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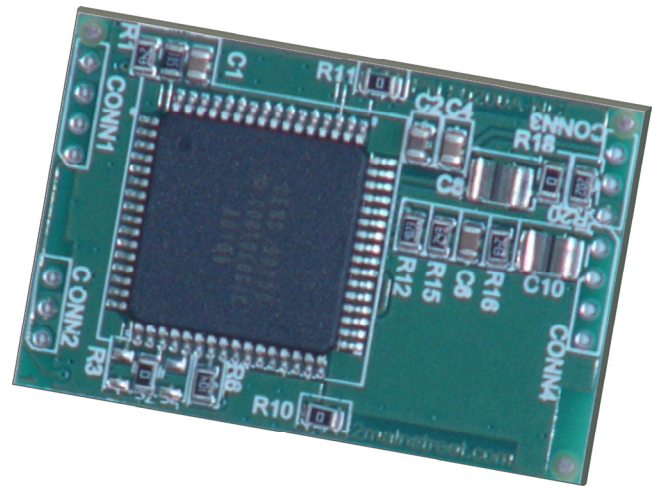
Electronic Voice Processing Module

90200A-NC

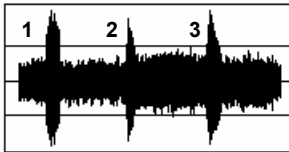
Clear Voice through Background Noise Cancellation

Product Features:

- Microphone or speaker applications
- Direct electret or dynamic mic connection
- Adapts to changes in background noise
- Up to 20 dB of voice to noise cancellation
- Reduce microphone vibration pickup
- Reduce microphone wind disturbance
- Select from 8 noise cancellation levels
- Power standby and audio pass through modes

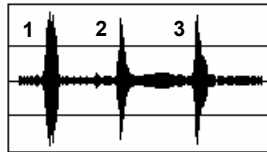


Before 90200A-NC



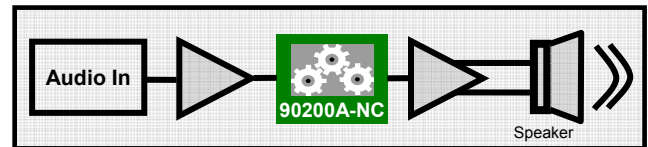
Voice audio before noise cancellation

After 90200A-NC

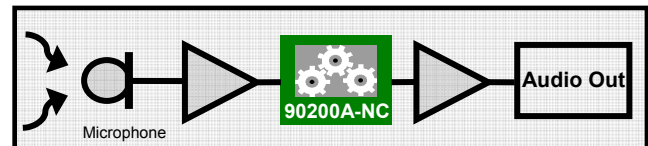


Voice audio after noise cancellation

Typical Circuit Configurations



or



Improving communication where background noise disrupts speech:
 Airport, Construction, Fire, Industrial, Motor Sports, Police, Public Safety, Railroad, Rescue, Security, Shipyard

Compatibility:

Voice processing module 90200A-NC performs noise cancellation with any analog voice band audio signal. The input provides direct connection to either low level microphone or high level line out sources. The output creates a signal range from microphone to standard audio line in levels. The module features power supply regulation and control pins for standby and pass through operation. Designed for either wire attach soldered installation or available with terminal strips for daughter card assembly. Shielding is also available for difficult RF environment installation.

User Applications

Intercom
 Headsets
 Bullhorn

UHF / VHF Radio
 Ham Radio
 CB Radio

Desktop Phone
 Speaker Phone
 Cellular Phone

Description:

The 90200A-NC uses electronic digital signal processing to cancel background audio noise from the desired voice signal thereby improving the speech intelligibility.

If you use communication equipment, you know the clear intelligible speech comes from a person in a quiet environment. Imagine hearing the same clear intelligible speech from a person standing next to a six lane highway or near a pounding jack hammer.

With the 90200A-NC voice processor module installed in your equipment you will hear speech improvements no matter the acoustic level of the noise or wind the microphone is picking up.

The 90200A-NC will enhance the safety of users by:

- Improving Message Understanding
- Reducing Communication Effort
- Removing Operator Frustration

Specifications:

Parameter	Notes	Minimum	Typical	Maximum	Unit
Audio Bandwidth	3dB	0.30		11.0	KHz
Total Harmonic Distortion	< 1.5V p-p output level, 2K ohm Load	1	1.5	2	%
System Delay	Input to Output		25	33	mSec
Noise Suppression (Level 8)	Voice Audio to White Noise Ratio (1)			20	dB
	Voice Audio to Momentary Noise Ratio (1)			20	dB
	Voice Audio to Hum or CW Tone Ratio (1)			20	dB
Suppression Convergence	Suppression Level and Noise Dependent		500	1000	mSec
Audio Signal Level Gain	Input to Output	1.0		8.0	A
Supply Voltage		+4.5		+14	Volts
Supply Current	Supply Voltage = 4.5 V		28	30	mAmps
Standby Mode Current	Supply Voltage Range		50	100	µAmps
Operating Temperature	Weakest Component Specification	-20		+85	Deg C
Shock	Installation Dependent				
Vibration	Installation Dependent				
Length	PCB Assembly		1.475		in
Width	PCB Assembly		0.975		in
Height	PCB Assembly		0.175		in

Notes: (1) Suppression levels are configuration dependent. Default setting is typical 15dB suppression
Noise figure and distortion events of electronic components affect measurements.

Installation:

The 90200A-NC is designed for a user to simply attach power, ground, input and output signals. The default configuration is for direct attachment of an electret microphone with the internal gain set for line out signal levels. With a couple component changes input / output and processing levels can be will tailored for virtually any audio processing application. A 2 watt headset speaker amplifier is also available in this same form factor. Call today and discuss your application.

Availability:

Direct purchase from Main Street Technology or ask your local communications equipment provider to become a certified distributor and installer.

Technical Support:

Call or email Main Street Technology support staff for answers regarding equipment integration or operational settings of the 90200A-NC voice processor module. Call today and discuss your application.