

VHF MARINE RADIO

INSTRUKTIONSMANUAL

- ® IP67(1 Meters dybde i 30 Minutter)
- ® Flyde Funktion



TIL BRUGEREN:

Tak fordi du har købt denne marineradio. Du vil finde det professionelle og brugerorienterede design af radioen under brug. Læs venligst alle instruktioner omhyggeligt og fuldstændigt, før du bruger radioen

ADVARSEL

- Brug aldrig nødkaldet, når dit skib eller en person ikke er i en nødsituation.
- Brug eller placer ikke transceiveren i områder med varme, fugt og støv.
- Arbejdsspændingen for transceiveren er 13,8V. Hvis strømkilden er 24V, skal du bruge en strømomformer (24V konverter til 13,8V), ellers vil transceiveren ikke fungere.
- Tilslut aldrig direkte til AC220V, dette vil ødelægge transceiveren. Hvis der registreres en unormal lugt eller røg fra transceiveren, skal du straks slukke for strømmen.
- Send ikke før tilslutning af antennen, dette vil ødelægge transceiveren.
- Efter lang tids brug bliver varmepanelet varmt, det vil sige normal tilstand.

INDHOLD

FORBEREDELSE

Leveret tilbehør.....	1
Radio montering.....	1
Antenne tilslutning.....	2
Forbindelser.....	2
Dimensioner.....	3

PANEL BESKRIVELSE

Front Panel.....	4
Mikrofon.....	5
Funktions Display.....	5

GRUNDLÆGGENDE

Tænd/sluk.....	7
Modtag og send.....	7
Kanal Gruppe valg.....	7
Kanal valg.....	7
Call kanal Programmering.....	8
Kanal kommentar.....	9
Mikrofon Låse Funktion.....	9
Display Baggrundsbelysning.....	9
Vibration Vand Dræning Funktion.....	9

SCANNING

Scan Typer.....	10
Indstil TAG kanaler.....	10
Start en Scanning.....	10

DUAL-WATCH / TRI-WATCH

Beskrivelse.....	11
Operation.....	11

DSC OPERATION

MMSI Nummer Programmering.....	12
MMSI Nummer Check.....	12
DCS Adresse ID.....	12
Nødkald.....	13
Individuelt opkald.....	14
Gruppe opkald.....	16
Alle Skipe kald.....	17
Geografisk område opkald.....	18
Position Indikation.....	18

INDSTILLINGER

Indstilling programmering.....	21
Indstilling indhold.....	21
KANaL LIST.....	23
SPECIFIKATIONER.....	24
TROUBLESHOOTING.....	24

PREPARATION

■ Leveret tilbehør

Følgende tilbehør er med i kassen:

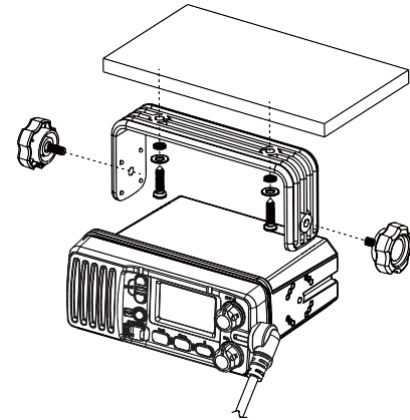
Tilbehør	Antal
DC kabel	1
Reservesikring	1
Monterings bøjle	1
Skruer til monteringsbøjle	1
Mikrofon beslag	1
Instruktionsmanual	1

■ Radio bøjlemontering

◆ Brug den medfølgende monteringsbøjle

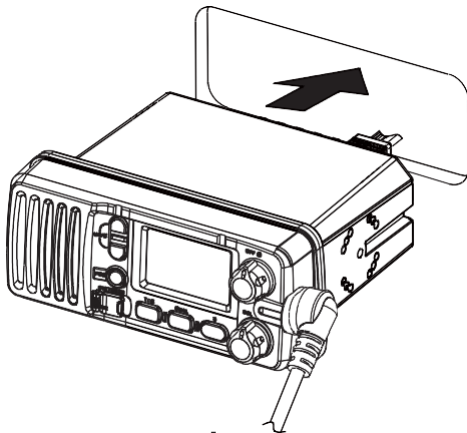
Det universelle monteringsbeslag, der følger med din transceiver, tillader montering over hovedet eller instrumentbrættet.

1. Fastgør monteringsbeslaget til hylde eller instrumentbræt med de medfølgende skruer, og monter transceiveren til monteringsbeslaget med knobboltene.
2. Monter transceiveren, så forsiden af transceiveren er 90° i forhold til din synslinje, når du betjener den, og spænd knobboltene, så transceiveren er sikkert monteret.
3. Du kan bruge en svampet pude mellem transceiveren og monteringsbeslaget for at reducere vibrationerne.



◆ Flush montering

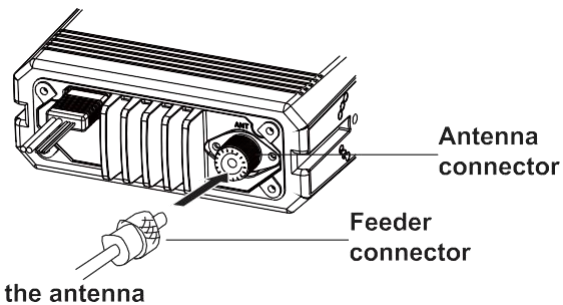
1. Skær et hul ind i instrumentpanelet (eller hvor du nu planlægger at montere transceiveren). Slide the transceiver through the holes as shown below.
2. transceiveren). Slide the transceiver through the holes as shown below.



■ Antenne montering

Tilslut venligst en antenne, før du sender. Vælg antennen med den relative frekvens og tilslut ANT-antennestikket. Brug antennen og lavt tab koncentriske med den samme naturlige impedans 50Ω .

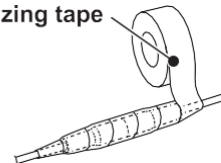
- Sending uden antenne kan beskadige transceiveren.

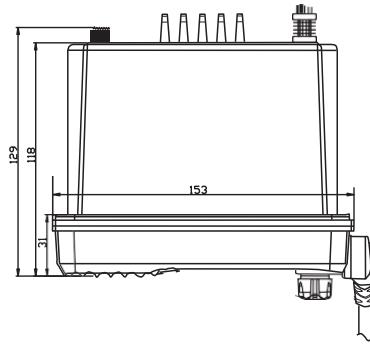


■ Forbindelser

Efter tilslutning af DC-strømkablet, GPS-modtagerens ledning og den eksterne højtalerledning skal du dække stikket og ledningerne med et klæbende tape som nedenfor for at forhindre, at vand siver ind i transceiveren.

