CTI Products

RadioPro[™] IP Gateway Installation Guide for Kenwood NEXEDGE NX-7xx/8xx Radios



Document # S2-61904-823 For Version 8 Software

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Fonts used in this document: *Technical terms Cross-references within this document* <u>Hyperlinks to other documents or web pages</u> Warnings Software menus, menu options, folders, pages, and parameters

Software parameter values

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1 OVERVIEW

This Manual will focus on configuring Kenwood NEXEDGE NX-7xx/8xx Radios with the RadioPro System.

Please Refer to the <u>RadioPro IP Gateway Installation Guide</u> for general installation information relevant for all radio system types.

1.1 System Planner Template

Use the System Planner Template on page 27 of this document in the planning phase of a project to record IP addresses, usernames, passwords, serial numbers, and device names.

1.2 Required Items

1.2.1 Radio Interface Cable

A radio interface cable must be ordered for each IP Gateway from the following table:

Control Station Radio	Cable Part #
Kenwood NEXEDGE NX-700/800/5700/5800	S2-61769
Kenwood NEXEDGE NX-720/820	S2-61890

Other cables are available to connect a dedicated data revert radio. Contact CTI for more information.

1.2.2 Control Station Radio

Each Control Station radio used for voice requires one IP Gateway. The control station radio connected to the IP Gateway **must at least have the minimum firmware version listed below**. Kenwood's FPU (Field Programming Unit) software will be needed to configure the control station radio.

Control Station Radio	Minimum Version	Programming Software
Kenwood NEXEDGE NX-700/800 or NX-720/820	3.21.00	KPG-111DN
Kenwood NEXEDGE NX-5700/5800	2.31.00	KPG-D1N

1.2.3 Radio Programming Cable

A radio programming cable is required to configure the Control Station radio.

Note: A programming cable connected to the front microphone connector on the Control Station radio may prevent communications to a RadioPro IP Gateway from the Rear Accessory Connector. **Therefore, when a cable is connected to the Rear Accessory Connector to connect a RadioPro IP Gateway or a PC (during programming), ensure that the programming cable has been disconnected from the front microphone connector.**

2. FEATURE AVAILABILITY

Kenwood NEXEDGE Systems

Depending on NEXEDGE System Type, some features may not be available. Use the following table to determine if a feature discussed in this document is available.

System Type	Analog	Analog w/ EleetSvnc	Digital NXDN	Digital NXDN	NXDN & LTR	NXDN Trunking
Feature		T leeleyno	N/DN	w/ call ack.	Trunking	(MsgTrnkd)
Voice Dispatch	~	~	~	~	~	~
Text Messaging	-	~	~	\checkmark	✓	\checkmark
GPS Mapping	-	~	✓	\checkmark	✓	\checkmark
Status Updates	-	~	~	~	~	~
Selective Calling	-	√	~	Not Currently Supported	~	Not Currently Supporte d
Remote Monitor	-	\checkmark	\checkmark	~	~	~
Remote Enable/Disa ble	-	~	\checkmark	\checkmark	~	\checkmark

3. CONFIGURATION AND INSTALLATION

Use the steps in the following table to install a RadioPro System. Each step is discussed in detail starting on Page 6. Following installation of the IP Gateway in Step 5, at least one Client must be installed from Step 6.

Step #	Description	Kenwood NEXEDGE NX-7xx/8xx
3.1.1	Configure Control Station Radio(s) for Voice	page 6
3.1.2	Configure Control Station Radio(s) for Data	page 14
3.1.3	Configure Subscriber Radios for ARS, GPS, and TMS	page 15
3.2	Connect RadioPro IP Gateway to Control Station Radio	page 22
3.3	Configure RadioPro IP Gateway(s) using ICU.exe	page 23

Please Refer to the <u>RadioPro IP Gateway Installation Guide</u> for additional installation steps relevant for all radio system types.

3.1 Program the Control Station Radio

3.1.1 Configure the Voice Radio



(For NX-5700/5800 radios see document # S2-61905.)

Radio models NX-700/800 or NX-720/820 can be used as a control station radio. The use of an NX-720/820 requires modification to the option jumpers located on the radio's Tx/Rx unit. Therefore, the NX-700/800 is easier to implement since it does not require internal modifications. See *Appendix - Radio Interface Cables* for more details.

Use the KPG-111DN **FPU** (Kenwood's NEXEDGE 'Field Programming Utility' configuration software for NX-7x0/8x0 radios) to configure NEXEDGE radio parameters using the following steps.

- 1. Configure the control station as any other radio
 - a. Using a Kenwood programming cable, connect the NX-700/800 Control Station radio to a PC or Notebook that has the correct Kenwood FPU version (KPG-111DN in this case).
 - b. Open the **KPG-111DN** FPU.
 - c. Ensure that the correct COM port is selected by going to the **Setup** > **COM Port** menu.
 - d. Then, from the **Program** menu, select **Read Data from the Transceiver** as shown below.
 - e. After the data has been read, use **File** > **Import** to load all of the previously saved settings required for the radio system. Parameters may also be entered manually.

💽 KPG-111DN [NX	-800/800H [Mobile]: K UH	HF : 450-520 MHz] [Da	ta File : kpg111	ldn.dat] [Sou	rce File : kpg	111dn.sdt]			-	
File Model Edit	Program Tools Setup	View Window He	elp							
🗅 🖼 🖬 🎒	Read Data from the	Transceiver Ctrl+	R							
a zan latarati	Write Data to the Tra	ansceiver Ctrl+)	N							
Zone informatio	Test Mode	Ctrl+	T	Type	- Zone h	ama				
Zone 1	Conventional Group	-		1 1990		ame				
Ch RX Frequence	TX Erequency Ch T	ima TX Moda		OT/DOT Eng	RAN Dec	PAN Foo	Channel Name	Ch Spacing (Apalog)	Ch Spacing (NVDN)	
1	y ixriequency cirry	ype IX mode	andar bec	and ar cho	NAM DEC	TONIA ENG	Charmer Name	chi Spacing (Analog)	ch spacing (nxbh)	-
2										
3										
5										
6										
7										
8										
10										
11										
12										
14										
15										
16										
	<u> </u>									-
Free Area = 40960) bytes	Zone Up	Zone Down	1		Zone Edit	Channel Edit	Close	Help	
<u> </u>										
COM3 04/14/2014	01:51:37 PM									1.

- 2. Configure the Data Port
 - a. Open the **Option Features 1** settings window using the menu commands: Edit > **Optional Features > Optional Features 1**.
 - b. Select the **Common Page 3** tab, and then under the **Function** column for **COM port 1** in the table as shown below, select **Data + GPS Data Output**.
 - c. For the PC Interface Protocol parameter, select Version 2. Note: Selecting "Version 1" will prevent the IP Gateway from functioning properly.

