

Interfacing of Artist to Telex/RTS ADAM

The Riedel Artist system can be interfaced to the Telex/RTS ADAM system in a manner that provides both logically passive four wire conference group connections and active logic point to point connections with panel key tally.

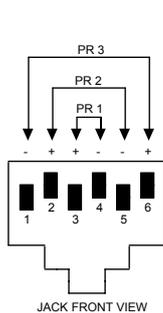
In a typical interface situation a combination of conference line and point to point connections is used to connect two independent systems together such as when two video trucks are used at the same venue.

Typical conference lines used are Production, Cameras, Engineering, and Audio. More or less may often be used. Interconnecting these is straight forward and requires only cross-connecting the audio between 4 wire utility ports within each system. The only issues to be considered are level matching and potential ground loops. Both of these potential issues are easily solved as most modern systems have built in transformers and level adjust capabilities. This is true of the Riedel Artist and the RTS ADAM systems.

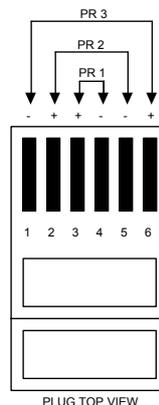
Typical point to point connections are Director to Director, TD to TD, Audio to Audio, IFBs, etc. The requirements can vary from a very small number to a quite large number. In practice only a few are needed because, in a production environment, most operators are generally using common party lines and, therefore, are able to communicate with each other. Whenever privacy is required, however, conference lines are not acceptable and some method of interconnecting individual operators must be found.

If two or more systems are ADAM they may be interconnected via the RTS trunking method. This is a very effective although complex thing to do. It requires a "Trunking Master" which is a data interconnect device, cross coupled audio ports, and extensive programming knowledge. For major events using multiple systems and employing adequate labor and set up time this is viable and quite effective. It is typical for these situations to have a full time "comms guy" employed for the set up and operation of the event. These systems may also exhibit "busy conditions" if there are not a sufficient number of trunks available to handle the worst case condition of use. The resulting combined system is no longer non-blocking. It is possible, in such a system, for the Director to push a key to talk to someone and have the system say the desired station is not available.

For most "bread and butter" situations the above is too costly in labor and time so it is typical to forgo the advantages of point to point and just rely on conference line connections.



Rear Panel Jack on Matrix



Cable Plug

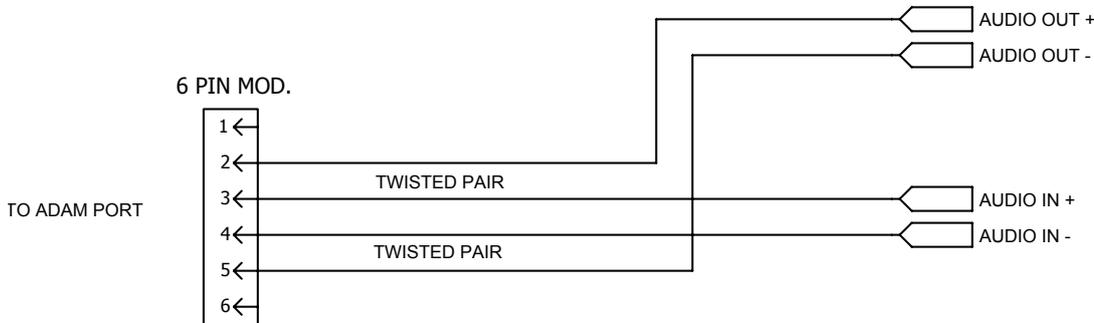
- PIN 1 = DATA -
- PIN 2 = AUDIO OUT FROM MATRIX +
- PIN 3 = AUDIO IN TO MATRIX +
- PIN 4 = AUDIO IN TO MATRIX -
- PIN 5 = AUDIO OUT FROM MATRIX -
- PIN 6 = DATA +

- PAIR 1 = AUDIO RECEIVE (TO MATRIX)
- PAIR 2 = AUDIO SEND (FROM MATRIX)
- PAIR 3 = DATA

PAIRS MUST BE TWISTED.

STATION CABLE IS PIN TO PIN.

ADAM 3 RJ-11 Connectors



ADAM AUDIO I/O (PGM IN/IFB OUT)

Since the data connection is propriety to RTS there is no way to use this method between Riedel Artist and ADAM or any other combination of dissimilar systems. There is, however, a simple and reliable method to interconnect systems by using a combination of cross coupled audio ports and simple logic connections.

The conference lines are tied together as specified above and additional audio ports are tied together to provide one dedicated path for each desired system to system connection. In addition to the audio a dedicated bi-directional logic path is established for each point to point audio connection. Since most field systems (and the majority of fixed systems) contain GPIO devices for use with two way radios and loudspeaker muting/dimming, no additional hardware is required.

Since there are no data connections between systems there is complete independence and no single point of failure. There is also no “busy condition” possible and the number of audio ports and logic connections are the same.

Since the audio connections are the same as for conference lines there is nothing special to do for the audio; cross couple ports and adjust levels if necessary. The Artist system operates at a nominal +6 dBu and is easily adjustable plus or minus 18 dB from nominal. Typical nominal levels for ADAM systems are +4 or +8 so the adjustment is simple and may not be required at all.

