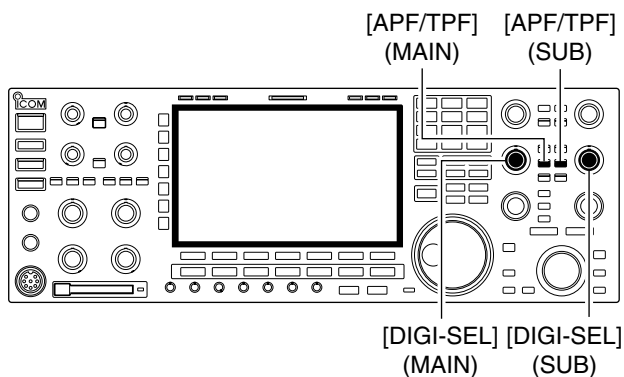


◇ APF (Audio Peak Filter) operation



The APF changes the audio frequency response by boosting a particular frequency to enhance a desired CW signal.

The peak frequency can be adjusted with [DIGI-SEL] control when “APF” is selected for “DIGI-SEL VR Operation” in miscellaneous (others) set mode (p. 12-18).

The audio filter shape is also selectable from “SOFT” and “SHARP” in miscellaneous (others) set mode (p. 12-19).

- ① During CW mode, push [APF/TPF] to turn the audio peak filter ON and OFF.
 - “APF” appears in the display and [APF/TPF] indicator above this switch lights green.
- ② Push [APF/TPF] for 1 sec. several times to select the desired audio filter width.
 - WIDE, MID and NAR filters, or, 320, 160 and 80 Hz filters are available depending on APF type setting in miscellaneous (others) set mode.
- ③ If “APF” is selected for “DIGI-SEL VR Operation,” rotate [DIGI-SEL] control to suit your preference.

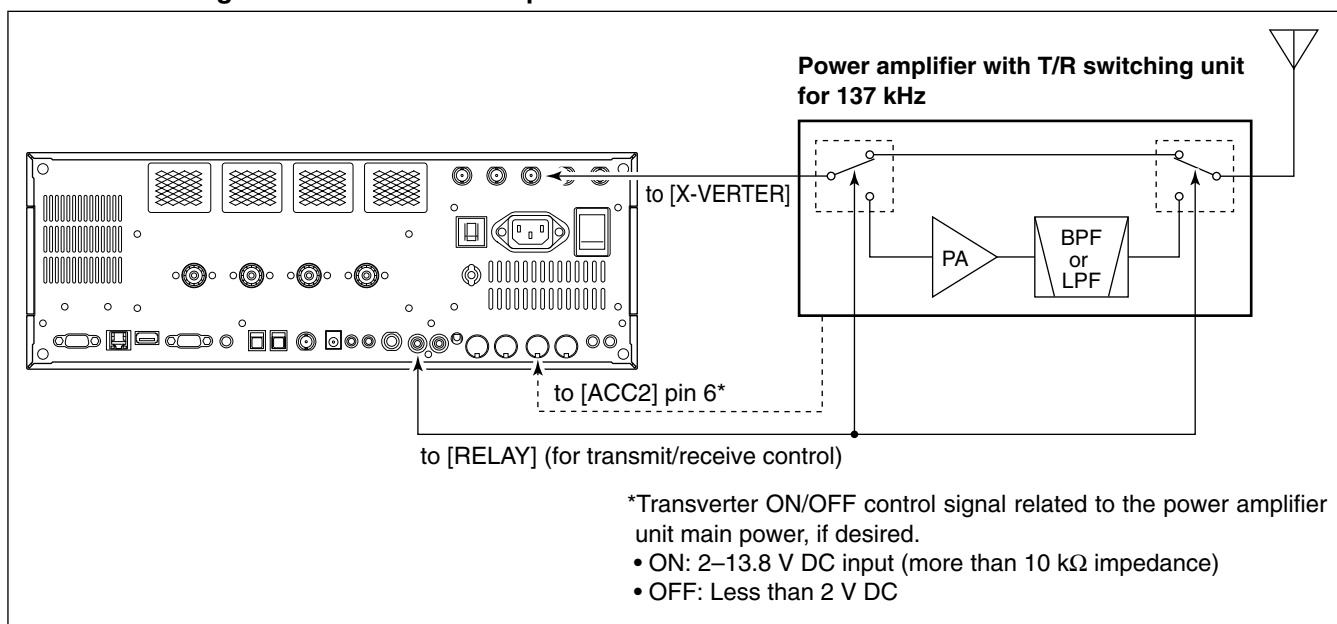
◇ About 137 kHz band operation (Europe, UK, Italy, Spain, France versions only)

137 kHz band, within the 135.7 kHz to 137.8 kHz range, operation in CW mode is optionally available with the IC-7800.

