



## U.S. Retail Price Sheet and Configuration Guide (Long Form) August, 1993

Thank you for considering a SPECTRAL Synthesis Digital Audio Workstation. SPECTRAL offers a wide variety of excellent digital audio products, which can be configured according to your specific needs. SPECTRAL's philosophy of fully integrate-able digital components makes this system the most flexible on the market. When configuring a SPECTRAL system you can get the most for your money by asking yourself what you will be doing with it. Then based upon your needs answer the following:

- 1) How many tracks will you need to have playing and/or recording simultaneously?
- 2) How much disk time will you need for each project?
- 3) How many channels of audio will need to pass in and out of the system at one time?
- 4) How many I/O channels should be digital and how many should be analog?
- 5) How much signal processing will you want to do in real time.
- 6) Will you have use for a digitally integrated sampling synthesizer and/or sample file editor?

Each SPECTRA-Drive will handle up to 6 tracks of simultaneous record and/or playback, although we refer to a one drive system as a "4" track system. An "8" track uses two drives and a 16 track uses four drives. Question two determines the size of disk drives you should buy. SPECTRAL offers 3 drive sizes. These sizes are described in track-minutes, which is the amount of recording time available on the disk for a mono channel of audio. As each drive can handle multiple tracks, divide the track-minutes per disk by four (or six), if all tracks of each disk will be full of audio in your typical work. Remember that a random access storage system does not need blank audio for sections of silence, so that 15 minutes on eight tracks will not necessarily require 2 hours of storage space. Magneto-Optical (M-O) drives can also be used for real-time recording (up to 4 tracks maximum per M-O drive) or they can be configured for back-up devices or for sound effects libraries.

I/O options are one of the most unique features of the SPECTRAL system. All systems provide at least 2 channels (stereo) digital in and out standard. This digital I/O uses the S/PDIF communication protocol and will connect directly with the ADDA2218 A to D / D to A Converter for stereo analog I/O. Most pro-model DAT machines and third party digital/analog converters can also be used. SPECTRAL also offers many different I/O options to expand the standard 2 channel digital I/O up to 16 channels of I/O, analog and/or digital in many possible combinations. This flexibility of I/O configuration ensures that you do not have to pay for more I/O channels than you need, and allows you to choose exactly how to interface to the rest of your studio.

SPECTRAL systems also offer real-time digital signal processing, 16-Bit sampling, and other DSP functions. If you want these features, add the DSP components to your system. Buy only as much processing power as you need, or include some now and add more later. That's just part of the flexibility of the SPECTRAL system!

### The AudioEngine Turnkey Systems (page 2)

The AudioEngine system is described in detail by its brochure. All AudioEngine systems include fully configured rack-mount computers. Select the system with the features you desire. Then find that system in the price sheet using the series number (the first two numerals) and the drive configuration (the last four numerals). The two digit series number indicates the computer platform (35 for 350, 55 for 550). The third digit specifies the preconfigured system type, followed with a dash and a 3 or 4 digit number specifying drive size.

Once you have selected the AudioEngine, you will want to add I/O options. This will give you discrete channels of audio to and from the rest of your studio. See the I/O expansion options section of this price sheet. The AudioEngine systems already include two channels of digital in and out standard. Add either a single ADDA2218 for stereo analog in and out or add the IO816 I/O board to provide connection to either a ADAX8818 (eight channels analog I/O) or a MAX880 unit (eight channels of Digital I/O). You can also add 8 more channels of either digital or analog I/O to bring the total to 16 channels.

### The MT Package Systems (page 3)

The MT Package systems assume that you or your dealer will be integrating a Digital Audio Workstation using SPECTRAL components into an AT-compatible (ISA Bus) 386 or 486 computer. Although there are a myriad of possible combinations, these packages represent the most common. Model numbers, shown along the left, describe exactly what will come with your system. MT1, MT2, and MT4 indicate the number of drives, hence the track throughput of the system; 4, 8, or 16. The next number (or 4th character) is the number of SynthCARD DSP boards in the system. If SynthCARDS are ordered, then the DSP software packages (AudioVision, AudioScape or SynthEngine Sampler) will run on the SynthEngine and can be added to the package. See the bottom of page 3 for the add-on price. The next two numerals (just left of the dash) indicate the number of stereo digital and analog I/O channels respectively. The numbers after the dash are the drive size option. The three price columns on the right are for the three drive sizes used with any of the systems.