KPG-111DN [NX- File Model Edit	800/800H [Mobile]: K UHF : 4. Program Tools Setup Vi	50-520 MHz] [Data File : kpg111dn.c ew Window Help	dat] [Source File :	kpg111dn.sdt]			
Zone Informatio Zone 1	n [Zone - 1 Channel - 1] Zone Turce Optional Features 1 Common Page 1 Common Page Battery Save Battery Save Battery Warning Tone	Sinnakina Tura ge 2 Common Page 3 Common Page 4 r Off r [LCD 5 LED 9 Always	P7/	nt LED ED COM nort Priority Interface Protocol	Serial Data Version 2		
12 13 14 15 16 17 Free Area = 4038	COM port Number COM port 1 COM port 2 COM port 2	Function Tome Tome Sion Switch	Polarity Iormal Iormal Iormal	Stop Bit 2 2 2	Baud Rate 9600 9600 9600		vse Heip
COM10 04/14/2014 0	202:58 PM				Close	<u>H</u> eip	

- d. Select the **Common Page 4** tab.
 - i. Enable Stack options Short Message Stack, Latest Received Message Stack, and Message Memory by changing them to Checked.
 - ii. **Enable** all of the options for both the **Serial Output** and **Serial Input** groups by changing them all to **Checked**.

Optional Ferrures 1		<u> </u>
PTTD (Anode) PTTD Type (Predisponder 1200 Beginning of Taxanat Expl of Taxanat PTTD Present Tee (b) (1 200 200 200 200 200 200 200 200	1003 Status Vessage Stad Status Vessage Stad Date Hessage Stad Date Hessage Stad Dates Hessage Stad Dates Hessage Stad Dates Hessage Stad Status Vessage Stad	0.5adra (Aaba)

3. Configure Sound Options

- a. Open the **Extended Function** window by using the menu commands: **Edit** > **Extended Function**.
- b. In the **Modulation Line** tab, **Ml2** column, and **Mic PTT** row, select **Connect** from the drop-down list as shown below.

✓ KPG-111DN [NX-800/800H File Model Edit Program □ ☑ □ ☑	[Mobile]: K UHF : 450-520 MHz Tools Setup View Window] [Data File : kpg111d w Help	n.dat] [Source File	: kpg111dn.sdt)			ل	*	×
Zone Information [Zone - 1	Channel - 1]							×	
Zone Typ	e	Signaling T	ype2	one Name					
Zone 1 . Conver	ntional Group	•							
Ch RX F	nction						g (Analog) Ch Spac	ing (NXDN) 🔺	
1 Optional Board	AUX Remote Zone-CH/GID	Nodulation Line Mobile F	Function						
5	(Connect to Modulation Lin	e						
6 PT	T Mic Line	MI2 Line	DI Line	With QT/DQT	With STE				
7 Mic 1	PTT Connect	Connect 💌	Disconnect	Yes	Yes				
8 External P	T (Voice) Disconnect	Discourset	Disconnect	Yes	Yes				
9 External P	PTT Disconnect	Disconnect	Connect	Ves	Ves				
	Disconnect	Diddonnoor	oomoor	100	100				
12 Modulator 13 Modulator 14 Modulator 15 Modulator 16 Modulator 17 Modulator 17 Modulator 17 Modulator 17 Modulator 18 Modulator 19 Modulator	Line by Mic PTT Connect Connect Disconnect	Audio Processor		Modulation Circuit		Цер	<u>C</u> lose	Нер	
COM5 06/16/2014 10:57:13 AM	Ĩ								

c. In the AUX tab, for Mic Sense, select 4dB (High) as shown below.

	Zone Type	er-1]	Signaling Type	Zone Name				
Zone 1	Conventional Gre	oup	-					
h RX F	Extended Eunction		<u> </u>	-H.,			nalog) Ch Spacing (N	KDN)
	2 Extended Function	1						
2	Optional Board AUX	Remote Zone-CH	H/GID Modulation Line Mobile Function					_
								_
	Pin number	VO	Function	Active	Debounce			_
3	DB-25 4pin	Output	None	Low	No			
r	DB-25 8pin	Output	None	Low	No			
3	DB-25 12pin	Input	None	Low	No			
)	DB-25 13pin	Input	None	Low	NO			
0	DB-25 15pin	Output	None	Low	No			
1	DB-25 Topin DB 25 20pin	Output	None	Low	No			
2	DB-25 21pin	Input	None	Low	No	1		_
3	DB-25 22pin	Output	None	Low	No	1		_
4	DB-25 23pin	Input	None	Low	No	1		_
0	DB-25 24pin	Input	None	Low	No	1		_
7	AUX Input			UX Output		·		-
	Data	Dwell Time [s]	Mic Mute	LOK Logic Sig	nal Continuous	_ -		
ree Area	Min S	anna IddR (Nish)	Front Mic	AllY Output Status Massa			Close	leip
	init of	Sense Free men	—— M12	State Hold Timer (Activ				
	Debo	unce Time [ms] 1	10	Status Morporu	e cow) (s) on			
	Data Override			Status Weinbry				
					Close	Help		
1								
_								

d. In the **Mobile Function** tab, for **DEO Level** (the level coming into the computer), select **+5** as shown below. For either **DI** or **DEO** sound settings, levels may be adjusted as needed.

KPG-111DN [NX-800/800H [Mobile]: K UHF : 450-520 MHz] [Data File : kpg111dn.dat] [Source File : kpg111dn.sdt]	
File Model Edit Program Tools Setup View Window Help	
Zone Information [Zone - 1 Channel - 1]	
Zone Type Zone Name	
Zone 1 🗧 Conventional Group	
Ch RX F 🕑 Extended Function	g (Analog) Ch Spacing (NXDN)
Optional Board AUX Remote Zone-CH/GD Modulation Line Mobile Function	
3	
DiLevel -1	
6 DEO Level	
9	
12	
15	
Free Area	<u>Close</u> <u>H</u> eip
Close Help	
COM5_06/16/2014_11:00-30.4M	
COLID COLADIZAT ANDORE THI	16

4. Configure FleetSync settings

Note: Even if the radio is being used in analog mode without FleetSync, or in digital mode with NXDN, a FleetSync ID must be assigned. Not entering an ID will prevent RadioPro from functioning properly.

- a. Open the FleetSync window by using the menu commands: Edit > FleetSync
- b. In the **General 1** tab, enter a value for **Fleet (Own)** and **ID (Own)**. (Note: These do not have to be used elsewhere, but they must have an assigned value.)

