



Japan Radio Co., Ltd.

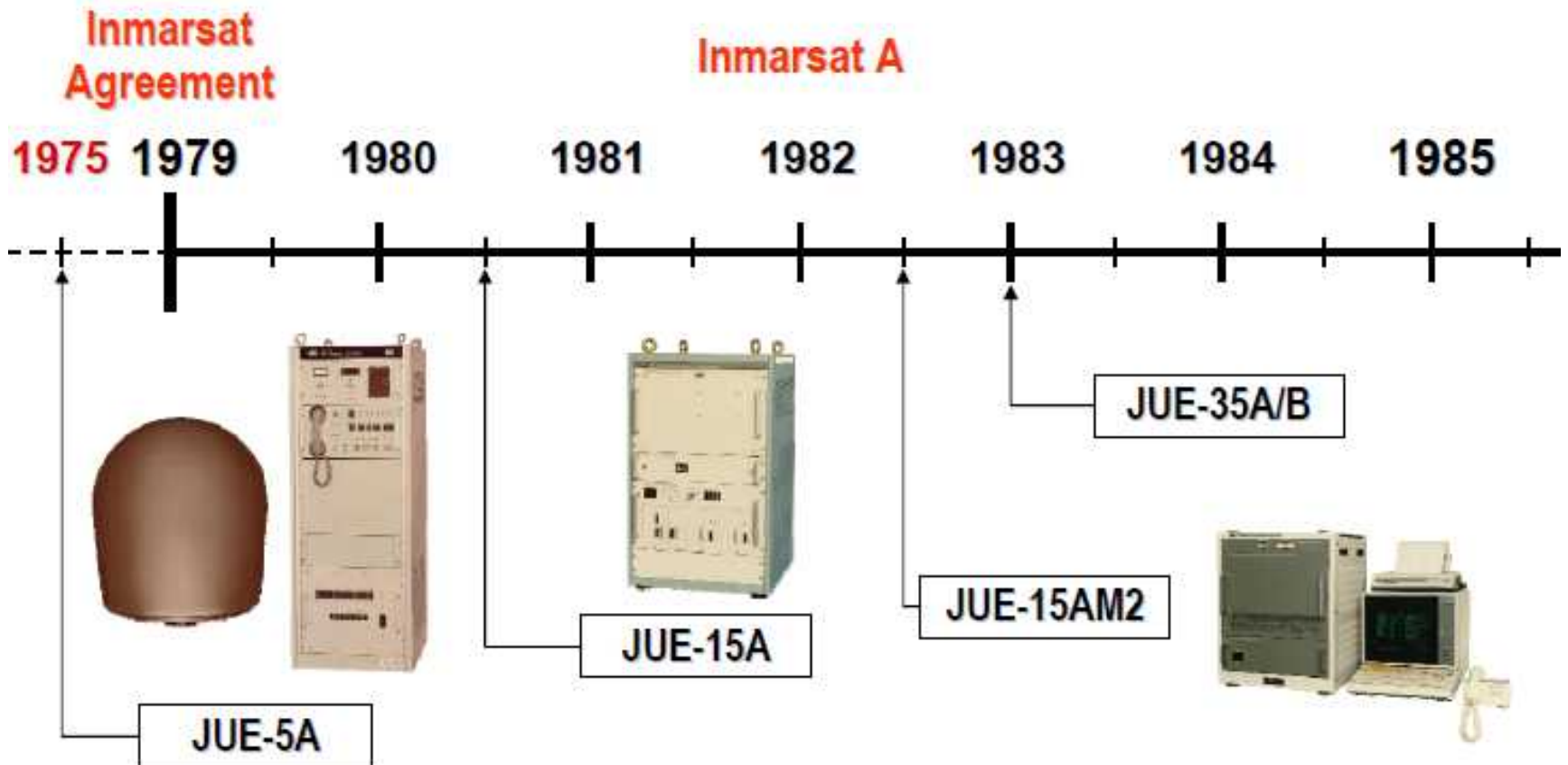
Fleet Broadband

JRC's development of INMARSAT service

JRC Europe

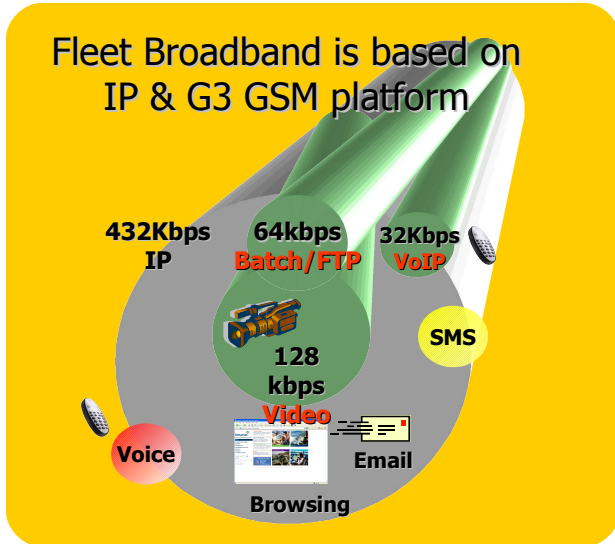
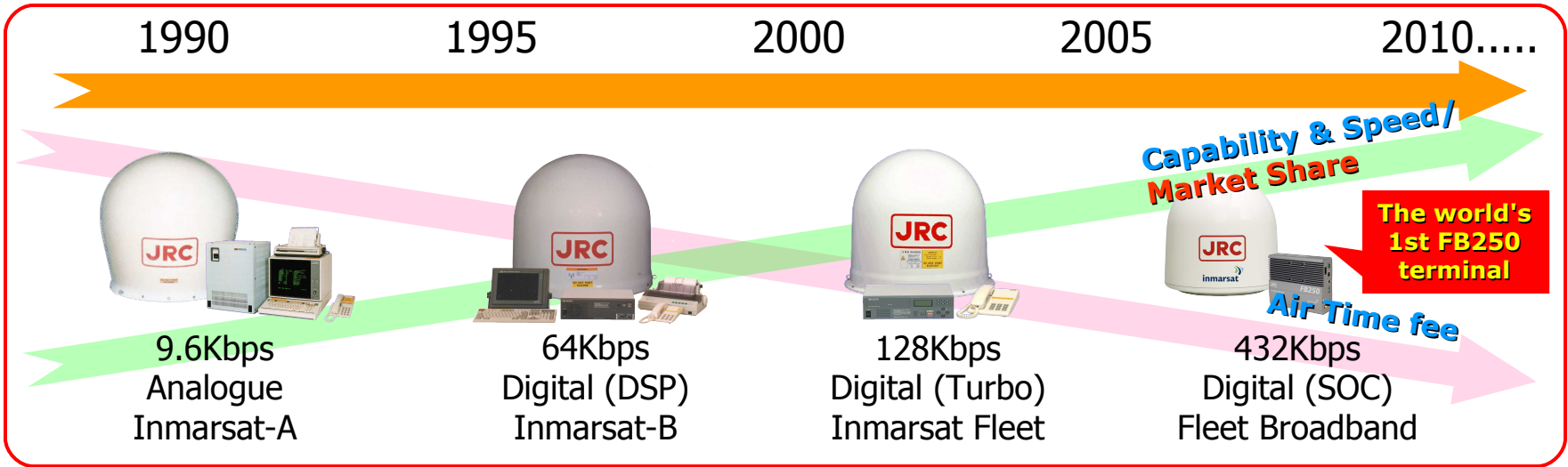
October, 2007

Since 1978



The world first Inmarsat terminal

Next Generation Satellite Communication



How to Realize?

Antenna

Main Unit

- JRC in-house technology All Made by JRC**
- Linear Amp.
- Flat Antenna
- 3 Axis Control
- System On Chip
- Multi Interface
- Reliability Design



JRC Fleet Broadband family



FB250

ADE



BDE



Handset

JUE-250

FB500

ADE



BDE



Handset

JUE-500



What JRC Fleet Broadband can Do?

Data



- Standard IP
- Variable bit rate service
- Up to 432kbps (receive)

Streaming



- Guaranteed bit rate service
- Available on demand
- 32, 64, 128, 256 kbps
- Also supports ISDN

Voice



- Voicemail, 4kbps circuit-switched service
- Enhanced services: call waiting, forwarding, barring, holding
- Broadcast quality voice

Text



- Send and receive text messages (GSM SMS)

	FB250	FB500
Data		
Standard IP	Up to 284kbps	Up to 432kbps
Streaming IP	32,64,128kbps	32,64,128,256kbs
ISDN	---	64kbs
Voice	4kbps and digital 3.1kHz audio	
Fax	Group 3 fax via 3.1kHz audio	
SMS	Standard 3G (up to 160 characters)	

Quick Comparison of F33 with FB250



Fleet F33	FB250
Similar Size and Weight	Similar Size and Weight
Voice: High quality not Simultaneously useable with Data	Voice: high Quality & Simultaneously useable with Data
Packet Data: MPDS – Best Effort up to ~64 kbps (Volume Charged)	Packet Data: 3G – Best Effort up to ~432 kbps (Volume Charged)
Streaming IP: No	Streaming IP: Guaranteed IP services of 32, 64, 128 or 256 (Time Charged)
Data, Fax: Spot coverage	Data, Fax: Global coverage
Data: 9.6 kbps Data	Data: 3.1 KHz Audio
Fax: 9.6 kbps	Fax: G3/G4 fax on 3.1 KHz + E-fax etc
SMS: No	SMS: Yes

