

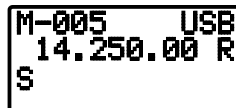
Scanning Operation

Scan Skip Programming (Memory Mode Only)

Among the memories you have programmed, there may be some stations which you do not wish to scan. For example, broadcast signals (which are transmitted continuously) will cause the scanner to stop, and such channels may be skipped so as to avoid this inconvenience.

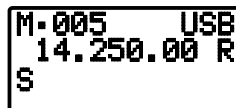
To remove a channel from the scanning loop:

1. Press the **F** key momentarily, then rotate the **SEL** knob, as needed, until Operating Function Row 2 [MW, MC, TAG] appears on the display.
2. Recall the memory channel to be skipped.
3. Press the **B** (MC) key momentarily. The “hyphen” in the memory channel number will change to become a “dot”; this shows that this channel now is not included in the scanning loop.
4. Repeat steps 2 and 3 as many times as necessary to skip all the channels you do not wish to scan.
5. Initiate memory scanning; you will observe that the channels you marked to be skipped are not included in the scanning loop.
6. Press the **PTT** switch to stop the scan; you may now use the **SEL** knob to step through the channels manually - one at a time - and you will observe that the “Skipped” channels are, nonetheless, available for recall by manual means.
7. You may restore a previously-skipped channel to the scanning loop by selecting the channel manually, then pressing the **B** (MC) key momentarily so that the “dot” changes to become a “hyphen”.



M-005 USB
14.250.00 R
S

Memory Skip “OFF”



M-005 USB
14.250.00 R
S

Memory Skip “ON”

Scan-Resume Choices

Scanning operation requires that you have the transceiver’s audio squelched. The transceiver then “assumes” that the opening of the squelch corresponds to the discovery of a signal you may wish to listen to.

Once the scan has been halted, the transceiver pauses on the signal and stays locked on its frequency for five seconds (default pause time). Thereafter, scanning will resume whether or not the other station’s transmission has ended. The scan resume interval can be set to 3/5/10 seconds, or off (whereby scanning quits when a signal is received) via Menu #41 (RESUME); see 64 for details.

Scanning Operation

Programmable Memory Scan (PMS) Operation

To limit scanning (or tuning) within a particular frequency range, you can use the Programmable Memory Scanning (PMS) feature, which utilizes special-purpose memory pair (“M-PL” and “M-PU”). The PMS feature is especially useful in helping you to observe any operating sub-band limits which apply to your Amateur license class.

PMS setup is simple to accomplish;

1. Store the upper and lower frequency limits of the desired range into the PMS memory pair (“M-PL” and “M-PU”).
2. Press the **[F]** key momentarily, then rotate the **[SEL]** knob, as needed, until Operating Function Row 3 [STO, RCL, PMS] appears on the display.
3. Press the **[C]** (PMS) key. The “PMS” indication will appear at the upper left corner of the LCD, signifying that the PMS feature is engaged. Tuning and scanning are now limited within the range between the selected PMS memory pair, keeping operation inside this programmed range.

Example: Limit tuning & scanning to the frequency range 144.300 - 148.000 MHz

1. Press the **[V/M]** key, as necessary, to recall the VFO mode. Tune the **[SEL]** knob or **[DIAL]** knob to 144.300 MHz.
2. Press the **[F]** key momentarily, then rotate the **[SEL]** knob, as needed, until Operating Function Row 2 [MW, MC, TAG] appears on the display.
3. Press the **[A]** (MW) key momentarily, then turn the **[SEL]** knob to select memory channel “M-PL.”
4. Press and hold in the **[A]** (MW) key for one second to write the VFO frequency into “M-PL.”
5. Now, tune the **[SEL]** knob or **[DIAL]** knob to 148.000 MHz).
6. Press the **[A]** (MW) key momentarily, then turn the **[SEL]** knob to select memory channel “M-PU.”
7. Press and hold the **[A]** (MW) key for one second to write the VFO frequency into “M-PU.”
8. Press the **[F]** key momentarily, then rotate the **[SEL]** knob one click clockwise to recall Operating Function Row 3 [STO, RCL, PMS].
9. Press the **[C]** (PMS) key momentarily. Tuning and scanning are now limited to the 144.300 ~ 148.000-MHz range until you press the **[V/M]** key to return to memory or VFO operation.

Note

The frequency resolution for these sub-band limits is 100 kHz, although the channel resolution of the sub-band limit memories in whatever you have selected as the current step size. As a result, the frequencies stored in these special memories (M-PL and M-PU) are both rounded down to the nearest 100 kHz for their roles as sub-band limits. Therefore, in the above example, any frequency between 144.300 and 144.399 MHz may be used to store a lower tuning limit of “144.300 MHz” in memory M-PL.

Dual Watch Operation

Note: This operation does not function in the FM Broadcast frequencies.

Dual Watch is similar, in some respects, to scanning. In Dual Watch, however, the transceiver monitors (squelched) on the VFO-A frequency while periodically checking VFO-B for activity (or vice-versa). A typical example might be for you to set VFO-A to 50.110 MHz, watching for DX stations who might call CQ on that frequency, while periodically checking 28.885 MHz for stations reporting band openings on 6 meters.

