITCH using a good grade of 50 ohm coaxial cable and PL-259 connectors. Connect single transmission line to be used to coax

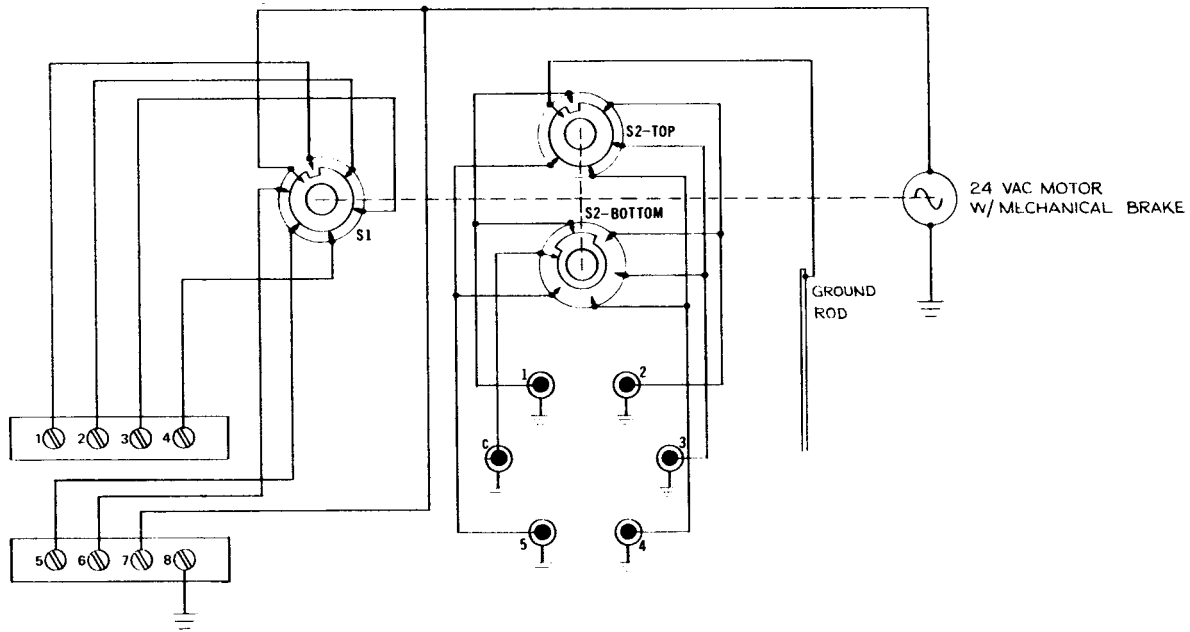


FIG. 2 ANTENNA SWITCH Schematic

receptacle labeled "C" using PL-259 connector. Make a record of the number of the coax receptacle used for each specific antenna. These numbers will correspond to the markings on the ANTENNA control switch on the console.

It is advisable to use the ANTENNA SWITCH even if only one antenna is used, as it provides easy grounding of the antenna when leaving the station and future antenna installations are then easily accomplished.

#### NOTE

The pressure-sensitive label supplied can be applied to the top of the RCS-4 Control Console, if desired, to facilitate antenna identification.

### OPERATION

With Power ON, the ANTENNA control switch determines which antenna is terminating the transmission line. To change antennas, merely rotate the ANTENNA control switch to the number corresponding to the desired antenna. The selection interval indicator will light showing the motor driven switches are turning. When the light goes out, the antenna selected is terminating the transmission line. When leaving the station, return ANTENNA SWITCH to GND. After selection interval indicator goes out, turn Power switch to OFF.

**CAUTION: BE SURE TRANSMITTER IS IN THE "OFF-THE-AIR" CONDITION WHEN INDICATOR LIGHT IS LIT CONTINUOUSLY, INDICATING MOTOR DRIVEN SWITCHES ARE TURNING. DURING THIS INTERVAL THE TRANSMISSION LINE IS IMPROPERLY TERMINATED.**

