

NAVNET QUICK SETUP GUIDE 10.4 inch series, single display (with optional equipment shown)

STEP 1 (Confirm no simulator modes are selected [SIM] would be displayed in upper left corner of display)

Connect the GPS position source. Use the Furuno BBWGPS antenna, Furuno GP32 or any compatible external device (must output NMEA sentences GGA, VTG, ZDA, see manufacturer specifications).

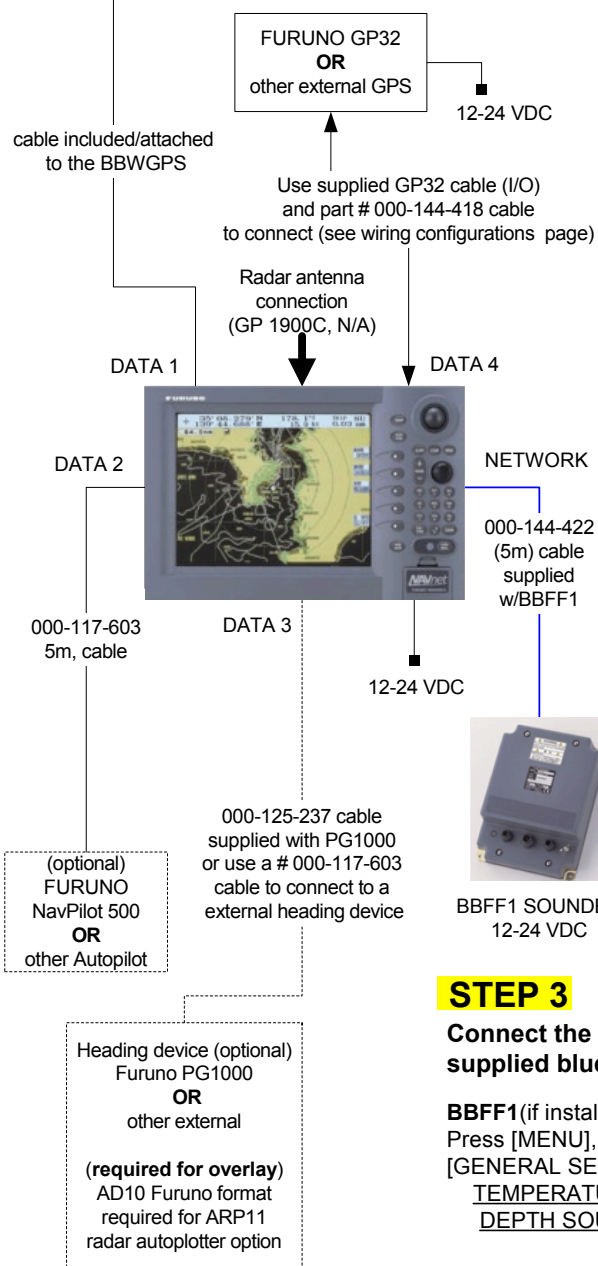
BBWGPS



BBWGPS (only configure if the BBWGPS antenna is connected to DATA1)

1. Press "MENU", Select [SYSTEM CONFIGURATION], Select [NAV OPTION]
2. Select [NAV SOURCE SETTINGS], Change POSITION SOURCE to [FURUNO BB GPS]
3. Press "RETURN"
4. Select [GPS SENSOR SETTINGS], Select [WAAS SETUP], Set [WAAS MODE], [ON]
5. Press "RETURN" twice
6. Select [SYSTEM SETUP], Select [PORT SETUP], Select [GPS/NMEA PORT], Set FURUNO GPS SENSOR to [YES]
7. Press [RETURN], then [MENU] for normal operations

OR use the NavNet display "default" menu settings if connecting an external GPS device (example: Furuno GP32 shown)



STEP 2 Applies to Radar only (Omit if installing a plotter)

Connect the radar antenna to DJ1 of the radar display 1833C, 1933C, or 1943C. Also 1953C (see installation manual, PSU-005 section for more)

RADAR SETUP PROCEDURES:

NOTE: Installation Menu access required.

Press and hold [MENU] while powering on display (starts normally)

Press [MENU], [SYSTEM CONFIGURATION], [INSTALLATION SETUP]

Press [RADAR SETUP] these are **REQUIRED ADJUSTMENTS!**

ANTENNA TYPE

- A 1823C
- B 1833 / 1833C
- F 1933 / 1933C
- G 1943 / 1943C
- H 1953/C

ANTENNA ROTATION [ROTATE] (do not change)

TRANSMIT RADAR FOR 5 minutes prior to and continue for FOLLOWING PROCEDURES (on the shortest range, set gain & sea control properly)

TUNING [OFF] Press [EDIT], select [ON], Press [ENTER], when complete "NOW TUNING" disappears.

VIDEO ADJUST (important!) select [ON], press [ENTER], when complete "NOW ADJUSTING VIDEO" disappears.

TIMING ADJUST [OFF] Press [EDIT], select [ON], visually select long straight target, rotate knob to straighten target, Press [ENTER].

