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: 5/13/05	Size: A	Dwg. #: **5961-271168-APP**	Rev: **C**	Sheet: 1 of 2	

APPLIES TO: M/A-Com M7100IP Mobile (High Power Trunk-mount)
Ericsson-GE M/A-Com Orion Mobile (Trunk-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 about in 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.

	Trunk-Mount	
ACU-1000 Interface Cable	JPS P/N 5961-291168	(5961-271168 + 5961-261002-00)
ACU-T Interface Cable	JPS P/N 5961-271168	(5961-271168 + 5961-281013-00)
TRP-1000 Shelf Interface Cable	JPS P/N 5961-271168	
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	

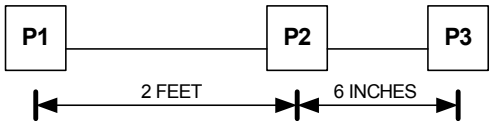
(*Indicates Default Value)

NOTES:

The ORION radio is furnished with an accessory cable which not only supplies auxiliary inputs and outputs, but is also used for normal functions such as Speaker, and/or DC Power. Therefore, the interface cable is designed to sandwich between the radio accessory connector and the ORION accessory cable, although it may be used to operate the ACU-1000 without attaching the ORION accessory cable.

Rev	ECO	Date
C		5-13-05

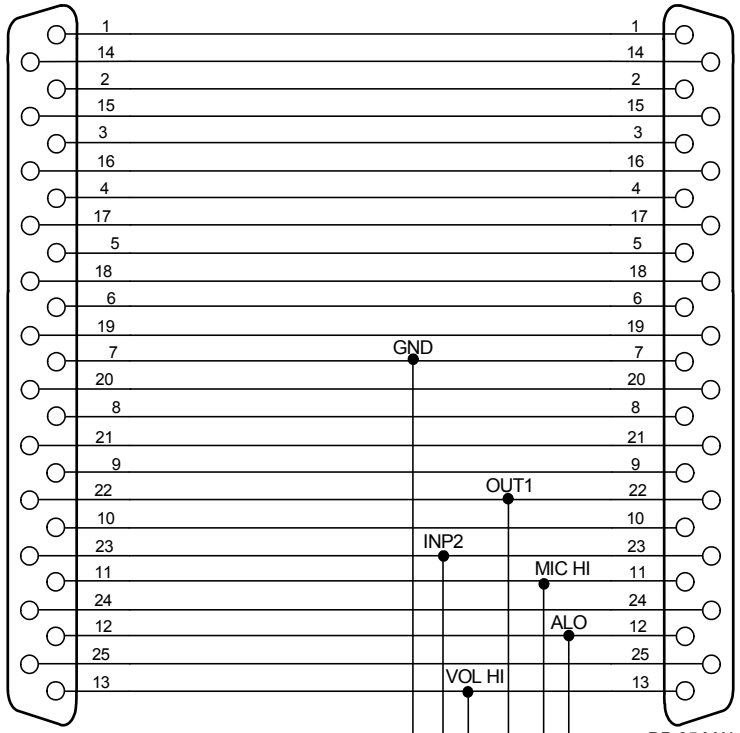
PURCHASED PART



COMPONENT PCB
(JPS P/N 5961-271000)

