



## Model 46A vs Model 47A – What’s the Difference?

Studio Technologies offers a number of products that convert analog line-level (“4-wire”) audio signals to party-line (PL) intercom circuits. Two of the units are very similar, the Model 46A and the Model 47A, and understanding their differences can be somewhat confusing. But when the facts are presented, selecting the correct model for a specific application should be straightforward.

The **Model 46A** has two 2-channel interfaces with power provided on intercom channel 1 (pin 2) of each interface. So on the 3-pin XLR interface connectors there is 30 volt DC power and channel 1 audio on pin 2 and channel 2 audio on pin 3. This is the standard 2-channel party-line power and audio scenario that is most often required for broadcast, production, and industrial applications. It allows direct connection of 2-channel belt packs, such as the popular RTS BP325, which obtain their power from pin 2.

The **Model 47A** is a little different, also providing two 2-channel interfaces but with power provided on both intercom channels of both interfaces. So on the 3-pin XLR interface connectors there is 30 volt DC power and channel 1 audio on pin 2 and 30 volt DC power and channel 2 audio on pin 3. This leads to the question: why would someone need power on both pins? Only if the Model 47A is being used to connect the party-line audio channels to belt packs by way of a Source Assignment Panel. Commonly known in the TV field as “SAP panels,” they are typically used in TV production trucks and trailers. They can also be found in some fixed installations. An installation that uses a SAP panel will allow the Model 47A’s four party-line intercom channels (two associated with each of two interfaces) to be assigned (routed to) in any order to any belt pack. And by having power on all channels any routing combination made by the SAP panel will supply the connected belt packs with their required power. (Remember that all belt packs get their power only from pin 2.) In mobile production applications it’s typical for two or three Model 47A units to be used together to provide eight or twelve party-line channels that are connected to a SAP and then on to an I/O panel with multiple XLR connectors.

In conclusion, the Model 46A is the more “standard” unit that’s appropriate for applications where belt packs will be connected directly to the unit’s two 2-channel interfaces. It provides two “powered pins” and four audio channels. The Model 47A is an enhanced version that is typically appropriate only for applications that utilize SAP panels. It provides four “powered pins” and four associated audio channels.

What’s the best method for an engineer, purchasing agent, buyer, or reseller to use to select between the Model 46A and the Model 47A? If the application utilizes a source assignment (SAP) panel the Model 47A would be correct. If not, the Model 46A would typically be correct.

A final note: single-channel party-line intercom circuits, such as those associated with Clear-Com® belt packs, are also compatible with both the Model 46A and the Model 47A but with certain limitations. Refer to the specific product user guide for details.

**Q: Is the audio quality the same on both the Model 46A and the Model 47A?**

A: Yes, the same excellent audio performance is provided.

**Q: Are the user controls the same between the Model 46A and the Model 47A?**

A: Yes, they are identical.

**Q: Do the Model 46A and Model 47A require different interconnection schemes, powering, audio connections, etc.?**

A: Installing the units is quite similar. However, the Model 47A’s party-line outputs would typically connect to inputs on a SAP panel.

**Q: Are the units the same size and weight?**

A: The physical size (one space in a standard 19” rack) is the identical. The weight of the Model 47A is slightly greater due to the additional circuitry.

**Q: Why is the Model 46A priced less than the Model 47A?**

A: The Model 46A has two party-line power supply circuits. The Model 47A has four power supply circuits and can power twice the number of user belt packs. Taking advantage of the Model 47A’s increased party-line output power requires the use of a SAP panel or other routing method.

**Q: Can I use a Model 47A where a Model 46A might be appropriate?**

A: Certainly. But the extra two power supply channels provided by the Model 47A would not get utilized. This would be an inefficient use of the unit’s resources and a waste of funds.

**Studio Technologies, Inc.**

Skokie, Illinois USA +1 847-676-9177 [www.studio-tech.com](http://www.studio-tech.com)