KPG-111DN [NX-800/800H [Mobile]: K UHF : 450-520 MHz] [Data File : kpg111dn.dat] [Source File : kpg111dn.sdt] File Model Edit Program Tools Setup View Window Help D Image: Compare the setup Image: Compare the setup Tools Setup Setup<	3 ×
Zone Information [Zone - 1 Channel - 1] Signaling Type Zone Name Zone 1 Conventional Group PeetSync Dev Zone Ch RXX PeetSync Dev Zone Dev Zone General 1 General 2 Parameter D List Status Did D Color Did Did Varrow	
COME (03/05/2015 (03/37/51 PM	//:

5. Configure NXDN settings

Note: Even if the radio is being used in analog mode without FleetSync, a FleetSync ID must be assigned. Not entering an ID will prevent RadioPro from functioning properly.

- a. Open the **NXDN** window by using the menu commands: **Edit** > **NXDN**
- b. In the **General 1** tab, enter a value for **Unit ID (Own)**.

KPG-111DN [NX-800/300H [Mobile]: K UHF : 450-520 MHz] [Data File : kpg111dn.dat] [Source File : kpg111dn.sdt] File Model Edit Program Tools Setup View Window Help
Zone Information [Zone - 1 Channel - 1]
Zone Type Signaling Type Zone Name
Zone 1 - Conventional Group FleetSync Dev Zone
Image: Construction of the strength of the strenge strength of the strength of the strength of the stre
A 446.60 General 1 General 2 Trunking Conventional Unit D List Storup D List Status List Status GPS Narrow
T Ver-the-Ar and the formed of the second se
8 Unit D Name (Own) Matts Gateway Transmit Busy Wat Time [s] 10.0
10 Group Call Display Type Caling Transceiver D/Group D Maximum ACK Wait Time [s] 2.0
11 Base D Type Group D
13 Base D 100
15 Unit Dencede Block -
16 Emergency Status response Alerr Linee
Free Area = 39 Code Status
A retrive suit/Na control call
Call April Tambel (Group Lade only)
L. Caler Caler D Stack on Kepty
List Partition Close Help
COM4 03/05/2015 03:41:51 PM

6. Configure Data settings

a. For each zone listed in the **Zone Information** window, use the **Zone Edit** button to open the **Zone Edit** window.

File	G-1 Ma	11DN (NX-3 odel Edit P	00G [Portable]: rogram Tools	K UHF : 450-52 Setup Viev	0 MHz][Data File / Window Help	e∶kpg111dr	.dat][Source	File :	: kpg111	.dn.sdt]						x
2	Zon	e Information	Zone - 1 Chan	inel - 1]		Signaling	Time		Zona N	lama						
:	Zone	1 🔅	Conventional G	Group	•	FleetS	ync		Dev	Zone						
	h i	RX Frequency	TX Frequency	Ch Type	TX Mode 0	T/DQT Dec	QT/DQT Enc	RA	N Dec	RAN Enc	C	hannel Name	Ch Spacing (Analog)	Ch Spacing (NXDN)	•	
	1	460.000000	460.000000	Analog	Analog	77.0	77.0				Anal	og Test	Narrow			
	2	462.000000	462.000000	Analog	Analog	None	None				DATA	CH	Narrow			
	3	464.000000	464.000000	NXDN	NXDN				None	None	NXDN	Test		Narrow		
	4	466.000000	466.000000	NXDN	NXDN				None	None	Data	2		Narrow		
	5															
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1	0															
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1_1	7								_						-	
	ree	Area = 39808 b	ytes	z	one <u>U</u> p Z	lone <u>D</u> own			Second Second	Zone Edit		Channel <u>E</u> dit	Close	Help		
ом	5 0	3/24/2015 12:	50:37 PM													

b. Specify the channel to use for data by assigning the Data Zone-CH/GID (Analog) and Data Zone-CH/GID (Digital) fields as required for your system.

0	KPG-	111DN [N	IX-300G [Portable]: K UH	HF : 450-52	0 MHz] [Data l	File : kpg111dn	.dat] [Sourc	e File : kpg111	ldn.sdt]				– ×
Fi	le N	1odel Edi	: Program Tools Se	tup View	/ Window H	elp							
	ם נ	; 🖬 🖉	S 🔊 🔋										
	Zo	ne Informa	tion [Zone - 1 Channel -	-1]								- 0	83
Г			Zone Type			Signaling	Туре	Zone	lame				_
	Zon	ie 1 🕂	Conventional Group)	-	FleetS	ync	Dev	Zone				
	Ch	RX Freque	ncy TX Frequency 0	Ch Type	TX Mode	QT/DQT Dec	QT/DQT Enc	RAN Dec	RAN Enc	Channel Name	Ch Spacing (Analog)	Ch Spacing (NXDN)	-
	1	460.00	Zone Edit - Conven	tional Grou	in [Zone - 1]						Narrow		
	-2	462.00			ip (Lone 1)						Narrow	Narrow	
	4	466.00			Zone Name)ev Zone		BCL Over	ide			Narrow	
	5		Da	ata Zone-CH	I/GID (Analog)	- 2	-	Zone Add					
	6			ata Zone-C		/		E Scan List		Table			
	-			Julu 20110-0		• •		Persistent G	ID (NXDN)				
	9				Home Channel M	ione	<u> </u>	No	Croup	D List Number			
	10		Opt	tional Signal	ing Decode Condi	tion QT/DQT		1	Group	1			
	11		Audio Contro	ol (Analog)	QT/DQT and Op	tional Signaling		2		3			
	12		Audio Contr	rol (NXDN)	RAN and Option	al Signaling		3		None			
	13			Tim	ne-out Timer (TOT) [s] 60	- -	4		None	L		
	15				TOT Pre-aler	t[s] Off	*	6		None			
	16				TOT Rekey Time	e [s] Off	*	7		None			
	17				TOT Reset Time	s[s] Off	-	8		None			-
	Free	e Area - 30									Close	Help	
		or a ou = 001							Close	Holo		Teb	
									Close	Teib			
co	M6	03/24/2015	12:56:07 PM										
_													

- i. If using *FleetSync* in a conventional (non-trunked) system, ensure that the correct data will be sent to the Data Channel:
 - Open the **FleetSync** window by using the menu commands: **Edit** > **FleetSync**
 - In the **Parameter** tab, enable the desired message types to send across the **Data Zone-CH/GID** with a **Check**.

