

Function Interoperability Test Report

VHF/UHF Digital Transceiver

NX-1200/1300 series

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Revision History

Version	Date of issue	Note
1.00	Sep.-6 2019	First edition

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1. Outline

JVCKENWOOD announces New Low-tier Digital transceiver NX-1000 series.

This document describes function compatibility report with current model and competitor radio.

2. NXDN Feature

2.1. Test Sample

- ◆ NEXEDGE Radio NX-1300N (K5)
 - Firmware Version N1.00.00
 - Activated Features
 - KWD-1501RC (REMOTE CONTROL)
 - KPG-D6 Version V1.00



- ◆ NEXEDGE Radio NX-3320
 - Firmware Version K3.00.00
 - KPG-D3 Version V3.00



- ◆ NEXEDGE Radio NX-340
 - Firmware Version V3.09
 - KPG-169D Version V3.03



2.2. NXDN Conventional

Summarize the result of interoperability test as the list. Test was done TX and RX.

Model Name	NX-3320	NX-340
OWN ID	OK	TX *1
Encryption	OK	OK
OAA	OK	OK *1
Individual Call	OK	OK
Group Call	OK	OK
Status Message	OK	OK *1
Short Message	OK	N/A *2
Long Message	OK	N/A *2
Stun / Revive / Kill	OK	OK
Remote Monitor	OK	RX *3
Radio Check	OK	RX *3
Mixed	OK	N/A *2

*1: NX-340 does not have a display. Only TX function was tested.

*2: NX-340 does not have a Short Message, Long Message and Mixed function.

*3: NX-340 can receive but cannot transmit these status message of the function.

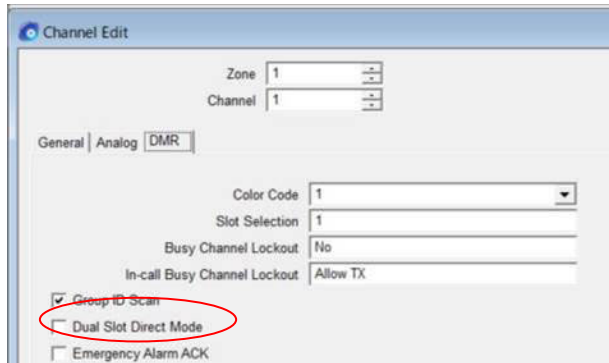
3. DMR Feature

3.1. Test Sample

- ◆ DMR Radio NX-1300D (K5)
 - Firmware Version D1.00.00
 - Activated Features
 - KWD-1501RC (REMOTE CONTROL)
 - KWD-1500EE (ENHANCED ENCRYPTION)
 - KPG-D6 Version V1.00



*: Kenwood DMR should be disable Dual slot direct mode to communicate with MotoTRBO.



Channel Edit - DMR

- ◆ DMR Radio NX-3320
 - Firmware Version K3.00.00
 - Activated Features
 - KWD-3504RC (REMOTE CONTROL)
 - KWD-3502EE (ENHANCED ENCRYPTION)
 - KPG-D3 Version V3.00



*: Kenwood DMR should be disable Dual slot direct mode to communicate with MotoTRBO.

- ◆ DMR Radio TK-D340
 - Firmware Version 1.40.00
 - KPG-166D Version v2.32



*: Kenwood DMR should be disable Dual slot direct mode to communicate with MotoTRBO.

- ◆ MotoTRBO DP-2600
 - Firmware Version R02.50.05
 - CPS 2.0 Version 2.18.95.0



- ◆ Hytera PD565
 - Firmware Version A5.06.03.006
 - CPS Version V8.06.01.010.EMS



3 DMR Feature

3.2 DMR Conventional

3.2. DMR Conventional

Summarize the result of interoperability test as the list. Test was done TX and RX.

(TX: NX-1300 ->competitor radio, RX: NX-1300 <- competitor radio)

Model Name	NX-3320	TK-D340	Motorola DP2600	Hytera PD565
Group Call	OK	OK	OK	OK
Individual Call	OK	OK	OK	OK
Broadcast Call	OK	OK	N/A	N/A
All Call	OK	OK	OK	OK
Paging Call	OK	OK	OK	OK
Emergency	OK	OK	OK *1	OK *1
Lone Worker	OK	OK	No *1	No *1
Radio Check	OK	OK	OK	OK
Stun / Revive	OK	OK	OK	OK
Remote Monitor	OK	OK	OK	OK
PTT ID and Aliasing	OK	TX *3	OK	OK
Enhanced Encryption	OK	N/A	Not Confirmed	OK
Call Interruption	OK	OK	No *2	No *2
Short Data Message	OK	TX *3	OK	OK
Mixed	OK	OK	N/A	N/A

