

# DANCOM

## COMMUNICATION EQUIPMENT

**SSB HF 1200**  
**SHORT WAVE**  
**TRANSMITTER**  
**1200 WATTS P.E.P.**  
1.6 to 30 MHz



**DANISH COMMUNICATION EQUIPMENT A/S**  
**Denmark**

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The HF 1200 is designed for use on compulsorily or voluntarily fitted vessels and complies with the latest SOLAS conventions and the ITU Radio Regulations. It meets the CEPT specifications and national requirements of most countries.

The HF 1200 is the 2nd generation of our SSB MF/HF program and it has benefitted from all previous experience with frequency synthesis, transistorisation and reliability and from the latest technological development.

The HF 1200 is built up of plug in modules which can be easily replaced hence expediting service.

To make the antenna installation most efficient the transmitter unit can be mounted at a distance of up to 200 m from the rest of the equipment. Thus the operator will only have the exciter and the receiver in front of him.

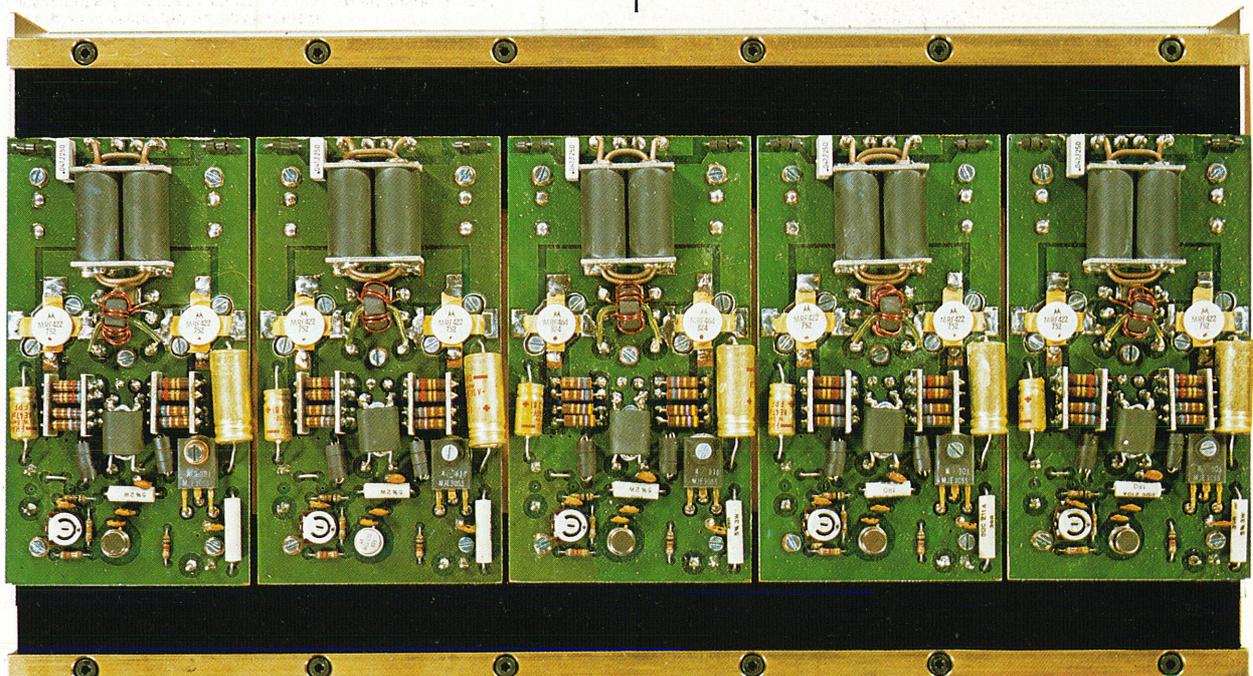
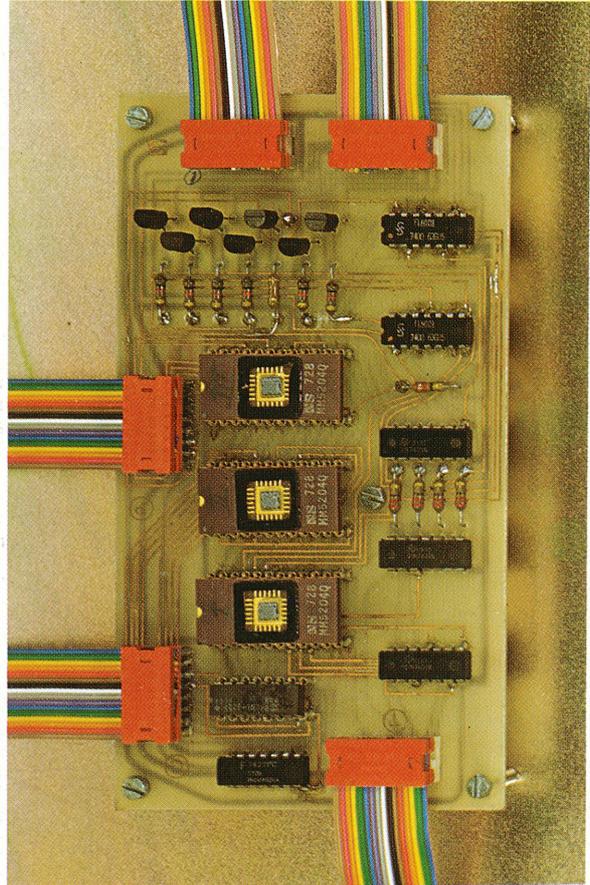
If there should be a fault in the antenna installation – detached antenna, short-circuited antenna, or too short (broken) antenna – the transmitter will not be damaged or stop transmitting. The fully transistorized output stage will adjust the output to a suitable level and go on transmitting.

