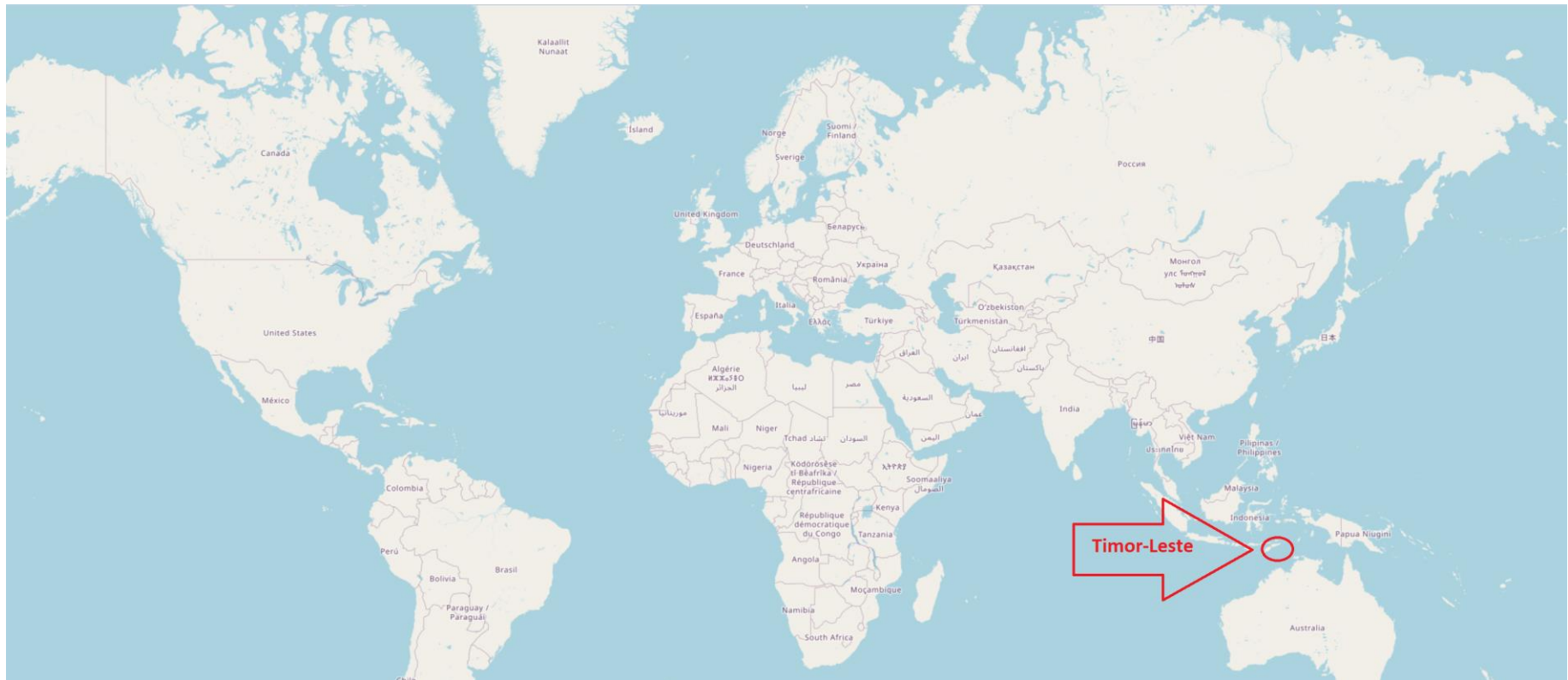


# 4W8X Timor-Leste

5<sup>th</sup> November – 5<sup>th</sup> December 2023

# 4W8X – Where is Timor-Leste?



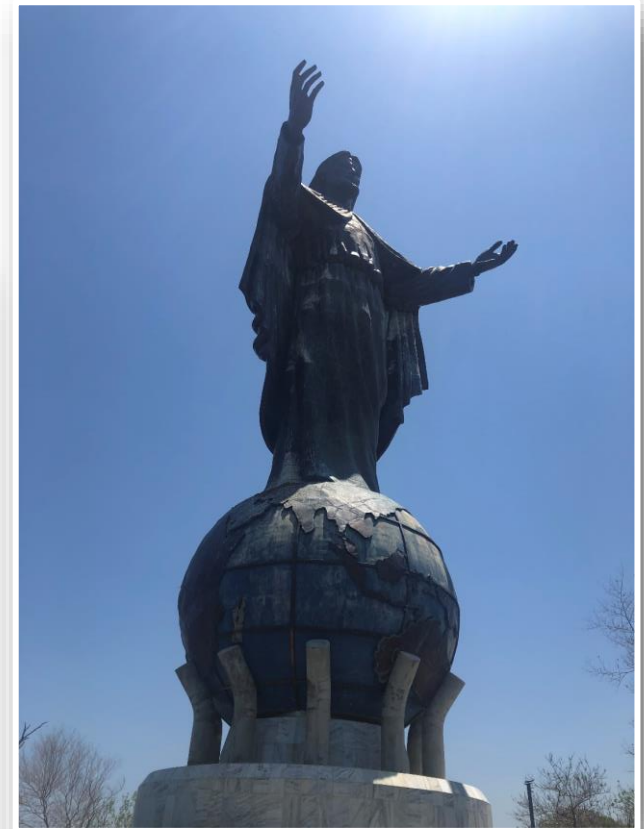
EU 12.500 km    W6 12.700 km    W1/2 16.000 km  
Caribbean & South America almost 18.000 km  
JA 5.200 km    ZL7 6.800 km

