

Menu Items

Menu

- 0. Basic Configurations -					
Menu	Display	Description	Setting Value	Default	Refer to
Display					
0-00	Color Display Pattern	Display color type	Type 1/ Type 2/ Type 3	Type 1	4-1
0-01	Function Key Style	Type of function key display	Type 1/ Type 2/ Type 3	Type 1	4-1
0-02	Font Style (Frequency Display)	Font type (frequency display)	Font 1/ Font 2/ Font 3/ Font 4/ Font 5	Font 1	4-1
0-03	Screen Saver	Screen saver	Off/ Type 1/ Type 2/ Type 3/ Display Off	Off	16-1
0-04	Screen Saver Wait Time	Wait time for screen saver	Preview (5 [sec])/ 5/ 15/ 30/ 60 [min]	Preview (5 [sec])	16-1
0-05	Screen Saver Message	Screen saver message	Up to 10 alphanumeric characters	TS-890	16-1
0-06	Power-on Message	Power on message	Up to 15 alphanumeric characters	HELLO	16-1
Meter					
0-07	FM Mode S-Meter Sensitivity	FM S meter sensitivity	Normal/ High	Normal	4-10
0-08	Meter Response Speed (Analog)	Analog meter response	1 to 4 (1 step)	3	4-10
0-09	Meter Display Pattern	Meter type	Digital/ Analog (White)/ Analog (Black)	Analog (White)	4-9
0-10	Meter Display Peak Hold	Meter with peak hold	Off/ On	On	4-10
0-11	S-Meter Scale	S meter scale	Type 1/ Type 2	Type 1	4-10
0-12	TX Digital Meter	TX meter (digital)	Off/ On	Off	4-10
Key					
0-13	Long Press Duration of Panel Keys	Duration for pressing and holding a key	200 to 2000 [ms] (100 [ms] step)	500 [ms]	16-2
0-14	Touchscreen Tuning	Touchscreen tuning	Off/ On	On	7-6
0-15	PF A: Key Assignment	Function assignment to [PF A] key	Refer to PF (Programmable Function).	VOICE1	16-2
0-16	PF B: Key Assignment	Function assignment to [PF B] key	Refer to PF (Programmable Function).	VOICE2	16-2
0-17	PF C: Key Assignment	Function assignment to [PF C] key	Refer to PF (Programmable Function).	VOICE3	16-2
0-18	External PF 1: Key Assignment	Function assignment to [PF 1] on the keypad	Refer to PF (Programmable Function).	Message Memory CH 1	16-3
0-19	External PF 2: Key Assignment	Function assignment to [PF 2] on the keypad	Refer to PF (Programmable Function).	Message Memory CH 2	16-3
0-20	External PF 3: Key Assignment	Function assignment to [PF 3] on the keypad	Refer to PF (Programmable Function).	Message Memory CH 3	16-3
0-21	External PF 4: Key Assignment	Function assignment to [PF 4] on the keypad	Refer to PF (Programmable Function).	Message Memory CH 4	16-3
0-22	External PF 5: Key Assignment	Function assignment to [PF 5] on the keypad	Refer to PF (Programmable Function).	Message Memory CH 5	16-3
0-23	External PF 6: Key Assignment	Function assignment to [PF 6] on the keypad	Refer to PF (Programmable Function).	Message Memory CH 6	16-3
0-24	External PF 7: Key Assignment	Function assignment to [PF 7] on the keypad	Refer to PF (Programmable Function).	Message Memory CH 7	16-3
0-25	External PF 8: Key Assignment	Function assignment to [PF 8] on the keypad	Refer to PF (Programmable Function).	Message Memory CH 8	16-3
0-26	Microphone PF 1: Key Assignment	Function assignment to [PF 1] on the microphone	Refer to PF (Programmable Function).	A/B, A=B	16-3

