

# Index

---

## Numerics

---

4-band EQ, 568  
7-band EQ, 568  
16 bits, mastering to, 651  
100mm faders, 151  
2001 (Dr. Dre), 536

## A

---

Absolute Grid editing mode, 348  
absorbers, sound control, 46  
Accelerated Graphics Port (AGP), 112  
Acid program, 21  
acoustic guitars  
  compressing, 584  
  EQ, 574  
  microphone selection considerations, 99  
  microphone types and placement, 278–279  
acoustical foam, studio insulation, 43  
active monitors, 28–29  
A/D (analog-to-digital) converters, 17–18  
ADAT (Alesis Digital Audio Tape)  
  Lightpipe connectors, 132  
  Optical connectors, 219, 528  
AES/EBU (Audio Engineering Society/European Broadcasting Union)  
  cables, 37–38  
after-touch performance data (MIDI), 72, 75, 493  
AGP (Accelerated Graphics Port), 112  
agreements (contracts), 677  
AIFF (Audio Interchange File Format), 30, 218, 629  
air-conditioning, studio setup, 39  
Alesis Masterlink burners, 659  
Algorithm setting, reverb effect, 601  
alignment, regions, 393–394  
Amazon Web site, 685  
ambient miking, 261  
ambient sound, 600  
amps, preamps  
  defined, 132  
  external, 13–14  
  hybrid, 14, 102  
  internal, 13  
  microphones and, 100–102  
  as most crucial recording element, 13  
  Neve and Neve-clone, 13  
  solid-state, 13, 100–101  
  starved-plate designs, 14  
  tube, 13, 101  
analog connectors, 32–36  
analog device connections, 561  
analog mixers, 54–55, 528–529  
analog-to-digital (A/D) converters, 17–18  
Apple Web site, 684  
arrangement, building intensity of, 534  
*Art of Digital Audio, The* (Watkinson), 18  
artifacts, 645  
Assign switches, 63  
Attack knob  
  compressors, 269, 579  
  gates, 589  
  limiters, 586  
attenuation, 25  
audio  
  backups, 237–238  
  compacting, 235–236  
  deleting, 236–237  
  exporting, 229–233  
  file management, 234–235  
  Import Audio dialog box, 643–644  
  importing, 219–222  
  streaming, 682–683  
audio dropout, 165  
audio editing  
  Absolute Grid mode, 348  
  discussed, 338  
  Grid mode, 348  
  nondestructive, 338  
  during playback, 338  
  Relative Grid mode, 348  
  Shuffle mode, 347  
  Slip mode, 348  
  Spot mode, 347–348  
  undo operations, 355–357  
Audio Engineering Society/European Broadcasting Union (AES/EBU) cables, 37–38

- audio file types
  - AIFF (Audio Interchange File Format), 30, 218, 629
  - BWF (Broadcast WAV File), 218, 628
  - MPEG-1 Layer 2, 218
  - new session creation, 168
  - QuickTime, 218
  - RealAudio G2, 218
  - SDII (Sound Designer II), 218
  - Sound Resource, 218
  - Windows Media, 219
- audio files. *See also* regions
  - compacting, 433–434
  - overview, 175
- Audio Import Options dialog box, 222
- Audio Interchange File Format (AIFF), 30, 218, 629
- Audio Media options (Import Session dialog box), 225–226
- audio recordings
  - auditioning takes, 328–332
  - canceling performance, 332
  - click tracks, 303–306
  - destructive, 180, 290
  - digital, 16–18
  - disk allocation, 292
  - enabling tracks for, 293–294
  - Latch Record Enable mode, 295
  - levels, setting, 296–298
  - loop, 180, 290–291, 324–325
  - monitoring setup, 299–303
  - multiple tracks, 313–314
  - nondestructive, 180, 290
  - overdubbing, 68, 325–327
  - to playlists, 327–328
  - pre-rolls/post-rolls, 314–316
  - punch, 180, 291, 321–324
  - quick-punch recording, 180, 291, 325
  - range settings, 298–299
  - Record modes, 289–291
  - record-enabling, 293–294
  - in Safe mode, 296
  - single tracks, 313–315
  - software, 21–22
  - starting over from scratch, 320
  - tempo settings, 306–307
  - unwanted takes, getting rid of, 332–334
- Audio Regions list
  - auditioning takes from, 328–329
  - selecting regions in, 353
  - sorting regions in, 354
  - unwanted takes, clearing, 333–334
- audio track channel strip (Mix window), 200–202
- audio tracks
  - defined, 241
  - parameters, automation, 608
- Audiophile hardware, 156–157
- AudioStreet Web site, 677–678
- AudioSuite offline plug-ins
  - controls in, 558–559
  - how to use, 560
  - overview, 557
- Audition button (Fades dialog box), 422
- audition paths, 166
- auditioning takes
  - from Audio Regions list, 328–329
  - choosing from playlists, 330
  - from multiple tracks, 331–332
  - preferences, 330–331
  - from Takes List drop-down menu, 329–330
- Auto button (RTAS plug-in), 556
- Auto Input Monitoring mode, 300
- auto-created regions, 339
- automation
  - audio track parameters, 608
  - Auto Latch mode, 609–610
  - Auto Off mode, 609–610
  - Auto Read mode, 609–610
  - Auto Touch mode, 609–610
  - Auto Write mode, 609–610
  - auxiliary input track parameters, 608
  - copying, 622
  - cutting, 621
  - deleting, 622
  - drawing, 618–619
  - editing, 620–624
  - enabling, 612–613
  - Grabber tool, 415–416
  - instrument track parameters, 608
  - Master Fader track parameters, 607
  - MIDI track parameters, 607
  - pasting, 622
  - preferences, 610–612

- reading of, enabling and suspending, 613
  - Selector tool, 415
  - thinning, 619–620
  - Trimmer tool, 414–415
  - viewing, 617–618
  - writing, 614–617
  - writing of, enabling and suspending, 612–613
  - Automation Mode drop-down menu (Track Output window), 552
  - Automation Mode selector
    - Edit window, 186
    - Mix window audio track channel strip, 201
  - Automation Safe button
    - RTAS plug-in, 556
    - Track Output window, 552
  - Automation section (Digi 003 interfaces), 155
  - Automation view, using Smart tool in, 414–416, 488
  - AutoPlay feature, 125
  - auto-tune, 27
  - Aux Assign knob, 66–67
  - Aux (Auxiliary) Return knobs, 66
  - Aux (Auxiliary) Send knobs, 60, 62, 66
  - Aux Return jacks, 69
  - auxiliary bus, 64
  - auxiliary input tracks
    - Mix window, 204, 544–545
    - parameters, automation, 608
  - auxiliary tracks, 241
  - axial room mode, 44
- 
- B
- 
- backplates, microphones, 88
  - backup vocals
    - EQ, 573
    - microphone types and placement, 273–274
    - stereo field, 530
  - backups
    - to CDs and DVDs, 127–128
    - data, 128
    - Norton Ghost program, 129
    - removable media, 128
    - Retrospect program, 129
    - session files, 237–238
  - balanced cords, 34
  - balanced versus unbalanced signals, 12
  - balancing levels, 648–649
  - Band-Pass filter, 593–594
  - bass (kick) drums
    - compressing, 584
    - EQ, 574–575
    - microphone types and placement, 281–282
  - bass guitars
    - amps, microphone selection
      - considerations, 99
    - compressing, 583
    - EQ, 574
    - microphone types and placement, 277
    - stereo field, 531
  - bass traps, 48–51
  - batch fades, 430–431
  - Baxandall curve, 647
  - Beck (*Mutations*), 536
  - bidirectional microphones, 94–95
  - bit depth
    - new session creation, 168
    - sampling rate and, 17
  - bit rates, 672–673
  - bits (binary digits), 16–17
  - Black Box hardware, 156–157
  - blips. *See* transients
  - Block view (Track View display), 340, 469
  - blogs, 681
  - Blumlein technique, stereo miking, 263–264
  - BNC worldclock connectors, 132
  - Bombfactory BF 76 limiter, 586–588
  - Bounce to Disk feature
    - bounce options, 627–629
    - Conversion Quality option, 630
    - File Type option, 628–629
    - Format option, 629
    - Resolution setting, 629
    - Sample Rate option, 629
    - Source option, 628
  - boxy-type sounds, 91
  - Brand New Day* (Sting), 536
  - breakpoints
    - adding, 623
    - deleting, 623
    - editing, 486
    - moving, 623–624
    - scaling, 486–487
  - breathes, 582, 591
  - Broadcast WAV File (BWF) audio file type, 218, 628

- buffer size
  - hard drives, 20, 113
  - setting up, 164
- Burn to Shine* (Harper), 536
- burning CDs
  - CD Creator burner, 659
  - CD-R brands, 658
  - computer-based systems, 659
  - error-detection software programs, 660
  - JAM burner, 659
  - mass production, 660–662
  - overview, 657
  - PQ subcode information, 659
  - Red Book-capable burners, 659
  - standalone burners, 659–660
  - Toast burner, 659
- Bus tab (I/O Setup dialog box), 167
- busing signals, mixers, 63–64
- buzzing sound, 32
- BWF (Broadcast WAV File) audio file type, 218, 628
- Bypass button (AudioSuite offline plug-in), 559

## C

---

- cables
  - AES/EBU, 37–38
  - coaxial, 37–38, 138
  - fiber optic, 37
  - low-Z, 35
  - MIDI, 36–37, 72
  - XLR connectors, 35
- cache buffers, 20
- canceling recording
  - clearing file from Audio Regions list, 333–334
  - keyboard commands, 332, 459
  - undo operations, 459
  - Undo Record command, 333
- Capture Region command, 386
- cardioid microphones, 92–94
- carpet, studio insulation, 43
- carving out frequencies, 566
- CD & DVD Recording For Dummies, 2nd Edition* (Chambers), 237
- CD Baby Web site, 665, 685

- CD burners
  - CD Creator, 659
  - CD-R burners, 658
  - computer-based systems, 659
  - error-detection software programs, 660
  - JAM, 659
  - mass production, 660–662
  - overview, 657
  - PQ subcode information, 659
  - Red Book-capable, 659
  - standalone, 659–660
  - Toast, 659
- CD Creator burners, 659
- CD Marksman Web site, 664
- CDs
  - backing up data to, 127–128
  - CD-R (write), 30
  - CD-RW (rewrite), 30
  - duplication, 663–664
  - mastering, 30
  - multiple copies, 662–666
  - reference, 664
  - replication, 664–666
- CD/Works Web site, 663
- centered crossfades, 425–426
- central processing units (CPUs)
  - compatibility information, 19
  - manufacturers, 117
  - processing power, 118
  - speed, 19, 118
  - usage limit settings, 164
- chair selection, studio setup, 39
- Chambers, Mark (*CD & DVD Recording For Dummies, 2nd Edition*), 237
- Change Duration option (MIDI Operations window), 507–509
- Change Velocity option (MIDI Operations window), 506–507
- channel meter LEDs (Digi 003 interface), 151
- Channel selector (RTAS plug-in), 556
- channel strips
  - compressor, preamp, and equalizer integration, 103
  - devices for, 103
  - expanded view (Edit window), 187
  - functionality, 57
- Channel view (Digi 003 interfaces), 151–152

