25DEC14, Updated 08DEC15

Icom IC M802 with serial number starting with 11, e.g. 11xxxxx, has a new version of software.

The IC-M802 USA and CS-M802 new versions are updated to be compatible with the latest ITU-R M493-13 standard for MF/HF DSC Class E operation.

After remaining stable since the introduction of the Icom M802, Icom has now released a slightly different version of the M802. The change is primarily the operating software of the M802. No other physical changes have been noted at this time.

After researching the issue it appears that Icom may have discontinued the M801E in Europe. In order to prepare the M802 for use in Europe, Icom seems to have re-programmed the M802 radio with features from M801E operating system.

The software changes may not be noticed to non-DSC user of the M802. While investigating the serial 11xxxx version and user programming tool I have so far identified the following changes have occurred.

MF and HF Voice Communications Mode

1. The serial 11xxxx radio is shipped with a subset of the ITU channels provided on the original M802. The channels may be added via the programming software only.
2. Transmission modes remain the same.

DSC Programming Differences

1. The serial #11xxxx radios now include a MF Working (Traffic) Frequency Selection in the software. It is not clear how this is to be used. The default frequency is 2182.0kHz.
2. Call Select in the serial # 11xxx vs the original M802.

#11xxxx	Original M802
Individual: RX/TX	Same
Group: RX/TX	Same
Geographical: Disable, RX, or RX/TX	Disable, RX only
N/A	All Ships Disable, RX, or RX/TX
Position request: Disable, RX, or RX/TX	Same
Distress: RX/TX	Same
Test: RX/TX	Same
Distress ACK: Disable, RX, or RX/TX	N/A
Distress Relay: Disable, RX, or RX/TX	N/A
Distress Relay ACK: Disable, RX, or RX/TX	N/A

DSC Category

1. "Individual": Both radios selectable for - Distress/Urgency/Safety/Routine
2. "Group": Both radios - Routine or Disabled
3. "Position Request": Both radios - Routine or Disabled
4. Original M802 only: "All Ships" – Urgent or Safety and may be disabled
5. Serial # 11xxxx only: "Geographical – Urgent or Safety and may be disabled

DSC 1st Telecom

1. Remains the same for "Individual": J3E
2. No Information may still be Disabled or Enabled
3. ITU Channel: Disable, Channel Number, or Frequency input.

DSC Reason

DSC Reason for the distress remains the same in both radios as it was defined by the ITU/IMO.

DSC Calling

1. "Geographic": Category calls may now both "Receive" and "Transmit". (All Ships calls are no longer used in the latest ITU-R M493-13)
2. "All Ships": Calls have been eliminated in the serial # 11xxxx.
3. "Distress Ack": May be sent with the serial # 11xxxx.
4. "Distress Relay": May be transmitted with the serial # 11xxxx.
5. "Distress Relay Ack": May be transmitted with the serial # 11xxxx.

DSC Calls

When **Making an Individual call**, the step after selecting the "Address ID" now provides the option of entering "Frequency" or "Position". Selecting "Frequency" will result in operation similar to the IC M802 in the prior version.

Selecting "Position" is not clear as it is not a defined option in the M801E but I suspect it will allow you to enter an approximate position of the vessel you are trying to contact. ??? I will continue to investigating this option further. The above information is in the serial #11xxxx operations manual, page 32.

At this time there is no pdf form manual I can find that represents the new manuals sent out with the serial #11xxxx M802 radios.

