

JR West's ICOCA

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Overview of JR West

West Japan Railway Company (JR West) is one of the six passenger railway companies established on 1 April 1987 at the breakup and privatization of Japanese National Railways (JNR). It has approximately 5000 km of track in the Kinki area—Japan's second largest conurbation, incorporating Shiga, Kyoto, Osaka, Nara, Hyogo, Wakayama—and western Honshu, carrying some 5 million passengers each day on its network.

Overview of JR West IC Fare Card

JR West introduced the ICOCA contactless IC fare card system on 1 November 2003. The ICOCA name comes from **IC** Operating **CA**rd and is a wordplay on the phrase '*iko ka,*' meaning 'Shall we go?' in the Japanese Kansai dialect. JR West received technical cooperation from JR East in development of ICOCA, so it is similar to JR East's Suica card and uses the same FeliCa technology. At the service start on 1 November 2003, ICOCA was introduced at 253 stations in Kinki. The service area has been expanded gradually to include 290 stations in Kinki as well as 137 in the Okayama/Hiroshima region, for a total of 427 stations. It has about 2900 automatic ticket gates plus about 1200 stored-fare top-up machines. At the end of May 2008 about 3.73 million

cards have been issued, approximately 1.83 million of which are ICOCA commuter passes and 1.90 million of which are stored-fare-only cards.

Overview of Use on Railways

Card types and services

As mentioned above, there are stored-fare-only ICOCA cards without commuter pass functions and ICOCA commuter passes that include commuter pass functions. Stored-fare-only ICOCA cards are sold for ¥2000 each at JR West stations where ICOCA has been introduced. This fee includes a ¥500 card deposit and ¥1500 for stored-fare use. These cards are unrecorded, so anyone can purchase one for immediate use. The fare is deducted from the stored-fare balance when touching the card to station automatic ticket gates on exit. When the stored fare runs low, more can be added at top-up machines, allowing the same card to be used over. Refunds are also available and the ¥500 deposit plus any remaining balance minus a ¥210 handling fee is returned.

The ICOCA commuter pass is also sold at JR West stations where ICOCA has been introduced. At purchase, the section where the pass will be used, period of use, passenger's name, and other information are recorded as provided by the passenger. This information is printed on the card surface but can be erased and reprinted repeatedly with new information



ICOCA



ICOCA Commuter pass

at renewal. A stored fare can also be held on the card for automatic deduction of the fare when the commuter pass is used outside the commuter section. The cardholder's name is printed on the ICOCA commuter pass, so it can be used only by that person. A ¥500 deposit is also required but is refunded if the pass is returned.

Because the ICOCA commuter pass is registered it can be disabled for use at automatic ticket gates allowing a new card to be issued on the day after it is lost or stolen. The reissued card has the same pass information as the lost card and the stored fare balance when procedures to stop use of the lost card are completed. A total of ¥1000—new ¥500 deposit plus ¥500 reissuing fee—is required to reissue a card but the ¥500 deposit on the lost card is refunded if it is found and turned in later.

Furthermore, an ICOCA commuter pass can be changed to a stored-fare-only ICOCA card when the commuter pass is no longer used. At that time, information such as the cardholder's name and commuter section printed on the card face is erased.

ICOCA cards and ICOCA commuter passes are available for both adults and children. Children's ICOCA cards have the child's name and last date that child fares are applicable printed on the card face. Cards for children are invalidated on the last day of the fiscal year in which the child becomes 12. For example, if a child turns 12 on 18 June 2008, his/her card will be invalidated on 31 March 2009.

IC Fare card linked with credit cards

JR West has been issuing SMART ICOCA cards linked with credit-card functions since 1 February 2006. The SMART ICOCA card also incorporates stored-fare-only and commuter pass functions so it can be used in the same way as ICOCA and the ICOCA commuter pass. When the stored fare runs low, it can be topped-up at a recharging machine in a station without using cash. Instead, the stored fare is topped-up

simply by pressing the button for the amount to add, which is then withdrawn from the passenger's credit card. As a result, SMART ICOCA allows cashless travel on rail. In addition, points are earned based on the amount used if a J-WEST Card credit card is used for payment. These points can be used to add stored fares to the card, which can be used for more rail travel.

