Engineer: Chris Samios	Date: 4/1/04	**Raytheon**			
Drawn: Bruce Page	Date: 4/1/04	**JPS Communications** 5800 Departure Drive, Raleigh, NC 27616			
Approved: Chris Samios	Date: 4/1/04	Title: ACU RADIO APPLICATION NOTES			
Issued/ Revised	Date: 10/2/06	Size: A	Dwg. #: **5961-291270-APP**	Rev: **A2**	Sheet: 1 Of 2

APPLIES TO: Motorola/Nextel Model i30SX, i35S, i80S, i205, i305, i530, i730, and i733
Iden Cellphones (Direct Connection)

RADIO MODIFICATIONS: None required.

RADIO PROGRAMMING: None required.

RADIO CONTROLS:

1.   Turn the handset volume to maximum as indicated on the indicator bar.

CABLING:

    ACU-1000 Interface Top Level Assembly   JPS P/N 5961-291270
    ACU-1000 Interface Cable   JPS P/N 5961-291269-00
    ACU-1000 Extension Cable   JPS P/N 5961-291266-00

    ACU-T Interface Top Level Assembly   JPS P/N
    ACU-T Interface Cable   JPS P/N
    ACU-T Extension Cable   JPS P/N

DSP PROGRAMMING:

RX Level	7	-16dBm
TX Level	6*	0dBm*
Squelch Type	VOX*	
COR Polarity	Active Low*	
High Frequency Equalizer	5	2dB Boost
RX Audio Delay	2*	100 ms*
TX Audio Delay (Radio Type)	4	800 ms
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 phones volume control should be set to level 6.

(The Falcon family of handsets includes Motorola/Nextel models i205, i305 AND i730.)

Falcon handsets configured for <u>Static/Fixed</u> Nextel Group Connect communications:
This configuration allows a Nextel interface to be used exclusively for Group Connect communications.

From the handset's Main Menu, select the following:
1) Settings
2) DC/GC Options
3) One-touch DC
4) Assigned Number
5) Enter a valid Talkgroup number preceded by the # symbol.

Falcon handsets configured for Static/Fixed Nextel Direct Connect communications:

This configuration allows a Nextel interface to be used exclusively for initiating Direct Connect communications. For example, this could be used as a dedicated talk path to an EOC dispatcher or another radio interoperability device.

From the handset's Main Menu, select the following:

1) Settings
2) DC/GC Option
3) One-touch DC
4) Assigned Number
5) Enter a Direct Connect number

