

# FURUNO<sup>®</sup>

## 14" FACSIMILE RECEIVER

DFAX Model **FAX-214**

Sophisticated Microprocessor Technology  
8-Level Quantization  
14" wide paper  
NAVTEX option



The future today with FURUNO's electronics technology.  
**FURUNO ELECTRIC CO., LTD.**  
9-52 Ashihara-cho, Nishinomiya City, Japan Telephone: +81 (0)798 65-2111  
Telefax: +81 (0)798 65-4200, 66-4622, 66-4623

Catalogue No. FX-610f

TRADE MARK REGISTERED  
MARCA REGISTRADA

# WIDE-CARRIAGE, FULL-FUNCTION RADIO

- Super clear weather chart and satellite-image reception on wide 14" paper with high-resolution, high-contrast and eight gradation levels.
- Quiet, reliable thermal recording mechanism
- Automatic, unattended operation by programmable control.
- All known 80-160 kHz LF and 2-25 MHz Facsimile frequencies. 10 additional channels for user-programming.
- Internal NAVTEX option. Regular NAVTEX messages are stored in memory for later printout while the operator places priority in a FAX reception, urgent messages are instantly printed.
- Automatic hands-off selection of the optimum frequency.
- Active antenna optionally available for simultaneous reception of FAX and NAVTEX by using a short backstay or a 2.6m whip antenna.

ZCZC GA95

WZ 969

1. ENGLAND EAST COAST. GREAT YARMOUTH APPROACHES. GORL  
EXTENSIVE SHOALING LOCATED VICINITY 52-34.4N 01-46.7E

LEAST DEPTH 8 METRES

2. WEST CORTON LIGHT

CANCEL WZ 965 (GA95)

NNNN

ZCZC GA86

WZ 956

DOVER STRAIT SURVEY

TRAFFIC LANE BETWEEN

NNNN

ZCZC GA85

WZ 954

DOVER STRAIT EDW BU

CANCEL WZ 929 (GA73)

NNNN

*(Actual size of NAVTEX printout)*



The all-new FURUNO FAX-214 brings the latest in microprocessor technology to the world of marine facsimile. The FAX-214 provides on 14" wide paper high-quality, high-resolution charts and satellite images transmitted from shoreside FAX stations all around the world. These charts yield eight "gray" levels (from pure black to white) on high-contrast 14" wide white thermal paper. This highly reliable and field-proven system has the advantage of not producing the foul-smelling carbon dust that older machines typically gave off when in operation.

The FAX-214 can be programmed for completely automatic, hands-off operation: it is even "smart" enough to scan all frequencies available for any particular station and pick the one which will give the best picture!

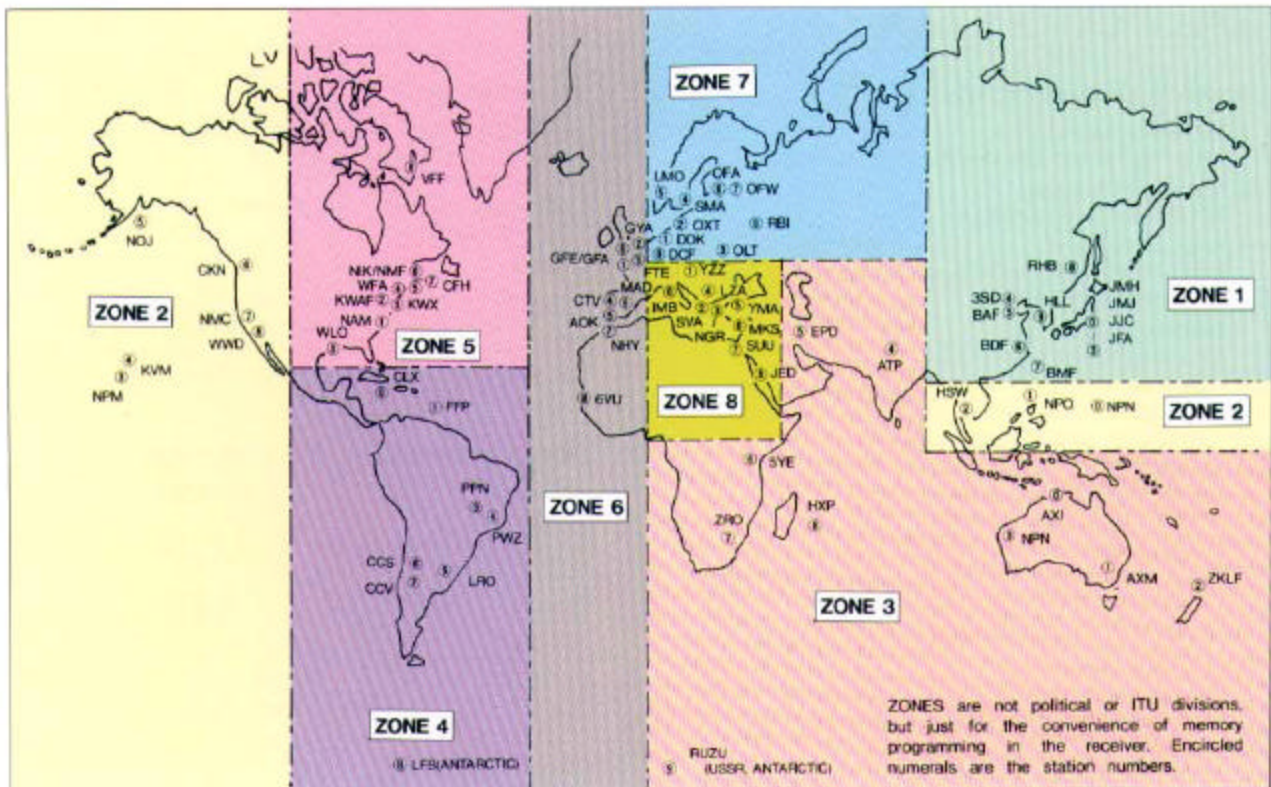
The FAX-214 is provided with the FAX-208A's unique feature in that it is the only marine FAX receiver which can incorporate a built-in NAVTEX receiver module which is just as intelligent as the FAX portion of the system. More and more NAVTEX transmitting stations are coming on the air around the world to provide automatic updating of weather and safety conditions in local areas.

