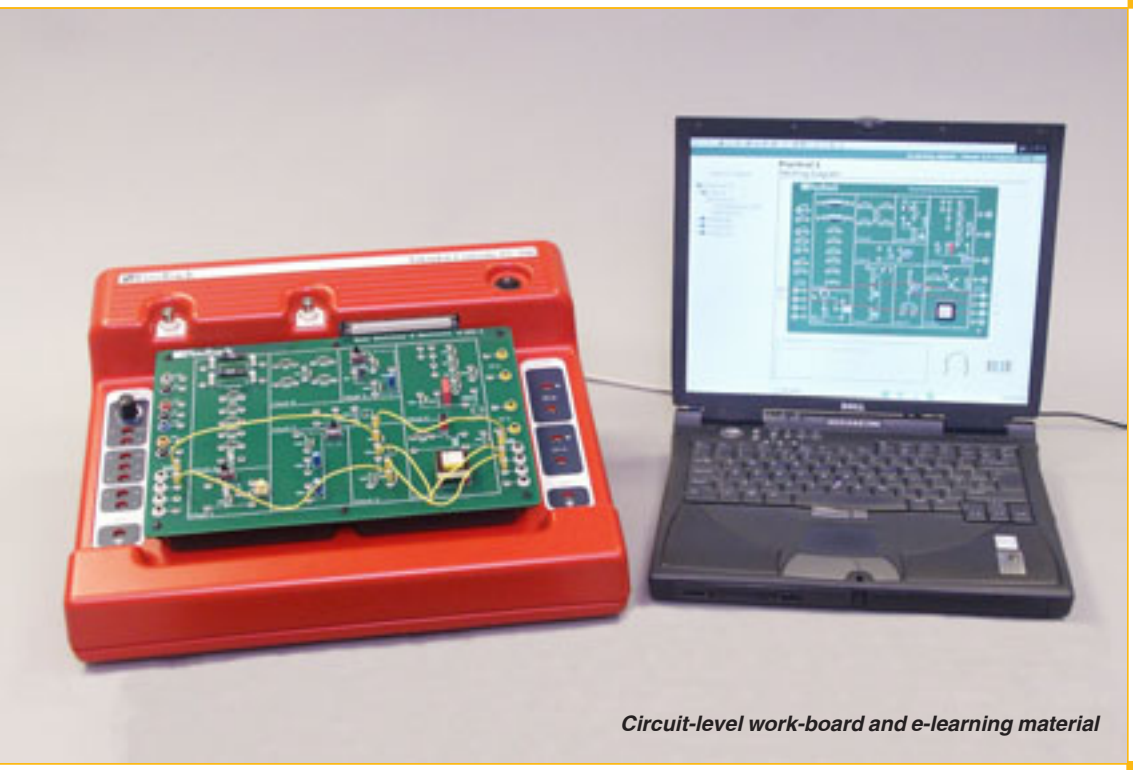
Feedback
Feedback Instruments Limited

Electricity & Electronics

DISCOVERY software

Electricity & Electronics



Circuit-level work-board and e-learning material

Features

- Choice of work-board types:
  - Circuit-level boards
  - Component-level boards
- Re-usable components
- Full curriculum with practical assignments
- PC-delivered virtual instrumentation
- Designed to save laboratory space and time
- Portable, IMS-compliant Discovery Software learning objects
- Usable in a web-delivered learning environment

Feedback's flexible Electricity & Electronics range meets the needs of academic, vocational and industrial training. Experience has shown the need for different approaches to practical assignments: pre-constructed circuits require minimal set-up, leaving maximum time for experimentation and analysis, whereas user-assembled circuits help develop construction skills. Feedback has been working closely with the education sector to produce time-saving solutions for each approach.

The hardware forms the core of an integrated learning environment that can fulfil any provider's teaching requirements. Each board is supplied with a full curriculum manual that includes underlying theory and guided assignments. A bench-top console provides the required power and can also offer virtual instrumentation to run on a PC, reducing your lab requirements for conventional test equipment.

The curriculum is also available as Discovery e-learning material that can be run on stand-alone PCs or Feedback's networked laboratory environment, Discovery Lab Manager. As the e-learning material conforms to the IMS specification, it can be also used in any IMS-compliant, 3rd party e-learning environment.

e-learning material

Virtual Instrumentation display

Curriculum Coverage

- Electrotechnology
- Basic Electricity
- Electromagnetism
- Basic Electronics - semiconductors
- Operational Amplifiers
- Electronic Circuit Applications - amplifiers, fault-finding and simple logic
- Logic - combinational and sequential logic
- Digital Systems - registers and counters
- Analogue Systems - digital to analogue, analogue to digital conversion
- Power Electronics

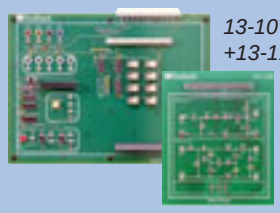
Electrotechnology, Analogue & Digital Electronics

Feedback's complete range of workboards has been developed in close co-operation with the education sector and offers a choice of products to suit every need.