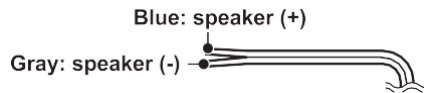
Rubber vulcanizing tape





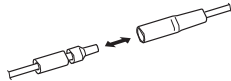
◆ Extern Højtalerledning

Forbind den eksterne højtaler.



◆ DC strømtilslutning

Forbind det medfølgende DC strømkabel fra denne forbindelse til en extern 13.8V DC strømforsyning. Forbind ikke til 24V.

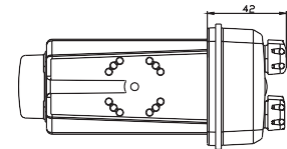
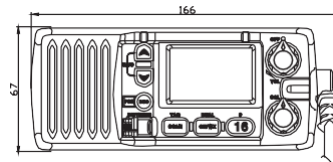
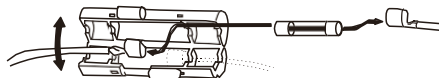


◆ Skift sikring

En sikring er monteret i det medfølgende DC strømkabel. Hvis en sikring springer, eller transceiveren holder op med at fungere, skal du finde årsagen til problemet, hvis det er muligt, og udskifte den beskadigede sikring med en ny, klassificeret.

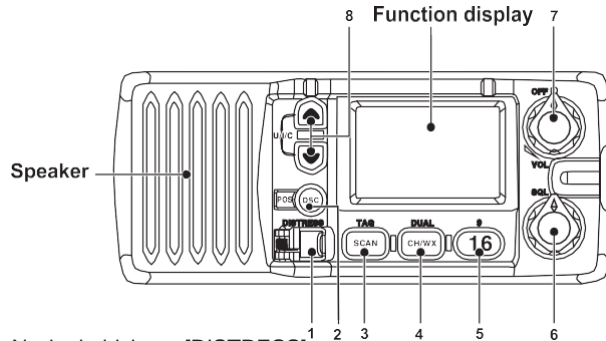
- Sluk venligst, før du udskifter sikringen.

DC15A/32V.



PANEL BESKRIVELSE

■ Front Panel



1. Nødopkaldsknap [DISTRESS]

Tryk og hold i 5 sek. for at sende et nødopkald.

2. DSC / Position Knap

→ Tryk for at komme til DSC menuen.

→ Tryk og hold i 1 sek. For at vise nuværende position fra GPS modtageren.

3. Scan / Tag Knap [SCAN]

→ Tryk for at starte eller stoppe normal eller prioritets scan.

→ Tryk og hold i 1 sek. for at indstille eller slette den viste kanal som en TAG (scannet) kanal.

Favoritkanalerne indstilles af TAG-kanalindstillingen.

→ Tryk og hold [HI/LO] og [SCAN] nede for at slette alle TAG-kanaler i den valgte kanalgruppe.

Gentag ovenstående procedure for at indstille alle TAG-kanaler.

4. Kanal / Vejrkanaltast

→ Vælg og skift den almindelige kanal og vejrkanal, når der trykkes på dem et øjeblik. → Push and hold for 1 sec. to start Dualwatch or Tri-watch.

→ Tryk for at stoppe Dualwatch eller Tri-watch, når begge er aktiveret.

→ Tryk for at flytte markøren fremad.

5. Kanal 16 / Call Channel Key [16]

→ Tryk for at vælge kanal 16.

→ Tryk og hold i 1 sek. for at vælge opkaldskanal.

"CALL" vises, når opkaldskanalen er valgt.

→ Mens du trykker og holder [CH/WX] nede, skal du trykke på [16] for at gå ind i programmeringstilstanden for kanalkommentarer.

→ Tryk for at flytte markøren tilbage.

→ Mens du tænder for strømmen, tryk [16] for at gå ind i indstillingstilstand.

Squelch Kontrol [SQL]

6. Drej for at indstille squelch-tærskelniveauet.

7. Tænd/Sluk/Volume kontrol [VOL]

8. Drej for at tænde og slukke for transceiveren og justere lydniveauet. [▲][▼] / [U/I/C]

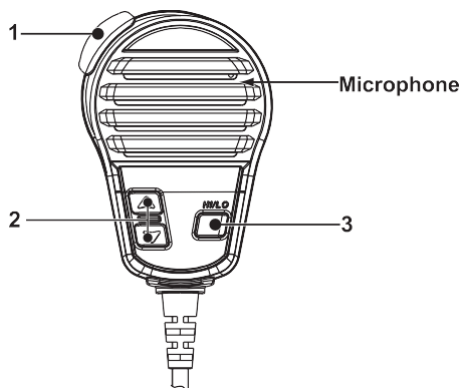
→ Vælg betjeningskanaler, indstillingstilstandsindstillinger osv.

→ Mens du trykker og holder [SCAN] nede, skal du trykke på [▲] eller [▼] for at justere lysstyrken på LCD-skærmen og tastebaggrundsbelysningen.

→ Vælg en af tre kanalgrupper i rækkefølge, når der trykkes på begge taster.

→ Mens du tænder for strømmen, skal du trykke på og holde begge taster nede for at aktivere AquaQuake-funktionen.

■ Microphone



1. [PTT]

Tryk og hold for at sende; slip for at modtage.

2. Kanal UP / DOWN Knapper[▲]/[▼]

→ Tryk på en af tasterne for at ændre betjeningskanalen, indstille tilstandsindstillinger osv.

→ Når favoritkanalfunktionen er slået TIL, tryk på en af tasterne for at vælge favoritkanalerne i den valgte kanalgruppe i rækkefølge.

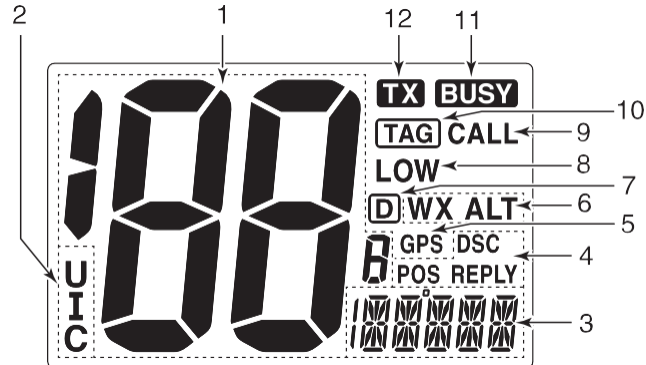
Sendestyrke Knap [HI/LO]

→ Tryk for at skifte mellem høj og lav effekt.

Nogle kanaler er kun indstillet til lav effekt.

→ Mens du trykker og holder [HI/LO], skal du tænde for strømmen for at slå mikrofonlåsfunktionen TIL og FRA.