The Basic 4 track and Basic 8 track MT Package systems do not include analog I/O or extended DSP. The first three models of the MT1 and MT2 are Basic. These can be augmented to include other features as shown in the subsequent models. In the system explanations in the center of the page, you can see what components are being added to the Basic package. If the new components require extra computer slots (beyond the 2 required for all 4 and 8 track packages), that is shown in parentheses. Also, the analog I/O for each configuration is indicated in bold lettering.

The 16 track MT Packages have stereo analog I/O and extended DSP in their base models. Because all 16 track MT Packages listed in this price sheet include one SynthCARD DSP board, the 16 track systems all require at least 3 slots. Just as with the smaller systems, components can be added for more I/O or DSP power. Because these packages have extended DSP, you can add AudioScape or the Sampling software options.

You can also configure your system completely from scratch or add system components from page 4 to any of the package systems. Let your dealer help you if none of the AudioEngine or MT Package systems match your particular needs.

# SPECTRAL AudioEngine™ Complete Digital Audio Workstations

All *AudioEngine* systems are preconfigured to be "Plug and Play" workstations; they include everything needed including the system CPU with pre-installed software, high resolution color display system, a MIDI card for control, all system components plus the required disk drives installed in a matching Drive Cabinet with power supplies. All models listed here include 2 channels of *Digital* I/O standard and between 4 to 16 tracks of internal through-put. To select a system you can consult your dealer or refer to the *AudioEngine* technical brochure for the basics and pick the base model number which will provide the CPU and the SPECTRAL components needed. Next, determine the on-line storage requirements (track-minutes) and select the drive size option. Other options such as additional I/O and back-up devices can be added to any of these *AudioEngines* to expand the workstation. Dealers may also configure combinations other than these.

Model	Basic Description	With 2 Channels Digital I/O *	Suggested List
<b>350 Series AudioEngine: 486-33 CPU with 8 slots, 14" High Resolution Color Display</b>			
351-610	1 HD610 Drive, 4 to 6 Tracks, 100 Track-Minutes		12,335
351-1200	1 HD1200 Drive, 4 to 6 Tracks, 197 Track-Minutes		12,685
351-2100	1 HD2100 Drive, 4 to 6 Tracks, 393 Track-Minutes		14,085
352-610	2 HD610 Drives, 8 to 12 Tracks, 200 Track-Minutes + 1 DSP with <i>AudioScape</i>		17,365
352-1200	2 HD1200 Drives, 8 to 12 Tracks, 394 Track-Minutes + 1 DSP with <i>AudioScape</i>		18,065
352-2100	2 HD2100 Drives, 8 to 12 Tracks, 786 Track-Minutes + 1 DSP with <i>AudioScape</i>		20,865
353-610	2 HD610 Drives, 8 to 12 Tracks, 200 Track-Minutes + 1 DSP with <i>AudioScape</i> + <i>AudioVision</i> & <i>Sampler</i>		18,505
353-1200	2 HD1200 Drives, 8 to 12 Tracks, 394 Track-Minutes + 1 DSP with <i>AudioScape</i> + <i>AudioVision</i> & <i>Sampler</i>		19,205
353-2100	2 HD2100 Drives, 8 to 12 Tracks, 786 Track-Minutes + 1 DSP with <i>AudioScape</i> + <i>AudioVision</i> & <i>Sampler</i>		22,005
354-610	4 HD610 Drives, 16 Tracks, 400 Track-Minutes + 2 DSP with <i>AudioScape</i> + <i>AudioVision</i> & <i>Sampler</i>		25,080
354-1200	4 HD1200 Drives, 16 Tracks, 788 Track-Minutes + 2 DSP with <i>AudioScape</i> + <i>AudioVision</i> & <i>Sampler</i>		26,480
354-2100	4 HD2100 Drives, 16 Tracks, 1,572 Track-Minutes + 2 DSP with <i>AudioScape</i> + <i>AudioVision</i> & <i>Sampler</i>		32,080
<b>550 Series AudioEngine: 486-50 CPU with 8 slots, 16" High Resolution Color Display</b>			
552-610	2 HD610 Drives, 8 to 12 Tracks, 200 Track-Minutes + 1 DSP with <i>AudioScape</i>		18,805
552-1200	2 HD1200 Drives, 8 to 12 Tracks, 250 Track-Minutes + 1 DSP with <i>AudioScape</i>		19,505
552-2100	2 HD2100 Drives, 8 to 12 Tracks, 786 Track-Minutes + 1 DSP with <i>AudioScape</i>		22,305
553-610	2 HD610 Drives, 8 to 12 Tracks, 200 Track-Minutes + 1 DSP with <i>AudioScape</i> + <i>AudioVision</i> & <i>Sampler</i>		19,945
553-1200	2 HD1200 Drives, 8 to 12 Tracks, 250 Track-Minutes + 1 DSP with <i>AudioScape</i> + <i>AudioVision</i> & <i>Sampler</i>		20,645
553-2100	2 HD2100 Drives, 8 to 12 Tracks, 786 Track-Minutes + 1 DSP with <i>AudioScape</i> + <i>AudioVision</i> & <i>Sampler</i>		23,445
554-610	4 HD610 Drives, 16 Tracks, 248 Track-Minutes + 2 DSP with <i>AudioScape</i> + <i>AudioVision</i> & <i>Sampler</i>		26,520
554-1200	4 HD1200 Drives, 16 Tracks, 788 Track-Minutes + 2 DSP with <i>AudioScape</i> + <i>AudioVision</i> & <i>Sampler</i>		27,920
554-2100	4 HD2100 Drives, 16 Tracks, 1,572 Track-Minutes + 2 DSP with <i>AudioScape</i> + <i>AudioVision</i> & <i>Sampler</i>		33,520