C1	JPS P/N 0321-220250
R7	JPS P/N 1820-103000
JU4	
JU5	
JU6	

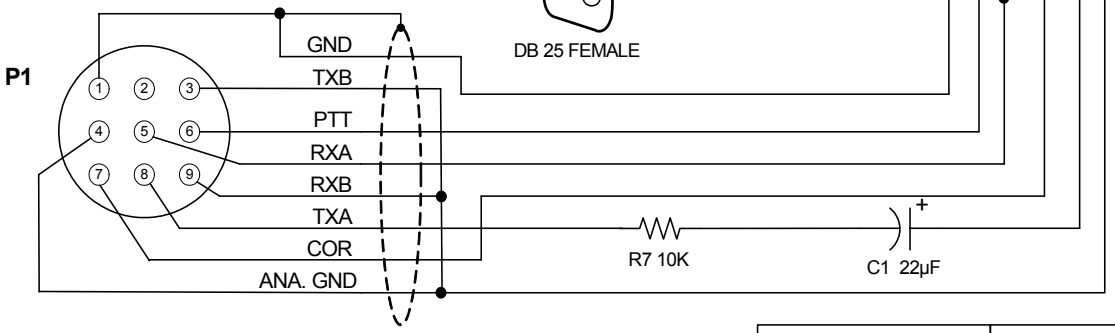
P3
TO ORION
ACCESSORY
CABLE



P2
TO RADIO
ACCESSORY
CONNECTOR

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

CPC FEMALE
REAR VIEW OF CONNECTOR



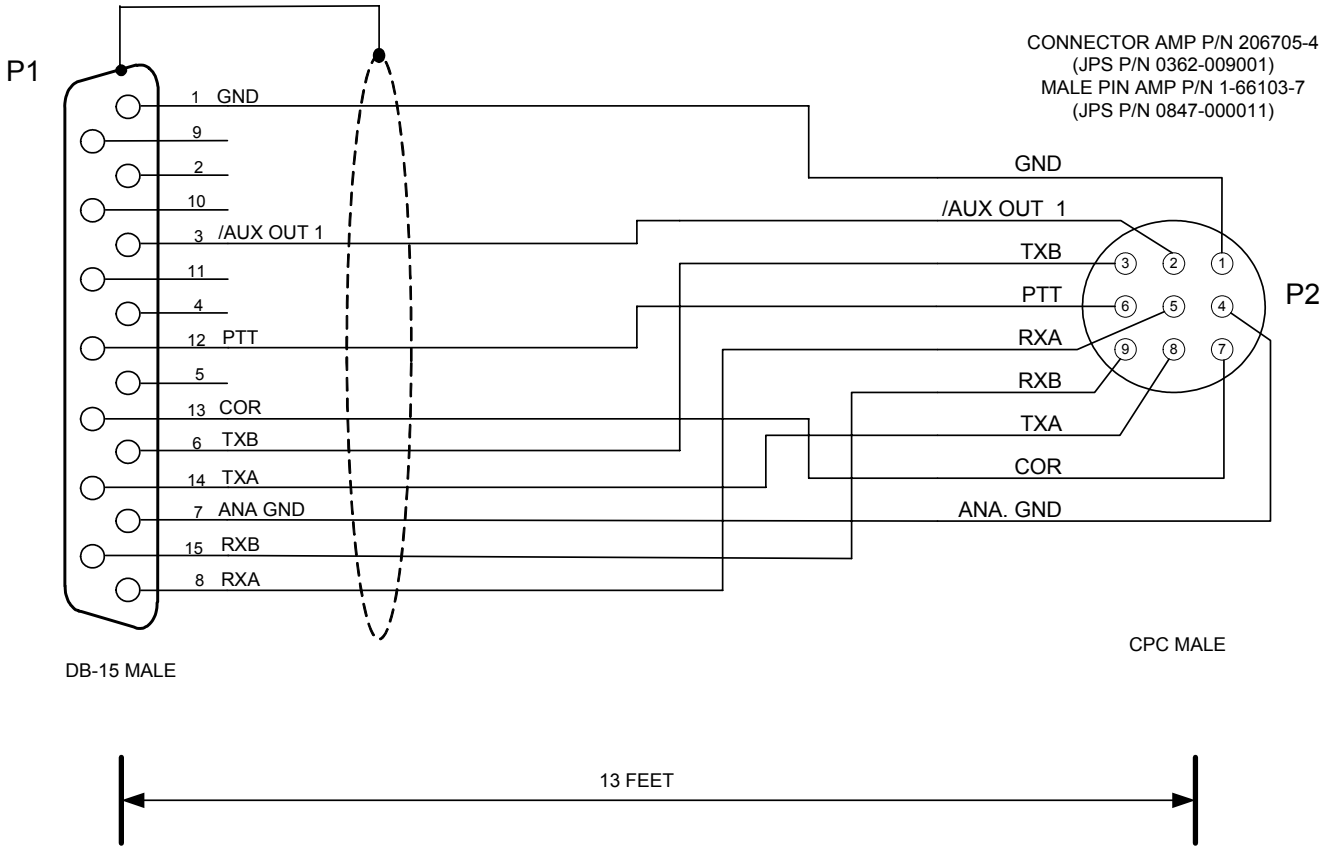
NOTES:
1. USE MOLDED CABLE JPS P/N 5961-261003-00.
2. SHIELD DRAIN CONNECTED TO PIN 1 OF P1 ONLY.
3. INSTALL JACK SCREWS ON P3.