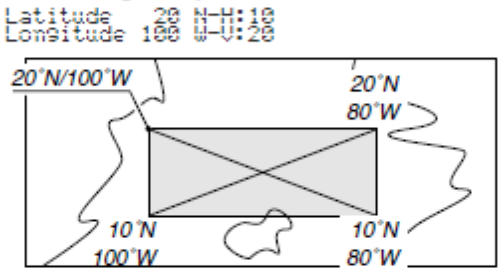
When **Making a Geographical** call, instead of frequency selection, the serial # 11xxxx M802 provides for the options of "Centre Point" or "Area". Geographical Calls are defined by the International Telecommunication Union in document ITU-R M.493-13. However, the M801E manual provides a better description of what data to enter for area and center. It is not well

defined in the serial # 11xxxx manual what to enter. Below is information from the M801E as to how the area is defined and is probably the same for the serial 11xxxx M802 radios.
Your GPS input should be the automatic default position for the center or corner depending on mode selected.

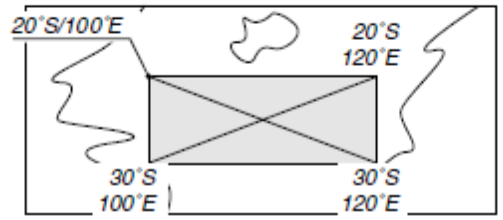
✔For your information— Area input

When using the 'Geographical' for distress relay call with "Area" selection, your original position is always the upper left hand corner in the world map as in the following illustration.

• Area setting example 1



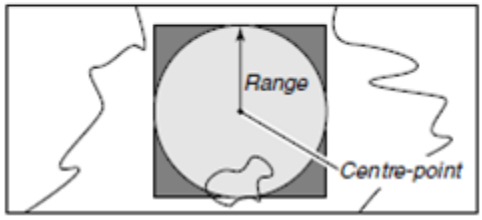
• Area setting example 2



✔ For your information 2— Centre-point input

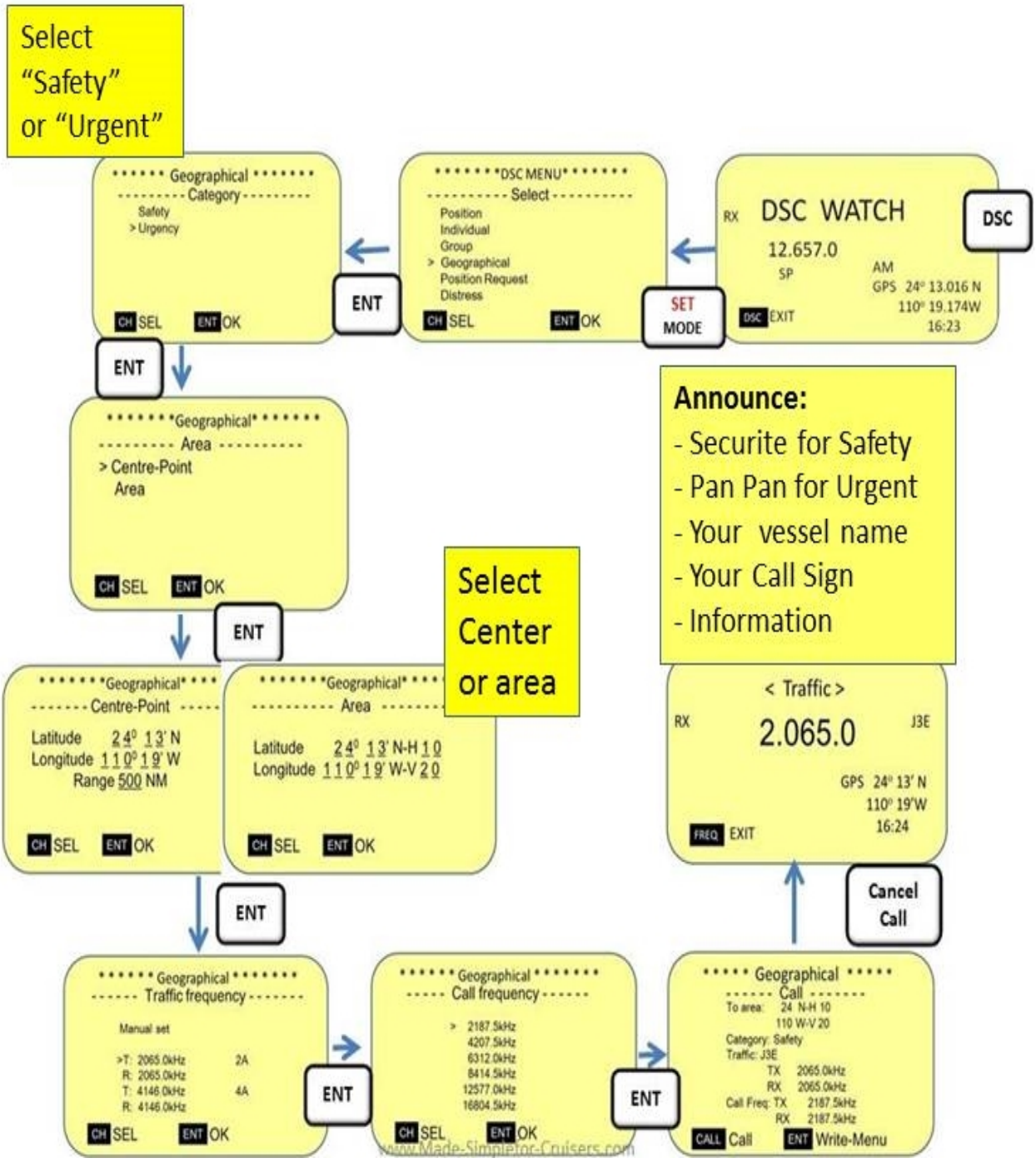
When using the 'Geographical' call with "Centre-point" selection, calls vessels in the square area ("■" area; not only round; "□" area) are called.

