

|                           |                  |                                                                                                                                                            |                                   |           |                                |
|---------------------------|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|-----------|--------------------------------|
| Engineer:<br>Chris Samios | Date:<br>3/11/04 | <br><b>JPS Communications</b><br>5800 Departure Drive, Raleigh, NC 27616 |                                   |           |                                |
| Drawn:<br>Bruce Page      | Date:<br>3/11/04 |                                                                                                                                                            |                                   |           |                                |
| Approved:<br>Chris Samios | Date:<br>3/11/04 | Title:<br>ACU RADIO APPLICATION NOTES                                                                                                                      |                                   |           |                                |
| Issued/<br>Revised        | Date:<br>3/11/04 | Size:<br>A                                                                                                                                                 | Dwg. #:<br><b>5961-271134-APP</b> | Rev:<br>A | Sheet:<br>1            Of    1 |

**APPLIES TO:**

Motorola Astro Saber Portable  
Motorola Analog Saber Portable

**RADIO MODIFICATIONS:**

None required

**RADIO PROGRAMMING:**

None required

**RADIO CONTROLS:**

1. Adjust the Volume Control until the yellow "SIGNAL" indicator on the associated DSP Module flashes with receive audio. Should be about in the mid-range (12 o'clock) position.

**CABLING:**

Standard ACU-1000 and ACU-T Interface cables are made up of a 2 foot TRP Radio Tray Interface cable and the appropriate 13-foot Extension cable.

|                                |                     |                                |
|--------------------------------|---------------------|--------------------------------|
| ACU-1000 Interface Cable       | JPS P/N 5961-291134 | (5961-271134 + 5961-261002-00) |
| ACU-T Interface Cable          | JPS P/N 5961-281134 | (5961-271134 + 5961-281013-00) |
| TRP-1000 Shelf Interface Cable | JPS P/N 5961-271134 |                                |
| RF Connector Type              |                     |                                |

**DSP PROGRAMMING:**

|                             |             |             |
|-----------------------------|-------------|-------------|
| RX Level                    | 4           | -4dBm       |
| TX Level                    | 7           | 4dBm        |
| Squelch Type                | VOX*        |             |
| COR Polarity                | Active Low* |             |
| High Frequency Equalizer    | 6           | 3.5dB boost |
| RX Audio Delay              | 2*          | 100 ms*     |
| TX Audio Delay (Radio Type) | 0*          | No Delay*   |
| Noise Reduction Value       | 0*          | Off*        |
| VOX/VMR Threshold           | 1*          | Med1*       |
| VOX/VMR Hang Time           | 3*          | 775 ms*     |
| COR Inhibit After PTT       | 1*          | 100 ms*     |
| All Others                  | As needed   |             |