To activate Dual Watch:

1. Set up transmit and receive operation on VFO-A, establishing your primary monitoring frequency. Set up the frequency to be checked periodically on VFO-B.
2. Recall VFO-A, then rotate the **(SQL/RF)** control until the background noise is just silenced.
3. Press the **(F)** key momentarily, then rotate the **(SEL)** knob, as needed, until Operating Function Row 5 [SCN, PRI, DW] appears on the display.
4. Press the **(C)** (DW) key momentarily to activate Dual Watch operation (the “DW” icon will appear at the bottom left corner of the LCD).
5. The transceiver will continue to monitor (squelched) on the current (VFO-A) frequency, but every five seconds will switch briefly to VFO-B frequency, looking for activity.
6. If a station is detected on the VFO-B frequency, the transceiver will pause on the VFO-B frequency (the decimal point in the frequency will blink).
7. Press the **(C)** (DW) key again to cancel Dual Watch operation (the “DW” icon will disappear).

Note that pressing the PTT switch on the microphone does not cancel Dual Watch operation.

Operation on Alaska Emergency Frequency: 5167.5 kHz (U.S. Version Only)

Section 97.401(d) of the regulations governing amateur radio in the United States permit emergency amateur communications on the spot frequency of 5167.5 kHz by stations in (or within 92.6 km of) the state of Alaska. This frequency is *only* to be used when the *immediate safety of human life and/or property* are threatened, and is *never* to be used for routine communications.

The **FT-818** includes the capability for transmission and reception on 5167.5 kHz under such emergency conditions via the Menu system. To activate this feature:

1. Press and hold in the **[F]** key for one second to activate the Menu mode.
2. Rotate the **[SEL]** knob to select Menu #28 (EMERGENCY).
3. Rotate the **[DIAL]** knob to select “ON.”
4. Press and hold in the **[F]** key to exit the Menu mode.

Emergency communication on this spot frequency is now possible:

Press the **[V/M]** key, as necessary, to enter the Memory mode, then rotate the **[SEL]** knob to select the emergency channel (M-EMG), which is found between channels M-PU and M-001.

Note that the receive-mode **CLARIFIER** functions normally while using this frequency, but variation of the transmit frequency is not possible. Activation of Menu #28 does not enable any other out-of-amateur-band capability on the transceiver. The full specifications of the **FT-818** are not necessarily guaranteed on this frequency, but power output and receiver sensitivity should be fully satisfactory for the purpose of emergency communication.

If you wish to disable operation on the Alaska Emergency Frequency, repeat the procedure detailed above, but set Menu #28 to “OFF” in step 3 of the procedure.

In an emergency, note that a half-wave dipole cut for this frequency should be approximately 45'3" on each leg (90'6" total length).

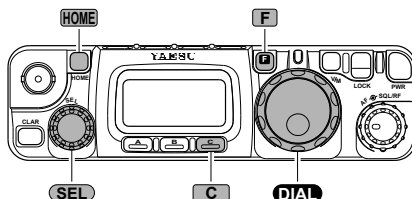
Emergency operation on 5167.5 kHz is shared with the Alaska-Fixed Service. This transceiver is *not* authorized for operation, under the FCC's Part 87, for aeronautical communications.

Menu Operation

The Menu System allows you to customize a wide variety of transceiver performance aspects and operating characteristics. Once you have gone through the various Menu customization procedures initially, you will find that you will not have to resort to them frequently during everyday operation.

Menu Operation

1. Press and hold in the **[F]** key for one second. The Menu Item number and a brief title for the Menu Item will appear in the display.
2. Rotate the **[SEL]** knob to select the Menu Item you wish to work on.
3. When you have chosen the desired Menu Item number, rotate the **[DIAL]** knob to change the value or condition for the Menu Item.
4. When you have made your selection, press and hold in the **[F]** key for one second to save the new setting and exit to the normal operation.



- In step (3) above, if you press the **[HOME]** key momentarily, it will reset the setting of that Menu Item to its factory-default value.
- In step (4) above, if you press the **[C]** key momentarily, you will exit to normal operation without saving the new setting.

Menu Item	Function	Available Values	Default
01 144 ARS	Activate/deactivate the Automatic Repeater Shift when operating on the 144 MHz band	OFF/ON	×1
02 430 ARS	Activate/deactivate the Automatic Repeater Shift when operating on the 430 MHz band	OFF/ON	×1
03 9600 MIC	Adjust the audio input level from the TNC during 9600 bps Packet operation	0 ~ 100	50
04 AM&FM DL	Enabling/disabling the [DIAL] knob on the AM and FM modes	ENABLE/DISABLE	DISABLE
05 AM MIC	Adjust the microphone gain level for the AM mode	0 ~ 100	50
06 AM STEP	Select the tuning steps for the [SEL] knob on the AM mode	2.5/5/9/10/12.5/25kHz	×1
07 ANTENNA	Select the antenna connector to be used on each operating band (HF/50/144/430 MHz)	FRONT/REAR	×1
08 APO TIME	Select the Auto Power Off time (time before power goes off)	OFF/1h ~ 6h	OFF
09 ARTS BEEP	Select the ARTS beep mode	OFF/RANGE/ALL	RANGE
10 BACKLIGHT	Select the LCD lamp mode	OFF/ON/AUTO	AUTO
11 BATT-CHG	Select the battery charging time	6/8/10 h (hours)	10
12 BEEP FREQ	Select the beep frequency	440/880 Hz	880 Hz
13 BEEP VOL	Select the beep volume	0 ~ 100	50
14 CAT RATE	Set the transceiver's circuitry for the CAT baud rate	4800/9600/38400 bps	4800 bps
15 COLOR	Select the illumination color for the LCD illumination	COLOR1 (Blue)/ COLOR2 (Amber)/ COLOR3 (Violet)	COLOR1
16 CONTRAST	Setting of the display contrast level	1 ~ 12	5
17 CW DELAY	Set the receiver recovery time during pseudo-VOX CW semi-break-in operation	10 ~ 500 msec	250 msec
18 CW ID	Enables/disables the CW identifier during ARTS operation	OFF/ON	OFF
19 CW PADDLE	Select the keyer paddle's wiring configuration	NORMAL/REVERSE	NORMAL