# 4W8X – Facts Timor-Leste



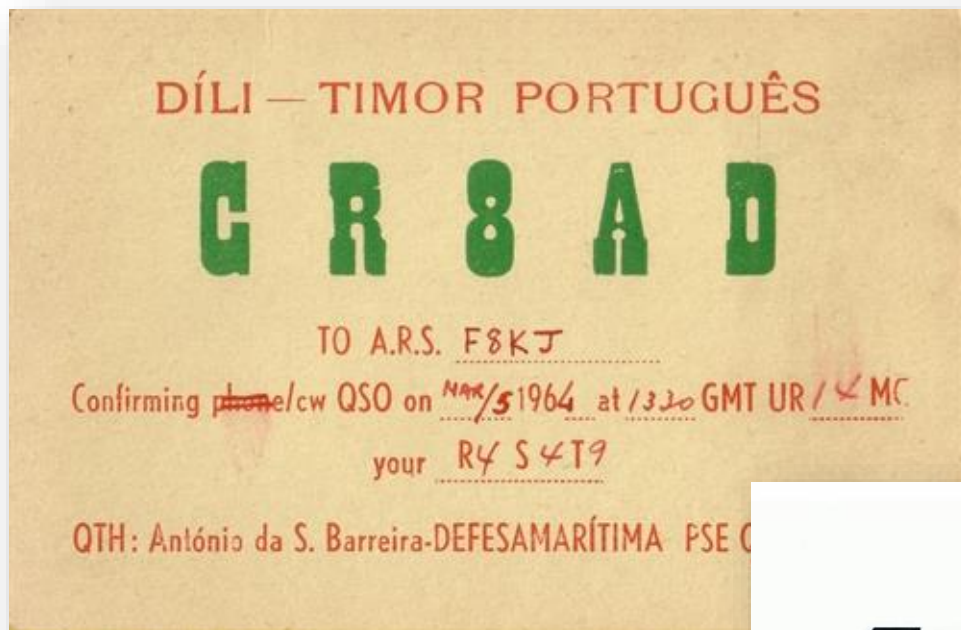
## Independence

- 1975 from Portugal
- 2002 from Indonesia

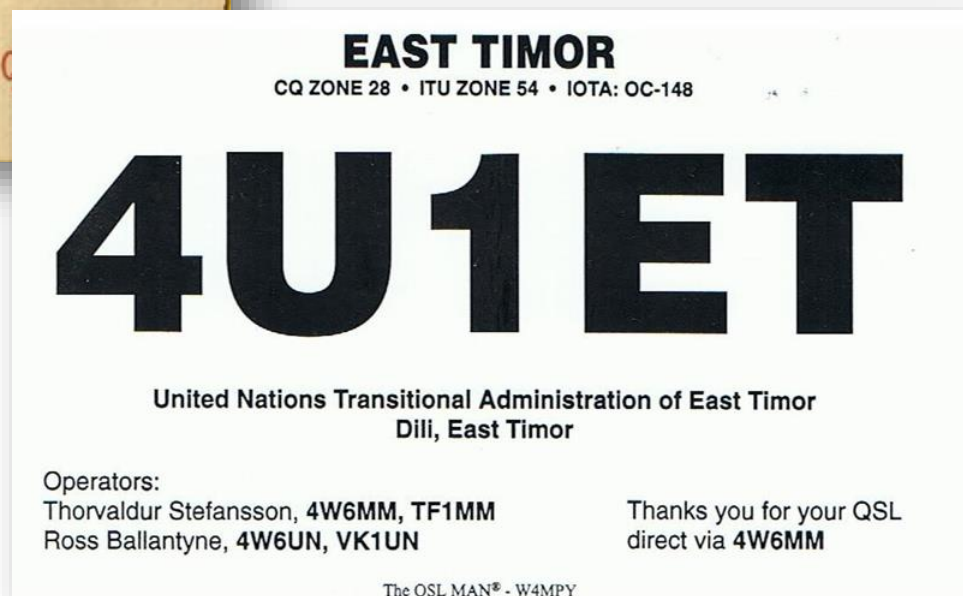


97% catholic:  
Copy of the statue  
"Cristo Redentor"

# 4W8X - Why Timor-Leste?



CR8/CR10 until  
14.9.1976



- from 1.3.2000 acc. to DXCC
- under 100.000 QSOs until 2018
- Special need on lowbands



# 4W8X - Preparations



Scouting Trip April 2023: 4W1A



Container Dispatch mid-July 2023

- Cable, cable, cable
- TRX, antennas, masts etc.

