

DSC

Digital Selective Calling System

The screenshot displays the Jotron DSC Client interface, which is used for monitoring and managing Digital Selective Calling (DSC) messages. The main window is divided into several sections:

- Connections:** Shows the status of various radio channels (Site A and Site B) and their respective frequencies (172.16.6.229 and 172.16.6.241).
- Received messages:** A table listing incoming messages with columns for Time, #, Site, RSSI, Type, Destination, Source, and Details.
- Messages Report:** A detailed view of a specific message, including its time, site, type, and source information.

Time	#	Site	RSSI	Type	Destination	Source	Details
2015-12-10 08:13:57	2	Site B	34	Urgency and safety call	All ships	Viking (0023762390)	F3E/G3E simplex (1000), Ch 16
2015-12-10 08:12:50	2	Site B	35	Urgency and safety call	Viking (0023762390)	SelfMmsi (0023762390)	Position request (1211)
2015-12-10 08:12:00	2	Site B	34	Routine individual call acknowledgement	Viking (0023762390)	SelfMmsi (0023762390)	F3E/G3E simplex (1000), Ch 67
2015-12-10 08:11:48	2	Site B	34	Routine individual call	ColorGreen (0023762490)	SelfMmsi (0023762390)	F3E/G3E simplex (1000), Ch 67
2015-12-10 08:04:52	2	Site A	29	Urgency and safety call	Viking (0023762390)	SelfMmsi (0023762390)	Position request (1211)
2015-12-10 08:04:09	2	Site A	29	Urgency and safety call	Viking (0023762390)	SelfMmsi (0023762390)	Test (111)
2015-12-10 08:00:04	1	Site B	47	Urgency and safety call	ColorGreen (0023762490)	SelfMmsi (0023762390)	Test (111)

Time	#	Site	RSSI	Type	Destination	Source	Details	Status
2015-12-10 08:13:57	2	Site B	34	Urgency and safety call	All ships	Viking (0023762390)	F3E/G3E simplex (1000), Ch 16	Received
2015-12-10 08:12:50	2	Site B	35	Urgency and safety call	Viking (0023762390)	SelfMmsi (0023762390)	Position request (1211)	Received

Time	Count	Site	Type	Site (Destination)	Source	Details	Mode	Signal strength
2015-12-10 08:13:57	2	Site B	Urgency and safety call	All ships	Viking (0023762390)	F3E/G3E simplex (1000), Ch 16	Received	34
2015-12-10 08:12:50	2	Site B	Urgency and safety call	Viking (0023762390)	SelfMmsi (0023762390)	Position request (1211)	Received	35
2015-12-10 08:12:00	2	Site B	Routine individual call acknowledgement	Viking (0023762390)	SelfMmsi (0023762390)	F3E/G3E simplex (1000), Ch 67	Received	34
2015-12-10 08:11:48	2	Site B	Routine individual call	ColorGreen (0023762490)	SelfMmsi (0023762390)	F3E/G3E simplex (1000), Ch 67	Received	34
2015-12-10 08:11:48	2	Site B	Routine individual call	ColorGreen (0023762490)	SelfMmsi (0023762390)	F3E/G3E simplex (1000), Ch 67	Received	34
2015-12-10 08:04:52	2	Site A	Urgency and safety call	Viking (0023762390)	SelfMmsi (0023762390)	Position request (1211)	Received	29
2015-12-10 08:04:09	2	Site A	Urgency and safety call	Viking (0023762390)	SelfMmsi (0023762390)	Test (111)	Received	29
2015-12-10 08:04:09	2	Site A	Urgency and safety call	Viking (0023762390)	SelfMmsi (0023762390)	Test (111)	Received	29
2015-12-10 08:00:04	1	Site B	Urgency and safety call	ColorGreen (0023762490)	SelfMmsi (0023762390)	Test (111)	Received	47
2015-12-10 08:00:04	1	Site B	Urgency and safety call	ColorGreen (0023762490)	SelfMmsi (0023762390)	Test (111)	Received	47

DSC

Jotron Digital Selective Calling System (DSC) is an advanced shore station system, providing features and networking capabilities to meet the complex challenges of today's maritime environment

The DSC system consists of client and server software applications that runs on the Windows™ Operating System and Jotron 7000 series VHF coastal radios and MF/HF radios from alternative manufacturers.

The Jotron VHF radios have a built-in digital DSC modem that guarantees reliable system operation and simplicity. The DSC system uses client/server software applications to receive and send DSC messages, and acknowledge or relay distress alarms as defined by ITU-M493.

Runs on multiple Microsoft™ Windows versions: Windows 10, 11, Windows Server 2016, 2019, 2022, 2025.