Menu Operation

Menu Item	Function	Available Values	Default
20	CW PITCH	Setting of the pitch of the CW sidetone, BFO offset, and CW filter center frequencies	300 ~ 1000 Hz 700 Hz
21	CW SPEED	Set the sending speed for the built-in Electronic keyer	4 wpm ~ 60 wpm/ 20 cpm ~ 300 cpm 12 wpm (60 cpm)
22	CW WEIGHT	Set the Dot:Dash ratio for the built-in electronic keyer	1:2.5 ~ 1:4.5 1:3.0
23	DCS CODE	Setting the DCS code	104 Std DCS codes 023
24	DIG DISP	Define the displayed frequency offset during DIG (USER-L or USER-U) mode operation	-3000 ~ +3000 Hz 0 Hz
25	DIG MIC	Adjust the audio input level from terminal equipment (such as a TNC or PSK-31 sound card) during DIG (Digital) mode operation	0 ~ 100 50
26	DIG MODE	Select the mode and sideband (if applicable) in the DIG (Digital) mode	RTTY/ PSK31-L/PSK31-U/ USER-L/USER-U RTTY
27	DIG SHIFT	Define the carrier frequency offset during DIG (USER-L or USER-U) mode operation	-3000 ~ +3000 Hz 0 Hz
28	EMERGENCY	Enable Tx/Rx operation on the Alaska Emergency Channel, 5167.5 kHz (USA Version only)	OFF/ON OFF
29	FM MIC	Adjust the microphone gain level for the FM mode	0 ~ 100 50
30	FM STEP	Select the tuning steps for the [SEL] knob on the FM mode	5/6.25/10/12.5/15/ 20/25/50 kHz *2
31	ID	Store your callsign into the CW identifier	- YAESU
32	LOCK MODE	Select the operation of the front panel's [LOCK] key	DIAL/FREQ/PANEL DIAL
33	MAIN STEP	Setting of the [DIAL] 's tuning speed	FINE/COARSE FINE
34	MEM GROUP	Enable/disable the memory grouping feature	OFF/ON OFF
35	MEM TAG	Store Alpha-Numeric "Tags" for the memory channels	- -
36	MIC KEY	Enable/disable CW keying by the microphone's [UP]/[DWN] keys	OFF/ON OFF
37	MIC SCAN	Enable/disable scanning access	OFF/ON ON
38	OP FILTER	Enable the optional filter (CW or SSB)	OFF/SSB/CW OFF
39	PKT MIC	Adjust the audio input level from the TNC during 1200 bps Packet operation	0 ~ 100 50
40	PKT RATE	Set the transceiver's circuitry for the Packet baud rate	1200/9600 bps 1200 bps
41	RESUME	Set the delay time for scanning resumption	OFF/3/5/10 seconds 5 sec
42	RPT SHIFT	Set the magnitude of the Repeater Shift	0 ~ 99.99 MHz *2
43	SCOPE	Select the Spectrum Scope mode	CONT/CHK CONT
44	SIDETONE	Adjust the CW sidetone volume level	0 ~ 100 50
45	SQL/RF-G	Select the configuration of the front panel's [SQL/RF] knob	RF-GAIN/SQL *1
46	SSB MIC	Adjust the microphone gain level for the SSB mode	0 ~ 100 50
47	SSB STEP	Select the tuning steps for the [SEL] knob on the SSB mode	1/2.5/5 kHz 2.5 kHz
48	TONE FREQ	Setting the CTCSS Tone Frequency	50 Std CTCSS tones 88.5 Hz
49	TOT TIME	Select the Time-Out-Timer time	OFF/1 ~ 20 min OFF
50	VOX DELAY	Set the "hang time" for the VOX circuitry	100 ~ 2500 msec 500 msec
51	VOX GAIN	Set the gain of the VOX circuitry's input audio detector	1 ~ 100 50
52	EXTEND	Enable/disable the extended Menu Items (#53 ~ #57)	OFF/ON OFF
53	DCS INV	Select "Normal" or "Inverted" DCS coding	Tn-Rn/Tn-Riv/ Tiv-Rn/Tiv-Riv Tn-Rn
54	R LSB CAR	Set the Rx Carrier Point for LSB	-300 ~ +300 Hz 0 Hz
55	R USB CAR	Set the Rx Carrier Point for USB	-300 ~ +300 Hz 0 Hz
56	T LSB CAR	Set the Tx Carrier Point for LSB	-300 ~ +300 Hz 0 Hz
57	T USB CAR	Set the Tx Carrier Point for USB	-300 ~ +300 Hz 0 Hz

*1: Depends on transceiver version.

*2: Depends on operating band and transceiver version.

Menu Operation

Menu Item 01 [144 ARS]

Function: Activate/deactivate the Automatic Repeater Shift when operating on the 144 MHz band.

Available Values: OFF/ON

Default: ON (depending on transceiver version)

Menu Item 02 [430 ARS]

Function: Activate/deactivate the Automatic Repeater Shift when operating on the 430 MHz band.

