



BECKER COMPACT LINE

COMMUNICATION & NAVIGATION



Compact Line • RCX 5000 Dual Mounting Rack

■ The BECKER dual mounting rack RCX 5000 is a specialized kit for the General Aviation 160mm-standard installation of the legendary full Solid State Single Block transponder ATC 4401 and VHF-AM transceiver AR 4201.

Compact and light, the LBA/JTSO certified system perfectly complements the BECKER CompactLine and offers the installation in any avionic panel.

The VHF-AM-transceiver equipment AR 4201 has an output of 5-7 Watts carrier power(16 W PEP).

One standby and 99 memory frequencies can be easily programmed and recalled.

Furthermore it provides standard functions like intercom, panel lighting, voltage indicator, an AF-input and an automatic test-routine.

Two transponder-models of the ATC 4401 with 250 or 160 Watt combining outstanding performance with low power consumption due to their "state of art design" with fully transistorized transmitters.

The sunlight readable display is illuminated for night operations. The display shows in addition to the transponder code also the current flight level, if an encoding altimeter is connected and Mode-C is selected. Despite the small size, the operation is simple and straight forward. It even allows the one button recall of two preselected codes.

The ATC 4401 operates from 9.5 to 32.2 V DC. This makes it suitable for almost every application in general aviation.

A standard encoding altimeter or blind encoder can be connected. ■

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AVIONIC SYSTEMS

Technical data AR 4201

■ Supply voltage	12.4 V to 15.1 V	Selectivity	> 60 dB for 25 kHz
■ Emergency supply voltage	10.0 V	Transmit output	> 5 Watt Carrier
■ Standby current	< 70 mA		16 Watt PEP
■ Transmit current	< 2.5 A	Audio output	> 3 Watt into 4 Ω
■ Frequency range	118.000 - 136.975 MHz	Phone output	> 100 mW into 600 Ω
■ Frequency channels	760	Dynamic mike	< 2 mV sym. into 150 Ω
■ Channel spacing	25 kHz	Standard mike	> 100 mV into 100 Ω
■ Memories	99	■ AF-Auxiliary input	1 V - 8 V into 600 Ω
■ Storage temperature	- 55 °C to + 85 °C	■ Digital-Voltmeter	7 V - 15 V
■ Operating temperature	- 20 °C to + 55 °C	■ Digital-Thermometer (option)	- 20 °C to + 55 °C
■ Maximum altitude	50.000 ft.	■ Certifications	
■ Sensitivity	< 1.5 µV for 6 dB (S+N)/N	JTSO - 2C37d, ED-23A, Equipment Class 4	
■ Bandwidth	> 8 kHz for 6 dB	JTSO - 2C38d, ED-23A, Equipment Class C	
		EUROCAE/RTCA ED-14C/DO-160C	
		EUROCAE/RTCA ED-12A/DO-178A	
		BZT: A 107 417 D LB	
		LBA 010.911/87 JTSO	

Technical data ATC 4401

General data :

■ Supply voltage	9.5 V to 32.2 V DC
■ Typ. consumption at (without panel illum.)	5544 (1200/sec) 0.50 A at 13.75 V (250 W) 0.40 A at 13.75 V (175 W) 0.30 A at 27.5 V (250 W) 0.25 A at 27.5 V (175 W)
- in standby mode	0.27 A at 13.75 V 0.14 A at 27.5 V
■ Panel illumination	≤ 0.10 A at 13.75 V ≤ 0.05 A at 27.5 V
■ Power-up time	3 sec. (internal self-test)
■ Ext. fuse protection	3 A slow-blow
■ Serial interface	RS 422 (9600 baud)
■ Operating temperature	- 20 °C to + 55 °C (short-time + 70 °C)
■ Storage temperature	- 55 °C to + 85 °C
■ Operating altitude in accordance with EUROCAE/RTCA ED-14D/DO-160D	35000 ft. Cat. C1
■ Vibration resistance in accordance with EUROCAE/RTCA ED-14D/DO-160D	Cat. NM
■ Humidity in accordance with EUROCAE/RTCA ED-14D/DO-160D	Cat. A / + 50 °C; 95 %, 48 h
■ Test and assembly standards	RTCA DO-150 TSO/JTSO C74c, C88a EUROCAE MPS/WG9/1-71

RCX 5000 dimensions

■ - Front panel	69.8 x 160 mm (H x W)
■ - Case depth	192 mm
■ Weight	1.555 kg

Receiver data :

■ Operating modes	Mode A Mode A+C
■ Receive frequency	1030 MHz ± 0.2 MHz
■ Sensitivity (MTL)	- 74 dBm (for 90 % reply rate)
■ Selectivity	± 15 MHz > 40 dB ± 25 MHz > 60 dB
■ Dynamic range	≥ 60 dB
■ Bandwidth	± 3 MHz < 3dB
■ Side lobe suppression	3-pulse method
■ Nominal impedance	50 Ω

Transmitter data:

■ Transmit frequency	1090 MHz ± 3 MHz
■ Transmitter type	Solid state
■ Transmit power	min. 250 W / 175 W at antenna socket
■ Reply limitation	effective as from 1200 replies / sec.
■ Nominal output impedance	50 Ω
■ Reply code (mode A)	ICAO coding system with 4096 reply possibilities
■ Flight level code (mode C)	ICAO coding system 100-foot steps from - 1000 to 35000 ft.
■ Transmit pulse shape	pulse width 0.45 ms ± 0.1 ms rise time 0.05 to 0.1 µs fall time 0.05 to 0.2 µs

BECKER FLUGFUNKWERK GMBH
Baden Airpark
77836 Rheinmünster / Germany
Phone +49 (0) 7229 / 305-0
Fax +49 (0) 7229 / 305-217
e-mail : info@becker-avionics.de
<http://www.becker-avionics.com>

BECKER AVIONICS, Inc.
10376 USA Today Way
Miramar, FL 33025, USA
Toll free 877 - 56 - BECKER
Phone +1 (305) 597 0069
Fax +1 (305) 597 8737
e-mail : info@beckerusa.com
<http://www.beckerusa.com>