3 MENU

- 0. Basic Configurations -					
Menu	Display	Description	Setting Value	Default	Refer to
Display					
0-27	Microphone PF 2: Key Assignment	Function assignment to [PF 2] on the microphone	Refer to PF (Programmable Function).	SPLIT	16-2
0-28	Microphone PF 3: Key Assignment	Function assignment to [PF 3] on the microphone	Refer to PF (Programmable Function).	M/V, M▶V	16-2
0-29	Microphone PF 4: Key Assignment	Function assignment to [PF 4] on the microphone	Refer to PF (Programmable Function).	MONI	16-2
0-30	Microphone DOWN: Key Assignment	Function assignment to [DOWN] on the microphone	Refer to PF (Programmable Function).	DWN Key (Microphone)	16-2
0-31	Microphone UP: Key Assignment	Function assignment to [UP] on the microphone	Refer to PF (Programmable Function).	UP Key (Microphone)	16-2
0-32	Automatic Power Off	APO (Automatic Power Off)	Off/ 60/ 120/ 180 [min]	Off	16-2
- 1. Audio Performance -					
Menu	Display	Description	Setting Value	Default	Refer to
Volume					
1-00	Beep Volume	Volume of beep tone	Off/ 1 to 20 (1 step)	10	16-2
1-01	Voice Message Volume (Play)	Playback volume of voice message	Off/ 1 to 20 (1 step)	10	12-2
1-02	Sidetone Volume	Sidetone volume	Off/ 1 to 20 (1 step)	10	5-9
Voice Guide					
1-03	Voice Guidance Volume	Voice guide volume	Off/ 1 to 20 (1 step)	10	13-1
1-04	Voice Guidance Speed	Voice guide speed	1 to 4 (1 step)	1	13-1
1-05	User Interface Language (Voice Guidance & Messages)	Language of voice guide and message display	English/ Japanese	English	13-1
1-06	Automatic Voice Guidance	Automatic voice guide	Off/ On	Off	13-1
- 2. Decoding & Encoding -					
Menu	Display	Description	Setting Value	Default	Refer to
FSK Decoding					
2-00	FFT Scope Averaging (RTTY Decode)	Averaging on the FFT scope (RTTY Decode)	0 to 9 (1 step)	0	5-24
2-01	RX UOS	RX unshift-on-space	Off/ On	On	5-21
2-02	Newline Code	New line code selection (during reception)	CR+LF/ All	All	5-21
2-03	Diddle	Diddle	Off/ Blank Code/ Letters Code	Blank Code	5-21
2-04	TX UOS	TX unshift-on-space	Off/ On	On	5-21
2-05	Automatic Newline Insertion	Automatic new line code insertion	On/ Off	On	5-21
FSK Key					
2-06	FSK Spacing	FSK shift width	170/ 200/ 425/ 850 [Hz]	170 [Hz]	5-21
2-07	FSK Keying Polarity	FSK keying polarity	Off/ On	Off	5-22
2-08	FSK Tone Frequency	FSK tone frequency	1275/ 2125 [Hz]	2125 [Hz]	5-21
2-09	RTTY Tuning Scope	Scope display for checking FSK tuning	FFT Scope/ X-Y Scope	FFT Scope	5-18
PSK Decoding					
2-10	FFT Scope Averaging (PSK Decode)	Averaging on the FFT scope (PSK Decode)	0 to 9 (1 step)	0	5-18
2-11	PSK AFC Tuning Range	Tuning range for PSK AFC	±15/ ±8 [Hz]	±15 [Hz]	5-24
2-12	PSK Tone Frequency	PSK tone frequency	1.0/ 1.5/ 2.0 [kHz]	1.5 [kHz]	5-27
2-13	PSK Tuning Scope	Scope display for checking PSK tuning	FFT Scope/ X-Y Scope	FFT Scope	5-18
Common					
2-14	CW/ RTTY/ PSK Log File Format	File format for saving CW/RTTY/ PSK logs	html/ txt	txt	5-27
2-15	CW/ RTTY/ PSK Time Stamp	CW/ RTTY/ PSK time stamp	Off/ Time Stamp/ Time Stamp + Frequency	Time Stamp + Frequency	5-27
2-16	Clock (CW/ RTTY/ PSK Time Stamp)	Clock selection for CW/ RTTY/ PSK time stamp	Local Clock/ Secondary Clock	Local Clock	5-27
2-17	Waterfall when Tuning (RTTY/ PSK Audio Scope)	Selection of RTTY/ PSK waterfall display type	Straight/ Follow	Straight	5-19 5-24