Quick Comparison of F77 with FB500



	Fleet F77 (JRC)	FB 500
Antenna	Similar Size and Weight	Similar Size and Weight
Voice	High quality not Simultaneously useable with Data	high Quality & Simultaneously useable with Data
ISDN	128 or 64 kbps (Time Charged)	64 kbps (Time Charged)
Packet	MPDS – Best Effort up to ~64 kbps (Volume Charged)	3G – Best Effort up to ~432 kbps (Volume Charged)
Streaming	No Support	Guaranteed IP services of 32, 64, 128 or 256 (Time Charged)
Fax	G3 Fax 9.6 kbps	G3/G4 Fax 3.1 KHz Audio (E-fax)
ID	Voice x 6, Fax x 5, Data x 1, ISDN x 6, MPDS x1	Voice x 1, ISDN x 1
SMS	No Support	160 Characters max

Upto 11 Simultaneous Connections Allowed*



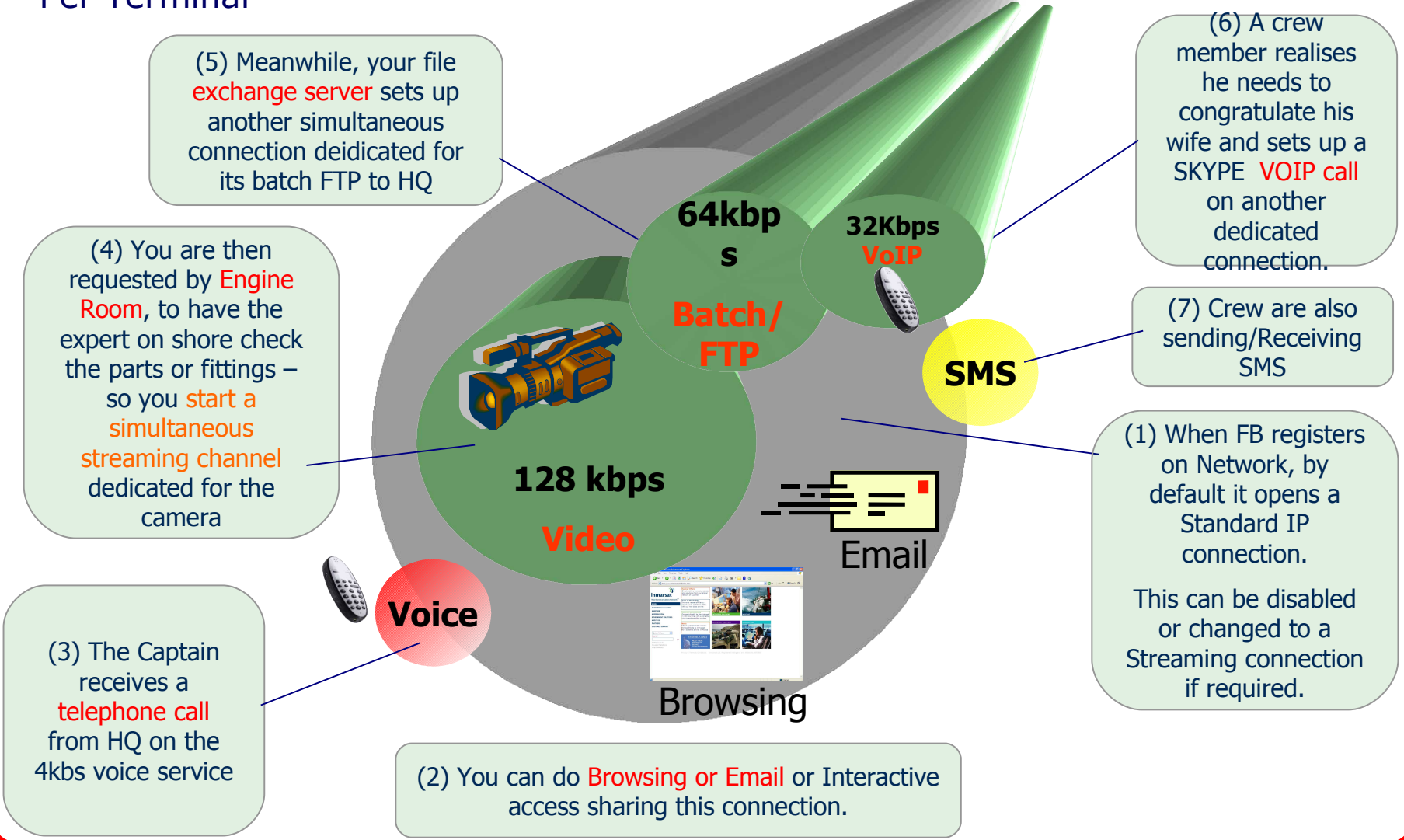
Connection 1	Connection 2	Allowed/Possible
4Kbps Voice	Standard IP (be)	Yes
3.1K Voice	Standard IP (be)	Yes
4Kbps Voice	Streaming IP (Except 256 kbps)	Yes
Standard IP	Streaming IP	Yes
ISDN	Standard IP (be)	Yes
3.1K Voice (via ISDN)	Streaming IP	No
ISDN	Streaming IP	No

