Version 1.0
October 2022

NXDN™

IC-F5130D
IC-F6130D

PRODUCT GUIDE

PREFACE

This product guide is made to promote our new products, the IC-F5130D/IC-F6130D series transceivers. The new product's technology components are described in this document, and you will understand the target users, built-in functions, and sales points of these transceivers. This product guide's target users are dealer sales staff members who are going to sell these transceivers for the first time and have already sold Icom NXDN™ products.

Icom hopes this product guide will help you to promote sales of the IC-F5130D/IC-F6130D series transceivers.

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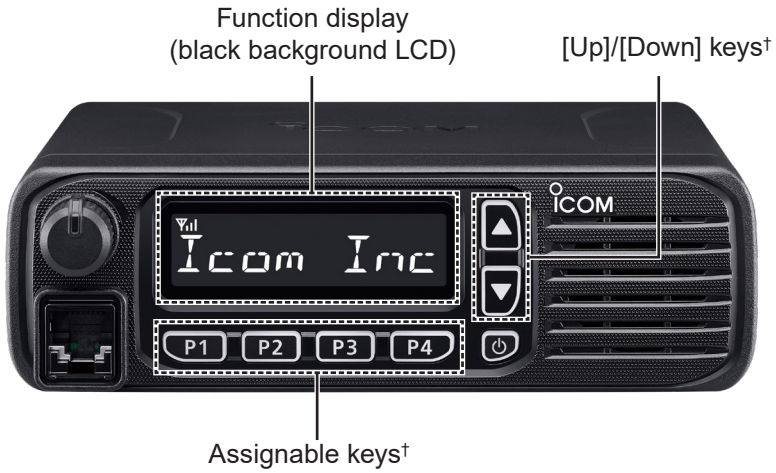
SECTION 1 PRODUCT OUTLINE

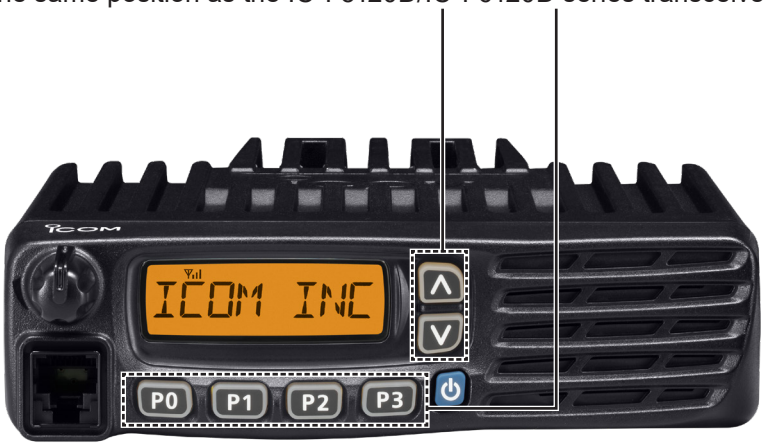
■ ABOUT THE IC-F5130D/IC-F6130D SERIES TRANSCEIVERS

The IC-F5130D/IC-F6130D series transceivers are the land mobile transceivers successors to the IC-F5120D/IC-F6120D series transceivers.
These transceivers can be easily operated by the four assignable keys and [Up]/[Down] keys, the same as the IC-F5120D/IC-F6120D series transceivers. Therefore, you can operate these transceivers similar to the IC-F5120D/IC-F6120D series transceivers.
In addtion, the IC-F5130D/IC-F6130D series transceivers install a new LCD that is 27 % larger than the IC-F5120D/IC-F6120D series transceivers. And black background type is applied to the new LCD, allowing you higher visibility even under direct sunlight and a nighttime operation.



IC-F5130D/IC-F6130D series front panel

†The IC-F5130D/IC-F6130D series transceivers' keys are located at the same position as the IC-F5120D/IC-F6120D series transceiver.



IC-F5120D/IC-F6120D series front panel
(previous model)

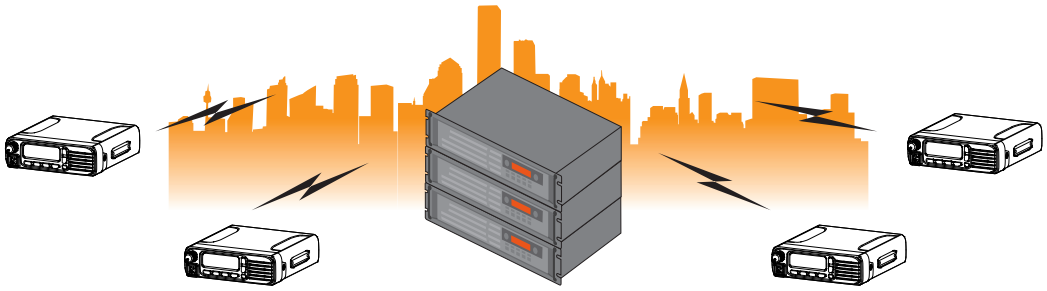
■ SELLING POINTS

• OPERATING MODES

The IC-F5130D/IC-F6130D series transceivers have both digital and analog modes enabling communication compatibility with other land mobile transceivers.

• USABLE IN A SINGLE-SITE TRUNKING SYSTEM

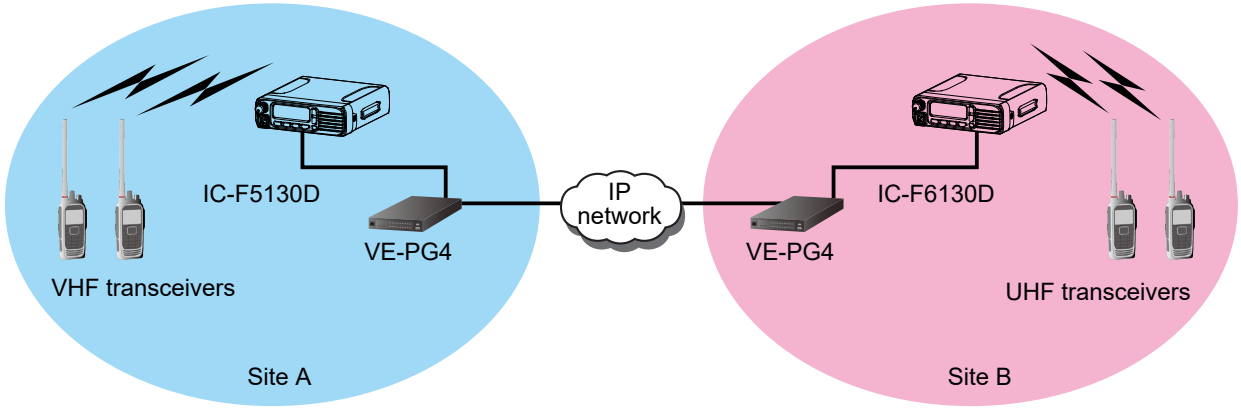
The IC-F5130D/IC-F6130D series transceivers can be used in a single-site trunking system. An activation key for use in a single-site trunking system is not required.