While FAX signals are being received and printed out, if an Urgent NAVTEX message is received the FAX will suspend operation and allow the NAVTEX message to take command. Otherwise, normal NAVTEX message will be stored in the background for later printing after the FAX is finished.

The optional broadband active antenna is available to provide reception for FAX and NAVTEX transmissions with use of a short backstay or 2.6m whip antenna.

# FACSIMILE RECEIVER

FAX-214



All known fax frequencies are here !  
Easy to tune in.

ZONE NUMBER	STATION NUMBER	CHANNEL NUMBER (*means AUTO)
60	* N	GFE 2618.5
Normal or Reverse	CALL SIGN	FREQ (EX.2618.5kHz)

You do not have to know the frequencies of the fax stations. If you enter the ZONE and STATION numbers, the computerized receiver does everything else. To tune in the Bracknell station, for instance, hit the touchpads-[CH][▲] to get 6 as ZONE][▶] to move cursor][▲] to get 0 as STATION][▶] to move cursor][▲] to get \* for automatic search][ENT].

The CALL SIGN with an optimum frequency will be automatically displayed. Of course you can select a frequency manually, too, with fine tuning keys.

### Automatic Start/Stop by WMO signal or Schedule Timer

The facsimile stations broadcast weather maps and news at regular schedules. You can preset 16 sets of start and end time by schedule timer.

53	* N	NAM	13:20	-	13:45
			Start		End

### NAVTEX OPTION

NAVTEX is Navigation Teleprinter in the format of narrow band direct printing (NBDP). The NAVTEX stations broadcast on 518 kHz weather and navigational information for the safety at sea. The NAVTEX message contains the following message categories.

- A : Coastal navigational information
- B : Meteorological warning
- C : Ice report
- D : Search and rescue alert
- E : Meteorological forecast
- F : Pilot message
- G : Decca message
- H : Loran-C message
- I : Satnav message
- J : Differential Omega message
- K : Other navigational system message
- L : Additional warning to category A
- Z : No message on hand

The facsimile receiver with NAVTEX module permits unattended operation to receive these messages. When the receiver is working to plot a weather map, the NAVTEX messages are stored in memory for later print. But the message D is instantly printed suspending the facsimile information. The equipment is designed to CCIR Rec 540-1, 476-3, and CEPT Specifications.

**SPECIFICATIONS OF FAX-214**

**RECEIVER CHARACTERISTICS**

1. **Frequency Range**  
80 to 160 kHz and 2 to 25 MHz, in 100 Hz steps
2. **Number of Channels**  
371 channels max. capability
3. **Receiving System**  
Double-conversion superheterodyne  
I.F.: 50.0 MHz and 455 kHz
4. **Mode of Reception**  
F3C, J3C (USB/LSB switchable)
5. **Sensitivity**  
80 to 160kHz: 10µV at 20 dB SINAD  
2 to 25MHz: 2µV at 20 dB SINAD
6. **Selectivity**  
Bandwidth: 2.4 kHz at 6 dB  
Attenuation: 60 dB at 6.0 kHz
7. **Tuning Monitor**  
3 LED's indicate whether the frequency is OK or whether it should be moved up or down.