KPG-111DN [NX-300G [Portable]: K UHF: 450-520 MHz] [Data File : kpg111dn.dat] [Source File : kpg111dn.sdt] File Model Edit Program Tools Setup View Window Help D				
Zone Information [Zone - 1 Channel - 1]				23
Zone Type Signaling Type Zone Name FleetSync Dev Zone	_			
Ch RX Fr @ FleetSync	me	Ch Spacing (Analog)	Ch Spacing (NXDN)	
1 46 2 40 Capacel 1 Capacel 2 Parameter ID List Status List Target ODS	- t	Narrow		
			Narrow	
4 46 GTC Count			Narrow	
5 Number of Betries 2				
7 Transmit Busy Wait Time [s] 10.0				
8 Maximum ACK Wait Time [8] 2.0				
9 ACK Delay Time [8] 0.5				
10 Transmit Dalay Time (Bacabia Cantura) [e] 0.0				
13 Data Preamble Evidencian Time (me)				
16 Random Access (Contention) 16 Status Message on Data Zone-CH/GID				
17 Short Message on Data Zone-CH/GD				-
Transparent on Data Zone-CH/GD	5.0	1	1	
Free Area	For	<u></u> iose	<u><u>H</u>eip</u>	
List Partition Close Help				
COME 02/04/2015 01-52/24 DM				
COM0 [05/24/2013 [01:52:24 FW]				

- ii. If using *NXDN* in a conventional system, ensure the correct data will be sent to the Data Channel.
 - Open the **NXDN** window by using the menu commands: **Edit** > **NXDN**
 - In the **Conventional** tab, enable the desired messages to send across the **Data Zone-CH/GID** with a **Check**.

KPG-111DN [NX-300G [Portable]: K UHF : 450-520 MHz] [Data File : kpg111dn.dat] [Soi File Model Edit Records Tools Seture View Window Help	urce File : kpg111dn.sdt]
Zone Information [Zone - 1 Channel - 1]	
Zone Type Signaling Type	Zone Name
Zone 1 Conventional Group FleetSync	Dev Zone
Ch RX F	p (Analog) Ch Spacing (NXDN)
2 46 General 1 General 2 Trunking Conventional Unit ID List Group ID List Statu	us List Status GPS
3 46	- Narrow
4 46 Parameter	Alert Tone - Narrow
GTC Count	Individual Call 3
7 ACK Delay Time [s] 0.5	Group Call 4
8 Transmit Delay Time (Receive Capture) [s] 0.0	Paging Call 8
9 Data Transmit Modulation Delay Time [ms] 400	
11 Breamble Length 0 fmp	
	Caller D Display Off
13 14 Individual Call Acknowledge Request	Selective Call Alert LED
15 Individual Call Acknowledge Request	Random Access (Contention) Status Message on Data Zone-CH/GD
16 Call Request Tone	Short Message on Data Zone-CH/GID
17 Call Processing Tone	Long Message on Data Zone-CH/GID Transparent on Data Zone-CH/GID
Call Processing Tone	Close Help
Call Processing Tone Delay Time [s] 0.0	
Automatic Response	
Initiating/Incoming Repet Time (e) 20	
List Bartition	Class Hala
	- Tinze - Uath
COM6 03/24/2015 01:35:19 PM	

7. Configure GPS settings

In order for RadioPro to process GPS information from subscriber radios, the control station radio must know what data to send to the IP Gateway.

- a. Open the Optional Features 2 window by using the menu commands: Edit > Optional Features 2
- b. In the GPS tab, Base Station Settings section, enable the option for **\$PKLDS/\$PKNDS (KW)** with a **Check**.

Note: Not selecting this option will result in GPS data not being sent to the RadioPro IP Gateway.

Zone Inf Optional Features 2 Conventional LTR VGS-1 Ch RXF GPS Report Mode 1 GPS Report Mode Image: Conventional 1 GPS Report Mode Image: Conventional 1 GPS Report Mode Image: Conventional 1 GPS Time Mark (s) Image: Conventional 1 GPS Time Mark (s) Image: Conventional 1 GPS Report Mode Image: Conventional 1 GPS Report Mode Image: Conventional 1 GPS Report CHOID Image: Conventional 1 GPS Report Mode Extract and Longitude 1 GPS Report CHOID Extract and Longitude 1 GPS Report Mode Extract and Longitude 1 GPS Report CHOID Extract and Longitude 1 GPS Report Meterval Time Sorderuc (MiteA) 1 Sorderuc (MiteA) Sorderuc (MiteA) 1 Image: Station Strings Sorderuc (MiteA) 1 Image: Station Strings Sorderuc (MiteA) 1 Image: Station Strings Sorderuc (MiteA) <t< th=""><th>KPG-111DN [NX-800/800H [Mobile]: K UHF: 450-520 MHz][Data File: kpg111dn.dat][Source File: kpg111dn.sdt] e Model Edit Program Tools Setup View Window Help</th><th></th></t<>	KPG-111DN [NX-800/800H [Mobile]: K UHF: 450-520 MHz][Data File: kpg111dn.dat][Source File: kpg111dn.sdt] e Model Edit Program Tools Setup View Window Help	
	2 Conc Linf Optional Features 2 2 Conc Linf Optional Features 2 Conventional LTR VGS-1 0 Bit GPS 1 Get GPS 2 Get GPS Report Mode 2 Get GPS Time Mark (b) 3 Get GPS Report Mode 4 Get GPS Time Mark (b) 6 GPS Report on Data Zone-CHIGD 7 GPS Report on Data Zone-CHIGD 8 GPS Report on Data Zone-CHIGD 9 GPS Report therval Time 11 Portable/gration On (b) 12 GPS Report therval Time 13 GPS Report Interval Time 14 Sondul, (MICA) 15 GPS Report On Off (b) 16 GPS Report Boot Off (b) 17 Free Area 18 GPS Report Boot Off (b) 19 GPS Report Boot Off (b) 10 GPS Report Boot Off (b) 11 Portable/gration On (b) 12 SPAULS/GROUS (cw) 13 GPS Report Boot Off (b) 14 GPS Report Boot Off (b) 16	Acna (Analog) Ch Spacing (NDN) • Narrow ···· -··· Narrow ···· ···· Narrow ····

3.1.2 Configure the Data Revert Radio



If you are using a Data Revert radio, follow the same steps for configuring the radio as you would for the Voice Radio with the following exceptions:

- Because the Data Revert Radio does not deal with audio, you may skip the steps on page 9 for *Configure Sound Options*.
- Because the Data Revert Radio will only receive GPS data, you may skip the steps on page 11 for *Configure Data settings*.
- Be certain to follow steps described on page 13, Configure GPS Settings.
- Because *Channel Steering* only affects the Voice Radio, program only the data channel into the radio.

3.1.3 Configure the Subscriber Radios



Use the **FPU** (Kenwood's NEXEDGE 'Field Programming Utility' configuration software) to configure NEXEDGE radio parameters using the following steps.

1. Configure the subscriber radio as any other radio.

- a. Using a Kenwood programming cable, connect the NX-700/800 Control Station radio to a PC or Notebook that has the correct Kenwood FPU version (KPG-111DN in this case).
- b. Open the **KPG-111DN** FPU.
- c. Ensure that the correct COM port is selected by going to the **Setup** > **COM port** menu.
- d. Then, from the **Program** menu, select **Read Data from the Transceiver** as shown below.
- e. After the data has been read, use **File** > **Import** to load all of the previously saved settings required for your radio system. Parameters may also be entered manually.