HEADING ADJUST (NOTE: factory setting 180° out for 24" dome antennas) select [NEXT PAGE], HEADING ADJUST [OFF], Press [EDIT], select [ON], using a range between 0.125-.25nm, rotate knob to bisect radar target, Press [SET]

Maximum radar ranges may need to be turned on using [MENU], [RADAR RANGE SETUP] after "ANTENNA TYPE" is changed.

STEP 3 BBFF1 Network sounder if Installed (Plug and Play)

Connect the BBFF1 network sounder to the display "network port" using the supplied blue 000-144-422, 5m network cable

BBFF1(if installed): Displaying digital temperature and depth on NavNet display(s)

Press [MENU], [SYSTEM CONFIGURATION]

[GENERAL SETUP] (default is [NMEA] for displaying input from external depth and temperature devices)

TEMPERATURE SOURCE [ETR] (transducers with temperature sensor only)

DEPTH SOURCE [ETR]

POWER OFF then ON after any "MENU CHANGES" to store the new information.
Refer to the "Wiring configurations (10.4 inch display notes)" or "General Information" page for details

NAVNET QUICK SETUP GUIDE 7 inch series, single display (with optional equipment shown)

STEP 1 (Confirm no simulator modes are selected [SIM] would be displayed in upper left corner of display)

Connect the GPS position source. Use the Furuno BBWGPS antenna, Furuno GP32 or any compatible external device (must output NMEA sentences GGA, VTG, ZDA, see manufacturer specifications).

BBWGPS



BBWGPS (only configure if the BBWGPS antenna is connected to DATA1)

1. Press "MENU", Select [SYSTEM CONFIGURATION], Select [NAV OPTION]
2. Select [NAV SOURCE SETTINGS], Change POSITION SOURCE to [FURUNO BB GPS]
3. Press "RETURN"
4. Select [GPS SENSOR SETTINGS], Select [WAAS SETUP], Set [WAAS MODE], [ON]
5. Press "RETURN" three times
6. Select [SYSTEM SETUP], Select [PORT SETUP], Select [GPS/NMEA PORT], Set FURUNO GPS SENSOR to [YES]
7. Press [RETURN], then [MENU] for normal operations

OR

FURUNO GP32
OR
other external GPS

use the NavNet display "default" menu settings if connecting an external GPS device (example: Furuno GP32 shown)

12-24 VDC

STEP 2 Applies to Radar only (Omit if installing a plotter)

Connect the radar antenna to DJ1 of the radar display 1722/C, 1732/C, 1742/C or 1762/C

RADAR SETUP PROCEDURES:

NOTE: Installation Menu access required.

Press and hold [MENU] while powering on display (starts normally)

Press [MENU], [SYSTEM CONFIGURATION], [INSTALLATION SETUP]

Press [RADAR SETUP] these are **REQUIRED ADJUSTMENTS!**

ANTENNA TYPE

- A 1722 / 1722C
- B 1732 / 1732C
- C 1742 / 1742C
- F 1762 / 1762C

ANTENNA ROTATION [ROTATE] (**do not change**)

TRANSMIT RADAR FOR 5 minutes prior to and continue for FOLLOWING PROCEDURES (on the shortest range, set gain & sea control properly)

TUNING [OFF] Press [EDIT], select [ON], Press [ENTER], when complete "NOW TUNING" disappears.

TIMING ADJUST [OFF] Press [EDIT], select [ON], visually select long straight target, rotate knob to straighten target, Press [ENTER].

HEADING ADJUST (**NOTE: factory setting 180° out for 24" dome antennas**) select [NEXT PAGE], HEADING ADJUST [OFF], Press [EDIT], select [ON], using a range between 0.125-.25nm, rotate knob to bisect radar target, Press [SET]

Maximum radar ranges may need to be turned on using [MENU], [RADAR RANGE SETUP], after "ANTENNA TYPE" is changed

cable included/attached to the BBWGPS

Use supplied GP32 cable (I/O) and part # 000-144-418 cable to connect

Radar antenna connection (GP1700C, N/A)

DATA 3 output to optional autopilot or other device is available, see wiring configurations page (7" display NOTES)

DATA 1



DATA 2

12-24 VDC

NETWORK
000-144-422 (5m) cable supplied w/BBFF1



BBFF1 SOUNDER
12-24 VDC

000-125-237 cable supplied with PG1000 or use a # 000-117-603 cable to connect to a external heading device

Heading device (optional)
Furuno PG1000
OR
other external

(required for overlay)
AD10 Furuno format required for ARP11 radar autoplotter option

STEP 3 BBFF1 Network sounder if Installed (Plug and Play)

Connect the BBFF1 network sounder to the display "network port" using the supplied blue 000-144-422, 5m network cable

BBFF1(if installed): Displaying digital temperature and depth on NavNet display(s)

Press [MENU], [SYSTEM CONFIGURATION]

[GENERAL SETUP] (default is [NMEA] for displaying input from external depth and temperature devices)

TEMPERATURE SOURCE [ETR] (transducers with temperature sensor only)

DEPTH SOURCE [ETR]

POWER OFF then ON after any "MENU CHANGES" to store the new information.

