

## Installation Instructions for Becker AR4201 STANDARD, comm radio harness:

READ ALL THE INSTRUCTIONS BEFORE BEGINNING INSTALLATION.

- 1) '4201 SPEAK': Solder center conductor to (+) tab on 4- or 8-ohm, 5-watt speaker. Solder the shield wire to the (-) tab.
- 2) '4201 AUDIO': Solder the center conductor to the audio hi tab, which is the only contact on the audio jack. Solder the shield wire to the ground tab, corresponding to the jack's threaded portion. If this system is installed in two places, these leads may be paralleled to the second.
- 3) '4201 PTT = Blu, 4201 Mic Hi = Wh, 4201 Mic Lo = Sh': All conductors of this multi-conductor wire go to the mic jack. Solder the blue striped wire to the push-to-talk tab, which is the 'tallest' contact on the jack. Solder the plain, white, wire to the mic hi tab, which is the 'shorter' contact on the jack. Solder the shield wire to the ground tab corresponding to the jack's threaded portion. If this system is installed in two places, these leads may be paralleled to the second.  
  
(\* If installing a push-to-talk switch, use the single conductor, shielded wire, marked 'PILOT PTT'. Solder the center conductor to the same tab as the blue striped wire (PTT = Blu) installed in this step. Solder the shield wire to the same tab as the shield wire (Mic lo = Sh). Route and cut this wire to length and install the solder sleeve and jumper wire to the shield. Solder the center conductor and shield wire to the tabs of the customer-provided, push-to-talk switch. Activating EITHER the remote PTT switch OR the PTT switch on a mic assembly connected to the mic jack will allow voice transition over the radio.
- 4) '4201 AUX IN': Solder the center conductor to the twisted wires on the resistors, already attached to the small music jack. Solder the shield wire to the short, ground tab on the music jack.
- 5) '4201 LIGHT': If you wish to activate the backlight on the radio face, solder the 'Light' wire to one tab of the normally open contacts of a customer-provided switch. Solder a +12 VDC wire to the other contact. When the contacts close, the backlight in the radio face will be lit. If desired a dimmer pot may be used in place of the switch. If no lights will be used, cap and stow this wire.
- 6) '4201 ICS': If you install this unit to two places, grounding this wire will activate the internal intercom system and allow the two places to communicate with each other. To use the internal intercom, solder this wire to one tab of a normally open switch and a ground wire to the other tab (both items customer provided). Close the switch to activate the internal intercom and open it when transmitting on the radio. If the ICS will not be used, cap and stow this wire.
- 7) '4201 GROUND': Attach this twisted pair of wires to, either airframe ground or a dedicated avionics ground. This may be accomplished with solder or by installing a ring terminal and using the appropriate hardware.
- 8) '4201 POWER': Install an appropriately sized ring terminal and attach to the 'load' terminal of a 5-amp circuit breaker. **\* ALWAYS check that the power supplied to the radio is correct as per the manufacturer's requirements. \***
- 9) Connect the 25-socket connector to the back of the radio with the self-contained slide lock.
- 10) Connect a coax antenna cable from the antenna to the BNC connector at the back of the radio.

### Special notes:

These instructions only address the electrical installation of this radio. Follow the manufacturer's instructions for all other aspects of the installation, such as the antenna connections and the mechanical mounting.

The speaker or audio (headphones), or both may be used. If the speaker and audio are both connected, a switch should be installed on the speaker (+) wire so that if headphones are being used, the speaker can be switched off.

If a wire is not used, such as the speaker, audio, music, ICS, or light wires, cap and stow each conductor.

The customer must provide audio and mic jacks when used. Suggest Switchcraft, #11 audio jack, and S12B mic jack, or equivalent.

When installing the mic or audio jacks on a conductive surface, fiber isolation washers MUST be used. Drill a 7/16" hole to allow the shoulder of the black washer to seat and push the mic jack through its hole. Place the brown fiber washer and thin metal washer over the threads and tighten the nut. Suggest Switchcraft, S1028 (brown), and S1029 (black) isolation washers or equivalent.

When installing the music jack on a conductive surface, the white nylon washers MUST be used. Drill a 5/16" hole and fit the shoulder of the white, shouldered, washer into the hole. Insert the music jack through the shoulder washer and place the white, flat washer over the threads and tighten the knurled nut.

Verify correct connections of power and ground wires. Engage the circuit breaker and turn on the radio. Program the radio as per the manufacturer's instructions and ensure that any desired options are activated currently.

Tune the radio to any desired frequency and listen for incoming signals, on the speaker and/or headphones. Plug a hand mic or boom mic into the mic jack and check that a clear voice signal is transmitted. Any aircraft band radio can be used when making these checks, such as a handheld or the radio in another aircraft.

Plug a music source, such as an iPod, into the music jack. Check for clarity and volume.

**\*NEVER attempt to transmit without the antenna connected to a com radio. The transmitter WILL be damaged.\***

Fly and enjoy!