


Engineer: Jack Curtis	Date: 5/06/05	 Raytheon JPS Communications 5800 Departure Drive, Raleigh, NC 27616			
Drawn: Bruce Page	Date: 5/06/05				
Approved: Chris Samios	Date: 5/06/05	Title: ACU RADIO APPLICATION NOTES			
Issued/ Revised	Date: 9/9/05	Size: A	Dwg. #: 5961-271293-APP	Rev: B	Sheet: 1 Of 1

APPLIES TO: Kenwood TK-7180 VHF Mobile Radio
Kenwood TK-8180 UHF Mobile Radio

RADIO MODIFICATIONS: None required.

RADIO PROGRAMMING: For radio programming use KPG-89D software and KPG-36/46 programming cable. After interface to radio is established the following is required programming for proper interface function. Select **Edit**, **Extended Functions** then select the tab **Aux**. From the list of Programmable Pin Numbers select the I/O Function for **DB-25 8Pin** and set to **Output**, **TOR**, **Active High**. For Pin Number listed as **DB-25 21Pin** set I/O function to **Input**, **External PTT (Voice)**, **Active Low**.

RADIO CONTROLS: The Volume Control will only control the radio's speaker output level and will have no effect on the interface.

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 5961-291293	(5961-271293 + 5961-261002-00)
ACU-T Cable	JPS P/N 5961-281293	(5961-271293 + 5961-281013-00)
TRP-1000 Shelf Interface Cable	JPS P/N 5961-271293	
RF Connector Type	PL259	

DSP JUMPERS:

JP1	Low Impedance *
JP2	Balanced *

DSP PROGRAMMING:

RX Level	7	-16dBm
TX Level	6*	0dBm*
Squelch Type	COR	
COR Polarity	Active High	
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	

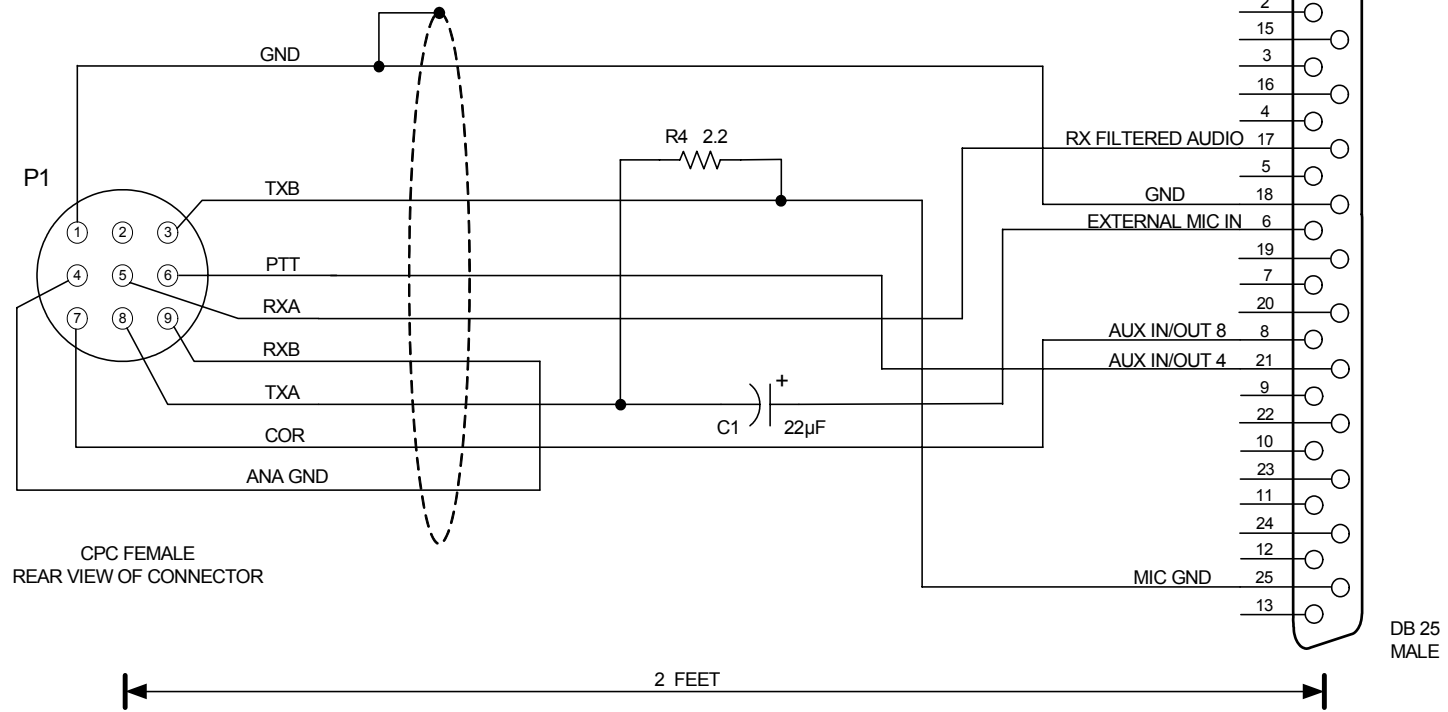
(* Indicates Default Value)