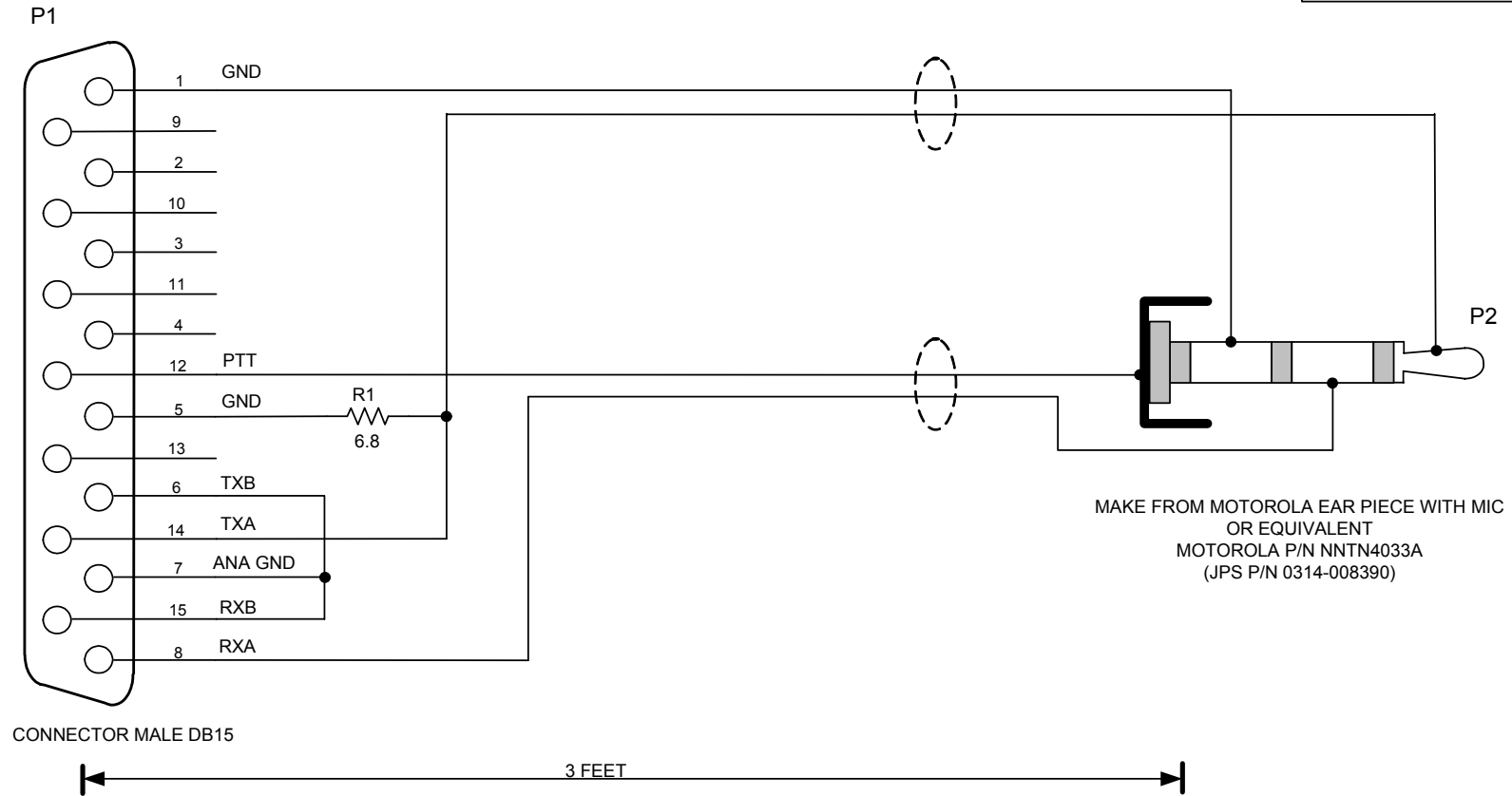**Falcon handsets configured for <u>Dynamic</u> Nextel Direct Connect communications:**

This configuration allows a Nextel handset to be used exclusively for receiving Nationwide Direct Connect calls. The DC call initiator is essentially permanently patched into the ACU-1000. It will require operator intervention to reset the handset to disconnect the Direct Connect link.

From the handset's Main Menu, select the following:
1) Settings
2) DC/GC Options
3) One-touch DC
4) Last Call

PURCHASED PART

P1

Pin	Signal
1	GND
9	
2	
10	
3	
11	
4	
12	PTT
5	GND
13	
6	TXB
14	TXA
7	ANA GND
15	RXB
8	RXA

R1
6.8

P2

CONNECTOR MALE DB15

MAKE FROM MOTOROLA EAR PIECE WITH MIC
OR EQUIVALENT
MOTOROLA P/N NNTN4033A
(JPS P/N 0314-008390)

3 FEET

NOTES: FOR R1 USE JPS P/N 1820-068000

THE TWO CONDUCTORS ARE PAIRED IN
SHEATHS AS SHOWN, TWO PLACES.

THIS CABLE IS PART OF THE 5961-291270 ASSEMBLY.
THIS CABLE WORKS WITH 5961-291266 EXTENSION CABLE.