Available Values: OFF/ON

Default: ON (depending on transceiver version)

Menu Item 03 [9600 MIC]

Function: Adjust the audio input level from the TNC during 9600 bps Packet operation.

Available Values: 0 ~ 100

Default: 50

Menu Item 04 [AM&FM DL]

Function: Enabling/disabling the **DIAL** knob on the AM and FM modes.

Available Values: ENABLE/DISABLE

Default: DISABLE

Menu Item 05 [AM MIC]

Function: Adjust the microphone gain level for the AM mode.

Available Values: 0 ~ 100

Default: 50

Menu Item 06 [AM STEP]

Function: Select the tuning steps for the **SEL** knob on the AM mode.

Available Values: 2.5/5/9/10/12.5/25kHz

Default: 5 kHz (depending on transceiver version)

Menu Item 07 [ANTENNA]

Function: Select the antenna connector to be used on each operating band (HF/50/144/430 MHz).

Available Values: FRONT/REAR

Default: HF: REAR, 50/144/430 MHz: FRONT

When select the REAR antenna connector, the “R” icon will appear on the display

Menu Item 08 [APO TIME]

Function: Select the Auto Power Off time (time before power goes off).

Available Values: OFF/1h ~ 6h

Default: OFF

Menu Item 09 [ARTS BEEP]

Function: Select the ARTS beep mode.

Available Values: OFF/RANGE/ALL

Default: RANGE

OFF: No alert beeps sound; you must look at the display to determine current ARTS status.

RANGE: A high tone beep will sound when the transceiver first detects that you are within range, and a low beep will sound when the other station goes out of range.

ALL: A high tone beep will sound every time a polling transmission is received from the other station, and a low beep will sound *once* when the other station goes out of range.

Menu Item 10 [BACKLIGHT]

Function: Select the LCD lamp mode.

Available Values: OFF/ON/AUTO

Default: AUTO

OFF: Disables the LCD lamp.

ON: Illuminates the LCD lamp continuously.

AUTO: Illuminates the LCD lamp for five seconds when any key is pressed.

Menu Item 11 [BATT-CHG]

Function: Select the battery charging time.

Available Values: 6/8/10 h (hours)

Default: 10 h

Menu Item 12 [BEEP FREQ]

Function: Select the beep frequency

Available Values: 440/880 Hz

Default: 880 Hz

Menu Item 13 [BEEP VOL]

Function: Select the beep volume

Available Values: 0 ~ 100

Default: 50

Menu Item 14 [CAT RATE]

Function: Set the transceiver's circuitry for the CAT baud rate to be used.

Available Values: 4800/9600/38400 bps

Default: 4800 bps

Menu Item 15 [COLOR]

Function: Select the illumination color for the LCD illumination.

Available Values: COLOR1 (Blue)/COLOR2 (Amber)/COLOR3 (Violet)

Default: COLOR1(Blue)

Menu Operation

Menu Item 16 [CONTRAST]

Function: Setting of the display contrast level.

Available Values: 1 ~ 12

Default: 5

Menu Item 17 [CW DELAY]

Function: Set the receiver recovery time during pseudo-VOX CW semi-break-in operation.

Available Values: 10 ~ 500 msec

Default: 250 msec

The recovery time may be adjusted in steps of 10 msec. A longer delay may be preferable if you pause frequently while sending.

Menu Item 18 [CW ID]

Function: Enables/disables the CW identifier during ARTS operation.

Available Values: OFF/ON

Default: OFF

Menu Item 19 [CW PADDLE]

Function: Select the keyer paddle's wiring configuration.

Available Values: NORMAL/REVERSE

Default: NORMAL

NORMAL: Keyer paddle polarity is normal. The "tip" plug connection produces dots, and the "ring" plug connection produces dashes.

REVERSE: Keyer paddle polarity is inverted. The "tip" paddle produces dashes, and the "ring" paddle produces dots.

Menu Item 20 [CW PITCH]

Function: Setting of the pitch of the CW sidetone, BFO offset, and CW filter center frequencies.

Available Values: 300 ~ 1000 Hz

Default: 700 Hz

The CW pitch may be adjusted in steps of 50 Hz.

Menu Item 21 [CW SPEED]

Function: Set the sending speed for the built-in Electronic keyer.

Available Values: 4wpm ~ 60 wpm/20cpm ~ 300 cpm

Default: 12 wpm (60 cpm)

You can set the sending speed according to either of two units of speed (wpm: words per minute; cpm: characters per minute). To switch units between "wpm" and "cpm," just press the **(SEL)** knob.

Menu Item 22 [CW WEIGHT]

Function: Set the Dot:Dash ratio for the built-in electronic keyer.

Available Values: 1:2.5 ~ 1:4.5

Default: 1:3.0

Menu Item 23 [DCS CODE]

Function: Setting the DCS code.

Available Values: 104 Standard DCS codes

Default: 023

DCS Code														
023	025	026	031	032	036	043	047	051	053	054	065	071	072	073
074	114	115	116	122	125	131	132	134	143	145	152	155	156	162
165	172	174	205	212	223	225	226	243	244	245	246	251	252	255
261	263	265	266	271	274	306	311	315	325	331	332	343	346	351
356	364	365	371	411	412	413	423	431	432	445	446	452	454	455
462	464	465	466	503	506	516	523	526	532	546	565	606	612	624
627	631	632	654	662	664	703	712	723	731	732	734	743	754	-

Menu Item 24 [DIG DISP]

Function: Define the displayed frequency offset during DIG (USER-L or USER-U) mode operation.