Refer to the "Wiring configurations (7 inch display notes)" or "General Information" page for details

BBWGPS



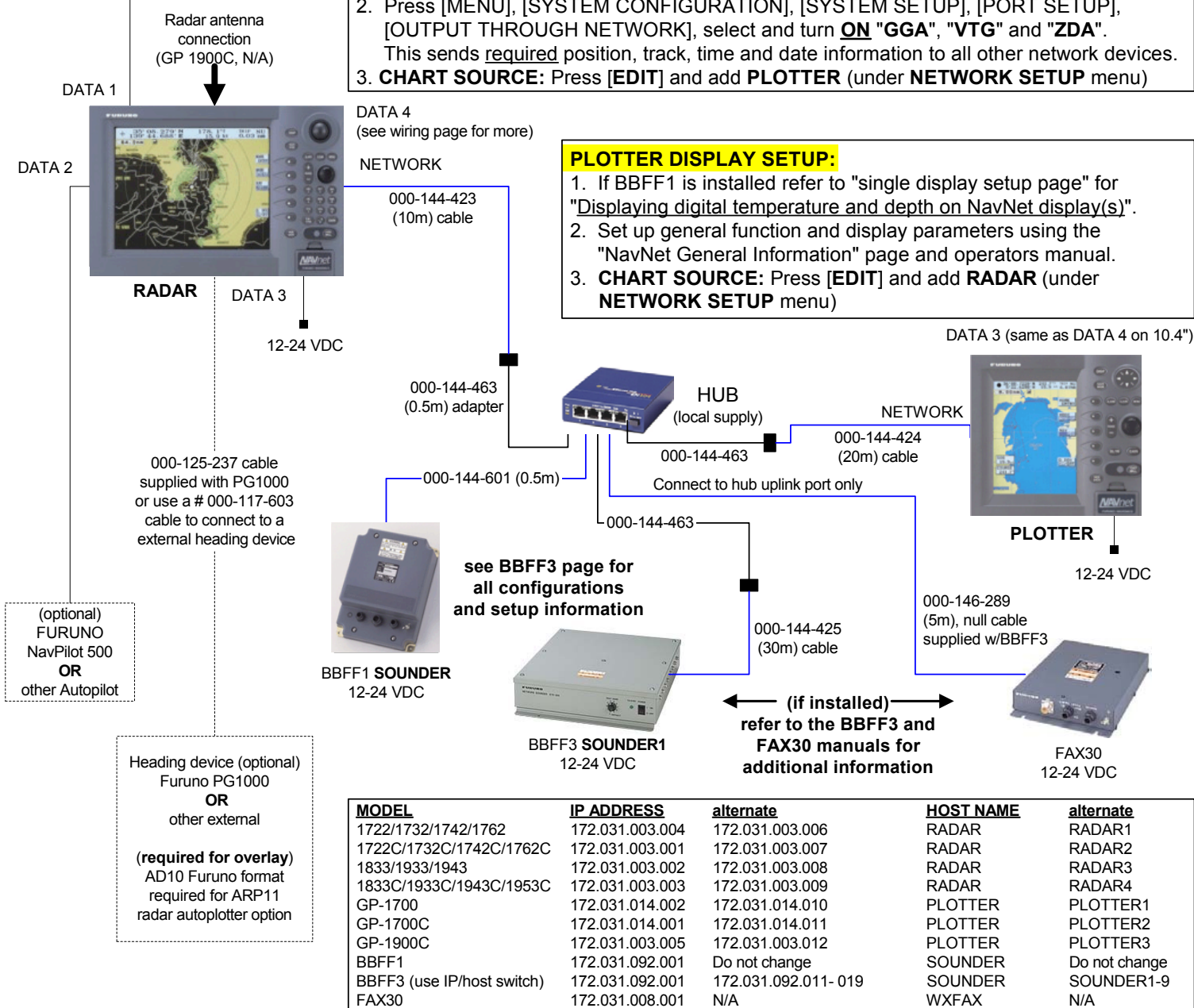
cable
included & attached
to the BBWGPS

(optional equipment shown)

1. **Connect and configure a single display and network sounder (if installed) before continuing**(see page 1).
 2. Confirm **no simulation modes** are selected, [SIM] would display in upper left corner.
 3. Connect all displays (any combination of up to four 7 inch and/or 10.4 inch displays total can be used in the network) and any combination of other network devices such as a BBFF1, BBFF3, or FAX30.
 4. Use a standard ethernet hub if three (3) or more network devices are present.
 - a) Care should be taken to supply a stable voltage to the hub from the primary display (any 7 pin port with 12VDC output) or other stable and filtered "12VDC" supply voltage.
- "INSTALLATION MENU required for following. Press and hold [MENU] while powering on display"**
5. All displays must have a different "HOST NAME" and "IP ADDRESS".
 - a) **A two(2) display system will usually be correct. Three(3) or more displays will require configuration**
 - c) Press [MENU], [SYSTEM CONFIGURATION], [INSTALLATION SETUP], "NETWORK SETUP" to configure.
 - b) Refer to the **IP ADDRESS, HOST NAME** chart for examples. **DO NOT rename the "RADAR" display.**
 6. **CHART SOURCE:** Input all displays [HOST NAME] on network, omit own HOST NAME
(see below setup boxes and "General Information" page for detailed instructions)