**Note:** Disk recording time (Track-Minutes) are approximate and may vary slightly from drive to drive.

\* **All AudioEngine systems** listed above are provided with 2 channels *Digital* I/O standard -- No Analog I/O is included. Analog I/O and/or additional *Digital* I/O, up to 16 channels, can be added by selection of many different I/O configurations from the I/O options.

## I/O Options

<b>ADDA2218</b>	2 channel 18 Bit A/D and D/A Converter with line levels In & Out	1,595
<b>IO816</b>	Main Multiple Channel Expander board (required for ADAX or MAX units)	445
<b>IOExp</b>	Expands IO816 for 16 channels - adds connections to add a second ADAX or MAX unit	295
<b>ADAX8818</b>	8 Channel Analog + 2 Channel Digital I/O with front panel metering	3,795
<b>MAX880/s</b>	8 Channel Digital I/O only with SMPTE reader (requires A/D and D/A converters)	1,995
<b>MAX880/e</b>	8 channel Digital I/O only (requires A/D and D/A converters)	1,750
<b>SyncClock 6400</b>	Sync Translator - resolves LTC to AES clock, convert VITC/SMPTE/MTC, etc.	1,995

**For other options** such as back-up devices & other expansions refer to the *Individual Components & Accessories* sheet (page 4).

**Third party add-on options** are also available such as hardware control worksurfaces, sound libraries, alternative I/O options, etc. Contact your authorized SPECTRAL dealer for suggested third party product selections.

# SPECTRAL MT Package Systems (Base Configurations)

All MT Packages REQUIRE: Intel 80386-25MHz or faster or 80486 (ISA Bus) AT-compatible computer with accurate bus DMA timing per Intel ISA specification; VGA or better color graphics (super VGA 1024 x 768 recommended); Microsoft compatible mouse; MS-DOS 4.x or higher; Microsoft WINDOWS 3.1; & a MIDI card. Optional DSP software can be used when SynthCARD DSP boards are included in the package. I/O options can also be expanded for up to 16 channels of combined digital and analog I/O. Dealers may also configure packages other than these. Note: Disk drive recording times (Track-Minutes) are approximate and may vary slightly.