- channel voice message, 75
- channels, MIDI, 74–75
- character (pleasing distortion), 14
- chipsets, 114
- chorus effect
  - how to use, 605
  - uses for, 26
- Clear Audio dialog box, 235
- Clear command, 408–409
- Clear Regions dialog box, 432
- clearing
  - selections, 408–409
  - unwanted takes from Regions list, 460
- Click button (Transport window), 183
- click tracks
  - advantages of, 303
  - connecting external device to sound, 306
  - creating, 304–305, 449–452
  - device configuration, 304–305, 450–452
  - enabling, 308
  - meter settings, 307, 449–450
  - output assignment, 304
  - tempo settings, 306–307, 449
- Click/Countoff Options dialog box, 305, 450–451
- clipping, 24
- clock source
  - master clock, 161
  - optical input, 162
- Close button (Track Output window), 550
- close miking, 260
- coaxial cables, 37–38, 138
- Cohen, Leonard (*Ten New Songs*), 536
- coincident stereo miking, 262
- colors, track, 247–248
- Come Away with Me* (Jones), 536
- comfort and efficiency, studio setup, 39
- Command 18 mixers, 15–16, 56
- commands
  - Capture Region, 386
  - Clear, 408–409
  - Copy, 408, 622
  - Cut, 407–408, 621
  - Delete, 622
  - Duplicate, 409–410
  - Heal Regions, 388–390
  - Items to Copy, 172
  - keyboard, 332, 459
  - Paste, 409, 622
  - Repeat, 410
  - Revert to Save, 172
  - Save Session As, 171
  - Save Session Copy In, 171–172
  - Separate Regions, 386–387
  - Thin, 620
  - Trim to Selection, 388
  - Undo Record, 333
  - Zoom Toggle, 346
- comments, memory locations, 372
- Comments view (Mix window), 207
- Compact Audio dialog box, 236
- compacting audio files, 235–236, 433–434
- Compare button
  - AudioSuite offline plug-in, 559
  - RTAS plug-in, 556
- compressors
  - acoustic instruments, 584
  - Attack knob, 579
  - bass, 583
  - Compressor/Limiter Dyn 3 plug-in, 579
  - dials, knobs, and settings, 268–269
  - drums, 584–585
  - electric guitars, 583
  - functionality, 24–25
  - Gain knob, 579
  - hard knee sounds, 269
  - how to use, 580–581
  - Knee knob, 579
  - Levels section, 580
  - mastering and, 636
  - percussion instruments, 584
  - Ratio setting, 579
  - Release knob, 580
  - selection considerations, 102
  - soft knee sounds, 269
  - Threshold knob, 580
  - too much versus too little
    - compression, 270
  - transients, 24, 578
  - uses for, 578
  - vocals, 582–583
- computer control surfaces, 56–57
- computer software MIDI controllers, 16
- computer-based CD burners, 659
- computers
  - compatibility information, 19
  - CPU processors, 19

- computers (*continued*)
  - dedicated, 19
  - hard drives, 19–20
  - hardware needed, 19–20
  - PC Wizard Web site, 19
  - PCI cards, 20–21
  - setup, 18
  - sound cards, 20–21
- condenser microphones, 88–89, 271–272
- Conductor button (Transport window), 183
- configuration, input/output
  - Digi 003 interfaces, 147
  - Mbox 2 interface, 138
  - Mbox 2 Mini interface, 135
  - Mbox 2 Pro interface, 142–143
- configuration, windows
  - creation, 211
  - discussed, 210
  - display settings, 212–213
  - editing, 215–216
  - filtering, 214
  - managing, 213–216
  - naming, 211, 214
  - new configurations, 215
  - numbering, 211
  - recalling, 213
  - showing/hiding, 215
  - updating, 216
- connectors
  - ADAT Lightpipe, 132
  - ADAT Optical, 38
  - AES/EBU cables, 37–38
  - analog, 32–36
  - balanced cords, 34
  - BNC worldclock, 132
  - designer cords, 33
  - digital, 36–38
  - low-Z cable, 35
  - MIDI, 36–37, 72
  - mono/TS plugs, 32–33
  - overview, 31
  - phono plugs, 36
  - quarter-inch plugs, 32–34
  - RCA plugs, 36
  - S/PDIF, 37–38
  - stereo/TRS plugs, 33–34
  - TDIF, 38
  - XLR, 35
  - Y cords, 34–35
- Console view (Digi 003 interfaces), 151–152
- consolidating selections, 431–432
- continuous controller data, 485–487
- contracts, 677
- Control Panel settings, 121–123
- control room bus, 64
- Control Room level knob, 66
- control surfaces, 56–57
- control-change messages, 76
- controller events, 494
- Controller view (Track View display), 471
- controllers, MIDI
  - computer software, 16
  - defined, 11
  - keyboard, 16
  - selection considerations, 85
  - self created, 84
  - standalone, 16
- Conversion Quality option (Bounce to Disk feature), 630
- converters, 17–18
- Copy command, 408, 622
- copying
  - automation data, 622
  - events, 309
  - memory locations, 382
  - MIDI events, 496
  - selections, 408
- copyrights, 661
- cords
  - designer, 33
  - microphone, 103
  - Y, 34–35
- Core2Duo CPU, 117
- counter displays (Edit window), 191
- Counter mode (Digi 003 interfaces), 154
- Counters section (Transport window), 180–181
- Countoff button (Transport window), 183
- CPUs (central processing units)
  - compatibility information, 19
  - manufacturers, 117
  - processing power, 118
  - speed, 19, 118
  - usage limit settings, 164
- Create Group dialog box, 251
- Creating Web Pages All-in-One Desk Reference For Dummies*, (Wagner and Mansfield), 679

crossfades  
 centered, 425–426  
 deleting, 427  
 length adjustment, 414  
 post-crossfades, 427  
 pre-crossfades, 426–427  
 trimming, 428  
 Cursor display (Edit window), 194  
 Cut command, 407–408, 621  
 cutting  
 automation data, 621  
 MIDI events, 496  
 selections, 407–408  
 cymbals  
 EQ, 576  
 microphone selection considerations, 99  
 microphone types and placement, 286

## D

D/A (digital-to-analog) converters, 17–18  
 DAE (Digidesign Audio Engine) playback  
 buffer, 165  
 daisychain setup, 72–73  
 data flow example (MIDI), 73–74  
 DAW (Digital Audio Workstation), 120  
 dB (decibels), 22, 298, 571  
 dead air, studio insulation, 43  
 dead room, 270–271, 277  
 Decay setting, reverb effect, 601  
 De-Esser plug-in  
 Frequency parameter, 591  
 graph, 592  
 HF Only parameter, 592  
 how to use, 592  
 Levels section, 592  
 Listen option, 592  
 Range knob, 591  
 sibilance, getting rid of, 591  
 Default switch (Digi 003 interfaces), 152  
 delay effect  
 Delay parameter, 603  
 Depth parameter, 603  
 Feedback parameter, 604  
 Gain setting, 603  
 Groove parameter, 604  
 LPF (Low-Pass Filter), 603  
 meter settings, 604  
 Mix parameter, 603  
 Rate setting, 604  
 slap-back echo, 604  
 Tempo Match option, 604  
 uses for, 26, 604  
 Delay option (Real-Time Properties  
 window), 517  
 Delete command, 622  
 deleting  
 audio files, 236–237  
 automation data, 622  
 crossfades, 427  
 events, 309  
 grouped tracks, 253  
 MIDI events, 495  
 MIDI notes, 480–481  
 playlists, 351–352  
 tracks, 249–250  
 Delta hardware, 156–157  
 Depth parameter (delay effect), 603  
 Desi Pak (desiccant packets), 106  
 design, self-created Web site, 679  
 designer cords, 33  
 destructive recording, 180, 290  
 device configuration, click tracks, 304–305,  
 450–452  
 devices, input  
 components needed, 9  
 direct boxes, 10, 12  
 instruments, 10  
 line-level inputs, 132  
 mics, 11  
 sound modules, 11–12  
 devices, MIDI  
 enabling in Mac OS X, 438–440  
 enabling in Windows XP, 440–441  
 monitoring, 455  
 setting up, 437  
 DI boxes (direct boxes), 10, 12  
 dialog boxes  
 Audio Import Options, 222  
 Clear Audio, 235  
 Clear Regions, 432  
 Click/Countoff Options, 305, 450–451  
 Compact Audio, 236  
 Create Group, 251  
 Disk Allocation, 293  
 Fades, 422–424  
 Hardware Setup, 161

- dialog boxes (*continued*)
  - Import Audio, 643–644
  - Import Session, 225–228
  - Import Session Data, 228–229
  - Input Quantize, 444
  - I/O Setup, 165–167, 245
  - Meter Change, 307
  - Missing Files, 176
  - New Memory Location, 371
  - New Session, 642–643
  - New Tracks, 447
  - New Window Configuration, 211–212
  - Playback Engine, 163–165, 302
  - Save a MIDI File As, 234
  - Shift, 327
- Diffusion setting, reverb effect, 601
- Digi 002 control surface, 526–527
- Digi 003 interfaces
  - Automation section, 155
  - channel meter LEDs, 151
  - Channel view, 151–152
  - connectors and dials, 149–150
  - Console view, 151–152
  - Counter mode, 154
  - Default switch, 152
  - Display Controls area, 154
  - Display Scribble Strips, 154
  - encoder meter LED rings, 151
  - Encoder/Meter Mode switch, 154
  - Fader Flip switch, 152
  - Fader section, 151
  - Global Fader controls, 152–153
  - Input switch, 153
  - input/output configuration, 147
  - jog/shuttle wheel, 153
  - Keyboard Modifier switches, 155
  - Loop Playback and Loop Record buttons, 153
  - Mac computer connections, 148
  - Master Fader switch, 152
  - mixing with, 526–527
  - Mute button, 151
  - Navigation section, 153
  - overview, 146
  - Record Arm switch, 152
  - Rotary Encoders, 151
  - Scribble Strips, 154
  - Solo button, 151
  - Status Indicators, 154
  - Transport section, 153
  - Windows computer connections, 148
- Digidesign Audio Engine (DAE) playback buffer settings, 165
- Digidesign User Conference (DUC), 112, 646, 648
- Digidesign Web site, 56, 84, 117
- Digital Audio Workstation (DAW), 120
- digital connectors, 36–38
- digital device connections, 562
- Digital Domain Web site, 665
- digital mixers, 55–56, 528
- digital recording
  - A/D (analog-to-digital) converters, 17–18
  - D/A (digital-to-analog) converters, 17–18
  - discussed, 16
  - sampling rate, 17
- Digital Signal Processing (DSP), 120
- digital-to-analog (D/A) converters, 17–18
- direct boxes (DI boxes), 10, 12
- Direct Memory Access (DMA), 120, 124
- Direct Out jacks, 67–68
- disabling grouped tracks, 252
- Disc Makers Web site, 664–665
- DiscMasters Web site, 665
- Disk Allocation dialog box, 293
- Display Controls area (Digi 003 interfaces), 154
- Display settings
  - Edit window, 212
  - Mix window, 212
  - Transport window, 213
- display settings, window configurations, 212–213
- distant miking, 261
- distorted rock guitar sounds, 275
- distortion. *See also* transients
  - character, 14
  - clipping, 24
- distribution, about this book, 5
- dithering, 424, 650
- DMA (Direct Memory Access), 120, 124
- domain registration, 680
- downloads, 682
- drawing automation, 618–619
- Dre, Dr. (*2001*), 536
- drives
  - buffer size, 20, 113
  - chipsets, 114

disk allocation, 292  
 IDE/ATA, 20  
 Mac computers, 113  
 Maxtor 7200 rpm ATA IDE, 20  
 multiple use, 19–20, 292–293  
 optical format settings, 162  
 PCs, 120  
 rotational speed, 113  
 SATA, 20  
 seek time, 20, 113  
 selection considerations, 20  
 spindle speed, 20, 113  
 dropout, audio, 165  
 drum machines, 81  
 drums  
   compressing, 584–585  
   cymbals, 99, 286, 576  
   distant miking, 261  
   EQ, 574–575  
   hand, 287  
   hi-hats, 285, 576  
   kick (bass), 281–282, 574–575, 584  
   microphone selection considerations, 99  
   microphone types and placement,  
     281–282  
   selection considerations, 283  
   snare, 282–284, 575, 584  
   stereo field, 531  
   tom-toms, 284, 575  
   tuning, 280  
*Drums For Dummies* (Strong), 280  
 dry signals, 598  
 DSP (Digital Signal Processing), 120  
 dual mono mode (MP3 encoders), 674  
 DUC (Digidesign User Conference), 112,  
   646, 648  
 Duplicate command, 409–410  
 duplicating  
   playlists, 351  
   selections, 409–410  
   tracks, 243  
 duplication, CD, 663–664  
 Duration option (Real-Time Properties  
   window), 517  
 dust free atmosphere, studio setup, 39  
 DV Toolkit, 19  
 DVDs, backing up data to, 127–128  
 dynamic control, transients, 268–270  
 dynamic microphones, 90–91, 271

dynamic processors  
   compressors, 24–25  
   expanders, 25  
   gates, 25  
   limiters, 24–25  
   range, 24  
   types, 577–578  
 dynamics, emotion of song enhancement,  
   533–534