Usable in a single-site trunking system

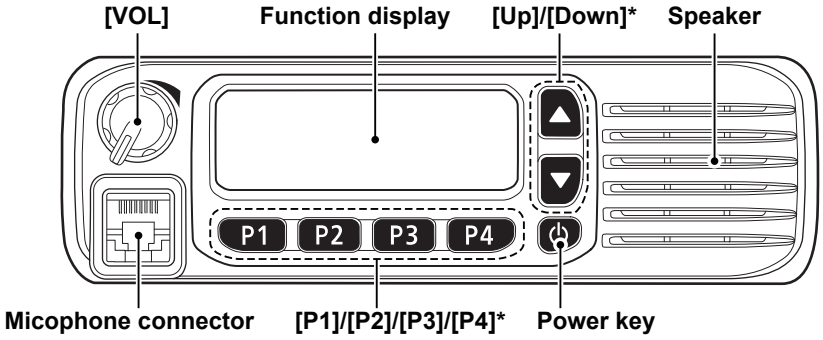
• CONSTRUCTING SYSTEMS USING THE VE-PG4

The IC-F5130D/IC-F6130D series transceivers support the VE-PG4 and can be used together in various communication systems.
For example, a system with different frequency band (VHF and UHF) transceivers in other sites can communicate together through the VE-PG4, as shown in the illustration below.

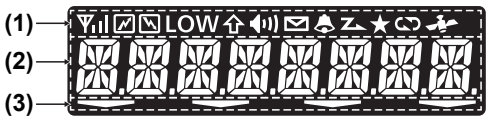


■ FRONT PANEL DESCRIPTION

*You can assign the desired functions to these keys using the optional CS-F5130D programming software. (User Interface > Key Settings)



■ FUNCTION DISPLAY DESCRIPTION



(1) Icon area
Displays the icons, as shown below.

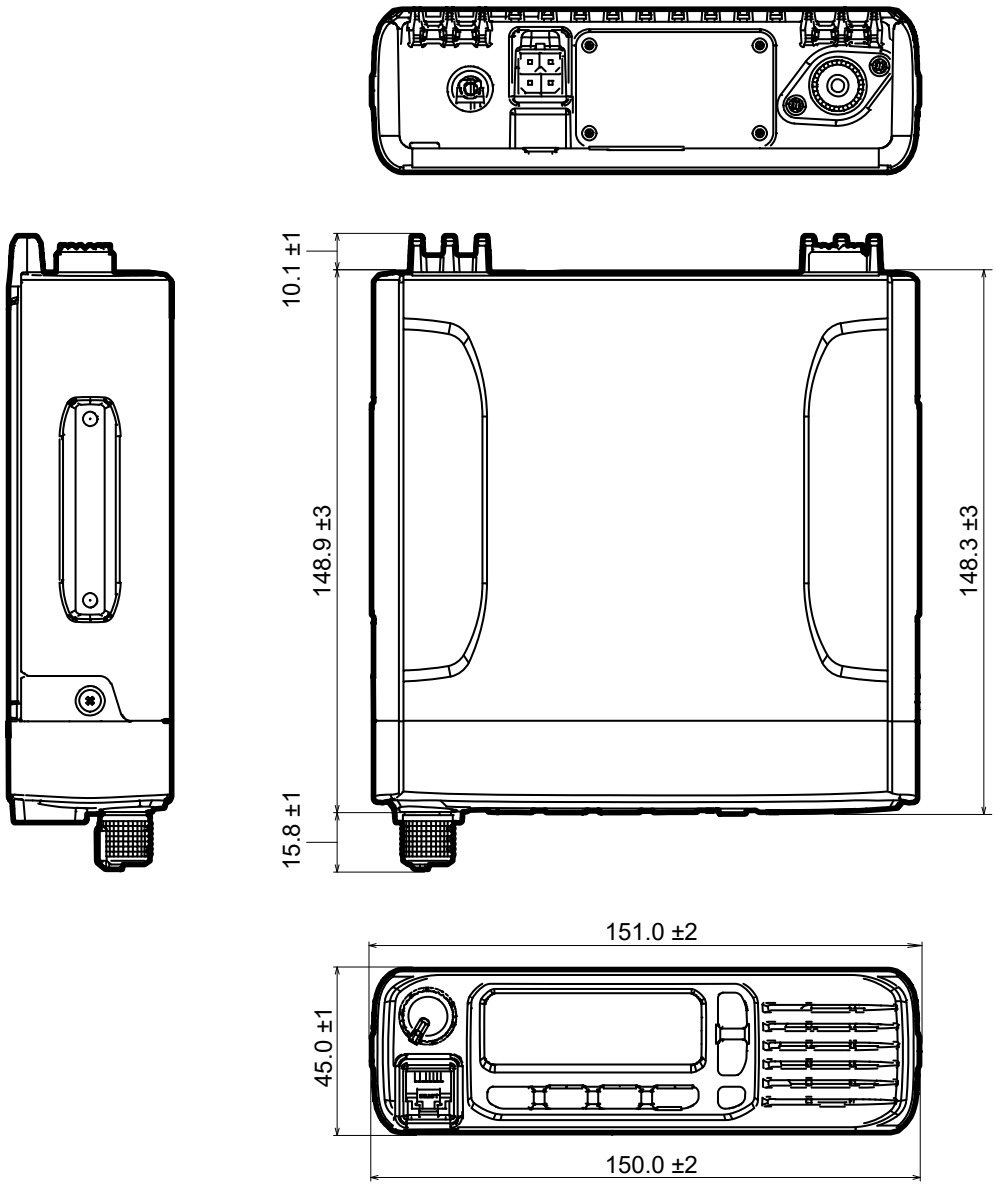
Icon	Description
	Displays the relative receive signal strength level.
	Displayed while transmitting a signal.
	Displayed while the channel is in busy (receiving a signal).
LOW	Displayed while a low output power is selected.
	Displayed when the Shift function is ON. The user can use an Assignable key's secondary function in the Shift mode.
	Displayed while the channel is in the audible (unmuted) mode.
	Blinks after messages (Message or Status Message) have been received.

Icon	Description
	Displayed when a matching signal is received, depending on the presetting.
	• Blinks while scanning. • Displayed when a scan is paused.
	Displayed while a scan target channel is selected.
	• Displayed while the Encryption function is ON. • Blinks while decoding an encrypted signal.
	• Displayed while valid position data is received. • Blinks while searching for satellites.

(2) Alphanumeric readout
Displays channel text, channel number or messages.
Display digit: 8 digits

(3) Dealer assignable key icons
Displayed when you push the Assignable keys [P1], [P2], [P3], and [P4] to use the function assigned to them. Assign the functions using the CS-F5130D (User Interface > Key Settings).

