

**A**LL OF THESE ITEMS



ARE THE PROPERTY



OF THE WORLD'S

MOST PRESTIGIOUS



MUSEUMS.

HOWEVER, ONLY  
ONE CAN BE YOURS.







## GEOCHRON - THE ULTIMATE TIME KEEPING DEVICE

### MAN'S NATURAL TIMEPIECE

From the first crude sundials that divided the days into vague and irregular intervals to the finest navigational chronometers that maintain split-second accuracy over long periods, our basic source of time has always been the rotation of the earth we live on and the apparent motion of the sun that this rotation causes. Even before any concept of time existed, the daily alternation of light and darkness must have regulated man's activities, as it does the activities of animals today. As recently as one hundred years ago, every city, town and hamlet on earth observed its own local time based on the instant that the sun reached its zenith at that locality, and "high noon" was the universal time for setting clocks and watches.

### THE TIME ZONE PROBLEM

Those simple and straightforward days of Local Sun Time ended when the first transcontinental railroads ushered in the era of modern long-distance transportation. The time confusion for travellers and trainmen became so great on long trips that in the 1870s the 24 "standard" world time zones we know today were set up by international agreement. These zones solved one problem but created another. Today, in our age of high speed jet travel, electronic communications and growing international involvement, more and more people need to know or are interested in knowing what time it is somewhere else, often halfway around the earth. The problem that time zones created is that the ordinary clock and watch are highly inadequate for telling on a global basis.

### THE INADEQUACY OF THE CLOCK

Conventional clocks are essentially local time indicators and no more. The last basic innovation in design of clocks, outside of improved accuracy and minor gimmickry, was back in the 17th century when someone added the minute hand to the thereto fore single-handed clock dial. Because clocks and watches present time as an abstract and sometimes meaningless number, learning the time in another part of the world is a matter of working with other abstract numbers, time zone

conversion factors, as well as figuring out whether it is A.M. or P.M., what day of the week and what date it is. Since there are at least 34 local world time zones (24 standard and 10 non-standard) the problem is not simple. And for this same reason, the idea of multiple dials or clocks for keeping track of time is impractical.

### GEOCHRON: THE NEW GLOBAL TIMEPIECE

The Geochron solves all these problems in one stroke by combining the answers to the two questions "What time?" and "Where?" in a single easy-to-read graphic analogue. Physically, the Geochron looks like a framed world map, about 3 feet by 2 feet in size. It is designed to be hung on the wall. The colourful map itself, a precision Mercator projection printed on dimensionally-stable Maylar, is an endless belt that is driven slowly from left to right by an electric clock motor in synchronisation with the rotation of the earth. All known legal time zone boundaries are delineated on the map by dark blue lines which in most cases, converge on lettered pointers at the top edge of the map. These letters identify the standard time zones and also represent the short-wave radio prefix for that zone.



### READING GLOBAL TIME ON THE GEOCHRON

The time zone arrows point to a stationary time scale across the top of the map that reads from midnight at the left, through noon in the middle, to midnight again at the right. To read the time in any standard zone in the world, you simply find that place on the map, zone boundaries to the arrow which points out the correct time. Certain non-standard and pocketed zones have boundaries that do not extend to the arrow. These are marked with a letter and a number. The letters tells you which arrow to read and the number shows the deviation from standard time. In case of India, for example, the designation is E + 30. This means that you add 30 minutes to the time you read on the E pointer. Simple addition of a fraction of an hour in the case of the 10 non-standard zones is the only calculation ever required in reading the Geochron.



## READING THE DATE AND THE DAY OF THE WEEK ON THE GEOCHRON

Since the map is moving slowly across the frame from left to right, the International Dateline crosses the frame once each day. The days of the week observed on either side of the Dateline are displayed in windows near the bottom of the map. The date and month for these two days are likewise shown on an indicator mounted at the bottom of the Geochron.



## GEOCHRON: GRAPHIC ANALOGUE OF DAY AND NIGHT

Perhaps the most fascinating thing about the Geochron is that it shows the exact portions of the earth that are in daylight and those that are in darkness at the very instant you are observing the Geochron. The brightly illuminated pattern in the centre of the map delineates those areas that are in daylight. The left edge of this pattern is the line of sunrise as it sweeps across the earth, and the right edge is the line of sunset. Because the length of the day is changing daily as the earth progresses through its seasons, the light pattern on the Geochron changes also, almost imperceptibly from day to day. Thus, with Geochron you can read the time of sunrise and sunset and the relative length of day and nightfall any latitude.

This illuminated pattern also shows the progress of the seasons during the year, from winter through spring, summer, autumn and back to winter again. Such heretofore abstract phenomena as the summer and winter solstices on the dates of the longest and shortest days of the year and

the vernal and autumnal equinoxes when the day and night are of equal length, are clearly and graphically shown by the Geochron light pattern.