NOTES:

PURCHASED PART

Rev	ECO	Date
B		9-9-05

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



CPC FEMALE
REAR VIEW OF CONNECTOR

DB 25
MALE

COMPONENT PCB (JPS P/N 5961-271000)	
R4	JPS P/N 1820-022000
C1	JPS P/N 0321-220250
JU2	
JU4	
JU6	

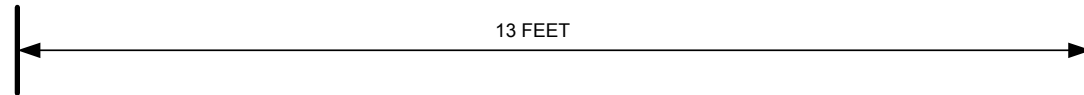
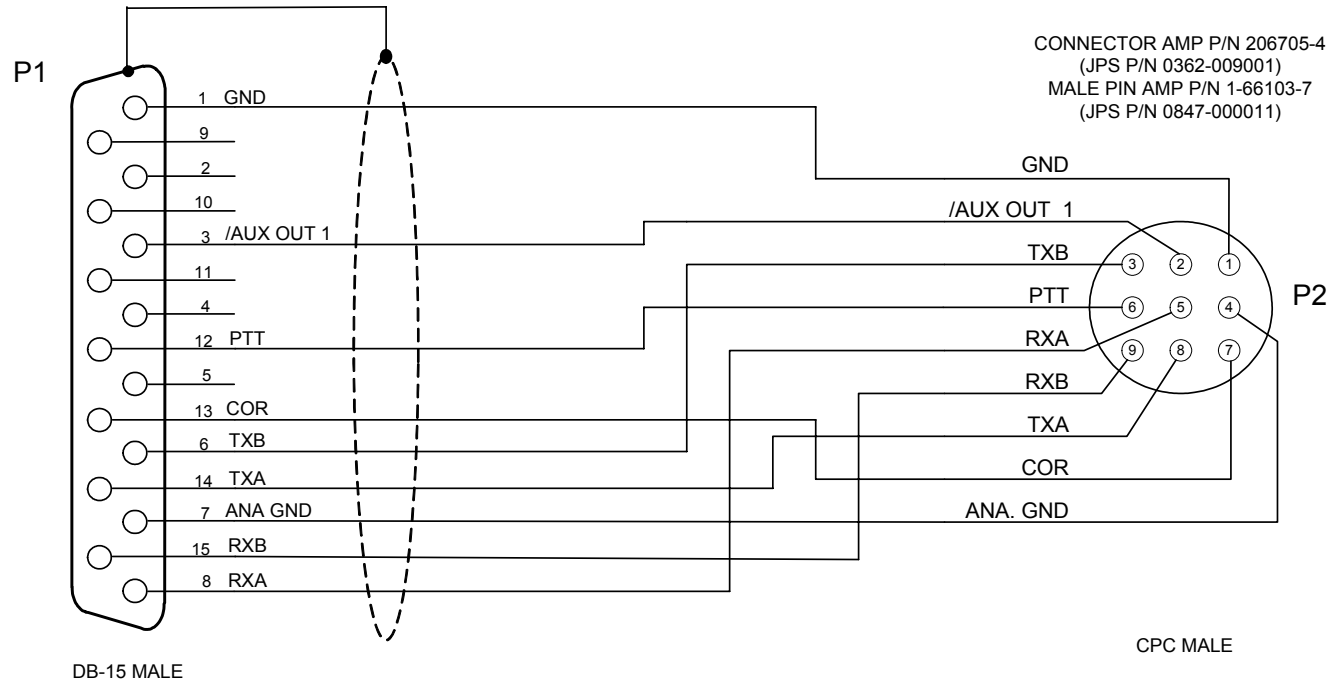
USED WITH:
KENWOOD TK-7180 VHF MOBILE RADIO
KENWOOD TK-8180 UHF MOBILE RADIO

