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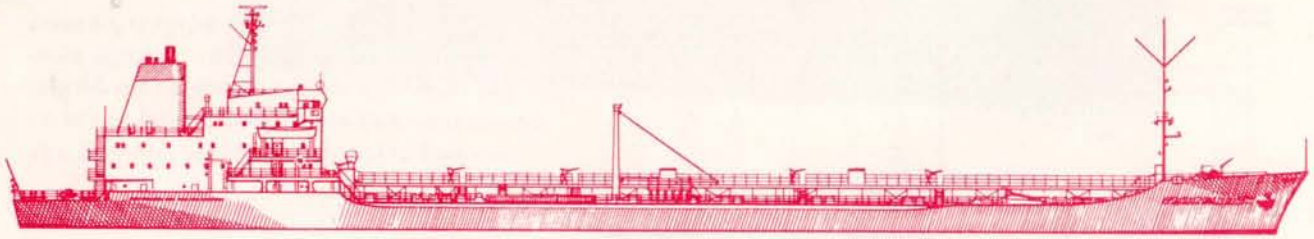


MARITIME APPLICATION/BRIDGE SYSTEM /7

Please destroy the blue edition

Product Description

The System/7 Maritime Application performs up to five programmed functions simultaneously making the navigation of large ships safer and more efficient. The following program functions are available:

Collision assessment
Position fixing
Adaptive auto pilot
Route planning
Route tracking

The hardware involved to perform the Maritime Applications programs consists of the following modules:

5010E Processor Module
5022 Disk Storage Module
5090 N01 Radar Navigation
Interface Module (RNIM)

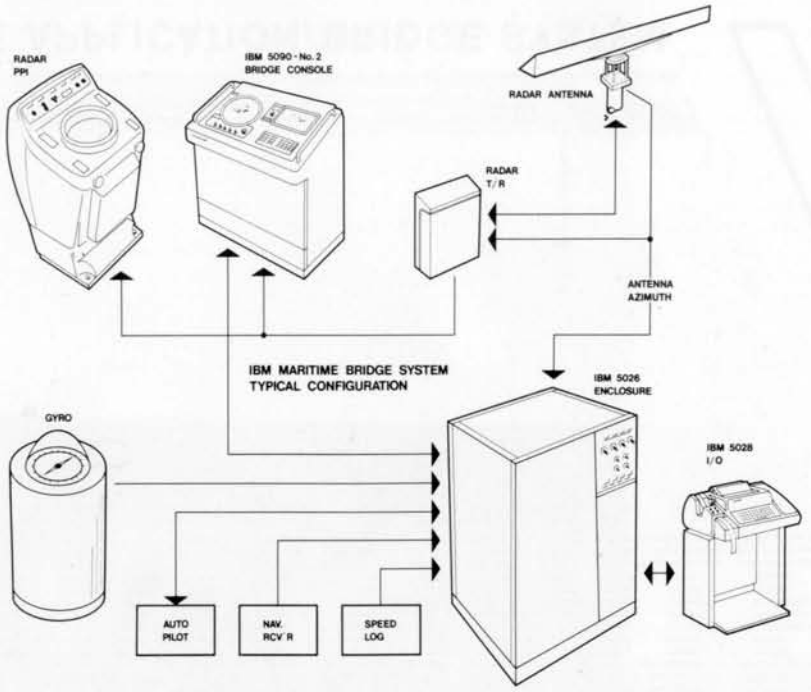
The 5026 C03 Enclosure has been modified to enhance the ability of the enclosure to withstand heavy vibrations and extended tilting. The 5090 N01 RNIM provides all the necessary interfaces with external OEM equipment possible to attach to (i.e., radar, gyro, speed log, omega navigation receiver, satellite navigation receiver, decca navigation equipment and auto pilot) as well as IBM 5090 N02, the Bridge Console.

The following I/O units are included in the application:

5028	Operator Station
5090 N02	Bridge Console

The 5090 N02 Bridge Console consists of input and output function units and control function unit. The box will be mounted on the bridge of the ship close to other navigation instrumentation.

The input functions are performed by means of keys and switches, the output will be presented on the data display screen, and on the PPI (i.e., a radar echo image display - Planned Position Indicator). The control functions are included to control the remotely



To address also the Serviceability aspect with this highly mobile system the following maintenance approach and maintenance features have been developed:

At sea the customer crew can use the especially designed maintenance package. This package consists of fault locating diagnostic programs contained on a cassette tape and a pictorial maintenance manual.

