

Engineer: Bruce Page	Date: 9/3/03	 JPS Communications 5800 Departure Drive, Raleigh, NC 27616			
Drawn: Bruce Page	Date: 9/3/03				
Approved: Jack Curtis	Date: 9/12/03	Title: ACU RADIO APPLICATION NOTES			
Issued/ Revised	Date: 3/11/04	Size: A	Dwg. #: 5961-271156-APP	Rev: A	Sheet: 1 Of 2

APPLIES TO: Motorola MCS-2000 800 MHz Mobile Radio
Motorola MCS-2000 UHF Mobile Radio
Motorola MCS-2000 VHF Mobile Radio

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 5961-291156	(5961-271156 + 5961-261002-00)
ACU-T Interface Cable	JPS P/N 5961-281156	(5961-271156 + 5961-281013-00)
TRP-1000 Shelf Interface Cable	JPS P/N 5961-271156	
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*

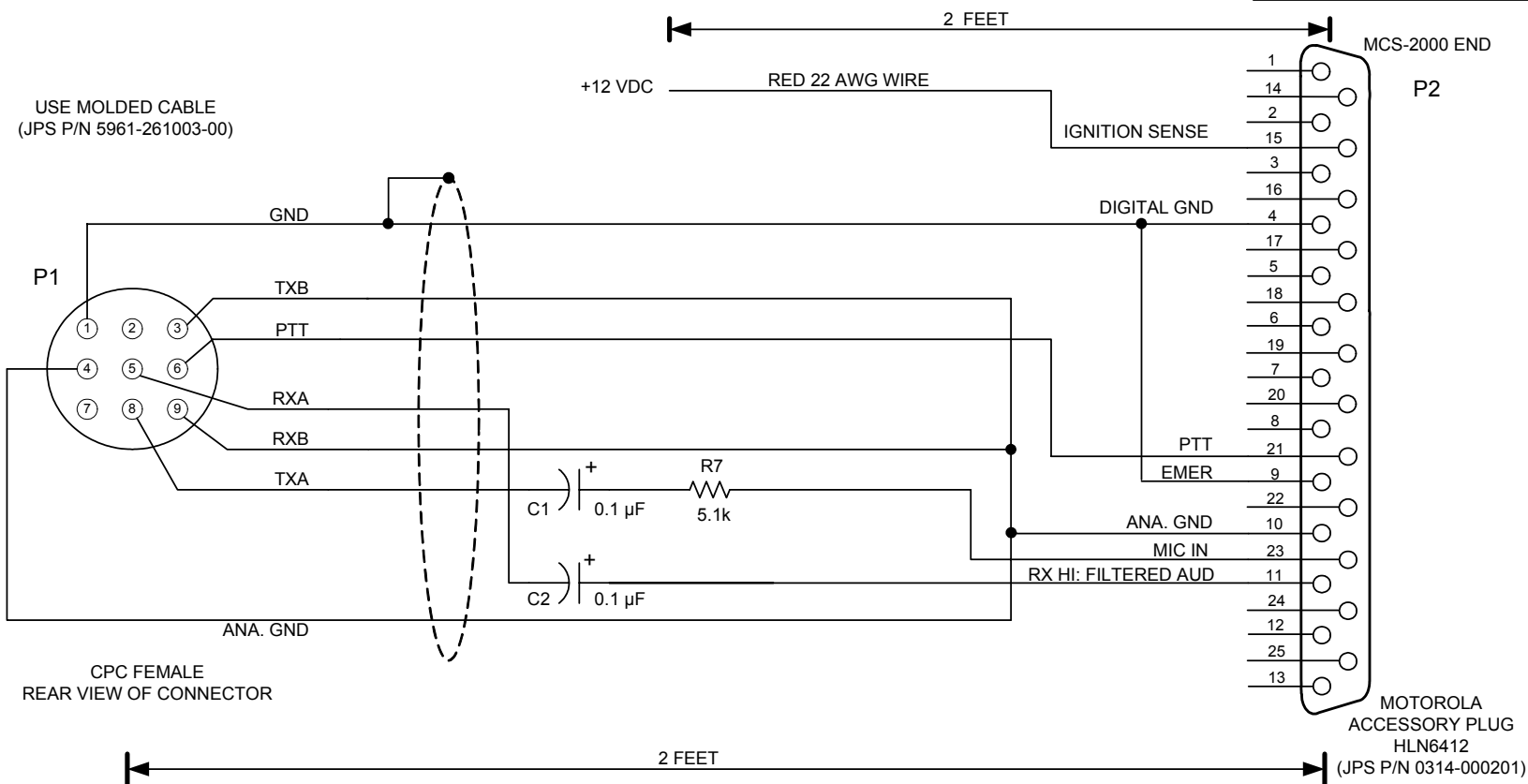
VOX/VMR Hang Time	3*	775 ms*
COR Inhibit After PTT	1*	100 ms*
All Others	As needed	