One I Conventional Group R R/Frequency Ch Type TX Mode OT/DQT Enc	Zone 1 Conventional Group Conventional Group	Model Ed	it Program Tool: Read Data t Write Data Test Mode	s Setup View from the Transc to the Transceiv	v Window H eiver Ctr rer Ctrl Ctrl	Help I+R +W I+T	141144() (000	ince thie : kpg	iiidhisdt j				
RX Frequency Ch Type TX Mode OTOOT Dec TAN Dec RAN Enc Channel Name Ch Spacing (Analog) Ch Spacing (NXCN) R File File <t< td=""><td>R XFrequency TX Frequency Cn Type TX Mode OTOOT Dec OTOOT Ecc RAN Dec RAN Enc Channel Name Ch Spacing (Analog) Ch Spacing (INDN) + 1 2</td><td>Zone 1 -</td><td>Conventional</td><td>Group</td><td></td><td>Signalin</td><td>д Туре</td><td>Zone</td><td>lame</td><td>_</td><td></td><td></td><td></td></t<>	R XFrequency TX Frequency Cn Type TX Mode OTOOT Dec OTOOT Ecc RAN Dec RAN Enc Channel Name Ch Spacing (Analog) Ch Spacing (INDN) + 1 2	Zone 1 -	Conventional	Group		Signalin	д Туре	Zone	lame	_			
Arrea + 0060 bytes Zone <u>Up</u> Zone <u>Down Zone <u>Lone Lone Lon</u></u></u></u></u></u></u></u></u></u></u></u></u></u></u></u></u></u></u></u></u></u></u></u></u></u></u></u></u></u></u></u></u></u></u>	Interdentry Interdentry <thinterdentry< th=""> <thinterdentry< th=""></thinterdentry<></thinterdentry<>	Th DY Freque		Ch Turne	TX Mode		OT/DOT Enc	RAN Dec	RAN Eng	Channel Name	Ch Spacing (Apalog)	Ch Spacing (NVDN)	
re Area = 40880 bytes Zone <u>Up</u> Zone <u>Down</u> Zone <u>Edt</u> <u>Qose</u> <u>Hep</u>	2 3 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	1	ency TX Frequency	Chitype	TX Mode	unbur bec	andar Elic	RAN DEC	ROAIN EIIG	channel Name	chi spacing (Analog)	ch spacing (NXDN)	-
reArea = 40990 bytes Zone Up Zone Down Zone Edt Channel Edt Gose Hep	3 4	2											
eArea = 40990 bytes Zone <u>Up</u> Zone <u>Down</u> Zone Edt Channel <u>E</u> dt <u>Qose</u> <u>Heb</u>	4	3											
ree Area = 40880 bytes Zone <u>Up</u> Zone <u>Down</u> Zone <u>Edt</u> <u>Qose</u> <u>Help</u>	0 -	4											
1 1 2 1 2 1 3 1 3 1 3 1 7 2 1 2 2 1 3 1 3 1 2 1 3 1 2 1 3 1 2 1 3 1 2 1 4 1 5 1 5 1 6 1 7 1	7	6											
a la	8	7											1
0 Image: Construction of the second	9 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	8											1
0 Image: Construction of the second	00 11 12 13 14 15 16 17 17 17 17 17 17 17 17 17 17	9											
2 2 3 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	2	10											
e Area = 40980 bytes Zone Lip Zone Down Zone Edt Channel Edt Gose Help	3	12											
4 A A A A A A A A A A A A A A A A A A A	14 15 16 17 <	13											
5 5 7 7 ree Arrea = 40660 bytes Zone <u>Up</u> Zone <u>Down</u> Zone Edt Channel <u>Edt Qose Help</u>	15 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	14											1
Real Area = 40990 bytes Zone Up Zone Down Zone Edt Channel Edt Glose Help	16 17 17 17 17 17 17 17 17 17 17 17 17 17	15											
Z Zone Up Zone Down Zone Edt Channel Edt Close Help	7 e Area = 40960 bytes Zone Up Zone Down Zone Edt Channel Edt Glose Help	16											
ree Area = 40960 bytes Zone Up Zone Down Zone Edt Channel Edt Gose Help	Free Area = 40960 bytes Zone Up Zone Down Zone Edit Channel Edit Glose Help	17											
		Free Area = 4	960 bytes	Z	one <u>U</u> p	Zone <u>D</u> own			Zone Edit	Channel <u>E</u> dit	<u>C</u> lose	Help	

- 2. Configure Target/Base ID settings.
 - a. If using *FleetSync*, ensure that the **Target Fleet** and **Target ID** specify the Control Station radio using the following steps:
 - i. Open the FleetSync window by using the menu commands: Edit > FleetSync
 - ii. In the Target tab, enter a value for Target Fleet and Target ID.
 Note: If the target does not include the Control Station(s), data will not appear in RadioPro.

File Model E	I [NX-300 [Portable]: K UHF : 450-520 MHz] [Data File : kpg111dn.dat] [Source File : kpg111dn.sdt] Edit Program Tools Setup View Window Help	
Cone Inform Zone 1 Cn RX FI 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 Free Area Free Area	Imation [Zone 1 Channel - 1] Zone Type Zone Type Zone Name Conventional Group Zone Name Image: Specific Specifi	
COM6 03/24/20:	List Partition Close Help	

- b. If using *NXDN*, ensure the **Base ID** specifies the Control Station radio using the following steps:
 - i. Open the NXDN window by using the menu commands: Edit > NXDN
 - ii. In the General 1 tab, enter a value for Base ID Type and Base ID.
 Note: If the Base ID does not include the Control Station(s), data will not be sent to RadioPro clients.

- 3. Configure Data settings.
 - a. For each zone listed in the **Zone Information** window, use the **Zone Edit** button to open the **Zone Edit** window.