---

## E

---

ear fatigue, 537  
 Edit Groups list (Edit window), 195  
 Edit window. *See also* editing  
   Automation Mode selector button, 186  
   channel strip expanded view, 187  
   counter displays, 191  
   Cursor display, 194  
   Display settings, 212  
   Edit Groups list, 195  
   Event Edit displays, 191–192  
   Grabber tool, 190, 472–473  
   Grid mode, 188, 348  
   Grid Value display, 194  
   Keyboard Focus button, 193  
   Linearity Display Mode button, 193  
   Link Timeline and Edit Selection  
     button, 193  
   Link Track and Edit Selection button, 194  
   Mirrored MIDI Editing function, 194  
   Mute button, 186  
   Nudge Value display, 194  
   overview, 184  
   Pencil tool, 190, 472, 475  
   Playlist selector button, 185  
   Record Enable button, 185  
   Regions list, 196  
   Ruler View tool, 192  
   rulers, 196–198  
   Scrubber tool, 190  
   Selector tool, 190, 472  
   Separation Grabber tool, 387–388  
   Show/Hide Tracks list, 195  
   Shuffle mode, 188, 347  
   Slip mode, 188, 348  
   Smart tool, 190  
   Solo button, 185  
   Spot mode, 188, 347–348

- Edit window (*continued*)
  - Standard Trimmer tool, 189, 395–397
  - Tab to Transients button, 193, 365
  - Track Height selector arrow, 186
  - Track Name button, 185
  - track size adjustment, 248
  - Track View button, 186, 192
  - Voice selector button, 186
  - Zoom controls, 189
  - Zoomer tool, 189
- editing. *See also* Edit window
  - about this book, 4
  - Absolute Grid mode, 348
  - automation data, 620–624
  - breakpoints, 486
  - discussed, 338
  - Grid mode, 348
  - line graphs, 486
  - nondestructive, 338
  - during playback, 338
  - Relative Grid mode, 348
  - Shuffle mode, 347
  - Slip mode, 348
  - Spot mode, 347–348
  - undo operations, 355–357
  - window configurations, 215–216
- Effect Bypass button (RTAS plug-in), 555
- effects
  - chorus, 26, 605
  - delay, 26, 603–604
  - discussed, 597
  - flanger, 26–27
  - inserting, 598–599
  - reverb, 26, 600–602
  - sending signals to, 599–600
- efficiency and comfort, studio setup, 39
- electric guitars
  - amps, microphone selection
    - considerations, 99
  - compressing, 583
  - distorted rock guitar sounds, 275
  - EQ, 574
  - microphone types and placement, 275–277
- e-mail newsletters, 686
- emotion of song enhancement, 532–534
- enabling
  - automation, 612–613
  - click tracks, 308
  - grouped tracks, 252
- encoder meter LED rings (Digi 003 interface), 151
- Encoder/Meter Mode switch (Digi 003 interfaces), 154
- encoders, MP3
  - bit rates, 672–673
  - dual mono mode, 674
  - encoding process, 675–676
  - encoding software selection, 674–675
  - engines, 671–672
  - force stereo mode, 674
  - joint stereo mode, 674
  - Mono mode, 673
  - stereo mode, 674
- End counter (Transport window Expanded section), 182
- engineering skills, about this book, 2–3
- engines, MP3 encoders, 671–672
- EQ (equalization)
  - bass, 574
  - discussed, 60
  - drums, 574–575
  - 4-band, 568
  - frequencies, 572–573
  - gain, 570–571
  - general EQ guidelines, 572–573
  - graphic, 22
  - guitars, 574
  - HF (High Frequency), 569
  - high-pass, 566–567, 571
  - HMF (High-Middle Frequency), 569
  - HPF (High-Pass Filter), 569
  - LF (Low Frequency), 569
  - LMF (Lower-Middle Frequency), 569
  - low-pass, 566–567, 571
  - LPF (Low-Pass Filter), 569
  - mastering and, 637
  - MF (Middle Frequency), 569
  - parametric, 23, 565–566, 570
  - percussion instruments, 576
  - piano, 576
  - plug-ins, 567–568
  - 7-band, 568
  - shelf, 23, 566, 570–571
  - vocals, 573

equalization. *See* EQ  
 Error Reporting feature (Control Panel settings), 121  
 error-detection software programs, 660  
 Event Edit displays (Edit window), 191–192  
 events  
   copying, 309  
   creating new, 308–309  
   deleting, 309  
   moving, 309  
   pasting, 309  
 events, MIDI  
   aftertouch-performance data, 493  
   controller events, 494  
   cutting and copying, 496  
   deleting, 495  
   Insert menu, 490–491  
   inserting, 492–493  
   manual edits, 496  
   MIDI Event List window, 488–489, 491–492  
   Options menu, 489–490  
   pitch bend information, 492  
   selecting, 496  
   Track Selector menu, 489  
   volume levels, 492  
 Expanded section (Transport window), 181–182  
 expanders, 25, 588, 590–591  
 exporting  
   audio, 229–233  
   MIDI, 233–234  
   region definitions, 232–233  
   regions, 230–232  
   stereo-interleaved files, 232–233  
 external digital device, mixing to, 630–631  
 external effects, processing with, 560–563  
 external hardware mixers, 14  
 external preamps, 13–14  
 Extract button (Strip Silence command), 419

## **F**

Fader Flip switch (Digi 003 interfaces), 152  
 Fader section (Digi 003 interfaces), 151  
 faders (slider controls), 63  
 fades  
   batch, 430–431  
   crossfades, 414, 425–428  
   fade-ins, 413, 428–429  
   fade-outs, 413, 429–430  
   Fades dialog box, 422–424  
 Fast Forward button (Transport window), 179  
 Fast Track hardware, 156–157  
 feedback, 312  
 Feedback parameter (delay effect), 604  
 fiber optic cables, 37  
 fiberglass batting insulation, 43  
 figure-8 microphones, 94–95  
 file management, 234–235  
 File Mode Selector menu (AudioSuite offline plug-in), 559  
 File Type option (Bounce to Disk feature), 628–629  
 file types  
   AIFF (Audio Interchange File Format), 30, 218, 629  
   BWF (Broadcast WAV File), 218, 628  
   MIDI files, 30  
   MP3 files, 30  
   MPEG-1 Layer 2, 218  
   new session creation, 168  
   QuickTime, 218  
   RealAudio G2, 218  
   SDII (Sound Designer II), 218  
   Sound Resource, 218  
   WAV, 30  
   Windows Media, 219  
 files, missing, 176  
 filters  
   Band-Pass, 593–594  
   HPF (High-Pass Filter), 569, 594  
   LPF (Low-Pass Filter), 569, 593, 603  
   window configurations, 214  
 FireWire  
   drives, 20  
   hardware, 156–157  
   port, 21  
 flanger effects, 26–27  
 Flatten Performance option (MIDI Operations window), 505–506  
 flutes, ambient miking, 261  
 foam panels, sound control, 45  
 force stereo mode (MP3 encoders), 674  
 Format option (Bounce to Disk feature), 629  
 formats, track, 242  
 forms, sound recording, 661

4-band EQ, 568  
Franhofer algorithm, 672  
Free Hand tool, 476, 618  
frequencies  
    carving out, 566  
    EQ and, 572–573  
    rumble, 23  
Frequency parameter (De-Esser  
    plug-in), 591  
frequency spectrum, 98, 648  
Function/Utility switches, 153  
*Fundamental* (Raitt), 536

## G

Gabriel, Peter (*So*), 536  
gain, 570–571  
Gain knob (compressors), 269, 579  
Gain setting (delay effect), 603  
GarageBand Web site, 677, 685–686  
gates  
    Attack knob, 589  
    defined, 588  
    filters, 25  
    Hold setting, 589  
    how to use, 590  
    Levels section, 590  
    noise, 590  
    Options: Look Ahead button, 590  
    Range setting, 588  
    Ratio setting, 589  
    Release knob, 589  
    Side Chain section, 590  
    Threshold setting, 589  
GB (gigabyte), 19  
General MIDI. *See* GM  
General Properties memory locations,  
    374–375  
Geocities Web site, 680  
Getsigned Web site, 686  
glass master, 664  
Global Fader controls (Digi 003 interfaces),  
    152–153  
GM (General MIDI)  
    Level 1 and 2 protocols, 78  
    sound cards, 84  
    sound patches, 77  
    standards, 77–78  
Go to End button (Transport window), 179

GoDaddy Web site, 680  
Grabber tool  
    automating, 415–416  
    breakpoints, adding, deleting and  
        moving, 623  
    description of, 190  
    enabling, 413, 488  
    selecting MIDI notes with, 472–473  
graph (De-Esser plug-in), 592  
graphic equalizers, 22  
graphical user interface (GUI), 83  
graphics cards, 118–119  
Gray, Macy (*On How Life Is*), 536  
grid lines, displaying, 349  
Grid mode (Edit window), 188, 348  
grid resolution, setting, 349  
Grid Value display (Edit window), 194  
Grid/Groove Quantize operation  
    Groove template selector, 503  
    Options field, 501–502  
    Pre-Quantize field, 503  
    Quantize Grid field, 501  
    Randomize field, 503  
    What Quantize field, 500  
grit sounds, 101  
Groove parameter (delay effect), 604  
Groove template selection (Grid/Groove  
    Quantize operation), 503  
Group option (Mix window audio track  
    channel strip), 201–202  
grouped tracks  
    adding tracks to, 253  
    creating, 251–252  
    deleting, 253  
    edit and mix groups, linking, 254  
    enabling/disabling, 252  
    IDs, 252  
    linked parameters, 250  
    naming, 251  
    renaming, 253  
Groups list (Mix window), 210  
GUI (graphical user interface), 83  
guidelines  
    EQ, 572–573  
    mastering, 641–642  
guitars  
    bass, 99, 277, 531, 574, 583  
    electric, 99, 275–277, 574, 583  
    EQ, 574

impedance level, 12  
 lead, 530  
 stereo field, 530

---

## H

hand drums, 287  
 hard drives  
   buffer size, 20, 113  
   chipsets, 114  
   disk allocation, 292  
   IDE/ATA, 20  
   Mac computers, 113  
   Maxtor 7200 rpm ATA IDE, 20  
   multiple use, 19–20, 292–293  
   optical format settings, 162  
   PCs, 120  
   rotational speed, 113  
   SATA, 20  
   seek time, 20, 113  
   selection considerations, 20  
   spindle speed, 20, 113  
 hard knee sounds, compression, 269  
 hardware  
   buffer size, 164  
   computer, 19–20, 126–127  
   control surface, 56–57  
   CPU usage limit settings, 164  
   DAE playback buffer settings, 165  
   inserts, 561  
   M-Audio compatible, 155–157  
   peripherals, 161  
   Playback Engine dialog box settings, 163–165  
   RTAS Engine settings, 164–165  
   RTAS processors, 164  
   sample rate setup, 162–163  
 Hardware Setup dialog box, 161  
 Harper, Ben (*Burn to Shine*), 536  
 headphone jacks, connecting to Mbox 2  
   Micro interface, 135  
 headphones, as monitors, 27  
 headroom, 267, 298, 584  
 Heal Regions command, 388–390  
 healing regions, 388–390  
 height adjustment, tracks, 341–342  
 hertz (Hz), 23  
 HF Cut setting, reverb effect, 602  
 HF (High Frequency), 569, 593

HF Only parameter (De-Esser plug-in), 592  
 hiding  
   items in Transport window, 178  
   region name, 342  
   tracks, 245–247  
   window configurations, 215  
 High-Middle Frequency (HMF), 569  
 high-pass EQ, 566–567, 571  
 High-Pass Filter (HPF), 569, 594  
 high-shelf EQ, 566, 570–571  
 hi-hats  
   EQ, 576  
   microphone types and placement, 285  
 Hipcast Web site, 684  
 hissing sound, 32  
 HMF (High-Middle Frequency), 569  
 Hold setting (gates), 589  
 horizontal zooming, 344  
 host-based systems, 118, 159  
 hosting sites, 677–678  
 HPF (High-Pass Filter), 569, 594  
 hybrid preamps, 14, 102  
 Hydrosorbent Products company, 106  
 hyper-cardioid microphones, 94  
 Hz (hertz), 23