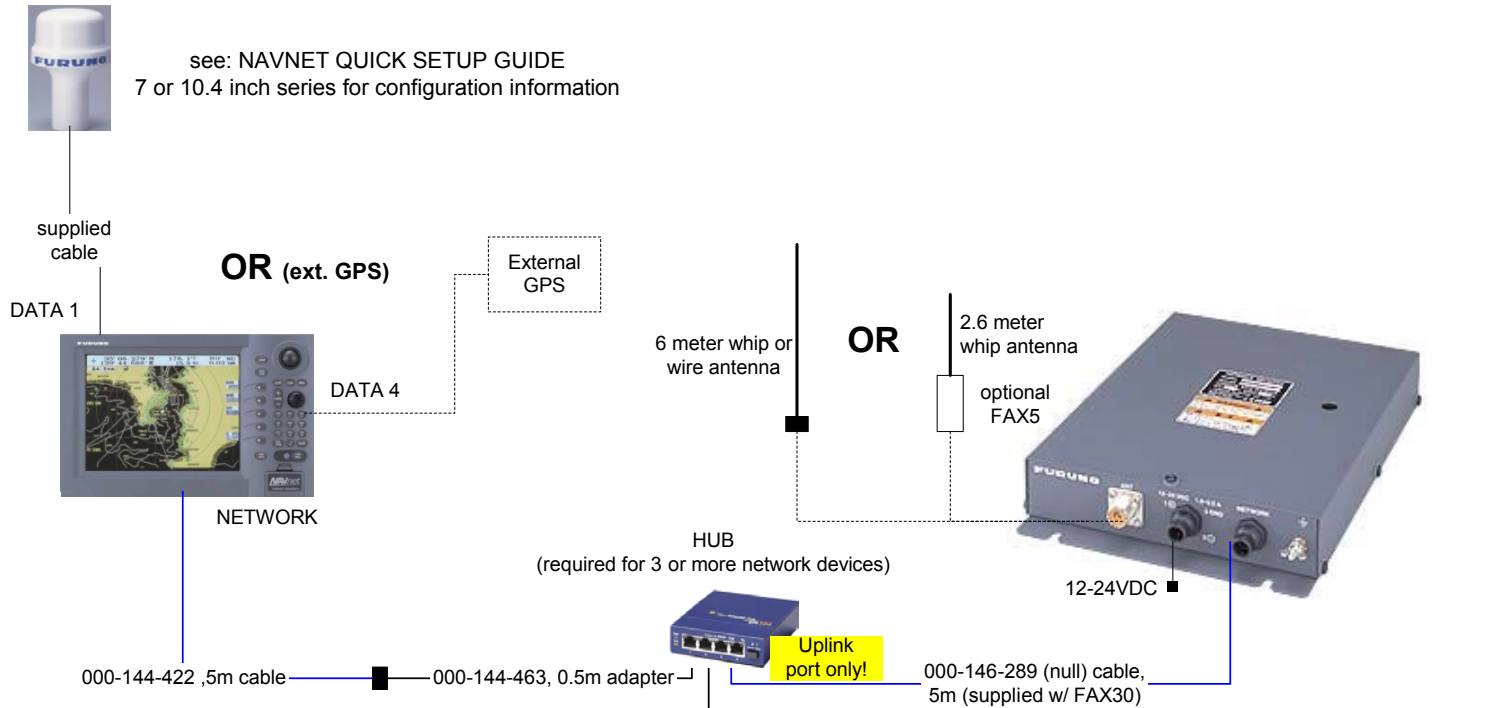
1. **Confirm initial configuration using the single display setup page**
2. Press [MENU], [SYSTEM CONFIGURATION], [SYSTEM SETUP], [PORT SETUP], [OUTPUT THROUGH NETWORK], select and turn **ON** "**GGA**", "**VTG**" and "**ZDA**".
This sends required position, track, time and date information to all other network devices.
3. **CHART SOURCE:** Press [EDIT] and add **PLOTTER** (under **NETWORK SETUP** menu)

1. If BBFF1 is installed refer to "single display setup page" for "Displaying digital temperature and depth on NavNet display(s)".
2. Set up general function and display parameters using the "NavNet General Information" page and operators manual.
3. **CHART SOURCE:** Press **[EDIT]** and add **RADAR** (under **NETWORK SETUP** menu)



POWER OFF then ON after any "MENU CHANGES" to store the new information. Refer to the Installation and Operator Manuals regarding detailed information on any steps

FAX 30 Weatherfax Quick Reference



STEP 1

NavNet display configuration and information :

GPS source: Connect BBWGPS or use external GPS (no menu settings required), see **NavNet Quick Setup** guide for more

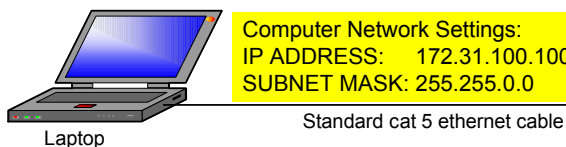
OUTPUT THROUGH NETWORK: Display with GPS connected Press [SYSTEM CONFIGURATION], [SYSTEM SETUP], [PORT SETUP], [OUTPUT THROUGH NETWORK], select and turn "ON" GGA, VTG and ZDA, press [MENU] to complete.