0	KPG-	111DN [NX-3	00G [Portable]:	K UHF : 450-52	20 MHz] [Data F	ile : kpg111dr	n.dat] [Source	File : kpg111	.dn.sdt]					x
Fi	le N	1odel Edit P	Program Tools	Setup Viev	v Window He	elp								
1	ጋ 📁		i 🕒 💡											
ŕ.	~													
	🥑 Zo	ne Information	[Zone - 1 Char	nnel - 1]									×	
			Zone Type			Signalin	д Туре	Zone N	lame					
	Zon	e 1 🕂	Conventional	Group	-	FleetS	ync	Dev	Zone				_ 1	
	Ch	RX Frequency	TX Frequency	Ch Type	TX Mode	QT/DQT Dec	QT/DQT Enc	RAN Dec	RAN Enc	Channel Name	Ch Spacing (Analog)	Ch Spacing (NXDN)	•	
	1	460.000000	460.000000	Analog	Analog	77.0	77.0			Analog Test	Narrow			
	2	462.000000	462.000000	Analog	Analog	None	None			DATA CH	Narrow			
	3	464.000000	464.000000	NXDN	NXDN			None	None	NXDN Test		Narrow		
	4	466.000000	466.000000	NXDN	NXDN			None	None	Data 2		Narrow		
	5													
	6													
	1													
	8													
	9													
	11													
	12													
	13													
	14													
	15													
	16													
11	17												-	
			·				-1				1	· · · · · · · · · · · · · · · · · · ·	_	
	Free	e Area = 39808 b	oytes	Z	one Up	Zone Down			Zone Edit	Channel Edit	Close	Help		
Ľ													_	
								_		_				
C.C.	M6	03/24/2015 12	-50-37 PM											
	ini0	05/24/2015 12	199197 F 191											11.

b. Specify the channel to use for data by assigning the **Data Zone-CH/GID (Analog)** and **Data Zone-CH/GID (Digital)** fields as required for your system. Ensure that the specified channels are the same as specified for the Control Station radio in Step 1a.6.b.

🕐 KPG-111DN {NX-300G {Portable}; K UHF : 450-520 MHz] [Data File : kpg111dn.dat] [Source File : kpg111dn.dat]
File Model Edit Program Tools Setup View Window Help
Zone Information [Zone - 1 Channel - 1]
Zone Type Signaing Type Zone Name
Zone 1 📩 Conventional Group 💌 FleetSync Dev Zone
Ch RX Frequency TX Frequency Ch Type TX Mode QT/DQT Dec QT/DQT Enc RAN Dec RAN Enc Channel Name Ch Spacing (Analog) Ch Spacing (NOON)
1 460.00 Zone Edit - Conventional Group I Zone - 11
2 402 IU a Lancak concentration or opp [concent] Attraction of the second secon
4 468.00 Zone Name Dev Zone BCL Override Narrow
5 Data Zone-CH/GD (Analoa) 1 V 2 V F Zone Add
6 Scen List Takle
7 Data Zone-Christi (rivbri)
10 Optional Signaling Decode Condition 01/00T No. Group D List Number
11 Audo Control (Analog) QT/DQT and Optional Signaling Z 3
12 Audio Control (NXDN) RAN and Optional Signaling 3 None
13 Time-out Timer (TOT) [a] 60 - 4 None
15 TOT Pre-alert [s] Off C None
16 TOT Rekey Time [s] Off 7 None
17 TOT Reset Time (s) Off - 8 None •
Pres Area = 34
<u>Cbse</u> <u>Hep</u>
· · · · · · · · · · · · · · · · · · ·
COM6 03/24/2015 12:56:07 PM

- i. If using *FleetSync* on a conventional (non-trunked) system, ensure that the correct data will be sent to the Data Channel:
 - Open the FleetSync window by using the menu commands: Edit > FleetSync
 - Open the **Parameter** tab.
 - Enable the desired messages to send across the Data Zone-CH/GID with a **Check**.

KPG-111DN [NX-300G [Portable]: KUHF : 450-520 MHz] [Data File : e Model Edit Program Tools Setup View Window Help) 🗭 🖬 🤀 😰 🎗	kpg111dn.dat] [Source File	: kpg111dn.sdt]					
Zone Information [Zone - 1 Channel - 1]							23
Zone Type Zone 1 Conventional Group	Signaling Type FleetSync	Zone Name Dev Zone					
Ch RX Frequ SelectSync			- • ×	Þ	Ch Spacing (Analog) Narrow	Ch Spacing (NXDN)	-
2 462.0 General 1 General 2 Parameter D List Status List	Target GPS			F	Narrow	 Narrow	
4 466.0 GTC Count				F		Narrow	
6 Number of Retries 7 Transmit Busy Wait Time [s]	2			F			
8 Maximum ACK Wait Time [s]	2.0			F			
10 ACK Delay Time [s] 11 Transmit Delay Time (Receive Capture) [s]	0.0			F			
12 Data Transmit Modulation Delay Time [ms]	400 ÷			F			
14 15 V Random Access (Contention)	0 1			F			
16 Image: Status message on Data Zone-CH/GD 17 Image: Ch/GD Image: Ch/GD Image: Ch/GD				E			-
Free Area = 3					Close	Help	
List Partition		<u>C</u> lose	Help				
M6 03/24/2015 01:16:39 PM							

- ii. If using NXDN on a conventional system,
 - Open the **NXDN** window by using the menu commands: **Edit** > **NXDN**
 - Open the **Conventional** tab
 - Enable the desired messages to send across the Data Zone-CH/GID with a Check.
 - Disabling "Status message on Data Zone-CH/GID" will keep the radio check on the voice channel.

	nation [Zone - 1 Channel - 12]				83
ne 1	Zone Type Conventional Group	Zone Name Radio Pro Test			
RX Fre 466 465 466 466 468 468 468	AKDN General 1 General 2 Trunking Conventional ¹ Unit D List Group D List Stat Parameter GTC Count 0 ACK Delay Time [s] 0.5 Conventional 1 D List Group D List State ACK Delay Time [s] 0.0 ACK Delay Time [s] 0.0 Data Transmit Modulation Delay Time [s] 0.0 Data Transmit Modulation Delay Time [s] 0.0 Ack Delay Time [s] 0 Ack Delay Time [s] 0 Ack Delay Time [s] 0 Conventional 2 D List Acknowledge Request Coll Processing Time Call Processing Time Call Processing Time [s] 0.0 Automatic Response	Alert Tone Alert To Display Off Status Message on Data Zone-CHGD C Long Message on Data Zone-CHGD Trensporent on Data Zone-CHGD	(Ansig) Ch 2 PW PW PW PW PW PW PW PW PW PW	lipacing (MDN)	-
	Initiating/Incoming Reset Time [s] 30				

- 4. Configure Text Message Settings.
 - a. Open the Key Assignment window by using the menu commands: Edit > Key Assignment
 - b. In the **Menu** tab, choose **Call** in the **Category List**, select **SDM (FleetSync/NXDN)** in the **Function List**, and then click the **Add** button.

Key Assignment	1	-{0	- • •	eyimiya	• 8
General Top/Side Front Mic Key Category List (F3) CALL SCAN AUDIO-TONES UTILITY Move Up Move Up New Dgite	Call Direct CH/GD Menu Character B Function List (F4) Individual (NODN) Group (NODN) Status (FileetSynchCODH) Statek SSM (FileetSynchCODH) Move Up Move Down	Available Functions (F5) Available Functions (F5) AutoTail AutoTail AutoTail AutoTail AutoTail Broadcast Direct CH/GD 1 Select Direct CH/GD 3 Select Direct CH/GD 3 Select	×		
Bename		Çlose	<u>H</u> elp		

- 5. Configure the GPS settings.
 - a. If using GPS, configure the desired behavior for the radio by using the menu commands Edit > Optional Features > Optional Features 2 and going to the GPS tab.
 - b. If GPS data should be sent on another channel, enable GPS Report on Data Zone-CH/GID with a Check, and then select the correct channel to use in the GPS Report CH/GID box.