* Depends upon manufacturer and firmware versions

Simultaneous Communication

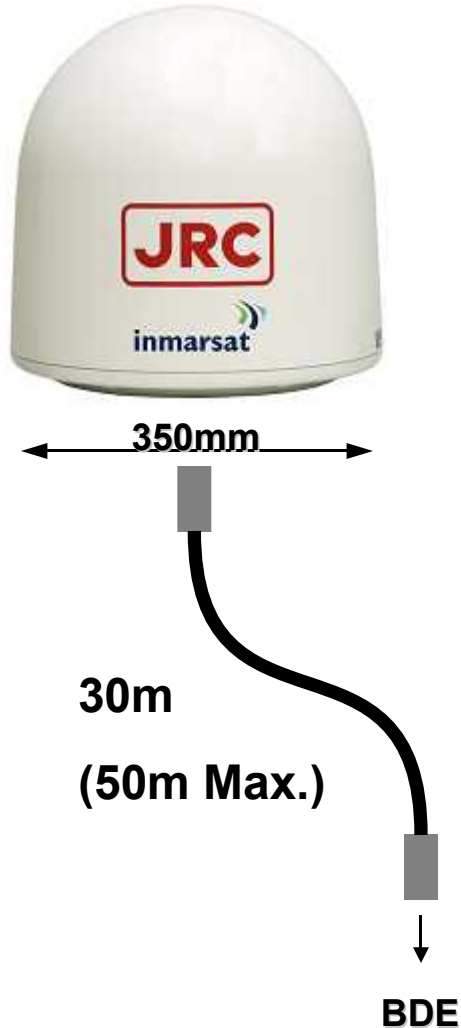


Separating Simultaneous data "streams for Each Application" Per Terminal



JUE-250 Above Deck Equipment

JRC



- High reliable, In-house electrical & mechanical design

Size: H x D =

350mm x 350mm

approx. 7.4 KG

- Single coaxial cable
- Same cable as Fleet F33

JUE-250 Below Deck Equipment

JRC



- Multi communication hub
- Built-in Web server
- Various interfaces

Size: H x W x D =

166mm x 221mm x 64mm

approx. 4 KG

1 x SIM Card

1 x DC Power Input

1 x Dedicated handset

WRF splitter



1 x RJ-45 3.1K Audio [ISDN]

1 x RJ-45 LAN [Data]

1 x USB [Data]

1 x RJ-11 2-wire [Voice]

1 x RJ-11 2-wire [Fax]