■ DIMENSIONS



(Unit: mm)

■ TARGET USERS

Warehouse

Taxi companies

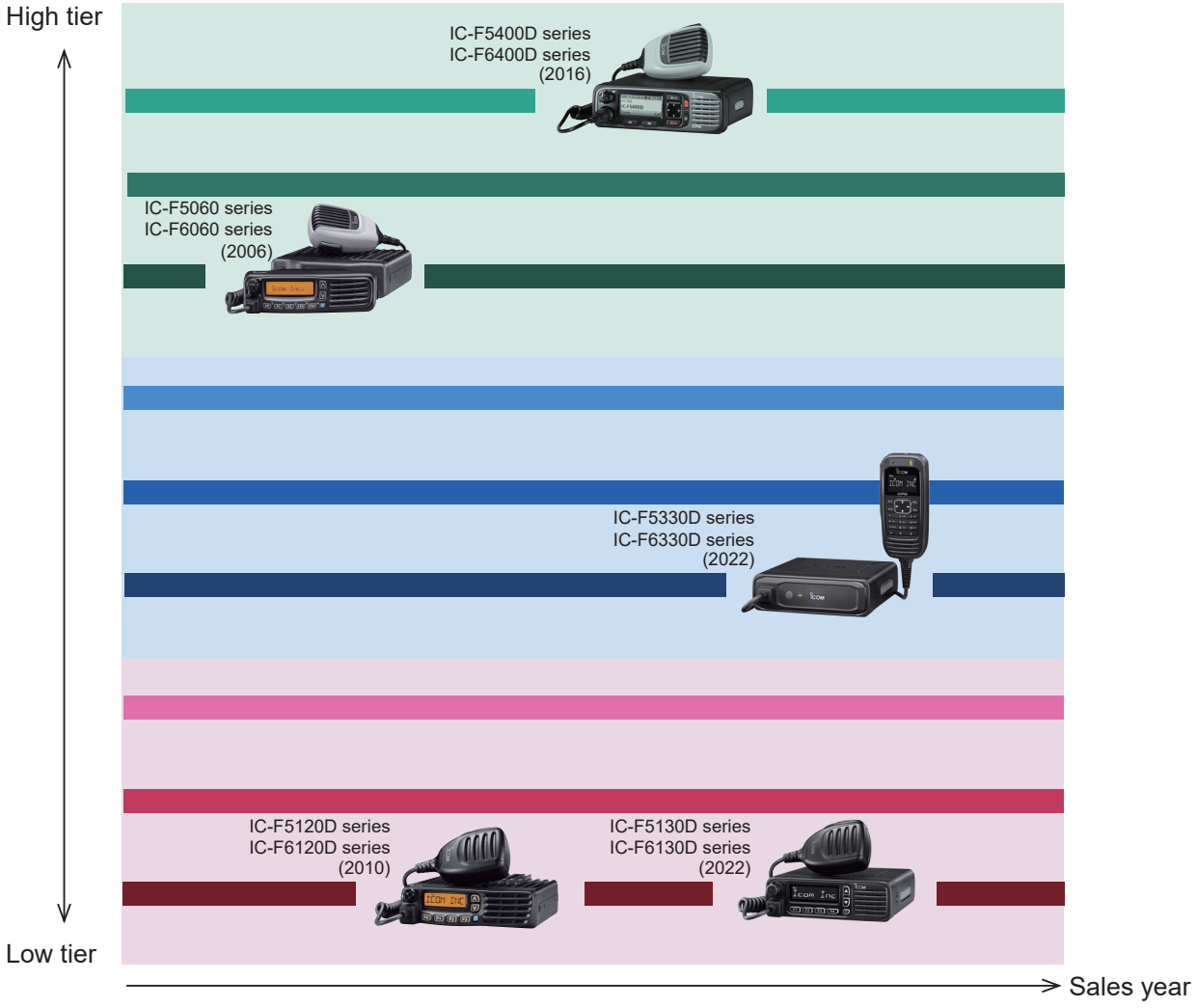
Security service

B & I markets
(Transport, and so on)

The IC-F5130D/IC-F6130D series transceivers are suitable for use cases, as shown below.
• In case the microphone installation space is narrow.
• For operations where keys are not used so often.

SECTION 2 PRODUCT RANGE

The IC-F5130D/IC-F6130D series transceivers are positioned as the low-tier land mobile transceivers, as shown on the following positioning map.



SECTION 3 COMPARISON WITH EXISTING MODELS

■ FUNCTION COMPARISON

*1Hereinafter called microSD card.
*2The total numbers of Individual ID and Talkgroup ID entries.
*3Only for IC-F5400DT/IC-F6400DT

MODEL / ITEMS	IC-F5130D IC-F6130D SERIES	IC-F5120D IC-F6120D SERIES	IC-F5060D IC-F6060D SERIES	IC-F5400D IC-F6400D SERIES
OPERATION TYPE				
Single-site conventional	YES	YES	YES	YES
Multi-site conventional	YES	YES	YES	YES
NXDN™ Type-D single-site trunking	YES	YES	YES	OPTIONAL
NXDN™ Type-D multi-site trunking	NONE	NONE	YES	OPTIONAL
Analog mode	YES	YES	YES	YES
6.25 kHz digital mode	YES	YES	YES	YES
12.5 kHz digital mode	NONE	NONE	NONE	YES
Analog/Digital mix mode	NONE	YES	YES	YES
Activation key required for analog 25 kHz bandwidth operation (For USA version)	Not supported	Not supported	Not supported	Supported
Multiple languages	NONE	NONE	NONE	YES*3
GPS position data TX/RX	YES	YES	YES	YES
VOICE FUNCTIONS				
Voice Announcement	NONE	NONE	NONE	YES
Voice Recording/Playback function	NONE	NONE	NONE	YES (A microSD or microSDHC*1 card is required.)
Active Noise Cancelling (ANC)	NONE	NONE	NONE	YES
TX audio Equalizer	NONE	NONE	NONE	YES
RX audio Equalizer	NONE	NONE	NONE	YES
DIGITAL FUNCTIONS				
Individual ID List	YES (Maximum 500 ID*2)	YES (Maximum 500 ID)	YES (Maximum 500 ID)	YES (Maximum 1,000 ID*2)
Talkgroup ID List	YES (Maximum 500 ID*2)	YES (Maximum 500 ID)	YES (Maximum 500 ID)	YES (Maximum 1,000 ID*2)
Log for Individual Call	YES	YES	YES	YES
RX Group	YES	NONE	NONE	YES
Block Decode	YES	YES	YES	YES
RAN Code	YES	YES	YES	YES
Lone Worker	YES	YES	YES	YES
Radio Check	RX ONLY	RX ONLY	YES	YES
Stun/Kill/Revive	RX ONLY	RX ONLY	YES	YES
Remote Monitor	RX ONLY	RX ONLY	YES	YES
Call Alert	YES	YES	YES	YES
Emergency	YES	YES	YES	YES
Short Data Message (SDM)	YES	YES	YES	YES
Status Message	YES	YES	YES	YES

Continued on the next page…

■ FUNCTION COMPARISON (CONTINUED)

*1Some of the MDC1200 functions may not be used.
*2An optional RMK-3 and an OPC-607, OPC-608, or OPC-609 separation cable are required.
*3An optional RMK-7 and an OPC-2364, OPC-2365, OPC-2366, or OPC-2367 separation cable are required.
*4An optional RMK-5 and an OPC-2373 or OPC-2374 separation cable are required.
*5An optional microphone with the Emergency key is required.

