


|                           |                  |  |                                   |                  |                                |
|---------------------------|------------------|--|-----------------------------------|------------------|--------------------------------|
| Engineer:<br>Bruce Page   | Date:<br>2/18/04 | <br><b>JPS Communications</b><br>5800 Departure Drive, Raleigh, NC 27616 |                                   |                  |                                |
| Drawn:<br>Bruce Page      | Date:<br>2/18/04 |  |                                   |                  |                                |
| Approved:<br>Chris Samios | Date:<br>2/18/04 | Title:<br>ACU RADIO APPLICATION NOTES  |                                   |                  |                                |
| Issued/<br>Revised        | Date:<br>4/14/04 | Size:<br>A   | Dwg. #:<br><b>5961-291267-APP</b> | Rev:<br><b>A</b> | Sheet:<br>1            Of    2 |

**APPLIES TO:** Motorola/Nextel Model i50SX, i55SR, i58SX, i60C, i85S, i88S, i90C, and i95CL  
Iden Cellphones (Direct Connection)

**RADIO MODIFICATIONS:** None required.

**RADIO PROGRAMMING:** None required.

**RADIO CONTROLS:**

1. Turn the handset volume to maximum as indicated on the indicator bar.

**CABLING:**

|                                       |                        |
|---------------------------------------|------------------------|
| ACU-1000 Interface Top Level Assembly | JPS P/N 5961-291267    |
| ACU-1000 Interface Cable              | JPS P/N 5961-291263-00 |
| ACU-1000 Extension Cable              | JPS P/N 5961-291266-00 |
| ACU-T Interface Top Level Assembly    | JPS P/N                |
| ACU-T Interface Cable                 | JPS P/N                |
| ACU-T Extension Cable                 | JPS P/N                |

**DSP PROGRAMMING:**

|                             |             |           |
|-----------------------------|-------------|-----------|
| RX Level                    | 9           | -29dBm    |
| TX Level                    | 6*          | 0dBm*     |
| Squelch Type                | VOX*        |           |
| COR Polarity                | Active Low* |           |
| High Frequency Equalizer    | 5           | 2dB Boost |
| RX Audio Delay              | 2*          | 100 ms*   |
| TX Audio Delay (Radio Type) | 4           | 800 ms    |
| 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)

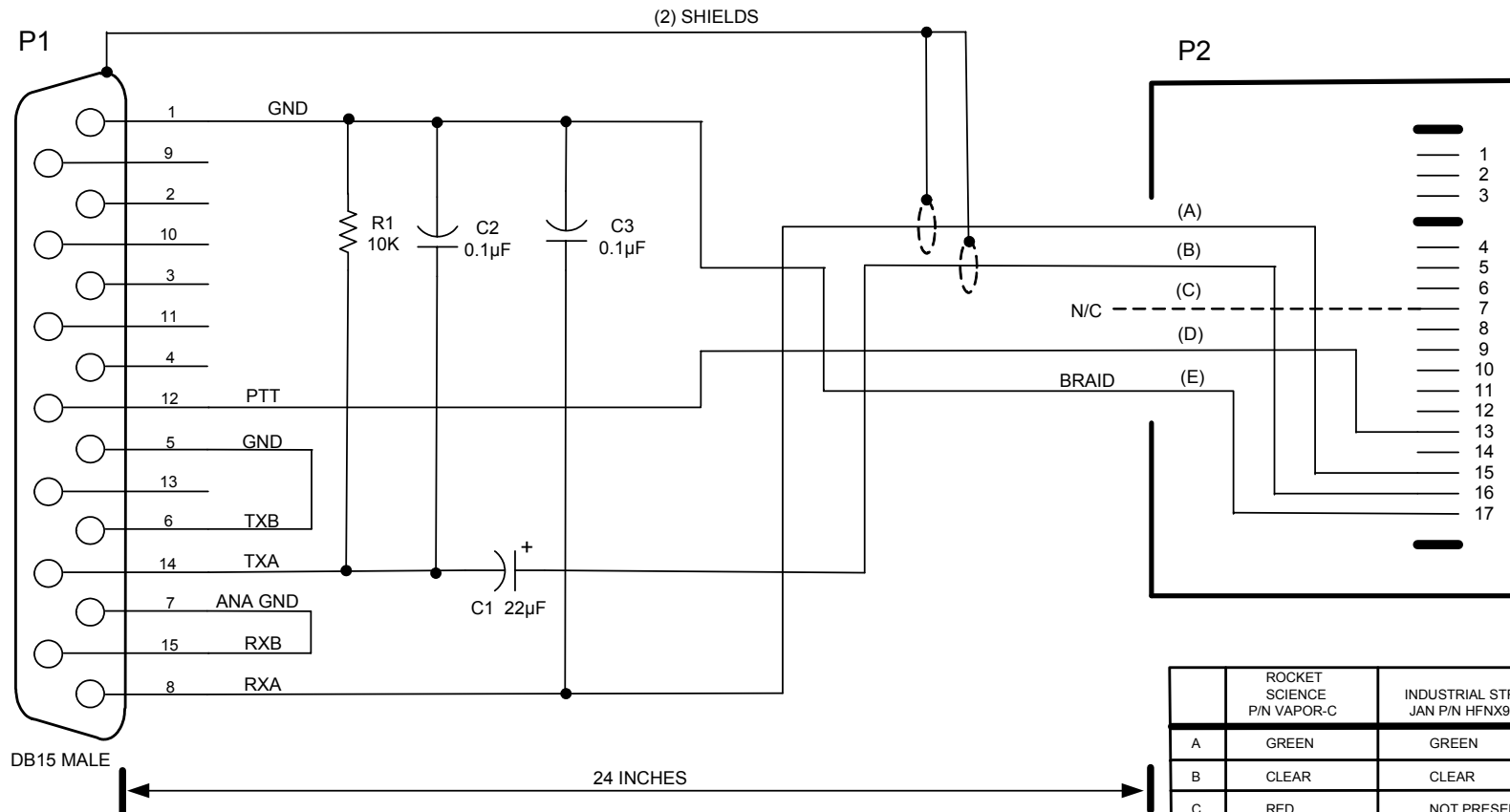
**NOTES:** This handset cannot be left to operate unattended.