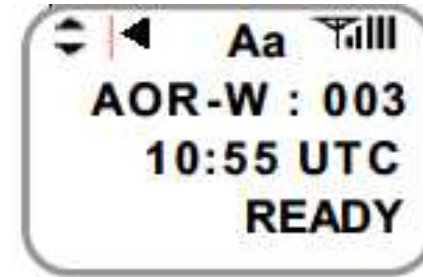
Three Operation Screens



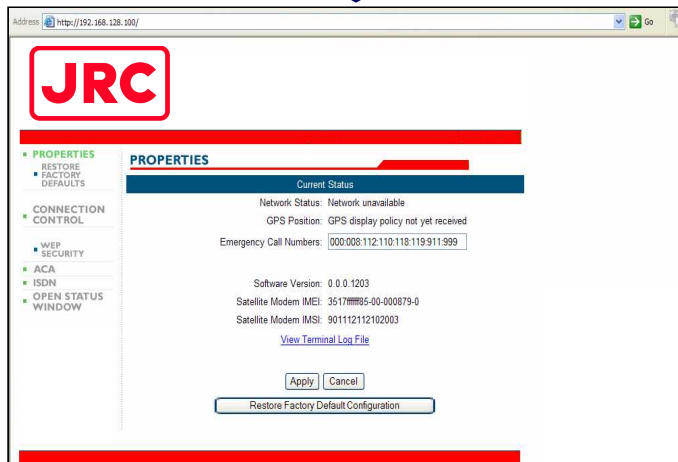
Voice call , ID setting

Data Call, SMS

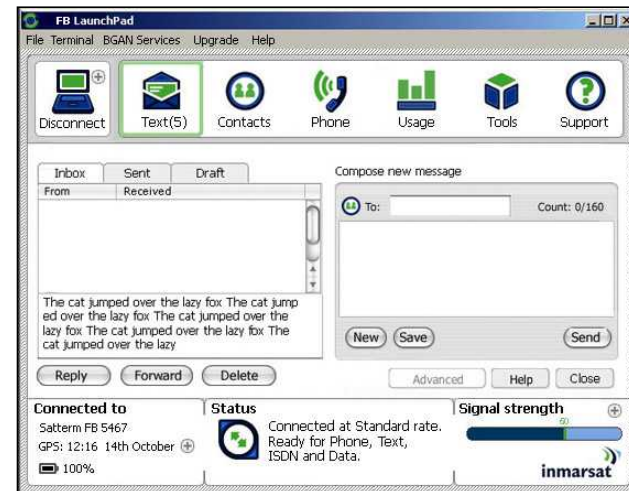
IP setting, Factory setting



Handset Screen



JRC Dedicated Screen



Launch-Pad Screen

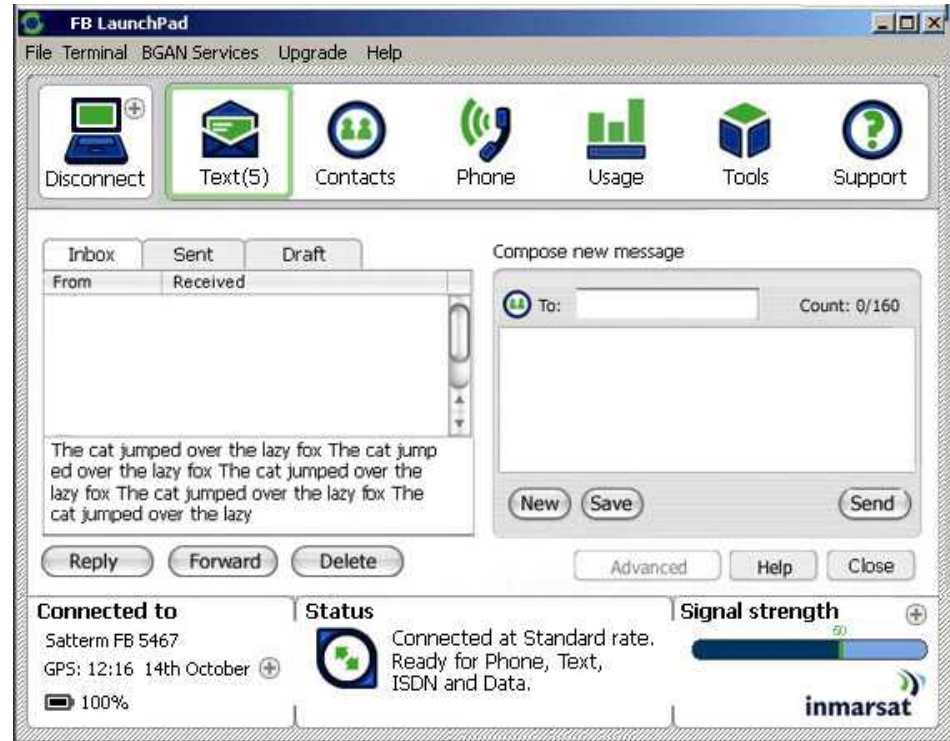
JUE-250 Launch-Pad Screen



FleetBroadband
Main Unit



LAN Cable




PC

JUE-250 Dedicated Screen



Address: <http://192.168.128.100/> Go



- **PROPERTIES**
 - RESTORE
 - **FACTORY DEFAULTS**
- **CONNECTION CONTROL**
 - **WEP SECURITY**
- **ACA**
- **ISDN**
- **OPEN STATUS WINDOW**

PROPERTIES

Current Status

Network Status: Network unavailable
GPS Position: GPS display policy not yet received
Emergency Call Numbers:

Software Version: 0.0.0.1203
Satellite Modem IMEI: 3517ffff85-00-000879-0
Satellite Modem IMSI: 901112112102003

[View Terminal Log File](#)



Fleet Broadband Applications

Some Solutions & Providers being considered for "Accreditation"



Middleware:

1. iOra:
2. Dialog:
3. Livewire:
4. Virtek:
5. Amos Connect:
6. Vizada Skyfile:
7. RAD:
8. Globe Wireless

Electronic Charting & Weather:

1. Primar:
2. ABS Nautical Systems:
3. Jeppesen C-MAP:
4. UKHO:
5. Transas:
6. Chartco:

Fax:

- RTE / Faxbox
- E-fax

SMA / Supplies / E-forms:

1. HMC:
2. Danaos:
3. Spectec:
4. ISSA:

IT, Management & Support:

1. Palantir – Keepup@sea:
2. Docmap:
3. Citrix:

Crew Calling:

1. Blue Ocean Wireless

Fleet Broadband Applications 1



Service	Application	Protocol	Software
E-Mail	Dualog:	TCP/IP	Launch Pad
	On-Air	Under investigating	Under investigating
	Team-Talk	Under investigating	Under investigating
	Stratos @SEAMAIL	TCP/IP	Launch Pad
	Rydex (Rmx2) 、	TCP/IP	Launch Pad
	KDDI Satmail Line	TCP/IP	Launch Pad
	Globe Wireless	TCP/IP	Launch Pad
	Orca	Under investigating	Under investigating
	Singtel Mail65	Under investigating	Under investigating
	FTMSC - Skyfile/Skyvideo:	TCP/IP	Launch Pad
	Amos Connect:	TCP/IP	Launch Pad
	Virtek:	Under investigating	Under investigating
	iOra:	Under investigating	Under investigating
	HMC(Horizon-Mobile)	Under investigating	Under investigating
Outlook and Others (Windows)	TCP/IP	Launch Pad	