■ Funktions Display



1. Kanal Number Læsning

- Angiv det valgte driftskanalnummer. (Se kanalliste)
- I indstillet tilstand skal du angive den valgte tilstand.

2. Kanalgruppeindikator

Angiv, om en U.S.A. "U", International "I" eller canadisk "C" kanal er i brug.

3. Kanalkommentarindikator

- Kanal kommentar vises hvis der er programmeret.
- "LOW BATTERY" ruller, når batterispændingen falder ca. 10,8V DC eller derunder.ruller, når batterispændingen falder ca. 10,8V DC eller derunder.
- "SC" blinker under prioriteret scanning; "SCAN" blinker under normal scanning.
- "DW" blinker under Dualwatch; "TW" blinker under Tri-watch.

4. DSC Indikator

- "DSC" vises, når der modtages et DSC-opkald.
- "POS REPLY" Viser når et positionskald/rapport bliver modtaget.

5. GPS Indikator

- Vises, mens gyldige positionsdata modtages.
- Blinker, når der modtages ugyldige positionsdata.
- Forsvinder, når der ikke er tilsluttet en GPS-modtager.

6. Vejrkanal Indikator

- "WX" vises, når en vejrkanal er valgt.
- "WX ALT" vises, når vejralarmfunktionen er i brug; blinker, når der modtages en alarmtone. Duplex Indikator

Vises når en duplexkanal er valgt.

7. Lav sendestyrke indikator

Vises når lav sendestyrke er valgt.

8. Call Kanal Indikator

Vises når call kanal er valgt.

9. TAG Kanalindikator

Vises når en TAG kanal er valgt.

10. Busy Indikator

Vises når man modtager et signal eller når squelch åbner.

11. Sende Indikator

Vises når man sender.

GRUNDLÆGGENDE

■ Tænd og sluk

1. Roter [VOL] med uret for at tænde.
2. Roter [VOL] mod uret for at slukke.

■ Modtag og Send

◆ Send

1. Tryk på [HI/LO] på mikrofonen for at vælge udgangseffekten, hvis det er nødvendigt.
 - "LOW" vises, når lav effekt er valgt.
 - Vælg lav effekt til kommunikation over kort afstand, vælg høj effekt til kommunikation over længere afstande.
 - Nogle kanaler er kun beregnet til lavt strømforbrug.
 - Tryk og hold [PTT] nede for at sende, og tal derefter ind i mikrofonen.
 - "TX" vises.
 - Kanal 70 kan ikke bruges til andet end DSC.
2. Slip [PTT] for at modtage.

Note:

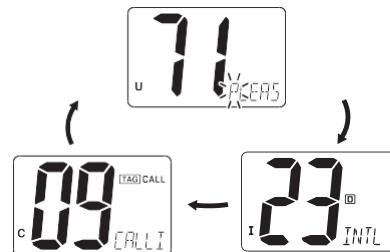
- Send ikke, før du tilslutter antennen, dette vil ødelægge transceiveren.
- TOT-funktionen (Time-out Timer) forhindrer kontinuerlig transmission over en forudindstillet tidsperiode, efter at transmissionen er startet.

◆ Modtage

1. Indstil lyd og squelch niveau.
2. Roter [SQL] helt mod uret først.
3. Roter [VOL] for at justerer lydniveauet.
4. Roter [SQL] med uret indtil støjen forsvinder.
Når der modtages et signal vises " **BUSY** " og der kommer lyd ud af højtaleren.

■ Kanal Gruppe Valg

1. Transceiveren er forprogrammeret med 59 U.S.A., 59 internationale og 63 canadiske kanaler. Disse kanalgrupper kan angives til betjeningsområdet.
2. Tryk [CH/WX] for at vælge en almindelig kanal.
 - Hvis en vejrkanaal vises, tryk [CH/WX] igen.
3. Tryk [U/I/C] (både [▲] og [▼]) på transceiveren for at skifte kanalgruppe, hvis nødvendigt.
 - U.S.A., International og Canadisk kanal grupper kan vælges i Rækkefølge
4. Push [▲] or [▼] to select a channel.
" **D** "appears for duplex channels.



■ Channel Selection

◆ Channel 16

Kanal 16 er nød- og sikkerhedskanalen. Den bruges til at etablere første kontakt med en station og til nødkommunikation. Kanal 16 overvåges under både Dual-watch og Tri-watch. Mens du står ved, skal du overvåge

1. Tryk kort på [16] for at vælge kanal 16.
2. Tryk [CH/WX] for at komme tilbage til tilstanden før valget af kanal 16, eller tryk [▲] eller [▼] for at vælge kanal.



Scrolls

Bekvemst:

Når favoritkanalfunktionen er slået TIL, vælger [▲]/[▼]-tasterne på mikrofonen favoritkanalerne i den valgte kanalgruppe i rækkefølge, når der trykkes på dem. The favorite channels are set by the TAG channel setting. (P.10)

◆ Kanal 9 (Call kanal)

Hver almindelig kanalgruppe har en separat opkaldskanal til fritidsbrug (Kanal 9; standard). Opkaldskanalen overvåges under Tri-watch.

1. Tryk og hold [16] i 1 sek. for at vælge call kanal i den valgte kanalgruppe. "CALL" og call kanal nummer vises.
2. Tryk [CH/WX] for a returnerer til tilstanden før valg af call kanal, eller tryk [▲] or [▼] for at vælge en kanal.



Scrolls

◆ Vejr kanaler

Transceiveren har 10 for-programmeret vejr kanaler. Transceiveren kan automatisk detekterer en vejralarm tone på valgte vejrkanal imens den modtager kanalen eller under scanning.

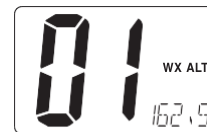
1. Tryk [CH/WX] en eller to for at vælge en vejrkanal.

- "WX" når en vejrkanal er valgt.
- "WX ALT" vises når vejralarm funktionen er i brug.

2. Tryk [▲] eller [▼] for at vælge kanal.



When weather alert is OFF.



When weather alert is ON.

■ Call kanal Programmering

Call kanal bliver brugt kanal 9 (standard), du kan programmerer call kanal med din mest brugte kanal i hver kanal gruppe for hurtigt genopkald.

1. Tryk [U/I/C] (både [▲] og [▼] på transceiveren flere gange for at vælge den ønskede kanalgruppe (U.S.A., International eller Canada) for at programmerer.
2. Tryk og hold [16] i 1 sek. for at vælge call kanal i den valgte kanalgruppe.
 - "CALL" og call kanal nummer vises.
3. Tryk og hold [16] igen i 3 sek. (indtil et langt beep skifter til 2 korte beep) for at komme til call kanal programmering tilstand.
 - Kanal numre starter med at blinke.