The power amplifier consists of 4 modules the matching of which permits all other modules to still feed the antenna with a power output even if one or more modules become defective. Thus communication remains possible.

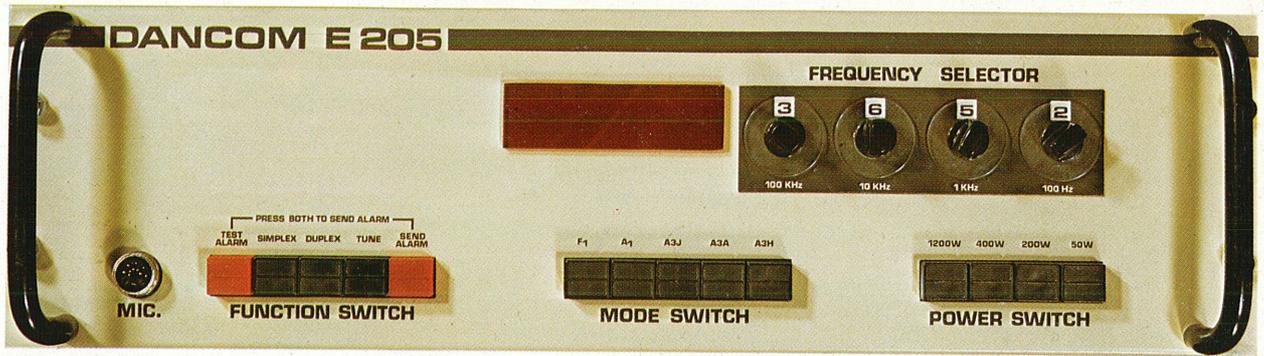
- 1200 Watt PEP
- Extremely low power consumption. No "STAND-BY"
- Fully transistorized
- No warm up time, instantly ready
- Fully synthesized
- Programable for 480 frequencies
- Telex (F1) and telegraphy (A1) at no additional cost
- Built-in two-tone alarm generator
- Built-in d.c. or a.c. operation
- Extremely simple operation
- Fully duplex operation
- Output stage with electronic overload protection
- 19" rack mounting

The fully synthesized transmitter covers the frequency range 1.6 MHz to 30 MHz programable for 480 channel frequencies at owner's option within the frequency range.

The HF 1200 is supplied with MOS Erasable PROMs which makes later frequency changes possible at a very low cost.



Solid state power amplifier module



### EXCITER E205

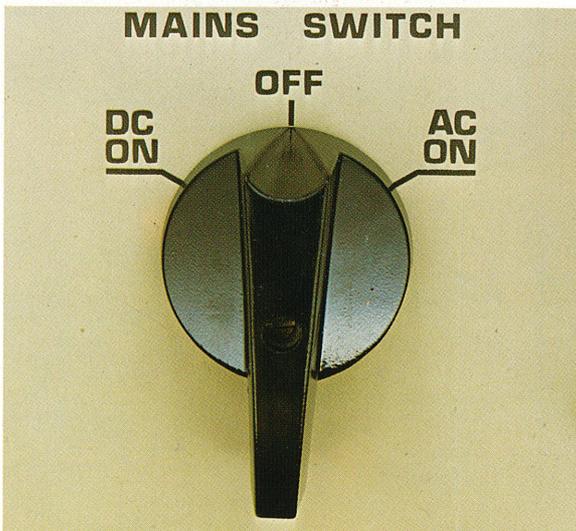
Decadic synthesized in 100 KHz, 10 KHz, 1 KHz and 100 Hz steps by setting of front panel controls which give full selection of all MF/HF frequencies in steps of 100 Hz by means of synthesis.