- 3. Controls Configurations -					
Menu	Display	Description	Setting Value	Default	Refer to
Control Rate					
3-00	Frequency Rounding Off (Multi/ Channel Control)	Rounds off the frequency of the [MULTI/CH] control	Off/ On	On	4-6
3-01	SSB Mode Frequency Step Size (Multi/ Channel Control)	SSB frequency step size	0.5/ 1/ 2.5/ 5/ 10 [kHz]	1 [kHz]	4-6
3-02	CW/FSK/PSK Mode Frequency Step Size (Multi/Channel Control)	CW/ FSK/ PSK frequency step size	0.5/ 1/ 2.5/ 5/ 10 [kHz]	0.5 [kHz]	4-6
3-03	FM Mode Frequency Step Size (Multi/ Channel Control)	FM frequency step size	5/ 6.25/ 10/ 12.5/ 15/ 20/ 25/ 30/ 50/ 100 [kHz]	10 [kHz]	4-6
3-04	AM Mode Frequency Step Size (Multi/ Channel Control)	AM frequency step size	5/ 6.25/ 10/ 12.5/ 15/ 20/ 25/ 30/ 50/ 100 [kHz]	5 [kHz]	4-6
3-05	9 kHz Step in AM Broadcast Band (Multi/ Channel Control)	Steps of the [MULTI/CH] control in the BC band (AM)	Off/ On	K type: Off E type: On	4-6
3-06	MHz Step	MHz step	100/ 500/ 1000 [kHz]	1000 [kHz]	4-6
3-07	Tuning Control: Number of Steps per Revolution	Number of steps per revolution of the Tuning control	250/ 500/ 1000 [Step]	1000 [Step]	4-6
3-08	Tuning Speed Control	Fast forward rate of the Tuning control	Off/ 2 to 10 (1 step)	Off	4-6
3-09	Tuning Speed Control Sensitivity	Sensitivity of the Tuning control for starting the fast forward operation	1 to 10 (1 step)	5	4-6
3-10	Lock Function	Frequency lock function	Frequency Lock/ Tuning Control Lock	Frequency Lock	4-6
3-11	Number of Band Memories	Number of band memories	1/ 3/ 5	3	4-3
3-12	Split Frequency Offset by RIT/XIT Control	Changing the split frequency using the [RIT/XIT] control	Off/ TX Frequency Offset while RX/ RX Frequency Offset while TX/ Both	Off	5-1
3-13	Band Direct Keys in Split Mode	Band direct key during split operation	RX Band/ RX Band and Cancel Split Mode/ RX/ TX Band	RX Band	5-1

- 4. Memory Channels & Scan -					
Menu	Display	Description	Setting Value	Default	Refer to
Memory					
4-00	Number of Quick Memory Channels	Number of quick memory channels	3/ 5/ 10 [ch]	5 [ch]	9-5
4-01	Temporary Change (Memory Channel Configurations)	Temporary change of memory frequency	Off/ On	Off	9-3
Scan					
4-02	Program Slow Scan	Program slow scan	Off/ On	On	10-2
4-03	Program Slow Scan Range	Range of program slow scan	100/ 200/ 300/ 400/ 500 [Hz]	300 [Hz]	10-3
4-04	Scan Hold	Scan Hold	Off/ On	Off	10-3
4-05	Scan Resume	Scan resume condition	Time-operated/ Carrier-operated	Time-operated	10-4

- 5. CW Configurations -					
Menu	Display	Description	Setting Value	Default	Refer to
Jack Terminals					
5-00	Paddle Jack Configuration (Front)	PADDLE jack (front panel) function setting	Straight Key/ Paddle/ Paddle (Bug Key Mode)	Paddle	5-13
5-01	Key Jack Configuration (Rear)	KEY jack (rear panel) function setting	Straight Key/ Paddle/ Paddle (Bug Key Mode)	Straight Key	5-13
Mode					
5-02	Electronic Keyer Squeeze Mode	Operation mode of the electronic keyer	Mode A/ Mode B	Mode B	5-13
5-03	Dot and Dash Reversed Keying	Switches between dot and dash paddle	Off/ On	Off	5-13
5-04	Paddle (Microphone Up/Down Keys)	Paddle ([UP] and [DOWN] keys on microphone)	Off/ On	Off	5-13
5-05	CW BFO Sideband	CW BFO sideband	USB/ LSB	USB	5-9