Because the Geochron is a graphic analogue, the viewer soon gains an instinctive appreciation of what time it is everywhere. It no longer becomes necessary to read an abstract number to know if it is an appropriate time to call someone in San Francisco California, or Sydney Australia. A glance at the light pattern on the map instantly tells you whether it is daylight at those places or the middle of the night.

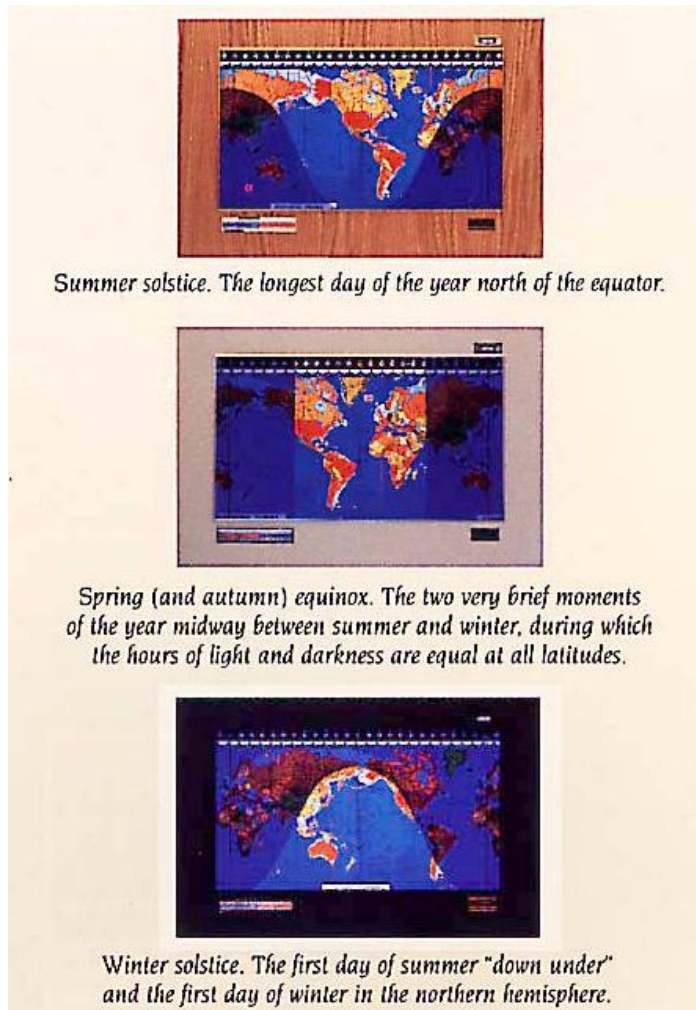
## OTHER USES FOR THE GEOCHRON

The Geochron is provided with two simple basic controls that allow it to be used for far more than just telling time.

One knob at the base of the unit allows to move the map horizontally across the frame. It is used basically to set the correct time on the Geochron scale when it is first plugged in. By moving the map, you can determine the time of sunrise and sunset at any locality on that day and see the relative effect of latitude on these times.

The second knob at the base of the unit allows you to set the date indicator to any day of any month in the year. Since the light pattern mechanism is coupled to the date indicator, this also changes and shows the light condition on earth at that time of the year. This feature has been found valuable by educators, motion picture producers, military men, as well as by the average person who just wants some help in planning his/her vacation. The Geochron also shows the exact zenith position of the sun at any time on any date and graphically

indicates the relationship between Apparent Solar Time and Mean Solar Time as expressed in the Equation of time. This is indicated by a small black dot that follows the zenith position of the sun as it traverses the earth.





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## **GEOCHRON: MODERN SUCCESSOR TO THE WALL CLOCK**

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The Geochron is the new world timepiece for the those in business, government or private affairs whose time telling needs or interests extend the boundaries of their own local time zones. It can truly be called the modern successor to the wall clock in this modern age of high speed international travel, communication and world involvement.

To accommodate the wide variety of market applications, the Geochron is available in four different models: The Standard Geochron, the Original Kilburg Geochron, the Executive Model Geochron and the Boardroom Geochron. Units are manufactured for the different electrical specifications required by countries

around the world i.e. 110/220VAC 50/60Hz. In addition a variety of housing finishes and mounting hardware options are available. So there you have it. Of course, there is plenty more we could tell you about the Geochron Global Time Indicator. But by now we figure you have all the facts needed to make an intelligent purchase decision.

However, should you need more information just contact us, by phone, fax or e-mail. You will find the appropriate numbers as indicated below.

Thanks for reading this article. We hope you now understand why Geochron is, without a doubt, the premier world timepiece for anyone whose personal or professional interests lie beyond the boundaries of local time zones.

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