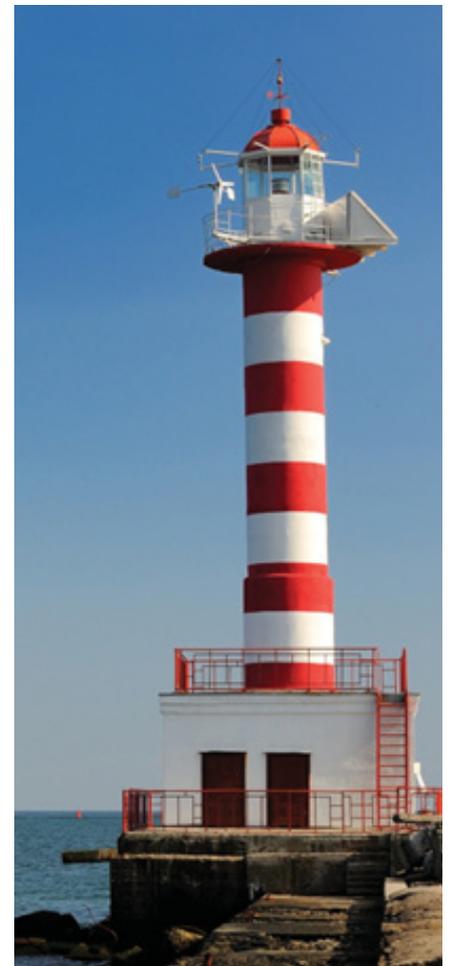
The system meets the requirements of Coastal Port and VTS Stations and cannot be used onboard ships and vessels without other equipment ensuring that the GMDSS requirements for Ship-Borne radio installations are met.

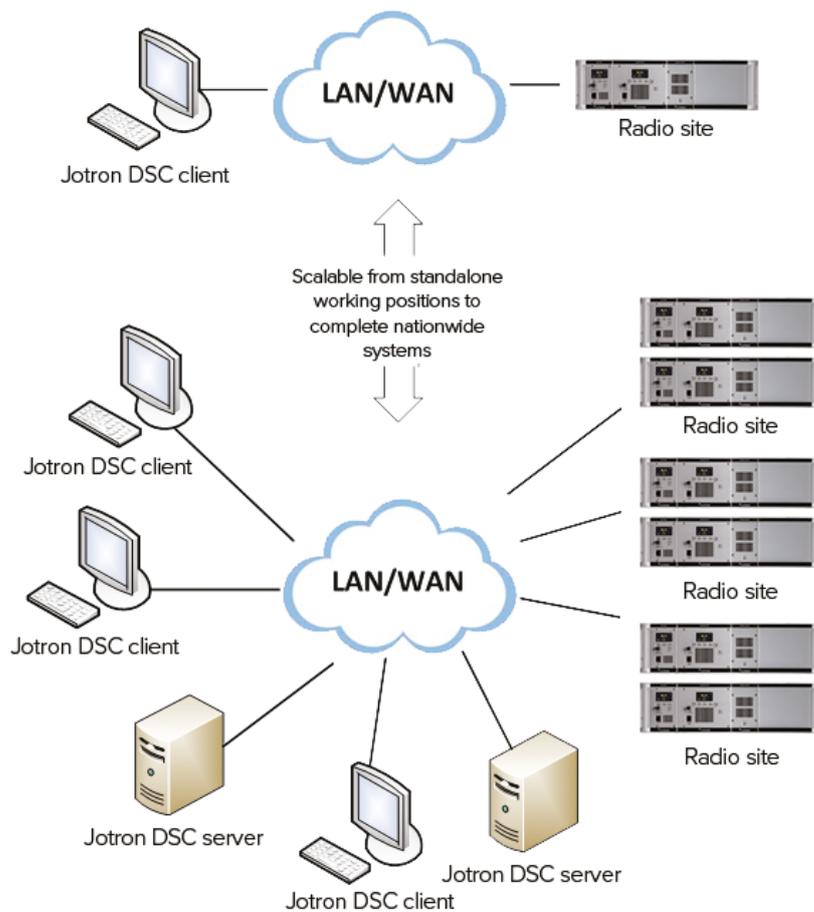
Features

- Professional IMO and ITU compliant solution
- High reliability and simple system maintenance thanks to digital DSC modem built into Jotron radios
- Advanced message handling and archiving
- Interface to Jotron RRC-7700 system for VHF message handling
- Fully IP based system requires minimal network bandwidth. DSC messages are digitally processed at the Jotron radios, converted to IP and are sent to our DSC server.
- Possibility to share a single transmitter radio between DSC system and voice communication system. Transmitter will automatically switch to VHF channel-70 for sending a DSC message
- MF/HF capable using Jotron gateways towards analogue radios
- Configurable DSC message templates
- Scalable server/client architecture. Suitable for standalone working positions and expandable to large installations with multiple working positions and radio sites
- API towards VTMS systems for integration to customer's systems
- Reliable communication within the system using industry-standard TCP/IP network
- DSC messages are archived in an SQL database. Archiving period is configurable and limited only by available storage capacity on the computer. Archived messages can be searched, printed or exported to Microsoft™ Excel
- System status monitoring and fault indication at working position

Flexible Architecture

The architecture is flexible and scalable. Multiple clients can connect to a server to operate the same radio sites, a client can also connect to multiple servers at the same time.