3 MENU

- 5. CW Configurations -					
Menu	Display	Description	Setting Value	Default	Refer to
Weight and Timing					
5-06	Automatic CW TX with Keying in SSB Mode	CW transmission by keying in the SSB mode	Off/ On	Off	5-9
5-07	Carrier Frequency Offset (SSB Mode to CW Mode)	Carrier frequency correction when shifting from the SSB mode to CW mode	Off/ On	Off	5-9
5-08	CW Keying Weight Ratio	Keyer weight	Automatic/ 2.5 to 4.0 (0.1 step)	Automatic	5-13
5-09	CW Keying Reversed Weight Ratio	Reverse keying auto weight ratio	Off/ On	Off	5-13
5-10	Interrupt Keying	Insert keying	Off/ On	Off	5-17
Memory					
5-11	CW Message Entry	Method for registering CW message	Text String/ Paddle	Paddle	5-14
5-12	Contest Number	Contest number	001 to 9999 (1 step)	001	5-15
5-13	Contest Number Format	Contest number style	Off/ 190 to ANO/ 190 to ANT/ 90 to NO/ 90 to NT	Off	5-15
5-14	Channel Number (Count-up Message)	Specifies the channel used for the count-up message	Off/ Channel 1 to Channel 8	Off	5-15
5-15	CW Rise Time	CW rise time	1/ 2/ 4/ 6 [ms]	6 [ms]	5-9
5-16	CW/ Voice Message Retransmit Interval Time	Repeat interval for retransmitting CW/voice message	0 to 60 [s] (1 [s] step)	10 [s]	5-17 12-3
- 6. TX/RX Filters & Misc. -					
Menu	Display	Description	Setting Value	Default	Refer to
Message					
6-00	Playback Time (Full-time Recording)	Playback time for constantly recorded audio	Last 10/ Last 20/ Last 30 [s]	Last 30 [s]	12-4
6-01	Recording with Squelch	Audio recording in tandem with squelch	Off/ On	On	12-4
TX Management					
6-02	Time-out Timer	Maximum continuous transmission time (Timeout timer)	Off/ 3/ 5/ 10/ 20/ 30 [min]	Off	8-8
6-03	TX Inhibit	Inhibits transmission	Off/ On	Off	16-11
6-04	Transmit Power Step Size	Fine adjustment of TX output power	1/ 5 [W]	5 [W]	4-8
6-05	ID Beep	ID beep	Off/ 1 to 30 [min] (1 step)	Off	8-8
Filter					
6-06	TX Filter Low Cut (SSB/AM)	Low cutoff frequency of the TX filter (SSB/AM)	10/ 100/ 200/ 300/ 400/ 500 [Hz]	100 [Hz]	8-5
6-07	TX Filter High Cut (SSB/AM)	High cutoff frequency of the TX filter (SSB/AM)	2500/ 2600/ 2700/ 2800/ 2900/ 3000/ 3500/ 4000 [Hz]	2900 [Hz]	8-5
6-08	TX Filter Low Cut (SSB-DATA/AM-DATA)	Low cutoff frequency of the TX filter (SSB-DATA/AM-DATA)	10/ 100/ 200/ 300/ 400/ 500 [Hz]	100 [Hz]	8-5
6-09	TX Filter High Cut (SSB-DATA/AM-DATA)	High cutoff frequency of the TX filter (SSB-DATA/AM-DATA)	2500/ 2600/ 2700/ 2800/ 2900/ 3000/ 3500/ 4000 [Hz]	2900 [Hz]	8-5
6-10	RX Filter Numbers	Number of RX filters	2/ 3	3	6-1
6-11	Filter Control in SSB Mode (High/Low and Shift/Width)	Switches between high cutoff/low cutoff and WIDTH/ SHIFT (SSB)	High & Low Cut/ Shift & Width	High & Low Cut	6-3
6-12	Filter Control in SSB-DATA Mode (High/Low and Shift/Width)	Switches between high cutoff/low cutoff and WIDTH/ SHIFT (SSB-DATA)	High & Low Cut/ Shift & Width	Shift & Width	6-3
6-13	VOX Voice Delay (Microphone)	Audio delay in the VOX mode (MIC)	Off/ Short/ Middle/ Long	Middle	8-3
6-14	VOX Voice Delay (Except Microphone)	Audio delay in the VOX mode (excluding MIC)	Off/ Short/ Middle/ Long	Middle	8-3
6-15	Delta Frequency Display	ΔF display setting	Off/ On	On	5-1

