**Audio Specialties Group
Products Division**

SPK-300/AS
Improved SPK-300
Dual Listen
TW Speaker Station

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Section 1.0: Introduction

The SPK-300/AS TW Speaker Station allows for the convenient monitoring and talking to/of two RTS type TW intercom channels.

1.1 Safety and Precautions

All the power circuits are fused internally. There are no high voltages present inside the SPK-300/AS.

Do not expose to rain or direct sunlight.

Section 2: Capabilities

2.1   Monitoring

Each of the two channels can be monitored by turning up the LISTEN LEVEL knobs on the front panel.   Each channel includes a front panel NULL adjustment to control the level of sidetone heard in the speaker or the headset.

The internal speaker is turned ON or OFF with the mechanically latching SPK switch on the front panel.

2.2   Talking

Individual channel select switches allow the user to speak to either CH-1 or CH-2, but not both at the same time.   The TALK SELECT switches pre-set which channel will be active when the MIC signal is enabled.   A GREEN LED is illuminated to show that a channel is selected for the talk function (STBY). The RED LED illuminates when the MIC signal is active.

The front panel MIC ON/OFF switch is a "click-latch" type that enables the microphone signal to be routed to the pre-selected channel. When using a PTT hand microphone, the MIC ON

LED will illuminate showing the status of the talk path.
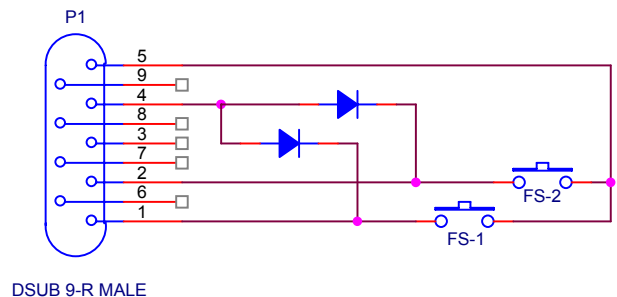
2.3   Optional Remote Connection

The rear panel DB-9 female connector contains signals to access channel selection, microphone enable, speaker mute and tally outputs.

2.3.1 Channel Select:

Talk-channel select is accomplished by pulling low the pin for each channel. Similar to the front panel TALK SELECT switches, these pins will latch the units to that channel with a momentary pulse. Additionally, the selected channel tally output serve as a remote indicator of which channel is currently active.

2.3.2 Foot-switch activation:

Separate foot-switches for CH-1 talk and CH-2 talk can be connected to the SPK-300/AS. Each foot-switch selects and latches its channel *and* activates the microphone. Use the following diagram to wire the foot-switches.
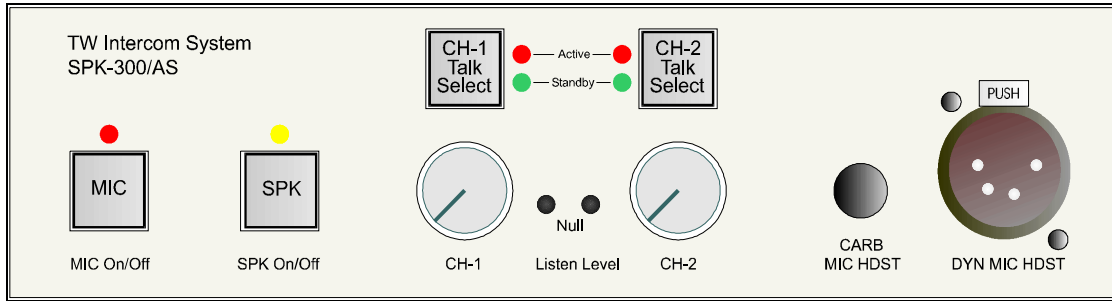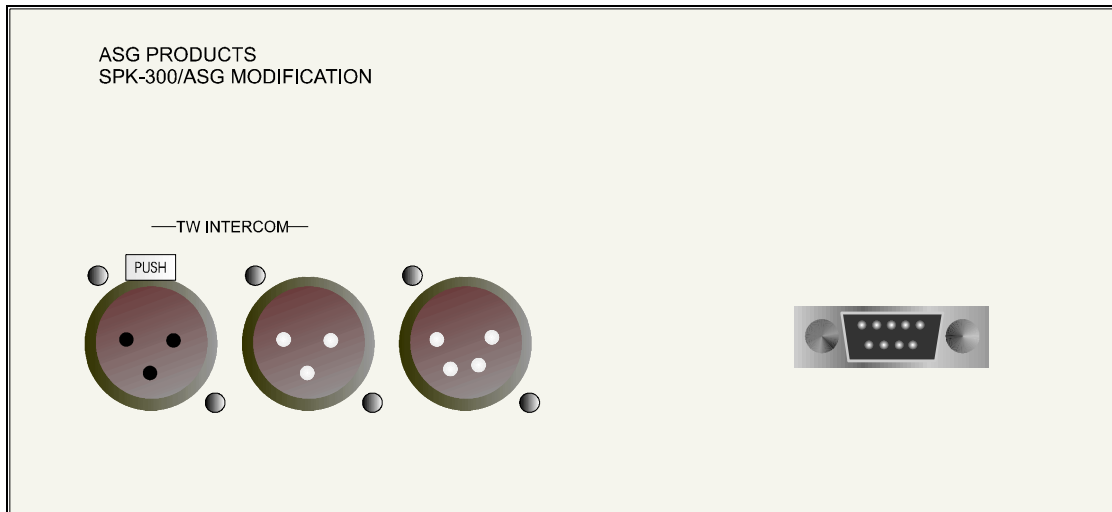