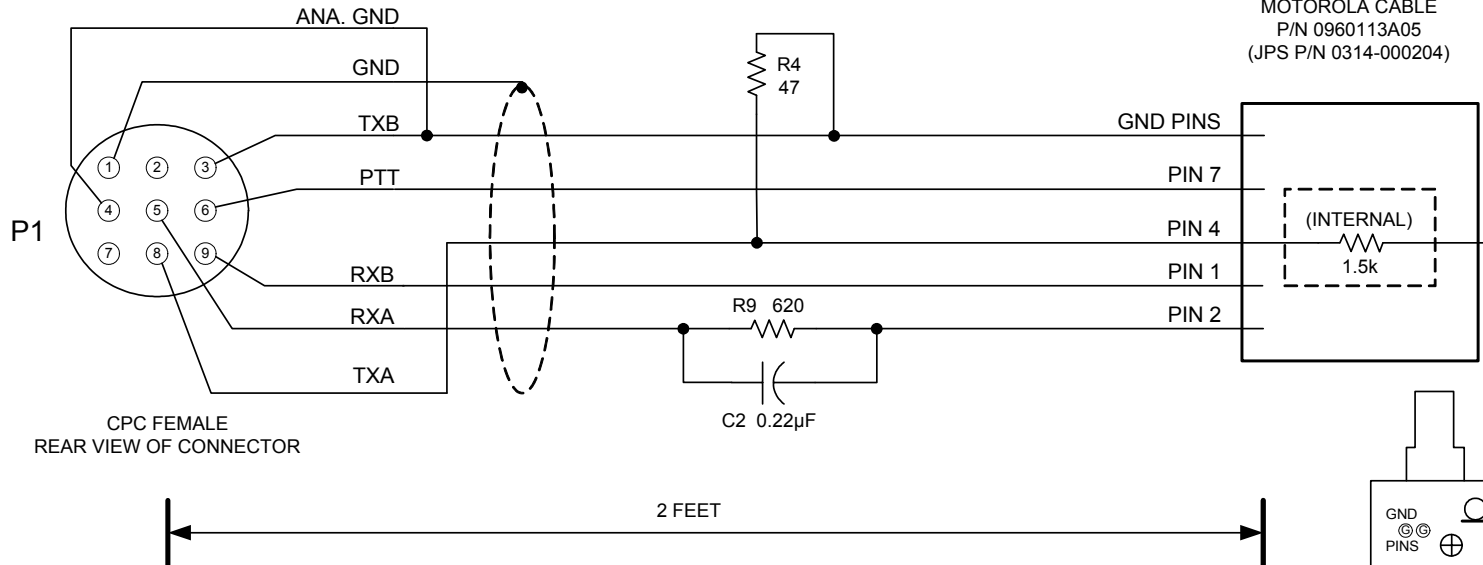
(\* Indicates Default Value)

**NOTES:**

| Rev | ECO | Date |
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## PURCHASED PART

USE MOLDED CABLE  
(JPS P/N 5961-261003-00)

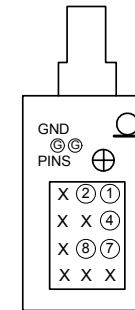


CPC FEMALE  
REAR VIEW OF CONNECTOR

COMPONENT PCB  
(JPS P/N 5961-271000)

C2 JPS P/N 0327-226500  
R4 JPS P/N 1820-470000  
R9 JPS P/N 1820-621000  
JU1  
JU2  
JU5

NOTE: SHIELD DRAIN CONNECTED TO PIN 1 OF P1 ONLY.