NOTES: SHIELD DRAIN CONNECTED TO PIN 1 OF P1 ONLY.
PIN 21 MUST BE PROGRAMMED FOR EXTERNAL PTT.
PIN 8 MUST BE PROGRAMMED FOR TOR (ACTIVE HIGH).

Designed By:	JAC	Raytheon JPS Communications Raleigh, NC USA		
Drawn By:	JAC	Title CABLE, CPC TO KENWOOD TK-7180 / TK-8180		
Checked By:	CTS	Size A	Document Number 5961-271293	Rev B
Issued Date		APRIL 28, 2005		Sheet 1 of 1

PURCHASED PART

Rev	ECO	Date
A		



- 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).

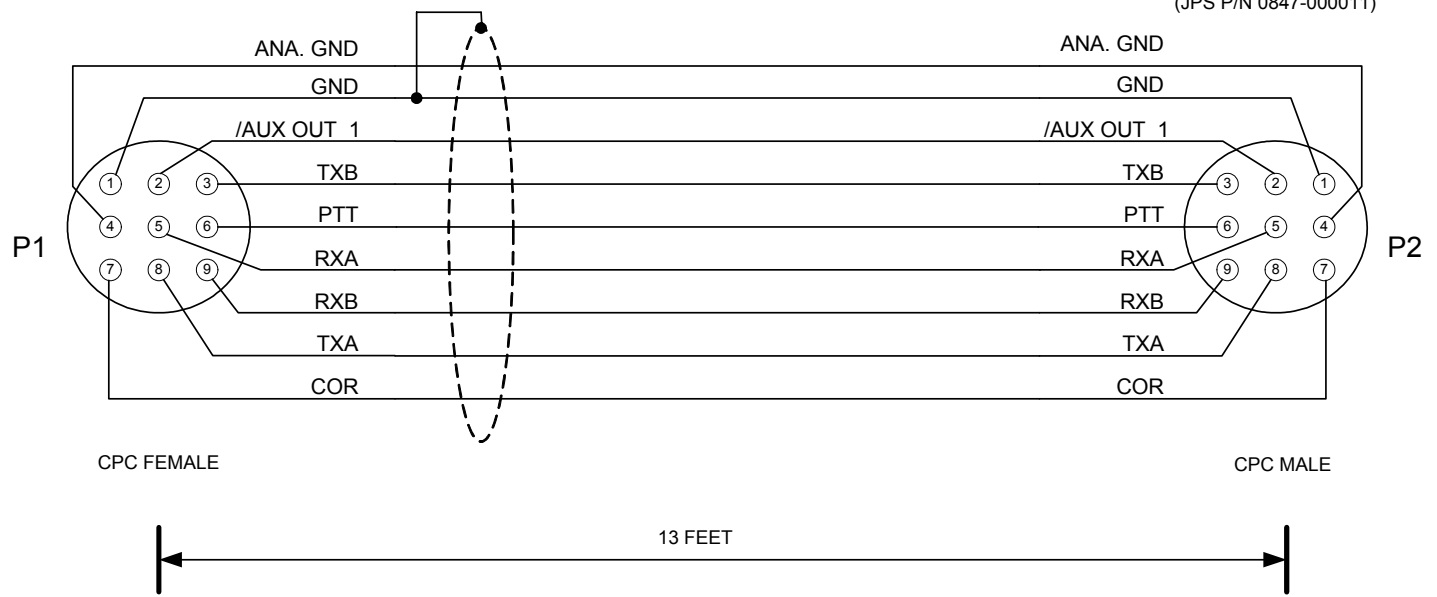
Designed By: JAC	Raytheon JPS Communications		
Drawn By: JAC	Title CABLE, ACU-1000 RADIO EXTENSION - 13 FT		
Checked By: RBP	Size A	Document Number 5961-261002-00	Rev A
Issued Date JANUARY 5, 2004		Sheet <u>1</u> of <u>1</u>	

Rev	ECO	Date
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)



- 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>