Usage area

The ICOCA system introduced at 253 stations in Kinki on 1 November 2003 has expanded to 427 stations in the Kinki and Okayama/Hiroshima regions by May 2008. Additionally, interoperability with other companies' IC fare cards allows ICOCA to be used in an even wider area. For reciprocity and convenience, the other companies' IC fare cards can be used in the ICOCA service area too.

Interoperability with JR East's Suica started from 1 August 2004, with PiTaPa of operators such as private railways in Kinki from 21 January 2006, and with JR Central's TOICA from 29 March 2008. As a result, ICOCA can now be used on lines of companies in the JR group in the Greater Tokyo area, Sendai, Niigata, and Nagoya/Shizuoka, as well as on private railways and other transport modes in Kinki.

A tie-up with transport operators issuing the PASPY card in Hiroshima allows ICOCA to be used on buses, trams, and other transport modes accepting PASPY. (However, PASPY cannot be used in the ICOCA area—see pp 28 for more details.)

This interoperability has been achieved using the stored fare function of each IC fare card system (where stored fare is saved on the card and deducted as used). Data on use is exchanged online between railway operators to settle accounts between companies.

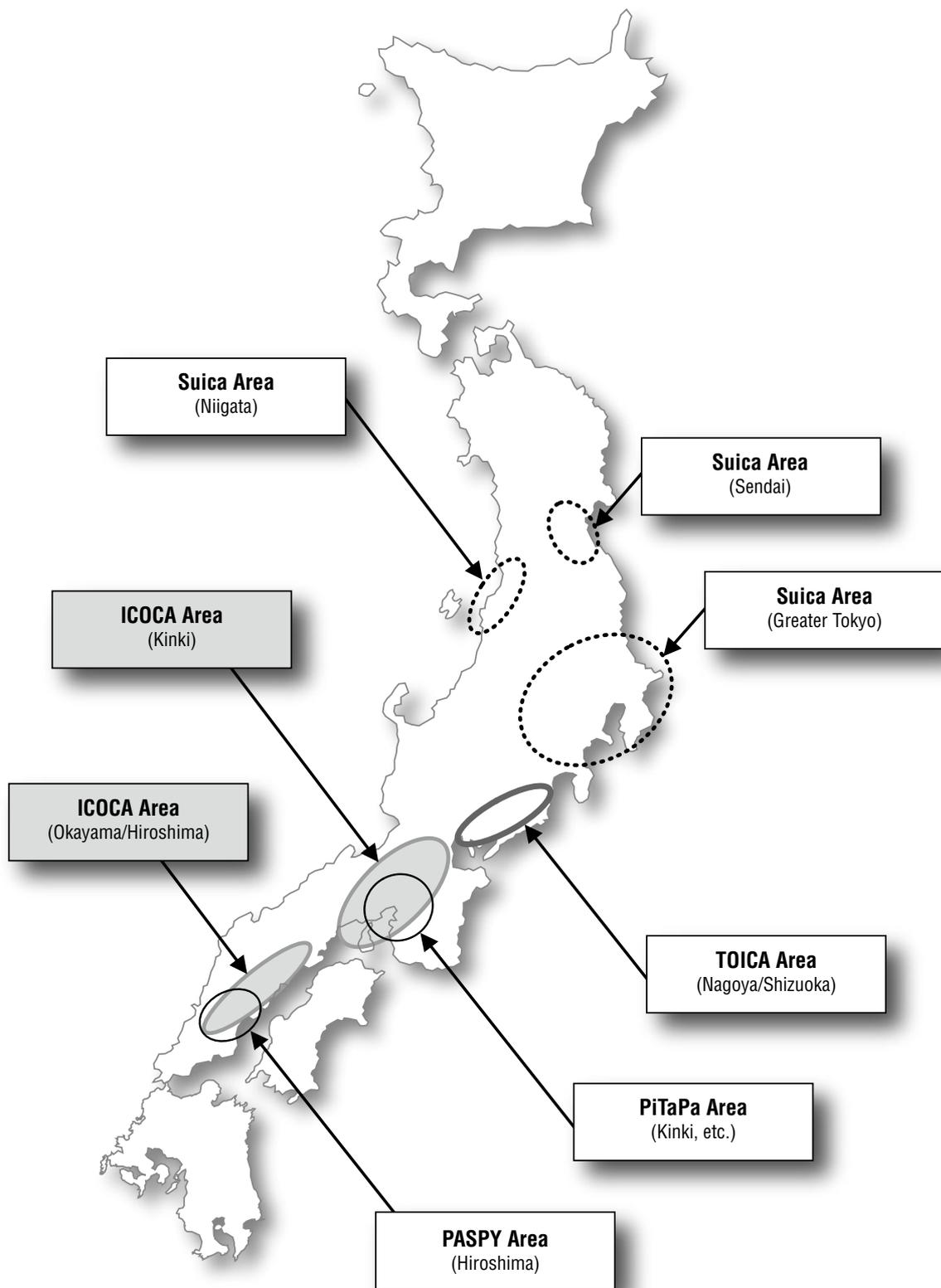


Children's ICOCA



SMART ICOCA

Figure 1 ICOCA Service Areas (Transport)



EX-IC Service with Shinkansen

With the start of ICOCA interoperability with TOICA on 29 March 2008 (same day as start of TOICA–Suica interoperability), ICOCA, Suica, and TOICA can now be used in Greater Tokyo, Nagoya/Shizuoka, and Kinki. In conjunction, JR Central started an IC fare card service for its Tokaido Shinkansen called EX-IC Service, which is limited to members of JR Central's and JR West's Express Reservation service using a separate EX-IC Card in addition to ICOCA, Suica, or TOICA. The structure of the system is very different from ICOCA and other conventional IC fare cards.

