

|                          |                  |                                                                                                                                                            |                                   |                  |                                          |
|--------------------------|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|------------------|------------------------------------------|
| Engineer:<br>Bruce Page  | 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>Jack Curtis | 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>5961-271138-APP</b> | Rev:<br><b>A</b> | Sheet:<br>1                      Of    1 |

**APPLIES TO:**                      Motorola GM-300 Mobile

**RADIO MODIFICATIONS:**    None required.

**RADIO PROGRAMMING:**

1. The radio should be programmed to the lowest programmable power range.
2. The "Microphone Off-Hook PL" disable function must be turned off using the programming software to allow the radio to transmit and receive PL tones. Under "Conventional Configuration" set "Hub Defeats PL" to Disable (no check mark in the feature selection block).

**RADIO CONTROLS:**

1. The Volume Control setting has no effect on the level of receive audio to the ACU-1000.

**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 5961-291138 | (5961-271138 + 5961-261002-00) |
| ACU-T Interface Cable          | JPS P/N 5961-281138 | (5961-271138 + 5961-281013-00) |
| TRP-1000 Shelf Interface Cable | JPS P/N 5961-271138 |                                |
| RF Connector Type              | Mini-UHF            |                                |

**DSP JUMPERS:**

|     |                            |
|-----|----------------------------|
| JP1 | Hi Impedance – (See notes) |
| JP2 | Unbalanced – (See notes)   |

**DSP PROGRAMMING:**

|                             |             |                     |
|-----------------------------|-------------|---------------------|
| RX Level                    | 4           | -4dBm - (See notes) |
| TX Level                    | 6*          | 0dBm*               |
| Squelch Type                | VOX*        |                     |
| COR Polarity                | Active Low* |                     |
| High Frequency Equalizer    | 5           | +2dB                |
| 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   |                     |

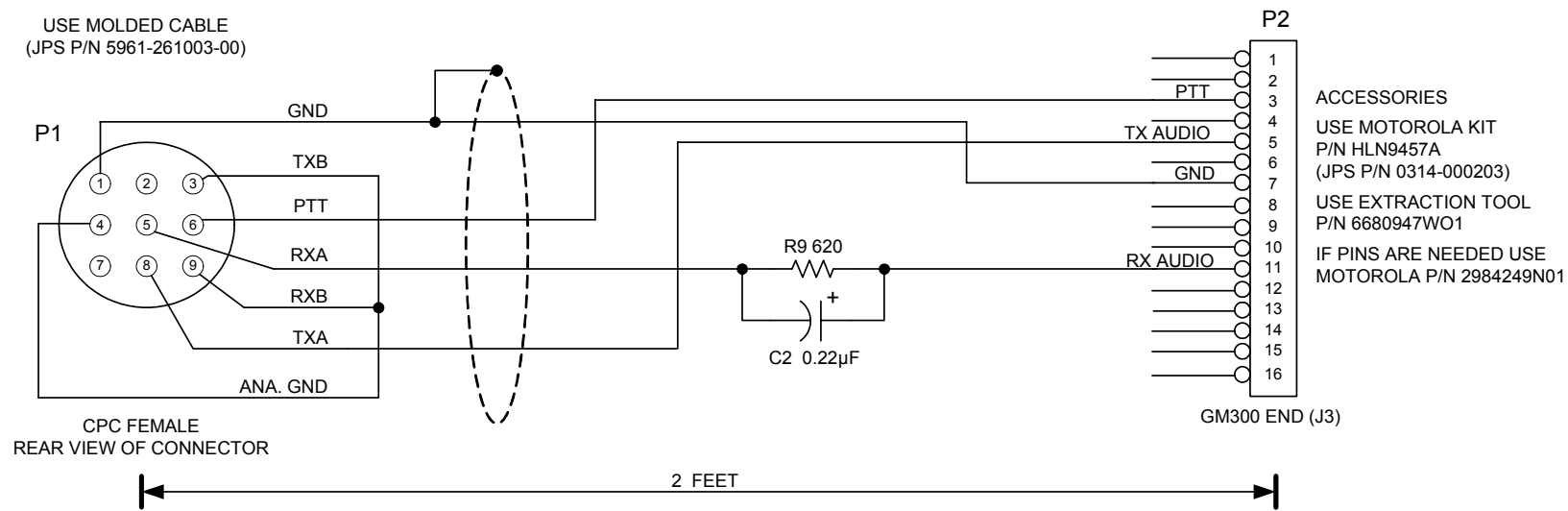
(\* Indicates Default Value)

**NOTES:**                      If the DSP Jumpers are left in the default positions (Lo Impedance and Balanced), the RX Level must be set at 7.