# 4W8X - Preparations





# 4W8X – Locations



- 2 locations connected with fiber optic and power cables
- One generator (37 kVA) for both radio sites
- Planned: QTH #1 mostly CW, QTH #2 mostly SSB, Digimodes distributed
- Optimization on site



# 4W8X – Team 1 meets in SIN

## Arrival via BAH or DXB





# 4W8X – Arrival





# 4W8X – 1<sup>st</sup> Stop



## Timor Plaza – SIM Cards and general info



# 4W8X – The Container

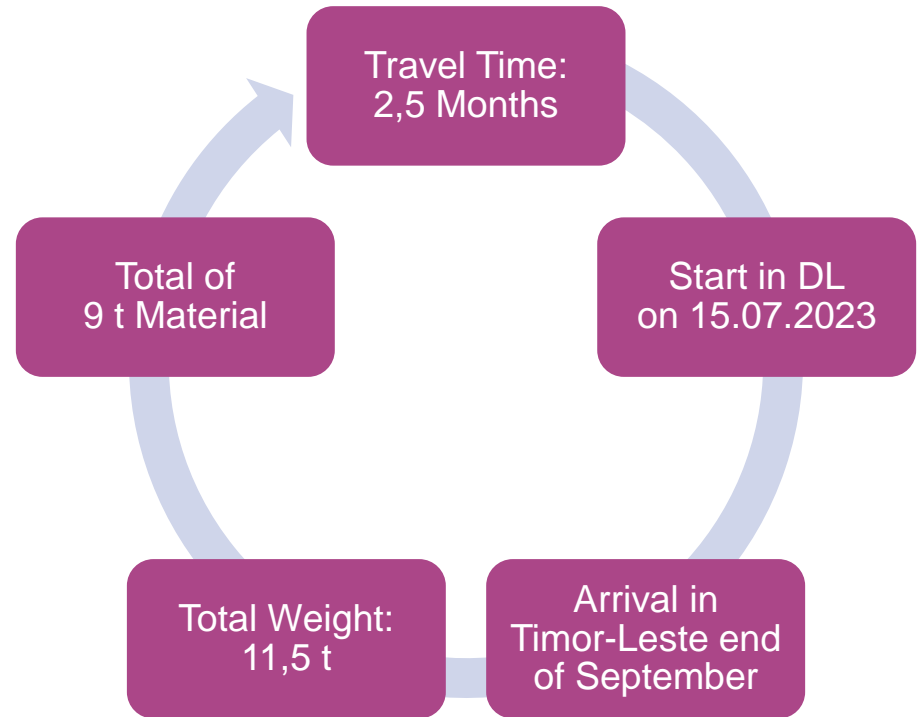


## Material container in Lauhata Beach Escape





# 4W8X – The Container





# 4W8X – Assembly



## First inspection and the local helpers





# 4W8X – Unloading the Container





# 4W8X – Power Supply



37 kVA

800 m  
Power Cable

Total Weight:  
2.078 kg



# 4W8X – Maintenance Schedule: Generator



| Date   | Time  | Run hours | Diesel   | Check oil |        |       |               |
|--------|-------|-----------|----------|-----------|--------|-------|---------------|
| 10.11. | 16.30 | 65.7      | 40 ltr.  | ✓         | 18.11. | 06.00 | 30 ltr.       |
| 11.11. | 16.40 | 90.0      | 60 ltr.  | —         |        | 17.00 | 2580 20 ltr.  |
| 12.11. | 17.30 | 106.2     | 40 ltr.  | —         |        | 21.30 | 262.8 25 ltr. |
| 13.11. | 17.30 | 131.0     | 40 ltr.  | —         | 19.11. | 7.50  | 275.8 35 ltr. |
| 13.11. | 17.30 | 139.0     | 50 ltr.  | —         |        | 17.30 | 282.8 35 ltr. |
|        | 21.30 | 143.0     | 70 ltr.  | —         |        | 22.30 | 287.8 20 ltr. |
| 14.11. | 09.30 | 155.0     | 20 ltr.  | —         | 20.11. | 8.00  | 297.3 30 ltr. |
|        | 11.30 | 160.0     | 40 ltr.  | —         |        | 22.30 | 50 ltr.       |
|        | 19.00 | 164.5     | 20 ltr.  | —         | 21.11. | 18.15 | 70 ltr.       |
| 15.11. | 07.15 | 177.0     | 40 ltr.  | —         | 22.11. | 10.30 | 30L           |
|        |       | 185       | 60 ltr.  | —         |        | 15.00 | 60L           |
|        |       | 185       | 60       | —         | 23.11. | 11.00 | 50L           |
| 16.11. | 06.00 |           | 60       | —         | 24.11. | 16.00 | 70L           |
|        | 17.00 | 210.3     | 20 ltr.  | —         | 25.11. | 12.30 | 80L           |
| 17.11. | 7.30  | 224.8     | 40 ltr.  | —         | 26.11. | 5.00  | 50L           |
|        |       |           | 20 ltr.  | —         |        | 16.00 | 40L           |
|        |       | 237.6     | ~40 ltr. | —         | 27.11. | 12.00 | 40L           |
|        |       |           |          | —         | 28.11. | 6.30  | 20L           |
|        |       |           |          | —         |        | 23.00 | 20L           |