### Power supply

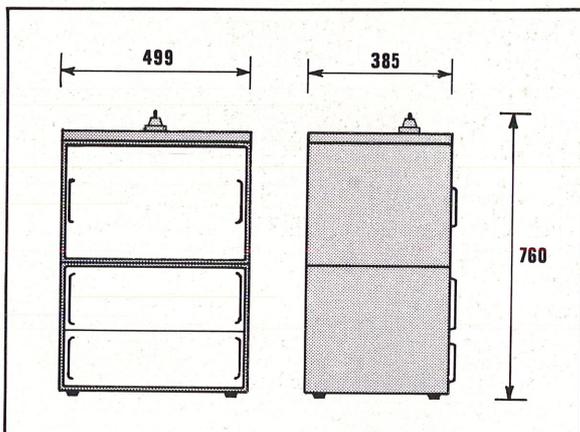
The HF1200 has a built-in solid state power supply for 24 V.d.c. or 110/220/380 V.a.c. or combined, changes by means of a main switch mounted on the front panel.

### Power consumption

The 100 % transistorisation – which includes also a solid state power amplifier – results in an extremely low power consumption. The HF 1200 consumes less current than equipments with much lower output power. The HF1200 has no "STAND-BY" position. When the Mains Switch is set at the requested voltage, the transmitter is instantly ready. Therefore power is only used during transmission.



### Dimensions



### Antenna tuning

Push the tune button and adjust for max. meter deflection. The HF1200 is prepared for remote antenna tuning.

### Special feature

Output terminal strip providing output for line output, sidetone output, remote earpiece, muting of extra receiver, muting of communal antenna system and audio input from extra receiver.

### TECHNICAL DATA:

Types of emission:	A1, A3H, A3A, A3J and F1 (AFSK)
Frequency ranges:	1.6 – 30 MHz
Modes of operation:	Simplex/Semiduplex/Duplex
Frequency stability:	Frequency inconstancy at an ambient temp. of +25°C
	long term $\pm 50$ Hz
	at an ambient temp. between +10°C and +40°C
	short term (15 min.) 25 Hz
Number of spot frequencies:	480 in 15 available bands
Power output:	4 – 30 MHz 1200 W PEP 1.6 – 4.0 MHz 400 W PEP
Power reduction:	in steps of 3 dB and 6 dB
Antenna impedance:	1.6 – 4 MHz 10 $\Omega$ 250 pF (CEPT) 4 – 30 MHz 50 $\Omega$ (CEPT)
Tuning Range of the antenna tuner:	1.6 – 5 MHz 5 – 400 $\Omega$ 3 – 30 MHz 50 – 2000 $\Omega$
Audio response:	< 6 dB (350-2700 Hz)
A.f.-distortion:	< 10 %
Speech compression	the a.f. amplifier includes a compressor which maintains the output power at an almost constant level
Intermodulation products:	out of band: 3rd order: $\geq 31$ dB below p.e.p. 5th order: $\geq 38$ dB below p.e.p. 7th order: $\geq 43$ dB below p.e.p.
Spurious and f.f. harmonic suppression:	$\geq 43$ dB
Carrier suppression:	A3H: 5-6 dB below p.e.p. A3A: 16 $\pm$ 2 dB below p.e.p. A3J: > 40 dB below p.e.p.
Residual FM:	< $\pm 10$ Hz
Temperature range:	-15°C to +55°C (0°C – +40°C the specified data are fulfilled)
Warm up period:	instant
Two-tone alarm generator	incorporated
Power supply:	24 V.d.c. battery +30%, $\pm 10$ % 110/220/380 V.a.c. +30%, $\pm 10$ % 50-60 Hz or 24 V.d.c. and 110/220/380 V.a.c. combined

**Weight:** 100 kgs

*Above specifications are subject to change without notice.*

# R201 AND R201 SPECIAL HIGH PERFORMANCE MF/HF RECEIVERS



The DANCOM series of MF/HF Marine and general purpose radio receivers are extremely high-grade receiver designs developed with the most advanced technique. Continuously variable from 10 KHz to 30 MHz in 30 bands with phase lock operation in steps of 100 Hz which gives a choice of tuning wide enough to span the whole world of MF-HF communications. The receivers are fully transistorized. Maximum use is made of integrated circuits to maximize reliability and assure a high degree of maintainability. The receiver complies with the latest specifications and national requirements of most countries.