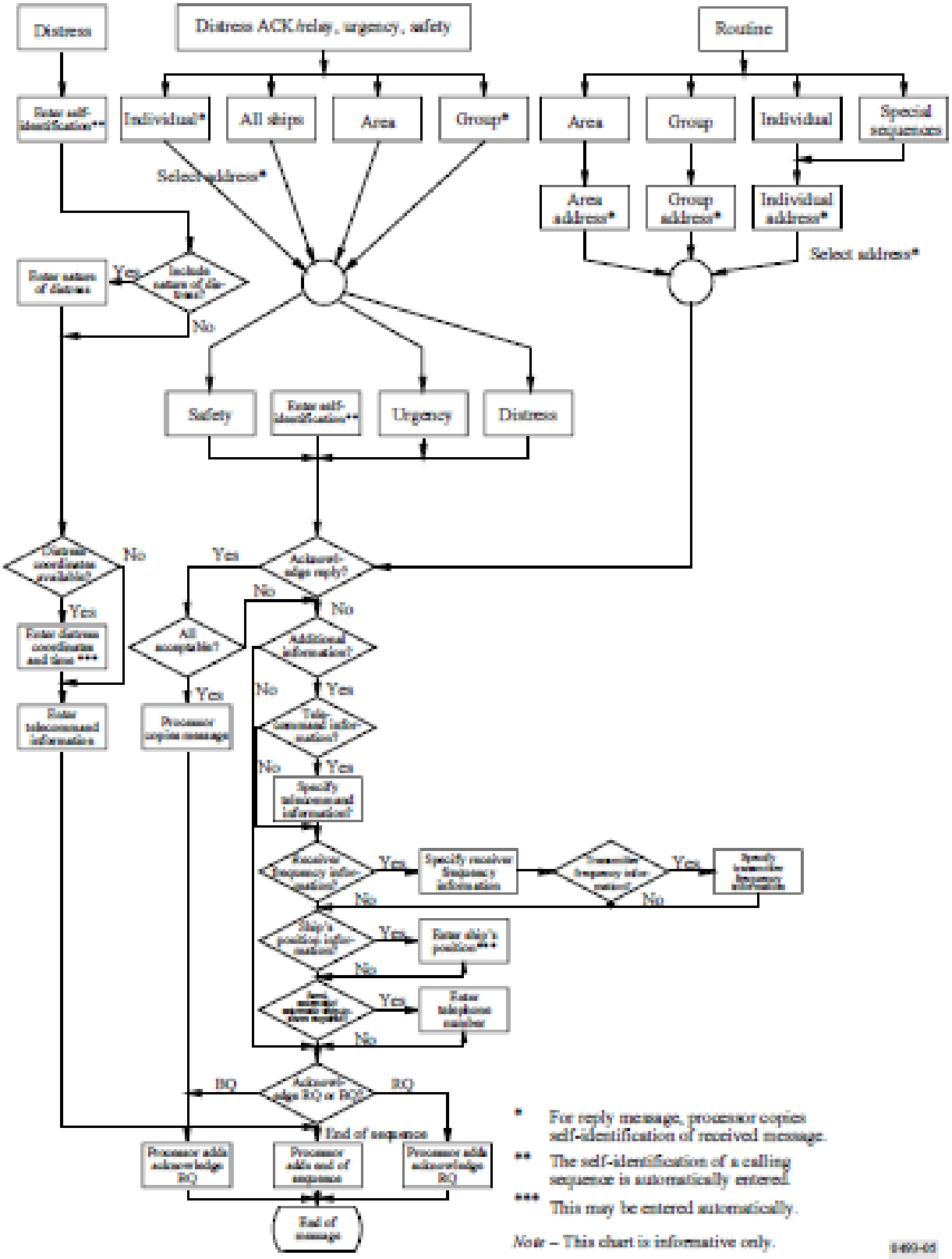
• Centre-point setting example



Note: Updates to this document will follow as I attain experience with the new M802 version.

Note: This new version of the M802 does not respond to "All Ships" calls from the older radios. However, the older version M802s do respond to the "Geographical" calls. "All Ships" calls are received only by coastal stations. The M802 conforms to Class E platforms.


Select
"Safety"
or "Urgent"
****** Geographical *******
--------- Category ---------
Safety
> Urgency
CH SEL
ENT OK
ENT
*******DSC MENU*******
---------- Select ----------
Position
Individual
Group
> Geographical
Position Request
Distress
CH SEL
ENT OK
SET
MODE
RX
DSC WATCH
12.657.0
SP
AM
GPS 24° 13.016 N
110° 19.174W
16:23
DSC EXIT
DSC
ENT
*******Geographical*******
--------- Area ----------
> Centre-Point
Area
CH SEL
ENT OK
ENT
Announce:
- Securite for Safety
- Pan Pan for Urgent