approx.  
1500 Liters  
of Diesel



# 4W8X – The "Open House"

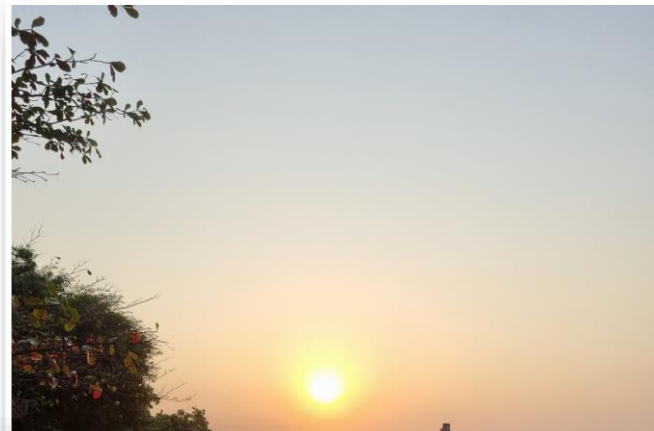




# 4W8X – First Antenna Work



50 MHz



HF  
Spiderbeams

# 4W8X – First Antenna Work



160m Vertical

HF Spiderbeams



50 MHz 5-Element



# 4W8X – Assembly in Alma do Mar



**Monoband  
Momobeams**

**Antenna  
Pre-Assembly**





# 4W8X – Receive Antennas



Beverage -  
Antennas

- 160 m
- 80 m
- > EU, > NA

*Dual-Band &  
Bi-directional*



Initially set up,  
bi-directional beverages  
NE <> SW, NW <> SE

- Low Band Shack
- Beverage Feedpoint

New beverages  
(uni-/bidirektional)  
NE <> SW, N

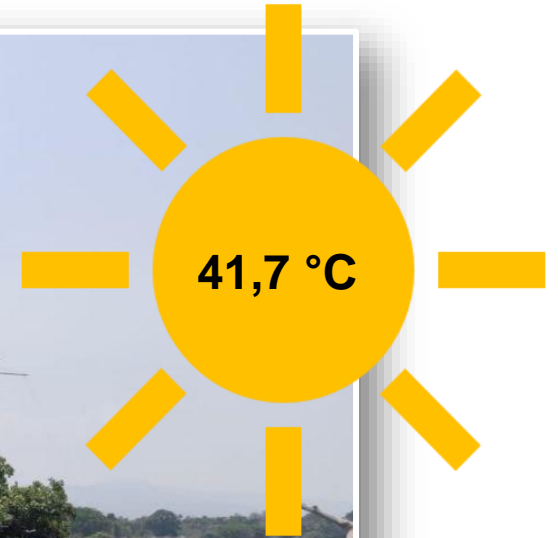


# 4W8X – Receive Antennas





# 4W8X – Lunch Break in Lauhata





# 4W8X – Rainy Season Already?





# 4W8X – Assembly in Alma do Mar



Preparations  
for the  
Momobeams



Messi &  
Paoloni Coax



Uninvited  
guests!



# 4W8X – Our Helpers and the Locals





# 4W8X – Assembly in Alma do Mar



Assembly of Antennas

Momo- und Spiderbeam Antennas



# 4W8X – HF Equipment per QTH



| Lauhata Beach Escape |              |   | QTH #1                                   |  |
|----------------------|--------------|---|--|--|
| 2 Shacks             | á 4 Stations | 8 Stationen                                   | K3, 2x FT-DX10, PAs                      |  |
| Antennas (TX+RX)     |              | Monoband Spiderbeams                          | 10m, 12m, 15m                            | ea. 1x   |
|                      |              | Vertical-Dipole-Array (VDA)                   | 17m, 20m                                 | ea. 1x   |
|                      |              | 4-Square Verticals                            | 30m, 40m                                 | ea. 1x   |
|                      |              | Verticals                                     | 160m, 80m                                | ea. 1x   |
|                      |              | Vertical Dipole                               | 60m                                      | 1x   |
|                      |              | 5-Element Yagi                                | 6m                                       | 1x   |
| Antennas (RX)        |              | Bidirektionale Beverages<br>~ NW/SE, NE/SW, N | 160m, 80m                                | 1x EU, 1x NA<br>(Combiner/Splitter & Switches) |
| Alma do Mar Resort   |              |   | QTH #2                                   |  |
| 1 Shack              | á 4 Stations | 4 Stations                                    | 4x FT-1000, PAs                          |  |
| Antennas (TX+RX)     |              | Monoband Momobeams + Rotor                    | 10m, 15m, 20m <sup>(*)</sup>             | ea. 1x   |
|                      |              | Monoband Spiderbeams                          | 10m, 12m, 15m, 17m, 20m                  | ea. 1x<br>(partly combined with Stack-Matches) |
|                      |              | Vertical                                      | 40m                                      | 1x   |
|                      |              |   | <sup>(*)</sup> 4- / 4- / 3-Element Beams |  |

