

## Helpful Hints for Communicating in Unusually High Noise Environments.

The Sigtronics **SPA-400N**, and **SPO-22N / 42N / 62N** voice activated intercoms have been specifically configured to obtain the optimum “signal-to-noise” ratio for successful cockpit communications in the “noisiest” of aircraft. Aircraft applications will include **Open Cockpit, Ultra-Lights, Warbirds, or Helicopters.**

It must always be emphasized, however, that the intercom is only one component of the total communications system. The *headsets chosen to be used are critical* in determining the overall performance of the “System”. For example, it is futile to attempt using any headset with a NRR (Noise Reduction Rating) below 24dB. The “stick-in-the-ear” or open frame type headsets are fine for the DC-10 cockpit environment, but are absolutely useless for the environment we’re discussing.

For this environment, it is suggested that the Sigtronics **S-20, S-45, S-58 or S-68** headsets be seriously considered for use. They are light weight for comfort (11.9 to 12.3 oz.), have a noise reduction of 24dB and are specifically designed for the most difficult noise conditions encountered in Military, General Aviation, and Airborne Law Enforcement. The M-80 electret microphone is an essential part of the success of these headsets. If you prefer the **S-40** headset, we can substitute the M-80 microphone for you. Also, we can retrofit the M-80 and our receivers to your helmet. All Sigtronics headsets are RFI and EMI immune and work superbly in fabric aircraft or in close proximity to antennas.

The following list of “Helpful Hints” is designed to maximize the performance of your Sigtronics Intercom System and allow “hands-free” cockpit communications where no previous intercom could!

1. If your current appropriate headsets have adjustable microphone gain settings, turn them down. This serves to improve the signal to noise figure of merit of most microphones. (Applies to David Clark H10-30, many models of Telex, and Peltor models with the amplified dynamic mic. Contact manufacturer for instructions.
2. In the Open Cockpit environment or when the boom mic is subjected to direct air blasts, large, foam type mic muffs should be used. We have a suitable muff available.
3. Correct positioning of the boom mic in relation to the mouth is important! Adjust so that the mic is to either side of the mouth (off center) but no more than ¼” away (one can “kiss” the “talk” portion of the microphone.)
4. Most important of all: Adjust the Headset receiver volume control(s) for maximum volume. Adjust the Intercom volume control to the lowest setting that allows good communications.

### **Sigtronics Corporation**

949 N. Cataract Avenue, #D

San Dimas, CA 91773

Phone: (909) 305-9399

E-mail: [info@sigtronics.com](mailto:info@sigtronics.com)

Web Site: [www.sigtronics.com](http://www.sigtronics.com)



## **SPA-400N Description**

The **SPA-400N** is specifically configured for very high noise environments, such as Ultra-lights, Open Cockpit aircraft, and all Warbirds.

### **Features:**

1. The **SPA-400N** has circuitry that allows you to use it either in the voice activated intercom mode or in a push-to-intercom mode. In order to use it in the push to intercom mode, you will need to install a separate **PTT** switch for this purpose. This feature is sometimes desirable in open cockpit and ultra-light aircraft where wind noise can be a problem. Using a large windscreen on the mic is very helpful, however.
2. Special High Noise circuitry
3. Stereo capability: If you want to have stereo/switching in the aircraft, order our **ST-400N** and our **S-45S**, **S-58S** or **S-68S** headsets.

\*If you have a Warbird (T-28, T-6, etc.) with the original military intercom, call Sigtronics regarding the best use of the SPA-400N.

For the best communications in high noise aircraft, it is highly recommended that you use the Sigtronics' high noise proven **M-80H mic**, either on one of our headsets or incorporated into your helmet. Call us regarding upgrading your helmet for the ultimate in communications.

## **SPO-22N/ 42N / 62N Description**

The **SPO-22N/ 42N / 62N** portable intercoms are like the SPO-22 / 42 / 62 in the brochure, however they incorporate special high-noise circuitry. They do not have the push-to-intercom feature that the SPA-400N has. The **SPO N** intercoms work well in Ultra-Lights and other high-noise environments, and with hand held radios.