MODEL / ITEMS	IC-F5130D IC-F6130D SERIES	IC-F5120D IC-F6120D SERIES	IC-F5060D IC-F6060D SERIES	IC-F5400D IC-F6400D SERIES
DIGITAL FUNCTIONS				
Digital voice scrambler	YES	YES	YES	YES
DES encryption	NONE	NONE	NONE	YES (4 keys: Default) (64 keys: Optional)
256 bit AES encryption	NONE	NONE	NONE	YES (Optional)
Transparent data mode	NONE	NONE	NONE	YES
OAA (Over-the-Air-Alias)	YES	NONE	NONE	YES
OTAP (Over-The-Air-Programming)	NONE	NONE	NONE	YES
OTAR (Over-The-Air-Re-keying)	NONE	NONE	NONE	YES
ANALOG FUNCTIONS				
Analog voice scrambler	NONE	NONE	YES	YES
CTCSS	YES	YES	YES	YES
DTCS	YES	YES	YES	YES
2 TONE	YES	YES	YES	YES
5 TONE	YES	YES	YES	YES
DTMF	YES	YES	YES	YES
MDC1200	YES*1	YES*1	YES	YES
LTR™ trunking	NONE	NONE	YES	YES
HARDWARE				
Built-in GPS receiver	NONE (User supplied)	NONE (User supplied)	NONE (User supplied)	YES (Optional UX-241 is required)
MicroSD memory card slot	NONE	NONE	NONE	YES
USB connector	NONE	NONE	NONE	YES
Dual head controller	NONE	NONE	YES*2 (Optional)	YES*3 (Optional)
COMMANDMIC™	NONE	NONE	NONE	YES*4 (Optional)
Dedicated Emergency key	YES*5	NONE	NONE	YES

■ SPECIFICATION COMPARISON FOR THE IC-F5130D SERIES TRANSCEIVER

*Depending on version, *[1]TIA-603, *[2]EN300 086, *[3]Optional license (ISL-CHEX) is required.,
*[4]7-Segment display type, *[5]1% BER

ITEMS \ MODEL		IC-F5130D SERIES	IC-F5120D SERIES	IC-F5060D SERIES	IC-F5400D SERIES
GENERAL					
Frequency coverage (MHz)		136~174	136~174	136~174	136~174
Number of channels		128 (8 zones)	128 (8 zones)	512 (128 zones)	1024 (128 zones) 4000 (128 zones)*[3] 99*[4]
Channel spacing (kHz)		6.25, 12.5, 25*	6.25, 12.5, 25	12.5/25*, 15/30*, 6.25	6.25, 12.5, 12.5/15, 20, 25*
Type of emission		16K0F3E*, 11K0F3E*[1], 14K0F3E*[2], 8K50F3E*[2], 4K00F1E/F1D	16K0F3E, 8K50F3E, 4K00F1E/F1D	16K0F3E*, 11K0F3E, 8K10F1E/F1D, 4K00F1E/F1D	16K0F3E*, 11K0F3E, 14K0F3E, 8K50F3E, 8K30F1E/F1D, 4K00F1E/F1D
TX current drain	**50 W version**	14 A (maximum)	10 A	14 A	9 A (typical)
	25 W version	8 A (maximum)	5 A	7 A	5 A (typical)
RX current drain	**standby**	300 mA (maximum)	300 mA	300 mA	370 mA (typical)
	Maximum audio	1.5 A (maximum)	1.2 A	1.2 A	0.9 A (typical) (Internal speaker)
Dimensions (projections not included: W×H×D)		150 × 45 × 151.8 mm: 5.9 × 1.8 × 6.0 in	150 × 40 × 167.5 mm: 5.91 × 1.57 × 6.59 in*[1] 150 × 40 × 117.5 mm: 5.91 × 1.57 × 4.63 in*[2]	160 × 45 × 150 mm: 6.3 × 1.77 × 5.91 in	174 × 55 × 150 mm: 6.9 × 2.2 × 5.9 in
Weight		1.2 kg: 2.6 lb	1.1 kg: 2.4 lb*[1] 0.8 kg: 1.8 lb*[2]	1.3 kg: 2.9 lb	1.5 kg: 3.3 lb
TRANSMITTER					
RF output power	**50 W version**	50 W, 25 W, 5 W	50 W, 25 W, 5 W	50 W, 25 W, 5 W	50 W, 25 W, 5 W*
	25 W version	25 W, 10 W, 5.8 W	25 W, 10 W, 2.5 W	25 W, 10 W, 2.5 W*	25 W, 10 W, 5.8 W*
Spurious emissions		80 dB (typical)*[1] 0.08 µW (typ.) (≤ 1 GHz)*[2] 0.03 µW (typ.) (> 1 GHz)*[2]	70 dB (minimum)	75 dB (typical)	90dB (typical)*[1] 0.25 µW (≤ 1 GHz)*[2] 1.0 µW (> 1 GHz)*[2]
Frequency stability		± 1.0 ppm	± 1.0 ppm	± 1.0 ppm	± 1.0 ppm
Audio harmonic distortion (40% deviation)		0.7% (typical)	3% (typical)	3% (typical)	0.5% (typical)
FM hum and noise	**Wide**	82 dB (typical)	46 dB (typical)	45 dB (typical)	54 dB (typical)
	Narrow	77 dB (typical)	40 dB (typical)	40 dB (typical)	54 dB (typical)
Digital FSK error		1.8% (typical)	–	5% (maximum)	1% (typical)

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■ SPECIFICATION COMPARISON FOR THE IC-F5130D SERIES TRANSCEIVER (CONTINUED)

*Depending on version, *[1]TIA-603, *[2]EN300 086, *[3]Optional license (ISL-CHEX) is required., *[4]7-Segment display type, *[5]1% BER, *[6]At 5% distortion, 8 Ω load, *[7]At 5% distortion, 4 Ω load, *[8]At 5% distortion, 12 Ω load

