

NPX138N

Panel-mount FM Transceiver

Data Sheet



The most important thing we build is trust

NPX138N Narrowband VHF-FM

This USFS-compliant radio was specifically designed to fulfill contract-required functionality. The synthesized, frequency-agile transceiver allows easy access to all pre-programmed channels and the ability to modify or add channels on the fly.

At less than 2" high and 3 lb., the self-contained, panel mount NPX138 radios are designed as stand-alone units for the single-mission user. The lightweight, state-of-the-art, compact design is perfect for the space- and weight-restricted environment of a helicopter or light fixed-wing aircraft.

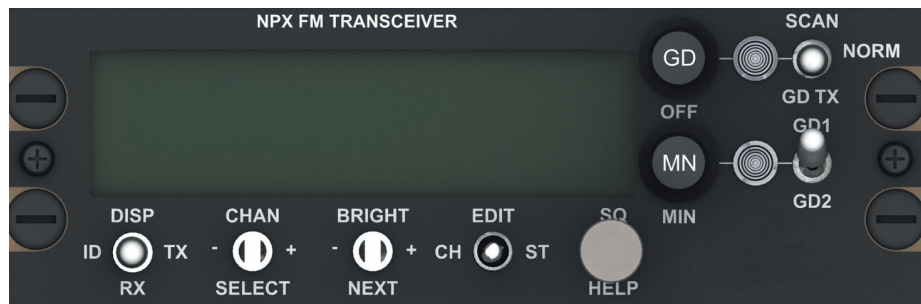
Each of the 100 memory channels available can store a receive frequency with CTCSS tone, a transmit frequency with CTCSS tone, scan function and an alpha-numeric identifier on a 32 character LED display. Transmit power of 1 or 10 watts is easily selectable from the front of the NPX138N.

The optional, synthesized, two-channel guard receiver allows front panel tuning of user frequencies, ensuring communication integrity during complex flight operations. Each individual channel is operator selectable for wide (5 kHz deviation) and narrow band (2.5 kHz deviation) operation. DTMF encoding and

direct keyboard programming can be added using the DTE12 Tone Encoder/Data Entry Keypad.

Panel lighting is available in either 28, 14 or 5 Vdc controlled through the aircraft dimmer bus. NVG-compatible lighting is optional.

*A Windows-based, serial-load software program is available for the NPX138N series FM radios, p/n NUDP-004. Contact us for details.



Features / Benefits

- Wideband / Narrowband Capable
- Compact Size and Weight
- Optional Synthesized 2 Channel Guard Receiver
- Low Power Consumption
- Modular Construction
- Multiple Scan Modes
- Ease of Operation
- Low Cost
- Agile Operation

Technical Specifications

General:

Panel Lighting	28, 14 or 5 Vdc, NVG optional
Operating Temp.	-30 C to +60 C
Cooling	Internal fan, thermostat control
Environmental	DO-160C Env. Cat. [B4D1] ZBA[BMN]XXXXXABABAUAXXX
Remote Interface	RS232C Serial Data
Channel Increments	5 kHz / 6.25 kHz
Tone Capability	38 CTCSS tones 67.0 - 250.3 Hz
Operating Mode	F3E simplex or semi-duplex
Audio Output	100 mW/600 ohm bal / unbal
Microphone	Amplified dynamic or equivalent
Sidetone	Output 25 mW/600 ohm nominal

Receiver:

Reference Sensitivity	0.5 uV max / 12 dB SINAD
Adj. Channel Sel.	70 dB (25 kHz) 60 dB (12.5 kHz)
Intermodulation	70 dB
Spurious Response	> 70 dB
Hum and Noise	> 50 dB unscelched < -80 dBW scelched

Freq. Response	+1/-3 to 6 dB/octave de-emphasis
Rx Recovery Time	250 milliseconds max

Transmitter:

RF Power Output	1 watt or 10 watt selectable
Duty Cycle	20% at (10 watts)
Conducted Spurious	-64 dBc (high power) -55 dBc (low power)
Frequency Stability	± .0003%
Distortion	< 4% max
Rated Deviation	±2.5 or ±5.0 kHz (NPX138N) ±5.0 kHz (NPX138, NPX066)
Modulation Limiting	85% of rated deviation

Approvals:

TC STC #SA99-211
TC STC #SH05-12
FAA STC #SA01170NY
FAA PMA
Install Kit: NPX-1KC (Crimp)

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