NavNet display software version:

C-Map 11,2 or higher

Navionics 15,2 or higher

Receive notification: Select from the FAX30 [MODE SETUP] screen [AUX] icon displays on lefthand side of screen (not on FAX display)



STEP 2

PC (Personal Computer) configuration and information:

Minimum Requirements: PC with Windows 98, ME, 2000 or XP: Best viewed with Internet Explorer 6.0 or, Netscape 7.0 and higher (check Operators Manual for other compatability and special settings)

Internet Explorer Setup: (see manual for more and Netscape setup)

1. Start Internet Explorer, click [Tools], [Internet Options]
2. Under [General] tab in "Temporary Internet Files" click [Settings]
3. Select [Every visit to the page] to check for the newest version page
4. Click [OK], then select the "Security" tab, click [Custom Level]
5. Find "Scripting" enable [Active Scripting] & [Scripting of Java applets]
6. Click [OK], Click "Connections" tab and "LAN settings" button
7. Uncheck [Use a proxy server] under "Proxy Server" section
8. Click [OK] twice to close "Internet Options" window

Multiple PC's cannot access the FAX30 simultaneously:

Logoff one PC before trying to access from another PC

PC operations: Normally use the left mouse button; except when saving a fax image which uses the right mouse button.

STEP 3

FAX30 notes and information:

FAX30 accessible 15 seconds after powered on

Only viewable on a NavNet 10.4 inch color display and/or PC.

NavNet display: Press [DISP], select "WXFAX" then [ENTER] knob

PC viewing: Open web browser and enter IP address 172.31.8.1

(Important! "Log off" when done viewing with PC)

Stores a maximum of 12 images (depending on file size)

Receives one fax image or navtex message at a time.

Three modes are available: FAX, Navtex only or FAX (timer)& Navtex

Timer mode: FAX (highest priority), Navtex (lowest priority)

FAX30 has no internal clock: receives from NavNet "ZDA" sentence or from PC computer's Web browser (turn "on" FAX30 before accessing)

Auto Navtex mode: requires navigation data (not available on PC)

FAX5 antenna coupler w/ 8' whip antenna remove FAX30 cover, locate jumper J23 on the RCV board and set to "ACTIVE"

Long wire antenna requires no internal FAX30 jumper change

Locate either antenna away from TX antennas (MF and HF in particular), noise generating equipment, rigging and masts.

Master Reset:

1. Unplug FAX30, remove cover, set S1 #1 "on"
2. Connect power and turn "on" the NavNet display, confirm FAX30 LED is flashing (after about 10 seconds).
3. Turn "off" NavNet display, disconnect FAX30 power, set S1 #1 "off"
4. Replace cover and reconnect FAX30 power cable.

Navtex notes and information:

Stores 130 messages (newest replace oldest when memory is full)

All messages begin with **ZCZC** (ID) and end with **NNNN**.

Example: **ZCZC** with **IA55** followed by message and ending with **NNNN**.

Where: **I** = TX station ID, **A** = Message category and **55** = message number.