Available Values: -3000 ~ +3000 Hz

Default: 0 Hz

Menu Item 25 [DIG MIC]

Function: Adjust the audio input level from terminal equipment (such as a TNC or PSK-31 sound card) during DIG (Digital) mode operation.

Available Values: 0 ~ 100

Default: 50

Menu Item 26 [DIG MODE]

Function: Select the mode and sideband (if applicable) in the DIG (Digital) mode.

Available Values: RTTY/PSK31-L/PSK31-U/USER-L/USER-U

Default: RTTY

RTTY: AFSK RTTY operation on the LSB mode

PSK31-L: PSK-31 operation on the LSB mode

PSK31-U: PSK-31 operation on the USB mode

USER-L: User-programmed costume operation based on LSB mode

USER-U: User-programmed costume operation based on USB mode

In the USER-L and USER-U modes, you can define the display frequency offset and carrier frequency offset by menu Items #24 (DIG DISP) and #27 (DIG SHIFT).

Menu Operation

Menu Item 27 [DIG SHIFT]

Function: Define the carrier frequency offset during DIG (USER-L or USER-U) mode operation.

Available Values: -3000 ~ +3000 Hz

Default: 0 Hz

Menu Item 28 [EMERGENCY]: USA Version only

Function: Enable Tx/Rx operation on the Alaska Emergency Channel, 5167.5 kHz.

Available Values: OFF/ON

Default: OFF

When this Menu Item is set to “ON,” the spot frequency of 5167.5 kHz will be enabled. To get to this frequency, use the **(SEL)** knob to navigate; the Alaska Emergency Channel will be found between the Memory channel “M-PU” and “M-001.”

Use of this frequency is restricted to amateurs operating in (or within 92.6 km of) the U.S. State of Alaska, and it is to be used for emergency communications only (involving the immediate protection of life or property).

Menu Item 29 [FM MIC]

Function: Adjust the microphone gain level for the FM mode.

Available Values: 0 ~ 100

Default: 50

Menu Item 30 [FM STEP]

Function: Select the tuning steps for the **(SEL)** knob on the FM mode.

Available Values: 5/6.25/10/12.5/15/20/25/50 kHz

Default: 5 kHz (depends on operating band and transceiver version)

Menu Item 31 [ID]

Function: Store your callsign into the CW identifier. Up to eight characters may be stored. The storage procedure is as follows:

1. Press the **(SEL)** knob momentarily to initiate callsign storage (an “under-bar” will appear below the first character location of the callsign).
2. Rotate the **(DIAL)** knob to select the first letter/number of your callsign, then rotate the **(SEL)** knob one click clockwise to save the first letter/number and move to the next entry position.
3. Repeat the previous step as many times as necessary to complete your callsign.
4. Press the **(SEL)** knob to save your completed callsign and exit.

Default: YAESU

Menu Item 32 [LOCK MODE]

Function: Select the operation of the front panel's **LOCK** key.

Available Values: DIAL/FREQ/PANEL

Default: DIAL

DIAL: Locks **DIAL** knob only

FREQ: Locks front panel keys and knobs related to frequency control (such as **BAND(DWN)** and **BAND(UP)** key, **A** (A/B) key., etc.)

PANEL: Locks all front keys and knobs (except **PWR** key and **LOCK** key)

Menu Item 33 [MAIN STEP]

Function: Setting of the **DIAL** knob's tuning speed.

Available Values: FINE/COARSE

Default: FINE

You may choose between two speeds for the **DIAL** knob. Selecting "COARSE" doubles the tuning rate compared to the default value.

Menu Item 34 [MEM GROUP]

Function: Enable/disable the memory grouping feature

Available Values: OFF/ON

Default: OFF

When this Menu Item is set to "ON," the 200 "standard" memory channels are partitioned into ten Memory Groups, each holding up to 20 memory channels.

Menu Item 35 [MEM TAG]

Function: Store Alpha-Numeric "Tags" for the memory channels.

Up to eight characters may be stored. The storage procedure is as follows:

1. Recall the memory channel on which you wish to append a label.
2. Recall this Menu Item [Menu #35 (MEM TAG)].
3. Press the **(SEL)** knob momentarily to initiate storing of the Tag (an under-bar will appear below the first character location).
4. Rotate the **DIAL** knob to select the first character (number, letter, or symbol) in the name you wish to store, then rotate the **(SEL)** knob clockwise to move to the next character.
5. Again rotate the **DIAL** knob to select the next number, letter, or symbol, then rotate the **(SEL)** knob clockwise to move to the next character's slot.
6. Repeat step 5 as many times as necessary to complete the name tag for the memory.
7. Press the **(SEL)** knob to save the A/N (Alpha-Numeric) Tag and exit.

Menu Operation

Menu Item 36 [MIC KEY]

Function: Enable/disable CW keying by the microphone's [UP]/[DWN] keys.

Available Values: OFF/ON

Default: OFF

When this Menu Item is set to "ON," press the microphone's [UP] key to send a "dot," and press the microphone's [DWN] key to send a "dash" (while the built-in electronic keyer is engaged).

Menu Item 37 [MIC SCAN]

Function: Enable/disable scanning access via the microphone's [UP]/[DWN] keys.

Available Values: OFF/ON

Default: ON

Menu Item 38 [OP FILTER]

Function: Enable the optional filter (CW or SSB) path.

Available Values: OFF/SSB/CW

Default: OFF

After installing the optional filter, set this Menu Item to define the signal path corresponding to the filter you have installed.

