


Engineer: RBP	Date: 3-24-06	 JPS Communications 5800 Departure Drive, Raleigh, NC 27616			
Drawn: RBP	Date: 3-24-06				
Approved: CTS	Date: 3-31-06	Title: ACU RADIO APPLICATION NOTES			
Issued/ Revised	Date: 4-3-06	Size: A	Dwg. #: 5961-271310-APP	Rev: A1	Sheet: 1 Of 2

APPLIES TO: MSAT G2 - Hughes TU-2100 Mobile Satellite Radio

RADIO MODIFICATIONS: None required.

RADIO PROGRAMMING:

See MSV Install Guide and the MSV User Guide for details on setup required.

RADIO CONTROLS:

See MSV Install Guide and the MSV User Guide for details on setup required.

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 5961-291310	(5961-271310 + 5961-261002-00)
ACU-T Interface Cable	JPS P/N 5961-281310	(5961-271310 + 5961-281013-00)
TRP-1000 Shelf Interface Cable	JPS P/N 5961-271310	
Radio RF Connector Type	Proprietary connector to active antenna	

DSP-1 JUMPERS:

JP1	Low Impedance *
JP2	Balanced *

DSP PROGRAMMING:

RX Level	9	-26dBm	
TX Level	6*	0dBm*	
Squelch Type	COR		
COR Polarity	Active High		
High Frequency Equalizer	4*	Flat*	
RX Audio Delay	0	20 ms	
TX Audio Delay (Radio Type)	4	800ms	See notes
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)

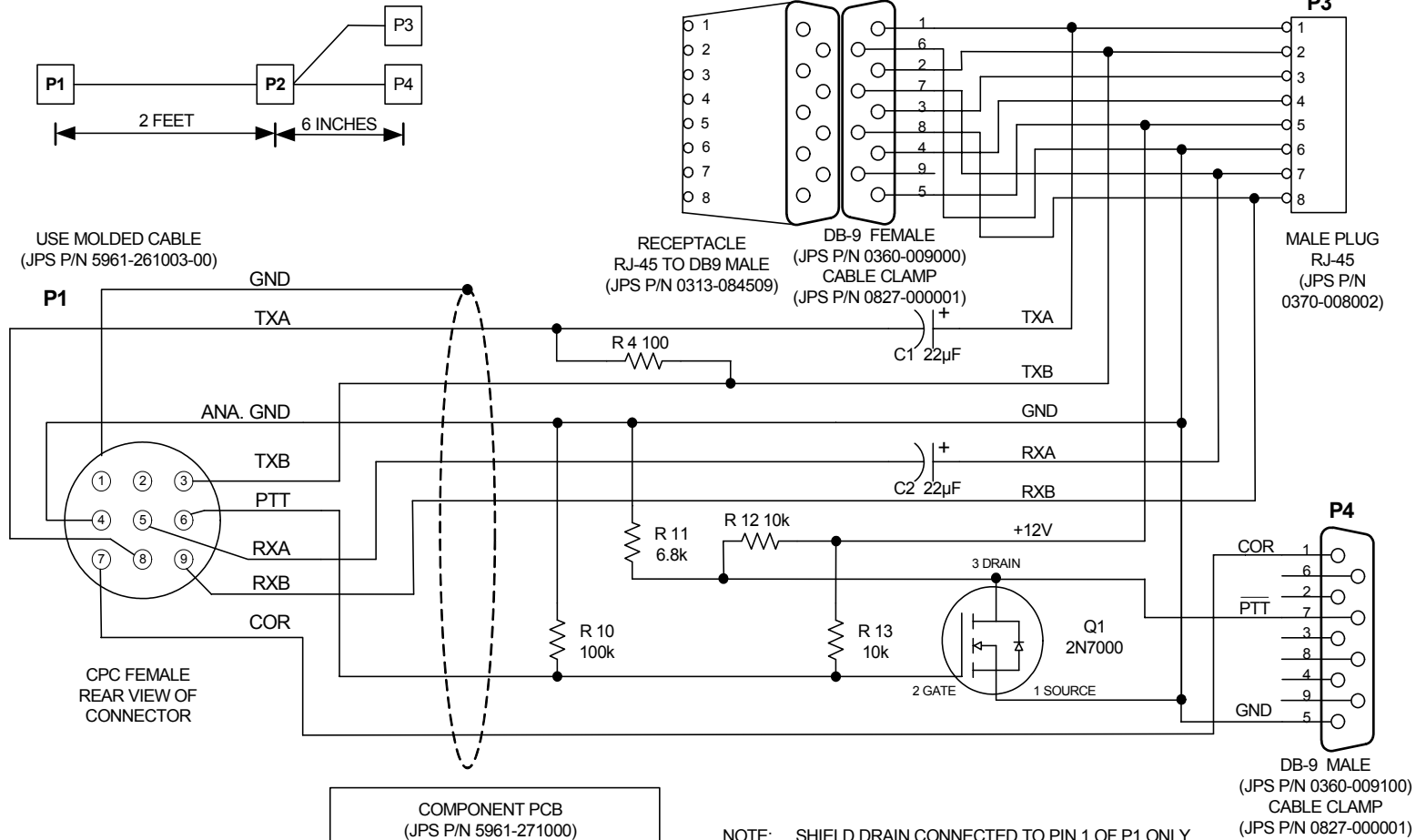
NOTES:

