

VICTORIA WEATHER OBSERVER BUILDS OWN INSTRUMENTS

by Allan F. McQuarrie,

George Murdoch is an ingenious man. He couldn't get all the weather measuring equipment he wanted so he decided to build it himself. One of hundreds of Cooperative Weather Observers across Canada and a member of a team of some two dozen in the Greater Victoria area, George Murdoch provides official precipitation measurements for the area around "Oak Bay-Willows Park".

The Atmospheric Environment Service (formerly known as the Canadian Meteorological Service) provides equipment, to measure certain weather parameters, to persons who are interested and meet specified standards. In Mr. Murdoch's case, rainfall measuring equipment was installed. This is essentially a standard rain gauge. But Mr. Murdoch wasn't satisfied; he wanted to know when the rain started and when it stopped. So he made and installed a device on a roof-top that, when rain began, would trip a sensitive relay switch. This in turn activates a recorder that he built so that the times can be determined.

The recorder consists of a roll of one inch paper tape moving at the rate of six inches per 24 hours across a scale. An electric clock drives the mechanism and ensures accurate timing at the rate of $\frac{1}{4}$ inch of tape per hour. When the relay is activated, a stylus makes a mark on the tape thus ensuring a permanent record of all times the rain is falling.

Achieving success in this line, he decided he wanted to measure wind velocity. He began to design his own anemometer but the Meteorological Service provided him with an old style but still usable instrument. This he has mounted over his garage. A cable leads from this measuring device to another of Mr. Murdoch's creations. A small box has a series of lights which indicate wind direction and another set of lights is used to measure the wind speed. This is a fairly standard type of simple installation but in this case, Mr. Murdoch has added a digital counter. This allows him to set the device to measure the wind speed even though he is not around.

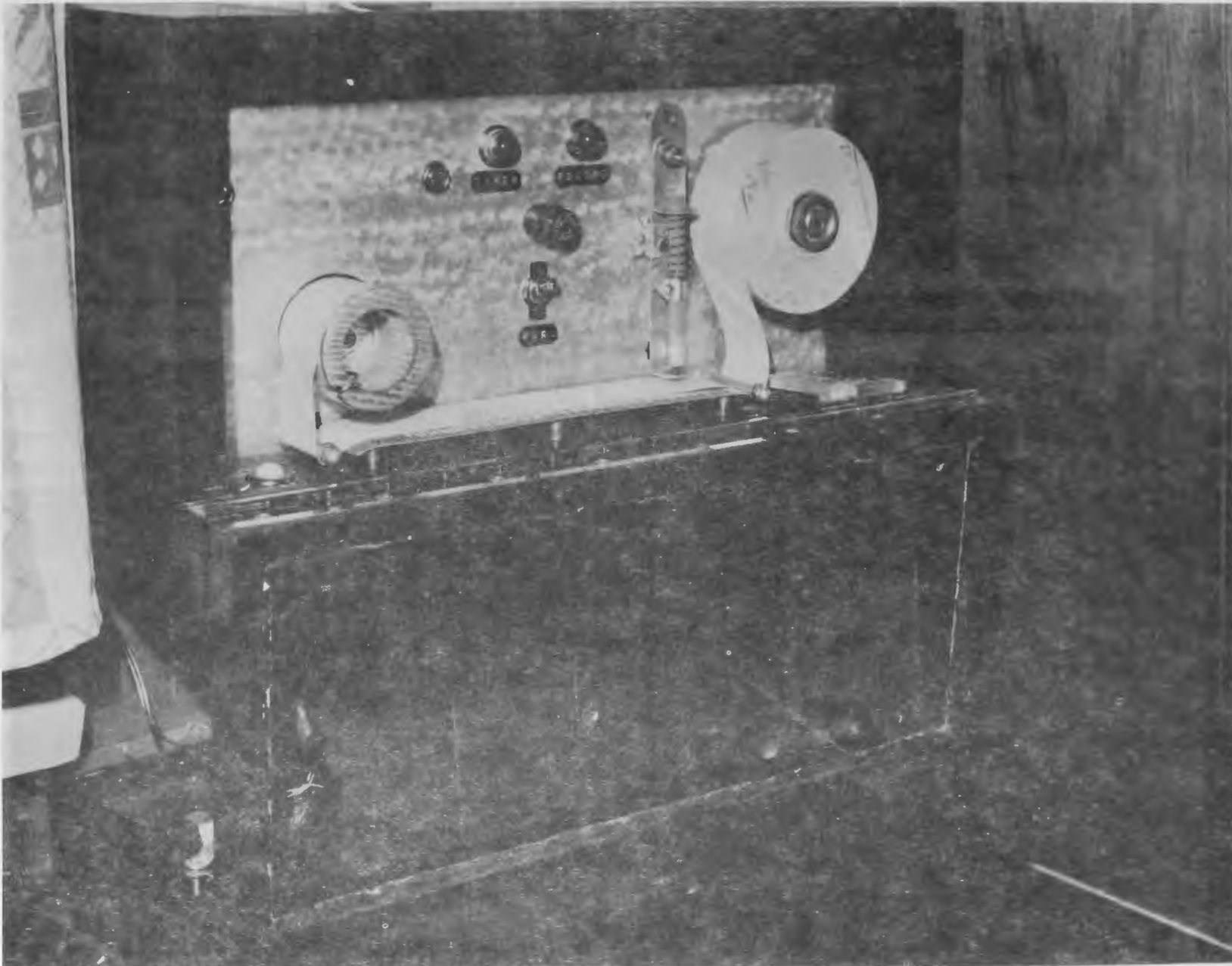
He has also obtained a small thermometer screen and a set of thermometers which, though not approved "officially", nevertheless give a good indication of temperatures in his garden. He has a small but accurate aneroid barometer for noting the pressure and a radio tuned to obtain weather at surrounding stations. He estimates he has spent \$375 on this equipment. His daily record of the weather includes all this information and other pertinent remarks and is mailed monthly to the Regional Climate Data Centre at Gonzales Observatory in Victoria.

Mr. Murdoch is an expert in electronics. For 40 years he was in the Radio and Electronics business, much of the time working for an old established Victoria firm (Fletcher's Radio) but for the last ten years, he was in business for himself. A native of Victoria, he is now 78 but still active and has his own workshop in which he constructed the meteorological equipment. At one time he was Reeve of Oak Bay, one of the municipalities of Greater Victoria. His family is now grown but he lives with Mrs. Murdoch at their comfortable home at 2240 Beach Drive, overlooking the waters beyond Willows Park. The Atmospheric Environment Service is proud to have men like George Murdoch assisting in its important program of obtaining Climatological Data.



George Murdoch, Co-operative Observer Oak-Bay: Willows Park (Victoria) with his "Home-Made" Wind Indicator Showing Digital Counter, August 1971

Allan McQuarrie Photo



Automatic Rain Timing Recorder – Designed and Built by George Murdoch, August 1971

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George Murdoch Explaining "Rain Recorder Relay Switch", August 1971

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