Engineer: Jack Curtis	Date: 6/25/02	**Raytheon** **JPS Communications** 5800 Departure Drive, Raleigh, NC 27616				
Drawn: Jack Curtis	Date: 6/25/02					
Checked: CTS	Date: 6/25/02	Title: ACU RADIO APPLICATION NOTES				
Approved: Revised	Date: 5/12/05	Size: A	Dwg. #: **5961-271171-APP**	Rev: **C**	Sheet: 1 of 2	

APPLIES TO: Ericsson-GE-M/A-COM Orion Mobile (Dash-mount)
                                            M/A-COM M7100 IP Mobile (Dash-mount)

RADIO MODIFICATIONS: None required

RADIO PROGRAMMING:

1. Mobile radios should normally be programmed for low transmit power.

2. Auxiliary Input 2 must be programmed as PTT. To program, first go to OPTIONS, then External I/O options. Go to Keycode and select Auxiliary Input 2. Scroll down and select EXPTT.

3. Auxiliary Output 1 must be programmed for Squelch Type COR functionality. To program, first go to OPTIONS, then External I/O options. Go to External Mute and place a check in that box. Set External Mute Output to 1 and set External Mute to Active Low.

RADIO CONTROLS:

Adjust the Volume Control until the yellow "SIGNAL" indicator on the associated DSP Module flashes with receive audio. Should be set to the full volume 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.

<div align="center">Dash-Mount</div>

ACU-1000 Interface Cable	JPS P/N 5961-291171	(5961-271171 + 5961-261002-00)
ACU-T Interface Cable	JPS P/N 5961-281171	(5961-271171 + 5961-281013-00)
TRP-1000 Shelf Interface Cable	JPS P/N 5961-271171	
RF Connector Type	TNC	

DSP PROGRAMMING:

RX Level	3*	0dBm*
TX Level	6*	0dBm*
Squelch Type	COR	
COR Polarity	Active Low*	
High Frequency Equalizer	4*	Flat*
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:

PURCHASED PART

Rev	ECO	Date
C		5-12-05

P2

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

GND

P1

TXB
PTT

RXA
RXB
TXA
COR
ANA. GND

CPC FEMALE
REAR VIEW OF CONNECTOR

OUT1
INP2
GND

TO RADIO
ACCESSORY
CONNECTOR

MIC HI
ALO
VOL HI

R3 68
C1 22µF
+

DB 37
MALE

2 FEET

COMPONENT PCB
(JPS P/N 5961-271000)

C1 JPS P/N 0321-220250
R3 JPS P/N 1820-680000
JU2
JU4
JU5
JU6
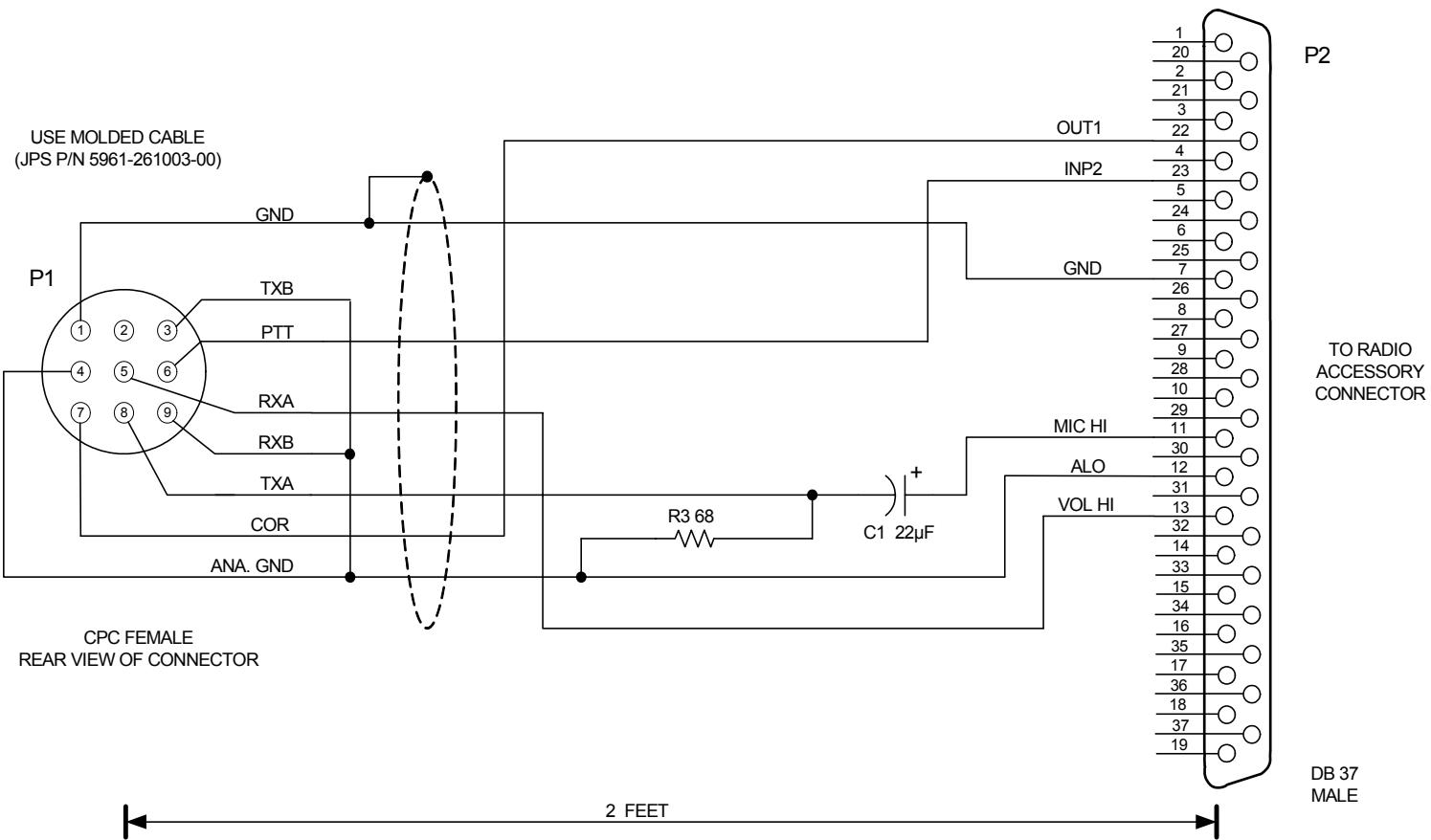
USED WITH:
M/A-COM ORION MOBILE (DASH MOUNT)
M/A-COM M7100 IP MOBILE (DASH MOUNT)

