

BECKER NAV

NAVIGATION



Remote Controlled VOR/ILS Receiver RN 33XX- ()/CU 5301- ()

■ This VOR/ILS receiver enables pilots and installations engineers to customize the VHF radios in any aircraft to provide. The ideal combination of performance and low cost, provides the best value and operating characteristics for any particular aircraft and mission profile.

The system is ideally suited for installations where minimum panel space is to be used. It utilizes a small, lightweight CU 5301 control unit, which fits into a standard 2 1/4" (57mm) round instrument panel cut-out, and is only 2 1/2" deep.

Lightweight remote receivers, with VOR/LOC, VOR/LOC/GS capabilities are mated with this control unit, to complete a system.

These receivers can be installed at any convenient place in the aircraft. The CU 5301 control unit offers a clear, high contrast, double line LCD display, which is readable under all lighting conditions, even in bright sunlight.

Both active and preset frequencies are displayed, and can be transferred by a single stroke of the "Flip-Flop" button. Up to 20 preset frequencies can be easily entered in channel mode from the front panel, and stored in a

non volatile memory. Parallel/serial outputs are provided for automatic DME channeling. The steering signals and flag drive outputs are compatible with most commonly used CDI, HSI, Flight Director and Autopilot Systems.

All systems will be JTSO certified for either VFR or IFR use in all types of fixed wing and rotary wing aircraft, and comply with the stringent ICAO requirements Annex 10, FM immunity.

For truly compact installations, the RN 33XX receiver systems can be combined with other Becker Prime-Line II equipment, such as VHF-COM, ADF and ATC transponder which have similar control units, providing a pleasant presentation in the panel.

The remote receiver units can be controlled by other types of CDU or FMS devices and are ideally suited for use as essential sensors in flight management systems. ■

BECKER AVIONIC SYSTEMS

Technical Data

Remote NAV-Receiver RN 3320 - (1) / RN 3330 - (1)

■ RN 3320 -(01)	VOR/LOC & GS receiver with VOR/LOC converter
■ RN 3330 -(01)	VOR/LOC receiver with VOR/LOC converter
■ Supply voltage	+ 13.75 V / + 27.5 V
■ Current consumption:	
RN 3320 - (01)	≤ 0.42 A / ≤ 0.32 A
RN 3330 - (01)	≤ 0.34 A / ≤ 0.26 A
■ Operating temperature range	- 40 °C . . . + 70 °C
■ Storage temperature range:	- 55 °C . . . + 85 °C
■ Altitude max.	50000 ft
■ Control Interface	RS 422, serial line
■ Dimensions incl. mounting plate	139 x 50 x 253 mm (H x W x D)
■ Weight max.:	
RN 3320 / RN 3330	0.81 kg / 0.78 kg
■ Frequency ranges:	
VOR/LOC	108.00 – 117.95 MHz 200 channels
Glide slope	329.15 – 335.00 MHz 40 channels
■ Channel spacing:	
VOR/LOC	50 kHz
Glide slope	150 kHz
■ Receiver sensitivity:	
VOR/LOC audio	- 93 dBm ≥ 6 dB SINAD
■ Selectivity:	
VOR/LOC	≥ 65 dB for ± 50 kHz
Glide slope	≥ 42 dB for ± 150 kHz
■ NAV signal composite	500 mV
■ VOR bearing error	≤ 2 degrees
■ Centering Error Loc	11% Std. Def.
■ Centering Error GS	13% Std. Def.
■ Outputs:	
VOR/LOC needles	max. 3 impeded, 1 KΩ
VOR/LOC flag	max. 3 impeded, 1 KΩ
TO/FROM flag	max. 3 impeded, 1 KΩ

G/S needles	max. 3 impeded, 1 KΩ
G/S warning flag	max. 3 impeded, 1 KΩ
DME Interface	2 out of 5, ARINC 410
■ Resolver interface	Standard ARINC 407
■ Audio power	≥ 100 mW into 300 Ω

Control Unit CU 5301 - (1)-101:

■ Supply voltage	+ 27.5 V DC / 13.75 V
■ 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

Recommended VOR/ILS components:

■ IN 3300-(X)-01	VOR/ILS crosspointer indicator
■ RM 3300-(2)	RMI converter, 3 wire syndro
■ RM 3300-(3)	RMI converter, sin/cos AC

Recommended connector kits:

■ CK 3305-S	for RN 3320-(1)
■ CK 3307-S	for RN 3330-(1)
■ CK 3310-S	for IN 3300-(X)-01
■ CK 3309-S	for RM 3300-(X)

Applicable documents:

■ VOR/LOC/GS	JT50-C34e/JT50-36e/ JT50-2C40c Software EUROCAE/RTCA ED
■ BAPT	ED 12B/DO-178B, software ED-14c / DO-160c, environment
■ Homologation	FTZ 17 TR 2010, A 131 839J 10.922 / 81 JT50, LBA

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