Menu Item 39 [PKT MIC]

Function: Adjust the audio input level from the TNC during 1200 bps Packet operation.

Available Values: 0 ~ 100

Default: 50

Menu Item 40 [PKT RATE]

Function: Set the transceiver's circuitry for the Packet baud rate to be used.

Available Values: 1200/9600 bps

Default: 1200 bps

Menu Item 41 [RESUME]

Function: Set the delay time for scanning resumption.

Available Values: OFF/3/5/10 seconds

Default: 5 sec

When this Menu Item set to "OFF," the scanner stops (without restarting) until you press the **[A]** (SCN) key (or the microphone's [UP]/[DWN] keys).

Menu Item 42 [RPT SHIFT]

Function: Set the magnitude of the Repeater Shift.

Available Values: 0 ~ 99.99 MHz

Default: Depends on transceiver version, and the band in use.

Each band's repeater shift (HF/50/144/430 MHz) may be set independently.

Menu Item 43 [SCOPE]

Function: Select the Spectrum Scope mode.

Available Values: CONT/CHK

Default: CONT

CONT: The Spectrum Scope sweeps continuously.

CHK: The Spectrum Scope sweeps one cycle every 10 seconds.

Menu Item 44 [SIDETONE]

Function: Adjust the CW sidetone volume level.

Available Values: 0 ~ 100

Default: 50

Menu Item 45 [SQL/RF-G]

Function: Select the configuration of the front panel's **(SQL/RF)** knob.

Available Values: RF-GAIN/SQL

Default: Depends on transceiver version

Menu Item 46 [SSB MIC]

Function: Adjust the microphone gain level for the SSB mode.

Available Values: 0 ~ 100

Default: 50

Menu Item 47 [SSB STEP]

Function: Select the tuning steps for the **(SEL)** knob on the SSB mode.

Available Values: 1/2.5/5 kHz

Default: 2.5 kHz

Menu Item 48 [TONE FREQ]

Function: Setting the CTCSS Tone Frequency.

Available Values: 50 Standard CTCSS tones

Default: 88.5 Hz

CTCSS Tone Frequency (Hz)												
67.0	69.3	71.9	74.4	77.0	79.7	82.5	85.4	88.5	91.5	94.8	97.4	100.0
103.5	107.2	110.9	114.8	118.8	123.0	127.3	131.8	136.5	141.3	146.2	151.4	156.7
159.8	162.2	165.5	167.9	171.3	173.8	177.3	179.9	183.5	186.2	189.9	192.8	196.6
199.5	203.5	206.5	210.7	218.1	225.7	229.1	233.6	241.8	250.3	254.1	-	-

Menu Item 49 [TOT TIME]

Function: Select the Time-Out-Timer time.

Available Values: OFF/1 ~ 20 min

Default: OFF

Menu Item 50 [VOX DELAY]

Function: Set the “hang time” for the VOX circuitry.

Available Values: 100 ~ 2500 msec

Default: 500 msec

Menu Operation

Menu Item 51 [VOX GAIN]

Function: Set the gain of the VOX circuitry's input audio detector.

Available Values: 1 ~ 100

Default: 50

Menu Item 52 [EXTEND]

Function: Enable/disable the extended Menu Items (#53 ~ #57).

Available Values: OFF/ON

Default: OFF

Menu Item 53 [DCS INV]

Function: Select "Normal" or "Inverted" DCS coding.

Available Values: Tn-Rn/Tn-Riv/Tiv-Rn/Tiv-Riv

Default: Tn-Rn

"n" = "normal"

"iv" = "inverted"

Menu Item 54 [R LSB CAR]

Function: Set the Rx Carrier Point for LSB

Available Values: -300 ~ +300 Hz

Default: 0 Hz

Menu Item 55 [R USB CAR]

Function: Set the Rx Carrier Point for USB

Available Values: -300 ~ +300 Hz

Default: 0 Hz

Menu Item 56 [T LSB CAR]

Function: Set the Tx Carrier Point for LSB

Available Values: -300 ~ +300 Hz

Default: 0 Hz

Menu Item 57 [T USB CAR]

Function: Set the Tx Carrier Point for USB

Available Values: -300 ~ +300 Hz

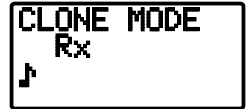
Default: 0 Hz

Cloning

You can transfer all data stored in one transceiver to another set by utilizing the handy “Cloning” feature. This requires a user-constructed cloning cable which connects the **ACC** jacks on the two transceivers as shown below.

To clone from one transceiver to another, use the following procedure:

1. Insert the Clone Cable into the **ACC** jack of each transceiver.
2. Turn both transceivers off, then press and hold in the **MODE** (◀) and **MODE** (▶) keys on each radio while turning the power on again. The “CLONE MODE” notation will appear on the display.
3. On the “*destination*” radio, press the **C** key.
4. Now, on the “*source*” radio, press the **A** key. Data will now be transferred to the “Destination” radio from the “Source” radio.
5. If there is a problem during the cloning process, “Error” will be displayed. Check your cable connections and try again.
6. If cloning is successful, turn the “destination” radio off. Now turn the “source” radio off.