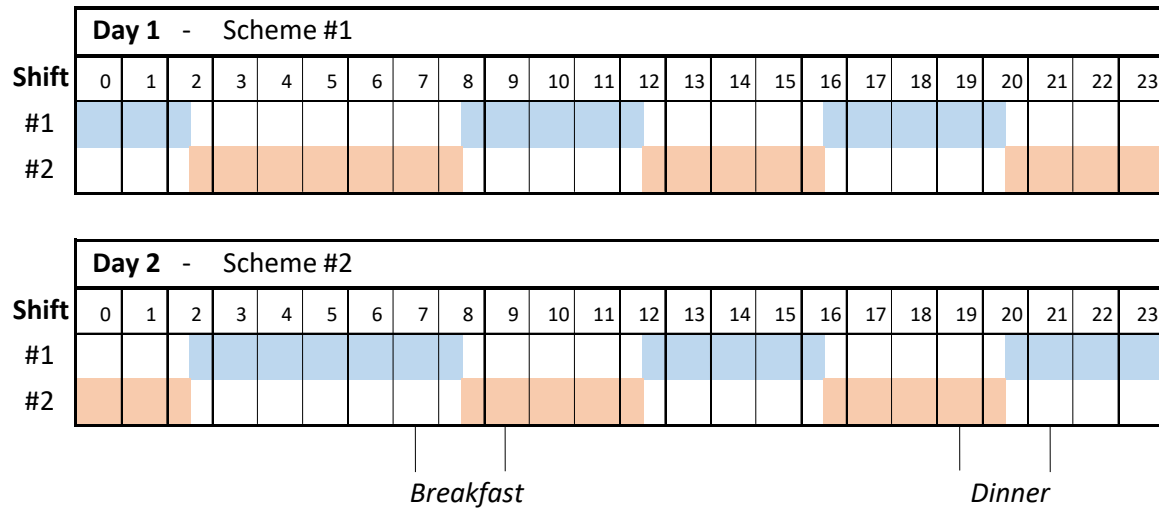


# 4W8X – Radio Operation



## 4W8X – Main Operation Shift Schedule

Shift scheme duration: 48 hours >>> Scheme repeating after 2 days

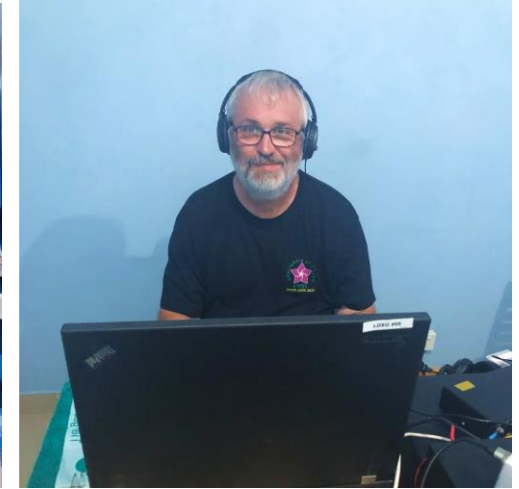


14.11.2023

| time slot   | hrs | main team | shack @Lauhata |        |        |       |        |       |        |   | shack @Alma do Mar |       |       |           |
|-------------|-----|-----------|----------------|--------|--------|-------|--------|-------|--------|---|--------------------|-------|-------|-----------|
|             |     |           | 1              | 2      | 3      | 4     | 5      | 6     | 7      | 8 | 1                  | 2     | 3     | 4         |
| 0230 - 0830 | 6   | 2         | DXX 160        | LYM 80 | KVA 40 | EE 15 | broken | IW 20 | UGN 30 |   | EO 10              | SP 15 | AT 20 | not ready |
| 1230 - 1430 | 2   | 2         |                | LYM    | KVA    | EE    |        | IW    | UGN    |   | EO                 | SP    | AT    |           |

# 4W8X – Lauhata

# QTH #1



DB6JG, DL7UGN, DL1BUG, DL5CW



# 4W8X – Lauhata

# QTH #1



DM6EE, DL7UGN, DL3DXX, DL6KVA, DF7TH, DL5LYM

# 4W8X – 40m 4-Square





# 4W8X – More OPs



DG5CST, DL6FBL, DL8DYL, KI7NRH, DJ5IW

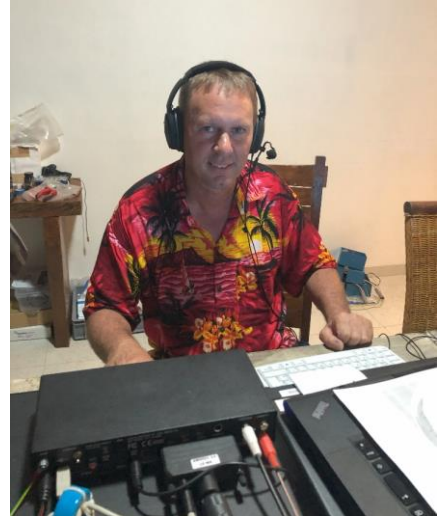
# 4W8X – Alma do Mar

# QTH # 2





# 4W8X – Alma do Mar



OE2VEL, DJ7EO, SP5XVY, DL9DRA, DK6SP, DL7AT

# 4W8X – Training with "Newcomer"





# 4W8X – CQ WW CW – M/M



- 160 m: Vertical
- 80 m: Vertical
- 40 m: 4-Square-Antenna
- 20 m: 3-ele Momo inc. Rotor + Spiderbeam
- 15 m: 4-ele Momo inc. Rotor + Spiderbeam
- 10 m: 4-ele Momo inc. Rotor + Spiderbeam

| Summary - 4W8X |       |      |      |      |        |     |
|----------------|-------|------|------|------|--------|-----|
| BAND           | QSO   | DXCC | ZONE | DUPE | POINTS | AVG |
| 160            | 155   | 26   | 17   | 6    | 444    | 2.9 |
| 80             | 929   | 80   | 29   | 26   | 2701   | 2.9 |
| 40             | 2259  | 125  | 35   | 57   | 6653   | 3.0 |
| 20             | 2073  | 131  | 37   | 65   | 6056   | 2.9 |
| 15             | 2604  | 138  | 37   | 100  | 7627   | 2.9 |
| 10             | 2162  | 126  | 34   | 54   | 6369   | 3.0 |
| TOTAL          | 10182 | 626  | 189  | 308  | 29850  | 2.9 |