EX-IC Service allows passengers who have made reservations and paid for shinkansen travel via the Internet to touch their EX-IC Card on the ticket gate to write reservation information to the card and board the shinkansen. Passengers transferring from conventional lines to the shinkansen use their ICOCA or other IC card for conventional line travel and EX-IC Card for the shinkansen, allowing travel from their departure to destination using just IC cards. Transfer between the conventional line and shinkansen is very easy, requiring only touching both the ICOCA or other conventional line IC card and EX-IC Card simultaneously at the shinkansen transfer gate (see pp 18 to 23 for more details).

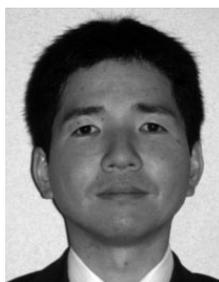
EX-IC Service is currently limited to the Tokaido Shinkansen section operated by JR Central. JR West also issues EX-IC Cards for Express Reservation members because they often use just the Tokaido Shinkansen section. However, EX-IC Service is scheduled for expansion to JR West's San'yo Shinkansen during summer 2009.

Non-transport Services

The ICOCA e-money service allowing payment for purchase of products at shops using the stored-fare balance started on 1 October 2005. The number of shops supporting the service has expanded centred on station kiosks and restaurants in Kinki and Okayama/Hiroshima. Service was also expanded from August 2007 to department stores near stations. Furthermore, ICOCA e-money can be used at JR East Suica-affiliated merchants from 18 March 2008, giving a total of about 43,410 shops across Japan at the end of May 2008. Further expansion is planned.

Another non-transport ICOCA service introduced in September 2007 is the ICOCA Building Entrance and Exit Control System allowing ICOCA cards to support controlled entry and exit to and from buildings and other facilities. Interoperability with JR East's Suica building entry and exit control was finalized in October 2007.

JR West is also studying other services making use of IC card functions. ■



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