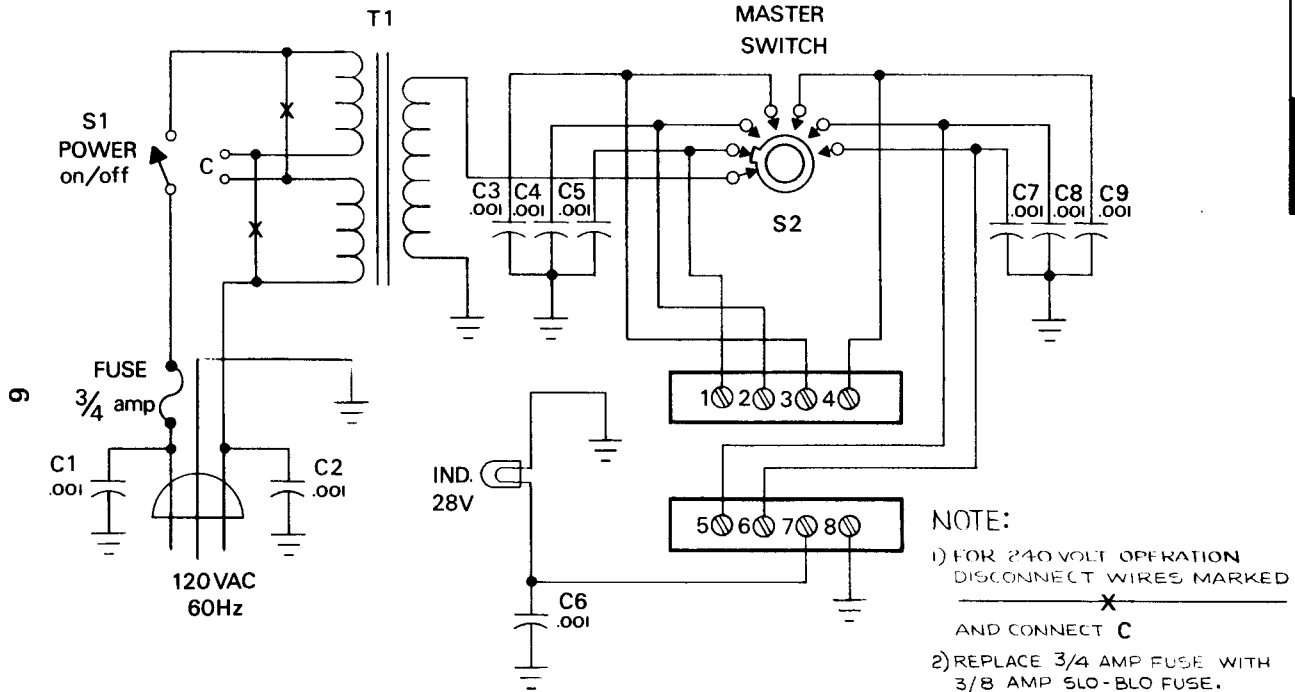


Fig.3 CONTROL CONSOLE SCHEMATIC



## NOTES



## NOTES

**DRAKE**

## DRAKE AMATEUR PRODUCTS

- R-4C** Receiver, covers the 160 meter through 10 meter amateur bands and up to fifteen additional 500 kHz ranges. It has 8-pole crystal filter selectivity with passband tuning and transceives with the T-4XC with excellent sensitivity.
- T-4XC** Transmitter, covers the 160 through 10 meter amateur bands and most other frequencies between 1.5 and 30 MHz. It has 8-pole crystal filters for sideband selection. It may be used to transceive with the R-4C.
- TR-4C** Transceiver, 300 Watt high frequency single-sideband unit covers the 80 meter through 10 meter amateur bands. Includes AM and CW modes, a linear, permeability-tuned VFO and two 8-pole crystal lattice filters.
- L-4B** Linear Amplifier, built for continuous duty at full capacity. 2000 Watts PEP on SSB. 1000 Watts on AM, CW and RTTY. Covers the 80 meter through 10 meter bands.
- SPR-4** An all solid-state communications receiver which can be programmed with accessory crystals to cover 150 kHz to 30 MHz. The SPR-4 receives AM, CW, SSB, (upper and lower) and may be powered from 120 VAC, 240 VAC, and 12 VDC.
- FS-4** Frequency Synthesizer, built for use with R-4 series, SPR-4, 2-C receivers, and T-4X series transmitters.
- MN-4** Antenna Matching Network, matches 50 Ohm transmitter output to coax antenna feedline with VSWR up to 5:1. An integral Wattmeter reads forward power in Watts and VSWR directly. 200 Watts continuous duty output.
- MN-2000** Antenna Matching Network. Same as MN-4 except: 1000 Watts continuous duty output (2000 Watts PEP) and 3 antenna connectors switch-selectable from front panel.
- W-4** Wattmeter, reads forward and reflected power directly in Watts (VSWR from nomograph). Range: 200 and 2000 Watts full scale, 1.8 to 54 MHz.
- WV-4** Wattmeter, reads forward and reflected power directly in Watts (VSWR from nomograph). Range: 100 and 1000 Watts full scale, 20 to 200 MHz.
- TR-33C** Transceiver, 2 meter VHF-FM, portable. Twelve channels, self-contained batteries and attached microphone.
- RCS-4** Remote Coax Switch, provides remote selection of up to five antennas, using only one main feedline. Allows grounding of unused antennas. Motor driven switches controlled from station located console.
- SSR-1** General Coverage Receiver, 0.5-30 MHz continuous. All solid state.

For information on any of our products, please feel free to write our Sales Department, 540 Richard Street, Miamisburg, Ohio 45342 or call direct, 513-866-2421.

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