---

## I

iBooks, 112  
 IDE/ATA hard drives, 20  
 IDs, grouped tracks, 252  
 iMacs, 112  
 impedance level, guitars, 12  
 Implementation Chart (MIDI), 75  
 Import Audio dialog box, 643–644  
 Import Session Data dialog box, 228–229  
 Import Session dialog box  
   Audio Media options, 225–226  
   Import option, 228  
   Sample Rate Conversion options, 227–228  
   Source Properties option, 225  
   Time Code Mapping options, 227  
   Track Offset options, 227  
   Video Media options, 227  
 importing  
   audio, 219–222  
   MIDI, 222–225  
   tracks, 225–229  
 In port (MIDI), 72–73

- indicators, selecting with, 364–365
  - indiecentre Web site, 686
  - Input button (Mix window)
    - audio track channel strip, 201
    - instrument channel strip, 204
    - MIDI track channel strip, 202
  - input devices
    - components needed, 9
    - direct boxes, 10, 12
    - instruments, 10
    - line-level inputs, 132
    - mics, 11
    - sound modules, 11–12
  - Input dial (limiters), 586
  - Input Filter parameters (MIDI), 442–443
  - input jacks, mixers, 58
  - Input 1 connector (Mbox 2 Mini interface), 137
  - Input Only Monitoring mode, 300
  - Input Quantize dialog box, 444
  - Input Quantize option (MIDI Operations window), 513
  - Input switch (Digi 003 interfaces), 153
  - Input tab (I/O Setup dialog box), 166
  - Input 2 connector (Mbox 2 Mini interface), 137
  - input/output configurations
    - Digi 003 interfaces, 147
    - Mbox 2 interface, 138
    - Mbox 2 Mini interface, 135
    - Mbox 2 Pro interface, 142–143
  - inputs
    - assigning to tracks, 244–245
    - Mbox 2 Mini interface, 135
    - MIDI track, 448
    - name of, changing, 166
  - Insert jack, 58–59
  - Insert menu (MIDI events), 490–491
  - Insert Position selector (RTAS plug-in), 555
  - Insert tab (I/O Setup dialog box), 167
  - inserts
    - hardware, 561
    - inserting into channel strip, 545–546
    - turning off effects in, 546
  - Inserts function (Mix window instrument track channel strip), 204
  - Inserts view (Mix window), 207–208
  - installing Pro Tools
    - on Mac computers, 116
    - on PCs, 127–128
  - instrument track channel strip (Mix window), 203–204
  - instrument tracks
    - defined, 242
    - parameters, automation, 608
    - playback sound, changing, 458–459
  - instruments, MIDI Thru, 441–442
  - insulation, studio setup, 43–44
  - Intel systems, 117
  - interfaces
    - MIDI, 85–86
    - mixers, 14
  - internal mixers, 14
  - internal preamps, 13
  - Internet forums, 21–22
  - Inverse Pan button (Track Output window), 552
  - I/O Setup dialog box, 165–166, 245
  - isolation booths, 43
  - ISP (Internet service provider), 680
  - ISRC (International Standard Recording Code), 661
  - Items to Copy command, 172
- 
- ## J
- 
- jacks
    - Aux Return, 69
    - Direct Out, 67–68
    - input, 58
    - Insert, 58–59
    - Master Out, 67
    - Monitors, 67
    - Optical, 162
    - patch bays, 69–70
    - Phones, 67
  - JAM burners, 659
  - Jam Lab hardware, 156–157
  - jog/shuttle wheel (Digi 003 interfaces), 153
  - joint stereo mode (MP3 encoders), 674
  - Jones, Norah (*Come Away with Me*), 536
  - Joshua Judges Ruth* (Lovett), 536
- 
- ## K
- 
- Kent, Peter (*Search Engine Optimization For Dummies*, 3rd Edition), 681
  - key input signal, 592

- Key timeline, 198  
 Keyboard Focus button (Edit window), 193  
 Keyboard Modifier switches (Digi 003 interfaces), 155  
 keyboards  
   feel and comfort of, 81  
   importing audio from, 219  
   keyboard MIDI controllers, 16  
   selection considerations, 81  
   workstations, 81  
 kHz (kilohertz), 17  
 kick (bass) drums  
   compressing, 584  
   EQ, 574–575  
   microphone types and placement, 281–282  
 Knee knob (compressors), 579  
 knobs, mixer  
   Aux Assign, 66–67  
   Auxiliary (Aux) Return, 66  
   Auxiliary (Aux) Send, 60, 62, 66  
   Control Room level, 66  
   Gain, 60  
   Pan, 62  
   Phones, 66  
   Trim, 60
- 
- L**
- 
- large-diaphragm microphones, 89, 271  
 Latch Record Enable mode, 295  
 latency  
   low-latency monitoring, 302–303  
   monitoring, 301–302  
   offsetting MIDI tracks, 445–446  
   overdubbing and, 326–327  
   zero-latency monitoring option, 135  
 lead guitars, 530  
 lead vocals  
   EQ, 573  
   stereo field, 530  
 legato, 517  
 length adjustment  
   crossfades, 414  
   selections, 366, 368–369  
 Length counter (Transport window Expanded section), 182  
 level adjustment, emotion of song enhancement, 532–534  
 level meters, sends, 548  
 Level 1 and 2 protocols (General MIDI), 78  
 leveling, 637  
 Levels section  
   compressors, 580  
   De-Esser plug-in, 592  
   gates, 590  
 LF (Low Frequency), 569, 594, 602  
 Librarian menu  
   AudioSuite offline plug-in, 559  
   RTAS plug-in, 556  
 limiters  
   Attack knob, 586  
   Bombfactory BF 76, 586–588  
   Input dial, 586  
   mastering and, 636  
   meter settings, 587  
   Output dial, 586  
   overview, 24–25, 585  
   Ratio setting, 587  
   Release knob, 586–587  
 line graphs, 486  
 Line tool, 476–477, 618  
 Linearity Display Mode button (Edit window), 193  
 line-level inputs, 132  
 Link settings (Fades dialog box), 424  
 Link Timeline and Edit Selection button (Edit window), 193  
 Link Track and Edit Selection button (Edit window), 194  
 Listen option (De-Esser plug-in), 592  
 listening critically, 535–537  
 LMF (Low-Middle Frequency), 569  
 lockers, microphone, 106  
 locking regions, 404  
 Logic program, 21  
 Loop Playback and Loop Record buttons (Digi 003 interfaces), 153  
 loop recording  
   audio, 180, 290–291, 324–325  
   MIDI, 466–467  
 looping playback, 318–319, 384  
 Lovett, Lyle (*Joshua Judges Ruth*), 536  
 Low Frequency (LF), 569, 594, 602  
 low-latency monitoring, 302–303  
 Low-Middle Frequency (LMF), 569  
 low-pass EQ, 566–567, 571  
 low-shelf EQ, 566, 570–571

low-Z cables, 35  
LPF (Low-Pass Filter), 569, 593, 603  
L-shaped studio setup, 39–40

## M

---

### Mac computers

connecting Digi 003 interfaces to, 148  
connecting Mbox 2 interface to, 139–140  
connecting Mbox 2 Micro interface to, 134–135  
connecting Mbox 2 Mini interface to, 136–137  
connecting Mbox 2 Pro interface to, 143–144  
extra software on, 114  
hard drives, 113  
iBooks, 112  
iMacs, 112  
Mac minis, 112  
PC software differences, 160  
PowerBooks, 112  
Pro Tools installation, 116  
RAM requirements, 113  
selection considerations, 112  
session templates for, 173  
sleep function, 115–116  
system requirements, 111–114  
system settings, 114–116  
versions, 112

Mac OS X, enabling MIDI devices in, 438–440

Mackie Control Universal, 15

mailing lists, 667

Manley Labs, 13

Mansfield, Richard (*Creating Web Pages All-in-One Desk Reference For Dummies*), 679

Manson, Marilyn (*Mechanical Animals*), 536

Marker memory locations, 373

Markers timeline, 198

marketing and promotion, 666–668, 685–686

master bus, 64

master clock, 161

master control section, mixers, 64–65

Master fader  
creating, 543–544  
functionality, 64  
parameters, automation, 609

Master Fader switch (Digi 003 interfaces), 152

Master Fader track (Mix window), 205–206

Master Level meters, 67

Master Link button (RTAS plug-in), 556

Master Out jacks, 67

MasterDisc Web site, 665

mastering  
balancing levels, 648–649  
CDs, 30  
compression and, 636  
computer files, 30  
dithering, 650  
duplicated copies, 29–30  
EQ and, 637  
general mastering guidelines, 641–642  
hiring professionals for, 638–640  
less-is-more concept, 642  
leveling, 637  
limiters and, 636  
optimizing dynamics, 644–646  
overview, 629  
preparation for, 637–638  
processing stage, 636–637  
sequencing, 637, 653–654  
session setup, 642–644  
to 16 bits, 651  
SRC (sample-rate conversion) process, 652–653  
tonal balance, 646–648  
truncation, 651

M-Audio hardware, 21

M-Audio interfaces, 155–157

Maxtor 7200 rpm ATA IDE hard drives, 20

Mbox 2 interface  
connectors and dials, 140–141  
headphone jacks, 135  
input/output configurations, 138

Mac computer connections, 139–140

outputs, 135

Windows computer connections, 139

Mbox 2 Micro interface  
costs, 133  
headphone connections, 135  
inputs, 135

Mac computer connection, 134–135

overview, 133

speaker connections, 135

- uses for, 134
- Windows computer connection, 134
- Mbox 2 Mini interface
  - connectors and dials, 137–138
  - input/output configurations, 135
  - Mac computer connections, 136–137
  - Windows computer connections, 136
- Mbox 2 Pro interface
  - connectors and dials, 144–145
  - input/output configurations, 142–143
  - Mac computer connections, 143–144
  - uses for, 141
  - Windows computer connections, 143
- McLachlan, Sarah (*Surfacing*), 536
- Mechanical Animals* (Manson), 535
- memory
  - DMA, 120, 124
  - minimum requirements, 19
  - New Memory Location dialog box, 371
  - RAM, 19, 113, 119
- memory locations
  - changing type of, 380–381
  - comments, 372
  - copying and pasting, 382
  - creation, 372–376
  - discussed, 370
  - extending selections to, 369
  - General Properties, 374–375
  - Marker, 373
  - Memory Location window options, 376–378
  - moving, 381
  - naming, 372
  - recalling, 379
  - renaming, 380
  - renumbering, 372
  - Selection, 374
  - selection range changes, 381
  - time properties, 371–372
- messages, MIDI
  - channel voice, 75
  - control-change, 76
  - note-off, 72, 75–76
  - note-on, 72, 75–76
  - performance data, 75–76
  - system-common, 76
  - system-exclusive, 76
- Metallica (*S&M*), 536
- Meter button (Transport window), 184
- Meter Change dialog box, 307
- meter settings
  - click tracks, 307, 449–450
  - delay effect, 604
  - events, creating, 308–309
  - events, editing, 309
  - limiters, 587
- Meter timeline, 197–198
- MF (Middle Frequency), 569
- microphones
  - accessories, 103–104
  - acoustic instrument recordings, 278–279
  - ambient miking, 261
  - backplates, 88
  - backup vocal recordings, 273–274
  - basic mic setup, 97–98
  - bass guitar recordings, 277
  - bidirectional, 94–95
  - boxy-type sounds, 91
  - cardioid, 92–94
  - care and maintenance, 104–106
  - close miking, 260
  - collections, 98
  - combination miking, 265–266
  - condenser, 88–89, 271–272
  - cords, 103
  - cymbal recordings, 286
  - desiccant packets for, 106
  - distant miking, 261
  - drum recordings, 281–282
  - dynamic, 90–91, 271
  - electric guitar recordings, 275–277
  - figure-8, 94–95
  - frequency spectrum, 98
  - hand drum recordings, 287
  - hi-hat recordings, 285
  - hyper-cardioid, 94
  - keeping away from humidity, 106
  - kick (bass) drum recordings, 281–282
  - large-diaphragm, 89
  - lockers, 106
  - multiple use, 98
  - multiple-pattern, 95
  - omnidirectional, 92–93, 274
  - overhead, 98, 286, 576
  - percussion instrument recordings, 287–288
  - phantom power feature, 88–89
  - pick-up patterns, 95