(* 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
A		



COMPONENT PCB
(JPS P/N 5961-271000)

C1 JPS P/N 0327-104101
C2 JPS P/N 0327-104101
R7 JPS P/N 1820-512000
JU5
JU6

USED WITH:
MOTOROLA MCS-2000 MOBILE

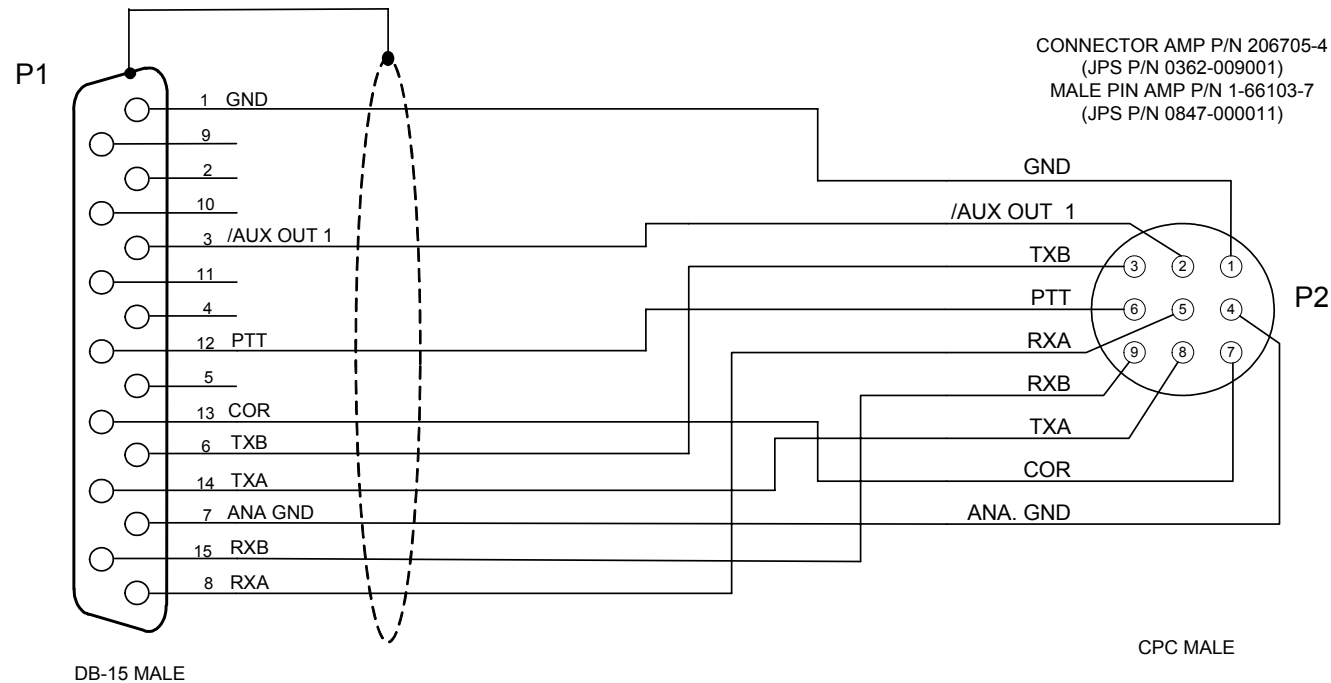
NOTES: SHIELD DRAIN CONNECTED TO PIN 1 OF P1 ONLY.