An (*) is displayed instead of character when character cannot be displayed

Message number "00" contains important emergency information

Message Categories: Recommended minimum are **A**, **B**, **D** and **L**

A: Coastal navigational warning

B: Meteorological warning

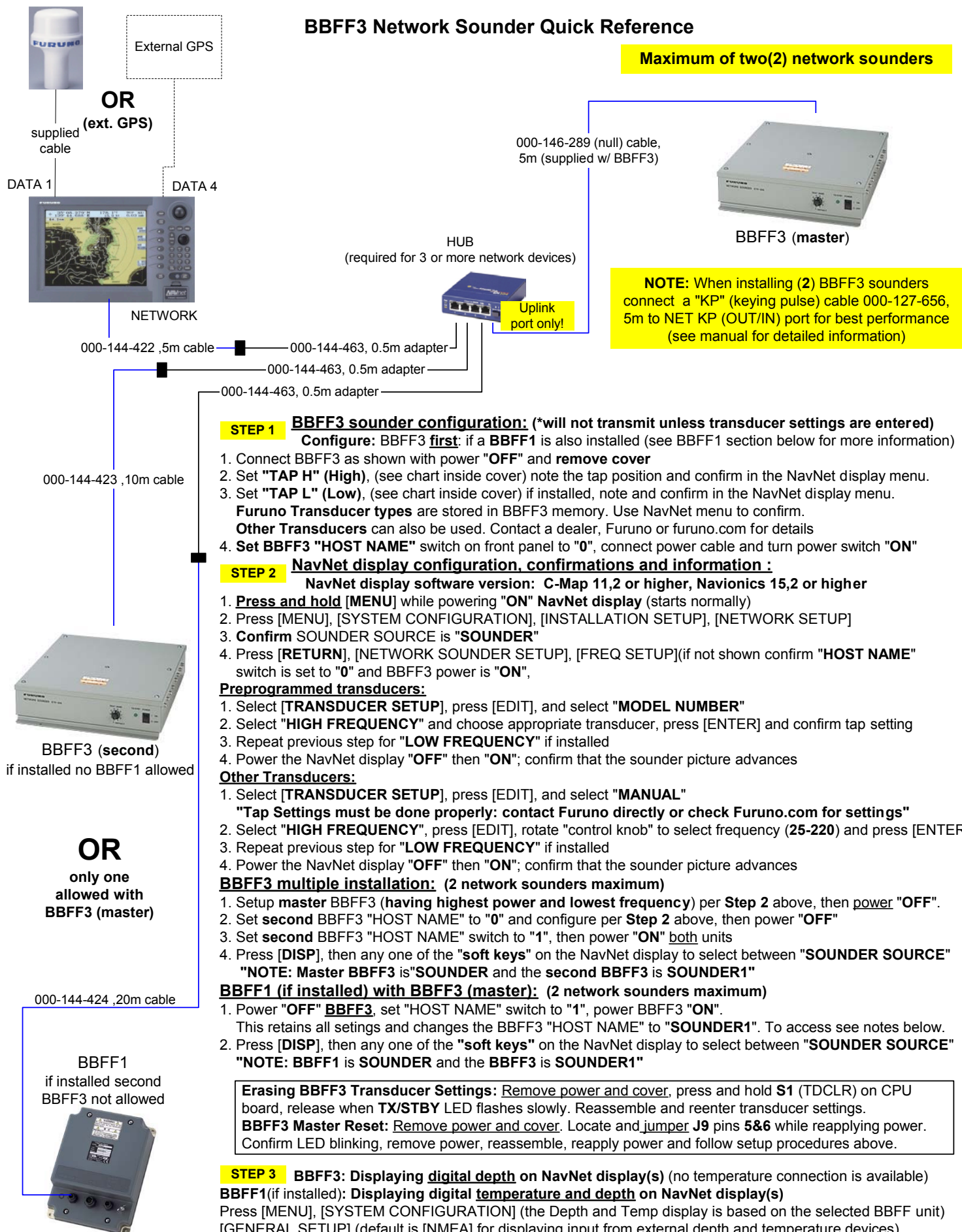
D: Search and Rescue Alert

L: Navarea warnings

Message categories are selectable: see operators manual 4.4.2 for more

BBFF3 Network Sounder Quick Reference

Maximum of two(2) network sounders



STEP 1 BBFF3 sounder configuration: (*will not transmit unless transducer settings are entered)

Configure: BBFF3 first: if a BBFF1 is also installed (see BBFF1 section below for more information)

1. Connect BBFF3 as shown with power "OFF" and **remove cover**
 2. Set "TAP H" (High), (see chart inside cover) note the tap position and confirm in the NavNet display menu.
 3. Set "TAP L" (Low), (see chart inside cover) if installed, note and confirm in the NavNet display menu.
- Furuno Transducer types are stored in BBFF3 memory. Use NavNet menu to confirm.
Other Transducers can also be used. Contact a dealer, Furuno or furuno.com for details
4. Set BBFF3 "HOST NAME" switch on front panel to "0", connect power cable and turn power switch "ON"

STEP 2 NavNet display configuration, confirmations and information :

NavNet display software version: C-Map 11,2 or higher, Navionics 15,2 or higher

1. Press and hold [MENU] while powering "ON" NavNet display (starts normally)
2. Press [MENU], [SYSTEM CONFIGURATION], [INSTALLATION SETUP], [NETWORK SETUP]
3. Confirm SOUNDER SOURCE is "SOUNDER"
4. Press [RETURN], [NETWORK SOUNDER SETUP], [FREQ SETUP](if not shown confirm "HOST NAME" switch is set to "0" and BBFF3 power is "ON",

Preprogrammed transducers:

1. Select [TRANSDUCER SETUP], press [EDIT], and select "MODEL NUMBER"
2. Select "HIGH FREQUENCY" and choose appropriate transducer, press [ENTER] and confirm tap setting
3. Repeat previous step for "LOW FREQUENCY" if installed
4. Power the NavNet display "OFF" then "ON"; confirm that the sounder picture advances

Other Transducers:

1. Select [TRANSDUCER SETUP], press [EDIT], and select "MANUAL"
- "Tap Settings must be done properly: contact Furuno directly or check Furuno.com for settings"
2. Select "HIGH FREQUENCY", press [EDIT], rotate "control knob" to select frequency (25-220) and press [ENTER]
 3. Repeat previous step for "LOW FREQUENCY" if installed
 4. Power the NavNet display "OFF" then "ON"; confirm that the sounder picture advances