- microphones (*continued*)
  - placement techniques, 259, 267–268
  - plosives, 272
  - polarity patterns, 92–95
  - polarizing voltage, 88
  - pop filters, 104
  - preamps and, 100–102
  - proximity effects, 263, 271
  - ribbon, 91–92, 272
  - selection considerations, 96–99
  - self noise, 89
  - Shure models, 90
  - sibilants (S and Sh sounds), 272
  - simulator programs, 97
  - small-diaphragm, 89
  - SM57 and SM58, 90
  - snare drum recordings, 282–284
  - solid state, 89
  - sound sources, 11
  - SPL (Sound Pressure Level), 90
  - spot miking, 260
  - stands, 103
  - stereo miking, 262–266, 273–274
  - storage, 106
  - super-cardioid, 94
  - testing, 105
  - time aligning, 266
  - tom-tom recordings, 284
  - transient problems, 266–270
  - transparent, 89
  - tube, 89
  - types, 87
  - vocal recordings, 270–273
  - voice coils, 90
  - XLR connectors, 35
- Middle Frequency (MF), 569
- MIDI
  - after-touch performance data, 72, 75
  - binary digital data, 16
  - cables/connectors, 36–37, 72
  - channel voice message, 75
  - channels, 74–75
  - compatibility, 16
  - continuous controller data, 485–487
  - control surfaces, 527
  - control-change messages, 76
  - controllers, 11, 16, 84–85
  - daisychain setup, 72–73
  - data flow example, 73–74
  - development, 15–16
  - exporting, 233–234
  - GM (General MIDI), 77–78, 84
  - Implementation Chart, 75
  - importing, 222–225
  - In port, 72–73
  - Input Filter parameters, 442–443
  - interfaces, 85–86
  - MIDI Thru instrument, 441–442
  - multitimbrality, 75, 81
  - note-off message, 72, 75–76
  - note-on message, 72, 75–76
  - Omni Off/Mono mode, 77
  - Omni Off/Poly mode, 77
  - Omni On/Mono mode, 77
  - Omni On/Poly mode, 76–77
  - Out port, 72–73
  - overview, 71–72
  - patches, 474
  - performance data messages, 75–76
  - pitch bend performance data, 72, 75
  - polyphony, 75, 81
  - ports, 12, 72–74
  - quantizing inputs, 443–445
  - Real-Time Properties window, 515–519
  - regions, 473
  - sequencers, 16, 85
  - SMF (Standard MIDI Files), 217
  - sound cards, 84
  - sound generators, 79–80
  - sound modules and, 11–12
  - synthesizers, 80–81
  - system-common messages, 76
  - system-exclusive messages, 76
  - Thru port, 72–73
  - track views, toggling between, 472
  - velocity performance data, 72, 75
  - vibrato performance data, 72, 75
  - workstations, 81
- MIDI Controls section (Transport window), 182–184
- MIDI devices
  - enabling in Mac OS X, 438–440
  - enabling in Windows XP, 440–441
  - monitoring, 455
  - program change markers, 485
  - setting up, 437

- MIDI events
  - aftertouch-performance data, 493
  - controller events, 494
  - cutting and copying, 496
  - deleting, 495
  - Insert menu, 490–491
  - inserting, 492–493
  - manual edits, 496
  - MIDI Event List window, 488–489, 491–492
  - Options menu, 489–490
  - pitch bend information, 492
  - selecting, 496
  - Track Selector menu, 489
  - volume levels, 492
- MIDI file format, 30
- MIDI Merge button (Transport window), 183, 461
- MIDI notes
  - custom note duration, 478
  - deleting, 480–481
  - duration, 482
  - inserting, 479
  - moving, 483
  - note chasing, 474–475
  - pitch adjustment, 481–482, 484
  - program changes, 480–481
  - selecting, 472–473, 511–512
  - splitting, 512
  - start and end points, 483
  - time locations, 483
  - velocity or continuous controller data, 479
  - volume adjustment, 482
- MIDI Operations window
  - accessing, 497
  - Change Duration option, 507–509
  - Change Velocity option, 506–507
  - closing, 498
  - Flatten Performance option, 505–506
  - Grid/Groove Quantize option, 500–504
  - Input Quantize option, 513
  - navigation within, 498
  - operations list, 499
  - Restore Performance option, 504–505
  - Select/Split Notes option, 510–512
  - Step Input option, 513–515
  - Transpose option, 509
- MIDI recordings
  - canceling performance, 459
  - enabling tracks for, 453–454
  - inputs, monitoring, 455
  - loop, 466–467
  - overdubbing, 460–461
  - playback, 456–459
  - punch, 462–465
  - Record button, 456
  - system-exclusive data, 467–468
  - track material selection, 472–473
  - unwanted takes, getting rid of, 459–460
  - Wait for Note option, enabling, 454
- MIDI track channel strip (Mix window), 202–203
- MIDI tracks
  - creation, 447
  - defined, 242
  - input, setting, 448
  - instrument track output, setting, 448
  - offsetting, 445–446
  - output, setting, 448
  - parameters, automation, 609
  - playback sound, changing, 458
  - midrange-dominated sound, 271
  - miking. *See* microphones
  - milliseconds (ms), 20
  - minimum requirements, memory, 19
  - Mirrored MIDI Editing function (Edit window), 194
  - Missing Files dialog box, 176
  - Mix parameter (delay effect), 603
  - Mix window. *See also* mixing
    - audio track channel strip, 200–202
    - auxiliary input tracks, 204, 544–545
    - Comments view, 207
    - Display settings, 212
    - Groups list, 210
    - inserts, 545–546
    - Inserts view, 207–208
    - instrument track channel strip, 203–204
    - Master Fader track, 205–206
    - MIDI track channel strip, 202–203
    - mono tracks, 206–207
    - opening, 539
    - overview, 199
    - sends, 546–550
    - Sends view, 209
    - Show/Hide Tracks list, 209
    - stereo tracks, 206–207
    - track size adjustment, 248

- mixers
  - analog, 54–55
  - Assign switches, 63
  - Aux Assign knob, 66–67
  - Auxiliary (Aux) Return knobs, 66
  - Auxiliary (Aux) Send knobs, 60, 62, 66
  - auxiliary bus, 64
  - busing signals, 63–64
  - channel strips, 57, 61, 541–542
  - Command | 8, 15–16, 56
  - control room bus, 64
  - Control Room level knob, 66
  - control surfaces, 56–57
  - digital, 55–56
  - Direct Out jacks, 67–68
  - external hardware, 14
  - faders (slider controls), 63
  - Gain knob, 60
  - as heart of home studio, 14–15
  - input jacks, 58
  - Insert jack, 58–59
  - interfaces, 14
  - internal, 14
  - master bus, 64
  - master control section, 64–65
  - Master fader, 64
  - Master Level meters, 67
  - Master Out jacks, 67
  - Monitors jacks, 67
  - Mute switch, 63, 66
  - Pan knob, 62
  - patch bays, 69–70
  - phantom power feature, 58
  - Phones jacks, 67
  - Phones knob, 66
  - physical faders, 14–15
  - Pre/Post switch, 62
  - routing signals, 63–64
  - Solo switch, 63, 66
  - Sub (submix) faders, 64
  - submix bus, 64
  - third party control surfaces, 15
  - Trim knob, 60
  - uses for, 53
- mixing. *See also* Mix window
  - analog mixers, 528–529
  - auxiliary input tracks, 544–545
  - Bounce to Disk feature, 627–630
  - with Digi 002 and 003 control surfaces, 526–527
  - digital mixers, 528
  - to external digital device, 630–631
  - general knowledge of, 524–525
  - hearing music clearly and accurately, 534–537
  - MIDI control surfaces, 527
  - mixing-in-the-box, 627–630
  - overview, 524
  - preparation for, 525–526
  - quality of song determination, 525
  - rough, 526
  - routing, 542
  - several versions of, 537
  - signal flow, 541
  - sit in the mix concept, 5
  - sound control during, 46–51
  - sounding waves, 47
  - submixing, 625–627
- Mobilepre USB hardware, 156–157
- modulation, 605
- monitoring
  - Auto Input mode, 300
  - Input Only mode, 300
  - latency adjustment, 301–302
  - low-latency, 302–303
  - MIDI devices, 455
  - mode selection, 299–300
  - Playback and Recorder faders, linking and unlinking, 300–301
  - setting up, 299
- monitors
  - active, 28–29
  - headphones as, 27
  - near-field, 28–29, 40, 46
  - passive, 28–29
  - placement, studio setup, 40, 42
  - speakers as, 28–29
- Monitors jacks, 67
- Mono After Touch view (Track View display), 471
- mono mode (MP3 encoders), 673
- mono tracks
  - defined, 242
  - Mix window, 206–207
- mono/TS plugs, 32–33
- Morris, Tee (*Podcasting For Dummies*), 684
- motherboards, 118

Motorized fader control, 151  
 moving  
   breakpoints, 624  
   memory locations, 381  
   regions, 399–403  
   selections, 369  
   tempo and meter events, 309  
   tracks, 249  
 MPEG-1 Layer 3 audio file type, 218  
 M-Powered version, 159–160  
 MP3 encoders  
   bit rates, 672–673  
   dual mono mode, 674  
   encoding process, 675–676  
   encoding software selection, 674–675  
   engines, 671–672  
   force stereo mode, 674  
   joint stereo mode, 674  
   mono mode, 673  
   stereo mode, 674  
 MP3 file format, 30  
 MP3s  
   data compression, 670–671  
   general knowledge of, 670  
   near-CD quality, 670  
 ms (milliseconds), 20  
 muddy sounds, 277, 647  
 multiple-pattern microphones, 95  
 multitimbrality, 75, 81  
 Music Production Toolkit, 19  
 Musical Instrument Digital Interface. *See*  
   MIDI  
*Mutations* (Beck), 536  
 Mute button  
   Digi 003 interface, 151  
   Edit window, 186  
   Mix window, 201  
 Mute parameter  
   audio tracks, 608  
   auxiliary input tracks, 608  
   instrument tracks, 608  
   MIDI tracks, 609  
 Mute switch, 63, 66  
 Mute view (Track View display), 341, 471  
 muting  
   regions, 405–406  
   tracks, 255  
 MyPodcast Web site, 684  
 MySpace Web site, 678

---

## N

---

names of regions, showing/hiding, 342  
 naming  
   grouped tracks, 251  
   memory locations, 372  
   sends, 548  
   tracks, 243–244  
   window configurations, 211, 214  
 Navigation section (Digi 003  
   interfaces), 153  
 near-field monitors, 28–29, 40, 46  
 networking, 686  
 Neve and Neve-clone preamps, 13  
 New Memory Location dialog box, 371  
 New Session dialog box, 642–643  
 New Tracks dialog box, 447  
 New Window Configuration dialog box,  
   211–212  
 newsletters, 686  
 Next button (RTAS plug-in), 556  
 No Doubt (*Return to Saturn*), 536  
 noise gates, 590  
 nondestructive editing, 338  
 nondestructive recording, 180, 290  
 Normal Zoom mode, 345  
 Northbridge graphics controllers, 118  
 Norton Ghost program, 129  
 Note button (Transport window), 184  
 note-off message, 72, 75–76  
 note-on message, 72, 75–76  
 notes, MIDI  
   custom not duration, 478  
   deleting, 480–481  
   duration, 482  
   inserting, 479  
   moving, 483  
   note chasing, 474–475  
   pitch adjustment, 481–482, 484  
   program changes, 480–481  
   selecting, 472–473, 511–512  
   splitting, 512  
   start and end points, 483  
   time locations, 483  
   velocity or continuous controller  
   data, 479  
   volume adjustment, 482  
 Notes view (Track View display), 470,  
   487–488

