

## Straight Leg Course Control Unit

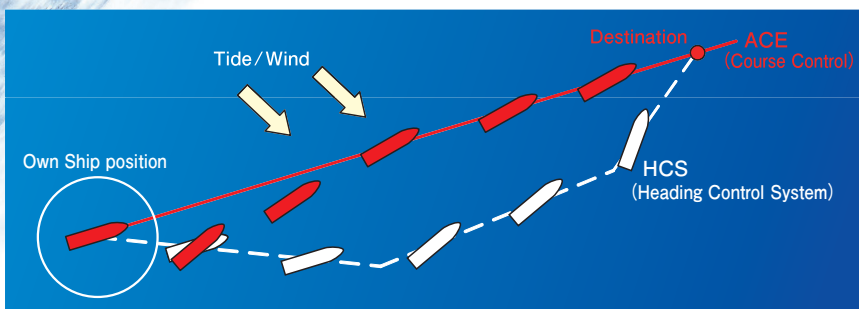


The latest Automatic Steering Function (ACE: Advanced Control for Ecology) is now available for integration to existing PR-6000 Autopilots!

\* Optional installation for PR-9000 series Autopilot

### Straight Leg Course Control (ACE) is

a new Course Control function (ACE: Advanced Control for Ecology) that automatically creates a route on the heading between the ship's current position and destination, calculates outside disturbances (tides), and implements the best rudder control making it possible for the vessel to sail the most efficient route.



Compared to normal automatic steering (Heading Control),

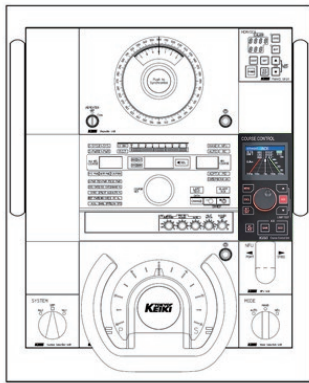
- Less route deviation
- Shorter sailing distance
- Reduction in the use of Rudder
- Minimized burden on the Helmsman

contribute to a safe and more efficient voyage.

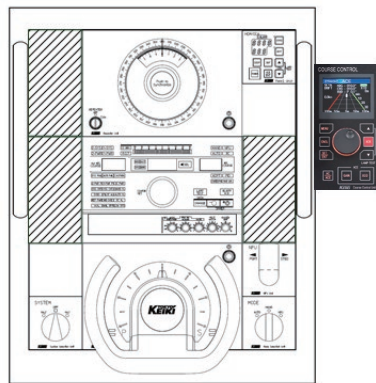
### Characteristics of Straight Leg Course Control function (ACE)

- Reduction in Fuel consumption (about 1~2% reduction)
- Route deviation is reduced allowing the vessel to sail the shortest distance to the destination without influence from tides etc, and the safety of the voyage is improved.
- Reduction in course changes decreases the amount of Rudder used lessening the burden on the Helmsman.
- Operates the same as normal Heading Control, it is easy to use and worry free. Easy changeover between Heading Control and ACE can be done by the push of a single button.
- Installation is easy due to the location and direct connection to GPS and Speedlog. (For details please contact TOKYO KEIKI Sales and or Service Department.)