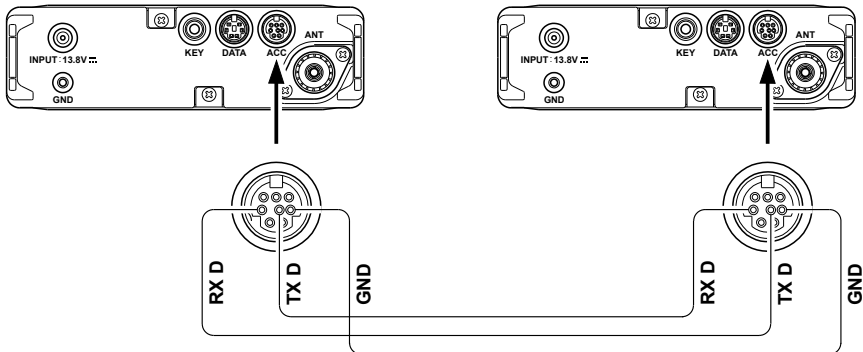
Distination radio



Source radio

Remove the clone cable. Channel and operating data for both radios are now identical. They both may be turned on now for normal operation.

When the radio is “Large Character” mode, the radio does not display the “CLONE MODE” which indicates the “clone mode”. However, the clone operation is the same method.



Installation of Optional Accessories

OPTIONAL FILTERS YF-122S/YF-122C/YF-122CN

1. Turn the transceiver's power off by pressing and holding in the **PWR** switch for 1/2 second, then remove the **FBA-28** Battery Case or **SBR-32MH** Ni-MH Battery Pack from the transceiver. Additionally, disconnect the DC cable from the **INPUT: 13.8V** jack on the rear panel of the transceiver, when operating the **FT-818** with a DC power supply.
2. Referring to Figure 1, remove the shoulder belt bracket and its two screws from both side of the transceiver, then remove the five screws affixing the top case of the transceiver, and remove the top case; disconnect the speaker's connector when you remove the top case.
3. Refer to Figure 2 for the mounting locations for the optional filters. Position the filter so that its connectors are aligned with the mounting pins on the board, and push it into place.
4. Replace the top case (remember to replace the internal speaker's plug), and connect the **FBA-28** Battery Case or **SBR-32MH** Ni-MH Battery Pack (and/or attach the DC power supply), and turn the transceiver on by pressing and holding in the **PWR** switch.
5. Change the setting of Menu #38 (OP FILTER) to "SSB" (if installing the **YF-122S**), or "CW" (for the **YF-122C/YF-122CN**).
6. Filter installation is now complete.

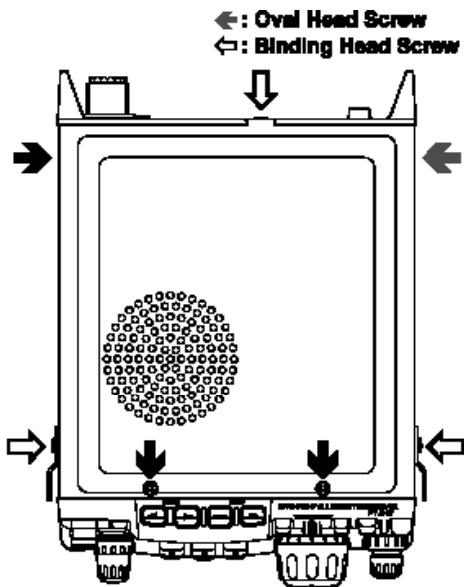


Figure 1

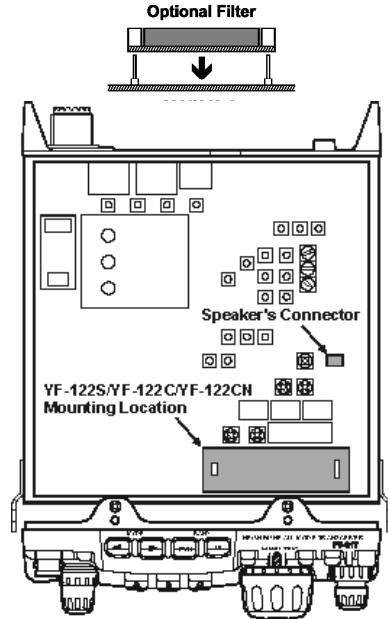


Figure 2

Power-on Microprocessor Reset Procedure

Some or all transceiver settings can be reset to their factory-default states using one of the following power-on routines:

- ❑ **V/M** + **POWER** on: Reset all memories and following menu setting to factory-default.
Menu #06 (AM STEP), 23 (DCS CODE), 30 (FM STEP), 35 (MEM TAG), 42 (RPT SHIFT), 47 (SSB STEP), and 48 (TONE FREQ).
- ❑ **F** + **POWER** on: Reset all menu setting (except following menu) to factory-default.
Menu #06 (AM STEP), 23 (DCS CODE), 30 (FM STEP), 35 (MEM TAG), 42 (RPT SHIFT), 47 (SSB STEP), and 48 (TONE FREQ).
- ❑ **HOME** + **POWER** on: CPU master reset for all memories and menu setting.

Some menu mode items are not initialized unless turn the power switchoff and on after having performed “Menu Mode Reset” or “All Reset”.

BAND DATA FORMAT

The **FT-818** BAND DATA Format (available on the ACC jack) is presented below. The BAND DATA line provides a stepped voltage, which denotes the current operating band. This data may be interpreted by an external device (such as an antenna switch or amplifier) to provide automatic band switching.

BAND	LEVEL	BAND	LEVEL	BAND	LEVEL	BAND	LEVEL
1.8 MHz	0.33 V	10 MHz	1.33 V	21 MHz	2.33 V	50 MHz	3.33 V
3.5 MHz	0.67 V	14 MHz	1.67 V	24.5 MHz	2.67 V	144 MHz	3.67 V
7 MHz	1.00 V	18 MHz	2.00 V	28 MHz	3.00 V	430 MHz	4.00 V

Use shielded cable for interconnections to external devices, so as to prevent RF interference.

