



Applications Notes

Designing, specifying, installing or upgrading a headset intercom system is a 'sometimes thing' for most people, with only a very few having sufficient experience to become expert. For that reason, Production Intercom staffers are always available on our 800 number to help you select the components to meet the requirement of each application, and to optimize your communications budget. In the sections which follow you will find comprehensive information about our equipment and its applications, but we thought it would be worthwhile first to provide short answers to the most commonly asked questions:

1. Compatibility: (Can I hook this up to my 'XYZ' system?)

There are several interconnect standards for headset intercom systems, none of which are directly compatible with the others. The most common standards are those originally devised by Clear-Com[®], Telex[®] and RTS[®]. The Clear-Com standard is also used by Production Intercom, HM Electronics, and a number of English and European manufacturers.

Most headset intercom manufacturers either make some kind of adaptor to allow you to interface with another standard, or, in some cases, products of their own which operate on another standard. For example, Clear-Com manufactures equipment which will operate on the RTS standard, and Telex makes 'belt packs' which are switchable between their own standard and Clear-Com's. In this category, Production Intercom offers the AD903, which permits limited interfacing between Production Intercom devices and any other standard. In most cases the audio can be passed successfully from one to the other, but the signal lamp circuit cannot.

When adding to an existing system (or when regularly interfacing with a particular type) we believe that it's best to stick with equipment on the same standard, as neither manufacturer is going to be too enthusiastic about accepting responsibility for the overall performance of a hybrid system.

The good news is that all of the better known companies provide products of high quality, and you can expect excellent performance from any of them. Your selection can be confidently made on the basis of useful facilities, durability, customer support, availability, and cost.

2. Wireless: (Do you have ?)

There are circumstances where a wireless headset intercom system is the ideal answer. Production Intercom does not manufacture a wireless system. It is our experience that cost, complexity, and problems associated with low-power transmissions in many public assembly facilities (as well as potential F.C.C. licensing hassles) will discourage all but those who absolutely require wireless. For those few with the budget and willingness to confront the obstacles, there are already several quite competent wireless systems in the marketplace, by manufacturers such as Clear-Com[®], HM Electronics[®], Telex[®], etc.

Our inquiries of customers who call us to ask about wireless reveal that, in most facilities, only one or two crew members actually need to be wireless. For these situations, we offer the AD913 Simplex Transceiver Adaptor. Using this device, any commonly available transceivers can be interfaced with the cabled system. The AD913 is wired into the cabled system just like another station. One transceiver is dedicated as the 'base' and connected via its remote mic/spkr jacks to the AD913. (Tell us the make and model of the transceiver and we'll make up an interconnecting cable with the appropriate connector for that unit.) Any station on the same circuit as the AD913/Base transceiver can now communicate with remote transceivers by pressing and holding their signal lamp button. Responses from the remote transceivers are received by the 'base', and passed through the AD913 to the cabled stations. The remote transceivers may be equipped with headsets where required.

Any transceiver with accessible jacks for the connection of a remote mic/spkr can be used. We do not recommend the use of transceivers with VOX facilities unless they can be overridden.

See 'Live Ent.' Section - Live Theatre System - Including Transceiver Interface

3. Simple v.s. Complex: (Do I need a 'Master' Station?)

The terms 'Master' station' or 'Main' station" seem to imply that every system must begin with one. Not so! Headset communications systems in their simplest form are common-talk or party line, and all that's required is an assortment of appropriate stations and a power supply to provide the operating current. Unless the facilities of a 'Master' or 'Main' station are going to be used, the additional cost is wasted. The need for a 'Master' or 'Main' station can be determined by answering the following questions. If the answer to any one or more of these questions is Yes, a 'Master' or 'Main' station will be required.

- a) Will there be more than one communications circuit, where the stations on each circuit should be isolated from stations on all other circuits, but where one station needs to communicate with all circuits?
- b) Will an audio signal from a remote source need to be fed onto the intercom line so that stations can (for example) monitor the program on stage?
- c) Will it be required that an audio signal from the intercom system be sent to a remote paging amplifier?

If the answers to these three questions were No, See 'Live Ent.' Section - Basic Portable System & Enhanced Portable System.

4. Noisy Environments: (How loud do your headsets get?)

The answer: 95dB. Simply overwhelming an already dangerously high sound pressure level with an intercom signal which is louder still would be dangerous practice. There are several steps which you can take to accomplish reliable communications in a high-noise environment: reduce 'sidetone' at stations near the noise source; use dual-muff headsets with high noise-exclusion ear pads; use headsets with noise-canceling microphones.

5. Connections: (How do I hook this stuff up?)

Production Intercom and compatible systems are frequently referred to as '2-wire' although this term is misleading since the stations are connected together using 2-conductor shielded microphone cable, and the shield is very much a conductor. Enclosed stations have XLR connectors (usually 3-pin). Stations intended for flush mounting have plug-in terminal strips.