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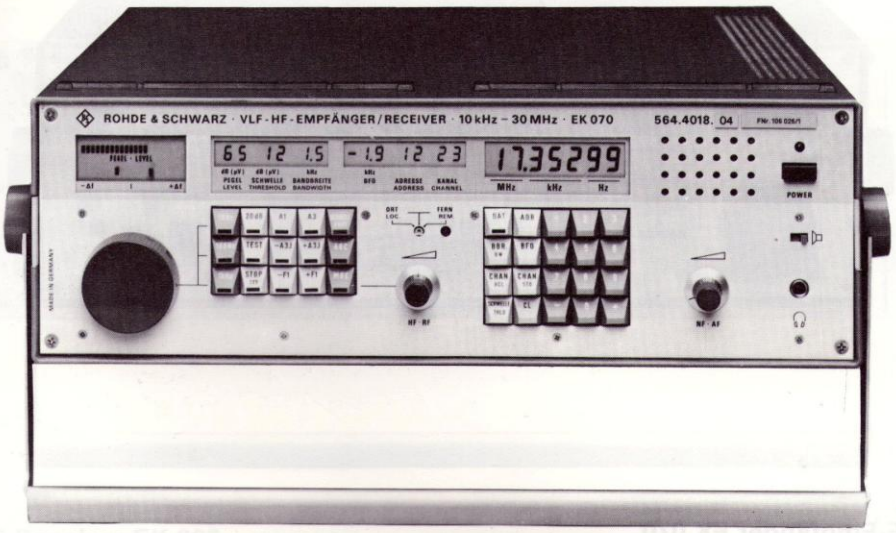

VLF-HF Receiver EK 070

Application

The EK 070 is a general-purpose VLF-HF receiver for use in locally or remotely controlled receiving stations. It is suitable for stationary and mobile communications and radiomonitoring applications.

Modular design and state-of-the art circuitry guarantee optimum reliability and simple maintenance. All settings are made with pushbuttons; the operating status of the receiver is indicated by a liquid-crystal display. The functions of the control panel and the internal data flow are controlled by a microprocessor. The receiver is provided with a line-current source permitting direct connection of a teleprinter.

Remote control of the receiver via a V.24 interface is possible in conjunction with the Control Unit GB 170.

Special features

- Full remote-control capability via IEC bus (IEEE-488) or V.24 interface
- High sensitivity along with excellent intermodulation performance
- Frequency setting via keyboard or quasi-continuously
- Channel memory for 30 complete settings
- Channel scanning
- Indication of frequency shift and error
- Built-in test generator for checking the signal path
- Switchable 20-dB attenuator

Specifications

Frequency	
Range	10 kHz to 30 MHz
Drift	≦ 3 × 10^{-8}/day
Setting increments	10 Hz
Generation	by synthesizer
Classes of emission	CW (A1A, A1B), MCW (A2A, A2B), AM (A3E), AME (H2A, H2B, H2E), SSB (R2A, R3E, J2A, J3E), ISB (B8E with option), FSK (F1A, F1B)
Preselection	by 8 suboctave filters
IF filters	9; bandwidths from 150 Hz to 12 kHz
Antenna input	50 Ω, VSWR < 3
Permissible input voltage	≦ 10 V EMF
Sensitivity for (S + N)/N = 10 dB between 0.2 and 30 MHz	
CW (A1A, A1B), B = 300 Hz	≦ 0.3 µV EMF
AM (A3E), B = 6 kHz	≦ 2.0 µV EMF
SSB (J3E), B = 3.1 kHz	≦ 0.75 µV EMF
BFO	variable over ± 3.1 kHz in 100-Hz steps
RF gain control	manual, manual + automatic, automatic
3rd-order intercept point	+ 23 dBm, typ.
Outputs	
AF line	600 Ω, floating
Loudspeaker	1 W into 5 Ω
2nd IF (1.4 MHz)	50 mV into 50 Ω
Recording	30 kHz, 0 dBm, 600 Ω
Power supply	AC: 115/125/220/235 V + 10/–15%, 47 to 420 Hz, 55 VA; AC plus DC (12/24 V ± 10%)

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VLF-HF Communication Receiver EK 071

Application

Used in fixed and mobile receiving and transmitting/receiving stations in radio networks for telegraphy, telephony and teletype.