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

Designed By:	JAC	**Raytheon** JPS Communications		
		Raleigh, NC USA		
Drawn By:	EDV	Title	CABLE, CPC TO M/A-COM ORION (DASH-MOUNT)	
Checked By:	CTS	Size A	Document Number 5961-271171	Rev C
		Issued Date	MARCH 19, 2004	Sheet 1 of 1

PURCHASED PART

Rev	ECO	Date
A		

P1

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

1 GND
9
2
10
3 /AUX OUT 1
11
4
12 PTT
5
13 COR
6 TXB
14 TXA
7 ANA GND
15 RXB
8 RXA

GND
/AUX OUT 1
TXB
PTT
RXA
RXB
TXA
COR
ANA. GND

P2

③ ② ①
⑥ ⑤ ④
⑨ ⑧ ⑦

DB-15 MALE

CPC MALE

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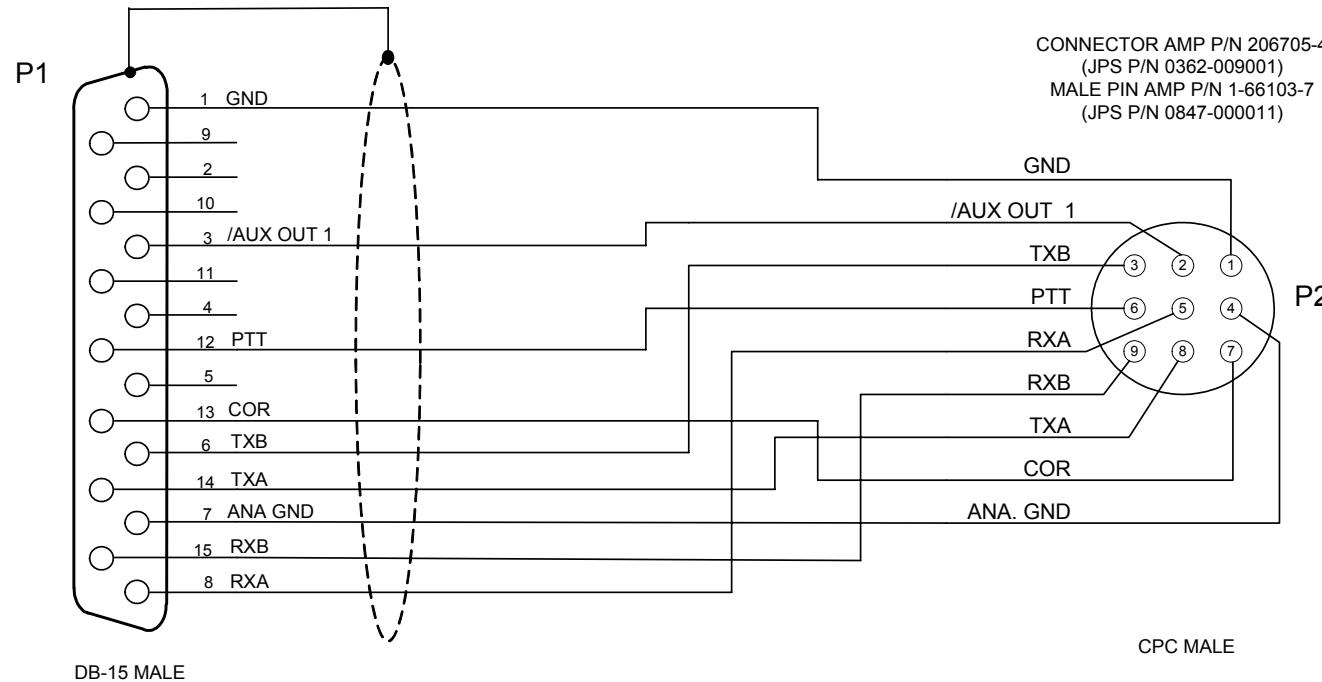
NOTES: 1) USE BELDEN 9934 SHIELDED CABLE.
2) CONNECT SHIELD DRAIN TO SHELL OF P1 ONLY.
3) CONNECTORS P1 AND P2 MUST BE MOLDED TO THE CABLE.
4) CABLE MUST BE LABELED WITH THE RAYTHEON/JPS P/N AND
   REV, VENDOR CODE AND DATE (MM/YY).

