# **INDEX**

Α

A/D Converter, 247

Aerobic, 192,193

Alarm, 70, 71, 194, 195, 262, 263 See also Fire Alarm and Smoke Detector

Amplifier, 49, 53, 69, 124, 125, 127, 130, 141, 142, 146, 198, 199, 206, 207, 249 See also Op Amp

Amputee, 143, 145, 146, 176, 218

Antenna, 196,197

Anterior Cruciate Ligament, 86

Anti-shear Device, 86

Apple IIe, 180 See also Computer, IBM PC and Microcomputer

Armrests, 117

Arthritis, 8, 36, 37

Asymmetric Tonic Reflex, 58

Audio, 34, 35, 52, 53, 141, 142, 153, 198, 199, 206, 207, 239, 246, 249, 276

Autistic, 38, 44

Automated Window, 118,119

Axillary Nerve, 26

В

Balance Platform, 122

Bandpass Filter, 137,239

BASIC, 27, 48, 51, 54, 62, 65, 71, 73, 76, 77, 95, 97, 140, 142, 154, 189, 205, 206, 207, 226, 232, 233, 242, 248, 256, 267, 268, 269
See *also* C Programming, Microsoft Quick C and Turbo C

Battery, 6, 25, 48, 49, 52, 53, 79, 83, 84, 85, 94, 98, 99, 130, 135, 141, 142, 195, 199, 204, 209, 212, 213, 220, 225, 233, 238, 239, 240, 241, 242, 243, 245, 248, 249, 251, 253, 254, 255, 258, 260, 261, 263, 266, 267, 275, 276, 277, 279

Bed, 30, 31, 50, 51, 71, 82, 118, 170, 171

Belts, 30, 31, 38, 44, 83

Bicycle, 6, 18, 27, 36, 37, 104, 105, 106, 107, 129, 168, 192,217

**BIODEX Machine, 86** 

Blind, 48, 49, 68, 69, 72, 204 See also Visual Impairment

Bodymold, 58, 59

Brake, 6, 36, 37, 43, 168, 178, 219

C

C Programming, 62 See also Basic, Microsoft Quick C and Turbo C

CAD, 252

Calculator, 208, 209

Camera, 150, 194, 195

Cane Holder, 32, 33

Cantilever, 36, 37, 279

Car, 23, 36, 97, 140, 144, 145, 146, 147, 168, 194, 270 See also Jeep

Carbon Fillers, 111

Center of Mass. 9

Cerebral Palsy, 4, 26, 58, 88, 90, 92, 96, 98, 100, 104, 105, 106, 116, 118, 122, 123, 128, 132, 134, 158, 162, 164, 180, 212, 214, 216, 220, 222, 232, 234, 267, 274, 278, 280, 282

Cervical Control Orthosis, 110

Chair, 7, 8, 30, 31, 38, 39, 58, 59, 60, 61, 115, 128, 129, 154, 155, 168, 169, 171, 185, 199, 206, 212, 213, 232, 233, 246, 270, 271, 282

Chassis, 35,233

Clown, 134, 140, 150

Clutch, 36, 37, 219

Communication, 4, 20, 34, 64, 130, 132, 180, 220, 221, 238, 239, 240, 241, 242, 243, 244, 245, 248, 251, 253, 256, 257, 258, 259

Communicator, 206,207

Comparator, 124, 130, 134, 135, 147, 276, 277

Computer, 16, 20, 52, 54, 56, 62, 63, 64, 65, 72, 73, 76, 77, 136, 172, 180, 214, 216, 222, 226, 237, 240, 241, 243, 244, 245, 250, 253, 254, 256, 259, 260, 262, 271, 273

Controller, 5, 6, 7, 50, 51, 52, 55, 130, 131, 136, 140, 141, 144, 145, 146, 147, 148, 149, 150, 202, 203, 206, 207, 208, 222, 250, 261, 283
See also Remote

Converters, 127,137

#### D

Database, 14

DC Multistep Timer, 260,261

Deaf, 70, 194, 204 See also Hearing Impaired

Desk, 14, 54, 55, 56, 194, 228 See also Workstation

Diabetic, 152

Diode, 35, 48, 195, 197, 285

Dispensers, 92, 93

DPDT Switch, 154,199

Drive Train, 99, 119, 177, 212, 213, 267

Driving, 197, 219, 224, 225, 226, 263, 269

Drum Set, 140,143

#### Ε

EEPROM, 257,258

Electric Winch, 24, 25

Electronic Compass, 68, 69

Environmental Controller, 202,203 See *also* Controller

EPROM, 206, 239, 249, 253

Exercise Bicycle, 6

Exercise Pillow. 4

Exercise Unit, 6,192

# F

Feedback, 6, 21, 69, 76, 122, 123, 124, 134, 148, 192, 193, 199, 204, 261, 274, 275, 276, 277, 278