KPG-111DN [NX-300G [Portable]: KUHF: 450-520 MHz] [Data File: kpg111dn.dat] [Source File: kpg111dn.sdt] File Model Edit. Program Tools Setup View Window Help D 2 4 8 8 29 7
Zone Information [Zone -1 Channel -1]
COM6 103/24/2015 12:40:21 PM

- c. If using GPS with FleetSync, ensure the GPS Base Fleet and Base ID include the Control Station radio using the following steps.
- d. Open the FleetSync window by using the menu commands: ${\mbox{Edit}} > {\mbox{FleetSync}}$

e. In the GPS tab, enter a value for $\ensuremath{\text{Base Fleet}}$ and $\ensuremath{\text{Base ID}}.$

Note: If the Base ID does not include the Control Station(s), data will not appear in RadioPro.

💽 KPG-111DN [NX-300G [Portable]: K UHF : 450-520 MHz] [Data File : kpg111dn.dat] [Source File : kpg111dn.sdt]]							
File Model Edi	File Model Edit Program Tools Setup View Window Help							
🗅 🖻 🖥 🎒								
🕑 Zone Informa	ation [Zone +1 Channel -1]							
	Zone Type Zone Name							
Zone 1	Conventional Group							
Ch RX Fre	FleetSync e Ch Spacing (Analog) Ch Spacing (NXDN)							
1 460	Narrow I							
2 462	General1 General2 Parameter ID List Status List Target GPS							
4 469	Narrow Narrow							
5	Base Fleet 100 - Grocombination							
6								
7	GPS Report Immg OU							
8								
10								
11	V Lifergency							
12								
13								
14								
16								
17								
Free Area =	Edit <u>Close</u> <u>Heip</u>							
	List Partition Close Help							
COM6 03/24/201	5 12:42:50 PM							
20110 00/24/201	2 ANTRES TH							

- f. If using GPS with NXDN, ensure the GPS Base ID includes the Control Station radio.
- i. Open the NXDN window by using the menu commands: Edit > NXDN
 ii. In the GPS tab, enter a value for Base ID Type (GPS) and Base ID (GPS).
 Note: This is the ID the subscriber will to respond to, which will be the ID of the data revert control station radio.

• KPG-111DN [NX-300G [Portable]: K UHF : 450-520 MHz] [Data File : kpg111dn.dat] [Source File : kpg111dn.sdt]	
File Model Edit Program Tools Setup View Window Help	
Zone Information [Zone - 1 Channel - 1]	
General 1 General 2 Trunking Conventional Unit ID List Group ID List Status List Status GPS	
	Ch Spacing (Analog) Ch Spacing (NXDN)
Base ID Type (GPS) Group ID	Narrow
Base D (GPS) 100	Narrow
- OPS ACK Reque	Narrow
GPS Combination	
Voice Call	
Status	
GPS Report Status Number Block 1 - 207	
	<u>C</u> lose <u>H</u> elp
List Partition Close Help	
COM6 03/24/2015 12:45:22 PM	

6. Configure the Data Port

a. Open the **Option Features 1** settings window using the menu commands: Edit > **Optional Features > Optional Features 1**.

KPG-111DN [NX-300 [Portable	e]: K UHF : 450-520 MHz] [Data Fil	e : kpg111dn.dat] [Source File : kpg11	1dn.sdt]	
File Model Edit Program To	ols Setup View Window H	elp			
0 🖻 🖬 🎒 🕵 💁 🤶					
Optional Features 1 Common Page 1 Common Page	2 Common Page 3 Common Page	4]			
Battery		LEDs			
Battery Saver	Off	✓ Transn	nit LED		
Battery Indicator	LCD & LED	🔽 Busy L	ED		
Battery Warning					
Battery Warning Tone		PC	COM port Priority	Version 2	[]
COM port Number	Function	Polarity	Stop Bit	Baud Rate	
COM part 0 No	986	Normal	2	9600	
COM port 2	010	in station	<i>h</i>	3000	
CW ID Expansi	on Switch				
				Close	Help

b. Select the **Common Page 3** tab, and then under the **Function** column for **COM port 1**, select **None**.

Optional Features 1	
Common Page 1 Common Page 2 Common Page 3 Common Page 4	1
- PTT ID (Analog)	- Stack
PTT ID Type FleetSync///IDC-1200	F Status Message Stack
Beginning of Transmit	Short Message Stack
End of Transmit	Latest Received Message Stack
PTT ID Pause Time (s) 1	D/Message Stack with Time Stamp
	Serial Output
	Status Message Serial Output
	 Short Message Serial Output Unit ID Serial Output
	J Command Serial Output
	Parial lagut
	Data Override
	Status Hold Selected

c. Select the **Common Page 4** tab, and then enable **Short Message Stack** with a **Check**.

3.2 Connect the IP Gateway to the Radio Data Radio Data Radio Data Radio NX-700/800 IP Gateway Determined S2-61769 IP Gateway

Note: Before continuing, ensure that the programming cable has been disconnected from the front mic connector.

See Section 4.1 Appendix – Radio Interface Cables

Kenwood NEXEDGE NX700/800 on Page 24 for interface cable details.

Connect the IP Gateway to the Control Station voice radio using the following steps:

- 1. Connect the DB-25 side of cable S2-617691 to the DB-25 connector on the rear of the NEXEDGE NX-800 radio.
- 2. Connect the DE-9 male side of the cable to the DE-9 female connector on the rear of the IP Gateway.
- 3. Ensure that jack screws on both connectors are tightened to hold connectors in place.

Connect the IP Gateway to the Data Revert Control Station radio using the following steps:

- 1. Connect the DB-25 side of cable 89-10505 (DB25 Male to DE9 Female) to the DB-25 connector on the rear of the NEXEDGE NX-800 radio.
- 2. Connect the DE-9 female side of the cable to the DE-9 male connector on the rear of the IP Gateway.
- 3. Ensure that jack screws on both connectors are tightened to hold connectors in place.

Note: Since the IP Gateway has not yet been configured with appropriate IP parameters, do NOT connect the IP Gateway to an IP network.

3.3 Configure the RadioPro IP Gateway



Note: Before continuing, ensure that Wi-Fi connection has been disabled in the PC or Laptop being used to configure the IP Gateway.

