



MANUAL

The controls in the MANUAL section are not programmable for user convenience.

VOLUME: Controls relative volume of UPPER and LOWER programs when in SPLIT or DOUBLE mode.

BALANCE: Controls relative volume of UPPER and LOWER programs when in SPLIT or DOUBLE mode.

AUTO: Automatically tunes all oscillators to standard pitch.

HOLD: Allows note or chord to be held indefinitely.

CHORD: When used in conjunction with the HOLD switch, allows selected chord to be transposed by lowest note on the keyboard.

CONTROL

PORTAMENTO: Controls rate of portamento ("sliding" from note to note); functions either in polyphonic or unison mode.

UNISON: Places OB-Xa in unison mode; one key depression gates all voices.

MODULATION

LFO RATE: Controls frequency of low frequency oscillator.

SINE/SQUARE: Selects LFO waveform.

S/H: Selects sample-and-hold modulation.

FREQUENCY DEPTH: Controls amount of frequency modulation.

OSC-1/OSC-2/FILTER: Selects destinations for frequency modulation.

PULSE WIDTH DEPTH: Controls amount of pulse width modulation.

OSC-1/OSC-2: Selects destination for pulse width modulation.

OSCILLATORS

1 FREQUENCY: Changes pitch of OSC-1 in octave increments over a four-octave range.

SAW/PULSE: Selects waveform of OSC-1.

PULSE WIDTH: Controls pulse width of all oscillators.

2 FREQUENCY: Changes pitch of OSC-2 in half-step increments over a five-octave range.

SAW/PULSE: Selects waveform of OSC-2.

SYNC: Locks OSC-2 onto a given harmonic of OSC-1.

F-ENV: Causes pitch of OSC-2 to be modulated by the FILTER ENVELOPE.

FILTER

FREQUENCY: Controls cut-off frequency of the filter.

RESONANCE: Controls amount of resonance (emphasis or "Q") of filter.

MODULATION: Controls amount of modulation by the FILTER ENVELOPE applied to the filter. Also controls amount of pitch modulation of OSC-2 by the FILTER ENVELOPE when F-ENV is activated.

OSC-1: Selects either full output or no output of OSC-1 routed through the filter (acts as oscillator one "ON/OFF" switch).

OSC-2 HALF/FULL: Selects full output, half output, or no output of OSC-2 routed through the filter (acts as oscillator two "ON/OFF" switch).

NOISE: Selects full output or no output of noise generator routed through the filter (acts as noise "ON/OFF" switch).

FOUR POLE: Selects either two-pole or four-pole filter configuration.

TRACK: Applies the keyboard control voltage to the filter frequency.

ENVELOPES

FILTER ENVELOPE ATTACK: Controls initial attack time of the FILTER ENVELOPE.

ENVELOPE: Controls time of fall to sustain level of the FILTER ENVELOPE.

DECAY: Controls sustain level of the FILTER ENVELOPE.

SUSTAIN: Controls final release time of the FILTER ENVELOPE.

RELEASE: Controls initial attack time of the LOUDNESS ENVELOPE.

LOUDNESS ENVELOPE: Controls time of fall to sustain level of the LOUDNESS ENVELOPE.

DECAY: Controls sustain level of the LOUDNESS ENVELOPE.

SUSTAIN: Controls final release time of the LOUDNESS ENVELOPE.

RELEASE: Controls initial attack time of the LOUDNESS ENVELOPE.

KEYBOARD

SPLIT: Selects split mode operation, also selects keyboard split location in conjunction with key depression.

DOUBLE: Selects double mode operation.

LOWER: Selects panel display of lower program parameters when in SPLIT or DOUBLE mode; also used for transposing the lower half of the keyboard.

UPPER: Selects panel display of upper program parameters when in SPLIT or DOUBLE mode; also used for transposing the upper half of the keyboard.

PROGRAMMER

MANUAL: Causes panel controls to operate in "absolute setting" mode; used to generate programs "from scratch".

GROUP/PROGRAM: Selects one of thirty-two programs (A1 through D8) and 8 SPLIT/DOUBLE combinations.

WRITE: Used in conjunction with the GROUP/PROGRAM switches to write a program or SPLIT/DOUBLE combinations into a selected memory location.

CASSETTE

The CHECK, PLAY and RECORD switches become active when the ENABLE ON switch on the rear panel is in the ON position.

CHECK: Allows a group of thirty-two programs and eight split/double combinations recently recorded onto cassette to be read back to the interface circuitry and checked for accuracy; no data goes into program memory during CHECK operation.

PLAY: Allows a group of thirty-two programs and eight split/double combinations to be brought from cassette into program memory.