ITEMS \ MODEL			IC-F5130D SERIES	IC-F5120D SERIES	IC-F5060D SERIES	IC-F5400D SERIES
RECEIVER						
Sensitivity	12 dB SINAD	W	0.25 (typical)	0.25 µV (typical)	0.25 µV (typical)	0.22 µV (typical)
		N	0.22 µV (typical)	–	–	–
	20 dB SINAD	W	–4.9 dBµV emf (typical)	–	–	–4.0 dBµV emf (typical)
		M	–4.5 dBµV emf (typical)	–	–	–
		N	–1.8 dBµV emf (typical)	–	–	–4.0 dBµV emf (typical)
	5% BER	6.25	–4.6 dBµV emf (typical)*[5]	0.18 µV (typical)	0.20 µV (typical)	–6.0 dBµV emf (typical)*[5] (6.25/12.5 kHz)
		12.5	–	–	–	–5.0 dBµV emf (typical)*[5]
Adjacent channel selectivity	Analog	W	83 dB (typical)	80 dB (typical)	85 dB (typical)	75 dB (typical)
		M	82 dB (typical)*[2]	–	–	–
		N	58 dB (typical)*[1] 80 dB (typical)*[2]	70 dB (typical)	75 dB (typical)	72 dB (typical)
	Digital	6.25	73 dB (typical)	65 dB (typical)	–	65 dB (typical)
		12.5	–	–	–	68 dB (typical)
Spurious response			80 dB (typical)	70 dB (minimum)	90 dB (typical)	85 dB (typical)
Intermodulation rejection	Analog		76 dB (typical)*[1] 69 dB (typical)*[2]	75 dB (typical)	77 dB (typical)	78 dB (typical)*[1] 70 dB (typical)*[2]
	Digital	6.25	74 dBµV emf (typical)	70 dBµV emf (typical)	–	70 dB (typical)
		12.5	–	–	–	70 dB (typical)
AF output power	Internal SP		–	–	–	4.0 W (typical)*[8]
	External SP		4.0 W (typical)*[7]	4.0 W (typical)*[7]	4.0 W (typical)*[7]	4.0 W (typical)*[6]

■ SPECIFICATION COMPARISON FOR THE IC-F6130D SERIES TRANSCEIVER

*Depending on version, *[1]TIA-603, *[2]EN300 086, *[3]Optional license (ISL-CHEX) is required.,
*[4]7-Segment display type, *[5]1% BER

ITEMS \ MODEL		IC-F6130D SERIES	IC-F6120D SERIES	IC-F6060D SERIES	IC-F6400D SERIES
GENERAL					
Frequency coverage* (MHz)		400~520	350~400 400~470 450~512	400~470 450~512 350~400 (Non - FCC)	380~470 450~512
Number of channels		128 (8 zones)	128 (8 zones)	512 (128 zones)	1024 (128 zones) 4000 (128 zones)*[3] 99*[4]
Channel spacing (kHz)		6.25, 12.5, 25	6.25, 12.5, 25	12.5/25*, 15/30*, 6.25	6.25, 12.5, 12.5/15, 20, 25
Type of emission		16K0F3E*, 11K0F3E*[1], 14K0F3E*[2], 8K50F3E*[2], 4K00F1E/F1D	16K0F3E, 8K50F3E, 4K00F1E/F1D	16K0F3E*, 11K0F3E, 8K10F1E/F1D, 4K00F1E/F1D	16K0F3E*, 11K0F3E, 14K0F3E, 8K50F3E, 8K30F1E/F1D, 4K00F1E/F1D
TX current drain	**45 W version**	14 A (maximum)	11 A	14 A	8.8 A (typical)
	25 W version	8 A (maximum)	5 A	7 A	5 A (typical)
RX current drain	**standby**	300 mA (maximum)	300 mA	300 mA	270 mA (typical)
	Maximum audio	1.5 A (maximum)	1.2 A	1.2 A	0.8 A (typical) (Internal speaker)
Dimensions (projections not included: W×H×D)		150 × 45 × 151.8 mm: 5.9 × 1.8 × 6.0 in	150 × 40 × 167.5 mm: 5.91 × 1.57 × 6.59 in*[1] 150 × 40 × 117.5 mm: 5.91 × 1.57 × 4.63 in*[2]	160 × 45 × 150 mm: 6.3 × 1.77 × 5.91 in	174 × 55 × 150 mm: 6.9 × 2.2 × 5.9 in
Weight		1.2 kg; 2.6 lb	1.1 kg: 2.4 lb*[1] 0.8 kg: 1.8 lb*[2]	1.3 kg: 2.9 lb	1.5 kg: 3.3 lb
TRANSMITTER					
RF output power	**45 W version**	45 W, 25 W, 4.5 W	45 W, 25 W, 5 W	40 W, 25 W, 5 W	45 W, 25 W, 4.5 W*
	25 W version	25 W, 10 W, 5.8 W	25 W, 10 W, 2.5 W	25 W, 10 W, 2.5 W*	25 W, 10 W, 5.8 W*
Spurious emissions		80 dB (typical)*[1] 0.08 µW (typ.) (≤ 1 GHz)*[2] 0.03 µW (typ.) (> 1 GHz)*[2]	70 dB (minimum)	75 dB (typical)	80dB (typical)*[1] 0.25 µW (≤ 1 GHz)*[2] 1.0 µW (> 1 GHz)*[2]
Frequency stability		± 1.0 ppm	± 1.0 ppm	± 1.0 ppm	± 1.0 ppm
Audio harmonic distortion (40% deviation)		0.8% (typical)	3% (typical)	3% (typical)	0.5% (typical)
FM hum and noise	**Wide**	76 (typical)	46 dB (typical)	45 dB (typical)	54 dB (typical)
	Narrow	70 dB (typical)	40 dB (typical)	40 dB (typical)	54 dB (typical)
Digital FSK error		1.7% (typical)	–	5% (maximum)	1% (typical)

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■ SPECIFICATION COMPARISON FOR THE IC-F6130D SERIES TRANSCEIVER (CONTINUED)

*Depending on version, *[1]TIA-603, *[2]EN300 086, *[3]Optional license (ISL-CHEX) is required.,
*[4]7-Segment display type, *[5]1% BER,*[6]At 5% distortion, 8 Ω load, *[7]At 5% distortion, 4 Ω load,
*[8]At 5% distortion, 12 Ω load