The RF signal from [X-VERTER] is used for the 137 kHz band operation, and an external amplifier unit is necessary.

See the connection diagram below for reference.

• Connection diagram for 137 kHz band operation



■ Miscellaneous (Others) set mode (continued)

SSB/CW Synchronous Tuning OFF

Selects the displayed frequency shift function from ON and OFF. (default: OFF)

When this function is activated, the receiving signal can be kept to receive even when the operating mode is changed between SSB and CW.

/// The frequency shifting value may differ according to the CW pitch setting.

- ON : The displayed frequency shifts when the operating mode is changed between SSB and CW.
- OFF : The displayed frequency does not shift.

CW Normal Side LSB

Selects the side band used to receive CW in CW normal mode. (default: LSB)

APF Type SOFT

Set audio filter shape for APF from SOFT and SHARP. (default: SOFT)

- SOFT : Soft filter shape is used. The audio filter width is adjustable and related to the CW pitch setting.
- SHARP : Sharp filter shape is used. The audio filter width is fixed.

MIC AF Out MAIN+SUB

Selects the desired band(s) for audio output from [MIC] connector (pin 8) from MAIN+SUB and SUB. (default: MAIN+SUB)

- MAIN+SUB : Outputs both main and sub bands audio.
- SUB : Outputs sub band audio only.

External Keypad (VOICE) OFF

Sets the external keypad for voice memory transmission capability ON and OFF.

See page 2-6 for the equivalent circuit of an external keypad and connection.

- ON : Pushing one of external keypad switches, transmits the desired voice memory contents during a phone mode operation.
- OFF : External keypad does not function. (default)

External Keypad (KEYER) OFF

Sets the external keypad for keyer memory transmission capability ON and OFF.

See page 2-6 for the equivalent circuit of an external keypad and connection.

- ON : Pushing one of external keypad switches, transmits the desired keyer memory contents during CW mode operation.
- OFF : External keypad does not function. (default)

14 CONTROL COMMAND

◇ Command table (continued)

Command	Sub command	Description
15	01	Read squelch condition
	02	Read S-meter level
	11	Read RF power meter
	12	Read SWR meter
	13	Read ALC meter
	14	Read COMP meter
	15	Read V _D meter
	16	Read I _D meter
16	02	Preamp (0=OFF; 1=preamp 1; 2=preamp 2)
	12	AGC selection (0=OFF; 1=Slow; 2=Mid; 3=Fast)
	22	Noise blanker (0=OFF; 1=ON)
	32	Audio peak filter (0=OFF; 1=WIDE/320 Hz; 2=MID/160 Hz; 3=NAR/80 Hz)
	40	Noise reduction (0=OFF; 1=ON)
	41	Auto notch (0=OFF; 1=ON)
	42	Repeater tone (0=OFF; 1=ON)
	43	Tone squelch (0=OFF; 1=ON)
	44	Speech compressor (0=OFF; 1=ON)
	45	Monitor (0=OFF; 1=ON)
	46	VOX function (0=OFF; 1=ON)
	47	Break-in (0=OFF; 1=semi break-in; 2=full break-in)
	48	Manual notch (0=OFF; 1=ON)
	4C	VSC (0=OFF; 1=ON)
	4D	Manual AGC (0=OFF; 1=ON)
4E	DIGI-SEL (0=OFF; 1=ON)	
4F	Twin peak filter (0=OFF; 1=ON)	
50	Dial lock (0=OFF; 1=ON)	
19	00	Read the transceiver ID
1A	00	Send/read memory contents (see p. 14-9 for details)
	01	Send/read band stacking register contents (see p. 14-9 for details)
	02	Send/read memory keyer contents (see p. 14-9 for details)
	03	Send/read the selected filter width (SSB, CW, PSK: 0=50 Hz to 40=3600 Hz; RTTY: 0=50 Hz to 31=2700 Hz; AM: 0=200 Hz to 49=10 kHz)
	04	Send/read the selected AGC time constant (0=OFF, 1=0.1/0.3 sec. to 13=6.0/8.0 sec.)
	050001	Send/read SSB TX Tone (Bass) level (0=-5 to 10=+5)
	050002	Send/read SSB TX Tone (Treble) level (0=-5 to 10=+5)
	050003	Send/read SSB RX Tone (Bass) level (0=-5 to 10=+5)
	050004	Send/read SSB RX Tone (Treble) level (0=-5 to 10=+5)
	050005	Send/read AM TX Tone (Bass) level (0=-5 to 10=+5)
	050006	Send/read AM TX Tone (Treble) level (0=-5 to 10=+5)
050007	Send/read AM RX Tone (Bass) level (0=-5 to 10=+5)	
050008	Send/read AM RX Tone (Treble) level (0=-5 to 10=+5)	
050009	Send/read FM TX Tone (Bass) level (0=-5 to 10=+5)	