GENERAL

Frequency Range:	Receive: 100 kHz-30 MHz 50 MHz-54 MHz 76 MHz-154 MHz 420 MHz-470 MHz Transmit: 160-6 Meters (USA: includes 60 meters) 2 Meters 70 Centimeters (Amateur bands only) 5.1675 MHz Alaska Emergency Frequency (USA only)
Emission Modes:	A1A (CW), A3E (AM), J3E (LSB/USB), F3E (FM), F1D (9600 bps packet), F2D (1200 bps packet)
Synthesizer Steps (Min.):	10 Hz (CW/SSB), 100 Hz (AM/FM)
Antenna Impedance:	50 Ohms, Unbalanced (Front: Type BNC, Rear: Type M)
Operating Temp. Range:	-10 °C to +60 °C (+14 °F to +140 °F)
Frequency Stability:	±0.5 ppm from 1 min. to 60 min after power on. @25 °C: 1 ppm/hour
Supply Voltage:	Normal: 13.8 VDC ± 15 %, Negative Ground Operating: 8.0-16.0 V, Negative Ground FBA-28 (w/8 "AA" Alkaline Cells): 12.0 V SBR-32MH (Ni-MH Battery Pack): 9.6 V
Current Consumption:	Squelched: 250 mA (Approx.) Receive: 450 mA Transmit: 2.4 A (HF/145 MHz), 2.7 A (430 MHz)
Case Size (W x H x D):	135 x 38 x 165 mm (5.31" x 1.5" x 6.50")
Weight (Approx.):	1.17 kg (2.58 lb) w/Alkaline battery, antenna, w/o Micro- phone

TRANSMITTER

RF Power Output:	6 W (SSB/CW/FM), 1.5 W (AM Carrier) @13.8 V
Modulation Types:	SSB: Balanced Modulator AM: Early Stage (Low Level) FM: Variable Reactance
FM Maximum Deviation:	±5 kHz (FM-N: ±2.5 kHz)
Spurious Radiation:	-50 dB (1.8-29.7 MHz) -60 dB (50/144/430 MHz)
Carrier Suppression:	>40 dB
Opp. Sideband Supp.:	>50 dB
SSB Frequency Response:	400 Hz-2600 Hz (-6 dB)
Microphone Impedance:	200-10k Ohms (Nominal: 600 Ohms)

Specifications

RECEIVER

Circuit Type:	Double-Conversion Superheterodyne		
Intermediate Frequencies:	1st: 68.33 MHz (SSB/CW/AM/FM); 10.7 MHz (WFM) 2nd: 455 kHz		
Sensitivity:	<u>SSB/CW</u>	<u>AM</u>	<u>FM</u>
100 kHz-500 kHz	–	–	–
500 kHz-1.8 MHz	–	32 μ V	–
1.8 MHz-28 MHz	0.25 μ V	2 μ V	–
28 MHz-30 MHz	0.25 μ V	2 μ V	0.5 μ V
50 MHz-54 MHz	0.2 μ V	2 μ V	0.32 μ V
144/430 MHz	0.125 μ V	–	0.2 μ V
	(IPO, ATT off, SSB/CW/AM = 10 dB S/N, FM = 12 dB SINAD)		
Squelch Sensitivity:	<u>SSB/CW/AM</u>	<u>FM</u>	
1.8 MHz-28 MHz	2.5 μ V	–	
28 MHz-30 MHz	2.5 μ V	0.32 μ V	
50 MHz-54 MHz	1 μ V	0.2 μ V	
144/430 MHz	0.5 μ V	0.16 μ V	
	(IPO, ATT off)		
Image Rejection:	HF/50 MHz: 70 dB 144/430 MHz: 60 dB		
IF Rejection:	60 dB		
Selectivity (–6/–60 dB):	SSB/CW: 2.2 kHz/4.5 kHz AM: 6 kHz/20 kHz FM: 15 kHz/30 kHz FM-N: 9 kHz/25 kHz SSB (optional YF-122S installed): 2.3 kHz/4.7 kHz (–66 dB) CW (optional YF-122C installed): 500 Hz/2.0 kHz CW (optional YF-122CN installed): 300 Hz/1.0 kHz		
AF Output:	1.0 W (8 Ohms, 10% THD or less)		
AF Output Impedance:	4-16 Ohms		

Specifications are subject to change without notice, and are guaranteed within amateur bands only.

Frequency ranges vary according to transceiver version; check with your dealer.

1. Changes or modifications to this device not expressly approved by YAESU MUSEN could void the user's authorization to operate this device.
2. This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions; (1) This device may not cause harmful interference, and (2) this device must accept any interference including received, interference that may cause undesired operation.
3. The scanning receiver in this equipment is incapable of tuning, or readily being altered, by the User to operate within the frequency bands allocated to the Domestic public Cellular Telecommunications Service in Part 22.

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

DECLARATION BY MANUFACTURER

The Scanner receiver is not a digital scanner and is incapable of being converted or modified to a digital scanner receiver by any user.

WARNING: MODIFICATION OF THIS DEVICE TO RECEIVE CELLULAR RADIOTELEPHONE SERVICE SIGNALS IS PROHIBITED UNDER FCC RULES AND FEDERAL LAW.

YAESU

The radio

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