BBFF3 multiple installation: (2 network sounders maximum)

1. Setup master BBFF3 (having highest power and lowest frequency) per Step 2 above, then power "OFF".
 2. Set second BBFF3 "HOST NAME" to "0" and configure per Step 2 above, then power "OFF"
 3. Set second BBFF3 "HOST NAME" switch to "1", then power "ON" both units
 4. Press [DISP], then any one of the "soft keys" on the NavNet display to select between "SOUNDER SOURCE"
- "NOTE: Master BBFF3 is "SOUNDER" and the second BBFF3 is SOUNDER1"

BBFF1 (if installed) with BBFF3 (master): (2 network sounders maximum)

1. Power "OFF" BBFF3, set "HOST NAME" switch to "1", power BBFF3 "ON".
This retains all settings and changes the BBFF3 "HOST NAME" to "SOUNDER1". To access see notes below.
 2. Press [DISP], then any one of the "soft keys" on the NavNet display to select between "SOUNDER SOURCE"
- "NOTE: BBFF1 is SOUNDER and the BBFF3 is SOUNDER1"

Erasing BBFF3 Transducer Settings: Remove power and cover, press and hold S1 (TDCLR) on CPU board, release when TX/STBY LED flashes slowly. Reassemble and reenter transducer settings.

BBFF3 Master Reset: Remove power and cover. Locate and jumper J9 pins 5&6 while reapplying power. Confirm LED blinking, remove power, reassemble, reapply power and follow setup procedures above.

STEP 3 BBFF3: Displaying digital depth on NavNet display(s) (no temperature connection is available)

BBFF1(if installed): Displaying digital temperature and depth on NavNet display(s)

Press [MENU], [SYSTEM CONFIGURATION] (the Depth and Temp display is based on the selected BBFF unit)
[GENERAL SETUP] (default is [NMEA] for displaying input from external depth and temperature devices)

TEMPERATURE SOURCE [ETR] (transducers with temperature sensor only) available only on BBFF1

DEPTH SOURCE [ETR] available on BBFF1 or BBFF3

NAVNET GENERAL INFORMATION

Radar setup (manual tuning) for maximum detection:

1. Power on the radar and transmit.
2. Range out to maximum range.
3. Adjust **SEA** and **RAIN** control (**press [GAIN] key to access**) to off or minimum. Set **A/C AT [OFF]**.
4. Adjust **GAIN** to maximum (**press [GAIN] key to access and select [MAN] under GAIN SENSITIVITY**).
5. Slowly reduce **GAIN** until only small amounts of noise (in the form of speckles) appear on the display.
6. Set **RANGE** to the desired range.
7. Adjust **SEA** control (used to reduce echoes from surrounding waves) as required.
Start at minimum and slowly adjust higher until small targets become distinguishable and clutter is reduced and/or broken up into small dots (**Do not over adjust**).
8. Adjust **RAIN** control (used only in rain conditions) if required.
Start at minimum and slowly adjust higher until unwanted echoes and speckles are reduced (**Do not over adjust**).
9. This completes the procedure for maximum receive sensitivity and creates a reference to compare with the radar system automatic gain, sea and rain functions.

Heading Input: connect to NavNet RADAR DISPLAY only: automatically shared on NavNet network (*see note for NMEA input)

AD10 (Furuno 4-wire): connect only to the heading port of the NavNet radar display (7" or 10" [port 2], 10.4" [port 3])

***NMEA (2-wire):** connect to the NavNet radar heading input (pins 1 and 2) or any NMEA port (pins 3 and 4)

If using NMEA heading: Radar display [OUTPUT THROUGH NETWORK] port, turn **HDG "ON"** required for network sharing.

NOTE: Heading is required for radar chart overlay, waypoint mark (lollipop), TLL (target latitude/longitude), echo stretch, radar north-up, course-up, true motion and optional ARP11 (automatic radar plotter). **The ARP11 requires FURUNO AD10 heading format.**

Time Offsets (if used): This is set in [GPS SENSOR SETTINGS] or [NAV SOURCE SETTINGS] depending on the GPS source.

BBWGPS antenna: Press [MENU], [SYSTEM CONFIGURATION], [NAV OPTION], [GPS SENSOR SETTINGS], edit [LOCAL TIME OFFSET] to proper offset (only for display with BBWGPS antenna connected).

External GPS source: Press [MENU], [SYSTEM CONFIGURATION], [NAV OPTION], [NAV SOURCE SETTINGS], edit [LOCAL TIME OFFSET] to proper offset (for any display with an external GPS source and/or network displays).

IMPORTANT: Time must be offset the same for each display on the network (example: -05.00 hrs.) for proper waypoint operations.

Displaying different screen colors; factory programmed or user selectable "MANUAL" (displays menu selected colors)

Multi color radar display: Press [MENU], [RADAR DISPLAY SETUP], select "ECHO COLOR", change to "MULTI COLOR".

