

Sierra Radio Systems

Applications Note AN1

Interfacing the Series 200 control systems to an
IRLP VOIP node

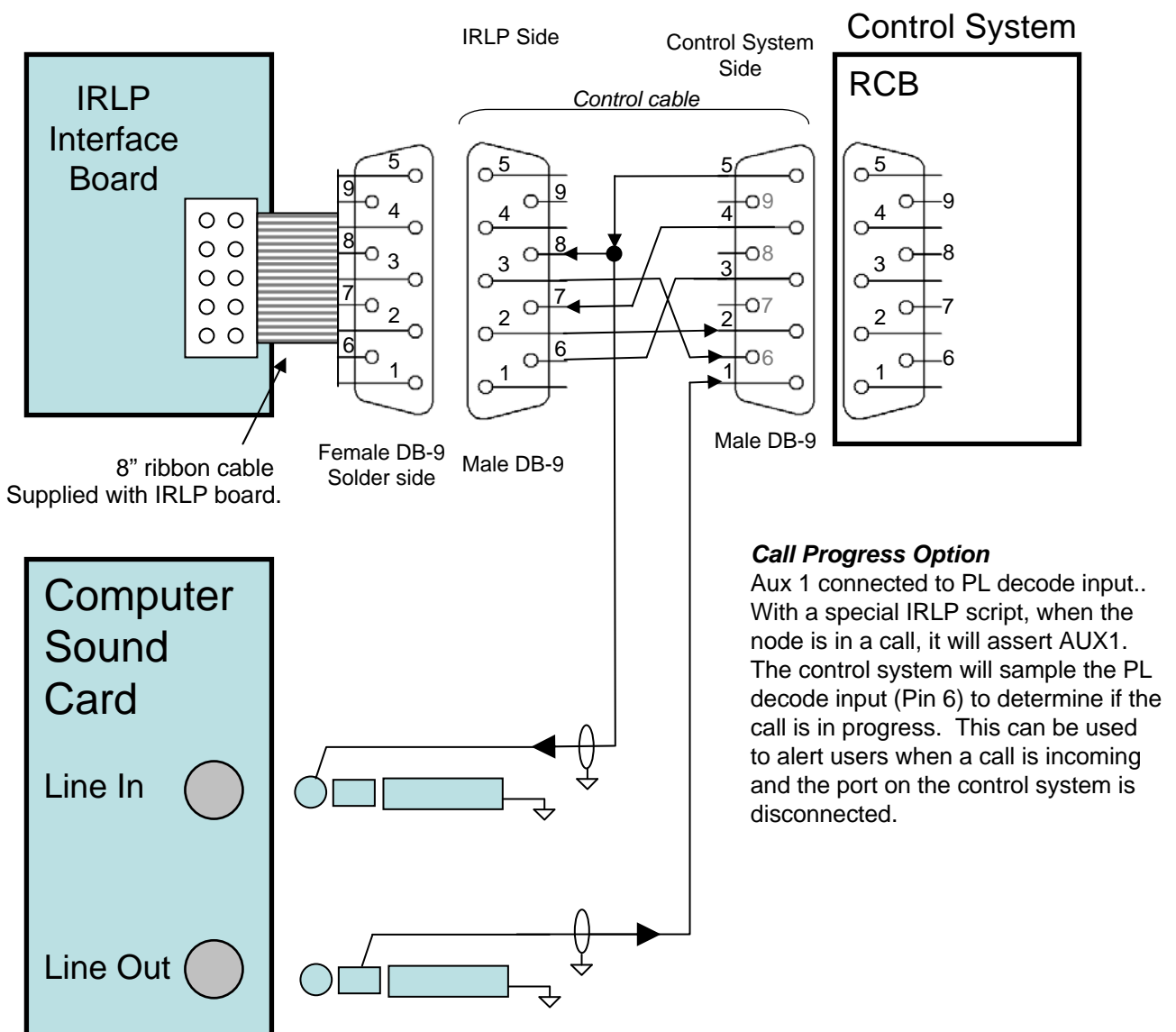
Version 1.0
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Introduction

This applications note describes how to interface an IRLP node to a SRS Series 200 control system. The computer used for the IRLP node typically behaves like a remote base radio. Standard IRLP control codes are passed by the SRS control system from the repeater or link ports to the IRLP node. This allows both SRS control codes and IRLP codes to be used on the same system.

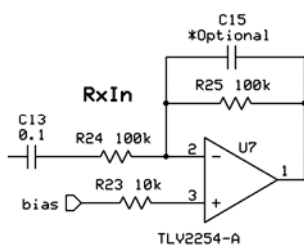
Connecting the SRS Radio Control Board to an IRLP version 3 hardware interface.



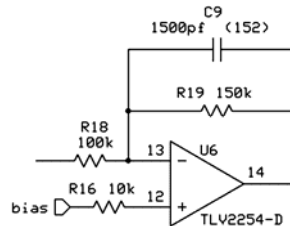
Control System Configuration

1. The IRLP node is typically configured as a "VOIP Link" type personality. This means...
 - The control system will not send any telemetry to the IRLP node.
 - The remote to link carrier delay will be turned off.
 - The control system will not accept any DTMF control from the IRLP node.
2. If the IRLP node is used as a point to point link in a private network, the personality can be set to "RF Link". This means...
 - The control system will generate telemetry and send it to the IRLP node.
 - Remote to link carrier delay is not automatically turned off.
 - The control system will accept DTMF commands from the IRLP node.
3. Although the control system has a flat frequency response, the most typical configuration routes pre-emphasized receiver audio from the transmitters. This reduces the amount of frequency modification done in the control system. When interfacing to an IRLP node or other audio source with flat audio, the frequency response must be adjusted to convert the emphasized audio in the controller to flat audio to the computer and take flat audio from the computer and pre-emphasize the audio to match the audio in the control system.
4. Typical component changes to the RCB is as follows...

For Pre-Emphasized Rx Audio



For Pre-Emphasized Tx Audio

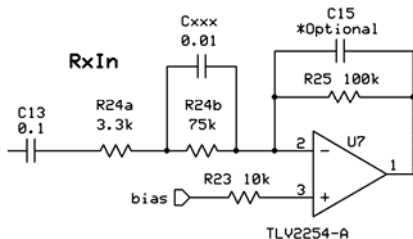


(Default flat audio circuit for pre-emphasized audio)

For Flat Rx Audio

(Circuit will pre-emphasize audio)

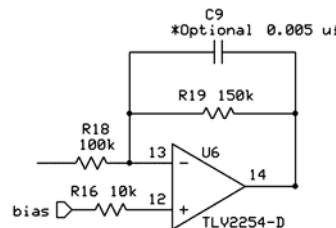
Take flat audio in and pre-emphasize it.



For Flat Tx Audio

(Circuit will de-emphasize audio)

Take pre-emphasized audio and flatten it.



Necessary for IRLP, Streaming audio and Icom IC-706