Suggested List (US Dollars)

## 4 Track Models

Drive Size xxx = -610 -1200 -2100

INCLUDES: FlyBy, Digital Studio, StudioTracks, PatchBay, and 1 SPECTRA-Drive

REQUIRES: 2 empty computer slots, 1 empty drive bay or an external drive enclosure.

Basic models REQUIRE: A/D & D/A Converters, pro-model DAT machine with digital I/O or other device with S/PDIF or AES digital connection.

MT1010-610	Basic - 100 Track-minutes	6,985		
MT1010-1200	Basic - 197 Track-minutes		7,335	
MT1010-2100	Basic - 393 Track-minutes			8,735
<b>- with Analog I/O</b>				
MT1011-xxx	Stereo - plus ADDA2218	8,580	8,930	10,330
MT1014-xxx	8 Chan - plus IO816 and ADAX8818 (+ 1 slot)	11,225	11,575	12,975
<b>- with 1 SynthCARD DSP Board</b> (for AudioScape or or Sampling software)				
MT1110-xxx	Basic - plus DSP (+ 1 slot)	9,775	10,125	11,525
MT1111-xxx	Stereo - plus DSP and ADDA2218 (+ 1 slot)	11,370	11,720	13,120

## 8 Track Package Models

INCLUDES: FlyBy, Digital Studio, StudioTracks, PatchBay, 2 SPECTRA-Drives

REQUIRES: 2 empty computer slots, sufficient empty internal drive bays or an external drive enclosure.

Basic models REQUIRE: A/D & D/A Converters, pro-model DAT machine with digital I/O or other device with S/PDIF or AES digital connection.

MT2010-610	Basic - 200 Track-Minutes	8,630		
MT2010-1200	Basic - 394 Track-Minutes		9,330	
MT2010-2100	Basic - 786 Track-Minutes			12,130
<b>- with Stereo or Multi-Channel Analog I/O</b>				
MT2011-xxx	Stereo - plus ADDA2218 Converter	10,225	10,925	13,725
MT2014-xxx	8 Chan - plus IO816 and ADAX8818 (+ 1 slot)	12,870	13,570	16,370
<b>- with 1 SynthCARD DSP</b>				
MT2110-xxx	Basic - plus DSP (+ 1 slots)	11,420	12,120	14,920
MT2111-xxx	Stereo - plus DSP and ADDA2218 (+ 1 slots)	13,015	13,715	16,515
MT2114-xxx	8 Chan - plus DSP, plus IO816 and ADAX8818 (+ 2 slots)	15,660	16,360	19,160
MT2211-xxx	Stereo - plus 2 DSPs and ADDA2218 (+ 2 slots)	15,805	16,505	19,305
MT2214-xxx	8 Chan - plus 2 DSPs, plus IO816 and ADAX8818 (+ 3 slots)	18,450	19,150	21,950

## 16 Track Package Models

INCLUDES: FlyBy, Digital Studio, StudioTracks, PatchBay, MT800, 4 SPECTRA-Drives, DSP, ADDA2218 or ADAX8818

REQUIRES: 3 empty slots, sufficient empty drive bays or external drive enclosure. (AudioScape, AudioVision, or Sampler optional)

<b>- with 1 SynthCARD DSP and Stereo Analog I/O</b>				
MT4111-610	Stereo - 400 Track-Minutes - includes ADDA2218, DSP	16,305		
MT4111-1200	Stereo - 788 Track-Minutes - includes ADDA2218, DSP		17,705	
MT4111-2100	Stereo - 1,572 Track-Minutes - includes ADDA2218, DSP			23,305
<b>- with 1 DSP and Multi-Channel Analog I/O</b>				
MT4114-xxx	8 Chan - plus IO816 and ADAX8818 (+ 1 slot)	18,950	20,350	25,950
MT4128-xxx	16 Chan - plus IO816 + IOexp + two ADAX8818s (+1 slot)	23,040	24,440	30,040
<b>- with 2 DSP and Stereo or Multi-Channel Analog I/O</b>				
MT4211-xxx	Stereo - plus extra DSP (+1 slots)	19,095	20,495	26,095
MT4214-xxx	8 Chan - plus extra DSP, IO816 and ADAX8818 (+ 2 slots)	21,740	23,140	28,740
MT4228-xxx	16 Chan - plus extra DSP, IO816 + IOexp + two ADAX8818s (+ 2 slots)	26,275	27,675	33,275