FINAL SCORE: 24 327 750

# 4W8X – EME: Assembly of 6 m



7el M<sup>2</sup> – LNA  
Antennas

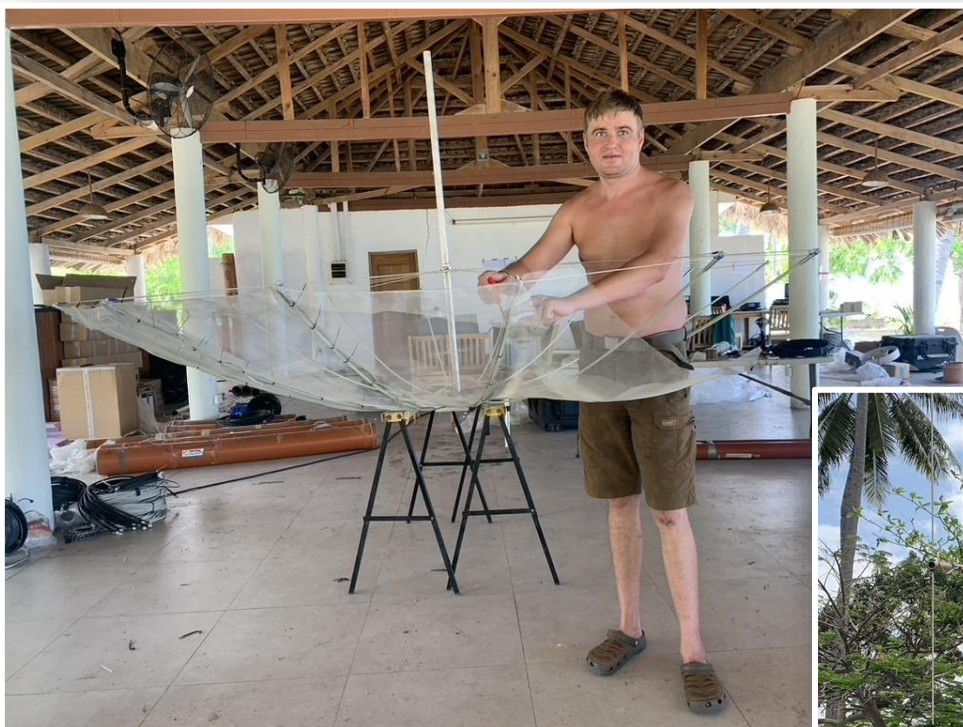
IC-7300



PA: RF-Kit 2k



# 4W8X – EME: 70 cm / 23 cm



Chief-OP:  
DG5CST, Seb  
Support:  
KI7NRH, Tizian

IC-9700

Dish (Ø 3m, DK4RC)

LNA VHF-design





# 4W8X – EME 70 cm / 23 cm



HM PA Italab (under antenna)

- ca. 700 W (70 cm)
- ca. 500 W (23 cm)





# 4W8X – EME Results



6 m: 44 QSOs, Q65A

2 m: 207 QSOs, JT65B

70 cm: 41 QSOs, 1 CW, Q65B

23 cm: 125 QSOs, 26 CW, Q65C



# 4W8X – Dismantle



1, 2, ...

...

2½ days





# 4W8X – Everything back in again!



37°C in shadow  
... and ...  
in Container ?

nearly  
50°C!



# 4W8X – Farewell Dinner





# 4W8X – Statistics



## Operating Time

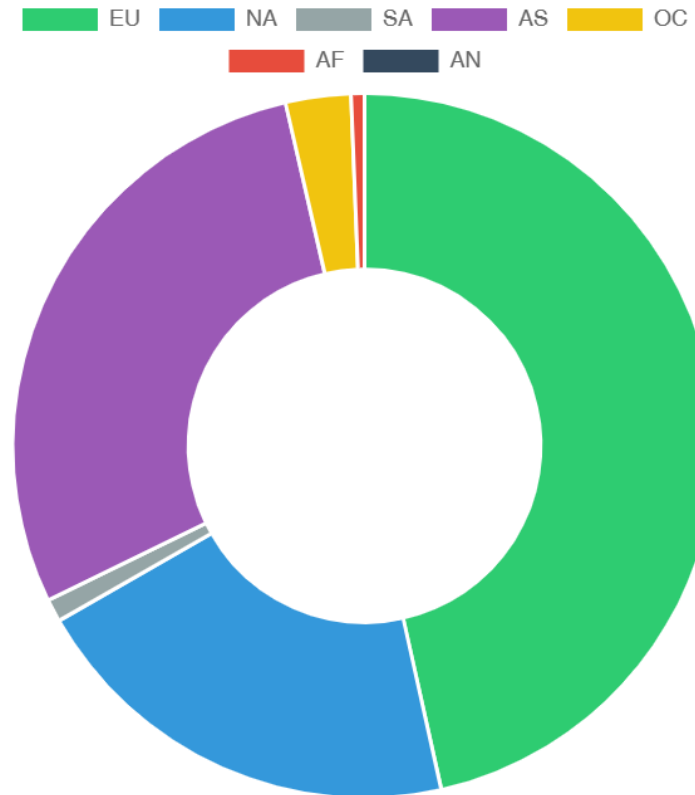
First QSO: **2023-11-07 11:52:00**  
 Last QSO: **2023-12-04 04:58:00**  
 Number of days: **26.71**

## Number of QSOs

Total QSOs: **165,200**  
 Unique Calls: **36,603**  
 Duplicate QSOs: **20,314 (12.3%)**