*1: Partly compatibility

*2: Not compatible

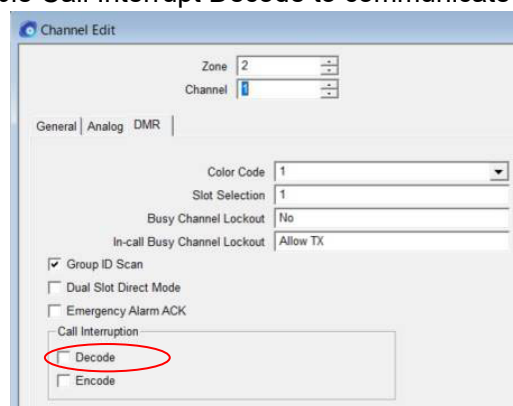
*3: TK-D340 does not have a display. Only TX function was tested.

3.2.1. Group Call

Group Call interoperability is confirmed as all works fine.

*: Kenwood DMR should be disable Call Interrupt Decode to communicate with MotoTRBO.

KPG-D6: Channel Edit – DMR



3.2.2. Individual Call

Individual Call interoperability is confirmed as all works fine.

*: The function called Private Call in Motorola and Hytera, is the same one.

*: Kenwood should be disable Call Interrupt Decode to communicate with MotoTRBO.

3 DMR Feature

3.2 DMR Conventional

3.2.3. Broadcast Call

This is interoperability test result of Broadcast Call.

Test sample	SU	Condition	Result
NX-1300D	KENWOOD NX-3320	Broadcast Call interoperability has been confirmed.	OK
	KENWOOD TK-D340	Broadcast Call interoperability has been confirmed.	OK
	Motorola DP2600	No Broadcast Call function	N/A
	Hytera PD565	No Broadcast Call function	N/A

3.2.4. All call

All Call interoperability has been confirmed as all works fine.

*: Kenwood should be disable Call Interrupt Decode to communicate with MotoTRBO.

3.2.5. Paging Call

This is interoperability test result of Paging Call. The function called Call Alert in Motorola and Alert Call in Hytera, is the same one.

Test sample	SU	Condition	Result
NX-1300D	KENWOOD NX-3320	Blink Yellow LED and sound alert tone.	OK
	KENWOOD TK-D340	Blink red LED and sound alert tone.	OK
	Motorola DP2600	Blink red LED and sound alert tone.	OK
	Hytera PD565	Light red LED and sound alert tone.	OK

3.2.6. Emergency

This is interoperability test result of Emergency. Motorola and Hytera have a same function.

Test sample	SU	Condition	Result
NX-1300D	KENWOOD NX-3320	Emergency interoperability has been confirmed.	OK
	KENWOOD TK-D340	Emergency interoperability has been confirmed.	OK
	Motorola DP2600	Emergency alarm works.	OK
	Hytera PD565	Emergency alarm works.	OK

3.2.7. Lone Worker

This is interoperability test result of Lone Worker.

Test sample	SU	Condition	Result
NX-1300D	KENWOOD NX-3320	Lone worker function works.	OK
	KENWOOD TK-D340	Lone worker function works.	OK
	Motorola DP2600	It receives as Emergency Alarm instead of Lone worker.	No
	Hytera PD565	No Lone Worker function. It receives as Emergency Alarm instead of Lone worker.	No

3.2.8. Radio check

Radio Check interoperability has been confirmed as all works fine.

3.2.9. Stun / Revive

Stun / Revive interoperability has been confirmed as all works fine. The function called Radio Enable / Disable in Motorola and Hytera is the same one.

3.2.10. Remote Monitor

Remote Monitor interoperability has been confirmed as all works fine.

3 DMR Feature

3.2 DMR Conventional

3.2.11. PTT ID and Aliasing

This is interoperability test result of PTT ID and Aliasing in Motorola. Kenwood and Hytera have this function but no name.

Test sample	SU	Condition	Result
NX-1300D	KENWOOD NX-3320	Display received Unit ID number.	OK
	KENWOOD TK-D340	No display model can only TX.	TX
	Motorola DP2600	Display received Unit ID number.	OK
	Hytera PD565	Display received Unit ID number.	OK

3.2.12. Enhanced Encryption

This is interoperability test result of Enhanced Encryption. The function called Privacy Enhanced in Motorola and Encrypt Full in Hytera is the same one.

