NX-5000 Multi Deck Configuration Setup

Jason Brennan – Product Manager

Sheryn Holliman – Western Regional Sales Manager

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Overview of RF Deck Options

Configuration Types

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Ordering

- Packages from Price Pages

- DIY Configuration Steps

Programming

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Remote Configurations

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RF Deck Options

NX-5000 Multi-Deck Options

Model	Band	Power	Operable Modes
NX-5600H	Lowband (39-50)	110 Watts	Analog/NXDN
NX-5700	VHF (136-174)	50 Watts	Analog/NXDN/DMR/P25
NX-5700H	VHF (136-174)	110 Watts	Analog/NXDN/P25
NX-5800	UHF (380-470, 450-520)	50 Watts	Analog/NXDN/DMR/P25
NX-5800H	UHF (380-470, 450-520)	100 Watts	Analog/NXDN/P25
NX-5900	700/800	35 Watts	Analog/NXDN/DMR/P25

NX-5000 series mobiles are capable of following configurations using any frequency/power type combinations:

- Dash Mount *Mid power models only

- Single Band / Single Control Head

- Single Band / Dual Control Head

- Dual Band / Single Control Head

- Dual Band / Dual Control Head

- Triple Band / Single Control Head

- Triple Band / Dual Control Head

Example: Tri-deck / single control head
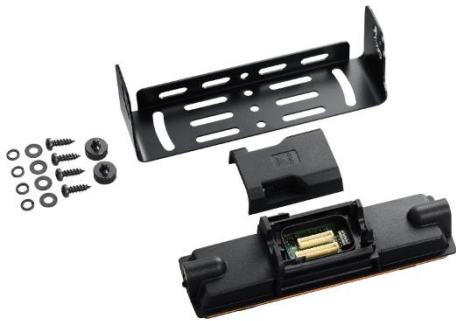
Control Head Options

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NX-5000 Control Head Options

< Basic Control Panel >

KCH-19

KRK-14 Kit – required with KCH-19

< Featured Control Panel>

KCH-20R – KRK-14 is built-in

< Handheld Control Microphone >

KCH-21R or KCH-21RM-S

KCH-19 - requires
a KRK-14 kit

KCT-71M/ M2/ M3
Remote Control Cables
– used with any of the
control heads

KMB-33
mounting bracket

KRK-15B
required for mid power to
be used on the RF deck

KCH-20RM
requires a KES-5A
and KCT-72M cable

KCH-21RM or RM-S
4 ft model

KCT-77M2
17ft Remote Control
Cable - required for the
KCH-21RM

KAP-2
Horn Alert and PA

KCT-23M
10 ft and M3 23ft
(50W power cable)

Items in red must be purchased separately.

KCH-19 - requires a
KRK-14 kit

KCT-71M/ M2/ M3
Remote Control Cables –
used with KCH-19 or 20R

KMB-36 mounting bracket

KCH-20RM
Requires a KES-5A
and KCT-72M cable

KCH-21RM or RM-S
model

KCT-77M2 Remote
Control Cable - required
for the KCH-21RM

KCT-23M2 10 ft or M4
23 ft (110W power cable)

KRK-15 Kit built in

Items in red must be purchased separately.

Ordering Packages from the Price Pages

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Packages do not include the actual RF deck, packages are just the hardware you order along with the RF deck or decks to create the complete solution.

With so many combinations of parts and options, there are too many possible packages to include all of them in the price pages. To ease the quoting process, there are a few methods of making sure you have what you need.

1. Ordering the pre-configured packages and labor codes.
2. Ordering using the "DIY" steps in the Price Pages
3. Ordering the most applicable packages and just adding the KCT-71M4 cable.

NX-5000 Configuration Kits

Whether you are quoting a public safety or a commercial vehicle, there are a number of popular and pre-configured packages listed in the **NX-5000 Mobile Accessories** section of the prices pages. These packages include all of the items needed to help you order the necessary hardware for your installation.

The packages are organized by different applications in the blue headers with a list of popular packages that apply to that type of application.

NEXEDGE P25 DMR — NX-5000 Series Mobile Accessories

CONVENIENT REMOTE & MULTI-RF DECK ACCESSORY KITS
MID POWER / Remote Kit - Single Head / Single RF Deck

5ABM	KMC-65M, KCH-19M, KRK-14HM, KRK-15BM, KCT-71M2, KCT-23M3, KMB-33M
5AFM	KMC-65M, KCH-20RM, KRK-15BM, KCT-71M2, KCT-23M3, KMB-33M, KES-5A, KCT-72M
5AHM	KCH-21RM, KRK-15BM, KCT-77M2, KCT-23M3, KMB-33M

The package part numbers indicate the deck type, the head type and how many of each are included using a combination of letters and numbers.