- 7. Rear Connectors -					
Menu	Display	Description	Setting Value	Default	Refer to
Baud Rate					
7-00	Baud Rate (COM Port)	Baud rate of COM connector	4800/ 9600/ 19200/ 38400/ 57600/ 115200 [bps]	9600 [bps]	16-5
7-01	Baud Rate (Virtual Standard COM)	Baud rate of virtual COM (Standard) connector	9600/ 19200/ 38400/ 57600/ 115200 [bps]	115200 [bps]	16-5
7-02	Baud Rate (Virtual Enhanced COM)	Baud rate of virtual COM (Enhanced) connector	9600/ 19200/ 38400/ 57600/ 115200 [bps]	115200 [bps]	16-12
7-03	Decoded Character Output	Decoded character output	Off/ On	Off	16-12
Data transfer					
7-04	Quick Data Transfer	Quick data transfer	Off/ A (TX/RX)/ A (Sub RX)/ B	Off	16-9
7-05	Overwrite Location (Quick Data Transfer)	Destination for data via quick data transfer	VFO/ Quick Memory	Quick Memory	16-9
Audio input					
7-06	USB: Audio Input Level	USB audio input level	0 to 100 (1 step)	50	16-7
7-07	ACC 2: Audio Input Level	Audio input level of ACC 2 connector	0 to 100 (1 step)	50	16-7
Audio output					
7-08	USB: Audio Output Level	USB audio output level	0 to 100 (1 step)	100	16-7
7-09	ACC 2: Audio Output Level	Audio output level from ACC 2 connector	0 to 100 (1 step)	50	16-7
7-10	TX Monitor Level (Rear Connectors)	TX monitor level output to the rear panel connector	Linked/ 0 to 20 (1 step)	Linked	16-7
7-11	Audio Output Type (Rear Connectors)	Format of audio output from the rear panel connector	All/ Received Audio only	All	16-7
- 8. Bandscope -					
Menu	Display	Description	Setting Value	Default	Refer to
Common					
8-00	Bandscope Display during TX	Bandscope display during transmission	Off/ On	Off	7-7
8-01	TX Audio Waveform Display	Waveform display for transmitted audio	On/ Off	On	8-5
8-02	Bandscope Maximum Hold	Maximum hold time	10 [s]/ Continuous	10 [s]	7-7
8-03	Waterfall when Tuning (Center Mode)	Waterfall display during tuning (center mode)	Straight/ Follow	Straight	7-2
8-04	Waterfall Gradation Level	Gradation setting of the waterfall	1 to 10 (1 step)	7	7-5
8-05	Tuning Assist Line (SSB Mode)	Auxiliary tuning line display (SSB only)	Off/ 300/ 400/ 500/ 600/ 700/ 800/ 1000/ 1500/ 2210 [Hz]	Off	7-5
8-06	Frequency Scale (Center Mode)	Frequency scale in the center mode	Relative Frequency/ Absolute Frequency	Relative Frequency	7-5
8-07	Touchscreen Tuning Step Correction (SSB/ CW/ FSK/ PSK)	Correction steps for touchscreen tuning	Off/ On	On	7-6
- 9. USB Keyboard -					
Menu	Display	Description	Setting Value	Default	Refer to
USB keyboard					
9-00	Send Message by Function Keys	Function key settings of USB keyboard	Off/ On	On	16-5
9-01	Keyboard Language	USB keyboard language	Japanese/ English (US)/ English (UK)/ French/ French (Canadian)/ German/ Portuguese/ Portuguese (Brazilian)/ Spanish/ Spanish (Latin American)/ Italian	English (US)	16-5
9-02	Repeat Delay Time	Key repeat delay time for USB keyboard	1 to 4 (1 step)	2	16-5
9-03	Repeat Speed	Key repeat speed for USB keyboard	1 to 32 (1 step)	1	16-5