## Band/Mode breakdown

| Band          | CW           | FT8          | SSB          | FT4          | RTTY        | MFSK       | JT65       | Total         | Total % |
|---------------|--------------|--------------|--------------|--------------|-------------|------------|------------|---------------|---------|
| 160           | 2048         | 1273         | 0            | 0            | 0           | 0          | 0          | 3321          | 2.0%    |
| 80            | 4846         | 1583         | 176          | 1598         | 0           | 0          | 0          | 8203          | 5.0%    |
| 60            | 60           | 508          | 0            | 0            | 0           | 0          | 0          | 568           | 0.3%    |
| 40            | 12145        | 3798         | 2538         | 1163         | 0           | 0          | 0          | 19644         | 11.9%   |
| 30            | 6528         | 1582         | 0            | 1496         | 882         | 0          | 0          | 10488         | 6.3%    |
| 20            | 9439         | 8026         | 5681         | 2968         | 821         | 0          | 0          | 26935         | 16.3%   |
| 17            | 7187         | 4473         | 2736         | 3025         | 706         | 0          | 0          | 18127         | 11.0%   |
| 15            | 10807        | 8654         | 7101         | 1889         | 987         | 0          | 0          | 29438         | 17.8%   |
| 12            | 6913         | 5888         | 3293         | 2041         | 502         | 0          | 0          | 18637         | 11.3%   |
| 10            | 10137        | 8395         | 6717         | 2690         | 0           | 0          | 0          | 27939         | 16.9%   |
| 6             | 242          | 1214         | 0            | 0            | 0           | 44         | 0          | 1500          | 0.9%    |
| 2             | 0            | 0            | 0            | 0            | 0           | 0          | 207        | 207           | 0.1%    |
| 70            | 1            | 0            | 0            | 0            | 0           | 41         | 0          | 42            | 0.0%    |
| 23            | 26           | 0            | 0            | 0            | 0           | 125        | 0          | 151           | 0.1%    |
| <b>Totals</b> | <b>70379</b> | <b>45394</b> | <b>28242</b> | <b>16870</b> | <b>3898</b> | <b>210</b> | <b>207</b> | <b>165200</b> |         |



# 4W8X – Team



DL7AT, SP5XYV, DL6FBL, DL5LYM, DJ5IW, DL7UGN, Bendu, OE2VEL,  
DL1BUG, DL6KVA, DG5CST, DL9DRA, DJ7EO, DL3DXX, DF7TH,  
DL5CW, KI7NRH, DL8DYL, DK6SP, DM6EE, not in picture: DB6JG



# 4W8X – THANKS



COAXIAL CABLES  AND CONNECTORS  
**Messi & Paoloni**

**MOMO BEAM**   
high-performance durable ANTENNAS

**DX** <sup>®</sup>  
**ENGINEERING**

  
**RF-KIT**  
POWER AMPLIFIER

**OM**  **Power**

 **The fibre people**  
Lemka GmbH

# 4W8X – Farewell from Timor-Leste



We are done – the work of our QSL-Manager begins now:

Thanks Sven, DJ4MX!