The RadioPro ICU (IP Configuration Utility) must be used to configure each RadioPro IP Gateway with the necessary parameters. Configuration of each RadioPro IP Gateway must be performed before connecting the IP Gateway to a local area network.

Configure RadioPro IP Gateway settings:

Please Refer to the <u>RadioPro IP Gateway Installation Guide</u> for information about how to connect to the IP Gateway and for settings that apply to all radio systems.

<u>Configure NEXEDGE specific settings:</u> (Once connected to the IP Gateway with the ICU Utility)

NEXEDGE Radio tab

Enter the appropriate radio ID values for the fields on this tab.

The **Receive PTT ID timeout (ms)** field is used to give the transmitting radio time to transmit its PTT ID before the default PTT ID is used.

🔝 icu × File Read Device Help 198.144.49.102 00:22:4D:DA:55:C4 Clerita Accounte Network Radio Akages NEXEDGE Radio GPS General License Key Own analog fleet 4 \$ Analog online status 1001 ¢١ Own analog ID Analog offline status ÷. Own digital ID ÷ ÷ Digital online status ÷. + NXDN reset tim + 500 * out (ms)

GPS tab

If mapping locations of subscribers is required, place a check mark next to **Start GPS polling when online status received**. Leave this unchecked if GPS mapping is not needed, or if subscriber radios have been programmed to start GPS polling on their own.

Then choose a **Report interval time** to set the minimum time between successive GPS updates. Increasing this parameter will decrease the number of GPS updates, thereby allowing more channel bandwidth for voice conversations.

S ICU	-	×
File Read Device Help		
198.144.49.102 00:22:4D:DA:55:C4		×
File Gateway		
General License Key Clients Accounts Network Radio Aliases NEXEDGE Radio GPS		
Start GPS polling when online status received		
* You must enter the correct status codes on the NEXEULaE Hadio tab. * You must also configure both the GPS and Status estimate in the EPU		
The most stay deterging search on a single search teaching in and it is a		
Report interval time: 10 🖨 seconds		
Warning: Scan is enabled.		

Refer to the *RadioPro IP Gateway Installation Guide* for instructions on how to connect the RadioPro IP Gateway to an IP Network, configure Port Forwarding, and installing RadioPro Clients.

4. APPENDIX

4.1 Appendix – Radio Interface Cables

Kenwood NEXEDGE NX700/800

Voice Radio

Interface Cable # S2-61769

Signal Name	IP Gateway DE-9* Pin #	NXx00 Radio DB-25 Pin #
Tx+ (Mic audio to radio) Transformer isolated, 600 ohms	4	6
Tx- (Mic audio to radio)	5	25
Rx+ (Speaker audio from radio) Transformer isolated, 600 ohms	8	17
Rx- (speaker audio from radio	9	18
Tx Data (from radio)	1	3
Rx Data (to radio)	6	2
Digital Ground	3	7

* Interface cable requires DE-9 Male to connect to the IP Gateway female connector.

Data Radio

Interface Cable # 89-10505 (standard DE-9 to DB-25 serial cable)

Signal Name	IP Gateway DE-9* Pin #	NXx00 Radio DB-25 Pin #	
Tx Data (from radio)	2	3	
Rx Data (to radio)	3	2	
Digital Ground	5	7	

* Interface cable requires DE-9 Male to connect to the IP Gateway female connector.

Kenwood NEXEDGE NX720/820

Voice Radio

Interface Cable # S2-61890

Signal Name	IP Gateway DE-9* Pin #	NXx20 Radio HD-15 Pin #
MI2 (Tx+ Mic audio to radio)	4	5
Audio Ground	5	15
AF0 (Rx+ Speaker audio from radio)	8	4
Audio Ground	9	15
Tx Data (from radio)	1	6
Rx Data (to radio)	6	7
Digital Ground	3	15

* Interface cable requires DE-9 Male to connect to the IP Gateway female connector.

Data Radio

Interface Cable # S2-61891

Signal Name	IP Gateway DE-9* Pin #	NXx20 Radio HD-15 Pin #
Tx Data (from radio)	2	6
Rx Data (to radio)	3	7
Digital Ground	5	15

Additional modifications to internal Tx-Rx unit of NX-720/820

Out	In	Description
R664	R666	Change FNC1 (TXD) and FNC2 (RXD)
R635	R633	of HD-15 (DE-15) Connector
R662	R665	from TTL level to RS-232C level
R796	R798	Change signal output from DEO to AFO
R797	R799	Change signal input from DI to MI2



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6. SYSTEM PLANNER TEMPLATE

PAGE 1 OF 2

RadioPro IP Gateways

Parameters Common to all IP Gateways

ICU.exe Admin Password for ICU.exe, default is "admin"	Dispatch Client Password for Dispatch client connections default is "user"	NTP Server IP Address Network Time Protocol

Parameters Unique to each IP Gateway

GPS = GPS Data Revert. Each IP Gateway supports 1 Voice & 1 GPS Data Radio.	Name IP Gateway name has max 2 lines, 24 chars per line	Serial #	IP Address	Subnet Mask	Default Gateway
IP Gateway A	Example Gateway Name	1234	192.168.56.22	255.255.255.0	192.168.56.1
Voice Radio A0	Example Radio VR A0		192.168.10.1	255.255.255.0	
GPS Radio A1	Example Radio GPS A1		192.168.11.1	255.255.255.0	
IP Gateway B					
Voice Radio B0					
GPS Radio B1					
IP Gateway C					
Voice Radio C0					
GPS Radio C1					
IP Gateway D					
Voice Radio D0					
GPS Radio D1					
IP Gateway E					
Voice Radio D0					
GPS Radio D1					
IP Gateway F					
Voice Radio D0					
GPS Radio D1					
IP Gateway G					
Voice Radio D0					
GPS Radio D1					
IP Gateway H					
Voice Radio D0					
GPS Radio D1					
IP Gateway J					
Voice Radio E0					
GPS Radio E1					

If additional IP Gateways are needed, copy this page.

See next page for System Planner Template Page 2 of 2

SYSTEM PLANNER TEMPLATE

PAGE 2 OF 2

RadioPro Dispatch Clients

See <u>RadioPro Dispatch Installation and Configuration Guide S2-61785</u> for more information.

Parameters Common to all Dispatch clients

Parameters Unique to each Dispatch client

Administrator Password for Edit Mode	PC Name	IP Address	License #	Licensed IP Gateway Connections

RadioPro Solo, Talk, and Mobile Clients

See <u>RadioPro Solo Client Installation Guide S2-61568</u>, for more information.

Parameters Common to all Talk Clients

Administrator Login Name	Administrator Password default is "admin"
admin	

User Login Name default is "user"	User Password default is "user"

If additional Solo, Talk, or Mobile client logins are needed, copy this page.