4. Tryk [▲] eller [▼] for at vælge den ønskede kanal.
5. Tryk [16] for at programmerer den viste kanal som call kanal.
 - Tryk [CH/WX] for at annullerer.



■ Kanal Kommentarer

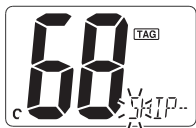
Hukommelseskanaler kan mærkes med et unikt alfanumerisk ID på op til 10 tegn hver. Kommentarer på mere end 6 tegn ruller automatisk ved kanalkommentarindikatoren efter kanalvalget.

Store bogstaver, små bogstaver (undtagen f, j, k, p, s, v, x, z), 0 til 9, nogle symboler (= + - ./) og plads kan bruges.

1. Vælg den ønskede kanal.

□ Annuller Dualwatch, Tri-watch eller scan på forhånd.

2. Mens du trykker på [CH/WX], tryk på [16] for at redigere kanalkommentaren.



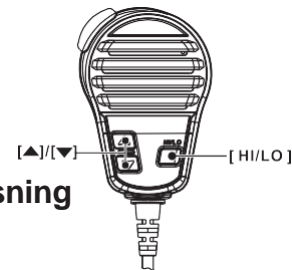
1. Tryk [▲] eller [▼] for at vælge den ønskede karakter.
 - Tryk [16] eller [CH/WX] for at flytte cursoren frem eller tilbage respektivt.
2. Gentag trin ③ for at indsætte alle karakterer.
3. Tryk [DSC] for at indstille kommentaren.
 - Tryk [SCAN] for at annullerer.
 - Cursoren og karakteren stopper med at blinke.

■ Mikrofon Låse Funktion

Mikrofon låse funktion låser [▲] og [▼] på

mikrofonen. Det forhindrer kanalskifte ved et uheld og funktions adgang.

→ While pushing and holding [HI/LO] on the microphone, turn power ON to toggle the microphone lock function ON and OFF.



■ Display Baggrundsbelysning

Funktionsdisplayet og tasterne kan være baggrundsbelyst for bedre synlighed under dårlige lysforhold.

→ Mens du trykker og holder [SCAN], tryk [▲] eller [▼] for at justerer brightness i LCD og taste lyset.

- Baggrundsbelysning har 3 niveauer og slukket.

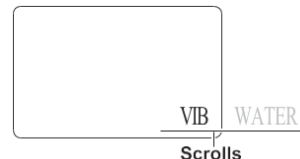
■ Viberende vand dræn funktion

Denne transceiver hjælper med at dræne vand væk fra højttalerhuset (vand, der ellers kunne dæmpe lyden fra højttaleren). Transceiveren udsender en viberende støj, når denne funktion bruges.

1. Mens du trykker og holder [▲] og [▼], tændes for strømmen. "VIB WATER" vises.

En lav beep tone lyder imens [▲] eller [▼] tasterne er holdt inde for at dræne vand, uanset [VOL] kontrol indstillingen.

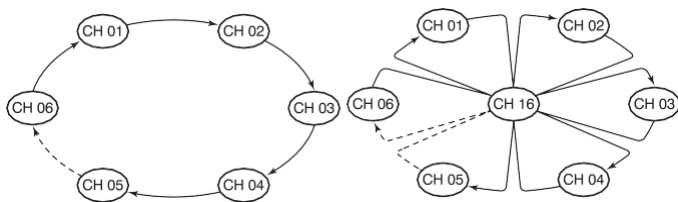
- Transceiveren kan ikke betjenes imens Vibration funktionen er aktiveret.



SCANNING

■ Scannings Typer

1. Transceiveren har prioriteret scanning og normal scanning. (Se programmering af indstillingstilstand).
2. Når vejralarmfunktionen er slået TIL, kontrolleres den tidligere valgte (sidst brugte) vejrkanal også under scanning.
3. Indstil TAG-kanalerne (scannede kanaler) før scanning. Ryd TAG-kanalerne, som uhensigtsmæssigt stopper scanningen.
4. Normal scanning:
5. Normal scanning søger gennem alle TAG-kanaler i rækkefølge. Kanal 16 er ikke markeret, medmindre kanal 16 er indstillet som en TAG-kanal.
6. Prioritetsscanning:
7. Prioritetsscanning søger gennem alle TAG-kanaler i rækkefølge, mens kanal 16 overvåges.



Normal Scan

Priority Scan

■ Indstil TAG kanaler

For mere effektiv scanning skal du tilføje ønskede kanaler som TAG-kanaler eller rydde TAG'et for uønskede kanaler.

Kanaler, der ikke er tagget, vil blive sprunget over under scanning.

Indstilling / sletning af en enkelt tagget kanal

1. Tryk [U/I/C] (både [▲] og [▼]) flere gange for at vælge den ønskede kanal gruppe.
2. Vælg den ønskede kanal for at indstille som en TAG kanal.
3. Tryk og hold [SCAN] i 1 sek. For at indstille den vistekanal som TAG kanal.
4. "TAG" vises i displayet.
5. Gentag trin ③ i TAG kanal indstillingerne.
6. "TAG" forsvinder.

◆ Indstil / reset alle Taggede kanaler

1. Mens du trykker og holder [HI/LO] på mikrofonen, skal du trykke på [SCAN] i 3 sek. for at slette alle TAG-kanaler i den valgte kanalgruppe.
2. Gentag ovenstående procedure for at indstille alle TAG-kanaler.

■ Start en scanning

Indstil scanninggenoptagelsestimeren på forhånd ved brug af indstillingstilstand.

1. Tryk på [SCAN] for at starte prioritet eller normal scanning.
 - "SC" blinker under prioriteret scanning; "SCAN" blinker under normal scanning.
 - Kanal 16 overvåges under prioriteret scanning.
 - Tryk på [▲] eller [▼] for at ændre scaningsretningen.
 - Der lyder en bip-tone, og "SC 16" blinker ved kanalkommentarindikatoren, når der modtages et signal på kanal 16 under prioriteret scanning.
2. Tryk på [SCAN] for at stoppe scanningen.

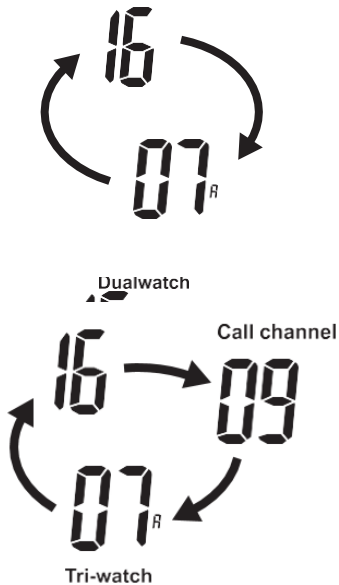
DUAL-WATCH / TRI-WATCH

■ Beskrivelse

Transceiveren har Dual-watch og Tri-watch.