By means of these aids the crew can diagnose and isolate malfunctions within the S/7 modules as well as the Bridge Console. A spares locker RPQ has been made available to the customer in order to provide spare parts onboard the ship and thus make logic card replacements possible.

In the service ports the IBM CEs will use:

- CE Diagnostic Programs
- TM Manuals
- Maintenance ALDs
- Diagnostic Wrap Card
- S/7 CE tools and test equipment

The overall power of the maintenance packages is enhanced by the logging feature,

Technology

The logic of the 5090 N01 and the 5090 N02 is implemented in both new and "old" technologies. Thus MST 1 SLT and TTL (Transistor Transistor Logic) together with FET (Field Effect Transistor) buffers will be found within the hardware. By use of this mix an optimized dense functional packaging was achieved.

The necessary power supplies have been designed by use of TSR (Transistor Switching Rectifier) units.

RPQ's

The following RPQ's are part of this Maritime Application:

D08226	Ruggedized 5026 C03
D08230	Ruggedized 5010
D08231	Ruggedized Sensor Module
D08233	Ruggedized Disk Storage 5022
D08234	Ruggedized Operator Station 5028

Interface Module (RNIM)

The 5026 C03 Enclosure has been modified to enhance the ability of the enclosure to withstand heavy vibrations and extended tilting. The 5090 N01 RNIM provides all the necessary interfaces with external OEM equipment possible to attach to (i.e., radar, gyro, speed log, omega navigation receiver, satellite navigation receiver, decca navigation equipment and auto pilot) as well as IBM 5090 N02, the Bridge Console.

The following I/O units are included in the application:

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5090 N02	Bridge Console

The 5090 N02 Bridge Console consists of input and output function units and control function unit. The box will be mounted on the bridge of the ship close to other navigation instrumentation.

The input functions are performed by means of keys and switches, the output will be presented on the data display screen, and on the PPI (i.e., a radar echo image display - Planned Position Indicator). The control functions are included to control the remotely installed S/7 and to control the operation of Bridge Console itself.

Maintenance

Due to the nature of this application the Reliability and Availability have been specifically addressed through extensive use of error checking, error recovery routines and on-line integrity tests.

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In the service ports the IBM CEs will use:

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- Maintenance ALDs
- Diagnostic Wrap Card
- S/7 CE tools and test equipment

The overall power of the maintenance packages is enhanced by the logging feature, which is aimed especially towards intermittent failures.

Programming

The application program is programming RPQ (PRPQ) with service class b modified. On request, DP customer engineering, if available and for a charge, will assist the customer in (1) preparing APAR's for Submission to an IBM central programming service location and (2) if the licensed program is inoperable, applying a PTF which has been supplied directly to the customer from the central location. The CE should do problem determination but no attempt should be made to diagnose a program problem. DPCE should not patch or in any way alter the PRPQ.

Technology

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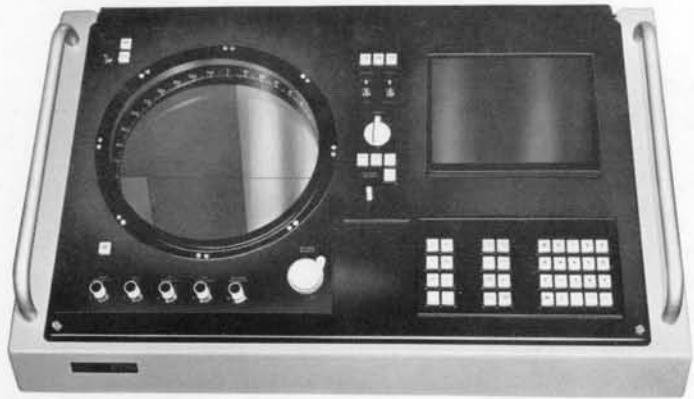
D08231	Ruggedized Sensor Module
D08233	Ruggedized Disk Storage 5022
D08234	Ruggedized Operator Station 5028
D08235	Remote Power & Restart
D08380	RNIM Module Basic
D08381	Radar Intf Adapter 1
D08382	Gyro Compass Adapt 1
D08383	RNIM Expansion
D08385	Omega Nav. Rec Adapter
D08386	Satellite Nav. Rcvr Adapter
D08388	DECCA Navigator Adapter
D08384	Speed Log Adapter
D08387	Steering Interface Adapter
D08379	Bridge Console
D08236	Maritime Spares Locker
P82010	MASBridge System 5799 AJQ

Career Path

This application will be serviced by Product Support Trained DS CE's.



IBM 5090

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