Nudge function, 399  
Nudge Value display (Edit window), 194  
nudging  
    regions, 400–401  
    selections, 366–367  
numbering window configurations, 211

## O

---

Oasis Disc Manufacturing Web site, 665  
oblique room mode, 44  
offline plug-ins, 557–560  
offline regions, 339  
Omni Off/Mono mode, 77  
Omni Off/Poly mode, 77  
Omni On/Mono mode, 77  
Omni On/Poly mode, 76–77  
omnidirectional microphones, 92–93, 274  
*On How Life Is* (Gray), 536  
100mm faders, 151  
Online button (Transport window), 178  
online promotion, 682  
opening sessions, 169  
Operations window (MIDI)  
    accessing, 497  
    Change Duration option, 507–509  
    Change Velocity option, 506–507  
    closing, 498  
    Flatten Performance option, 505–506  
    Grid/Groove Quantize option, 500–504  
    Input Quantize option, 513  
    navigation within, 498  
    operations list, 499  
    Restore Performance option, 504–505  
    Select/Split Notes option, 510–512  
    Step Input option, 513–515  
    Transpose option, 509  
optical format settings, 162  
optical input, clock source, 162  
Optical jacks, 162  
optimization techniques, studio setup, 41  
Options menu (MIDI events), 489–490  
Options: Look Ahead button (gates), 590  
organization, promotion and marking,  
    666–667  
organs, stereo field, 531  
Out port (MIDI), 72–73  
Out Shape settings (Fades dialog box), 423

output  
    assigning to tracks, 244–245  
    audio regions, 166  
    click tracks, 304  
    MIDI track, 448  
    Track Output windows, 550–552  
Output button (Mix window)  
    audio track channel strip, 201  
    instrument channel strip, 204  
    MIDI track channel strip, 202  
Output dial (limiters), 586  
Output Selector box (Track Output  
    window), 552  
Output tab (I/O Setup dialog box), 166  
Output windows  
    Send, 552–553  
    Track, 550–552  
outputs  
    Mbox 2 Mini interface, 135  
    name of, changing, 166  
overdubbing  
    audio performances, 68, 325–327  
    defined, 325  
    Direct Out jacks, 68  
    latency and, 326–327  
    MIDI performances, 460–461  
overhead microphones, 98, 286, 576  
overhead panels, sound control, 47, 49  
Ozone hardware, 156–157

---

## P

P and T syllable pops (plosives), 174, 272  
Pan controls (Track Output window), 552  
Pan knob, 62  
Pan parameter  
    audio tracks, 608  
    auxiliary input tracks, 608  
    instrument tracks, 608  
    MIDI tracks, 609  
Pan view (Track View display), 341, 471  
Panner Link button (Track Output window),  
    552  
panning, 529  
panning slider (Mix window audio track  
    channel strip), 201  
Parabolic tool, 619  
parametric equalizers, 23, 565–566, 570

- passive monitors, 28–29
- passwords, Pro Tools installation, 116
- Paste command, 409, 622
- pasting
  - automation data, 622
  - events, 309
  - memory locations, 382
  - selections, 409
- patch bays
  - functionality, 69–70
  - studio setup, 39
- Patch select button (Mix window)
  - MIDI instrument channel strip, 204
  - MIDI track channel strip, 202–203
- patches, MIDI, 474
- Path Meter View box (Track Output window), 550
- Path Selector button (Track Output window), 552
- PC Wizard Web site, 19
- PCI (Peripheral Component Interface)
  - cards, 20–21, 112
- PCI-E (PCI-Express) slot, 118
- PCs
  - AutoPlay feature, disabling, 125
  - Control Panel settings, 121–123
  - CPU selection, 117–118
  - enabling DMA, 124
  - graphics card selection, 118–119
  - hard drive selection, 120
  - hardware connections, 126–127
  - Mac computers software differences, 160
  - motherboard selection, 118
  - Pro Tools installation, 127–128
  - RAM requirements, 119
  - session templates for, 174
  - system requirements, 117–120
  - virus protection, 126
  - Windows settings, 120
  - Windows XP Classic mode, 120–121
  - Windows XP operating system, 120
- Pearl Jam (*Yield*), 536
- Pencil tool
  - breakpoints, adding and deleting, 623
  - description of, 190
  - editing line graph with, 486
  - enabling, 416
  - selecting notes with, 472
  - tools in, 475
  - waveforms, redrawing, 417
- Pentium 4 CPU, 117
- percussion instruments
  - compressing, 584
  - EQ, 576
  - microphone selection considerations, 99
  - microphone types and placement, 287–288
  - stereo field, 531
- performance data messages (MIDI), 75–76
- Peripheral Component Interface (PCI)
  - cards, 20–21, 112
- peripherals, hardware setup, 161
- phantom power feature
  - defined, 132
  - microphones, 88–89
  - uses for, 58
- phase cancellation, stereo miking, 265
- phase holes, 638
- Phase Invert button (RTAS plug-in), 557
- Phones jacks, 67
- Phones knob, 66
- phono plugs, 36
- piano
  - EQ, 576
  - stereo field, 531
- pick-up patterns, microphones, 95
- pitch adjustment, MIDI notes, 481–482, 484
- pitch bend performance data (MIDI), 72, 75
- Pitch Bend view (Track View display), 471
- pitch correction, 27
- plate sound, 600
- Play button (Transport window), 179
- playback
  - from anywhere during session, 317
  - from beginning of session, 317
  - editing during, 338
  - looping, 318–319, 384
  - MIDI recording, 456–459
  - Play button, 316–317
  - scrolling options, 317–318, 457
  - scrubbing, 319–320
  - sounds, changing, 458–459
- Playback Engine dialog box, 163–165, 302
- Playback faders, linking and unlinking, 300–301
- Playlist selector button (Edit window), 185

- playlists
  - creating new, 350–351
  - deleting, 351–352
  - duplicating, 351
  - recording audio to, 327–328
  - renaming, 352
  - selecting, 352
  - setting pre-roll and post-roll values in, 315–316
- plosives (P and T syllable pops), 104, 272
- Plug-in Flip mode (Fader Flip switch), 152
- Plug-In selector
  - AudioSuite offline plug-in, 558
  - RTAS plug-in, 555
- plug-ins
  - AudioSuite offline, 557–560
  - De-Esser, 591–592
  - EQ, 567–568
  - RTAS, 554–557
  - uses for, 553
- Plug-Ins parameter, audio tracks, 608
- plugs. *See* connectors
- podcasting, 683–684
- Podcasting For Dummies* (Morris and Terra), 684
- podHoster Web site, 684
- Pohlmann, Ken C. (*Principles of Digital Audio*), 18
- pointer files, 683
- polarity patterns, microphones, 92–95
- polarizing voltage, microphones, 88
- polyphony, 75, 80
- pop filters, 104, 272
- ports, MIDI
  - connections, 12
  - In, 72–73
  - Out, 72–73
  - Thru, 72–73
- post-crossfades, 427
- post-rolls
  - auditioning, 383
  - flags, 315
  - setting and enabling, 383
  - values of, setting in Transport window, 314–315
  - values of, setting within playlists, 315–316
- PowerBooks (Mac computers), 112
- PQ subcode information, 659
- preamps
  - defined, 132
  - external, 13–14
  - hybrid, 14, 102
  - internal, 13
  - microphones and, 100–102
  - as most crucial recording element, 13
  - Neve and Neve-clone, 13
  - solid-state, 13, 100–101
  - starved-plate designs, 14
  - tube, 13, 101
- pre-crossfades, 426–427
- predelay, 601
- Pre/Post button (Send Output window), 553
- Pre-Quantize field (Grid/Groove Quantize operation), 503
- pre-rolls
  - auditioning, 383
  - flags, 315
  - setting and enabling, 383
  - values of, setting in Transport window, 314–315
  - values of, setting within playlists, 315–316
- Preset list button (RTAS plug-in), 556
- presets, zooming, 344
- Preview button (AudioSuite offline plug-in), 559
- Previous button (RTAS plug-in), 556
- Principles of Digital Audio* (Pohlmann), 18
- Pro Tools HD systems, 160
- Pro Tools LE version, 21, 159
- Pro Tools LE Windows Systems: 003, 002, Mbox, 001 forum, 117
- Pro Tools M-Powered version, 21
- Pro Tools TDM systems, 160
- Process button (AudioSuite offline plug-in), 559
- Process Mode Selector menu (AudioSuite offline plug-in), 559
- processing stage, mastering, 636–637
- processor based systems, 160
- program change markers, MIDI devices, 485
- Program Change view (Track View display), 471
- ProjectMix I/O hardware, 156–157
- promotion and marketing, 666–668, 685–686
- proximity effects, microphones, 263, 271
- pumps, 582

punch recording  
 audio, 180, 291, 321–324  
 MIDI, 462–465  
 quick-punch, 180  
 start and end points, 321–323

---

## Q

Q settings, frequencies, 23  
 quantize  
 Grid/Groove Quantize operation, 500–503  
 inputs, MIDI, 443–445  
 Quantize section (Real-Time Properties window), 516–517  
 regions, 404–405  
 quarter-inch plugs, 32–34  
 quick-punch recording  
 audio, 180, 291, 325  
 setting up for, 325  
 QuickTime audio file type, 218

---

## R

rack mountable sound modules, 12  
 Raitt, Bonnie (*Fundamental*), 536  
 RAM (random access memory)  
 Mac computer system requirements, 113  
 PC system requirements, 119  
 Pro Tools requirements, 19  
 Random tool, 478, 619  
 Randomize field (Grid/Groove Quantize operation), 503  
 range, dynamic processors, 24  
 Range knob (De-Esser plug-in), 591  
 Range setting (gates), 588  
 Rate setting (delay effect), 604  
 Ratio setting  
 compressors, 269, 579  
 gates, 589  
 limiters, 587  
 Real Time AudioSuite (RTAS)  
 controls on, 555–557  
 effective use of, 557  
 inserting, 554  
 processors, setting up, 164  
 routing, 554  
 RTAS Engine settings, 164–165  
 sends, 554

RealAudio files, 682  
 RealAudio G2 audio file type, 218  
 Real-Time Properties window  
 accessing, 515  
 Delay option, 517  
 Duration option, 517  
 Quantize section, 516–517  
 Transpose option, 518–519  
 Velocity option, 518  
 recalling memory locations, 379  
 Record Arm switch (Digi 003 interfaces), 152  
 Record button (Transport window), 179–180  
 Record Enable button  
 Edit window, 185  
 Mix window, 201  
 Record faders, linking and unlinking, 300–301  
 recording audio. *See also* recording MIDI  
 about this book, 3–4  
 auditioning takes, 328–332  
 canceling performance, 332  
 click tracks, 303–306  
 destructive, 180, 290  
 digital, 16–18  
 disk allocation, 292  
 enabling tracks for, 293–294  
 Latch Record Enable mode, 295  
 levels, setting, 296–298  
 loop, 180, 290–291, 324–325  
 monitoring setup, 299–303  
 multiple tracks, 313–314  
 nondestructive, 180, 290  
 overdubbing, 325–327  
 overdubs, 68  
 to playlists, 327–328  
 pre-rolls/post-rolls, 314–316  
 punch, 180, 291, 321–324  
 quick-punch recording, 180, 291, 325  
 range settings, 298–299  
 Record modes, 289–291  
 record-enabling, 293–294  
 in Safe mode, 296  
 single tracks, 311–313  
 software, 21–22  
 starting over from scratch, 320  
 tempo settings, 306–307  
 unwanted takes, getting rid of, 332–334