- Continuously variable from 10 KHz to 30 MHz in 30 bands
- Phase lock operation in 100 Hz steps
- Digital indication of tuning (LED)
- Fixed positions for 500 and 2182 KHz
- FSK capability
- Built-in CW capability (R201 SPECIAL)
- Independent 600 Ω balanced line output
- Built-in power supply for 24 V.d.c. and 110/220 V.a.c.
- Meter to read signal level
- 19" rack-mounting or complete with cabinet

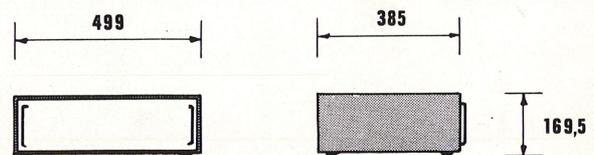
#### TECHNICAL DATA:

Modes of reception:	A1, A2, A3, A3H, A3A, A3J and F1
Frequency range:	10 KHz – 30 MHz in 30 bands 500 and 2182 KHz in 2 fixed positions
Sensitivity:	AM: 3 μV for 10 dB s/n CW/SSB: 1 μV for 10 dB s/n (bandwidth 3 KHz)
Antenna impedance:	10-250 pF from 10 KHz-4 MHz 50 Ω from 4-30 MHz
Frequency stability: frequency inconstancy in any 5 min. period with constant ambient temperature	< 50 Hz (long term)
10 KHz-30 MHz	< 20 Hz
Selectivity:	- 6 dB - 60 dB
A3	>± 3 KHz <± 20 KHz
A3H, A3A, A3J	6 dB at + 350 Hz to 2700 Hz SSB min. attenuation 60 dB at -400 Hz to 3700 Hz

Your Authorized Dancom Dealer is:

Selectivity:	- 6 dB - 60 dB
R201 Special	
Pos. Intermediate	>± 1.2 Hz <± 2.5 KHz
Pos. Narrow	>± 500 Hz <± 3.5 KHz
Pos. Very Narrow	<± 200 Hz <± 2 KHz
Cross modulation:	with a wanted signal 60 dB above 1 μV the interference produced by an unwanted signal 10 KHz off-tune and 90 dB above 1 μV will be more than 30 dB below standard output
Intermodulation:	with a wanted signal 30 dB above 1 μV, 2 unwanted signals, whose sum or difference frequency equals that of the wanted signal, must each be of a level 80 dB above 1 μV to produce standard output
Blocking:	with a wanted signal 60 dB above 1 μV, an interfering carrier 10 KHz off-tune must be of a level exceeding 100 dB above 1 μV to affect the output by 3 dB
Image rejection:	10 KHz-30 MHz 70 dB
Intermediate frequencies:	1st i.f. = 45.1 MHz 2nd i.f. = 580 KHz
I.f.-rejection:	> 60 dB up to 1.6 MHz > 90 dB above 1.6 MHz
B.F.O. R201 Spec.:	± 3 KHz (with fine-tuning)
Clarifier:	± 200 Hz
AGC Characteristic:	output is maintained within 6 dB for a change in input of 90 dB from 3 μV reference level
AGC time constant:	mode attack release A1/A2/A3 10 m sec 1.15 sec SSB 10 m sec 2.00 sec
Audio output: loudspeaker lines earphones	4 W into 3.2 Ω (distortion: 5 % max.) 10 mW into 600 Ω balanced 1 mW into 2000 Ω
Audio response	≤ 3 dB (300 Hz – 4 KHz)
Radiation:	typically 20 × 10 <sup>-12</sup> Watts max. 400 × 10 <sup>-12</sup> Watts
Meter:	to read signal level
Power supply:	24 V.d.c. battery +30 %, +10 % and 110/220 V.a.c. +30 %, +10 % 50-60 Hz
Power consumption:	app. 60 Watts
Weight:	23 kgs
Temperature range:	-15°C to +55°C (0-40°C the specified data are fulfilled)

#### Dimensions



Above specifications are subject to change without notice.