5 = mid power RF deck
6 = high power RF deck
A = NX-5000 designation
B = basic control head (KCH-19)
F = full feature control head (KCH-20R)
H = hand held control head (KCH-21RM)
M = how many decks are included
IG = with ignition sense cable/kit (high power only)
MR = includes KAP-2 for horn alert/PA/and high audio output (mid power only)

So for example a 5ABM package is for a single mid-power RF deck with a single basic head, while 5ABMM is for dual mid-power decks with a single basic head, and a 5ABBMM is for dual mid-power decks with dual basic heads.

NX-5000 Configuration Kits

Some of the packages may look very similar so it's important to pay close attention to the differences.

A common misstep in ordering occurs between the "-MR" and non "MR" packages.

NX-5000 Configuration Kits

Order the RF Deck then pick:

MID POWER / Remote Kit **- Dual Head / Dual RF Deck**

- 5ABBMM - KMC-65M(x2), **KCH-19M**(x2), KRK-14HM(x2), KRK-15BM(x2), KCT-71M2(x2), KCT-71M4, KCT-23M3(x2), KMB-33M(x2)

- 5AFFMM - KMC-65M(x2), **KCH-20RM**(x2), KRK-15BM(x2), KCT-71M2(x2), KCT-71M4, KCT-23M3(x2), KMB-33M(x2), KES-5A(x2), KCT-72M(x2)

MID POWER / Remote Kit **- Dual Head / Dual RF Deck, External Speakers per deck**

- 5ABBMM-**MR** - KMC-65M(x2), **KCH-19M**(x2), KRK-14HM(x2), KRK-15BM(x2), KCT-71M2(x2), KCT-71M4, KCT-23M3(x2), KMB-33M(x2), KES-5A(x2), KAP-2(x2)

- 5AFFMM-**MR** - KMC-65M(x2), **KCH-20RM**(x2), KRK-15BM(x2), KCT-71M2(x2), KCT-71M4, KCT-23M3(x2), KMB-33M(x2), KES-5A(x2), KAP-2(x2)

- **For Example**

  - A firetruck needs two mid power RF decks and two full featured control heads. One control head will be installed in the cab and the other at the pump panel. There are two multi-deck package options to choose, but only one has the best options for audio output.

- **Let's look at the best option from the Price Pages:**

  - **5AFFMM** - KMC-65M(x2), KCH-20RM(x2), KRK-15BM(x2), KCT-71M2(x2), KCT-71M4, KCT-23M3(x2), KMB-33M(x2), KES-5A(x2), KCT-72M(x2)

  - This package has each speaker connected to the control head via the KCT-72.

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Models <u>without "-MR"</u> uses internal speaker or a speaker attached to the Control Head.

- Each speaker can only play audio from selected deck
- Each external speaker requires a KCT-72 cable attached to the back of the head.

Example: 5AFFMM

NX-5000 Configuration Kits

- For Example

  - In the same county, a type three ambulance also needs two RF decks and two full featured control heads. One control head will be installed in the cab and the other in the rear patient module. Since both the driver and the EMT need to listen to both bands, the 5AFFMM package cannot apply.

- Let's look at the MR version:

  - **5AFFMM**-**MR** - KMC-65M(x2), KCH-20RM(x2), KRK-15BM(x2), KCT-71M2(x2), KCT-71M4, KCT-23M3(x2), KMB-33M(x2), KES-5A(x2), KAP-2(x2)

  - This allows for mounting both speakers in a common area between the cab and the patient module and allows constant reception of calls on both bands.

Models with "-MR" uses speaker attached to the radio deck.

- When both speakers are installed in same compartment or area, user can hear the audio from both decks simultaneously.

- This is closer to dispatcher approach as they tend to listen to multiple voice channels at the same time.

