

Avionics

NAV-2000R NAV/COMM Signal Generator

AEROFLEX
A passion for performance.



Unprecedented accuracy in an affordable avionics signal generator

- Supports VOR, LOC, GS, MB, COMM, SELCAL, and ADF Modes
- Front Panel Control of VIDEO LEVEL for use with NAV Converters
- Front Panel Store & Recall allows for 49 Setups per Mode, 294 Total
- DSP (Digital Signal Processing)
- Full GPIB bus control of all features

The NAV-2000R is the only generator needed to test ADF, Marker Beacon, VOR, LOC, Glideslope, HF, VHF, and UHF COMM receivers. The NAV-2000R Signal Generator offers a frequency range of 150 kHz to 450 MHz, and is loaded with special avionic functions including the ability to produce Morse Code Ident in VOR, LOC and ADF modes; pulsed audio tones corresponding to the Marker Beacon selected; two-tone modulation; and SELCAL capability in COMM mode.

Available options include:

- Collins 479S-6A GPIB command set compatibility
- A unit with extended output power to + 7dBm

All signal parameters are controllable from the front panel or through the standard GPIB bus for use in manual bench and ATE test applications. STORE and RECALL functions allow quick recall of up to 249 user-stored test setups (49 in each mode). The bright electroluminescent display, combined with logically grouped keypads, provides for fast, efficient setup of avionics test signals. The most often used signal parameters are entered with one key-stroke by using "Hot Keys" dedicated to VOR bearing and LOC/GS DDM selections. MODE keys access the following avionics functions:

- VOR - bearing displayed in degrees To/From; user control of 30 Hz variable and 9960 Hz modulation % and frequency; user control of 1020 Hz tone modulation with programmable Morse Code Ident.
- Localizer - 90 and 150 Hz modulation displayed in DDM or % modulation; 90/150 Hz phase control; 1020 Hz tone modulation with programmable Morse Code Ident.
- Glideslope - 90 and 150 Hz modulation displayed in DDM or percent modulation; 90/150 Hz phase control.
- ADF - modulation tone variable from 10 Hz to 18 kHz; 1000 Hz default tone modulation with programmable Morse Code Ident.
- Marker Beacon - variable 400 Hz outer marker, 1300 Hz middle marker and 3000 Hz inner marker, with pulsed tone ident capability corresponding to selected beacon type.
- COMM - modulation tones variable from 10 Hz to 18 kHz with two-tone capability for HF applications. SELCAL option allows setup of ARINC 714-6 selective calling tones.

For the very latest specifications visit www.aeroflex.com

GENERAL SPECIFICATIONS

FREQUENCY

Range

150 kHz to 450 MHz

Resolution

10 Hz

SPECTRAL PURITY

Harmonics

<-30 dBc

Non-Harmonics (Spurious)

<-60 dBc, Offset >5 kHz

OUTPUT LEVEL

Range

-127 to 0 dBm (-50 unit)

-127 to 7 dBm (-80 unit)

Resolution

0.1 dB

AMPLITUDE MODULATION

Range

0 to 99%

Resolution

0.01%

Accuracy (sum of all tones)

10 to 95%

±2% of indication

Tone Frequency Accuracy

±0.005%

Total Harmonic Distortion

<0.1%

VOR MODE

Modulation Tones

9960 Hz, 30 Hz Reference

30 Hz Variable, 1020 Hz Ident

LOCALIZER MODE

Modulation Tones

90, 150, 1020 Hz

Tone Frequency Adjustment

±10%

Range

Set DDM Function

"Hot Key"

0, 0.046, 0.093, 0.155, 0.200

Keypad or GPIB bus

0 to 0.400 DDM

DDM Resolution

0.001 DDM

DDM Accuracy

0 ±0.0003 DDM

0.046 ±0.0012 DDM

0.093 ±0.0021 DDM

0.155 ±0.0034 DDM

0.200 ±0.0053 DDM

GLIDESLOPE MODE

Modulation Tones

90, 150 Hz

Tone Frequency Adjustment

±10%

Range

Set DDM Function

"Hot Key"