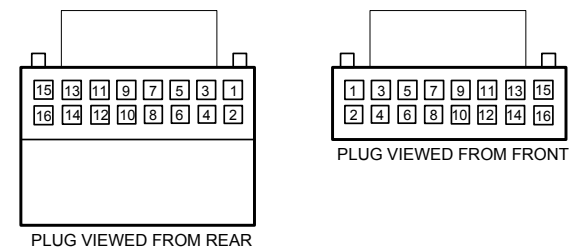
PURCHASED PART

| Rev | ECO | Date |
|-----|-----|------|
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USE MOLDED CABLE  
(JPS P/N 5961-261003-00)



CPC FEMALE  
REAR VIEW OF CONNECTOR



|                                        |                     |
|----------------------------------------|---------------------|
| COMPONENT PCB<br>(JPS P/N 5961-271000) |                     |
| C2                                     | JPS P/N 0327-226500 |
| R9                                     | JPS P/N 1820-621000 |
| JU1                                    |                     |
| JU2                                    |                     |
| JU5                                    |                     |
| JU6                                    |                     |

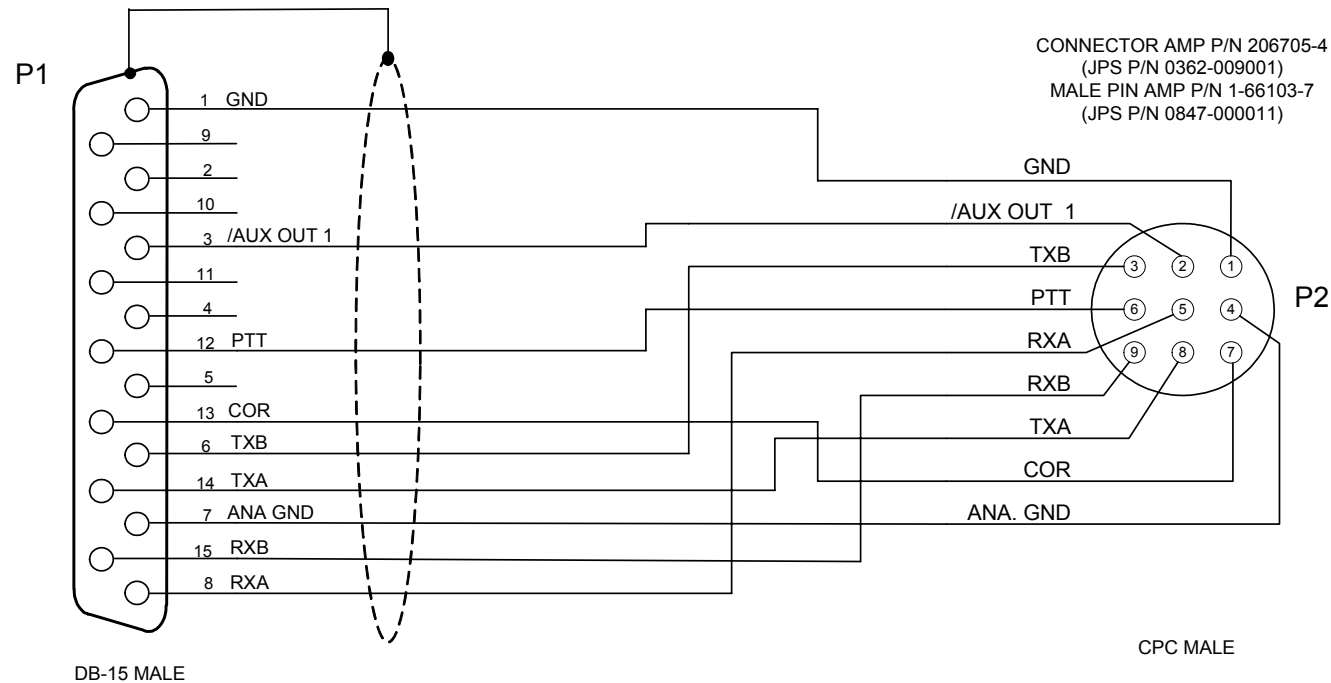
USED WITH:  
MOTOROLA GM-300 MOBILE

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

|              |     |                                                       |                                       |              |