- Uses the KAP-2 kit for KES-5

Example: 5AFFMM-MR

KAP-2

KAP-2

KCT-71M4

KCT-71M4

KCT-71M2
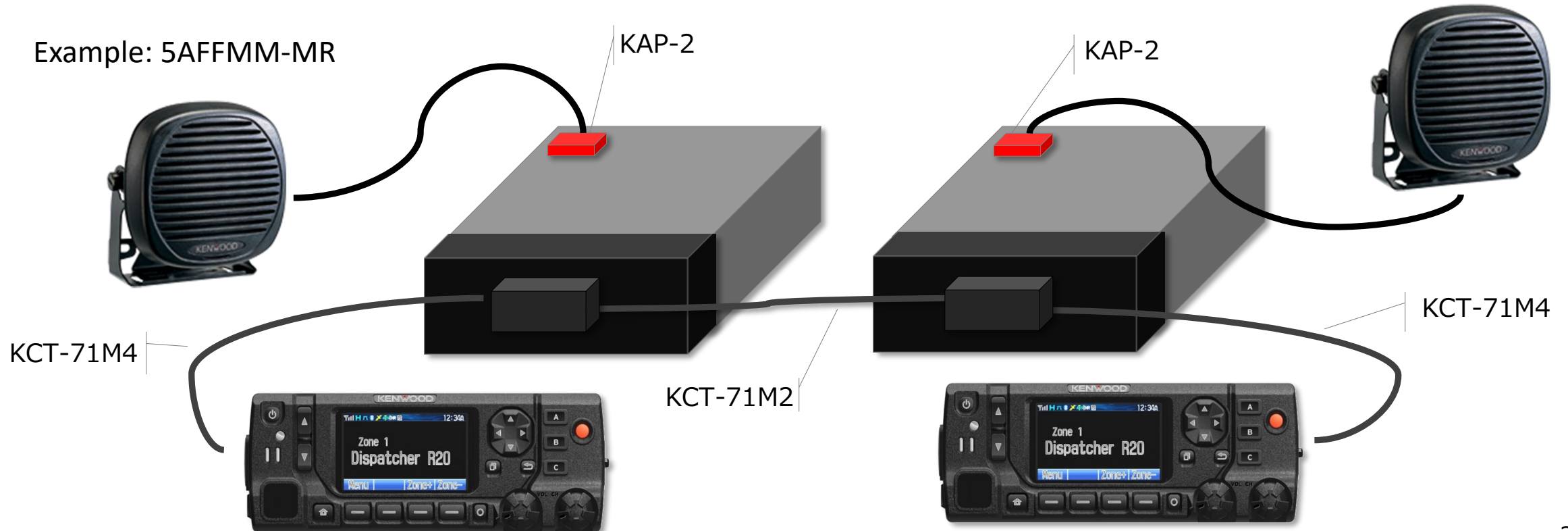
NX-5000 Configuration Kits

NX-5000 series – Have the Factory assembly and setup service your configuration before shipping to you

- Submit the Remote Mount Configuration Request Form for multi-band system
  - *Located on myTOOLS under forms*

- Purchase NX-5x00 (H)B RF Decks and corresponding Remote Kit(s) with all listed labors.

Labor Code	Description
L-5029	Single Head Remote Kit and Radio
L-5030	Dual Head Remote Kit and Radio
L-5031	Single Head Remote Kit and Dual Deck Radio.
L-5032	Single Head / Dual Deck / Ext. Speakers
L-5033	Dual Head and Dual Deck Radio
L-5034	Dual Head / Dual Deck / Ext. Speakers
L-5035	Single Head Remote and Triple Deck Radio
L-5037	Dual Head and Triple Deck Radio
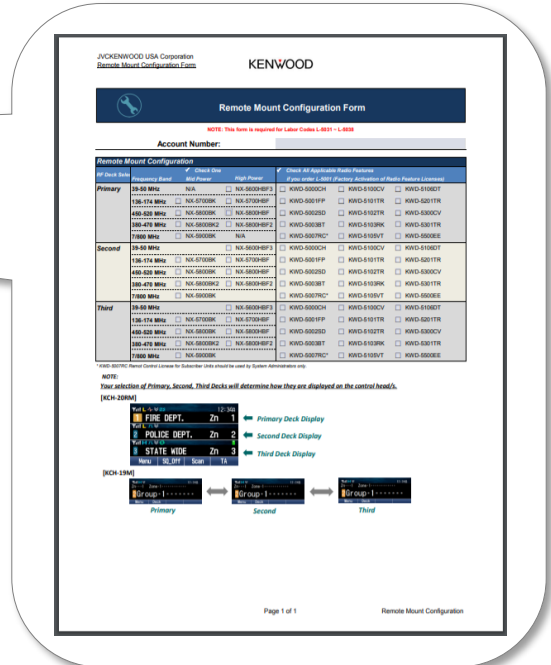
Ordering Custom Kits

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NX-5000 "DIY" Configuration Setup in 6 Steps

If the customer needs fall outside of what the standard packages offer, you can create a custom package using the DIY section of the Price Pages.

