

# BECKER COM

## COMMUNICATION



Remote Controlled Transponder ATC 3401-1-R/CU 5401- ( )

■ This small, lightweight air traffic control transponder is particularly well suited for installations where instrument panel space is limited. It's CU 5401 control unit is designed to be mounted into a standard 2 1/4" (57mm) round instrument panel cut-out, and is only 2 1/2" deep.

The mode A/C, receiver and high power transmitter, are housed in a separate unit, which can be installed at any convenient place in the aircraft.

The control unit offers a clear, high contrast, double line LCD display, which is readable under all lighting conditions, even in bright sunlight. When an altitude encoder is connected, the reported flight level is displayed below the transponder code, to verify correct operation of the entire system.

Any of the standard 4096 identification codes can easily be chosen by the rotary selector switches. Two preset identification codes, for VFR flight or other purposes, can be entered from the front panel, and stored in non-volatile memory, for instant recall by a single key stroke.

This transponder is suitable in all types of fixed wing and rotary wing aircraft, operates from both 14 and 28 volt input power, and will be certified for both VFR and IFR operations. It complies with the requirements of JTSO C74c, class 1A, and can report altitudes up to 62700 feet. Low power consumption, coupled with small size and weight, and high altitude reporting capability make it an ideal selection as a standby transponder for larger aircraft operating at flight levels where interruptions in transponder operation can not be tolerated.

For truly compact installations, this transponder can be combined with other Becker PrimeLine II equipment, such as the VHF-COM, ADF, and the NAV-VOR/ILS navigation, which have similar control units providing a pleasant presentation in the panel.

The transponder remote receiver/transmitter unit can be controlled by other types of CDU or FMS devices and is ideally suited for use as essential sensor in flight management systems. ■

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AVIONIC SYSTEMS

## Technical Data

### Remote Transponder ATC 3401-(1)-R

■ Mode	AC
■ Supply voltage	+ 10 ... + 32 V DC
■ Current consumption	≤ 1.5 A at 13.75 V ≤ 0.8 A at 27.5 V
■ Operating temperature range	- 40 °C ... + 70 °C
■ Storage temperature range	- 55 °C ... + 85 °C
■ Altitude max.	35000 ft
■ Control Interface	RS 422, serial line
■ Blind encoder	Parallel (Gray-Code)
■ Dimensions incl. mounting	139 x 50 x 253 mm (H x W x D)
■ Weight max.	1.2 kg
■ Operating modes	Mode A and C
■ Reply code (Mode A)	ICAO coding system with capacity for 4096 reply code combinations
■ Altitude code (Mode C)	ICAO coding system with 100 ft increments reporting from 1000 to 62700 ft (MOA Gilham code)
■ Antenna impedance	50 Ω

### Receiver section:

■ Receiver frequency	1030 MHz
■ Sensitivity (MTL)	- 78 dBm ... - 72 dBm
■ Selectivity	± 15 MHz ≥ 40 dB ± 25 MHz ≥ 60 dB
■ Bandwidth	± 3 MHz ≤ 3 dB
■ Side lobe suppression	3 pulse method

### Transmitter section:

■ Transmit frequency	1090 MHz
■ Peak power	≥ 250 W
■ Reply limit	1200 replies/sec.

### Control Unit CU 5401-(1)-101:

■ Supply voltage	+ 10 ... + 32 V DC
■ Current consumption without panel lighting	≤ 60 mA
■ Panel lighting	≤ 160 mA at 13.75 V DC ≤ 80 mA at 27.5V DC
■ Operating temperature range	- 20 °C ... + 55 °C
■ Storage temperature range	- 55 °C ... + 85 °C
■ Altitude max.	50000 ft
■ Interface	RS 422, serial line
■ Dimensions	61.3 x 61.3 x 62 mm (H x W x D)
■ Weight max.	0.26 kg

### Applicable documents:

■ ATC	JTSO - C 74 c RTCA DO-150
■ Environment	ED-14C/DO-160C
■ Software	ED-12B/DO-178B
■ BAPT	FTZ 17 TR 2010, A 133 695 K
■ LBA	10.930 / 54 JTSO

### Recommended connector kits:

■ CK 3401-S	for ATC 3401-(1)-R
■ CK 5000-S	for CU 5401-(1)-101