Some of previous project titles:
10-second toothbrush timer
A simple Scanning Tunneling Microscope
Chua’s circuit (chaos)
Temperature Control via Digital PID Loop
Optoelectronic Resonance Detector
Plant Watering Detector
Accelerometer
Radio-controlled motor

Signal Processors
AM or FM Radios
4-transistor Class D FM Transmitter
Digital “Mastermind” Game
ADC (Analog to Digital Converter)
Precision Dual Slope ADC
Digital Signal Storage
Analog Signal Storage
A to D to A Converter
Digital Chess Clock
Lamp Ping-Pong Scorer
Digital Adder
TI-04: The Power of an Abacus in the Palm of Your Hand
Digital Tachometer
FM Transmitter
A Digital Combination Door Lock
Radio Controlled Servo
Decade Random Number Generators: The One Armed Bandit
Serial Communication System
Frequency Multiplier and Data Acquisition System
Very Low Frequency Radio Receiver
Proximity Alarm
Simon
AM Transmitter
Event Counter
Analog computers
Glitch Counter

Measuring Things
Digital Thermometer
Light Intensity Display for UV/Ozone Monitoring
Thermal Conductivity of Gases by the Hot Wire Method
Measurement of the Dielectric Constant of Water
Friction of Bicycle Wheel
Star Tracker
A Magnetometer for Small Fields
Magnetic Flux in Matter
Thermal Noise of an Oscillator

**Light**
IR Motion Detector
Photodiode-based motion sensor
Integrating Photometer
Photodiode-array “camera”
Clorox Laser
Optical Communications Link
Solar Powered Rechargable Battery System and Yard Light
Photon Flux from the Sky
Optical Density Monitor
Ellipsometry System
Laser Scanner
Self-Contained IR photometer for Astronomy
Optical Link 2D Motion Tracking

**Medical Electronics**
EKG Heart Monitor
Brain Wave Monitor
Blood Pressure Pulse Velocity
A Real-Time Monitor of Heart Rate Variability
Skin conductivity monitor

**Voice and Music**
LED Audio Voltage Meter
Audio Signal Filtering and Amplification
Voice Record/Playback
Simple VCO Keyboard
Music Response LEDs with Frequency Dependence
Laser Microphone
Digital Echo Box
Voice Transmission by Light Waves
AM Radio Transmission and Reception
Audio Information Recording and Playback
Voice Annunciator
Analog Synthesizer
Multi-key Square Wave Synthesizer
Visual Interpretation of Music with Spectrum Analyzer
Visual Display of Music
The Electronic Synthesizer and the Major C Pentatonic Scale
Audio-Optical Link
Optically Controlled Music Box
Digital Delay Processor
3rd Order Butterworth Audio Crossover and Equalizer
Seven Band Graphic Equalizer
Musical Light Show
Sound Meter