### Signal Processing Software

AudioScape E.Q., Delay, Filters, Reverb and other real-time effects Add + 595 to DSP model price

### Sampling Software

AudioVision + Sampler Sample recording, editing, and MIDI controlled playback Add + 1,140 to DSP model price

## AudioEngine™ Computer Systems in 19" Rack

<i>AudioEngine 350</i> CPU; 486-33 8 slot, complete with 14" Hi-Res monitor . . . . .	4,685
<i>AudioEngine 550</i> CPU; 486-50 8 slot, complete with 16" Hi-Res monitor . . . . .	6,125

*Note:* The 350 series *AudioEngine* CPUs can be ordered with 16" monitor option for additional COST. A *RX4875* drive enclosure is included with all complete *AudioEngine* systems described on page 2 but it is not included with the *AudioEngine* CPU Computer Systems listed above. Order drive enclosures below.

## System Components

### The Digital Audio Bus

<i>FlyBy™</i> Bus Controller Board . . . . .	895
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### Audio Processing & 16-Bit Sampling

<i>SynthCARD™</i> DSP board with <i>SR404</i> RAM daughter board . . . . .	2,790
<i>AudioVision™</i> software . . . . .	645
<i>SynthEngine™ Sampler</i> software . . . . .	495
<i>AudioScape™</i> software . . . . .	595
<i>AudioFiler™</i> software . . . . .	95

### Hard Disk Recording, Mixing, and Editing

<i>Digital Studio™</i> board with <i>StudioTracks™</i> software . . . . .	4,445
<i>AutoTracks™</i> CMX AutoConforming software . . . . .	(TBD)
<i>MT800</i> 8 track SCSI expansion . . . . .	495

### SCSI Disk Drives

<i>HD610 SPECTRA-Drive</i> . . . . .	1,645
<i>HD1200 SPECTRA-Drive</i> . . . . .	1,995
<i>HD2100 SPECTRA-Drive</i> . . . . .	3,395
<i>MO600</i> Magneto-Optical drive . . . . .	3,675
<i>OC600</i> Magneto-Optical cartridge . . . . .	180
<i>MO1000</i> Magneto-Optical drive . . . . .	4,650
<i>OC1000</i> Magneto-Optical cartridge . . . . .	235

### Tape Back-Up

<i>EX2400</i> 8mm Tape drive . . . . .	2,550
<i>TC2400</i> 8mm Tape cartridge . . . . .	40
<i>DA2000</i> DDS (Data DAT) Tape drive . . . . .	1,725
<i>TC2000</i> DDS Tape cartridge . . . . .	30

### Drive Enclosures

<i>RX275</i> Single Drive 19" Rack Enclosure . . . . .	395
<i>RX875</i> Four Drive 19" Rack Enclosure . . . . .	675
<i>RX4875</i> (Combo) Two to Eight Drive 19" Rack Enclosure . . . . .	795

### I/O Options

<i>ADDA2218</i> 2 channel 18 Bit A/D and D/A Converter with line levels In & Out . . . . .	1,595
<i>IO816</i> Main Multiple Channel Expander board (required for ADAX or MAX units) . . . . .	445
<i>IOExp</i> Expands IO816 for 16 channels - adds connections to add a second ADAX or MAX unit . . . . .	295
<i>ADAX8818</i> 8 Channel Analog + 2 Channel Digital I/O with front panel metering . . . . .	3,795
<i>MAX880/s</i> 8 Channel Digital I/O only with SMPTE reader (requires A/D and D/A converters) . . . . .	1,995
<i>MAX880/e</i> 8 channel Digital I/O only (requires A/D and D/A converters) . . . . .	1,750
<i>SynClock™ 6400</i> Sync Translator & True Chase - resolves LTC to AES clock, convert VITC/SMPTE/MTC . . . . .	1,995

All prices shown on all pages are in U.S. Dollars.  
Prices subject to change without notice. Dealer pricing may vary.