Fleet Broadband Applications 2



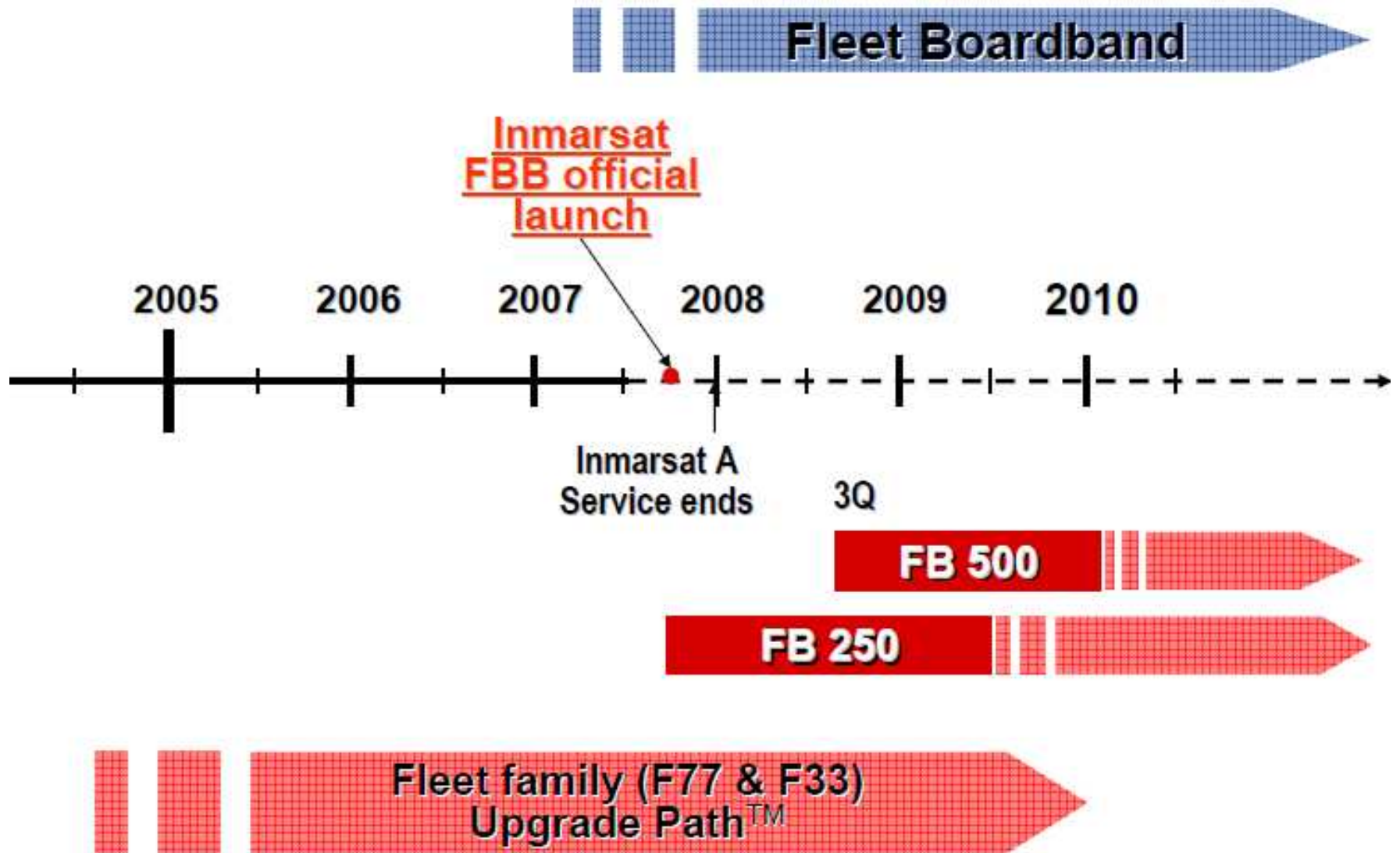
Service	Application	Protocol	Software
Electronic Chart (ECDIS)	Primar:	Internet	Launch Pad
	Jeppesen C-MAP:	Internet	Launch Pad
	UKHO:	Internet	Launch Pad
	Chartco:	Internet	Launch Pad
		WRF	Chart-Co PC
	Transas:	Internet	Launch Pad
Catsat:	Internet	Launch Pad	
Ship Management	Spectec :	Internet	Launch Pad
	Danaos:	Internet	Launch Pad
	ABS Nautical Systems:	Internet	Launch Pad
	Star Information Systems:	Internet	Launch Pad
	Docmap:	Internet	Launch Pad
Crew Caling (GSM)	Blue Ocean Wireless (Altobridge):	Internet & Voice	BOW
	Palantir – Keepup@sea	Voice	Under investigating



Fleet Broadband Applications 3

Service	Application	Protocol	Software
Video Communication	Livewire:	ISDN/Streaming	FB250 : Streaming
	Scotty	ISDN/Streaming	FB250 : Streaming
Voice over IP	RAD	Voice	Under investigating
	Front-line Communicator (Audisoft)	Voice	Under investigating
Telemedicine	iMed:	ISDN/Streaming	FB250 : Streaming
Fax	E-Fax	Internet	Launch Pad
	G3 Fax	Fax	3.1K Audio
	G4 Fax	Fax	3.1K Audio
Remote Access	Remote Maintenance	PPP-RAS	Ship initiation
	Engine Monitor	PPP-RAS	Ship initiation
Router	CISCO or others	Router	Ship initiation