3 MENU

Advanced Menu Items

Menu	Display	Description	Setting Value	Default	Refer to
0	Indication Signal Type (External Meter 1)	Target of external meter output 1	Automatic/ TX Power/ ALC/ Drain Voltage (Vd)/ Compression Level (COMP)/ Current (Id)/ SWR	TX Power	16-6
1	Indication Signal Type (External Meter 2)	Target of external meter output 2	Automatic/ TX Power/ ALC/ Drain Voltage (Vd)/ Compression Level (COMP)/ Current (Id)/ SWR	Automatic	16-6
2	Output Level (External Meter 1)	Level of external meter output 1	0 to 100 [%] (1 step)	50 [%]	16-6
3	Output Level (External Meter 2)	Level of external meter output 2	0 to 100 [%] (1 step)	50 [%]	16-6
4	Reference Signal Source	Switches the reference signal	Internal/ External	Internal	16-8
5	Reference Oscillator Calibration	Adjusts the frequency of the reference oscillator	-500 to +500 (1 step)	0	17-2
6	TX Power Down with Transverter Enabled	Powers down the transverter function	Off/ On	On	16-15
7	TX Hold After Antenna Tuning	Holds transmission at the end of antenna tuning	Off/ On	Off	4-12
8	Antenna Tuner during RX	Antenna tuner behavior while receiving	Off/ On	Off	4-12
9	Antenna Tuner Operation per Band	Antenna tuner behavior for each band	Off/ On	Off	4-12
10	Microphone Gain (FM Mode)	FM microphone gain	0 to 100 (1 step)	50	5-28
11	PKS Polarity Reverse	Reversing of PSK polarity	Off/ On	Off	16-12
12	TX Inhibit While Busy	Inhibits transmission while in the BUSY state	Off/ On	Off	16-12
13	CTCSS Unmute for Internal Speaker	Mute behavior of CTCSS	Mute/ Unmute	Mute	16-8
14	PSQ Logic State	SQL control signal logic	Low/ Open	Low	16-8
15	PSQ Reverse Condition	SQL output conditions	Off/ Busy/ Sql/ Send/ Busy-Send/ Sql-Send	Sql	16-8
16	PSQ/ PKS Pin Assignment (COM Connector)	PSQ/PKS mode setting	Off/ On	Off	16-8
17	Virtual Standard COM Port - RTS	RTS settings of virtual COM port (Standard)	Flow Control/ CW Keying/ RTTY Keying/ PTT/ DATA SEND	Flow Control	16-12
18	Virtual Standard COM Port - DTR	DTR settings of virtual COM port (Standard)	Off/ CW Keying/ RTTY Keying/ PTT/ DATA SEND	Off	16-12
19	Virtual Enhanced COM Port - RTS	RTS settings of virtual COM port (Standard)	Off/ CW Keying/ RTTY Keying/ PTT/ DATA SEND	Off	16-12
20	Virtual Enhanced COM Port - DTR	RTS settings of virtual COM port (Standard)	Off/ CW Keying/ RTTY Keying/ PTT/ DATA SEND	Off	16-12
21	External Display	External display output	Off/ On	On	16-7
22	Resolution (External Display)	Resolution settings of external display	800 x 600/ 848 x 480	800 x 600	16-7
23	Touchscreen Calibration	Touchscreen adjustment	-	-	17-3
24	Software License Agreement	Software license of this transceiver	-	-	i
25	Important Notices concerning Free Open Source	Ways to obtain open source resources used by this transceiver	-	-	ii
26	About Various Software License Agreements	Licenses related to software used by this transceiver	-	-	ii
27	Firmware Version	Firmware version used by this transceiver	-	-	17-1

Reset Menu Items

Display	Description	Refer to
Menu Reset	Menu reset	17-1
Memory Channel Reset	Memory channel reset	
VFO Reset	VFO reset	
Standard Reset (The Clock, TX Inhibit, and Transmit Power Upper Limit will not be reset)	Standard reset	
Full Reset	Full reset	