Dual-watch overvåger kanal 16, mens du modtager på en anden kanal.

Tri-watch overvåger kanal 16 og opkaldskanalen, mens den modtager en anden kanal.



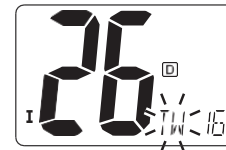
■ Operation

1. Vælg Dualwatch eller Tri-watch i indstillet tilstand.
2. Vælg den ønskede kanal.
3. Tryk og hold [CH/WX] nede i 1 sek. for at starte Dualwatch eller Tri-watch.
 - "DW" blinker under Dualwatch; "TW" blinker under Tri-watch.
 - Der lyder en bip-tone, når der modtages et signal på kanal 16.

For at annullerer Dualwatch eller Tri-watch, tryk [CH/WX].



Dualwatch



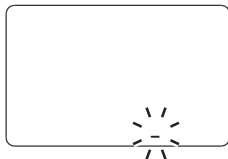
Tri-watch

DSC OPERATION

■ MMSI Nummer Programmering

Den 9-cifrede MMSI (Maritime Service Identity; DSC self ID)-kode kan programmeres ved ON.

1. Roter [VOL] for at slukke.
2. Tryk og hold [DSC], imens du tænder ON for at indtaste MMSI nummer programmerings tilstand.
3. Når displayet vises, slip [DSC], en markør begynder at blinke.

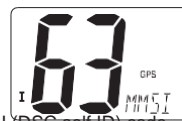


4. Edit the specified MMSI code by pushing [▲] or [▼].
 - Push [16] or [CH/WX] to move the cursor forward or backward, respectively.
 5. Input 9-digit code, then push [DSC] to set the code.
 - Returns to the normal operation.
- Note:**
- This code programming can be performed only twice. After the code programming, it can be changed only by your dealer or distributor.

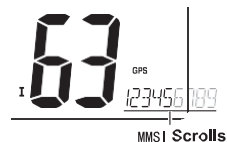
■ MMSI Code Check

The 9-digit MMSI (DSC self ID) code can be checked.

1. Push [DSC] to enter the DSC menu.
2. Push [▲] or [▼] to select "MMSI" and push [DSC].



3. Check the 9-digit MMSI (DSC self ID) code.
 - The MMSI code is displayed and scrolls at the channel comment indicator.



4. Push [DSC] to return to the normal operation.

■ DCS Address ID

A total of 30 DSC address IDs (9-digit) can be programmed and named with up to 5 characters.

◆ Programming Address ID

1. Push [DSC] to enter the DSC menu.
2. Push [▲] or [▼] to select "ADDRESS", and push [DSC].



3. Push [▲] or [▼] to select "ADD", and push [DSC].



4. Push [▲] or [▼] to input 9-digit of the appropriate address ID.
 - Push [16] or [CH/WX] to move the cursor forward or backward, respectively.
 - Push [SCAN] to cancel and exit the condition.

Note: 1st digit “0” is fixed for a group ID. When you input 1st digit “0” and other 8 digits, the ID is automatically registered as a group ID.



5. After inputting 9-digit ID, push [DSC] to input 5 characters ID name using [▲] or [▼].
 - Push [16] or [CH/WX] to move the cursor forward or backward, respectively.
 - Push [SCAN] to cancel and exit the condition.
6. Push [DSC] to program and exit the DSC menu.

◆ Deleting Address ID

1. Push [DSC] to enter the DSC menu.
2. Push [▲] or [▼] to select “ADDRESS” and push [DSC].



3. Push [▲] or [▼] to select “DEL”, then push [DSC].

- When no address ID is programmed, “NO ID” is displayed.



4. Push [▲] or [▼] to select the desired ID name for deleting and push [DSC], “READY” appears.



■ Distress Call

A Distress call should be transmitted if, in the opinion of the master, the ship or a person is in distress and requires immediate assistance.

Note: Never use the Distress call when your ship or a person is not in an emergency. A Distress call can be used only when immediate help is needed.

◆ Transmitting a Distress Call

1. While opening the key cover, push [DISTRESS] for 5 sec. to transmit the Distress call.
 - Emergency channel (Channel 70) is automatically selected and the Distress call is transmitted.



2. After transmitting the call, the transceiver waits for an acknowledgment call on Channel 70.
 - The Distress call is automatically transmitted about every 4 minutes.
 - “DSC REPEAT” scrolls at the channel comment indicator.



3. After receiving the acknowledgment, reply using the microphone.
 - “RCV DISTRESS ACK” scrolls at the channel comment indicator.
4. Push and hold [DISTRESS] for 5 sec. to transmit a re-newed Distress call, if desired.
5. Push any key except [DISTRESS] to cancel the ‘call repeat’ mode.

Note: A distress alert contains:

- Kinds of distress: Undesignated distress
- Position data: GPS position data held until receiving an ‘acknowledgement’.

◆ Receiving a Distress Call

While monitoring Channel 70 and a Distress call is received:

1. The emergency alarm sounds.
 - Push any key to stop the alarm.
2. “DSC” appears and “RCV DISTRESS” scrolls at the channel comment indicator, then Channel 16 is automatically selected.
3. Continue monitoring Channel 16 as a coast station may require assistance.



◆ Receiving a Distress Acknowledgement

While monitoring Channel 70 and a Distress acknowledgement to other ship is received:

1. The emergency alarm sounds.
 - Push any key to stop the alarm.

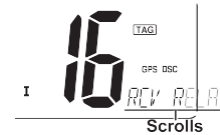
2. “DSC” appears and “RCV DISTRESS ACK” scrolls at the channel comment indicator, then Channel 16 is automatically selected.



◆ Receiving a Distress Relay Call

While monitoring Channel 70 and a Distress Relay acknowledgement is received:

1. The emergency alarm sounds.
 - Push any key to stop the alarm.
2. “DSC” appears and “RCV RELAY” scrolls at the channel comment indicator, then Channel 16 is automatically selected.



■ Individual Call

The Individual call function allows you to transmit a DSC signal to a specific ship only.

◆ Transmitting Individual Call

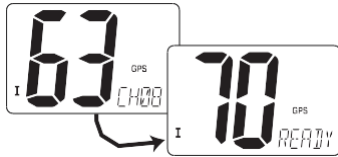
1. Push [DSC] to enter the DSC menu.
 - “INDIVIDUAL” scrolls at the channel comment indicator.



- Push [DSC] to select the desired pre-programmed individual address using [▲] or [▼], then push [DSC].
 - The ID code for the Individual call must be set in advance.