Feeder, 38, 88, 89, 140, 146 See *also* Mechanical Feeder

FET Transistor, 53

Fiberglass, 59, 60, 61

Fire Alarm, 194,195 See *also* Alarm and Smoke Detector

Flip Flop, 51, 130, 205

Foot, 10, 22, 44, 91, 97, 106, 118, 122, 123, 128, 129, 132, 133, 152, 169, 170, 187, 189, 204, 222, 226, 229, 235, 268, 274, 275

Force Sensing Resistor, 153

### G

Gait Training, 122,123

Gear, 6, 11, 15, 43, 55, 119, 145, 168, 169, 171, 176, 177, 178, 213, 220, 231

Gryposis Muliplex Congenita, 46

# Н

Hand Scanner, 72, 73

Handrail, 40, 184, 185, 191

Head Injury, 6

Hearing Impaired, 70,194 See also Deaf

Hearsay 1000 System, 214,215

Horseback Riding, 26

Hydraulic, 20, 21, 24, 184, 185

Hydrotherapy, 234,235

Hyperextension, 22

Hysteresis, 276

T

IBM PC, 63, 64, 72, 73 See also Apple IIe, Computer and Microcomputer

Incentive, 140, 141, 145, 146, 147, 148, 149, 222

Inverter, 195, 197, 209, 233, 245, 249

## J

Jeep, **147**, **148**, **268** See **also** Car

Joy Stick, 230,231

## K

Keyboard, 73, 76, 77, 136, 172, 173, 180, 181, 214, 215, 226

Knee Brace, 10, 11

Kneerests, 9

## L

Laser, 130,131

LCD, 240, 241, 253, 256, 259

LED, 5, 24, 35, 61, 74, 97, 134, 145, 149, 150, 186, 194, 202, 203, 206, 207, 209, 233, 239, 249, 253, 255, 261, 263

Leg, 15, 16, 36, 42, 46, 59, 60, 61, 82, 83, 86, 87, 91, 106, 107, 108, 117, 124, 158, 159, 172, 192, 193, 222, 223, 229, 235

Lifting Ramp, 24, 25

Lifting Stool, 170,171

Light Array, 34, 35 See also LED

Lower Extremity Abductor, 108

#### М

Magnet, 6, 116, 117, 213

Mechanical Feeder, 88, 89 See also Feeder

Medical Vial, 164

Mentally Disabled, 34, 238, 240, 242, 244, 245, 248

Mentally Handicapped, 40,257

Microcomputer, 5

See also Apple IIe, Computer and IBM PC

Microcontroller, 5, 239, 241, 243, 247, 249, 251, 253, 257, 258, 261, 262, 263

Microphone, 52, 53, 198, 199, 214, 238, 239, 248, 249

Microprocessor, 4, 5, 75

Microsoft Quick C, 63

See also Basic, C Programming and Turbo C

Mobility, 6, 9, 15, 42, 44, 59, 61, 82, 91, 110, 115, 117, 128, 172, 204, 205, 212, 222, 228, 229, 246, 247, 266, 267, 270, 280

MOSFET, 195, 196, 197, 243, 245

Motorola, 5, 55, 75, 195, 196, 241, 243, 247, 251, 261

Mounting System, 22

Mouse, 62, 63, 65, 76, 136, 137

Multiple Sclerosis, 6

Muscle Stimulator, 284,285

Myoelectric Arm, 140, 143, 147

#### N

NAND, 95, 136, 197, 203, 243, 245

National Semiconductor, 196, 197, 198, 199

Nintendo, 148,149

NPN Bipolar Transistor, 243

NSF, 1, 54, 56, 146, 154

#### 0

On/Off Logic, 95

Op Amp, 49

See also Amplifier

ORCAD, 244, 249, 252, 253

Orthosis, 110, 111, 275

Oscillator, 49, 56, 69, 78, 195, 225, 276

## Р

Pager System, 196,197

Painting, 14,226

Paraplegic, 22, 23

PC Board, 79, 149, 263

Physical Therapy, 4, 123, 224, 225

Physically Disabled, 72, 206, 246

Piezoelectric, 52

Plaster of Paris, 59

Plexiglas, 89, 92, 101, 130, 233

Plywood, 4, 15, 31, 40, 82, 83, 91, 97, 129, 154, 159, 160, 165, 171, 173, 229, 279

Polyethylene, 11, 27

Polyurethane, 83, 97, 99

Positioner, 226

Posture, 8, 46, 177, 234

Potentiometers, 124,249 See also Trimpots

Pronation, 134,135

Prosthesis, 140, 141, 143, 144, 145, 146, 147, 148, 149, 150

PVC, 11, 163, 193, 229, 234, 235

#### a

Quadriplegic, 14, 24, 25, 26, 27, 54, 94, 136, 180, 212, 214, 216, 224, 278, 284

## R

Radio, 48, 49, 70, 71, 94, 97, 132, 136, 146, 153, 194, 196, 197, 250, 252, 253, 254, 258, 260

RAM, 241,251

Reading, 72, 73, 75, 122, 203, 280, 281

Receiver, 1, 48, 49, 70, 71, 94, 145, 146, 194, 195, 196

Recreation, 26, 112, 214, 222

Reed Relays, 95,149

Regulator, 130, 196, 197, 199, 239, 241, 243, 251, 261

Rehabilitation, 2, 14, 15, 48, 50, 52, 54, 86, 94, 111, 170, 183, 184, 192, 194, 196, 198, 204, 206, 212, 216, 218, 220, 222, 224, 225, 226, 282