Special features

- Easy to operate
- Non-volatile memory for 50 complete settings (remotely controllable)
- Excellent large-signal characteristics
- Built-in F1 demodulator with line-current source
- Tuning indicator for F1 operation
- Modular design

Specifications

Frequency	
Range	10 kHz to 30 MHz
Setting increments	10 Hz
Drift	≦ 3 × 10^{-8}/day
Generation	by synthesizer
Classes of emission	CW (A1A, A1B), MCW (A2A, A2B), AM (A3E), AME (H2A, J2B, H3E), SSB (R2A, R3E, J2A, J3E), ISB (B8E with option), FSK (F1A, F1B), FAX (F1C; F7B with option)
Sensitivity for (S + N)/N = 10 dB between 0.2 and 30 MHz	
CW (A1A, A1B), B = 300 Hz	≦ 0.3 µV EMF
AM (A3E), B = 6 kHz	≦ 2.0 µV EMF
SSB (J3E), B = 3.1 kHz	≦ 0.75 µV EMF

IF selectivity	3-dB bandwidth:	60-dB bandwidth:
	± 75 Hz	± 225 Hz
	± 150 Hz	± 375 Hz
	± 300 Hz	± 750 Hz
	± 750 Hz	± 1875 Hz
	± 1.5 kHz	± 3.75 kHz
	± 3 kHz	± 7.5 kHz
	± 6 kHz	± 50 kHz
	+ 0.3 to + 3.4 kHz	- 0.3 to + 4.0 kHz
	- 0.3 to - 3.4 kHz	+ 0.3 to - 4.0 kHz

Image-frequency rejection	> 80 dB
Power supply	AC: 115/125/220/235 V + 10/-15%, 47 to 420 Hz; AC plus DC (12/24 V ± 10%)
Dimensions (W × H × D)	
Bench model	479 mm × 154 mm × 487 mm
19" rackmount	483 mm × 132 mm × 515 mm

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VLF-HF Receiver EK 085

Application

The EK 085 is a general-purpose VLF-HF receiver for communications and radiomonitoring applications. This microprocessor-controlled receiver handles amplitude-modulated signals, SSB and telegraphy (morse and FSK) signals in the range from 10 kHz to 30 MHz.
Standardized data interfaces are available for the direct connection of teletypes, weather-chart and facsimile recorders, e.g. for halftone satellite pictures (optional).
The receiver can easily be integrated in computer-controlled systems or be used for programmed routine tasks of any complexity.

Special features

- Built-in digitally tuned preselector or
- Motor-tuned three-circuit preselector (optional)
- Passband tuning
- AC/DC power supply unit (with automatic switchover)
- Built-in digital clock for time-programmed operation
- Frequency and channel scanning
- Non-volatile memory for 100 channels
- Electronic note book
- BITE (to module level)
- Frequency setting with tuning knob in steps of 10 Hz, 100 Hz or 1 kHz
- Compliance with relevant MIL-STDs
- Remote control of all operating functions
- Expandable by a variety of options (e.g. SINAD evaluation)

