

# Chapter 13

## Specifications

### K2500 FEATURES

- 240 x 64-pixel backlit fluorescent graphic display with adjustable contrast
- 3.5-inch floppy disk drive, for DD or HD disks, DOS compatible
- MIDI In, Thru, and Out with selectable second MIDI Out
- MIDI LED to indicate MIDI activity
  
- 48-note polyphony with dynamic voice allocation
- Multi-timbral, for multi-track sequencing and recording
- 199 factory preset programs, and 100 factory preset setups
- Up to 3 layers per program, up to 32 layers for programs on drum channels
- Receives mono (channel) pressure and poly (key) pressure
- 8-zone setups transmit on 8 MIDI channels with independent programmable controls
- Fully featured onboard sequencer for recording from keyboard or via MIDI; loads and plays MIDI Type 0 sequences
- Easy-to-use programming interface including soft buttons, Alpha Wheel, and alphanumeric pad
  
- 8 Megabytes of 16-bit sample ROM, including acoustic instrumental sounds, waveforms, and noise
- 20 KHz maximum bandwidth
- Optional stereo sampler with analog and digital inputs
- AES/EBU I/Os and optical I/O
- Sound ROM expandable to a total of 28 Megabytes
- 8 SIMM sockets for optional sample RAM—up to 128 Megabytes
- Stereo sample playback capability
- Akai® S1000 sample disk compatibility
  
- Two 1/4-inch mixed audio outputs (stereo pair)
- Eight 1/4-inch audio outputs programmable as four stereo pairs or as eight separate outputs, with insert capability for effects patching
- Stereo headphone jack
- Optional effects board with direct digital out and digital stereo insert
  
- 240K battery-backed RAM for user programs, setups and other objects, expandable to 1256K
- Two SCSI ports for connection with external SCSI disks, CD-ROM drives, or Macintosh® personal computers
- Optional internal hard disk
- Optional 8 channel interface to AES, ADAT, DA-88
  
- Realtime DSP for each voice: 31 programmable DSP algorithms incorporating filters, EQ, distortion, panning, pulse width modulation, and more; up to 3 programmable DSP functions per voice

## Specifications

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### K2500 FEATURES

- Filters: Lowpass, Highpass, Allpass, Bandpass, Notch, programmable resonance
- Programmable stereo multi-effects on MIX outputs, including simultaneous reverb, chorus, delay, flanging, EQ—and more
- Realtime internal and MIDI control of effects parameters
  
- MIDI standard sample dump/load capability
- SMDI sample dump/load capability
- System Exclusive implementation
- MIDIScope™ for analyzing MIDI events

## Environmental Specifications

### Temperature ranges

|                |         |                 |
|----------------|---------|-----------------|
| For operation: | minimum | 41° F (5° C)    |
|                | maximum | 104° F (40° C)  |
| For storage:   | minimum | -13° F (-25° C) |
|                | maximum | 186° F (85° C)  |

### Relative humidity ranges (non-condensing)

|                        |       |
|------------------------|-------|
| Operation and storage: | 5—95% |
|------------------------|-------|

## Physical Specifications

| Overall dimensions | K2500R             | K2500              | K2500X             |
|--------------------|--------------------|--------------------|--------------------|
| Width              | 16.9 in.* 43 cm.   | 47.8 in. 121.4 cm. | 54.3 in. 137.9 cm. |
| Depth              | 13.9 in. 35.4 cm.  | 17.8 in. 45.1 cm.  | 17.8 in. 45.1 cm.  |
| Height             | 5.1 in. 13 cm.     | 4.8 in. 12.2 cm.   | 4.8 in. 12.2 cm.   |
| Weight:            | 24.65 lb. 11.2 kg. | 55.5 lb. 25.2 kg.  | 72 lb. 32.7 kg.    |

\* Excluding the rack-mount brackets

## Electrical Specifications

AC supply: selectable; 100V, 120V, 220V, or 240V. 1.0 amps at 120 volts nominal

### Safe voltage ranges

| Voltage setting:      | 100V   | 120V   | 220V    | 240V    |
|-----------------------|--------|--------|---------|---------|
| Safe voltage range:   | 85—107 | 95—125 | 180—232 | 190—250 |
| Safe frequency range: | 48—65  | 48—65  | 48—65   | 48—65   |

If the voltage drops below the minimum safe level at any voltage setting, the K2500 will reset, but no data will be lost. If the voltage exceeds the maximum safe level, the K2500 may overheat.

**Specifications**

MIDI Implementation Chart

# MIDI Implementation Chart

**Model: K2500**

**Manufacturer:**  
Young Chang

**Date: 3/21/95**  
**Version 1.0**

**Digital Synthesizers**

| Function                | Transmitted  | Recognized                          | Remarks                             |   |
|-------------------------|--|-------------------------------------|-------------------------------------|---|
| <b>Basic Channel</b>    | Default  | 1                                   | 1                                   | Memorized                                     |
|                         | Changed  | 1 - 16                              | 1 - 16                              |   |
| <b>Mode</b>             | Default  | Mode 3                              | Mode 3                              | Use Multi mode for multi-timbral applications |
|                         | Messages Altered   |                                     |                                     |   |
| <b>Note Number</b>      |  |                                     | 0 - 127                             | 0-11 sets intonation<br>Key                   |
|                         | True Voice   | 0 - 127                             | 0 - 127                             |   |
| <b>Velocity</b>         | Note ON  | O                                   | O                                   |   |
|                         | Note OFF   | O                                   | O                                   |   |
| <b>After Touch</b>      | Keys   | X                                   | O                                   |   |
|                         | Channels   | O                                   | O                                   |   |
| <b>Pitch Bender</b>     |  | O                                   | O                                   |   |
| <b>Control Change</b>   | O  | O                                   | O                                   | Controller assignments are programmable       |
|                         |  | 0 - 31<br>32 - 63 (LSB)<br>64 - 127 | 0 - 31<br>32 - 63 (LSB)<br>64 - 127 |   |
| <b>Program Change</b>   |  | O                                   | O                                   | Standard and custom formats                   |
|                         | True #   | 1 - 999<br>0 - 127                  | 1 - 999<br>0 - 127                  |   |
| <b>System Exclusive</b> |  | O                                   | O*                                  |   |
| <b>System Common</b>    | Song Pos.  | O                                   | O                                   |   |
|                         | Song Sel.  | O                                   | O                                   |   |
|                         | Tune   | X                                   | X                                   |   |
| <b>System Real Time</b> | Clock  | O                                   | O                                   |   |
|                         | Messages   | O                                   | O                                   |   |
| <b>Aux Messages</b>     | Local Control  | O                                   | O                                   |   |
|                         | All Notes Off  | O                                   | O                                   |   |
|                         | Active Sense   | X                                   | X                                   |   |
|                         | Reset  | X                                   | X                                   |   |
| Notes                   | *Manufacturer's ID = 07<br>Device ID: default = 0;<br>programmable 0 - 127 |                                     |                                     |   |

Mode 1: Omni On, Poly  
Mode 3: Omni Off, Poly

Mode 2: Omni On, Mono  
Mode 4: Omni Off, Mono

O = yes  
X =no