For example, we have an ambulance service that needs a mid power UHF deck and a high power VHF deck with a basic head in the front and a full featured head in the back. They have not requested simultaneous receive audio from both decks.

NX-5000 "DIY" Configuration Setup in 6 Steps

STEP 1. Select Mobile(s) / Up to 3 mobiles of any combination

Mid Power Mobiles : NX-5700BK, NX-5800BK, NX-5900BK

High Power Mobiles : NX-5600HBF3, NX-5700HBF, NX-5800HBF

Model	Band	Power	Operable Modes
NX-5600H	Low band (39-50)	110 Watts	Analog/NXDN
NX-5700	VHF (136-174)	50 Watts	Analog/NXDN/DMR/P25
NX-5700H	VHF (136-174)	110 Watts	Analog/NXDN/P25
NX-5800	UHF (380-470, 450-520)	50 Watts	Analog/NXDN/DMR/P25
NX-5800H	UHF (380-470, 450-520)	100 Watts	Analog/NXDN/P25
NX-5900	700/800	35 Watts	Analog/NXDN/DMR/P25

NX-5000 "DIY" Configuration Setup in 6 Steps

STEP 2. Add power cable and bracket / For each Mobile Deck

Mid Power Mobiles : KCT-23M(10 ft) or KCT-23M3(23ft), KMB-33M(bracket), and KRK-15BM(Control Head Remote Kit)

High Power Mobiles : KCT-23M2(10 ft) or KCT-23M4(23ft), and KMB-36(bracket)

	Power Cable	Mounting Bracket	Deck Interface
Mid Power			
High Power			

NX-5000 "DIY" Configuration Setup in 6 Steps

STEP 3. Select Control Head(s). Up to two Control Heads

KCH-19M Basic Control Head + KRK-14HM Control Head Interface Kit + KRK-15B interface kit for RF Deck

KCH-20RM Full Featured Control Head + KCT-72M(Acc Connection Port cable) + KES-5A (Speaker)

KCH-21RM Handheld Control Head

	Control Head	Head Interface	Deck Interface	Speaker
Front				Not applicable
Rear			Not applicable	

NX-5000 "DIY" Configuration Setup in 6 Steps

STEP 4. Add Microphone for each Control Head. –

KMC-65M Standard Microphone – x 2

KMC-66M Microphone with 12 keypad - or from other 8pin audio input accessories

	Microphone
Front	
Rear	

NX-5000 "DIY" Configuration Setup in 6 Steps

STEP 5. Select Desired Cable Length (Radio to Control Head)

For KCH-19M/KCH-20RM Control Heads:

- 17ft.(KCT-71M2) - x 2
- 25ft. (KCT-71M3)
- 1.6ft.(KCT-71M4)

- Custom length (KCT-71A50/KCT-71A100)
- For KCH-21RM Control Head: 17ft. (KCT-77M2)

	Cable
Front	
Rear	

STEP 6. Add Deck to Deck Connection Cable (ONLY for multi-RF configuration) –

For Dual-band configuration : Requires ONE x KCT-71M4 (1.6ft.)

For Tri-band configuration : Requires TWO x KCT-71M4 (1.6ft)

	Cable
Front	
Rear	

OR...

- Select the two most applicable packages.

  - 5ABM x 1 for the mid power deck

  - 6AFHIG x 1 for the high power deck

- Add a KCT-71M4

  - KCT-71M4 x 1

If you need the packages assembled by Tuning, then the labor codes still apply using this method.

  - Add Labor code L-5033

NX-5000 "DIY" Configuration Setup in 6 Steps

🔲 Following either method still results in the same solution for the ambulance.