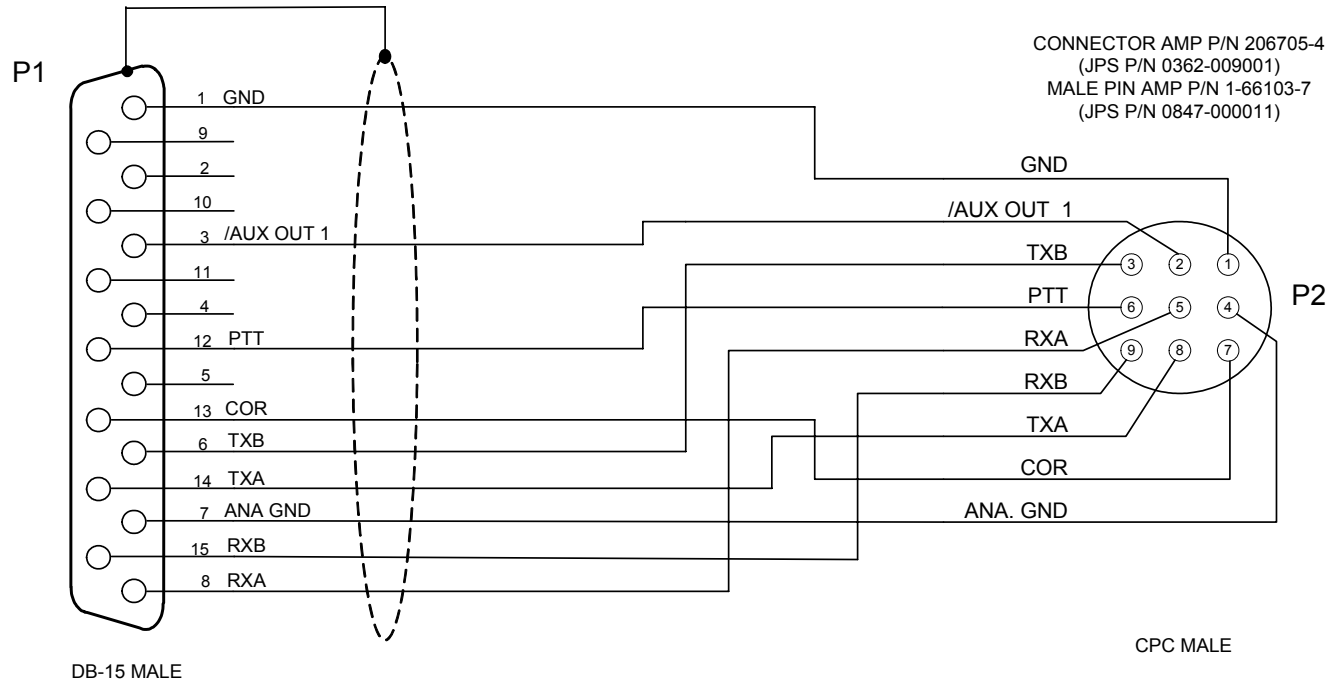
VIEWING CABLE FROM  
CONNECTOR SIDE  
(X = NO PIN)

USED WITH:  
MOTOROLA ASTRO SABER PORTABLE  
MOTOROLA ANALOG SABER PORTABLE

|                  |                                                       |                                       |                            |
|------------------|-------------------------------------------------------|---------------------------------------|----------------------------|
| Designed By: CTS | <b>Raytheon JPS Communications</b><br>Raleigh, NC USA |                                       |                            |
| Drawn By: EDV    | Title CABLE, CPC TO MOTOROLA ASTRO SABER              |                                       |                            |
| Checked By: JAC  | Size A                                                | Document Number<br><b>5961-271134</b> | Rev A                      |
| Issued Date      |                                                       | NOVEMBER 17, 2003                     | Sheet <u>1</u> of <u>1</u> |

# PURCHASED PART

| Rev | ECO | Date |
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- NOTES: 1) USE BELDEN 9934 SHIELDED CABLE.  
2) CONNECT SHIELD DRAIN TO SHELL OF P1 ONLY.  
3) CONNECTORS P1 AND P2 MUST BE MOLDED TO THE CABLE.  
4) CABLE MUST BE LABELED WITH THE RAYTHEON/JPS P/N AND REV, VENDOR CODE AND DATE (MM/YY).