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 _1_ of _1_

Rev	ECO	Date
A		

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)

ANA. GND	ANA. GND
GND	GND
/AUX OUT 1	/AUX OUT 1
TXB	TXB
PTT	PTT
RXA	RXA
RXB	RXB
TXA	TXA
COR	COR

P1

P2

CPC FEMALE

CPC MALE

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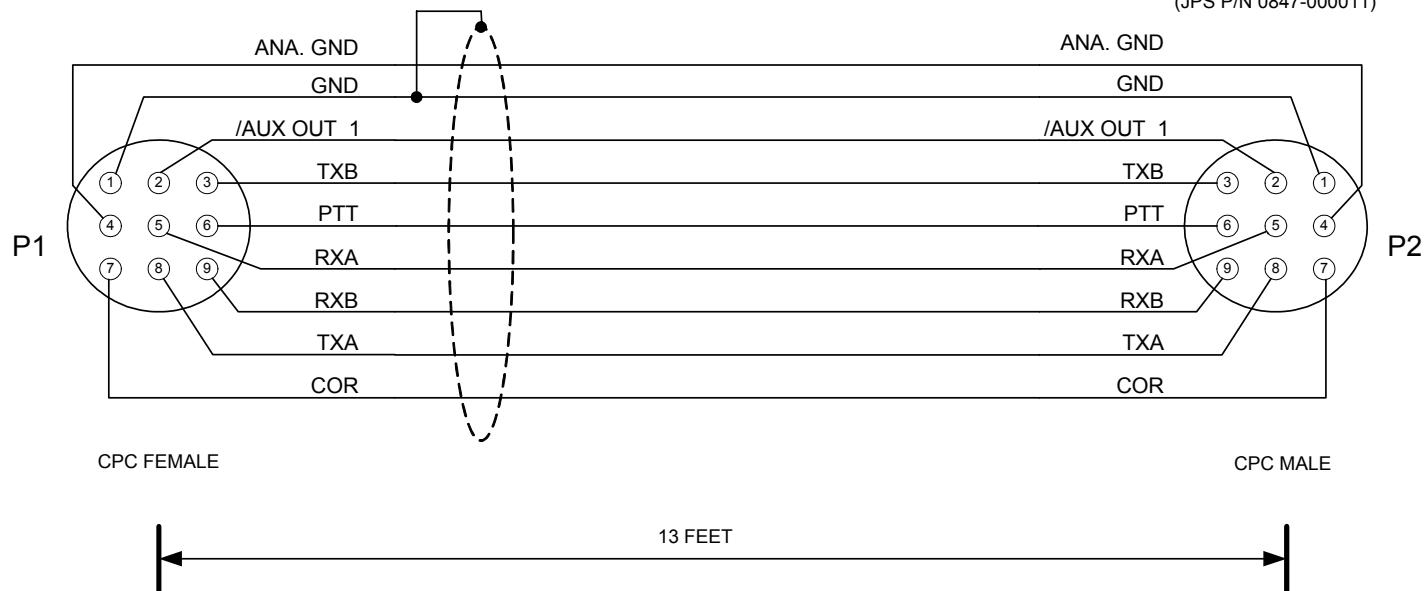
NOTES:
1) USE BELDEN 9934 SHIELDED CABLE.
2) CONNECT SHIELD DRAIN TO PIN 1 OF P1 ONLY.
3) CONNECTORS P1 AND P2 MUST BE MOLDED TO THE CABLE.
4) CABLE MUST BE LABELED WITH THE RAYTHEON/JPS P/N AND
   REV, VENDOR CODE AND DATE (MM/YY).

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 _1_ of _1_