NX-5700H

NX-5800

KCT-71M2

KCT-71M2

KCT-71M4

Front

KCH-19 /
KRK-14

Rear

KCH-20

KCT-72M

KES-5
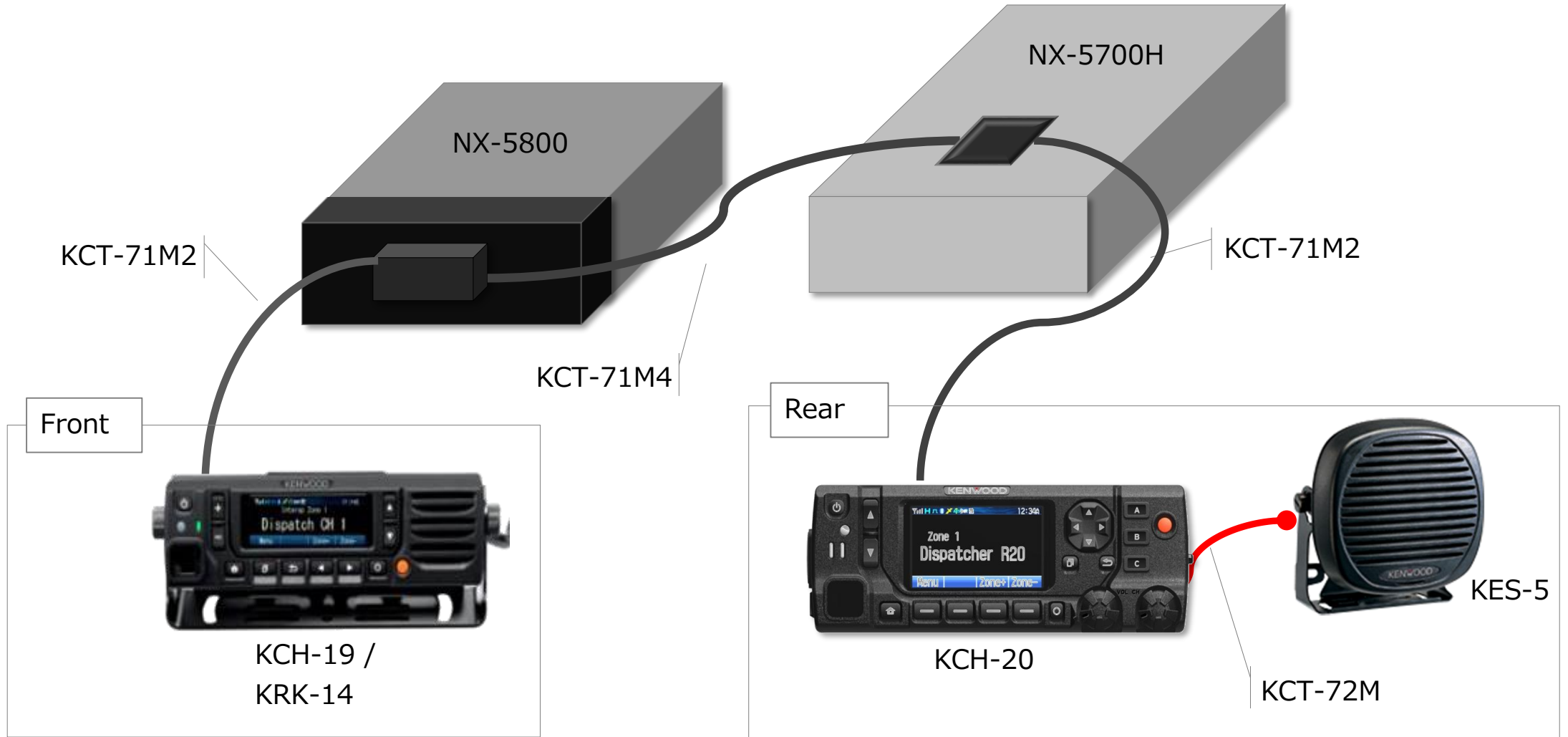
Programming

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Common Questions

- Once you receive your kit, first make sure the firmware in all decks is up to date.
- If the firmware is not the same between decks, you will receive a message on the control head indicating "Firm Mismatch."

- To update the initial firmware, or load any option license keys, you should do this on a individual deck basis using the head/heads that will be a part of the final install.
  - If the head is attached directly to the deck, remove it and reconnect with the remote kit before updating.
  - Once the firmware matches in all decks and heads, then you can apply firmware and programming to the whole kit without separation.
- As long as the firmware matches, you can physically connect programmed heads and decks together and then program the multi-deck system via KPG-D1.

Common Questions

- Use the **NX-5000 Common Function Reference** (In Depth Manual) as a guide to set the DIP switches correctly for any configuration.

Common Questions

- Adjusting the DIP switches during installation should be done with the RF decks removed from power.

- Resolve all headtype errors before attempting to write the multi-deck data.

- Be sure that all radios have the Multi-Deck license installed. In newer radios this is built in from the factory, however, older NX-5000s sold before the option was released will not have this license and it must be added.

- The software and the radios perform many checks with each other before allowing the programmer to write to a multi-deck installation. As long as all decks show up in the Write FPU data screen, you have worked past the most common mistakes with multi-deck setup.

Example from the field

- Dual RF deck

- High power and mid power

- Single, full featured head

- Utility vehicle installation

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Courtesy of Bryan Vacca

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