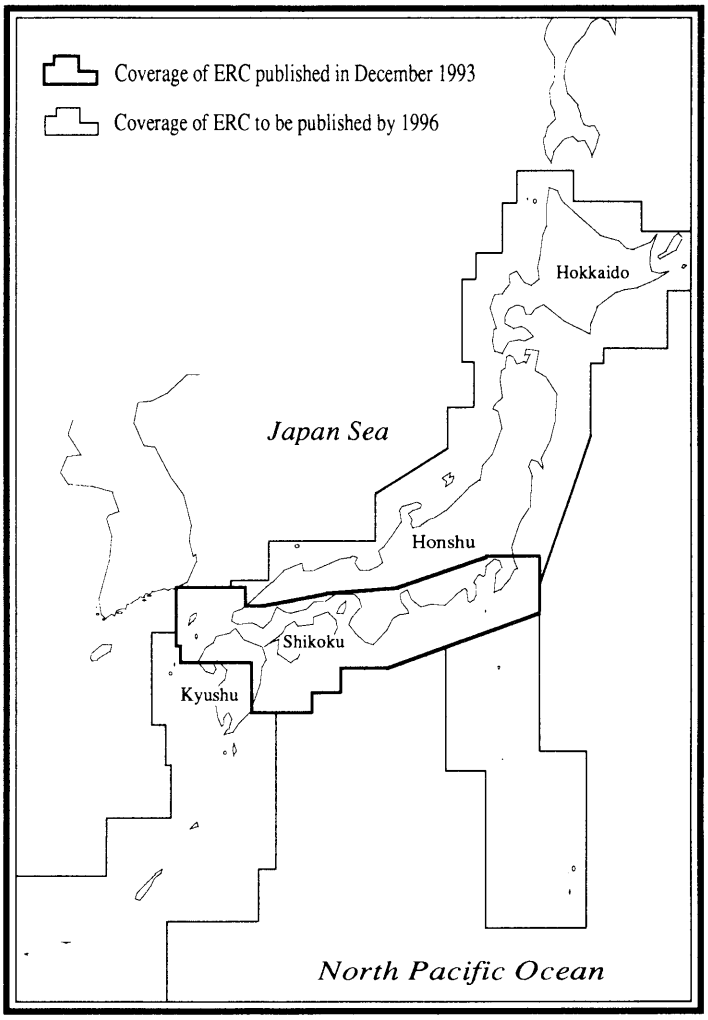
JAPAN HYDROGRAPHIC ASSOCIATION RELEASES ELECTRONIC REFERENCE CHART

The Japan Hydrographic Association (JHA) put on sale a set of its first Electronic Reference Chart (ERC) covering certain maritime traffic congested areas in Japanese waters on 20 December 1993.

Under the technical guidance and supervision of the Hydrographic Department of Japan, JHA has long been engaged in development and preparation of ERC, which is a simplified Electronic Navigational Chart (ENC). This is a non-equivalent chart to be used in combination with hardware equipped on board the ship, but required to be used in navigation for reference purposes only.

ERC is constructed with digitized chart data of coastlines, 10- and 20-meter depth contours, aids to navigation such as lighthouses and light buoys, dangers like drying and sunken rocks, fish havens, sunken wrecks, tide-rips, eddies, etc., as well as various maritime limits and conspicuous landmarks. These are recorded on IC memory cards and displayed on CRT overlayed with Radar images and ship's positions obtained by GPS, Loran C, etc.

One IC card containing 4 files is 40,000 yen in price. One file contains digitized chart information obtained from 3~4 sheets of paper charts. Chart data of one file overlaps the other covering its adjacent area with at least 5-mile width. The accuracy of the digitized chart data is kept to that of the original paper chart used for digitization. The content of the card is to be updated once a year.