Specifications

JOTRON DSC SYSTEM PARTS

Jotron DSC client (software component)

Jotron DSC server (software component)

TA-7650C, DSC enabled coastal transmitter unit

RA-7203C, DSC enabled coastal receiver unit

RGW-7700, DSC enabled gateway for MF/HF DSC

COMPLIANT TO THE FOLLOWING DSC STANDARDS

ITU-R M.493-16

ITU-R M.1080

ITU-R M.821-1



Example operation

The screenshot displays the Jotron DSC Client interface. The main window shows a list of received messages with columns for Time, #, Site, RSSI, Type, Destination, Source, and Details. A 'Messages Report' window is overlaid, providing a summary of 11 messages with columns for Time, Count, Site, Type, Destination, Source, Details, Status, and Signal strength.

Time	#	Site	RSSI	Type	Destination	Source	Details	Status
2015-12-10 08:13:57	2	Site B	34	Urgency and safety call	All ships	Viking (0025762390)	F3E/G3E simplex (100). Ch 16	Received
2015-12-10 08:12:50	2	Site B	35	Urgency and safety call	Viking (0025762390)	SelfMmsi (0025762290)	Position request (121).	Received
2015-12-10 08:12:00	2	Site B	34	Routine individual call acknowledgement	SelfMmsi (0025762290)	SelfMmsi (0025762290)	F3E/G3E simplex (100). Ch 67	Received
2015-12-10 08:11:48	1	Site B	0	Routine individual call	ColorSpeed (0025762490)	SelfMmsi (0025762290)	F3E/G3E simplex (100). Ch 67	Sent
2015-12-10 08:04:52	2	Site A	29	Urgency and safety call	Viking (0025762390)	SelfMmsi (0025762290)	Position request (121).	Received

Time	Count	Site	Type	Destination	Source	Details	Status	Signal strength
2015.12.10 08:13:57	2	Site B	Urgency and safety call	All ships	Viking (0025762390)	F3E/G3E simplex (100). Ch 16	Received	34
2015.12.10 08:12:50	2	Site B	Urgency and safety call	Viking (0025762390)	SelfMmsi (0025762290)	Position request (121).	Received	35
2015.12.10 08:12:00	2	Site B	Routine individual call acknowledgement	SelfMmsi (0025762290)	SelfMmsi (0025762290)	F3E/G3E simplex (100). Ch 67	Received	34
2015.12.10 08:11:48	1	Site B	Routine individual call	ColorSpeed (0025762490)	SelfMmsi (0025762290)	F3E/G3E simplex (100). Ch 67	Sent	0
2015.12.10 08:04:52	2	Site B	Routine individual call	ColorSpeed (0025762490)	SelfMmsi (0025762290)	F3E/G3E simplex (100). Ch 67	Received	34
2015.12.10 08:04:52	1	Site B	Urgency and safety call	Viking (0025762390)	SelfMmsi (0025762290)	Position request (121).	Sent	0
2015.12.10 08:04:52	2	Site A	Urgency and safety call	Viking (0025762390)	SelfMmsi (0025762290)	Position request (121).	Received	29
2015.12.10 08:04:09	1	Site B	Urgency and safety call	Viking (0025762390)	SelfMmsi (0025762290)	Position request (121).	Sent	0
2015.12.10 08:04:09	2	Site A	Urgency and safety call	Viking (0025762390)	SelfMmsi (0025762290)	Position request (121).	Received	29
2015.12.10 08:00:04	1	Site B	Urgency and safety call	ColorSpeed (0025762490)	SelfMmsi (0025762290)	Position request (121).	Sent	0
2015.12.10 08:00:04	1	Site B	Urgency and safety call	ColorSpeed (0025762490)	SelfMmsi (0025762290)	Position request (121).	Received	47

Send VHF DSC message dialog box. It includes a list of templates on the left and a form on the right for configuring the message. The 'Message' field is set to 'Individual stations call (120)'. The 'Category' is 'Routine (100)'. The 'Destination MMSI' is highlighted in yellow. The 'EOS' is 'Reply required (117)'. The '1st telecommand' is 'F3E/G3E simplex (100)'. The '2nd telecommand' is 'No information (126)'. The 'RX Channel' is highlighted in yellow. There are fields for 'Site Name' and 'Site MMSI'.

DSC message view dialog box. It displays the details of a received message: 'Urgency and safety call acknowledgement' received on 2024-04-10 09:31:19. The 'Format' is 'Individual stations call (120)'. The 'Category' is 'Safety (100)'. The 'Source MMSI' is '0025762390'. The 'Destination' is '0025762290'. The '1st telecommand' is 'Position request (121)'. The '2nd telecommand' is 'No information (126)'. The 'Channel (frequency):' is empty. The 'Position' is '60°59'N 009°14'E'. The 'Time (UTC):' is '01:00'. The 'Telephone nr.:' is empty. The 'EOS' is 'Is Reply (122)'. There are fields for 'Site Name' and 'Time' at the bottom, with the time set to '2024-04-10 09:31:19'. There are 'Print' and 'Close' buttons.

v. 5 March-26 Jotron AS reserves the right to change any content herein without notice