- Your vessel name
- Your Call Sign
- Information
Select
Center
or area
*******Geographical*******
-------Centre-Point -----
Latitude 24° 13' N
Longitude 110° 19' W
Range 500 NM
CH SEL
ENT OK
*******Geographical*******
---------- Area --------
Latitude 24° 13' N-H 10
Longitude 110° 19' W-V 20
CH SEL
ENT OK
< Traffic >
RX
2.065.0
J3E
GPS 24° 13' N
110° 19'W
16:24
FREQ EXIT
Cancel
Call
ENT
****** Geographical *******
------ Traffic frequency -------
Manual set
>T: 2065.0kHz 2A
R: 2065.0kHz
T: 4146.0kHz 4A
R: 4146.0kHz
CH SEL
ENT OK
ENT
****** Geographical *******
----- Call frequency ------
> 2187.5kHz
4207.5kHz
6312.0kHz
8414.5kHz
12577.0kHz
16804.5kHz
CH SEL
ENT OK
ENT
***** Geographical *****
------ Call -------
To area: 24 N-H 10
110 W-V 20
Category: Safety
Traffic: J3E
TX 2065.0kHz
RX 2065.0kHz
Call Freq: TX 2187.5kHz
RX 2187.5kHz
CALL Call
ENT Write-Menu

From ITU-R M.493-13

Example of message composition flow chart