Board Type	Curriculum Delivery			Test & Measurement	
	Paper-based	e-learning		Conventional	Virtual Instrumentation
Circuit-level (on-board)	●	●		●	●
Component-level (on-board)	●	●		●	●
Component-level (carrier-mounted)	●	●		●	●
Component-level (breadboard)	●			●	

Circuit-level boards:

12-200

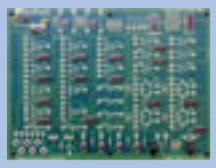


13-107 +13-110

Component-level boards:

A) Pre-mounted components

12-100



LT345

B) Carrier-mounted components plus constructor deck

EEC471-2

EEC470

C) Loose components plus breadboard construction deck

11-110

11-100

Circuit-level boards are pre-constructed to help students make the most of their laboratory sessions. There is very little preparation required to start assignments, which leaves maximum time for experimentation and analysis.

Component-level boards are very versatile for learning basic principles, helping develop circuit construction skills and for circuit design prototyping.

There are three varieties to choose from :

A) Pre-mounted components on the work-board: use patch leads to wire up a wide variety of circuits.

B) Carrier-mounted components, used with a construction deck: this rugged combination provides the flexibility to use components time after time, in any combination, without the worry of bad connections or broken leads.

C) Loose components with the flexible bread-board construction deck provide the full freedom to prototype and test circuits, using the on-board power, signal generator and test facilities, at a very modest cost.

Curriculum	Board Construction			
	Circuit-level	Component-level		
		A) Pre-mounted on-board	B) Carrier-mounted plus deck	C) Loose plus breadboard
Electromagnetism		12-100		
Basic Electricity & Electronics	12-200		EEC471-2	11-110
Amplifiers & Electronic Circuit Applications	12-210		EEC473-4	11-120
Operational Amplifiers		OAT343		
Logic Circuits/Digital Electronics	12-220	LT345	CK341	11-130
Analogue & Digital Systems		CK342		
Power Electronics			EEC475-6	
Applications with Fault-finding	13-201			
Electronic Servicing	13-202			

Electrotechnology, Analogue & Digital Electronics

Teknikit Console 92-300 & 92-300-1 + Construction Deck EEC470

DISCOVERY software

The Teknikit Console is a robust, moulded bench-top unit that provides a platform for all Feedback work-boards and trainers. The console is available in two versions. The first provides all the power requirements for the work-boards and the second additionally provides a USB PC interface to support Feedback's powerful browser-based Discovery software and real-time virtual instrumentation.

The console satisfies the power supply requirements of all Feedback workboards, as follows: 0-20V dc, ±15V dc, +5V dc, 2 x 12V ac.

The EEC470 is a versatile patch-board that fits onto the Teknikit console and receives carrier-mounted components supplied in the training kits. The deck's layout allows swift and simple circuit construction and the high quality beryllium copper spring contacts have a self-cleaning action to ensure a long life of good electrical connections.

Power Supply 92-445

As a lower cost alternative, where Virtual Instrumentation is not required, the console can be replaced with a 92-445 Power Supply. The power supply satisfies the requirements of all Feedback workboards, as follows: 0-20V dc, ±15V dc, +5V dc, 2 x 12V ac.

The following component-level boards allow a wide variety of circuits to be constructed and tested. Each unit is supplied with a fully developed curriculum and manual.

Electromagnetism Trainer 12-100

DISCOVERY software

The Electromagnetism Trainer provides an introduction to the application of electromagnetic fields through the use of devices. It is a practical, hands-on, component-level trainer on which elements of the system are presented clearly and logically.

Circuits start with individual elements and move on to interconnected components in more complex circuits. Inductance is studied using a test rig comprising two coils wound side-by-side on a former. Different core materials can be used with the former, allowing their performance in magnetic circuits to be evaluated. Soft iron core parts allow different arrangements of magnetic circuit to be formed to investigate magnetic coupling between primary and secondary windings. Magnetic material performance is investigated at different frequencies.

Curriculum Coverage

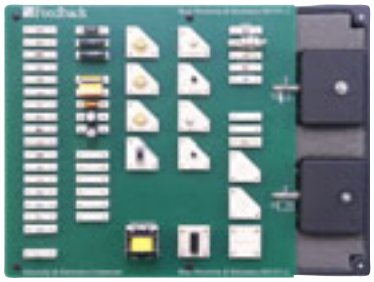
- Electromagnetic induction
- Inductance
- Inductive reactance
- Resonance
- Mutual inductance
- Introduction to magnetism
- Investigation of a solenoid
- Transformer theory
- Single phase transformers
- Reed relays
- Relays
- Simple motor control circuits using relays
- dc Motors
- dc Generators

Electrotechnology, Analogue & Digital Electronics

Basic Electricity & Electronics EEC471-2

DISCOVERY software

The EEC471-2 components are used to construct circuits on the EEC470 deck, introducing the basic principles of electrical and electronic theory and circuits.