ITEMS \ MODEL			IC-F6130D SERIES	IC-F6120D SERIES	IC-F6060D SERIES	IC-F6400D SERIES
RECEIVER						
Sensitivity	12 dB SINAD		0.22 µV (typical)	0.25 µV (typical)	0.25 µV (typical)	0.25 µV (typical)
	20 dB SINAD	W	–5.0 dBµV emf (typical)	–	–	–4.0 dBµV emf (typical)
		M	–5.0 dBµV emf (typical)	–	–	–
		N	–2.0 dBµV emf (typical)	–	–	–4.0 dBµV emf (typical)
	5% BER	6.25	–5.0 dBµV emf (typical)*[5]	0.18 µV (typical)	0.20 µV (typical)	–6.0 dBµV emf (typical)*[5]
		12.5	–	–	–	–5.0 dBµV emf (typical)*[5]
Adjacent channel selectivity	Analog (W/N)	W	76 (typical)*[1,2]	75 dB (typical)	85 dB (typical)	75 dB (typical)
		M	76 dB (typical)*[2]	–	–	–
		N	58 dB (typical)*[1] 74 dB (typical)*[2]	65 dB (typical)	75 dB (typical)	72 dB (typical)
	Digital	6.25	69 dB (typical)	60 dB (typical)	–	65 dB (typical)
		12.5	–	–	–	68 dB (typical)
Spurious response			75 dB (typical)	70 dB (minimum)	90 dB (typical)	85 dB (typical)
Intermodulation rejection	Analog		74 dB (typical)*[1] 69 dB (typical)*[2]	75 dB (typical)	77 dB (typical)	75 dB (typical)*[1] 70 dB (typical)*[2]
	Digital	6.25	74 dBµV emf (typical)	70 dBµV emf (typical)	–	70 dB (typical)
		12.5	–	–	–	70 dB (typical)
AF output power	Internal SP		–	–	–	4.0 W (typical)*[8]
	External SP		4.0 W (typical)*[7]	4.0 W (typical)*[7]	4.0 W (typical)*[7]	4.0 W (typical)*[6]

SECTION 4 COMPARISON WITH COMPETITORS

■ FUNCTION COMPARISON

†Some of the MDC1200 functions may not be used.

MODEL / ITEMS	IC-F5130D IC-F6130D SERIES	XPR2500	MD612i	NX-700 NX-800
CALL TYPE				
Group Call	YES	YES	YES	YES
Individual Call	YES	YES	YES	YES
All Call	YES	YES	YES	YES
DIGITAL FUNCTIONS				
Lone Worker	YES	YES	NONE	YES
Radio Check	YES (RX only)	YES	NONE	YES
Stun/Kill/Revive	YES (RX only)	YES	YES	YES
Remote Monitor	YES (RX only)	YES	YES	NONE
Call Alert	YES	YES	NONE	YES
Emergency	YES	YES	YES	YES
Short Data Message	YES	YES	YES	YES
Status Message	YES	NONE	NONE	YES
Digital Voice Scrambler	YES	NONE	YES	YES
OAA (Over-the-Air-Alias)	YES	NONE	NONE	YES
6.25 kHz Digital Mode	YES	NONE	NONE	YES
ANALOG FUNCTIONS				
CTCSS	YES	NONE	YES	YES
DTCS	YES	NONE	YES	YES
2-Tone	YES	NONE	NONE	YES
5-Tone	YES	YES	NONE	YES
DTMF	YES	YES	NONE	YES
MDC1200	YES†	YES	NONE	NONE
HARDWARE				
Built-in GPS receiver	NONE (User supplied)	NONE	NONE (User supplied)	NONE (User supplied)

■ SPECIFICATION COMPARISON FOR THE IC-F5130D SERIES TRANSCEIVER

ITEMS \ MODEL	IC-F5130D SERIES	XPR2500	MD612i	NX-700
GENERAL				
Frequency coverage (MHz)	136~174	136~174	136~174	136~174
Number of channels	128	128	48	512
Dimensions (W × H × D)	150 × 45 × 151.8 mm (5.9 × 1.8 × 6.0 in)	169 × 44 × 134 mm (6.7 × 1.7 × 5.3 in)	164 × 43 × 150 mm (6.5 × 1.7 × 5.9 in)	160 × 45 × 157 mm (6.3 × 1.8 × 6.2 in)
Weight	1.2 kg (2.6 lb)	1.3 kg (2.9 lb)	1.1 kg (2.4 lb)	1.4 kg (3.1 lb)
Operating temperature range	–30°C ~ 60°C (–22°F ~ 140°F)	–30°C ~ 60°C (–22°F ~ 140°F)	–30°C ~ 60°C (–22°F ~ 140°F)	–30°C ~ 60°C (–22°F ~ 140°F)
TRANSMITTER				
Output power (High power)	50 W	45 W	50 W	50 W
Adjacent channel power	• **Analog** **[USA] and [EXP] (50 W version)** 63 dB (typical) @ 12.5 kHz 84 dB (typical) @ 25 kHz **[EXP] (25 W version)** 70 dB (typical) @ 12.5 kHz 82 dB (typical) @ 20 kHz 84 dB (typical) @ 25 kHz • **Digital** 68 dB (typical)	60 dB @ 12.5 kHz 70 dB @ 25 kHz	60 dB @ 12.5 kHz 70 dB @ 25 kHz	UNKNOWN
Audio harmonic distortion	0.7% (typical)	3%	3%	3%
FM hum and noise	77 dB (typical) @ 12.5 kHz 82 dB (typical) @ 25 kHz	40 dB @ 12.5 kHz 45 dB @ 25 kHz	40 dB @ 12.5 kHz 45 dB @ 25 kHz	45 dB @ 12.5 kHz 50 dB @ 25 kHz

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■ SPECIFICATION COMPARISON FOR THE IC-F5130D SERIES TRANSCEIVER (CONTINUED)

*1TIA-603, *2ETSI

ITEMS \ MODEL	IC-F5130D SERIES	XPR2500	MD612i	NX-700
RECEIVER				
Sensitivity	• **Analog** **[USA] and [EXP] (50 W ver.)** 0.25/0.22 µV (typical) (25/12.5 kHz) @ 12 dB SINAD **[EXP] (25 W ver.)** 0.28/0.30/0.41 µV emf (typical) (25/20/12.5 kHz) @ 20 dB SINAD • **Digital** 0.29 µV (typical) @ 1% BER	• **Analog** 0.22 µV (typical) @ 12 dB SINAD • **Digital** 0.19 µV (typical) @ 5% BER	• **Analog** 0.22 µV (typical) @ 12 dB SINAD 0.4 µV (typical) @ 20 dB SINAD • **Digital** 0.3 µV (typical) @ 5% BER	• **Analog** 0.25 uV @ 12 dB SINAD • **Digital** **(at 3% BER)** 0.22 µV @ 12.5 kHz 0.28 µV @ 6.25 kHz
Audio power output	4.0 W (typical) (External @ 4 Ω load)	4 W (Internal) 7.5 W (External @ 8 Ω load) 13 W (External @ 4 Ω load)	6 W (Internal @ 16 Ω load) 12 W (External @ 8 Ω load)	4 W (@ 4 Ω load)
Hum and noise	52 dB (typical) @ 12.5 kHz 62 dB (typical) @ 25 kHz	40 dB @ 12.5 kHz 45 dB @ 25 kHz	40 dB @ 12.5 kHz 45 dB @ 25 kHz	UNKNOWN
Adjacent channel selectivity	• **Analog** **[USA] and [EXP] (50 W version)** 58 dB (typical) @ 12.5 kHz*1 83 dB (typical) @ 25 kHz*1 **[EXP] (25 W version)** 80 dB (typical) @ 12.5 kHz*2 82 dB (typical) @ 20 kHz*2 83 dB (typical) @ 25 kHz*2 • **Digital** 73 dB (typical)	50 dB @ 12.5 kHz 75 dB @ 25 kHz	60 dB @ 12.5 kHz 70 dB @ 25 kHz	70 dB @ 12.5 kHz 80 dB @ 25 kHz
Intermodulation	**[USA] and [EXP] (50 W version)** 76 dB (typical)*1 **[EXP] (25 W version)** 69 dB (typical)*2	75 dB	70 dB*1 65 dB*2	75 dB
Spurious response rejection	80 dB (typical)	75 dB	70 dB	90 dB