Command	Sub command	Description
1A	050010	Send/read FM TX Tone (Treble) level (0=-5 to 10=+5)
	050011	Send/read FM RX Tone (Bass) level (0=-5 to 10=+5)
	050012	Send/read FM RX Tone (Treble) level (0=-5 to 10=+5)
	050013	Send/read SSB TX bandwidth for wide (see p. 14-10 for details)
	050014	Send/read SSB TX bandwidth for mid. (see p. 14-10 for details)
	050015	Send/read SSB TX bandwidth for narrow (see p. 14-10 for details)
	050016	Send/read speech level (0=0% to 255=100%)
	050017	Send/read CW side tone gain (0=min. to 255=max.)
	050018	Send/read CW side tone gain limit (0=OFF, 1=ON)
	050019	Send/read beep gain (0=min. to 255=max.)
	050020	Send/read beep gain limit (0=OFF, 1=ON)
	050021	Send/read headphones output ratio (0=0.60 to 255=1.40)
	050022	Send/read headphone output selection (0=separated, 1=mixed)
	050023	Send/read AF/SQL signal output to ACC-A (0=Main; 1=Sub)
	050024	Send/read AF/SQL signal output to ACC-B (0=Main; 1=Sub)
	050025	Send/read AF output level to ACC-A (0=0% to 255=100%)
	050026	Send/read AF output level to ACC-B (0=0% to 255=100%)
	050027	Send/read S/P DIF output level (0=0% to 255=100%)
	050028	Send/read MOD output level to ACC-A (0=0% to 255=100%)
	050029	Send/read MOD output level to ACC-B (0=0% to 255=100%)
	050030	Send/read S/P DIF MOD output level (0=0% to 255=100%)
	050031	Send/read MOD input connector during DATA OFF (0=MIC; 1=ACC-A; 2=ACC-B; 3=MIC/ACC-A; 4=MIC/ACC-B; 5=ACC-A/ACC-B; 6=MIC/ACC-A/ACC-B; 7=S/P DIF)
	050032	Send/read MOD input connector during DATA1 (0=MIC; 1=ACC-A; 2=ACC-B; 3=MIC/ACC-A; 4=MIC/ACC-B; 5=ACC-A/ACC-B; 6=MIC/ACC-A/ACC-B; 7=S/P DIF)
	050033	Send/read MOD input connector during DATA2 (0=MIC; 1=ACC-A; 2=ACC-B; 3=MIC/ACC-A; 4=MIC/ACC-B; 5=ACC-A/ACC-B; 6=MIC/ACC-A/ACC-B; 7=S/P DIF)
	050034	Send/read MOD input connector during DATA3 (0=MIC; 1=ACC-A; 2=ACC-B; 3=MIC/ACC-A; 4=MIC/ACC-B; 5=ACC-A/ACC-B; 6=MIC/ACC-A/ACC-B; 7=S/P DIF)

14 CONTROL COMMAND

◇ Command table (continued)

Command	Sub command	Description
1A	050190	Set/read FFT scope averaging set for RTTY decoder (0=OFF, 1=2, 2=3, 3=4)
	050191	Set/read FFT scope waveform color set for RTTY decoder (see p. 14-10 for details)
	050192	Set/read FFT scope averaging set for PSK decoder (0=OFF, 1=2, 2=3, 3=4)
	050193	Set/read FFT scope waveform color set for PSK decoder (see p. 14-10 for details)
	050194	Set/read PSK AFC function tuning range (0=±8 Hz, 1=±15 Hz)
	050195	Set/read APF type (0=SOFT, 1=SHARP)
	06	Send/read DATA mode with filter set (see p. 14-10 for detail)
	07	Send/read SSB transmit bandwidth (0=WIDE, 1=MID, 2=NAR)
	08	Send/read DSP filter shape (0= sharp, 1= soft)
	09	Send/read roofing filter set (0=3 kHz, 1=6 kHz, 2=15 kHz)
0A	Send/read manual notch width (0=Wide, 1=Mid., 2=Nar.)	
10	Send/read lock function set (0=OFF, 1=ON)	
1B	00	Set/read repeater tone frequency (see p. 14-10 for details)
	01	Set/read TSQL tone frequency (see p. 14-10 for details)
1C	00	Set/read the transceiver's condition (0=Rx; 1=Tx)
	01	Set/read antenna tuner condition (0=OFF, 1=ON, 2=Start tuning or while tuning)