– THE END –

Next slides for  
exchange / addition



# 4W8X – Capital City Dili





# 4W8X – Transportation in 4W





# 4W8X – Liquica



# 4W8X – Liquica

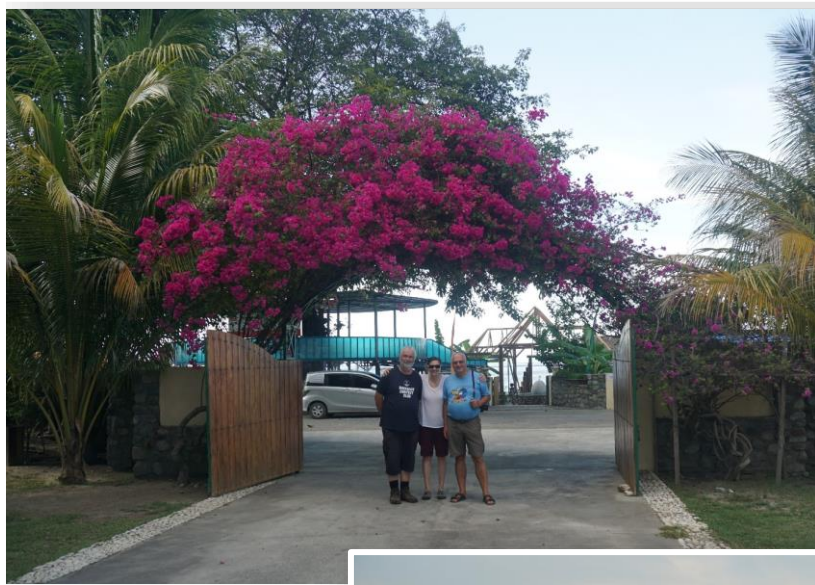




# 4W8X – Children and Young People



# 4W8X – Alma do Mar





# 4W8X – Alma do Mar



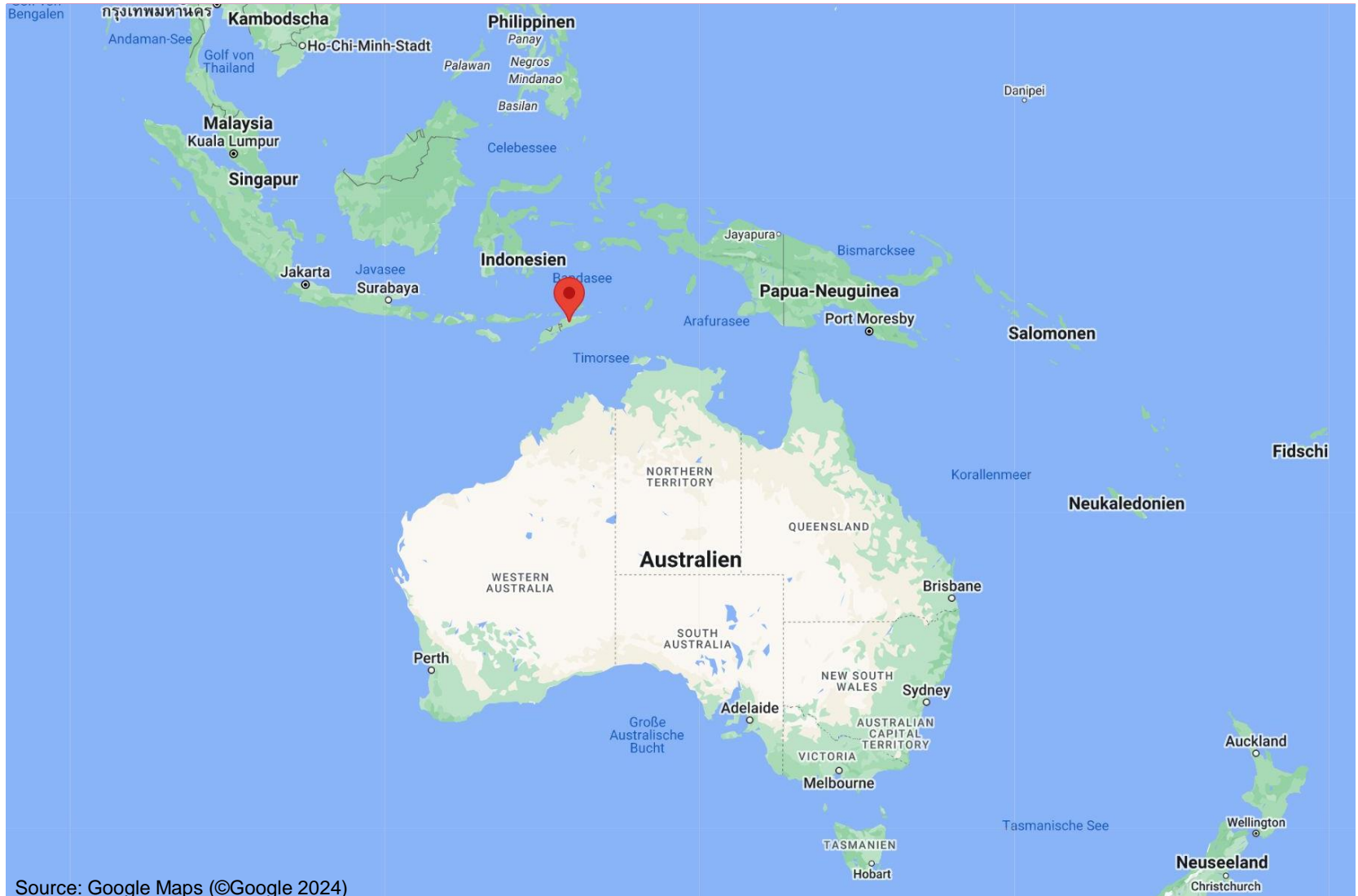


# 4W8X – Lauhata Beach Escape





# 4W8X – Geographical Location



Source: Google Maps (©Google 2024)

# 4W8X – 4W Map

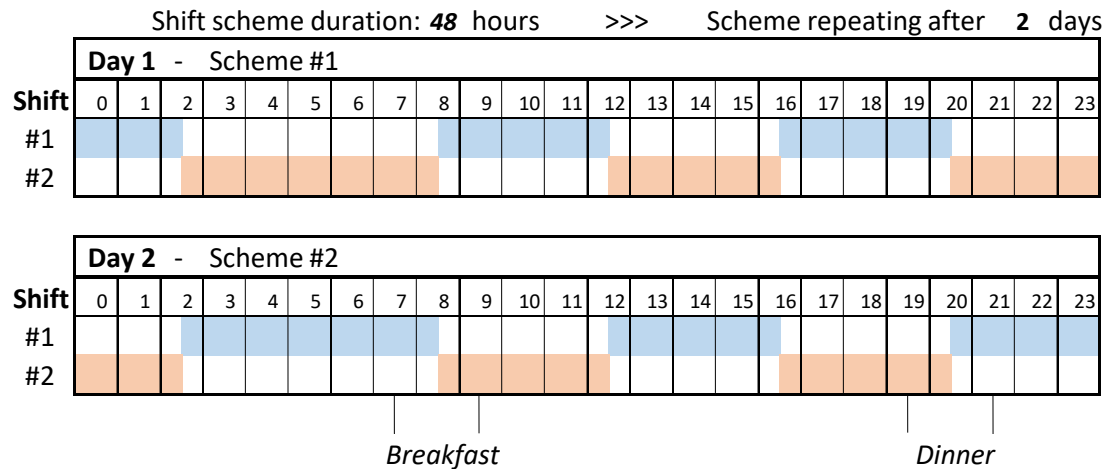




# 4W8X – Operating



## 4W8X - Shift Schedule



### 7TH:

- Converted to an MS-Drawing object
- Text may be edited / moved / deleted
- PowerPoint-Online has rendering issues with tables. Table shows OK on PC & in presentation mode

- Effectively 15 operators and 12 operating seats for 80m - 6m (-1 seat 160m)
  - One shift with 8 operators
  - One shift with 7 operators
  - EME operation separate by DG5CST
  - 160m operation acc. separate schedule (mainly DL3DXX)

# 4W8X – EME Band Change



2 m  $\leftrightarrow$  70/23 cm  
with 3 persons





# 4W8X – Dismantle