USED WITH:
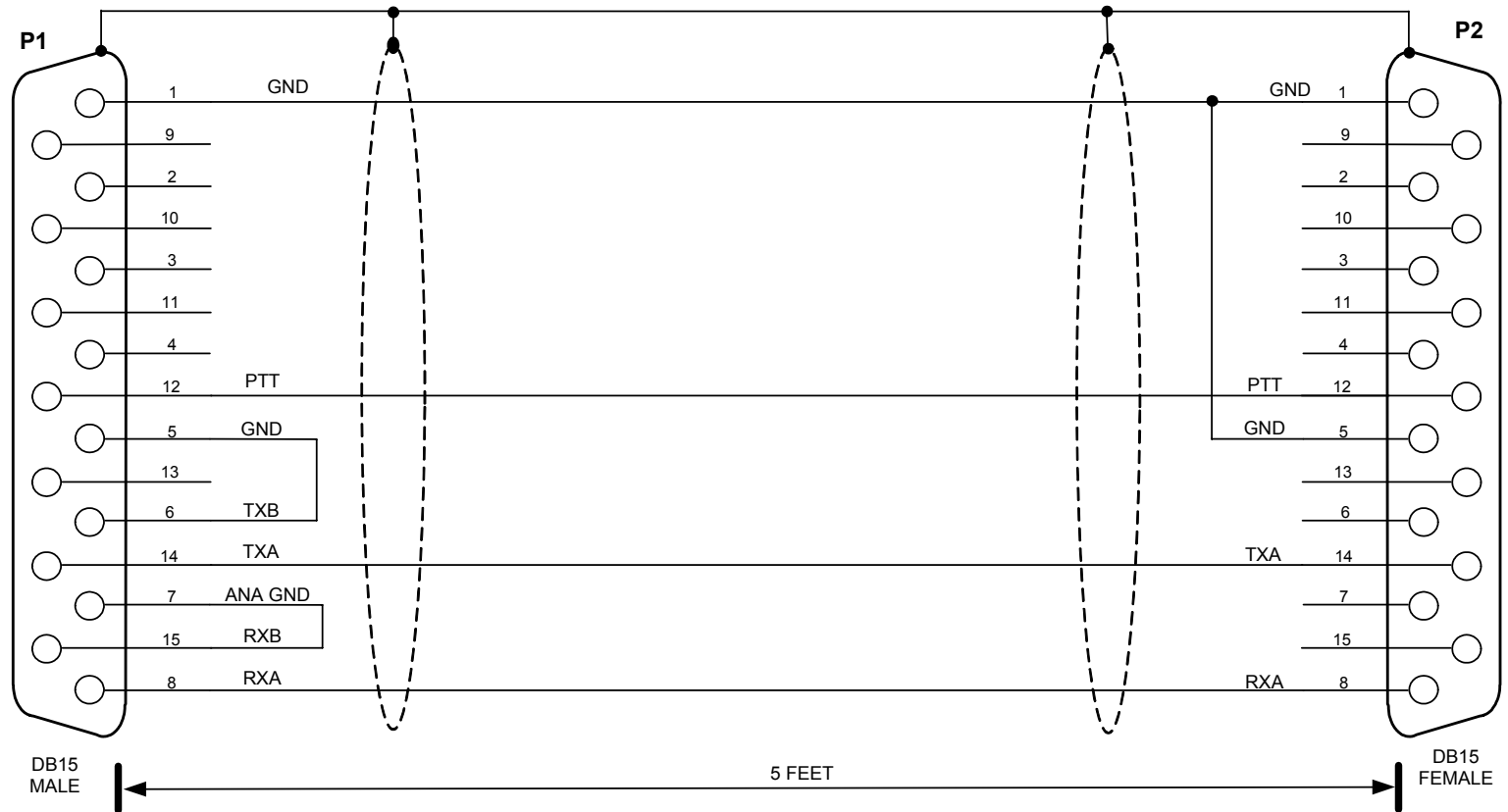MOTOROLA/NEXTEL MODELS i30SX, i35S, i80S, i205, i305, i530, i730, & i733.

Rev	ECO	Date
A		

	Raytheon JPS Communications		
Designed By: CTS			
Drawn By: RBP	Title CABLE , ACU DIRECT INTERFACE TO NEXTEL i305		
Checked By: JAC	Size A	Document Number 5961-291269-00	Rev A1
	Issued Date	APRIL 1, 2004	Sheet 1 of 1

PURCHASED PART

Rev	ECO	Date
A		

P1

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

P2

GND	1	
9		
2		
10		
3		
11		
4		
PTT	12	
GND	5	
13		
6		
TXA	14	
7		
15		
RXA	8	

DB15
MALE

DB15
FEMALE

5 FEET

NOTE: USE SHIELDED CABLE JPS P/N 0311-042410. CONNECT SHIELD DRAIN TO SHELL OF P1 AND SHELL OF P2. USE JACK SCREWS ON P2.

INCLUDED ON:
NEXTEL i90 DIRECT KIT JPS P/N 5961-291267
NEXTEL i305 DIRECT KIT JPS P/N 5961-291270

USED WITH:
ACU-1000 TO i90 DIRECT CABLE JPS P/N 5961-291263-00
ACU-1000 TO i305 DIRECT CABLE JPS P/N 5961-291269-00

Designed By: Chris Samios	**Raytheon** JPS Communications		
Drawn By: Bruce Page	Title Cable, ACU Extension to Nextel i90 Family Direct Connect		
Checked By: Chris Samios	Size A	Document Number **5961-291266-00**	Rev B
File Name: 5961-291266-00.VSD	Issued Date	MARCH 9, 2004	Sheet _1_ of _1_