Pro Set Elite 6 Setup Recommendations

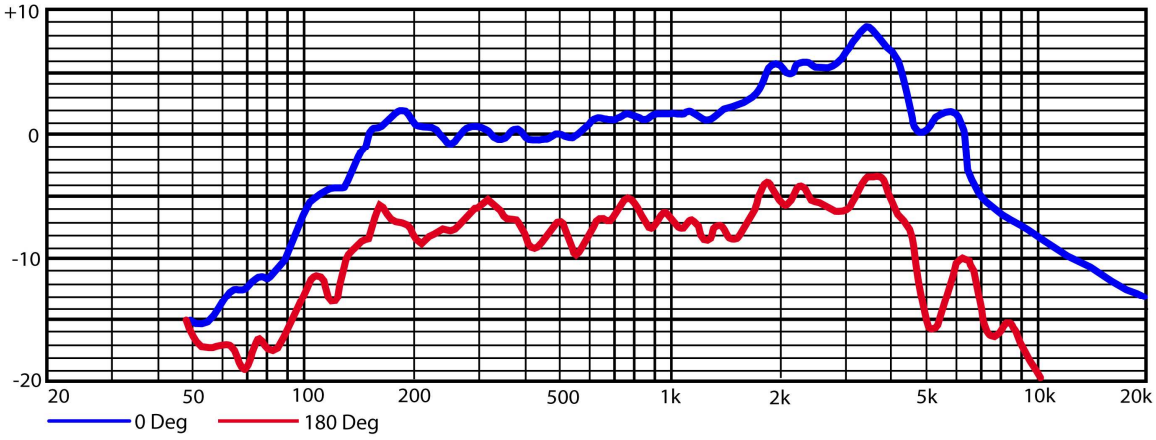
Heil Sound's Pro Set Elite 6 brings the newest dynamic microphone element technology to your station, along with a rugged, high-performance headset that's ideal for long hours of operation. This bulletin outlines typical setup parameters for the Pro Set Elite (PSE) 6.

The Pro Set Elite 6 features a high-fidelity headset that's designed for supreme comfort during long, arduous hours of operating. It's light in weight, yet supremely durable, and it folds up for easy transport.

The PSE-6 includes Heil Sound's exclusive Phase Reversal technology, that allows the operator to place the left and right earpieces in and out of phase, allowing spatial separation of signals during dynamic pile-up situations.

The Pro Set Elite 6 utilizes a wide-range, high-articulation dynamic microphone element, and the PSE-6 is compatible with the AD-1 series of adapter cables for interfacing to transceivers.

HC-6 Element Characteristics



The HC-6 dynamic element, employed in the PSE-6, begins its low-frequency roll-off at about 180 Hz, and it begins to rise at about 1500 Hz; the peak in response, at 3500 Hz, is approximately 9 dB, with the enhancement being between 5 and 6 dB between 2000 and 3000 Hz (the upper end of a typical SSB bandwidth).

HC-6 Element Characteristics (continued)

This response curve means that highly articulated speech can be achieved by rolling off the bass response at a higher frequency, to match the typical 300-Hz roll-off of most SSB transceivers, and an even more aggressive wave-form, ideal for DX and contest work, can be achieved by adding about 5 dB of gain between 2000 and 3000 Hz, while rolling off the bass response at about 500 to 600 Hz. Those familiar with the Heil Sound product line will observe that these two enhancements, well within the adjustment range of the DSP-based equalizers found in modern amateur transceivers, emulate the response characteristics of the HC-5 and HC-4 elements, respectively.

The bass response may also be left untouched, with varying amounts of treble added, if desired, for full-fidelity applications.

This flexibility in adjustment possibilities, enhanced by the pre-loading of the response on the high-frequency side, makes the HC-6 the ideal element for today's modern ham transceivers.

Equalizer Setup Guidelines

We are providing suggested starting points for setup of the equalization systems in many modern transceivers. Please understand that these are necessarily only *starting points*, and that you will want to experiment with these settings to get the optimum adjustments in place for your own voice and your operating objectives.

Icom

Model	Parameter	Set To
IC-7600 IC-7700 IC-7800 IC-746Pro IC-756 Pro Series	**[Level] [Set]** [SSB TX Tone (Bass)] [SSB TX Tone (Treble)] [COMP] (Bandwidth)	 -4 +5 MID or NAR (for DX) Wide (for fidelity)
IC-706*	**Q4 or Q6 (Carrier Freq.)**	+150
IC-7000*	**SSB TBW** [M-3] [F-4]	Set parameters for MID or NAR for 500 Hz (L) and 2800 Hz (H).

* Note that the PSE-6 *only* works on *SSB* with the IC-706/IC-7000. Choose the PSE-iC version, with the Icom-specific "iC" element, if FM operation is intended. Same initial SSB settings apply.