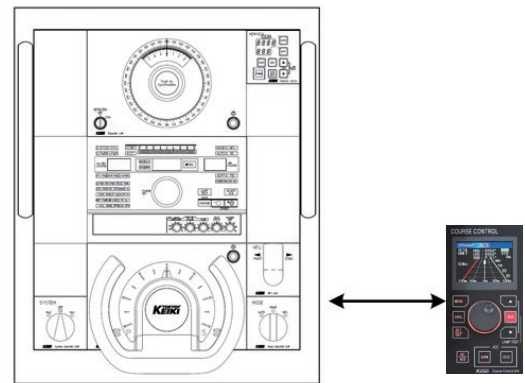
## Unit Installation examples



Built into Autopilot



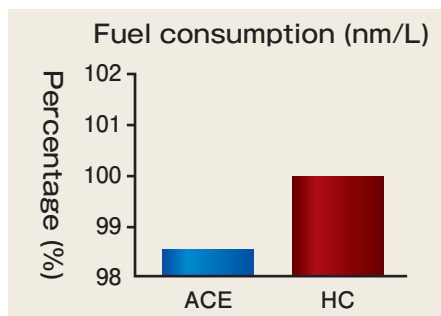
Mounted to the side of Autopilot



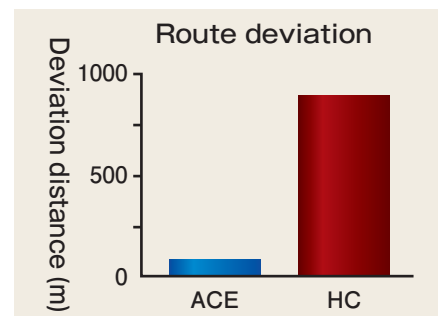
Mounted separate of Autopilot

## Actual test result (example)

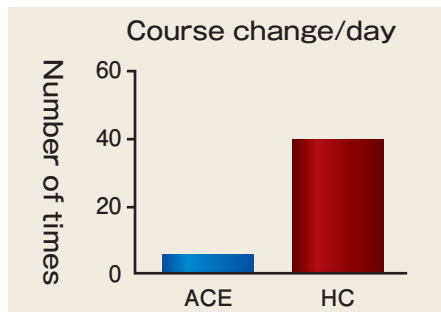
Test area: Route between Japan and Australia  
 Test conditions: Beauford Scale 1~5/Tide:0.2~3kn  
 Test vessel: Bulk Carrier (length 190m/weight 31,482 GRT)



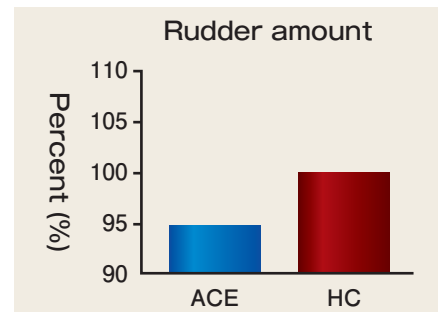
1.5% reduction in fuel consumption  
 (1.5% energy saving)



Route deviation distance is reduced  
 contributing to safe navigation



Vessel does not deviate from the course,  
 less course changes



Burden on the Helmsman is reduced, decrease  
 in vessel speed due to rudder changes is suppressed.

ACE: Straight Leg Course Control HC: Heading Control

Design and specifications are subject to change without prior notice,  
 and without any obligation on the part of the manufacturer.



**CAUTION**

Before operating this equipment,  
 you should first thoroughly read the operator's manual.

# TOKYO KEIKI

TOKYO KEIKI INC.

[www.tokyokeiki.jp/e/products/marine/](http://www.tokyokeiki.jp/e/products/marine/)

Marine Systems Company

Head Office	2-16-46, Minami-Kamata, Ohta-ku, Tokyo 144-8551 JAPAN	Tel. +81-3-3737-8611	Fax. +81-3-3737-8663
TOKYO KEIKI (SHANGHAI) CO., LTD.	C-1407, Orient International Plaza, No.85 Lou Shan Guan Rd., Shanghai 200336. CHINA	Tel. +86-21-3223-1252	Fax. +86-21-6278-7667
TOKYO KEIKI U.S.A., INC.	3452 E. Foothill Blvd. Suite 420 Pasadena, CA 91107 U.S.A.	Tel. +1-626-403-1500	Fax. +1-626-403-7400
Singapore Branch	No.2 Jalan Rajah #07-26/28, Golden Wall Flatted Factory, Singapore 329134	Tel. +65-6254-1877	Fax. +65-6254-1745