2.3.3 Microphone Enable:

Enabling the microphone from the remote connector is done two ways. Pin-#3 is a duplicate of the front panel MICROPHONE ENABLE switch. It allows for the "click-latch" function to work.   Pin-#4 does not allow the microphone to latch in the ON state. This pin is best suited for foot-switches.

2.3.4 Speaker Mute:

Since the control pin is simply a speaker "mute" control and not a speaker "on-off" control, the speaker must be enabled with the front panel switch for the mute function to have any effect. Pulling the Pin High (+5V DC) will mute the speaker. This state change is setup to conveniently allow two SPK-300/AS units to control the speaker mute of each other. This is helpful when two units are used in close proximity to each other such as an audio mixer position in a control room or in a PA Mixer area.

To allow the "Nearby" switching to work, a special DB-9 cable must be run between the two units. The cable allows the MIC-ON tally signal to mute the other unit's SPK-MUTE control input. Use the diagram below to construct the cable.

Wire can be shielded two-conductor or unshielded with a minimum of three conductors. Standard microphone cable is well suited.

Section 3: Features

3.1 Front Panel Layout

3.2 Rear Panel Layout

Section 4: Internal Wiring
Rev3 (D-7)

4.1   Internal header connector

Pin-1   +12V DC
2   SPK AMP OUT
3   +4.7V DC
4   CH-1 4WS
5   GND
6   CH-1 4WR
7   GND
8   CH-2 4WS
9   GND
10   CH-2 4WR
11   GND
12   CH-1 Talk Audio
13   GND
14   CH-2 Talk Audio
15   MIC SIG
16   SPK Listen
17   HDST Listen
18   SPK CNTL
19   MIC CNTL
20   MIC PTT

4.3   XLR 3-PIN

1   COMMON
2   CH-1
3   CH-2

ASG Products SPK-300-ASG Operational Notes.

Manual Revisions for Version-2 PCB

1   Added to the capability of remote microphone enable with simultaneous channel-select. This was available as a modification to the rev #1 PCB that is now a standard feature of the rev-2 PCB. This feature is designed to allow foot-switch operation of talk with channel-select for two separate foot switches.

2   Added selectable remote/ext speaker dim or mute determined with a jumper selection on the PCB.   This allows the "Nearby" speaker-mute control to dim instead of full mute.

      J4   :when pins 1&2 are shorted allow the speaker to mute
                  :when pins 2&3 are shorted allows speaker to dim by 6dBm