■ SPECIFICATION COMPARISON FOR THE IC-F6130D SERIES TRANSCEIVER

ITEMS \ MODEL	IC-F6130D SERIES	XPR2500	MD612i	NX-800
GENERAL				
Frequency coverage (MHz)	400~520	403~470	400~470	450~520 400~470
Number of channels	128	128	48	512
Dimensions (W × H × D)	150 × 45 × 151.8 mm (5.9 × 1.8 × 6.0 in)	169 × 44 × 134 mm (6.7 × 1.7 × 5.3 in)	164 × 43 × 150 mm (6.5 × 1.7 × 5.9 in)	160 × 45 × 157 mm (6.3 × 1.8 × 6.2 in)
Weight	1.2 kg (2.6 lb)	1.3 kg (2.9 lb)	1.1 kg (2.4 lb)	1.4 kg (3.1 lb)
Operating temperature range	–30°C ~ 60°C (–22°F ~ 140°F)	–30°C ~ 60°C (–22°F ~ 140°F)	–30°C ~ 60°C (–22°F ~ 140°F)	–30°C ~ 60°C (–22°F ~ 140°F)
TRANSMITTER				
Output power (High power)	45 W	40 W	45 W	45 W
Adjacent channel power	**[USA] and [EXP] (45 W version)** **• Analog** 63 dB (typical) @ 12.5 kHz 76 dB (typical) @ 25 kHz **• Digital** 68 dB (typical) **[EXP] (25 W version)** **• Analog** 69 dB (typical) @ 12.5 kHz 75 dB (typical) @ 20 kHz 75 dB (typical) @ 25 kHz **• Digital** 68 dB (typical)	60 dB @ 12.5 kHz 70 dB @ 25 kHz	60 dB @ 12.5 kHz 70 dB @ 25 kHz	UNKNOWN
Audio harmonic distortion	0.8% (typical)	3%	3%	3%
FM hum and noise	70 dB (typical) @ 12.5 kHz 76 dB (typical) @ 25 kHz	40 dB @ 12.5 kHz 45 dB @ 25 kHz	40 dB @ 12.5 kHz 45 dB @ 25 kHz	45 dB @ 12.5 kHz 50 dB @ 25 kHz

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■ SPECIFICATION COMPARISON FOR THE IC-F6130D SERIES TRANSCEIVER (CONTINUED)

*1TIA-603, *2ETSI

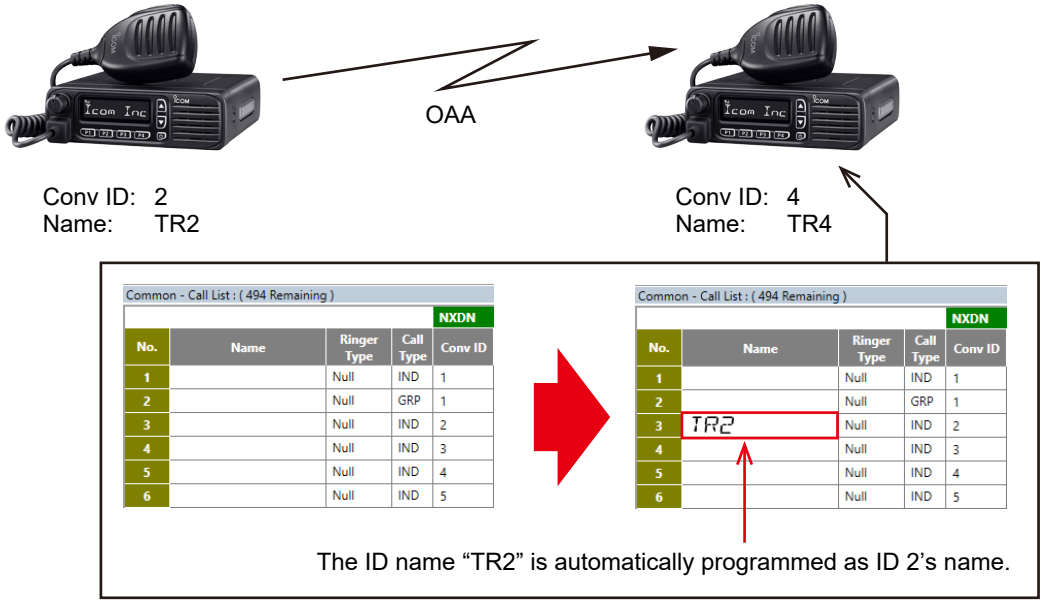
ITEMS \ MODEL	IC-F6130D SERIES	XPR2500	MD612i	NX-800
RECEIVER				
Sensitivity	• **Analog** **[USA] and [EXP] (45 W version)** 0.22 µV (typical) (25/12.5 kHz) @ 12 dB SINAD **[EXP] (25 W version)** 0.28/0.28/0.40 µV emf (typical) (25/20/12.5 kHz) @ 20 dB SINAD • **Digital** 0.28 µV (typical) @ 1% BER	• **Analog** 0.22 µV (typical) @ 12 dB SINAD • **Digital** 0.19 µV (typical) @ 5% BER	• **Analog** 0.22 µV (typical) @ 12 dB SINAD 0.4 µV @ 20 dB SINAD • **Digital** 0.3 µV (typical) @ 5% BER	• **Analog** 0.25 uV @ 12 dB SINAD • **Digital** **(at 3% BER)** 0.28 µV @ 12.5 kHz 0.20 µV @ 6.25 kHz
Audio power output	4.0 W (typical) (External @ 4 Ω load)	4 W (Internal) 7.5 W (External @ 8 Ω load) 13 W (External @ 4 Ω load)	6 W (Internal @ 16 Ω load) 12 W (External @ 8 Ω load)	4 W (@ 4 Ω load)
Hum and noise	53 dB (typical) @ 12.5 kHz 64 dB (typical) @ 25 kHz	40 dB @ 12.5 kHz 45 dB @ 25 kHz	40 dB @ 12.5 kHz 45 dB @ 25 kHz	UNKNOWN
Adjacent channel selectivity	• **Analog** **[USA] and [EXP] (45 W version)** 58 dB (typical) @ 12.5 kHz*1 76 dB (typical) @ 25 kHz*1 **[EXP] (25 W version)** 74 dB (typical) @ 12.5 kHz*2 76 dB (typical) @ 20 kHz*2 76 dB (typical) @ 25 kHz*2 • **Digital** 69 dB (typical)	50 dB @ 12.5 kHz 70 dB @ 25 kHz	60 dB @ 12.5 kHz 70 dB @ 25 kHz	70 dB @ 12.5 kHz 80 dB @ 25 kHz
Intermodulation	**[USA] and [EXP] (45 W version)** 74 dB (typical)*1 **[EXP] (25 W version)** 69 dB (typical)*2	70 dB	70 dB*1 65 dB (ETSI)*2	70 dB
Spurious response rejection	75 dB (typical)	70 dB	70 dB	85 dB