Remote, 4, 5, 25, 71, 76, 94, 130, 133, 140, 145, 146, 196, 197, 202, 254, 255

Restorator, 6, 7

RF, 49,196

Robotic Arm, 282,283

## S

Saddle, 26, 27

Safety Factor, 31,189

Scanning, 202, 203, 206, 207, 208, 209, 255

Scoliosis, 58

Scooter Board, 128,129

Screwdriver, 140,145

Seesaw, 98, 99

Sensor, 34, 35, 52, 53, 69, 130, 153, 204, 205, 253

Shoe Insert, 152, 153, 275

Sip-n-Puff Switch, 50, 51

Ski, 10, 11, 22, 23, 112, 113

Sled, 22, 23, 112

Slide Projector, 132,133

Smoke Detector, 70, 71 See *also* Alarm, Fire Alarm

Social Interaction, 96, 98

Spastic Diplegia, 234

Springs, 5, 18, 43, 107, 222

Stabilizers, 18, 19

Standing, 15, 112, 122, 154, 159, 228, 229, 269, 274

Steering, 18, 24, 140, 147, 148, 168, 169, 178, 212, 213

Strobe Light, 70, 71

Supination, 134

Support, 1, 8, 9, 22, 26, 27, 30, 31, 33, 37, 40, 42, 43, 44, 46, 50, 51, 52, 54, 55, 58, 59, 60, 61, 83, 91, 93, 100, 110, 111, 112, 115, 116, 117, 123, 127, 153, 154, 158, 160, 162, 164, 165, 170, 181, 184, 185, 186, 187, 189, 192, 193, 222, 228, 229, 232, 233, 234, 235, 268, 270, 271

Swing, 8, 30, 31, 109, 220, 221, 276

Switch, 5, 6, 20, 21, 25, 35, 50, 51, 56, 62, 64, 65, 74, 75, 77, 78, 79, 95, 97, 98, 116, 118, 130, 132, 133, 134, 141, 142, 143, 144, 146, 148, 150, 154, 163, 169, 195, 197, 198, 199, 202, 203, 206, 207, 208, 209, 213, 215, 219, 220, 225, 226, 230, 231, 232, 233, 238, 239, 240, 241, 242, 243, 244, 245, 248, 249, 250, 251, 254, 255, 256, 257, 258, 259, 261, 263, 267, 268, 269, 275, 276, 279, 283, 284, 285

# T

Table, 14, 15, 16, 21, 54, 55, 56, 90, 91, 92, 158, 159, 160, 161, 163, 171, 172, 173, 181, 206, 226, 228, 247, 278,279

Tape Player, 78, 79, 132, 231

Telephone, 52,153

Threshold Pressure, 153

Tibia, 9, 86

TIG Welded, 22

Tilt-a-Spoon, 93

See also Feeder and Mechanical Feeder

Time Delay, 35, 85, 197, 205, 209

Timer, 4, 55, 75, 77, 78, 97, 130, 136, 192, 193, 203, 206, 207, 209, 258, 260, 261, 262, 263, 276, 284, 285

Touch-talker, 220

Toys, 96, 98, 128, 216, 282

Train, 62, 96, 97, 99, 119, 143, 145, 149, 177, 212, 213, 226, 250, 266, 267, 274

Training Cart, **82**, **84** See *also* Car and Jeep

Training Wheels, 106

Transducer, 204,205

Transmission, 36, 37, 106, 107, 196

Transmitter, 48, 49, 94, 145, 146, 153, 194, 196, 197, 233,254

Transportation, 38, 97, 128, 176, 177, 228, 270, 271

Trimpots, 78

Truck, 24,217

Tub, 38

Turbo C, 63 See also Basic, C Programming and Microsoft Quick C

## U

U Frame, 15

Ultrasonic, 204,205

# V

Velcro, 5, 10, 21, 42, 44, 53, 61, 83, 87, 111, 117, 171

Vending Machine, 100

Visual Impairment, 214,274 See *also* Blind

Voice Activated Therapy Device, 34, 35

Voice Amplifier, 198,199

Voice Synthesizer, 72, 73

# W

Walker, 8, 9, 42, 43, 46, 82, 112, 116, 117, 152, 154, 234

Water Pumps, 99

Wheelchair, 9, 15, 22, 24, 25, 32, 33, 52, 58, 62, 64, 82, 83, 84, 90, 108, 109, 114, 115, 118, 128, 129, 158, 168, 169, 170, 172, 176, 177, 178, 184, 185, 188, 189, 192, 198, 199, 202, 206, 212, 213, 217, 218, 219, 220, 222, 223, 224, 229, 232, 233, 246, 255, 266, 267, 269, 270, 271, 278, 279, 282

Word Recognizer Chip, 136

Work Station, 14, 15, 16, 92, 162, 228 See also Desk