The wiring for the Riedel GPI-116 and the RTS UIO-256 are attached and show four logic connections. Both the GPI-116 and UIO-256 can provide 16 logic connections per unit. More can be used if necessary. Logic programming is as follows:

Outgoing voltage is generated by the GPI-116 when triggered by the key associated with the matching audio port. The logic voltage is applied to the UIO-256 input which triggers the opening of the desired crosspoint and its resulting key tally.

No input logic is required for the proper operation of the Artist system because each four wire input port has a built in VOX circuit which senses the incoming audio and triggers the required crosspoint and key tally. Due to the great flexibility of the Artist programming and built in logic engine any type of system command can be triggered by the VOX. This includes, in addition to a simple point to point call, IFB, ISO, crosspoint dimming or muting, level changes, etc.

So three connections are required: audio from A to B, audio from B to A, and logic from Artist to ADAM.

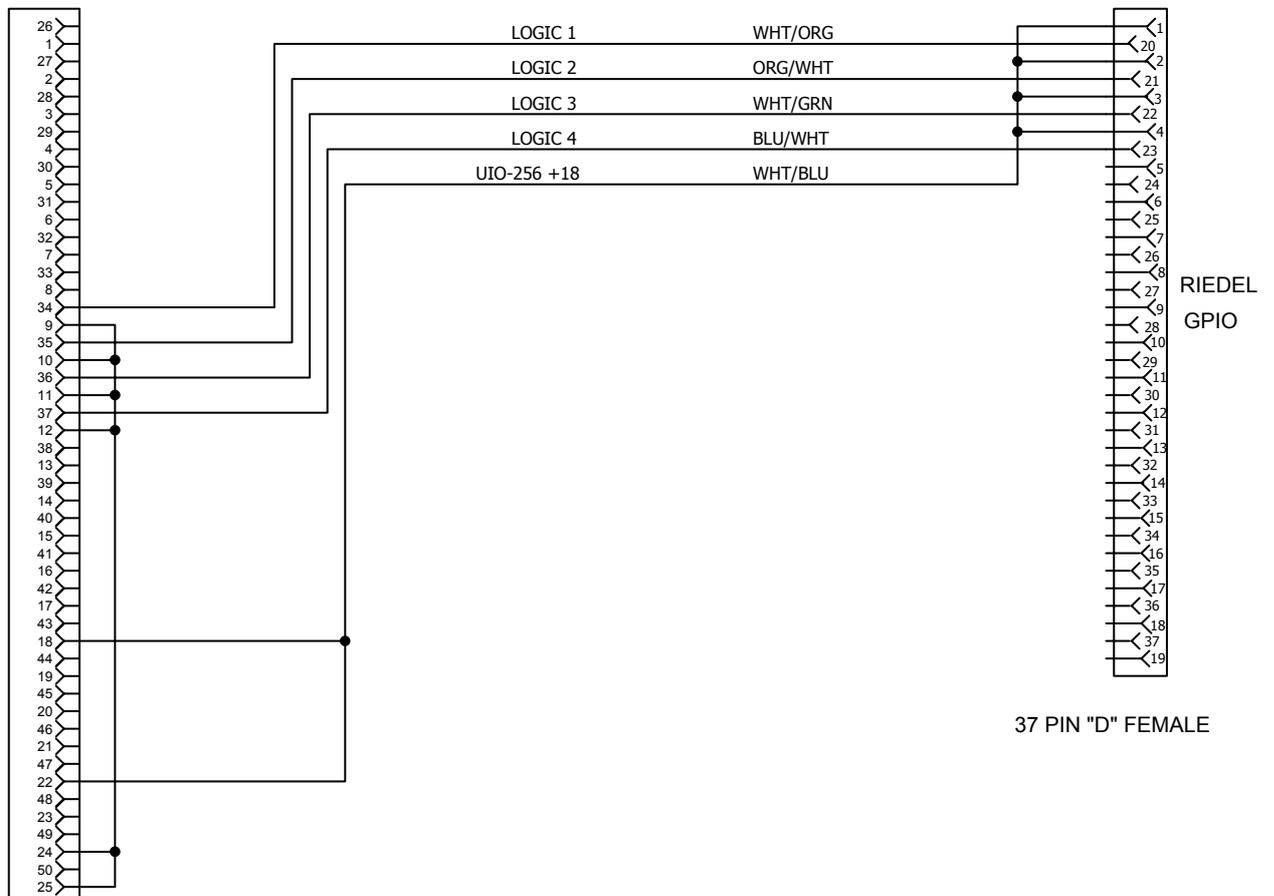
For a small number of ports hardwiring is simple. If a large number of ports are required or the distance between systems is large, the Artist system may be interconnected via fiber to another Artist system located close to the “other” system. In the case of a main system being an Artist 128 the remote system could be an Artist 32 which

would give up to 16 such “trunks”. Two Artist 32 units would support 32 “trunks” and so on.

This method also works with Clear-Com and has been tested with both ADAM and Clear-Com Matrix +2 and 3. Details of Clear-Com are available upon request. Other systems that have the ability to be driven by external logic also will work in the same manner.

Dave Brand (dave.brand@riedel.net)
 Vice President Technology
 Riedel Communications Inc.

UIO-256 GPI IN (J7)



50 pin female 57 series microribbon

GPI outs to UIO-256 Artist to ADAM Logic