Channel acquisition for sat-com radios can take as much as 2.4 seconds. This could result in initial syllables of transmit audio being lost during channel acquisition. An equivalent delay in the TX audio path requires use of an AP-1 (TX Option) module to provide a further 1.6 seconds of delay in addition to the 800 ms provided by the DSP-1 module.

The DSP-2 has a TX Audio Delay Doubling feature that can bring the total delay from 800 ms to 1.6 seconds. To access this feature it will be necessary to connect a laptop with Ethernet crossover cable to the DSP-2 Ethernet connector and with a browser open the IP address 192.168.1.200/options.html. The displayed page has radio buttons that can be set to the TX doubling function then saved.

PURCHASED PART

Rev	ECO	Date
A		3-29-06

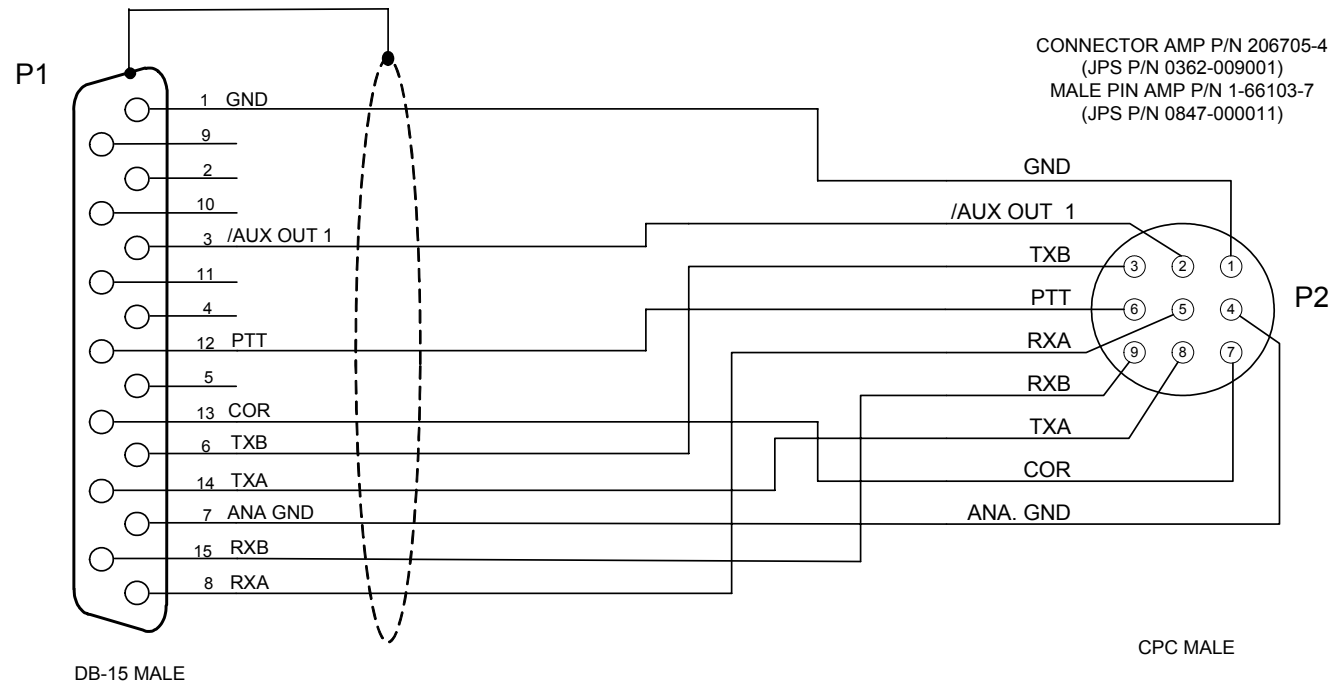


USED WITH:
MSAT G2 MOBILE SATELLITE
RADIO (HUGHES 2100)

Designed By:	RBP	Raytheon JPS Communications Raleigh, NC USA		
Drawn By:	RBP	Title CABLE, CPC TO MSAT G2 MOBILE SATELLITE RADIO		
Checked By:	CTS	Size A	Document Number 5961-271310	Rev A
		Issued Date	MARCH 21, 2006	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).

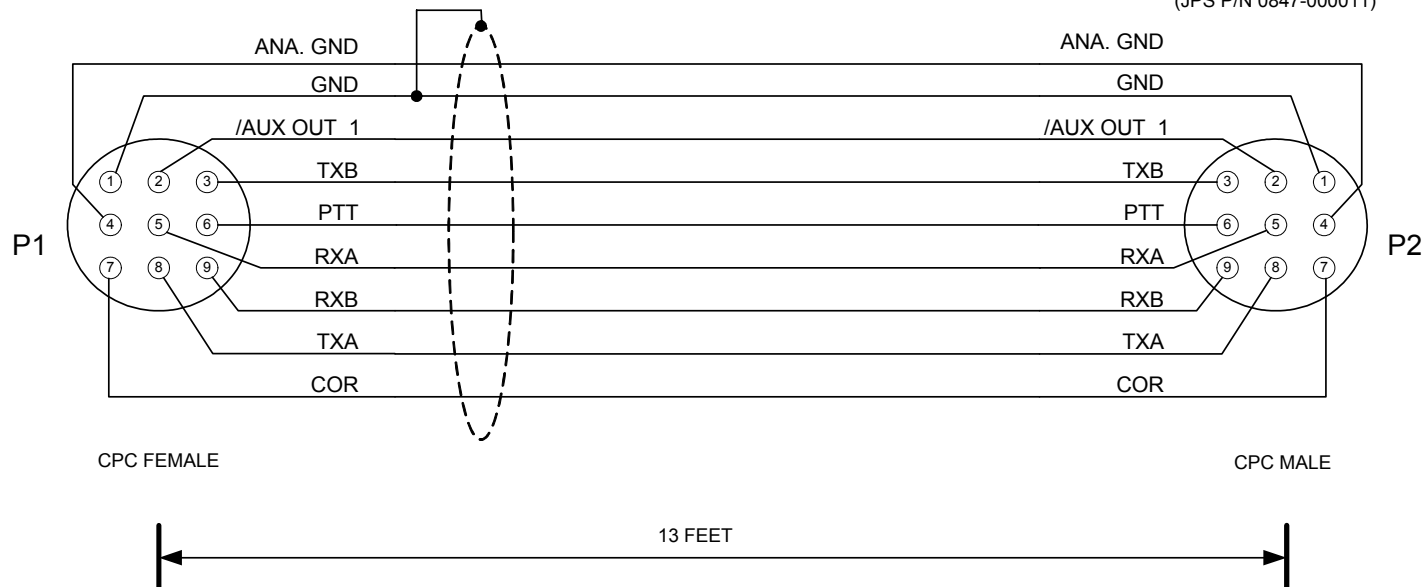
Designed By: JAC	Raytheon JPS Communications		
Drawn By: JAC	Title CABLE, ACU-1000 RADIO EXTENSION - 13 FT		
Checked By: RBP	Size A	Document Number 5961-261002-00	Rev A
Issued Date JANUARY 5, 2004		Sheet <u>1</u> of <u>1</u>	

Rev	ECO	Date
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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>	