1. The handset will revert to telephone mode after a time-out period of inactivity, and the operator will be needed to return the handset to Iden mode with the appropriate talk group selected.

2. When multiple talk groups are active, the handset will revert to the last active talk group and the operator will need to verify or select the desired talk group.
3. The handset models covered in these Application Notes will not pass DTMF, and therefore require an operator to manually complete all ACU-1000 or ACU-T interconnections.

# PURCHASED PART

| Rev | ECO | Date |
|-----|-----|------|
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NOTES: FOR C1 USE JPS P/N 0321-220250.  
FOR C2 AND C3 USE JPS P/N 0327-104101.  
FOR R1 USE JPS P/N 1820-103000.

ALL COMPONENTS CONTAINED IN P1 SHELL.

FOR P2 - USE EARBUD CABLE FROM ROCKET SCIENCE NEXTEL HANDSFREE KIT P/N VAPOR-C OR INDUSTRIAL STRENGTH P/N HFNX90PTTR (JPS P/N 0314-000216).

USED WITH:  
MOTOROLA/NEXTEL>IDEN MODELS i50SX, i55SR, i58SX, i60C, i85S, i88S, i90C, & i95CL

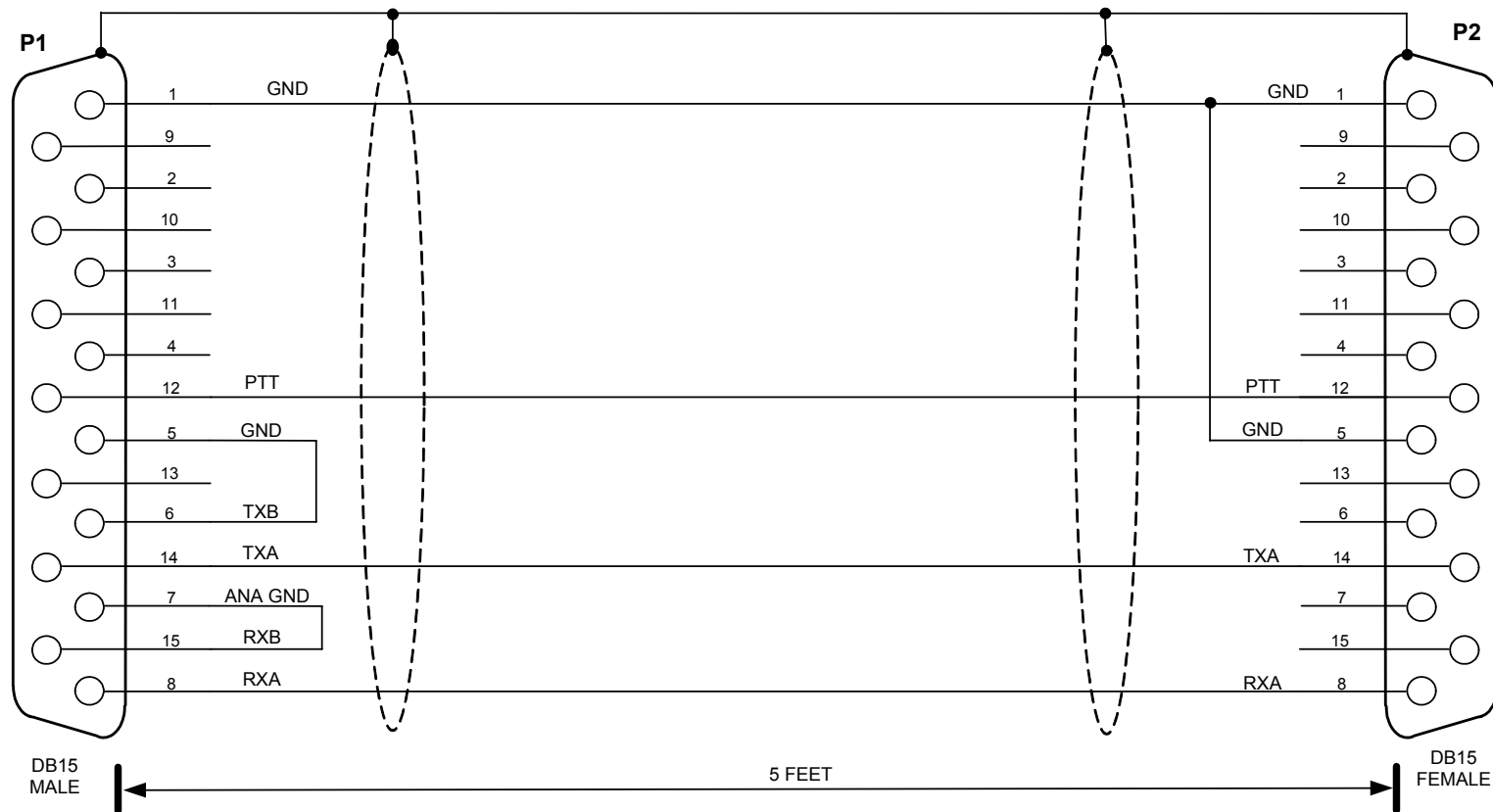
INCLUDED ON JPS P/N 5961-291267

|   | ROCKET SCIENCE P/N VAPOR-C | INDUSTRIAL STRENGTH JAN P/N HFNX90PTTR |
|---|----------------------------|--|
| A | GREEN                      | GREEN                                  |
| B | CLEAR                      | CLEAR                                  |
| C | RED                        | NOT PRESENT                            |
| D | YELLOW                     | RED                                    |
| E | BRAID ON RED               | BRAID ON RED                           |