Chart color selections: Press [MENU], [CHART SETUP], [CHART DETAILS] (selections depend on type, C-MAP or Navionics)

Select Pre programmed or Manual color selection:

1. Enable settings by pressing [POWER/BRILL], [HUE] and selecting [DAY], [NIGHT], [TWILIGHT] or [MANUAL]

MULTIPLE DISPLAY NETWORKS:

A maximum of four(4) displays are possible on the network

Chart source allows for three additional HOST NAMES plus using own chart source.

Additional network devices including BBFF1, BBFF3 sounders and/or FAX30 weatherfax units can also be added.

Output Through Network Sentences: (Configure only on NavNet display with position source connected)

1. Press [MENU], [SYSTEM CONFIGURATION], [PORT SETUP], [OUTPUT THROUGH NETWORK]
2. Set **GGA**, **VTG** and **ZDA** to "ON" for proper position and waypoint operations (Not required in single display systems)
3. Press [RETURN], [MENU] to return to normal operations.

NOTE: Set **CHART SOURCE** options on each display in the network properly (even if no chart is present)

1. This allows for future expansion of additional charts of same type i.e. Navionics or C-Map.
2. Proper type display software; Navionics or C-MAP/NT is required (type noted on display chart door).
3. All displays within a network can then use any chart from any display on the network.
4. Access **CHART SOURCE** using **INSTALLATION SETUP (hold [MENU] while powering on display.**
5. Press [MENU], [SYSTEM CONFIGURATION], [INSTALLATION SETUP], [NETWORK SETUP], edit "CHART SOURCE".
6. Include all displays **HOST NAME**'s within the network omitting its own HOST NAME, then press [ENTER].
7. Press [RETURN], [MENU] to return to normal operations.

POWER OFF then ON after any "MENU CHANGES" to store the new information.

Refer to the Wiring configurations page or Installation and Operator Manuals regarding detailed information on any steps

NAVNET Wiring Configurations

Power supply connections are omitted for clarity
Refer to appropriate installation manual for more information

NAVNET 7" Display

NOTES:

Radar (17X2/C type) display
DATA 1 same as 10.4"
DATA 2 heading only!
DATA 3 same as 10.4" DATA 4

Plotter (GP1700C)
DATA 1 same as 10.4"
DATA 2 NMEA input/output
DATA 3 same as 10.4" DATA 4

NOTE: These are examples of NavNet wiring. Please contact Furuno or a local authorized dealer for more advanced or special configurations.

NavNet displays input & output NMEA data in RS422 (+/-) and RS232 (+/ground) voltage levels, use the appropriate connections as required.

NAVNET 10.4" Display

NOTES:

Waypoint information from a external GPS is possible by menu selection.
Press [MENU], [PLOTTER SETUP], select [QP], edit QP to "EXT WPT (RMB)" and press [ENTER].

PORT PRIORITIES:
HIGHEST:
(*BBWGPS overrides all ports)

NETWORK PORT
(any position data coming in to display)

DATA 4 (NMEA I/O)
DATA 2 (NMEA I/O)
DATA 1 (NMEA I/O)*
LOWEST:

DATA 4
remaining wire colors for 000-144-418 cable are same as shown on AIR-033-407 adapter

AIR-033-407 adapter cable
(direct connection of smart sensor to DATA 4)

Furuno BBWGPS

OR (one only!)

DATA 1 (NMEA input/output)

DATA 2 (NMEA input/output)

DATA 3 (FurunoAD10 or NMEA Heading only)

DATA 4 use AIR-033-407 adapter for DATA 4 (connect direct to DATA 1)

FURUNO BBWGPS antenna

OR

FURUNO GP32 GPS system
OR
other external GPS unit (follow manufacturer wiring specifications)

VHF RADIO (DSC input)
DATA2 shown
OR
use DATA4 RS232 NMEA output for RS232 level requirement

AND/OR

Autopilot

FURUNO PG1000

FURUNO GP32 GPS system
OR
other external GPS unit (follow manufacturer wiring specifications)

OR

FURUNO SMART DEPTH SENSOR

Connect BBWGPS attached cable directly to the NavNet display

white NMEA output(+) RS422
blue NMEA output(-) RS422

Terminal Block (local supply)

000-145-612 (1.2m) cable (included with GP32)

yellow NMEA input(+)

green NMEA input(-)

000-144-418 (5m) cable

000-117-603 (5m) cable

white (NMEA output +)
black (NMEA output -)
yellow (NMEA input +) from ext.
green (NMEA input -) NMEA device

000-117-603 (5m) cable

white (NMEA heading)
black (NMEA heading)

OR (one only!)

000-125-237 cable supplied with PG1000

000-144-418 (5m) cable

blue (input RS232)
white (output RS232)
bare wire (common ground)
■ RS422 + input (yellow)
■ RS422 - input (green)

OR (one only!)

Terminal Block (local supply)

000-145-612 (1.2m) cable (included with GP32)
yellow (output RS232)
green (input RS232)
blue (common ground)

7(P) plug
NMEA output(white RS232)
NMEA input (blue RS232)
ext. buzzer (black)
+12VDC (red)
common ground(bare wire) for 12VDC, RS232 I/O & buzzer