RECORD: Allows a group of thirty-two programs and eight split/double combinations to be recorded onto cassette from program memory.

MODULATION AND BEND BOX

MODULATION LEVER: Controls amount of LFO modulation routed to oscillators for vibrato.

BEND LEVER: Controls pitch bend of oscillators.

LOWER: When in split or double mode, selects lower program as destination of LFO modulation and pitch bend.

UPPER: When in split or double mode, selects upper program as destination of LFO modulation and pitch bend.

RATE/PULL FOR SAW: Controls frequency of LFO. When knob is pulled up, selects sawtooth LFO waveform.

DEPTH/PULL ON: Controls depth of LFO modulation. When knob is pulled up, routes LFO modulation to oscillators independent of MODULATION LEVER.

MOD OSC-1: Selects oscillator one as destination of LFO modulation.

MOD OSC-2: Selects oscillator two as destination of LFO modulation.

BEND OSC-2 ONLY: Selects OSC-2 only as destination of BEND LEVER.

BEND NARROW: Selects BEND LEVER range of one whole-step up or down. When BEND NARROW switch is off, the BEND LEVER range is one octave up or down.

TRANPOSE DOWN: Transposes keyboard down one octave.

TRANPOSE UP: Transposes keyboard up one octave.

REAR PANEL

LEFT/MONO/RIGHT: Allows OB-Xa output to be used in stereo or mono.

MONITOR OFF/LOW: Selects monitor volume of CASSETTE INTERFACE.

CASSETTE INTERFACE JACKS: Connect CASSETTE INTERFACE circuitry to external cassette recorder.

ENABLE ON: Activates CASSETTE INTERFACE circuitry.

SUSTAIN FOOTSWITCH: When depressed, both FILTER and LOUDNESS ENVELOPE RELEASE times are set to their maximum settings.

PROGRAM ADVANCE FOOTSWITCH: Causes program to move forward sequentially.

HOLD FOOTSWITCH: Allows front panel HOLD switch functions to be controlled by footswitch.

VIBRATO PEDAL: Controls amount of modulation and bend box LFO modulation routed to oscillators.

FILTER PEDAL: Controls filter cut-off frequency.

115V/230V: Allows OB-Xa to run on either 115 volts AC or 230 volts AC.

COMPUTER INTERFACE: Connects OB-Xa control/processor circuitry to future Oberheim products.



OB-Xa

OB-Xa

The Oberheim OB-Xa programmable polyphonic synthesizer represents the latest step in Oberheim's philosophy of evolutionary product development. An expansion of the famous OB-X, the OB-Xa is the result of continued close collaboration with professional musicians from around the globe.

In designing the OB-Xa, we began with the OB-X and then expanded it to include many exciting new features. Highlighting these additions is the Split Keyboard function which allows the synthesist to play two different programs on each section of the keyboard. Split location, program combinations, independent transpose of each keyboard section, and balance control setting are all programmable. But the possibilities don't end there. Just enter the Double mode and each key you play sounds both selected programs. By selecting different program combinations and mixing them to your liking with the Balance control, hundreds of new, complex sounds are possible. It's like having two polyphonic synthesizers at your command.

To make the OB-Xa even more flexible we've added a four pole filter, but at the same time we've kept the standard Oberheim two pole filter. Also, the OB-Xa has the facilities for modulating one of the oscillators by an envelope generator, and has an improved noise generator. The Modulation Panel (Bend Box) has been enhanced with its own low frequency oscillator with sine and sawtooth waveforms and extensive routing capabilities, making possible vibrato effects ranging from the subtlest to the most dramatic. As with the OB-X, the OB-Xa is available in four, six or eight voice configurations.

The OB-Xa, with new graphics and solid walnut end panels, leaves the factory programmed with 32 different programs and 8 split/double touch Auto-tune and PLAY.

Dimensions: 40" (101.60cm) wide, 20" (50.80cm) deep, 6" (15.24cm) high
Weight: 45 lbs. (20.41kg)

OB-Xa features include: Five-octave keyboard with programmable split/double combinations, transpose, split location and Balance setting; auto-tune; continuous edit; polyphonic portamento; sample/hold; noise generator; unique "return-to-center" pitch bend and modulation levers; two voltage controlled oscillators, a two pole filter, a four pole filter, and two ADSR envelope generators per voice; two separate LFO's, one with sine and square, and the other with sine and sawtooth; oscillator modulation by an envelope generator; switchable 100/115/220/240 volt power. Also, for versatility in live performance, the OB-Xa has the following foot control inputs: Sustain, program advance and chord/hold footswitches; vibrato and filter pedals.

Some Things Are Better Than Others.



Oberheim

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