- Push [▲] or [▼] to select a desired intership channel, push [DSC].
 - Intership channels are already preset into the transceiver in recommended order.
 - Channel 70 is selected and "READY" appears after pushing [DSC].



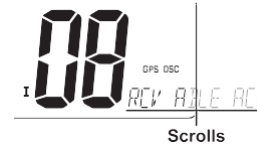
- Push [DSC] to transmit the Individual call.
 - If Channel 70 is busy, the transceiver stands by until the channel becomes clear.



- After transmitting the Individual call, standby on Channel 70 until an acknowledgement is received.
 - "WAIT ACK" scrolls at the channel comment indicator.



- When the acknowledgement 'Able to comply' is received, the specified channel (in step ③) is selected with beeps automatically. Or, when the acknowledgement 'Unable to comply' is received, the display returns to the operated channel (before entering the DSC menu) with beeps.
 - "RCV ABLE ACK" OR "RCV UNABLE ACK" scrolls at the channel comment indicator.



- Push and hold [PTT] to communicate your message to the responding ship when 'Able to comply' is received.

◆ Transmitting Individual Acknowledgement

When receiving an Individual call, you can transmit an acknowledgement ('Able to comply' or 'Unable to comply') by using the on screen prompts (refer to "Receiving an Individual call"). You can also send an acknowledgement through the menu system as follows.

- Push [DSC] to enter the DSC menu.
- Push [▲] or [▼] to select "INDV ACK" and push [DSC].
 - "INDV ACK" item appears after an Individual call is received.
 - "INDV ACK" item disappears if another call is received after the Individual call.
 - The Individual acknowledgement can be transmitted to the last received Individual call only.



- Push [▲] or [▼] to select the acknowledgement "ABLE" or "UNABL".



4. Push [DSC] to enter the standby condition for Individual acknowledgement call.

- "READY" appears at the channel comment indicator.



5. Push [DSC] to transmit the acknowledgement to the selected station.



6. After the Individual acknowledgement has been transmitted, the display changes to the channel specified by the calling station automatically when "ABLE" is selected.



◆ Receiving an Individual Call

While monitoring Channel 70 and an Individual call is received:

1. The emergency alarm or beeps sound depending on the received category.
2. "DSC" appears and "RCV INDIVIDUAL" scrolls at the channel comment indicator.
3. Push any key to stop beep.
4. Push [DSC] to reply the call and select the channel specified by the calling station for voice communication; Push any other key to ignore the Individual call.



■ Group Call

The Group call function allows you to transmit a DSC signal to a specific group only.

◆ Transmitting Group Call

1. Push [DSC] to enter the DSC menu.
2. Push [▲] or [▼] to select "GROUP", and push [DSC].

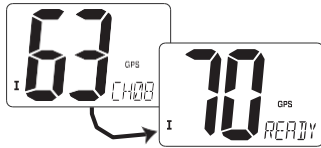


3. Push [▲] or [▼] to select the desired pre-programmed group address, and push [DSC].

- The ID code for the Group call must be set in advance.



- Push [▲] or [▼] to select the desired intership channel, and push [DSC].
 - Channel 70 is selected and “READY” appears.



- Push [DSC] to transmit the Group call.
 - If Channel 70 is busy, the transceiver stands by until the channel become clear.



- After the Group call has been transmitted, the display changes to the previously specified channel.



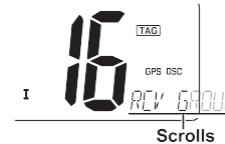
- Push and hold [PTT] to communicate your message to the responding ship.

◆ Receiving a Group Call

While monitoring Channel 70 and a Group call is received:

- The emergency alarm or beeps sound depending on the received category.
- “DSC” appears and “RCV GROUP” scrolls at the channel comment indicator.

- Push any key to stop beep.
- Push [DSC] to select the channel specified by the calling station for voice communication; Push any other key to ignore the Group call.



■ All Ships Call

The All Ships call function allows you to transmit a DSC signal to all ships.

◆ Transmitting All Ships Call

Large ships use Channel 70 as their ‘listening channel’. When you want to announce a message to these ships, use the ‘All Ships call’ function.

- Push [DSC] to enter the DSC menu.
- Push [▲] or [▼] to select “ALL SHIPS”.

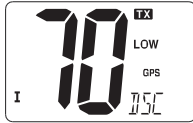


- Push [DSC] to enter the standby condition for All Ships call.
 - Channel 70 is selected and “READY” appears.



- Push [DSC] to transmit the All Ships call.

- Low power is selected.



5. After the All Ships call has been transmitted, the display changes to Channel 16 automatically.



◆ Receiving an All Ships Call

While monitoring Channel 70 and an All Ships call is received:

1. The emergency alarm sounds when the category is 'Distress' or 'Urgency'; 2 beeps sound for other categories.
2. "DSC" appears and "RCV ALL SHIPS" scrolls at the channel comment indicator.
3. Push any key to stop beep.
4. Push [DSC] to monitor channel 16 for an announcement from the calling vessel, push any other key to ignore the call.



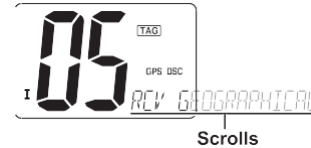
■ Geographical Area Call

The Geographical Area call function allows you to transmit a DSC signal to all ships in a geographical area.

◆ Receiving a Geographical Area Call

While monitoring Channel 70 and a Geographical Area call (for the area you are in) is received:

1. The emergency alarm or beeps sound depending on the received category.
2. "DSC" appears and "RCV GEOGRAPHICAL" scrolls at the channel comment indicator.
3. Push any key to stop the beep.
4. Push [DSC] to change to the channel specified by the calling station for voice communication; Push any other key to ignore the Geographical Area call.

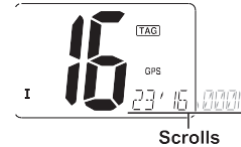


■ Position Indication

◆ Positioning Instructions

Push and hold [DSC] for 1 sec. to display the current position.

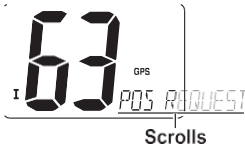
- 'Latitude' and 'Longitude' scroll in sequence at the channel comment indicator.
- "NO POSITION" scrolls when no GPS is connected.
- "GPS" blinks when the GPS data is invalid.



◆ Transmitting Position Request Call

Transmit a Position Request call when you want to know a specified ship's current position, etc.

1. Push [DSC] to enter the DSC menu.
2. Push [▲] or [▼] to select "POS REQUEST", then push [DSC].



3. Push [▲] or [▼] to select the desired pre-programmed individual address.
 - The ID code for position request must be set in advance.