SOLDER RED 18 AWG WIRE TO PIN 15 OF P2.

Designed By:	CTS	Raytheon JPS Communications Raleigh, NC USA		
Drawn By:	EDV	Title CABLE, CPC TO MOTOROLA MCS-2000		
Checked By:	JAC	Size A	Document Number 5961-271156	Rev A
		Issued Date	NOVEMBER 5, 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).

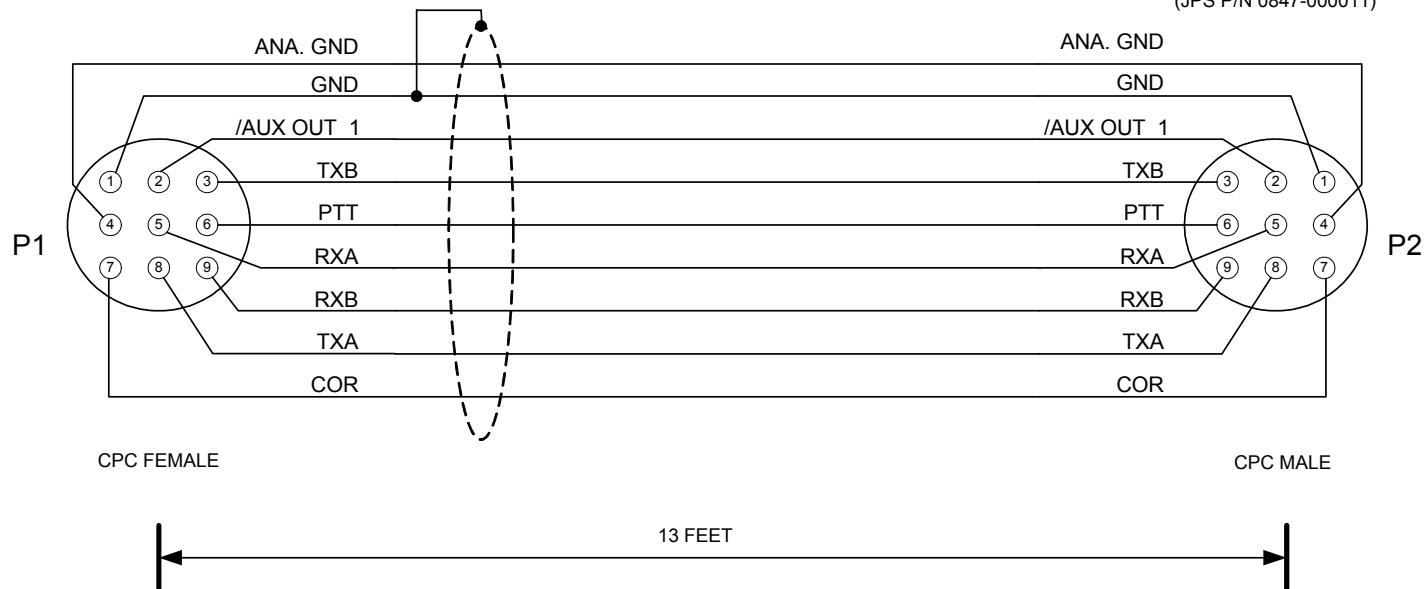
Designed By: JAC	Raytheon JPS Communications		
Drawn By: JAC	Title CABLE, ACU-1000 RADIO EXTENSION - 13 FT		
Checked By: RBP	Size A	Document Number 5961-261002-00	Rev A
Issued Date JANUARY 5, 2004		Sheet <u>1</u> of <u>1</u>	

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