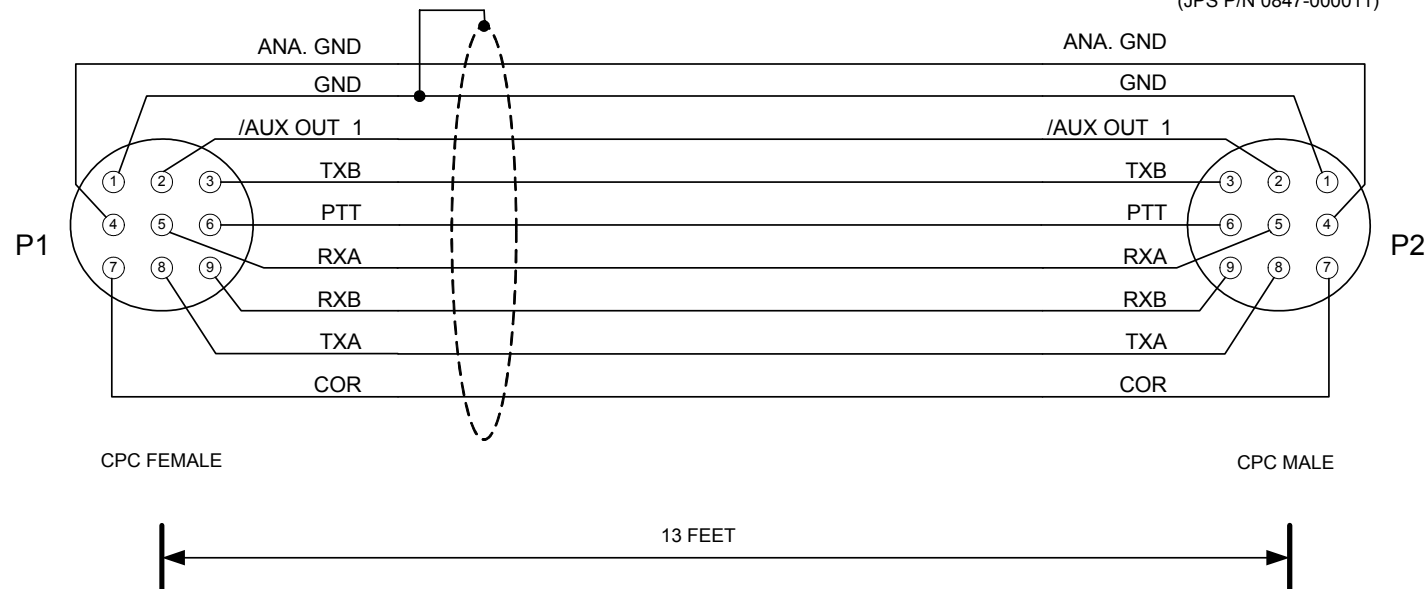
|                                |                                                  |                                          |          |
|--------------------------------|--------------------------------------------------|------------------------------------------|----------|
| Designed By:<br>JAC            | <b>Raytheon JPS Communications</b>               |                                          |          |
| Drawn By:<br>JAC               | Title<br>CABLE, ACU-1000 RADIO EXTENSION - 13 FT |                                          |          |
| Checked By:<br>RBP             | Size<br>A                                        | Document Number<br><b>5961-261002-00</b> | Rev<br>A |
| Issued Date<br>JANUARY 5, 2004 |                                                  | Sheet <u>1</u> of <u>1</u>               |          |

| Rev | ECO | Date |
|-----|-----|------|
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## PURCHASED PART

CONNECTOR AMP P/N 206708-1  
(JPS P/N 0362-005003)  
FEMALE PIN AMP P/N 1-66105-8  
(JPS P/N 0362-005002)

CONNECTOR AMP P/N 206705-4  
(JPS P/N 0362-009001)  
MALE PIN AMP P/N 1-66103-7  
(JPS P/N 0847-000011)



- NOTES: 1) USE BELDEN 9934 SHIELDED CABLE.  
2) CONNECT SHIELD DRAIN TO PIN 1 OF P1 ONLY.  
3) CONNECTORS P1 AND P2 MUST BE MOLDED TO THE CABLE.  
4) CABLE MUST BE LABELED WITH THE RAYTHEON/JPS P/N AND REV, VENDOR CODE AND DATE (MM/YY).

|                                |                                                       |                                          |          |
|--------------------------------|-------------------------------------------------------|------------------------------------------|----------|
| Designed By:<br>JAC            | <b>Raytheon JPS Communications</b><br>Raleigh, NC USA |                                          |          |
| Drawn By:<br>JAC               | Title<br>CABLE, ACU-T RADIO EXTENSION - 13 FT         |                                          |          |
| Checked By:<br>RBP             | Size<br>A                                             | Document Number<br><b>5961-281013-00</b> | Rev<br>A |
| Issued Date<br>JANUARY 5, 2004 |                                                       | Sheet <u>1</u> of <u>1</u>               |          |