Count Down to FBB



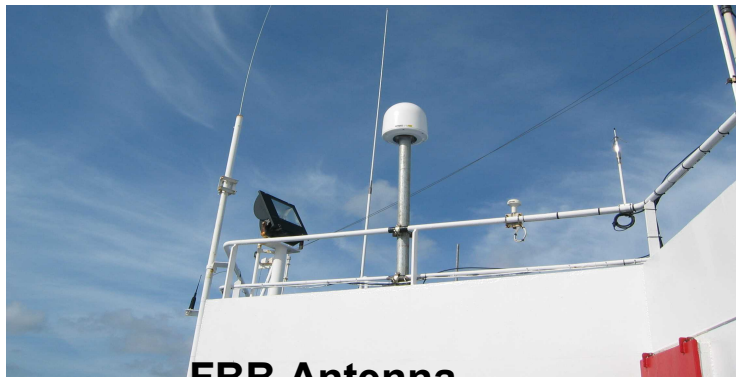
Type approval process



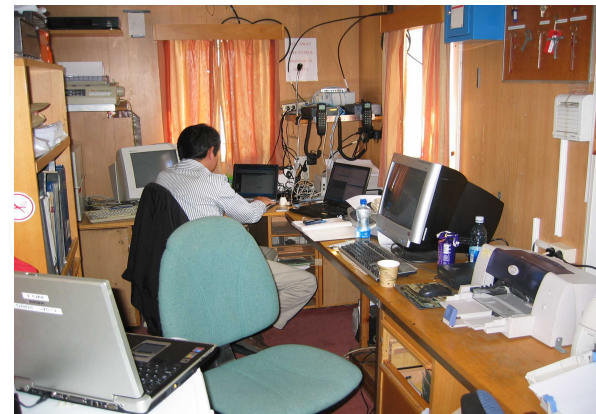
Normandy



Rosslare - Roscoff & Cherbourg



FBB Antenna



Alpha test on Board

Availability

□□ *The wait is over. We are ready! Are you?*

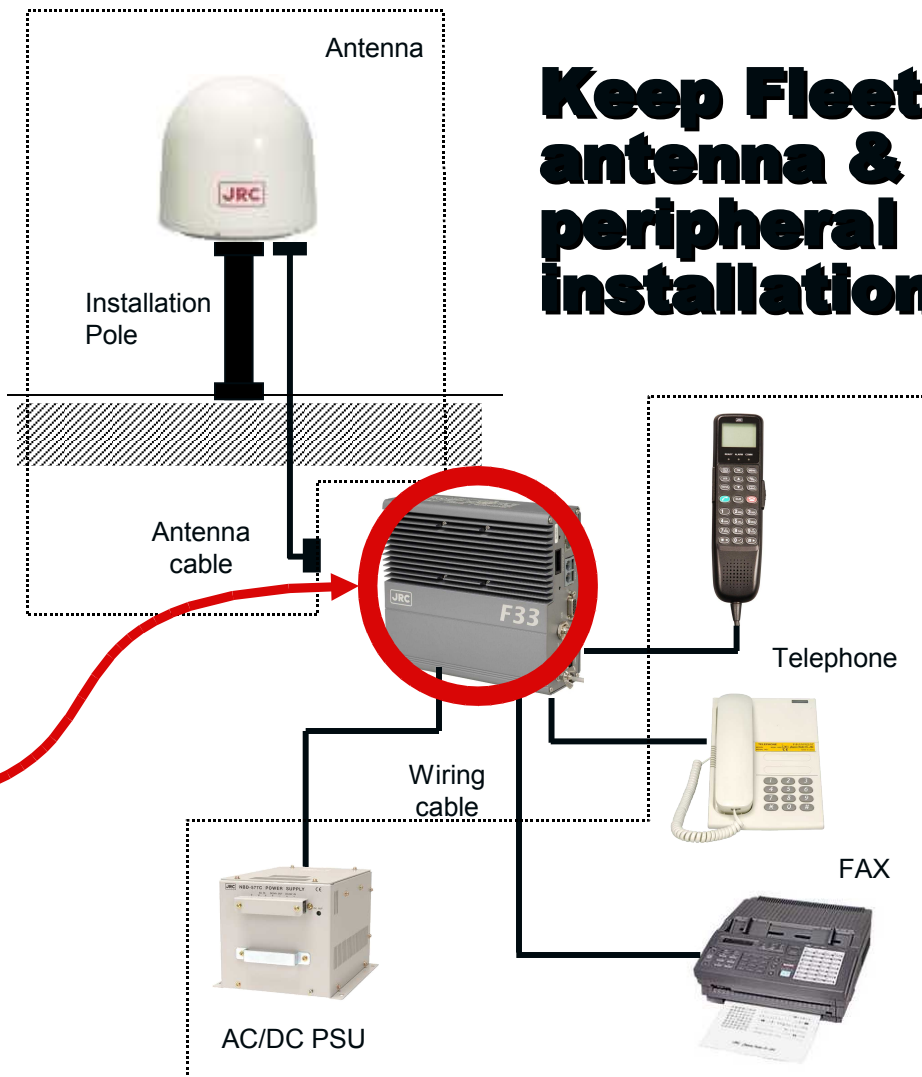
November 19th 2007

□□ JRC will be the first manufacturer who is able to deliver and will officially launch the world's first type approved JUE-250 terminals.