- recording MIDI. *See also* recording audio
  - canceling performance, 459
  - enabling tracks for, 453–454
  - inputs, monitoring, 455
  - loop, 466–467
  - overdubbing, 460–461
  - playback, 456–459
  - punch, 462–465
  - Record button, 456
  - system-exclusive data, 467–468
  - track material selection, 472–473
  - unwanted takes, getting rid of, 459–460
  - Wait for Note option, enabling, 454
- Red Book-capable burners, 659
- references CDs, 536, 664
- reflections, sound control, 44
- reflectors, sound control, 46
- region definitions, 232–233
- regions. *See also* audio files
  - alignment, 393–394
  - as audio and MIDI file representation, 188
  - auto-created, 339
  - Capture Region command, 386
  - creation, 386–388
  - exporting, 230–232
  - healing, 388–390
  - locations, 355
  - locking, 404
  - MIDI, 473
  - moving, 399–403
  - muting/unmuting, 405–406
  - name of, showing/hiding, 342
  - nudging, 400–401
  - offline, 339
  - output, 166
  - placing in tracks, 390–391
  - quantizing, 404–405
  - removing unused, 432–433
  - searching, 355
  - selecting, 353
  - selections, 360–364
  - Separate Regions command, 386–387
  - separating, 387–388
  - shifting, 402
  - sorting, 354
  - stereo, 339
  - synch points, 392–393
  - time grids, 188
  - time stamps, 342–343
  - trimming, 395–399
  - user-defined, 339
  - viewing, 339–341
  - whole-file, 339
  - zooming, 343–346
- Regions list (Edit window), 196, 459
- Regions view (Track View display), 470
- Relative Grid editing mode, 348
- Release knob
  - compressors, 580
  - gates, 589
  - limiters, 586–587
- Release parameter (compressors), 269
- Rename button (Strip Silence command), 419
- renaming
  - grouped tracks, 253
  - memory locations, 380
  - playlists, 352
- Repeat command, 410
- replication, CD, 664–666
- Resolution setting (Bounce to Disk feature), 629
- Restore Performance option (MIDI Operations window), 504–505
- Retrospect program, 129
- Return to Saturn* (No Doubt), 536
- Return to Zero button (Transport window), 178, 320
- reverb effect
  - Algorithm setting, 601
  - ambient sound, 600
  - Decay setting, 601
  - Diffusion setting, 601
  - enclosed room characteristics, 600
  - HF Cut setting, 602
  - how to use, 602
  - less is more effect, 602
  - LP filter, 602
  - plate sound, 600
  - predelay, 601
  - purpose, 26
  - uses for, 26
- Revert to Save command, 172
- Rewind button (Transport window), 178–179
- ribbon microphones, 91–92, 272
- robotic-vocal sounds, 27
- Roland GS standard, 78

room modes, 44  
 Rotary Encoders (Digi 003 interface), 151  
 rotational speed, hard drives, 113  
 routing  
   routing signals, mixers, 63–64, 542  
   RTAS plug-ins, 554  
   tracks, 563  
 Royer r121 ribbon microphones, 94  
 RTAS (Real Time AudioSuite)  
   controls on, 555–557  
   effective use of, 557  
   inserting, 554  
   processors, setting up, 164  
   routing, 554  
   RTAS Engine settings, 164–165  
   sends, 554  
 Ruler View tool (Edit window), 192  
 rulers  
   Key timeline, 198  
   Markers timeline, 198  
   Meter timeline, 197–198  
   Tempo timeline, 197  
   Time timeline, 197  
   zooming in on, 346  
 rumble, 23

## S

S and Sh sounds (sibilance), 272, 591  
 Safe mode, recording audio, 296  
 Sample display (Linearity Display Mode button), 193  
 Sample Rate Conversion options (Import Session dialog box), 227–228  
 Sample Rate option (Bounce to Disk feature), 629  
 sample rates  
   new session creation, 168–169  
   setting up, 162–163  
 sample-rate conversion (SRC), 652–653  
 samplers, 82–83  
 samples and ticks, 242  
 SATA hard drives, 20  
 Save a MIDI File As dialog box, 234  
 saving  
   Items to Copy command, 172  
   Revert to Save command, 172  
   Save command, 170  
   Save Session As command, 171

  Save Session Copy In command, 171–172  
   sessions, 170  
 scaling breakpoints, 486–487  
 Scribble Strips (Digi 003 interfaces), 154  
 scrolling options, playback, 317–318, 457  
 Scrubber tool, 190  
 scrubbing, 319–320  
 S-Curve tool, 424, 619  
 SDII (Sound Designer II) audio file type, 218  
*Search Engine Optimization For Dummies*, 3rd Edition (Kent), 681  
 search engine optimization (SEO), 680–681  
 searching regions, 355  
 secondary counter (Transport window Expanded section), 181  
 seek time, hard drives, 20, 113  
 Selection memory locations, 374  
 Selection Reference menu (AudioSuite offline plug-in), 558  
 selections  
   all session tracks, 363  
   any space between, 362  
   clearing, 408–409  
   consolidating, 431–432  
   copying, 408  
   cutting, 407–408  
   duplicating, 409–410  
   end points, auditioning, 384  
   entire regions, 362  
   extending farther than width of computer screen, 361  
   extending to adjacent track, 370  
   extending to memory location, 369  
   with indicators, 364–365  
   length adjustment, 366, 368–369  
   looping playback, 384  
   marking, 359  
   moving, 369  
   multiple regions, 362  
   multiple tracks, 362  
   nudging, 366–367  
   pasting, 409  
   playing selection material, 382–383  
   regions, 360–364  
   repeating, 410  
   start points, auditioning, 383  
   Tab to Transients function, 365  
   Trim to Selection command, 388

- Selector tool
  - automating, 415
  - description of, 190
  - enabling, 412, 488
  - selecting MIDI notes with, 472
- Select/Split Notes option (MIDI Operations window), 510–512
- self noise, 89
- self-created Web site, 678–681
- Send Flip mode (Fader Flip switch), 152
- Send Output window, 552–553
- Send parameter, audio tracks, 608
- Send Selector button (Send Output window), 553
- sends
  - assigning, 547
  - assigning effects to, 547–548
  - controlling for groups, 550
  - inactive, 549
  - level meters, 548
  - naming, 548
  - removing, 549
  - RTAS plug-ins, 554
  - turning off effects in, 549
  - uses for, 546
  - viewing, 548
- Sends option (Mix window instrument track channel strip), 204
- Sends view (Mix window), 209
- SEO (search engine optimization), 680–681
- Separate button (Strip Silence command), 419
- Separate Regions command, 386–387
- separating regions, 387–388
- Separation Grabber tool, 387–388
- sequencers, MIDI
  - built-in, 81
  - compatibility, 16
  - standalone versus built-in, 85
- sequencing, 637, 653–654
- sessions
  - audio file type, 168
  - bit depth, 168
  - creating new, 167–169
  - input/output settings, 168
  - missing files, finding, 175
  - opening, 169
  - sample rate options, 168–169
  - saving, 170–172
  - templates, 172–174
- Settings menu
  - AudioSuite offline plug-in, 559
  - RTAS plug-in, 555
- 7-band EQ, 568
- shelf equalizers, 23, 566, 570–571
- Shift dialog box, 327
- shifting regions, 402
- Show/Hide Tracks list
  - Edit window, 195
  - Mix window, 209
- Shuffle mode (Edit window), 188, 347
- Shure model microphones, 90
- sibilance (S and Sh sounds), 272, 591
- Side Chain section (gates), 590
- side chains
  - HF (High Frequency) filter, 593
  - key input signal, 592
  - LF (Low Frequency) filter, 594
  - making room for vocals in dense mix, 594
  - setting up, 593
  - uses for, 594
- signal flow, 541
- signal processors
  - dynamic processors, 24–25
  - effects processors, 25–27
  - EQs, 22–23
  - overview, 597
- signals
  - balanced versus unbalanced, 12
  - dry, 598
  - DSP (Digital Signal Processing), 120
  - sending to effects, 599–600
  - wet, 598
- silence
  - inserting, 420–421
  - Strip Silence command, 418–420
- silica gel, 106
- silky/smooth sounds, 91
- Single Zoom mode, 345–346
- sites. *See* Web sites
- 16 bits, mastering to, 651
- slap-back echo, 604
- sleep function, Mac computers, 115–116
- slider controls (faders), 63
- Slip mode (Edit window), 188, 348
- S&M (Metallica), 536

- SM57 and SM58 microphones, 90
- small-diaphragm microphones, 89, 272
- Smart tool
  - Automation view, 414–416, 488
  - description of, 190
  - Grabber tool, 413, 415–416
  - location of, 411
  - Notes view, 487–488
  - Selector tool, 412, 415
  - Trimmer tool, 412, 414–415
  - in Waveform view, 412–414
- SMF (Standard MIDI Files), 217
- smooth/silky sounds, 91
- snare drums
  - compressing, 584
  - EQ, 575
  - microphone types and placement, 282–284
- So (Gabriel), 536
- soft knee sounds, compression, 269
- soft-synths
  - advantages/disadvantages, 83
  - GUI, 83
- software
  - host-based systems, 159
  - Internet forums, 21–22
  - recording, 21–22
- solid state microphones, 89
- solid-state preamps, 13, 100–101
- Solo button
  - Digi 003 interface, 151
  - Edit window, 185
  - Mix window, 201
  - Track Output window, 552
- Solo switch, 63, 66
- soling tracks, 255
- Sony/Phillips Digital Interface Format (S/PDIF), 132
  - connectors, 554
  - overview, 132
- sorting regions, 354
- sound cards, 20–21, 84
- sound control
  - absorbers/reflectors, 46
  - bass traps, 48–51
  - dead air (trapped air), 43
  - foam panels, 45
  - during mixing, 46–51
  - near-field monitors, 46
  - not enough/tool much sound
    - reflection, 45
  - overhead panels, 47, 49
  - reflections, 44
  - sound waves, 44, 47
  - studio setup, 43–47
  - textured ceilings, 47
  - during tracking, 45–46
  - wood surfaces, 46
- Sound Designer II (SDII) audio file type, 218
- sound generators, 79–80
- sound isolation, studio setup, 42–43
- sound modules
  - advantages of, 82
  - control, 11
  - MIDI and, 11–12
  - rack mountable, 12
  - samplers, 82–83
- sound patches, General MIDI, 77
- Sound Pressure Level (SPL), 90
- sound quality, synthesizers, 81
- sound recording (SR) forms, 661–662
- Sound Resource file type, 218
- sounds
  - midrange-dominated, 271
  - muddy, 277, 647
  - playback, changing, 458–459
  - robotic-vocal, 27
  - thin, 277
- Source option (Bounce to Disk feature), 628
- Source Properties option (Import Session dialog box), 225
- spaced pair stereo miking, 263–264
- spamming, 686
- S/PDIF (Sony/Phillips Digital Interface Format)
  - connectors, 554
  - overview, 132
- speakers
  - connecting to Mbox 2 Micro interface, 135
  - as monitors, 28–29
  - selection considerations, 28
- spindle speed, hard drives, 20, 113
- SPL (Sound Pressure Level), 90
- splitting
  - MIDI notes, 512
  - stereo tracks, 406
- spot miking, 260
- Spot mode (Edit window), 188, 347–348

