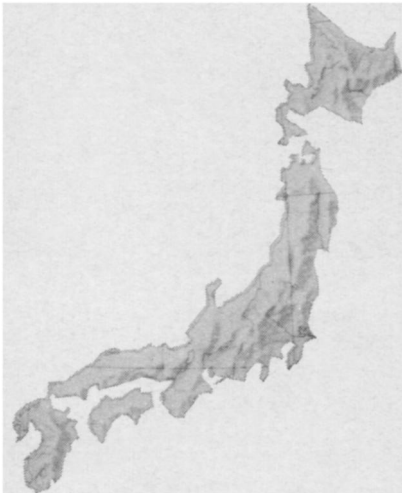


LETTER FROM TOKYO



mementos

Japanese sights and sounds will greet the seventieth century

by Stuart Griffin

Five thousand years from now, if all goes well, people in the year 6970 will open the latest time capsule, planned for the 1970 Japan World Exposition near Osaka. Like its predecessors, this time capsule will inform posterity about life in the twentieth century.

Still on the drawing board, the capsule is the joint project of Mainichi Newspapers and the Matsushita Electric Industrial Company, which have solved complex technological problems to give a full-scale record of mankind's accomplishments to the human race in the seventieth century.

A 23-member Japanese technical committee has unanimously agreed to build this time capsule to the following rigid specifications:

- Spherical shape for more even pressure distribution.
- Hard, stainless steel composition.
- Internal diameter of one meter, with a weight of slightly over two tons and a capacity of 500 liters.

Other features of the capsule are that its shell will measure 70 millimeters at the thickest point and will have two lids, both welded to the capsule's body for a complete seal. The internal lid, 50 centimeters in diameter, will be equipped with two cylindrical ports through which inert gas will be introduced into the capsule's inner chamber to protect the contents.

In addition, the capsule will be solid cast, using the latest technology to eliminate the slightest flaws. This marks the first time that the special stainless steel, called 22AT, will be used for casting.

All in all, Time Capsule EXPO '70 will be more than 10 times the size of the capsule devised for the 1964-65 World's Fair in New York. That capsule had a 43-liter capacity.

Another famous time capsule was buried at the site of the 1938 World's Fair in New York. It was constructed of a copper, aluminum and silver alloy tempered to the hardness of steel. The 1964 capsule was made of stainless steel with a glass inner shell. All three time capsules are scheduled to be opened about the same time. The two World's Fair capsules have the same opening date, 6939; 31 years later the Japanese capsule will be opened according to plans.

Instructions for opening the Japanese capsule and precautions to be taken in removing its contents will be photoetched between the outer and inner lids on plates of SUS27 stainless steel. No

devices are thought necessary to permit ease of reading.

Although the capsule is relatively large, its restricted space will require all printed information to be microphotographed. A new microetching technique involving electronic beams will be employed. Perfected by Matsushita's Central Research Institute, it reportedly can record up to 100,000 pages of ordinary-sized books on 1,000 silicon wafers, 25 millimeters in diameter and 0.5 of a millimeter in thickness, all of which would occupy the space of five cigarette packs.

Each silicon wafer is surface-coated with a photoresistant, high-polymer material especially developed by Japanese scientists. Printed information is transformed into electronic beams which microetch it on the coating. The wafer is doubly protected by a film of boron emulsion.

To reproduce all microetched information, the wafer is put in a reader which enlarges it on a television screen. Several languages are expected to be used.

Music will also be tape recorded, since experiments have shown that such recorded tape will last for over 5,000 years. A specially selected Japanese paper has been selected for the capsule because it has a "semipermanent life." Pigments of carbon and metal have been suggested for use not only in printing books but in reproductions of the world's great art because these pigments do not change their physical properties with time.

A second Japanese committee of 27 distinguished scholars will decide just what material will go in the capsule. The committee has convened twice this year and provisionally has picked 1,600 items in 689 different groups. The list includes: an atomic timepiece, scrolls of paintings illustrating twentieth century life, taped street noises, tape recordings of famous speeches, household utensils and art reproductions.

The Japanese people are being asked for their opinions about the representative cultural achievements of today, regardless of national origin.

The time capsule will be displayed at the Matsushita pavilion from March 15 through September 13, 1970. The site is in the Senri hills, some 335 miles southwest of Tokyo. At the close of the exposition, the theme of which is "Progress and Harmony for Mankind," the capsule will be sealed and buried near the exposition site with a massive marker to indicate its location.