□□ Commercial products on 19 Nov.

□□ **More** units by end of 2007

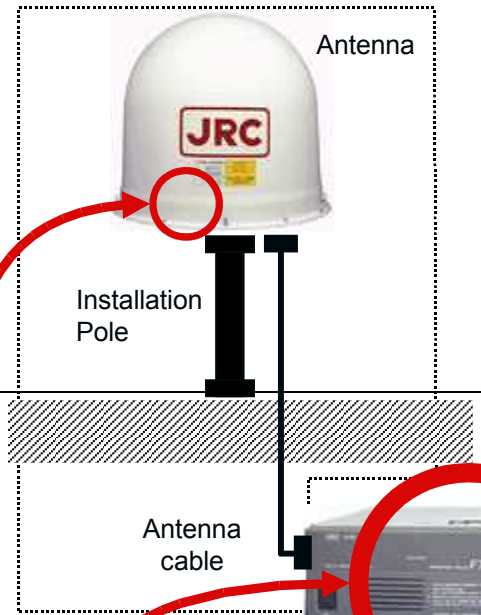
Fleet F33 Upgradeable to FB250



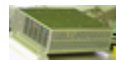
Keep Fleet F33 antenna & all peripheral installations

Just replace main unit!

Fleet F77 Upgradeable to FB500



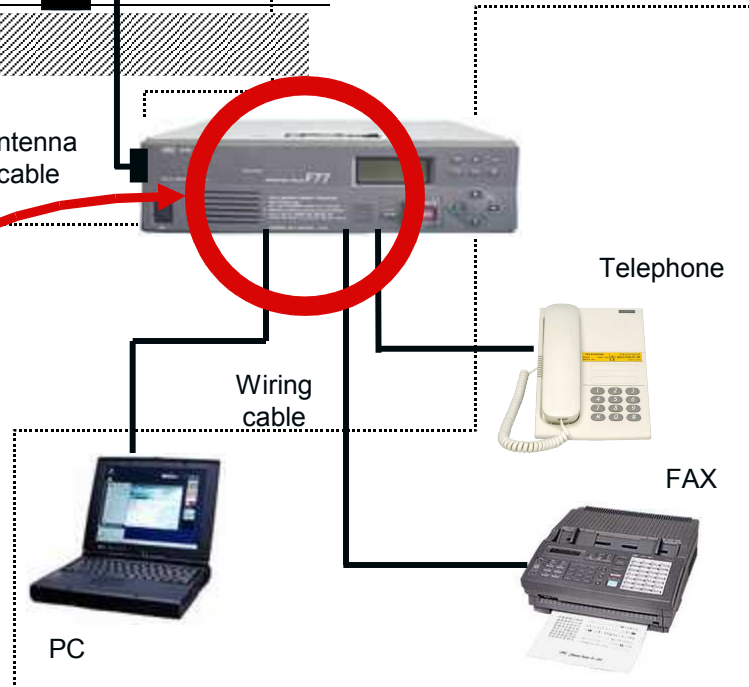
Keep Fleet F77 antenna & all peripheral installations



and RF unit



Replace main unit!



Meet the JUE-250 on Tour

- *Where to meet JRC's pioneering JUE-250 at the 2007 public conferences and exhibitions in Europe.*



- Digital Ship Athens (23-24 Oct)
- Kormarine 2007, Pusan (23-27 Oct)
- Inmarsat Channel Launch (29-31 Oct)
- Europort maritime (6-9 Nov)
- Official FB launch Inmarsat (19 Nov)
- Marintech China, Shanghai

A scenic view of a sunset over a body of water. The sun is low on the horizon, creating a bright reflection on the water's surface. In the background, there are silhouettes of buildings and trees. The sky is a mix of orange and grey.

***Global
Service & Support***

Sun Never Set

Online Maintenance



To Shore Service Station...

Failure diagnostic data

(through LAN)



ECDIS

Conning Display

Radars

AIS

Fleet Broadband
JRC FB250/500

✓ Download and analysis of failure diagnostic data

✓ Remote maintenance of the onboard equipment

Minimize Down time!



Network and 24 hours hotline



+81 3 3492 9201

- ✦ 3 branches and 17 service stations
- ✦ FAK: Over 30 models and 280 items, consignment



Please visit at
JRC stand
See
Anna Marini
For
Best price and delivery