|                  |  |                                |              |
|------------------|--|--------------------------------|--------------|
| Designed By: CTS | <b>Raytheon JPS Communications</b>           |                                |              |
| Drawn By: RBP    | Title CABLE, ACU-1000 TO NEXTEL i90 (DIRECT) |                                |              |
| Checked By: CTS  | Size A                                       | Document Number 5961-291263-00 | Rev A        |
| Issued Date      |  | FEBRUARY 16, 2004              | Sheet 1 of 1 |

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NOTE: USE SHIELDED CABLE JPS P/N 0311-042410. CONNECT SHIELD DRAIN TO SHELL OF P1 AND SHELL OF P2. USE JACK SCREWS ON P2.

INCLUDED ON:  
 NEXTEL i90 DIRECT KIT JPS P/N 5961-291267  
 NEXTEL i305 DIRECT KIT JPS P/N 5961-291270  
 USED WITH:  
 ACU-1000 TO i90 DIRECT CABLE JPS P/N 5961-291263-00  
 ACU-1000 TO i305 DIRECT CABLE JPS P/N 5961-291269-00

|                                  |   |  |          |
|----------------------------------|---|--|----------|
| Designed By:<br>Chris Samios     | <b>Raytheon JPS Communications</b>                                |  |          |
| Drawn By:<br>Bruce Page          | Title<br>Cable, ACU Extension to Nextel i90 Family Direct Connect |  |          |
| Checked By:<br>Chris Samios      | Size<br>A   | Document Number<br><b>5961-291266-00</b> | Rev<br>B |
| File Name:<br>5961-291266-00.VSD | Issued Date<br>MARCH 9, 2004                                      | Sheet <u>1</u> of <u>1</u>               |          |