4. Push [DSC] to enter the standby condition for Position Request call.
 - Channel 70 is selected and "READY" appears.



5. Push [DSC] to transmit the Position Request call.



6. After the Position Request call has been transmitted, the following indication is displayed.

- "WAIT ACK" scrolls at the channel comment indicator.

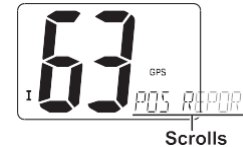


7. Push any key to exit the condition and return to the normal operation.

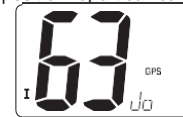
◆ Transmitting Position Report Call

Transmit a Position Report call when you want to announce your own position to a specific ship and to get an answer, etc.

1. Push [DSC] to enter the DSC menu.
2. Push [▲] or [▼] to select "POS REPORT", and push [DSC].



3. Push [▲] or [▼] to select the desired pre-programmed individual address.
 - The ID code for the position report call can be set in advance.



4. Push [DSC] to enter the standby condition for Position Report call.
 - Channel 70 is selected and "READY" appears.



5. Push [DSC] to transmit the Position Report call.



6. After the Position Report call has been transmitted, stand by on Channel 70 until an acknowledgement is received.

- "WAIT ACK" scrolls at the channel comment indicator.

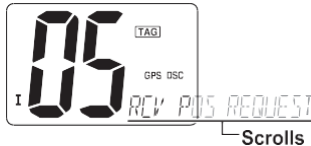


7. Push any key to exit the condition and return to the normal operation.

◆ Receiving a Position Request Call

While monitoring Channel 70 and a Position Request call is received:

1. "DSC" appears and "RCV POS REQUEST" scrolls at the channel comment indicator.
2. Push any key to stop the beep.
3. Push [DSC] to reply to the call; Push any other key to ignore the call.

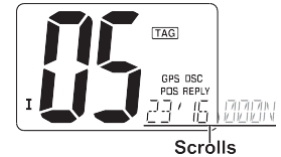


◆ Receiving a Position Report Call

While monitoring Channel 70 and a Position Report call is received:

1. "DSC" appears and "RCV POS REPORT" scrolls at the channel comment indicator.
2. Push any key to stop the beep.

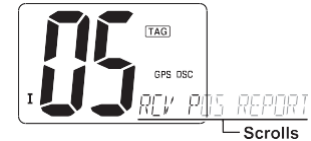
3. Push [DSC] to reply to the call; Push any other key to ignore the call.
 - The 'Latitude' and 'Longitude' from the called station is displayed and scrolled automatically in order of Latitude co-ordinates and then Longitude co-ordinates after replying the call.



◆ Receiving a Position Reply Call

While monitoring Channel 70 and a Position Reply call is received:

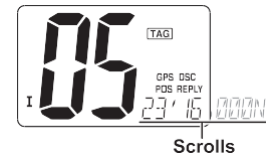
1. "DSC" and "POS REPLY" appear in the display.
 - The 'Latitude' and 'Longitude' from the called station is displayed and scrolled automatically in order of Latitude co-ordinates and then Longitude co-ordinates.
2. Push any key to stop the beep.



◆ Receiving a Position Report Reply Call

While monitoring Channel 70 and a Position Report Reply call is received:

1. "DSC" and "POS REPLY" appear in the display.
 - The 'Latitude' and 'Longitude' you have sent is displayed and scrolled automatically in order of Latitude co-ordinates and then Longitude co-ordinates.
2. Push any key to stop the beep.



SET MODE

■ Set Mode Programming

Set mode is used to change the conditions of the transceiver's functions: Scan type (Normal or Priority), Scan resume timer, Weather alert, Dual/Tri-watch, DSC watch, Beep tone, Auto acknowledgement and Favorite channel function.

Set mode operation

1. Turn power OFF.
2. While pushing [16], turn power ON to enter Set mode.
3. After the display appears, release [16].
 - "SCAN" appears at the channel comment indicator.
4. Push [16] to select the desired item, if necessary.
5. Push [▲] or [▼] to select the desired condition of the item.
6. Turn power OFF, then ON again to exit Set mode.

No.	Display	Item	Option	Default
1	SCAN	Scan type	n- (normal scan) / p- (priority scan)	n- (normal scan)
2	TIMER	Scan resume timer	of (OFF) / on (ON)	of (OFF)
3	WX ALERT	Weather alert	of (OFF) / on (ON)	of (OFF)
4	DUAL	Dual/Tri-watch	d-(Dualwatch) / t- (Tri-watch)	d-(Dualwatch)
5	DSC WATCH	DSC watch	of (OFF) / on (ON)	of (OFF)
6	BEEP	Beep tone	of (OFF) / on (ON)	on (ON)
7	AUTO ACK	Auto acknowledgement	of (OFF) / on (ON)	of (OFF)
8	FAVORITE CH	Favorite channel	of (OFF) / on (ON)	on (ON)

■ Set Mode Items

◆ Scan Type

The transceiver has 2 scan types: Normal scan and Priority scan. Normal scan searches all TAG channels in the selected channel group. Priority scan searches all TAG channels in sequence while monitoring Channel 16.

◆ Scan Resume Timer

The scan resume timer can be selected as a pause (OFF) or timer scan (ON). When OFF is selected, the scan pauses until the signal disappears. When ON is selected, the scan pauses 5 sec. and resumes even if a signal has been received on any other channel than Channel 16.

◆ Weather Alert

A NOAA broadcast station transmits a weather alert tone before important weather information. When the weather alert function is turned ON, the transceiver detects the alert, then the "WX ALT" indicator blinks until the transceiver is operated. The previously selected (used) weather channel is checked any time while scanning.

- "WX ALT" appears instead of "WX" indication when the function is set ON.

◆ Dual / Tri-watch

This item can be selected as Dualwatch or Tri-watch.

◆ DSC Watch

DSC watch monitors Channel 70 while you are receiving another channel.

If a distress signal is received on Channel 70, the transceiver monitors Channel 16 and 70 alternately until the distress signal disappears. If a signal is received on another channel, DSC watch pauses until the signal disappears.

- This function may not be available for some channel groups depending on dealer setting.
- "DSC WATCH" scrolls at the channel comment indicator.

◆ Beep Tone

You can select silent operation by turning beep tones OFF or you can have confirmation beeps sound at the push of a key by turning beep tones ON.

◆ Automatic Acknowledgement

This item sets the Automatic acknowledgement function ON or OFF.

When Position Request call or Position Report call is received, transceiver automatically transmits Position Request Reply call or Position Report Reply call, respectively.

- "AUTO ACK" scrolls at the channel comment indicator.

◆ Favorite Channel

This item sets the Favorite channel function ON or OFF.