|--------------|-----|-------------------------------------------------------|---------------------------------------|--------------|
| Designed By: | CTS | <b>Raytheon JPS Communications</b><br>Raleigh, NC USA |                                       |              |
| Drawn By:    | EDV | Title<br>CABLE, CPC TO MOTOROLA GM-300                |                                       |              |
| Checked By:  | JAC | Size<br>A                                             | Document Number<br><b>5961-271138</b> | Rev<br>A     |
|              |     | Issued Date                                           | NOVEMBER 16, 2003                     | Sheet 1 of 1 |

# 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).

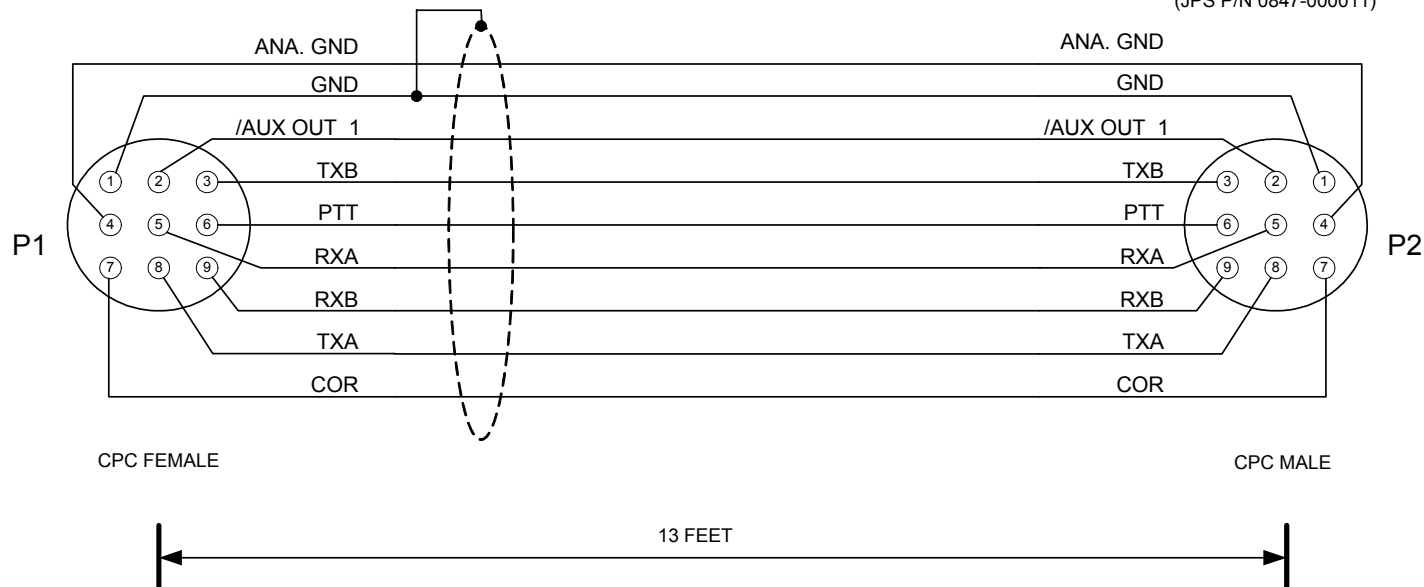
|                                |                                                  |                                          |          |
|--------------------------------|--------------------------------------------------|------------------------------------------|----------|
| Designed By:<br>JAC            | <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>               |          |