Linear Amplifier Menu Items

Display	Description	Setting Value	Default	Refer to
Band	Target bands of the linear amplifier menu	HF/ 50M/ 70M (E type)	HF	16-14 16-14
Linear Amplifier	Linear amplifier ON/OFF	Off/ On	Off	
Keying Logic	Linear amplifier TX control	Active Low/ Active High	Active Low	
TX Delay	Linear amplifier TX delay ON/OFF	Off/ On	Off	
TX Delay Time (CW/FSK/PSK)	Linear amplifier TX delay time (CW/FSK/PSK)	5/ 10/ 15/ 20/ 25/ 30/ 35/ 40 [ms]	15 [ms]	
TX Delay Time (SSB/FM/AM)	Linear amplifier TX delay time (SSB/FM/AM)	5/ 10/ 15/ 20/ 25/ 30/ 35/ 40/ 45/ 50 [ms]	35 [ms]	
Internal Relay Control	Linear amplifier relay control	Off/ On	Off	
External ALC Voltage	Linear amplifier external ALC voltage	-1/ -2/ -3/ -4/ -5/ -6/ -7/ -8/ -9/ -10/ -11/ -12 [V]	-4 [V]	

Dimmer Menu Items

Dimmer	Display	Description	Setting Value	Default	Refer to
1	Display	Screen brightness	5 to 100 (5-step)	100	4-2
	LED	LED brightness	5 to 100 (5-step)	100	
2	Display	Screen brightness	5 to 100 (5-step)	75	
	LED	LED brightness	5 to 100 (5-step)	75	
3	Display	Screen brightness	5 to 100 (5-step)	50	
	LED	LED brightness	5 to 100 (5-step)	50	
4	Display	Screen brightness	0 to 100 (5-step)	25	
	LED	LED brightness	5 to 100 (5-step)	25	

USB/File Management Menu Items

Display	Description	Setting Value	Default	Refer to
Safe Removal of USB Flash Drive	Removes the USB flash drive safely	-	-	11-6
Read Configuration Data	Reads transceiver settings data	-	-	11-3
Save Configuration Data	Saves transceiver settings data	-	-	11-2
Copy Files to PC (via USB cable)	Copies files to PC (via USB cable)	-	-	11-4
Copy Files to USB Flash Drive	Copies files to USB flash drive	-	-	11-5
Read Image Files for Screen Saver (Type 3)	Reads images for screen saver	-	-	16-1
Delete Files (Internal Memory)	Deletes files stored in the internal memory of the transceiver	-	-	11-5
File Storage Location	Configures the destination for saving files	Internal Memory/ USB Flash Drive	Internal Memory	11-2
Format USB Flash Drive	USB flash drive format	-	-	11-5

3 MENU

Clock Menu Items

Menu	Display	Description	Setting Value	Default	Refer to
0.Date and Time					
0-00	Date (Local Clock)	Date of the local clock	Year: '18 (2018) to '99 (2099) Month: JAN/ FEB/ MAR/ APR/ MAY/ JUN/ JUL/ AUG/ SEP/ OCT/ NOV/ DEC Day: 01 to 31	Year: '18 Month: JAN Day: 01	14-1
0-01	Time (Local Clock)	Time of the local clock	00:00 to 23:59 (hour: 00 to 23, minute: 00 to 59)	00:00	
0-02	Timezone (Local Clock)	Time zone of the local clock	UTC -14:00 to UTC ±00:00 to UTC +14:00 (15-minute step)	UTC +00:00	
0-03	Timezone (Secondary Clock)	Time zone of the auxiliary clock	UTC -14:00 to UTC ±00:00 to UTC +14:00 (15-minute step)	UTC +00:00	
0-04	Secondary Clock Identification Letter	Auxiliary clock identifier	Single character (A to Z)	U	
0-05	Date Display Format	Date display format	MMM/DD/'YY, DD/MMM/'YY, 'YY/ MMM/ DD	K type: MMM/ DD/'YY E type: DD/ MMM/'YY	14-2
0-06	Clock Display	Clock display setting	Off/ Local Clock/ Secondary Clock/ Both	Both	
1.Automatic Time Correction					
1-00	Clock Correction using the NTP Server	Automatic clock setting (NTP)	Off/ On	Off	14-3
1-01	NTP Server Address	NTP server address	Up to 50 alphanumeric characters	Blank	

LAN Menu Items

Menu	Display	Description	Setting Value	Default	Refer to
0	DHCP	DHCP	Off/ On	On	15-1
1	IP Address	IP address	1.0.0.0 to 223.255.255.255	192.168.1. 100	
2	Subnet Mask	Subnet mask	0.0.0.0 to 255.255.255.252	255.255.255. 0	
3	Default Gateway	Default gateway	1.0.0.0 to 223.255.255.255	Blank	
4	Primary DNS Server	Primary DNS server	1.0.0.0 to 223.255.255.255	Blank	
5	Secondary DNS Server	Secondary DNS server	1.0.0.0 to 223.255.255.255	Blank	
6	MAC Address	MAC address	-	Fixed value for each transceiver	