Kenwood

Model	Parameter	Set To
TS-2000	Menu #21 (TX EQ) Menu #22 (Filter BW)	CONVEN 2.6 kHz
TS-870	Menu #29 (Bandwidth) Menu #30 (Bandshift) Menu #31 (TX EQ)	2600 Hz 300 Hz H (default) or C
TS-570	Menu #13 (Bandwidth) Menu #14 (TX EQ)	2.4 kHz H (default) or C

Yaesu

Model	Parameter	Set To
FT-450	[MIC EQ]	9
FT-817	Menu #56 (T LSB CAR) Menu #57 (T USB CAR)	+150 +150
FT-847	Menu #42 (Extended Menu) Menu #92 (USB-CAR) Menu #93 (LSB-CAR)	On +15 (150 Hz) +15 (150 Hz)
FT-857/FT-897	Menu #16 (CAR LSB T) Menu #18 (CAR USB T) Menu #48 (DSP MIC EQ)	+150 Hz +150 Hz HPF or OFF
FT-920	U-51 (Mic EQ) U-59 (TX LSB Car. Offset) U-60 (Proc. LSB Offset) U-62 (TX USB Car. Offset) U-63 (Proc. USB Offset)	Off or 1 +150 Hz +150 Hz +150 Hz +150 Hz
FT-1000 MP (all versions)	Menu 4-4 (TR-EDSP) Menu 5-9 (T-Fil) Menu 7-7 (SSB-T)	Off or 1 6.0 kHz 200-3100 or 300-3100 Hz

Yaesu *(continued)*

The Yaesu FT-2000, FTdx-5000, and FTdx-9000 transceivers all use a Parametric Microphone Equalizer, with three bands of equalization.

For each band (low, medium, and high audio frequencies), you can adjust the center frequency, amplitude, and bandwidth of the applied equalization. There also are separate "Speech Processor On" and "Speech Processor Off" settings ("Processor On" is denoted by a "P" in the parameter name) and, in the case of the FTdx-9000, separate "Front Panel" and "Rear Panel" settings (!). The functions are identical across all models, but the menu numbers vary. Look at the menu function name, to keep it straight.

Model	Parameter	Set To
FT-2000/D	Menu #85 (J3E TX BPF)	3-27 (default) or 2-28
	Menu #125 (EQ1 FRQ)	200
	Menu #126 (EQ1 LVL)	-12
	Menu #127 (EQ1 BW)	2
	Menu #128 (EQ2 FRQ)	900
	Menu #129 (EQ2 LVL)	-6
	Menu #130 (EQ2 BW)	2
	Menu #131 (EQ3 FRQ)	2100
	Menu #132 (EQ3 LVL)	+10
	Menu #133 (EQ3 BW)	2
	Menu #134 (PE1 FRQ)	200
	Menu #135 (PE1 LVL)	-12
	Menu #136 (PE1 BW)	2
	Menu #137 (PE2 FRQ)	900
	Menu #138 (PE2 LVL)	-6
	Menu #139 (PE2 BW)	2
	Menu #140 (PE3 FRQ)	2100
	Menu #141 (PE3 LVL)	+10
	Menu #142 (PE3 BW)	2

Yaesu *(continued)*

Model	Parameter	Set To
FTdx-5000	Menu #104 (A3J TX BPF)	300-2700 or 200-2800 Hz
	Menu #151 (EQ1 FRQ)	200
	Menu #152 (EQ1 LVL)	-12
	Menu #153 (EQ1 BW)	2
	Menu #154 (EQ2 FRQ)	900
	Menu #155 (EQ2 LVL)	-6
	Menu #156 (EQ2 BW)	2
	Menu #157 (EQ3 FRQ)	2100
	Menu #158 (EQ3 LVL)	+10
	Menu #159 (EQ3 BW)	2
	Menu #160 (PE1 FRQ)	200
	Menu #161 (PE1 LVL)	-12
	Menu #162 (PE1 BW)	2
	Menu #163 (PE2 FRQ)	900
	Menu #164 (PE2 LVL)	-6
	Menu #165 (PE2 BW)	2
	Menu #166 (PE3 FRQ)	2100
	Menu #167 (PE3 LVL)	+10
	Menu #168 (PE3 BW)	2
FTdx-9000 *PEP version, menu numbers differ on earlier versions*	Menu #078 (SSB-TX-BPF)	300-2700 or 200-2800 Hz
	Menu #080 (LSB TX Car.)	+100 Hz
	Menu #082 (USB TX Car.)	+100 Hz
	Menu #146 (F-EQ1-FREQ)	200
	Menu #147 (F-EQ1-LEVEL)	-12
	Menu #148 (F-EQ1-BWTH)	2
	Menu #149 (F-EQ2-FREQ)	900
	Menu #150 (F-EQ2-LEVEL)	-6
	Menu #151 (F-EQ2-BWTH)	2
	Menu #152 (F-EQ3-FREQ)	2100
	Menu #153 (F-EQ3-LEVEL)	+10
	Menu #154 F-EQ3-BWTH)	2
	Menu #155-163 are same functions for Rear Panel Mic Jack, and Menu #164-172 are same functions for "Speech Processor On" setup. Use identical parameter settings as shown in column 3 for Menu #146-154 for starting points for all three setup modes.	

Elecraft

Model	Parameter	Set To
K3	Mic Gain	Low
	Mic Bias	Off
	[EQ Freq. Segments]	
	0.05	-12
	0.1	-10
	0.2	-6
	0.4	-2
	0.8	0
	1.6	+6
	2.4	+8
	3.2	+10

Ten-Tec

Model	Parameter	Set To
Omni VII	SSB TX BW	2600
	TX Roll Off	250
	TX Equalizer	-15
Orion/Orion II	TX Filter	2.55
	LF Roll Off	250
	TX EQ	-15

Flex-Radio

Model	Parameter	Set To
1500/3000/5000	Transmit Filter	High: 2900
		Low: 200
	3-Band EQ	Low: -10 dB
		Mid: -3 dB
		High: +9 dB
	10-Band EQ	32/63/125: -12 dB
		250: -6 dB
		500: -3 dB
		1K: 0
		2K/4K: +6 dB
		8K/16K: 0