USED WITH:
ERICSSON-GE M/A-COM ORION MOBILE (TRUNK MOUNT ONLY)
M/A-COM M7100IP MOBILE (HIGH POWER TRUNK MOUNT ONLY)

Designed By: JAC	Raytheon JPS Communications		
Drawn By: RBP	Title: CABLE, CPC TO ERICSSON-GE ORION (TRUNK-MOUNT)		
Checked By: CTS	Size: A	Document Number: **5961-271168**	Rev: C
	Issued Date: MARCH 19, 2004	Sheet 1 of 1	

Rev	ECO	Date
A		

PURCHASED PART



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).

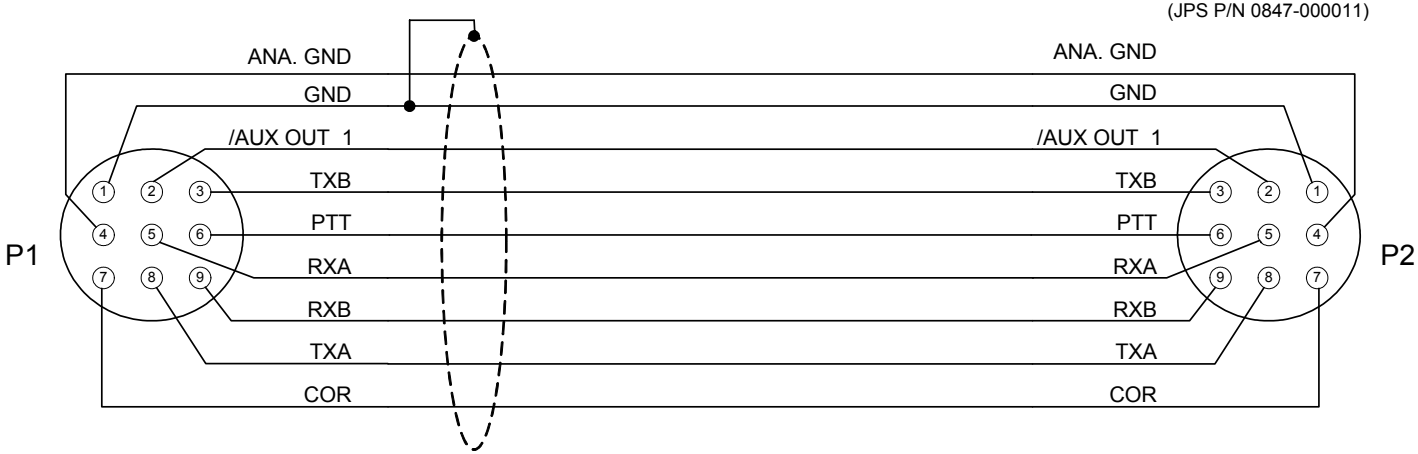
Designed By: JAC	Raytheon JPS Communications		
Drawn By: JAC	Title: CABLE, ACU-1000 RADIO EXTENSION - 13 FT		
Checked By: RBP	Size: A	Document Number: **5961-261002-00**	Rev: A
	Issued Date: JANUARY 5, 2004		Sheet 1 of 1

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)



CPC FEMALE

CPC MALE

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