Test sample	SU	Condition	Result
NX-1300D	KENWOOD NX-3320	Enhanced Encryption interoperability has been confirmed. *1	OK
	KENWOOD TK-D340	No enhanced Encryption Function. *2	N/A
	Motorola DP2600	Not confirmed.	N/A
	Hytera PD565	Enhanced Encryption interoperability has been confirmed.	OK

*1: This function required Radio Feature License KWD-3502EE.

*2:TK-D340 does not have Enhanced Encryption function.

3.2.13. Call Interruption

This is interoperability test result of Call Interruption.

Test sample	SU	Condition	Result
NX-1300D	KENWOOD NX-3320	Call Interruption interoperability has been confirmed.	OK
	KENWOOD TK-D340	Call Interruption interoperability has been confirmed.	OK
	Motorola DP2600	Call Interruption is not compatible.	No
	Hytera PD565	Call Interruption is not compatible.	No

MotoTRBO cannot be communicated to Group and Individual Call with Kenwood that is enable Call Interrupt Decode.

Priority Interrupt called Hytera, cannot be used in conventional mode, only in Trunking mode.

3.2.14. Short Data Message (SDM)

This is interoperability test result of Short Data Message. The function called Message in Motorola and Hytera is the same one.

Test sample	SU	Condition	Result
NX-1300D	KENWOOD NX-3320	SDM interoperability has been confirmed.	OK
	KENWOOD TK-D340	No display model can only TX.	TX
	Motorola DP2600	SDM interoperability has been confirmed.	OK
	Hytera PD565	SDM interoperability has been confirmed.	OK

3.2.15. Mixed

This is interoperability test result of Mixed.

Test sample	SU	Condition	Result
NX-1300D	KENWOOD NX-3320	Mixed Mode interoperability has been confirmed.	OK
	KENWOOD TK-D340	Mixed Mode interoperability has been confirmed.	OK
	Motorola DP2600	No Mixed Mode function	N/A
	Hytera PD565	No Mixed Mode function	N/A

4. Analog Feature

4.1. Test Sample

- ◆ DMR Radio NX-1300N
 - Firmware Version D1.00.00
 - KPG-D6 Version V1.00

- ◆ DMR Radio NX-3320
 - Firmware Version K3.00.00
 - KPG-D3 Version v3.00

- ◆ DMR Radio TK-D340
 - Firmware Version 1.40.00
 - KPG-166D Version v2.32

- ◆ NXDN Radio NX-340
 - Firmware Version V3.09.00
 - KPG-169D Version V3.03

- ◆ Analog Radio TK-3312
 - Firmware Version V2.38.00
 - KPG-134D Version V2.32



4.2. FleetSync

FleetSync is a generic term for data communication method with MSK modulation developed by Kenwood. It is possible to conduct a selective voice call, text data transmission and GPS data transmission. Competitors does not have this function.

We checked only latest models as follow function;

- Selcall
- Paging Call
- PTT ID
- Talk back
- Status Message
- Short Message
- Long Message
- Own Fleet ID
- Stun/Kill

4 Analog Feature

4.3 MDC1200

Summarize interoperability test result as the list. Test was done TX and RX.

Model Name	NX-3320	TK-D340	NX-340	TK-3312
Selcall	OK	OK	OK	OK
Paging Call	OK	OK	OK	OK
PTT ID	OK	TX *1	TX *1	OK
Talk back	OK	N/A *2	N/A *2	N/A *2
Status Message	OK	TX *1	TX *1	OK
Short Message	OK	N/A *2	N/A *2	N/A *2
Long Message	OK	N/A *2	N/A *2	N/A *2
OWN Fleet ID	OK	TX *1	TX*1	OK
Stun/Kill	OK	RX	RX	OK

*1: TK-D340 and NX-340 do not have a display. Only TX function is tested.

*2: TK-D340, NX-340 and TK-3312 do not have Talk back, Short Message and Long Message function.

4.3. MDC1200

We checked as follow function;

- Selcall
- Call Alert
- PTT ID
- PTT ID with QT/DQT
- Radio Check
- Radio Inhibit / Uninhibit
- ID (OWN)
- ID (Group)

Summarize interoperability test result as the list. Test was done TX and RX.

Model Name	NX-3320	TK-3312
Firmware Version	K3.00.00	V2.38.00
FPU Version	KPG-D3 3.00	KPG-134D V2.32
Call Alert	OK	OK
PTT ID	OK	OK
PTT ID with QT/DQT	OK	OK
Radio Inhibit/Uninhibit	OK	N/A
ID (OWN)	OK	OK
ID (Group)	OK	OK

TK-D340 and NX-340 does not have MDC-1200 Feature.