The favorite channel is programmed by the TAG channel setting.

When the Favorite channel function is turned ON, [▲] or [▼] keys on the microphone select the favorite channels in the selected channel group in sequence when pushed.

- "FAVORITE CH" scrolls at the channel comment indicator.

■ CHANNEL LIST

Channel number					Frequency(MHz)					Channel number					Frequency(MHz)					Channel number					Frequency(MHz)				
USA	INT	CAN	Transmit	Receive	USA	INT	CAN	Transmit	Receive	USA	INT	CAN	Transmit	Receive	USA	INT	CAN	Transmit	Receive	USA	INT	CAN	Transmit	Receive	USA	INT	CAN	Transmit	Receive
	01	01	156.050	160.650		21	21	157.050	161.650	68	68	68	156.425	156.425	86A			157.325	157.325										
01A			156.050	156.050	21A		21A	157.050	157.050	69	69	69	156.475	156.475	87	87	87	157.375	161.975										
	02	02	156.100	160.700			21b	Only receiver	161.650	70 ³	70 ³	70 ³	156.525	156.525	87A			157.375	157.375										
	03	03	156.150	160.750		22		157.100	161.700	71	71	71	156.575	156.575	88	88	88	157.425	162.025										
03A			156.150	156.150	22A		22A	157.100	157.100	72	72	72	156.625	156.625	88A			157.425	157.425										
	04		156.200	160.800		23	23	157.150	161.750	73	73	73	156.675	156.675															
		04A	156.200	156.200	23A			157.150	157.150	74	74	74	156.725	156.725															
	05		156.250	160.850	24	24	24	157.200	161.800	75*1	75*1	75*1	156.775	156.775															
05A		05A	156.250	156.250	25	25	25	157.250	161.850	76*1	76*1	76*1	156.825	156.825															
06	06	06	156.300	156.300			25b	Only receiver	161.850	77*1	77	77*1	156.875	156.875															
	07		156.350	160.950	26	26	26	157.300	161.900		78		156.925	161.525															
07A		07A	156.350	156.350	27	27	27	157.350	161.950	78A		78A	156.925	156.925															
08	08	08	156.400	156.400	28	28	28	157.400	162.000		79		156.975	161.575															
09	09	09	156.450	156.450			28b	Only receiver	162.000	79A		79A	156.975	156.975															
10	10	10	156.500	156.500		60	60	156.025	160.625		80		157.025	161.625															
11	11	11	156.550	156.550		61		156.075	160.675	80A		80A	157.025	157.025															
12	12	12	156.600	156.600	61A		61A	156.075	156.075		81		157.075	161.675															
13 ²	13	13 ¹	156.650	156.650		62		156.125	160.725	81A		81A	157.075	157.075															
14	14	14	156.700	156.700			62A	156.125	156.125		82		157.125	161.725															
15 ²	15 ¹	15 ¹	156.750	156.750		63		156.175	160.775	82A		82A	157.125	157.125															
16	16	16	156.800	156.800	63A			156.175	156.175		83	83	157.175	161.775															
17 ¹	17	17 ¹	156.850	156.850		64	64	156.225	160.825	83A		83A	157.175	157.175															
	18		156.900	161.500	64A		64A	156.225	156.225			83b	Only receiver	161.775															
18A		18A	156.900	156.900		65		156.275	160.875	84	84	84	157.225	161.825															
	19		156.950	161.550	65A	65A	65A	156.275	156.275	84A			157.225	157.225															
19A		19A	156.950	156.950		66		156.325	160.925	85	85	85	157.275	161.875															
20	20	20 ¹	157.000	161.600	66A	66A	66A ¹	156.325	156.325	85A			157.275	157.275															
20A			157.000	157.000	67 ²	67	67	156.375	156.375	86	86	86	157.325	161.925															

¹Low power only. ²Momentary high power. ³DSC operation.

■ SPECIFICATIONS

General	
Frequency coverage	TX: 156.025-157.425 MHz
	RX: 156.050 -163.275 MHz
Mode	FM (16K0G3E) DSC (16K0G2B)
Frequency stability	± 10ppm
Operating temperature range	-20°C ~ +60°C
Antenna impedance	50Ω
Dimensions (WxDxH)	153mmx152mmx67mm
Weight (main unit)	742g (with microphone)

Transmitter		Receiver	
Output power	25W / 1W	Sensitivity	≤0.2uV
Max. frequency deviation	±5.0 kHz	Squelch sensitivity	≤0.2uV
Spurious emissions	≤-70dB (H)	Adjacent channel selectivity	≥70dB
	≤-56dB (L)	Spurious response rejection ratio	≥70dB
Adjacent channel power	≥70dB	Intermodulation rejection ratio	≥70dB
Audio harmonic distortion	≤10%	Max. current	≤1.5A
Current drain	≤5.5A (H)	Audio output power	≥4.5W (10%)
	≤1.5A (L)	GPS signal	Build in
Input resistance	2kΩ	Output impedance	4Ω

■ TROUBLESHOOTING

Issues described in the following table are some common operational failure. These types of errors are generally due to improperly connected, the operation caused by incorrect settings, or operator error caused due to incomplete programming. These problems are usually not caused by circuit failure. Before suspect intercom failure, please refer to the relevant parts of these forms and the instructions for use.

Question	Possible Cause	Solutions	Reference page
Power did not respond.	1. the power cable is connected well. 2. the power cable fuse broken. 3. the voltage exceeds 17V or below 9V.	1, check the power cable is connected correctly: red (+); black (-). 2, then find the cause of blown fuse, replace the fuse current to 15A. 3, adjust the power supply is 13.8V.	3
Unable to connect with GPS.	1. connection error. 2. different external GPS format.	1, check the connections are correct. 2, external GPS format should be NMEA0183-2.0.	3
Can not be scanned.	Not set mark channels (TAG).	The channel you want to scan is set to mark channels.	10
Can not launch.	Work on the weather channel or 70 channels.	Exit the weather channel or 70 channels.	4,8
High power can not be selected.	Some channels can transmit at low power.	Choose other channels.	5,7
The same channel can not talk.	1, the channel is different frequency (DUP). 2, the working group on its own channel.	1, select a channel. 2, the channel is set to the same frequency.	5,7
No beep	Beep off	Open the beep function in the settings mode.	22
Can not transmit a distress call.	MMSI code is not set.	Hold down the [DSC] key to boot into MMSI setting mode.	12
No sound from the speaker.	1, tone squelch level too. 2, the volume is too small. 3, the speaker grid water.	1, rotate [SQL] knob to adjust the squelch level. 2, rotate [VOL] knob to adjust the volume. 3, the use of vibration drainage water discharge.	7,9



VHF MARINE TRANSCEIVER