**RECORDER CHARACTERISTICS**

1. **Recording System**  
Thermal head printing. Paper TP-1440A (360mm x 40mm)  
Effective width 337mm (168.5mm with scanning speed 240r.p.m)
2. **Scanning Speed**  
60, 90, 120 or 240 r.p.m., automatic or manual selection
3. **I.O.C.**  
576 or 288, automatic or manual selection  
Scanning Density 5 lines/mm approx.
4. **Level Quantization**  
8 levels
5. **Phase Control**  
Automatic or manual
6. **External Input Signal**  
Black: 1500 Hz, White: 2300 Hz  
Level 0 dBm at 600 ohms
7. **Operation**  
Automatic or manual  
Automatic start/stop by W.M.O. remote control signal  
Schedule Timer 16 programs/day

**NAVTEX RECEIVER (Optional)**

1. **Frequency**  
518 kHz
2. **Sensitivity**  
2µV at 50 ohms  
5µV at 10 ohms + 150pF  
(4% message error)
3. **Message Memory**  
7000 characters, 30 ID codes  
Storage hour 66 hours
4. **Format**  
79 characters/line, 13 x 9 dot matrix
5. **Print Speed**  
27 characters/sec

**POWER SUPPLY**

Choice of 10 to 40 VDC universal, 30 W (15 W at stand-by)with DC power module or 110/220 VAC with AC power module

**EQUIPMENT LIST**

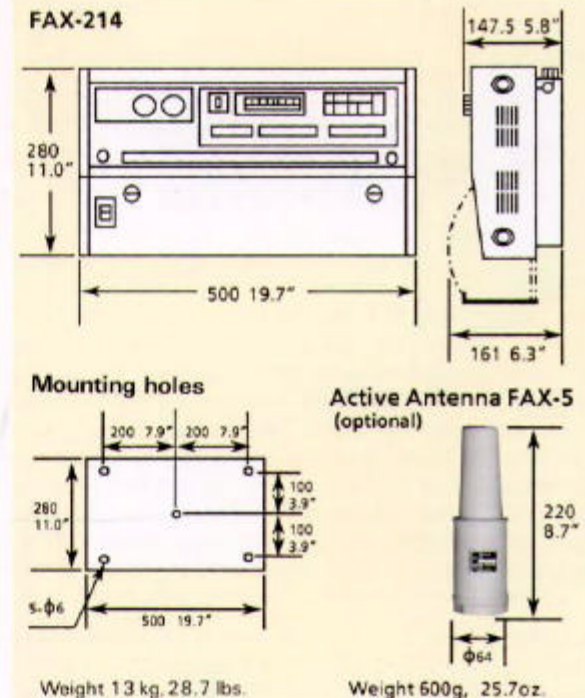
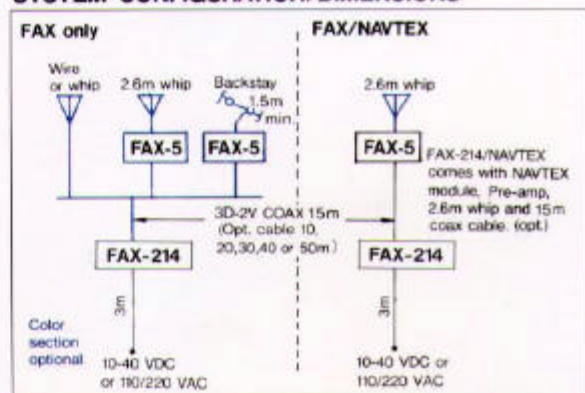
**Standard**

1. Main Unit (1 roll of paper inset) 1 unit
2. Installation Materials 1 set
3. 2 spare fuses and 1 roll of paper
4. Power Cable 3m 1 pc.

**Option**

1. NAVTEX Receiver Module OP08-2
2. Active Antenna (Pre-amp Unit) FAX-5 (w/15m 3D-2V)
3. 2.6m Whip Antenna 04S4176 for use with FAX-5
4. Extension cable kit OP04-2 for FAX-5 (10, 20, 30, 40, or 50m)

**SYSTEM CONFIGURATION/DIMENSIONS**



SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

FOR FURTHER INFORMATION,  
PLEASE CONTACT