Timer Menu Items

Display	Description	Setting Value	Default	Refer to
Programmable Timer				
Timer Mode	Type of program timer behavior	Off/ Power-on/ Power-off/ Power-on/ off/ Record	Off	14-4
Repeat	Repeat setting for program timer behavior	Off/ On	Off	
Day of the Week - Sun	Day of week setting for activating program timer - Sun	Check/ Uncheck	Check	
Day of the Week - Mon	Day of week setting for activating program timer - Mon	Check/ Uncheck	Check	
Day of the Week - Tue	Day of week setting for activating program timer - Tue	Check/ Uncheck	Check	
Day of the Week - Wed	Day of week setting for activating program timer - Wed	Check/ Uncheck	Check	
Day of the Week - Thu	Day of week setting for activating program timer - Thu	Check/ Uncheck	Check	
Day of the Week - Fri	Day of week setting for activating program timer - Fri	Check/ Uncheck	Check	
Day of the Week - Sat	Day of week setting for activating program timer - Sat	Check/ Uncheck	Check	
Power-on Time	Program timer operation time start	00:00 to 23:59	00:00	
Power-off Time	Program timer operation time end	00:00 to 23:59	00:00	
Frequency/Mode	Frequency during program timer operation	30.000 kHz to 59.999.999 MHz	14.000.000	14-4
	Mode during program timer operation	LSB/ USB/ CW/ CW-R/ PSK/ PSK-R/ FSK/ FSK-R/ FM/ AM/ LSB-DATA/ USB-DATA/ FM-DATA/ AM-DATA	USB	
Sleep Timer				
Sleep Timer	Sleep timer	Off/ 5/ 10/ 15/ 30/ 60/ 90/ 120 [min]	Off	14-6

Auto Mode Menu Items

Display	Description	Setting Value	Default	Refer to
Auto Mode	Auto mode ON/OFF status	Auto Mode Off/ Auto Mode On	Auto Mode Off	4-4
Frequency	Frequency category of auto mode (#0)	30.000 kHz to 59.999990 MHz	9.5 MHz	
Mode	Mode of auto mode (#0)	LSB/ USB/ CW/ CW-R/ PSK/ PSK-R/ FSK/ FSK-R/ FM/ AM/ LSB-DATA/ USB-DATA/ FM-DATA/ AM-DATA	LSB	

3 MENU

KNS Menu Items

Menu	Display	Description	Setting Value	Default	Refer to
0	KNS Operation (LAN Connector)	KNS operation (LAN connection)	Off/ On (LAN)/ On (Internet)	Off	15-3
1	Administrator ID	KNS administrator ID	1 to maximum 32 alphanumeric characters	Blank	
2	Administrator Password	KNS administrator password	1 to maximum 32 alphanumeric characters	Blank	
3	Built-in VoIP	Built-in VoIP function	Off/ On	On	15-4
4	Audio Input Level (VoIP)	VoIP outgoing audio input level	0 to 100 (1 step)	50	
5	Audio Output Level (VoIP)	VoIP incoming audio output level	0 to 100 (1 step)	100	
6	VoIP Jitter Buffer	VoIP jitter absorption buffer	80/ 200/ 500/ 800 [ms]	80 [ms]	
7	Speaker Mute	Speaker mute	Off/ On	Off	
8	Access Log	Log function	Off/ On	Off	15-6
9	Registered Users' Remote Operation	Remote operation by registered user	Off/ On	Off	
10	Session Time	Session time	1 [min]/ 2 [min]/ 3 [min]/ 5 [min]/ 10 [min]/ 15 [min]/ 20 [min]/ 30 [min]/ 40 [min]/ 50 [min]/ 60 [min]/ 90 [min]/ 120 [min]/ Unlimited	Unlimited	
11	KNS Welcome Message	KNS welcome message	Up to 128 single-byte alphanumeric characters	Blank	

Frequency Marker Menu Items

Display	Description	Setting Value	Default	Refer to
Frequency	Marker frequency (#0 to 49)	30.000 kHz to 59.999.999 MHz	-	7-7