UNITED STATES OF AMERICA
GENERAL SERVICES ADMINISTRATION
WASHINGTON, DC 20405

FEB 12 1974

Mr. Dwight Ink
Deputy Administrator
General Services Administration
Washington, DC 20405

Dear Dwight:

As you are aware, the energy crisis has confronted the Federal Government with complex problems that can be resolved only by employing progressive, innovative approaches and attitudes. I believe that we in GSA have assumed a responsive leadership role within the Federal establishment in meeting the President's energy-conservation goals.

In order to provide you with a management tool for measuring your own progress toward one of these goals, I am enclosing a digital thermometer to help you gauge the success of your own office temperature-reduction program.

Sincerely,

ARTHUR F. SAMPSON
Administrator

Enclosure

Keep Freedom in Your Future With U.S. Savings Bonds

DiggiGuide

DIGITAL ROOM THERMOMETER

by AIRGUIDE

Explanation of Operation and Instructions For Use

AIRGUIDE
INSTRUMENT COMPANY
2210 WABANSIA AVENUE
CHICAGO, ILLINOIS 60647

DigiGuide

DIGITAL ROOM THERMOMETERS by AIRGUIDE

Space-age technology makes possible this entirely new concept in thermometers. Techniques, materials and methods developed for space craft and highly sophisticated military devices are applied to this early commercial use of liquid crystals.

Airguide, always a pioneer in new weather instruments, introduces the first digital thermometers that are super-sensitive, easy-to-read and colorful. Temperature indicating digits appear, change color, and disappear in an almost mystical fashion as it follows temperature changes.

By easy interpretation of color hues, accuracy can greatly exceed the usual household instruments. Truly, these are fascinating devices that quickly become conversation pieces.

How it Works

Liquid crystals are microscopic capsules of chemicals which become active under certain circumstances. In this case, the liquid crystals reflect light at specific temperatures. Each set of digits from 66°F to 86° is backed by a pod of liquid crystals formulated to become active at the specific temperature it represents. At other temperatures they appear black.

Actually, each pod is active to some extent over a 2°F range to give a continuity of reading. Within its range, the crystal pod will change color, from tan at the low end of the reflective range, to green in mid-range, to blue at the high end. By interpreting the colors of the visible digits, readings accurate to 1° and even ½° may be obtained.

In addition to the digits, high and low arrows extend DigiGuide's scale. The low arrow will show Blue from 66° to 64°, Green from 64° to 60°, and Tan from 60° to 58°. The high end arrow will be Tan from 87° to 91°, Green from 91° to 97°, and Blue from 97° to 105°.

Location

The placement of the DigiGuide is quite important for its greatest use and enjoyment. The liquid crystals do not emit light, but when activated, reflect the available light. It must be placed in a position to pick up the room light—the more light it picks up, the brighter the reflection. However, it must be far enough from light sources so it does not pick up heat from them.

Direct sun rays will probably erase all reading as the temperature rises above the scale range, but it will function again when moved out of direct sunlight. DigiGuide is so sensitive to heat, it will pick up heat from an incandescent light several feet away—in fact, to demonstrate how the thermometer works, move it fairly close to a light bulb and observe its action. Fluorescent lights give off little heat and have much less effect on DigiGuide. Do not leave exposed to direct sunlight for prolonged periods or its life may be shortened.

Because of its extreme sensitivity, you may wish to try several locations in a room to find the position most representative of the average temperature. Outside walls may be 2°-3° cooler during winter and this will, of course, be reflected if a DigiGuide is positioned on them. Warm or cold drafts will similarly affect DigiGuide.

DigiGuide should not be immersed in water or other liquids.

Precision Reading

To the casual observer this new concept in room thermometers is simply a colorful accessory with an easy reading feature. But for those who understand its workings, it can also be probably the most accurate household thermometer they have ever used.

The pod of liquid crystals behind each set of digits reflects light within a narrow temperature span of about 2°. Within this 2° range, the color changes from tan at its lower end, green in mid-range, and blue at the high end. At other temperatures it appears black. For instance, if the room temperature is exactly 70° these digits will reflect green. The adjacent numerals may be dimly visible. An exact temperature such as 70° is not often encountered.

Should the temperature rise to 70½° the green digits will become tinged with blue, and the 72 digits will start to appear tan.

A continued rise to 71° will turn the 70 digits blue and the 72 a definite tan. At 71½° the 70 digits will be deep blue, fading to black, and the 72 numerals will start to change from tan to green.

At 72° the green 72 is most apparent and 70 and 74 may be seen dimly.

A little care and skill in interpreting the readings and coloring can be most rewarding and increase your enjoyment of DigiGuide.

The metal case and acrylic screen of DigiGuide serve to stabilize the temperature action. It is actually the temperature of these two components that is shown on the screen. If the instrument is reading in the 70s, applying the heat of your hand near a higher reading, such as 86°, will make that digit appear as the DigiGuide warms to that temperature. Remove your hand and it will fade out again. To avoid misleading readings when handling the instrument, grasp it to left of the current reading, that is, over the digits that will not respond to the heat of your hand.

© 1972 Airguide Instrument Co.

GUARANTEE

We guarantee this Airguide instrument to be free from defects of workmanship or material and to remain accurate in normal use. If within one year of purchase date this instrument fails to give satisfactory service, it will be repaired or replaced without charge. This guarantee does not cover breakage through accident or misuse. Replacement will be made if this instrument is returned postpaid to

Airguide INSTRUMENT COMPANY
2210 Wabansia Avenue Chicago, Illinois 60647

Form 9002-141-1272 Printed in U.S.A.