Specifications

Frequency		
Range	10 kHz to 30 MHz	
Resolution	10 Hz	
Setting	decadic via keypad, quasi-continuously in 10-Hz/100-Hz/1-kHz steps or with variable step width	
Tuning time	≦ 50 ms	
BFO		
for all classes of emission (except for A3E)	± 2.9 kHz in 100-Hz steps	
for A1A in addition	± 1.5 kHz continuously	
Sensitivity for (S + N)/N = 10 dB between 0.4 and 30 MHz		
A1A, B = 300 Hz	≦ 0.4 µV EMF, typ. 0.125 µV (into 50 Ω)	
J3E, B = 2400 Hz:	≦ 0.85 µV EMF, typ. 0.3 µV (into 50 Ω)	
IF selectivity	3-dB bandwidth	60-dB bandwidth
	± 150 Hz	± 375 Hz
	± 1200 Hz	± 1800 Hz
	± 4000 Hz	± 50 kHz
	+0.3 to +2.7 kHz	- 0.3 to +3.3 kHz
	- 0.3 to - 2.7 kHz	+0.3 to - 3.3 kHz
	optional: four additional bandwidths	
Classes of emission	CW (A1A, A1B), MCW (A2A, A2B), AM (A3E), AME (H2A, H2B, H3E), SSB (R2A, R3E, J2A, J3E) ISB (B8E optional), FSK (F1A, F1B); frequency shifts: ± 42.5 Hz, ± 85 Hz, ± 425 Hz, FAX (F1C; F3C optional)	
Interfaces	modes and levels selectable	
Modes	- CCITT V.24 (RS-232-C) - CCITT X.21 (DIN 66244) - RS-485 (bus) Options: - IEC 625-1 (IEEE 488) bus - MIL-STD-1553B (MIL bus)	
Levels	- CCITT V.10 (X.26, RS-423-A; compatible with V.28) - CCITT V.11 (X.27, RS-422-A)	
Power supply	AC: 100/120/220/240 V, 47 to 420 Hz DC: 19 to 31 V	

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HF Receiver EK 851 C2

Application

The EK 851 C2 is a microprocessor-controlled HF receiver of the HF radio equipment family HF 850. It is suitable for stationary, land-mobile and shipboard use and covers the frequency range from 0.4 to 30 MHz.

It is preferably used together with the HF Transceiver XK 852 to permit full-duplex operation.

Operation and design of EK 851 C2 and XK 852 are identical, i.e. the receiver offers the same operating ease, simple maintenance and logistics as the transceiver.

To cope with the specific requirements, various filter units are available: a 30-MHz lowpass filter as standard or digitally or motor-tuned preselectors as options.

Special features

- Same design and operation as XK 852
- 100 channels for storage of receive frequencies and receiver settings
- System-compatible due to universal interfaces:
  V.82 (RS-232-C); V.10 (RS-423-A);
  V.11 (RS-422-A); Bus (RS-485)
- Built-in preselector
- FSK modem for direct teletype connection
- Built-in test equipment (BITE) to module level
- Compliance with relevant MIL-Standards, such as
  MIL-STD-461 to 463
  MIL-STD-810 C
  MIL-STD-1399

Specifications

Frequency range	0.4 to 30 MHz	
Frequency entry	in 10-Hz steps	
Tuning time	typically 50 ms	
BFO	variable over ± 2.9 kHz in 100-Hz steps	
Sensitivity for (S + N)/N = 10 dB between 0.4 and 30 MHz		
A1A; B = 300 Hz	≦ 0.4 µV EMF	
J3E, J7B, H3E; B = 2400 Hz	≦ 0.65 µV EMF, typically 0.9 µV	
IF selectivity	3-dB bandwidth	60-dB bandwidth
	± 150 Hz	± 375 Hz
	± 1200 Hz	± 1800 Hz
	-100 to +2300 Hz	-700 to +2900 Hz
	+300 to +2700 Hz	-300 to +3300 Hz
	-300 to +2700 Hz	+300 to +3300 Hz
Classes of emission	CW (A1A, A1B); MCW (A2A, A2B); AM (A3E); AME (H2A, H2B, H3E); SSB (R2A, R3E, I2A, I3E); ISB (B8E) optional; FSK (F1A, F1B), Frequency shifts: ± 42.5 Hz, ± 85 Hz, ± 425 Hz	
Power supply	DC: 19 to 31 V, floating; AC: 115/220 V, 47 to 63 Hz with Power Supply IN 852 C1	
Dimensions (W × H × D)		
Bench model	427 mm × 176 mm × 400 mm	
19" rackmount	483 mm × 177 mm × 400 mm	
Weight	approx. 28 kg	

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