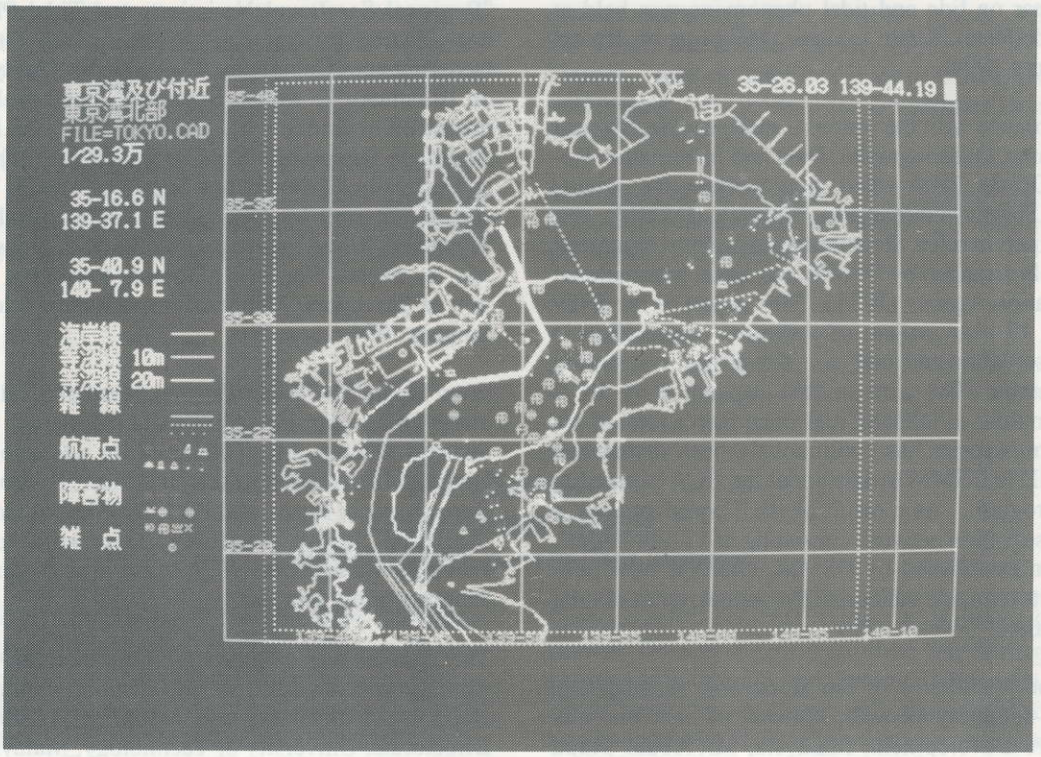


ERC Coverage

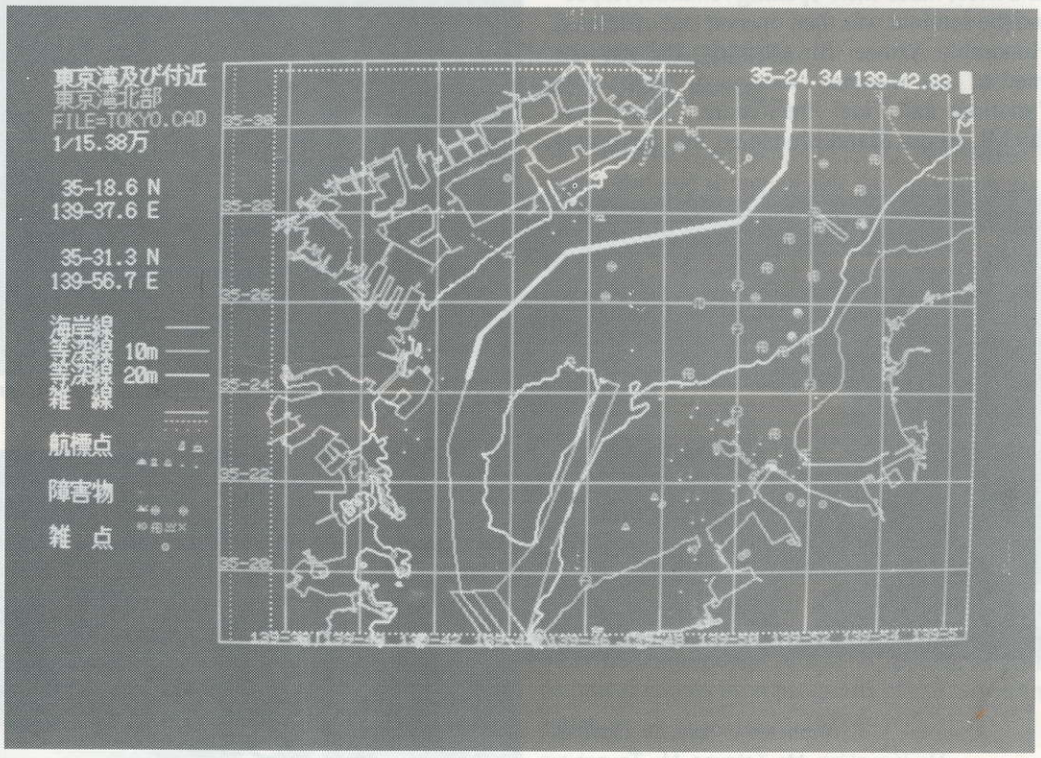
Comparative Table of ENC and ERC

	Electronic Navigational Chart (ENC)	Electronic Reference Chart (ERC)	Digital data for simple/inferior devices
Definition	Fully equivalent to contemporary paper charts	Not equivalent to paper charts but used for high convenience systems	Used only for simple and inferior devices such as video plotters, etc.
CRT displaying items	Items to be displayed on CRT are the same as those given on a paper chart.	Basic chart information such as costlines, depth contours, aids to navigation, and other navigational safety information like various maritime limits, etc.	Coastlines only
Density of data	High density data (several tens of thousand spots data for 1 sheet of paper chart)	Medium density data (about eight thousand spots data for 1 sheet of paper chart)	Low density data (about two thousand spots data for 1 sheet of paper chart)
Updating of data	Always updated	To be updated once a year	Not to be updated
Type of ships	For ocean-going vessels	For those small ships such as pleasure boats, yachts, and other ships in coastal waters	Pleasure boats, small fishing boats, etc.

One of the cards already released, Card No. R-300 for instance, is named "Tokyo Wan (Bay) and its Approaches", containing 4 files of "Northern Portion of Tokyo Wan", "Uraga Suido Passage and Approaches", "Southern Portion of Tokyo Wan to O Sima", and "Daito Saki to Iro Saki", which have been prepared from six different sheets of Japanese paper charts, Nos. 51, 80, 87, 90, 1061, and 1062.



Sample display of ERC (Tokyo Wan (Bay))



Sample display of ERC (an enlarged chart for a portion of the above ERC (Tokyo Wan)