0, 0.045, 0.091, 0.175, 0.400

Keypad or GPIB bus

0 to 0.800 DDM

DDM Resolution

0.001 DDM

DDM Accuracy

0 ±0.0003 DDM

0.045 ±0.0012 DDM

0.091 ±0.0021 DDM

0.175 ±0.0038 DDM

0.400 ±0.0083 DDM

MARKER BEACON MODE

Modulation Tones

400, 1300, 3000 Hz

Tone Frequency Adjustment Range

10 Hz to 18 kHz

VHF/UHF COMM MODE

Modulation Tones

10 Hz to 18 kHz, SELCAL

Tone Frequency Resolution

0.1 Hz

ADF MODE

Modulation Tones

10 Hz to 18 kHz, SELCAL

Tone Frequency Resolution

0.1 Hz

ADF MODE

Modulation Tones

1000 Hz

Tone Frequency Resolution

0.1 Hz increments

MORSE CODE

Morse Code Ident

User Programmable (VOR, LOC, ADF)

Length, 0 to 6 characters

Programmable

AUDIO OUTPUT LEVEL

2 VAC (peak) into 600 ohms

ENVIRONMENT

Operating Temperature

7 to 430 °C

Relative Humidity

<90%

POWER REQUIREMENTS

Input

100-240 VAC, 48-440 Hz

PHYSICAL CHARACTERISTICS

Weight

34 lbs (15.42 kg)

Size

17.4" x 5" x 19.3" (44.2 cm x 13.2 cm x 49 cm)

(19" x 5" x 19.3" in rack mount)

VERSIONS, OPTIONS AND ACCESSORIES

When ordering please quote the full ordering number information.

Ordering

Numbers

Versions

NAV2000R-50-110 NAV/COMM Signal Generator, 110 V

NAV2000R-50-220 NAV/COMM Signal Generator, 220 V

NAV2000R-70-110 NAV/COMM Signal Generator, 110 V
Includes GPIB Command Set compatible w/
Collins 479S-6A

NAV2000R-70-220 NAV/COMM Signal Generator, 220 V Includes
GPIB Command Set compatible w/ Collins
479S-6A

NAV2000R-80-110 NAV/COMM Signal Generator, 110 V Output
power range: -120 to +7 dBm

NAV2000R-80-220 NAV/COMM Signal Generator, 220 V Output
power range: -120 to +7 dBm

Optional Accessories

AC500520RH Rack Mount Kit

Extended warranty

WNAV/203C Extended standard warranty 36 months with
scheduled calibration

WNAV/205C Extended standard warranty 60 months with
scheduled calibration

CHINA Beijing

Tel: [+86] (10) 6467 2761 2716
Fax: [+86] (10) 6467 2821

CHINA Shanghai

Tel: [+86] (21) 6282 8001
Fax: [+86] (21) 62828 8002

FINLAND

Tel: [+358] (9) 2709 5541
Fax: [+358] (9) 804 2441

FRANCE

Tel: [+33] 1 60 79 96 00
Fax: [+33] 1 60 77 69 22

GERMANY

Tel: [+49] 8131 2926-0
Fax: [+49] 8131 2926-130

HONG KONG

Tel: [+852] 2832 7988
Fax: [+852] 2834 5364

INDIA

Tel: [+91] 80 5115 4501
Fax: [+91] 80 5115 4502

KOREA

Tel: [+82] (2) 3424 2719
Fax: [+82] (2) 3424 8620

SCANDINAVIA

Tel: [+45] 9614 0045
Fax: [+45] 9614 0047

SPAIN

Tel: [+34] (91) 640 11 34
Fax: [+34] (91) 640 06 40

UK Burnham

Tel: [+44] (0) 1628 604455
Fax: [+44] (0) 1628 662017

UK Stevenage

Tel: [+44] (0) 1438 742200
Fax: [+44] (0) 1438 727601
Freephone: 0800 282388

USA Wichita

Tel: [+1] (316) 522 4981
Fax: [+1] (316) 522 1360
Toll Free: 800 835 2352

USA JcAIR Test Systems

Tel: [+1] (913) 764 2452
Fax: [+1] (913) 782 5104



As we are always seeking to improve our products, the information in this document gives only a general indication of the product capacity, performance and suitability, none of which shall form part of any contract. We reserve the right to make design changes without notice. All trademarks are acknowledged. Parent company Aeroflex, Inc. ©Aeroflex 2005.

www.aeroflex.com
info-test@eroflex.com



Our passion for performance is defined by three attributes represented by these three icons: solution-minded, performance-driven and customer-focused.