- Square tool, 477, 619
- SR (sound recording) forms, 661–662
- SRC (sample-rate conversion), 652–653
- standalone MIDI controllers, 16
- Standard MIDI Files (SMF), 217
- Standard Trimmer tool, 189, 395–397
- standards, General MIDI, 77–78
- stands, microphone, 103
- start and end points, MIDI notes, 483
- Start counter (Transport window Expanded section), 182
- starved-plated design preamps, 14
- Status Indicators (Digi 003 interfaces), 154
- Steely Dan (*Two Against Nature*), 536
- steering data, 674
- Step Input option (MIDI Operations window), 513–515
- stereo field
  - backup vocals, 530
  - bass guitars, 531
  - drums, 531
  - front and back sound sources, 531–532
  - guitar parts, 530
  - lead vocals, 530
  - left and left sound sources, 529–531
  - organs, 531
  - percussion instruments, 531
  - piano, 531
  - synthesizers, 531
- stereo miking
  - Blumlein technique, 263–264
  - coincident, 262
  - neutral stereo images, 265–266
  - phase cancellation, 265
  - poor stereo imaging, 265
  - problems with, 265
  - spaced pair, 263–264
  - X-Y, 262
- stereo mode (MP3 encoders), 674
- stereo regions, 339
- stereo tracks
  - defined, 242
  - Mix window, 206–207
  - splitting, 406
- stereo-interleaved files, 232–233
- stereo/TRS plugs, 33–34
- Sting (*Brand New Day*), 536
- Stop button (Transport window), 179
- stopping recording
  - clearing file from Audio Regions list, 333–334
  - keyboard commands, 332
  - Undo Record command, 333
- storage, microphone, 106
- streaming audio, 682–683
- Strip button (Strip Silence command), 419
- Strong, Jeff (*Drums For Dummies*), 280
- stuck notes, 441
- studio setup
  - air-conditioning, 39
  - chair selection, 39
  - comfort and efficiency, 39
  - dead air, 43
  - dust free atmosphere, 39
  - fiberglass batting insulation, 43
  - insulation, 43–44
  - isolation booths, 43
  - L-shaped, 39–40
  - monitor placement, 40, 42
  - optimization techniques, 41
  - patch bays, 39
  - sound control, 43–47
  - sound isolation, 42–43
  - U-shaped, 39, 41
  - workstation setup, 39–41
- Sub (submix) faders, 64
- submix bus, 64
- submixing, 625–627
- super-cardioid microphones, 94
- Surfacing* (McLachlan), 536
- swing feel, 516
- switches, mixer
  - Assign, 63
  - Mute, 63, 66
  - Pre/Post, 62
  - Solo, 63, 66
- synch points, regions, 392–393
- synthesizers
  - built-in sequencers, 81
  - keyboard selection, 81
  - selection considerations, 80–81
  - soft-synths, 83–84
  - sound quality considerations, 81
  - stereo field, 531
- Sysex view (Track View display), 471

system requirements  
 Mac computers, 111–114  
 PCs, 117–120  
 system settings, Mac computers, 114–116  
 system-common messages, 76  
 system-exclusive data, recording, 467–468  
 system-exclusive messages, 76

## T

T and P syllable pops (plosives), 174, 272  
 Tab to Transients button (Edit window), 193, 365  
 takes, auditioning  
 from Audio Regions list, 328–329  
 choosing from playlists, 330  
 from multiple tracks, 331–332  
 preferences, 330–331  
 from Takes List drop-down menu, 329–330  
 Takes List drop-down menu, 329–330  
 tangential room mode, 44  
 Target button  
 RTAS plug-in, 556  
 Track Output window, 552  
 TC/E (Time Compression/Expansion), 397  
 TDIF (Teac Digital Interface Format)  
 connectors, 38  
 templates, session, 172–174  
 tempo  
 click tracks, 306–307, 449  
 events, creating, 308–309  
 events, editing, 309  
 settings, 306–307  
 Tempo button (Transport window), 184  
 tempo map, 184  
 Tempo Match option (delay effect), 604  
 Tempo timeline, 197  
*Ten New Songs* (Cohen), 536  
*Terra, Evo (Podcasting For Dummies)*, 684  
 testing microphones, 105  
 textured ceilings, sound control, 47  
 Thin command, 620  
 thin sounds, 67, 277  
 thinning automation, 619–620  
 Threshold setting  
 compressors, 268, 580  
 gates, 589  
 Thru port (MIDI), 72–73  
 Tick display (Linearity Display Mode button), 193  
 ticks, track, 242  
 time aligning, 266  
 Time Code Mapping options (Import Session dialog box), 227  
 Time Compression/Expansion (TC/E), 397  
 time grids, 188  
 time locations, MIDI notes, 483  
 time properties, memory locations, 371–372  
 time signatures, 197  
 time stamps, region, 342–343  
 Time timeline, 197  
 Time Trimmer tool, 397–398  
 Tip/Ring/Sleeve (TRS) plugs, 33–34  
 Tip/Sleeve (TS) plugs, 32–33  
 Toast burner, 659  
 tom-toms  
 EQ, 575  
 microphone types and placement, 284  
 tonal balance, 646–648  
 touch-sensitive fade control, 151  
 Track fader (Track Output window), 552  
 Track Height selection arrow (Edit window), 186  
 Track meter (Track Output window), 552  
 Track Name button (Edit window), 185  
 Track Offset options (Import Session dialog box), 227  
 Track Output windows  
 controls, 550–552  
 opening, 550  
 Track Selector box  
 RTAS plug-in, 555  
 Track Output window, 552  
 Track Selector menu (MIDI events), 489  
 Track type icon (Mix window)  
 audio track channel strip, 201–202  
 instrument channel strip, 204  
 MIDI track channel strip, 203  
 Track View button (Edit window), 186, 192  
 Track View display  
 Blocks view, 469  
 Controller view, 471  
 Mono After Tough view, 471  
 Mute view, 471  
 Notes view, 470  
 overview, 340–341

- Track View display (*continued*)
  - Pan view, 471
  - Pitch Bend view, 471
  - Program Change view, 471
  - Regions view, 470
  - Sysex view, 471
  - Velocity view, 471
  - views, toggling between, 472
  - Volume view, 471
  - Waveform view, 412–415
- tracking sound control, 45–46
- tracks
  - assigning inputs and outputs to, 244–245
  - audio, 241
  - auxiliary input, 241
  - color assignment, 247–248
  - creating new, 242–243
  - deleting, 249–250
  - duplicating, 243
  - formats, 242
  - grouped, 250–254
  - height adjustment, 341–342
  - hiding, 245–247
  - importing, 225–229
  - instrument, 242
  - Master Fader, 241
  - MIDI, 242
  - mono, 242
  - moving, 249
  - muting, 255
  - naming, 243–244
  - placing regions in, 390–391
  - routing, 563
  - samples and ticks, 242
  - showing, 245–247
  - size, 248
  - soloing, 255
  - stereo, 242, 406
  - voice assignment, 255–257
- transients
  - compression, 268–270, 578
  - defined, 24
  - dynamics control, 268–270
  - headroom, 267
  - microphone placement techniques, 267–268
  - overview, 266
  - recording level, setting properly, 267
- transistors, solid-state preamps, 13
- transparent-type microphones, 89
- Transport Master box (Transport window Expanded section), 181–182
- Transport option (Real-Time Properties window), 518–519
- Transport section (Digi 003 interfaces), 153
- Transport window
  - Click button, 183
  - Conductor button, 183
  - Counters section, 180–181
  - Countoff button, 183
  - Display settings, 213
  - Expanded section, 181–182
  - Fast Forward button, 179
  - Go to End button, 179
  - Meter button, 184
  - MIDI Controls section, 182–184
  - MIDI Merge button, 183, 461
  - Note button, 184
  - Online button, 178
  - overview, 177
  - Play button, 179
  - pre-roll values, 314–315
  - Record button, 179–180
  - Return to Zero button, 178, 320
  - Rewind button, 178–179
  - showing/hiding items in, 178
  - Stop button, 179
  - Tempo button, 184
  - Wait for Note button, 183
- Transpose option (MIDI Operations window), 509
- Triangle tool, 477, 618
- Trim knob, 60
- Trim to Selection command, 388
- Trimmer tool
  - automating, 414–415
  - breakpoints, moving, 623–624
  - enabling, 488
- trimming crossfades, 428
- trimming regions
  - Nudge function, 399
  - Standard Trimmer tool, 395–397
  - Time Trimmer tool, 397–398
  - Trim command, 398–399
- TRS (Tip/Ring/Sleeve) plugs, 33–34
- truncation, 651
- TS (Tip/Sleeve) plug, 32–33
- tube microphones, 89

tube preamps, 13, 101  
 tuning drums, 280  
 tuplets, 516  
*Two Against Nature* (Steely Dan), 536  
*2001* (Dr. Dre), 536  
 Type 0 MIDI file type, 223  
 Type 1 MIDI file type, 223

---

## U

unbalanced versus balanced signals, 12  
 unbalanced lines, 33  
 undo operations  
   canceling performance, 459  
   discussed, 355  
   performing, 356  
   previous, 357  
   setting levels of, 356  
 Undo Record command, 333  
 UPC bar code, 665  
 updating window configurations, 216  
 user-defined regions, 339  
 U-shaped studio setup, 39, 41

---

## V

VBR (variable bit rate), 673  
 Velocity meter (Mix window audio track channel strip), 201  
 Velocity option (Real-Time Properties window), 518  
 velocity performance data (MIDI), 72, 75  
 Velocity view (Track View display), 471  
 versions, Mac computers, 112  
 vertical zooming, 344  
 vibrato performance data (MIDI), 72, 75  
 Video Media options (Import Session dialog box), 227  
 viewing automation, 617–618  
 virus protection, 126  
 vocals  
   breathes, 582  
   compressing, 582–583  
   dead room, 270–271  
   EQ, 573  
   microphone selection considerations, 99

  microphone types and placement, 270–273  
   pumps, 582  
   stereo field, 530  
 voice coils, 90  
 Voice Dyn/Off selector (Mix window audio track channel strip), 201  
 Voice selection button (Edit window), 186  
 voices, track  
   assigning, 256  
   freeing up, 257  
   overview, 255  
   priority settings, 256–257  
 volume adjustment, MIDI notes, 482  
 volume levels, MIDI events, 492  
 Volume parameter  
   audio tracks, 608  
   auxiliary input tracks, 608  
   instrument tracks, 608  
   MIDI tracks, 609  
 Volume view (Track View display), 340, 471  
 VU (volume unit), 67

---

## W

Wagner, Richard (*Creating Web Pages All-in-One Desk Reference For Dummies*), 679  
 Wait for Note option  
   enabling, 454  
   Transport window, 183  
 Watkinson, John (*The Art of Digital Audio*), 18  
 WAV file format, 30  
 Waveform view (Track View display), 340, 412–415  
 waveforms, redrawing, 417  
 Web sites  
   Amazon, 685  
   Apple, 684  
   AudioStreet, 677–678  
   CD Baby, 665, 685  
   CD Marksman, 664  
   CD/Works, 663  
   Digidesign, 56, 84, 117  
   Digital Domain, 665  
   Disc Makers, 664–665  
   DiscMasters, 665

## Web sites (*continued*)

- GarageBand, 677, 685–686
  - Geocities, 680
  - Getsigned, 686
  - GoDaddy, 680
  - Hipcast, 684
  - hosting sites, 677–678
  - indiecentre, 686
  - MasterDisc, 665
  - MyPodcast, 684
  - MySpace, 678
  - Oasis Disc Manufacturing, 665
  - PC Wizard, 19
  - podcasting, 684
  - podHoster, 684
  - self created, 678–681
  - wet signals, 598
  - whole-file regions, 339
  - window configurations
    - creation, 211
    - discussed, 210
    - display settings, 212–213
    - editing, 215–216
    - filtering, 214
    - managing, 213–216
    - naming, 211, 214
    - new configurations, 215
    - numbering, 211
    - recalling, 213
    - showing/hiding, 215
    - updating, 216
  - Windows computers
    - connecting Digi 003 interfaces to, 148
    - connecting Mbox 2 interface to, 139
    - connecting Mbox 2 Micro interface to, 134
    - connecting Mbox 2 Mini interface to, 136
    - connecting Mbox 2 Pro interface to, 143
  - Windows key, 3
  - Windows XP
    - AutoPlay feature, disabling, 125
    - Classic mode, 120–121
    - Control Panel settings, 121–123
    - DMA, enabling, 124
      - enabling MIDI devices in, 440–441
    - WMV (Windows Media File), 682
    - wood surfaces, sound control, 46
    - workstations
      - DAW, 120
      - keyboard, 81
      - MIDI, 81
      - setup, 39–41
    - writing automation
      - plug-in parameters, 615–616
      - send automation, 616–617
      - on tracks, 614–615
- 
- ## X
- 
- XLR connectors, 35
  - X-Y stereo miking, 262
- 
- ## Y
- 
- Y cords, 34–35
  - Yamaha XG protocol, 78
  - Yield* (Pearl Jam), 536
- 
- ## Z
- 
- zero-latency monitoring option, 135
  - zooming
    - description of, 189
    - horizontal, 344
    - Normal Zoom mode, 345
    - options, 343
    - presets, 344
    - regions, 343–346
    - on ruler, 346
    - Single Zoom mode, 345–346
    - vertical, 344
    - Zoom controls (Edit window), 189
    - Zoom In button (Fades dialog box), 422
    - Zoom Out button (Fades dialog box), 423
    - Zoom Toggle command, 346