SECTION 5 MAJOR FUNCTION INTRODUCTION

The major functions of the IC-F5130D/IC-F6130D series transceivers are described as follows.
These functions are included in the main firmware revision 1.0 or later for NXDN™ transceiver versions.

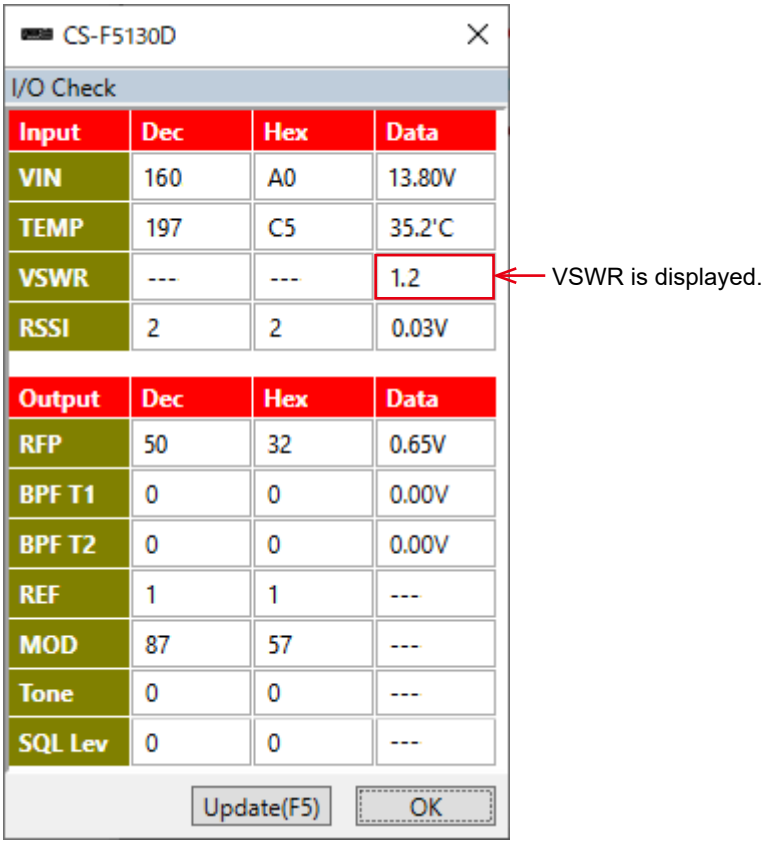
■ OAA (Over-the-Air Alias) FUNCTION

Even if the received signal from the transceivers with an ID that is not programmed into the Call List, this function can automatically display and program the caller's name with an ID. When you add new transceivers in your system, the transceivers can display the name corresponding to an Individual ID/ Talkgroup ID on the display without reentering by using this function. The name registered in the caller transceiver is updated, and when the callee transceiver receives the updated ID and name from the caller transceiver, the callee transceiver displays and registers the updated name into the Call List.



■ VSWR (Voltage Standing Wave Ratio) DETECTION FUNCTION

The IC-F5130D/IC-F6130D series transceivers can measure VSWR, which is the ratio of forward power to reflected power.
If a problem with transmitting occurs, you can detect the source of a problem from the transceiver or antenna using this function.
The optional CS-F5130D programming software is required to use this function.
The VSWR is displayed in the Data column of VSWR on the CS-F5130D's I/O Check window, as shown below.
If the VSWR value is six or less, the transceiver may have a problem. If the value is six or more, the antenna or coaxial cable may have problems.



SECTION 6 OPTIONAL ACCESSORIES

Current (as of October 2022) optional accessories available for the IC-F5130D/IC-F6130D series transceivers are shown below.

EXTERNAL SPEAKERS

- **SP-30** (Cable length: Approximately 2.6 m/8.5 ft)

- **SP-35** (Cable length: Approximately 2 m/6.6 ft)
  SP-35L (Cable length: Approximately 6 m/19.7 ft)

ADAPTER CABLES (For connecting a horn speaker, external device, and so on)

- **OPC-1939** (Cable length: Approximate 200 mm/7.9 in, D-Sub 15-pin cable)

- **OPC-2078** (Cable length: Approximate 360 mm/14.1 in, D-Sub 25-pin cable)

POWER SUPPLY CABLES (Same as supplied power cable)

- **OPC-2478** (For 50 W/45 W versions (20 A), Cable length: Approximate 3 m/9.8 ft)

- **OPC-2479** (For 25 W versions (10 A), Cable length: Approximate 3 m/9.8 ft)

MICROPHONES

- **HM-152**
  (Cable length: Approximately 0.90 m/35.4 in†)

- **HM-152T**
  (Equipped with a DTMF keypad,
  Cable length: Approximately 0.90 m/35.4 in†)

- **HM-148G**
  (Water and dust proof: IP54,
  Cable length: Approximately 0.49 m/19.3 in†)

- **HM-148T**
  (Equipped with a DTMF keypad,
  Water and dust proof: IP54,
  Cable length: Approximately 0.49 m/19.3 in†)

- **HM-211**
  (Equipped with Active noise canceling,
  Cable length: Approximately 0.49 m/19.3 in†)

- **HM-239T**
  (Equipped with a DTMF keypad and
  an Emergency key,
  Cable length: Approximately 0.90 m/35.4 in†)

- **SM-26**
  (Cable length: Approximately 0.30 m/11.8 in)

†When curled.

Revision record

Version	Month/Year	The revised contents
Version 1.0	October 2022	First issue.

How the World Communicates

Icom Inc.
1-1-32 Kamiminami, Hirano-ku, Osaka 547-0003, Japan https://www.icomjapan.com/