

# VTS SIMULATOR SYSTEM

**JRC**



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**Conformity with IALA Recommendation V-103**

**Can train up to a total of 20 trainees at the same time for ASEAN 10 countries**

**Allows self study by using Digital Library and E-learning**

**Country specific operations training for ports, straits, or rivers**

**Training can be done using only one instructor**

**Suitable for actual operation**

**Recorded AIS data for training scenario**

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# General

As recent economic growth in the ASEAN region is becoming increasingly more noteworthy and development of infrastructure such as ports which function as strategic central bases for goods distribution in the region are rapidly progressing, marine trade in the region seems to be getting more active than before. However, some ASEAN member states are at present still experiencing high risks of marine accident as the safety measures for ship navigation have not yet been established to the appropriate level.

The International Convention for the Safety of Life at Sea (SOLAS) defines VTS as one of the marine aids to navigation services contributing to the safety of marine traffic. As regulated by IMO, VTS operators should be in possession of internationally recognized certification. Certain states have already established such a training system for certification, but as for ASEAN as a whole, such a system has not been established to an appropriate level as far as training scale is concerned. In view of this, and in order to improve this situation, this project to establish the ASEAN Regional Training Center was proposed and adopted. This ASEAN Regional Training Center will be utilized for implementation of the training of VTS personnel for VTS training instructors in accordance with the international standards, which will consequently contribute to the safe navigation of ships in waters of the ASEAN region.

## Instructor training and Self Study

Lecture by Instructor and Self Study is the First Stage of this training system.

### VTS Lecture Room

This stage takes place in VTS Lecture Room. In this room, 20 trainees can learn about nautical knowledge, traffic management, language, and do some assessment to measure their understanding. Laptop computers are assigned to trainees for this stage.



**Rules Master**  
Guide to the international Regulations and IALA buoyage



**Digital Library**  
Providing the E-Document of Regulations and others



**3D Models**  
3D Models of buoy type, Vessel type, and Light & Shape



**E-Learning**  
Assessment tool to test Trainees understanding



**ENC Viewer**  
Learn how to read ENC and identify subject in nautical chart



**Video on Demand**  
Maritime and safety navigation procedure Videos



**Language**  
Speech recognition/voice input software (English comprehension, pronunciation, and listening.)

# Simulator training

Simulator Training is the Second Stage of this training system. The trainee will practice what they have learned in the first stage. They will be divided into 3 groups: 8 trainees will act as VTS Operator, 8 trainees will act as ship's crew, and the other 4 trainees will monitor the simulation as instructor candidate.

## VTS Instructor



### INSTRUCTOR'S CONSOLE

JRC VTS Instructor room concept allows one instructor to make a scenario using Scenario Generator Console.

Instructor can start to play the scenario by using Instructor console as the training begins. Instructor can record and playback trainee's activity to review and grade their training. Instructor can also watch their activity in real-time through Web Camera and broadcast information with audio system. Instructor can contact any particular trainee using IP phone.

## TRAINEE'S CONSOLE

There are 4 Laptop Monitors in front of the instructor console. Up to 4 trainees can learn and monitor training activity by listening to the conversation and watching their activity using the laptop monitors. There are two large displays in front. Instructor can change the view by using HDMI switch. One displays VTS Operator chart view. The other one displays Instructor console view. Trainees can learn to be an instructor by observing instructor activity through large display.



**Activity Monitor**

In the Instructor room, there is a large monitor to monitor each VTS operator console



**Web Camera**

The instructor console is equipped with web camera viewer to monitor the trainees activity and readiness to start the training



**Audio System**

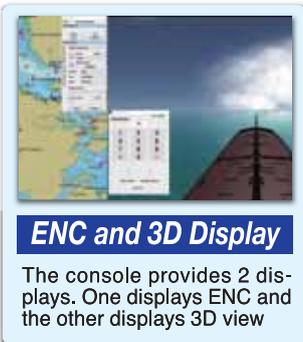
The Instructor is able to announce the information directly to Trainees by using the audio system on the desk

# VTS Operator/VTS Ship

System configuration of VTS Operator & Ship rooms consists of four sets of Trainee consoles including IP Phones, one Web Camera, and one set Speaker System.



In the Trainee console, the trainee will act as the VTS Operator pairing with the ship side, simulating actual operation with the scenario run by the instructor. The console provides 2 displays. One LCD displays ENC chart in which the trainee can monitor the target (ship) and acquire the target's information. Another LCD displays a 3D view from any location (i.e. console in the VTS Operator room) and from the bridge (i.e. console in the Ship room). Trainee in the VTS room can set the 3D view near the target to see the target's visual shape.



• Specifications may be subject to change without notice.

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