

# FOR YOUR INFORMATION !

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## How To Use Optical Instruments In Wet Or Cold Weather

When caught in a sudden downpour, you should cover the instrument with a plastic hood, or any kind of plastic bag for protection. Only those instruments especially designed to be waterproof can withstand a heavy soaking without fogging up.

Never store your instrument in the case when it is wet. This is probably responsible for more problems than any other single factor. This does not mean that the instrument cannot be carried in the case throughout the work-day from station to station, but avoid prolonged storage in warm rooms in the carrying case if there is any suspicion at all that the instrument is wet. The combination of high humidity, warm temperature and darkness is ideal for the growth of fungus. Fungus will grow on, and etch the surfaces of optical glass. Removal of fungus from the optical system is time consuming and very costly, even if the optical components can be saved. If they have to be replaced, it is even more costly.

In cold weather store your instrument outside, or in your vehicle. Never bring it into a warm room from outside cold, as this causes fogging and condensation. Avoid any sudden changes in temperature. In sub-zero temperatures, changes in heating and cooling create another serious problem. When water condenses on the outside of the instrument, it is also condensing on the inside, on clamps and bearing surfaces. The next exposure to cold turns this water to ice and causes stiffness in the rotating components. The buildup of water is progressive and cumulative and will eventually make the instrument too stiff to use.

If the instrument does fog up, use a heat lamp on it. Set it so that the instrument will get no warmer than can comfortably be borne by the hand, and continue for several hours.

If all the above suggestions fail to help, **DO NOT** attempt to take the instrument apart. This procedure is invariably catastrophic. Pack it up and bring it in to

**Ellerbusch** for service.