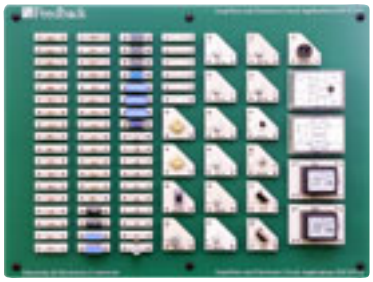
Curriculum Coverage

- Resistance
- Resistor networks
- Resistors in series & parallel
- Superposition theorem
- Thévenin's theorem
- Power
- Capacitance
- Capacitors in series & parallel
- Time constant
- Electromagnetic induction
- Inductance
- RMS value of an ac waveform
- Resistance in ac circuits
- Capacitance in ac circuits
- Inductance in ac circuits
- Capacitive reactance
- Inductive reactance
- The series CR circuit
- The series LR circuit
- Impedance of a series CR circuit
- Impedance of a series LR circuit
- Impedance of a series LCR circuit
- Parallel impedances
- Power in ac circuits
- Series resonance
- Parallel resonance
- The transformer
- The semiconductor diode
- Half-wave rectification
- Full-wave rectification
- The zener diode
- Transistor familiarisation
- The common-emitter transistor circuit
- The silicon controlled rectifier (SCR)
- The TRIAC
- Trigger devices – the DIAC and UJT
- The field effect transistor

Amplifiers & Electronic Circuit Applications EEC473-4

DISCOVERY software

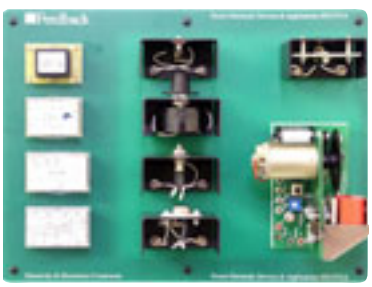
The EEC473-4 components are used to construct circuits on the EEC470 deck and cover Amplifiers and Electronic circuit applications theory and circuits.



Curriculum Coverage

- Using electronic amplifiers
- dc gain
- ac gain
- Amplitude distortion
- Frequency and phase distortion
- Negative feedback
- Frequency response
- The ac amplifier
- The operational amplifier
- Push-pull amplifiers
- Passive attenuators
- Applications
- Common-emitter amplifier
- Emitter follower
- Complementary push-pull
- Amplifier
- Differential amplifier
- Operational amplifier
- Astable multivibrator
- Phase-shift oscillator
- The Schmitt trigger
- Voltage regulator
- TTL NAND gate
- Exclusive-OR gate
- Set-reset flip-flop
- D flip-flop
- Clocked SR flip-flop
- J-K flip-flop

Power Electronic Devices & Applications EEC475-6



The EEC475-6 is used in conjunction with the EEC470 deck to provide a course of study that brings together practical experience and the related theoretical concepts, ranging from device characteristics to applications, including PWM motor control. Comprehensive assignments provide a course of study on Power Electronic Devices and their applications.

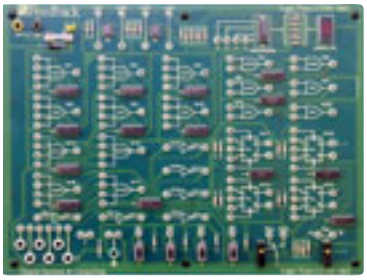
Curriculum Coverage

- Rectification
- Capacitor filters
- Simple voltage stabilisers
- Circuit protection
- Variable dc supplies
- Integrated circuit voltage regulator
- Characteristics of the power MOSFET
- Silicon controlled rectifier (SCR) dc characteristics
- The unijunction transistor
- SCR circuits with resistive and complex loads
- Characteristics of the triac
- Speed measurement methods
- Frequency to voltage conversion
- Phase angle control of a dc motor
- Feedback control of a dc motor
- Pulse Width Modulation
- Pulse Width Modulation Control of a dc Motor
- Inverters and Converters
- Switched-Mode Regulator

Electrotechnology, Analogue & Digital Electronics

Logic Tutor LT345 Mk II

DISCOVERY software

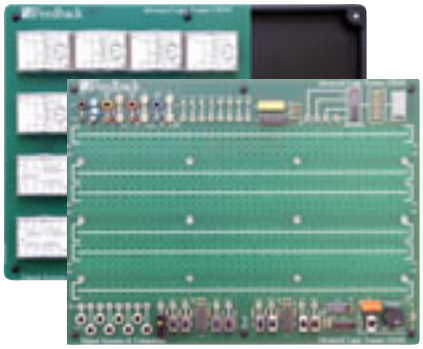


A component-level board unit featuring a range of integrated circuits, inputs and indicators, for teaching logic, combinational and sequential digital circuits and numeric displays.

Curriculum Coverage

- Binary Numbers
- Basic Logic Operations
- Combinational Logic
- Karnaugh Maps
- The Simple Latch
- Clocked Flip-Flops
- The JK Flip-Flop
- Equivalence
- Non-equivalence and other circuits
- Binary Addition
- Registers
- Synchronous Counters
- Asynchronous Counters
- Codes & Code Converters
- 7-Segment Display

Advanced Logic Trainer CK341



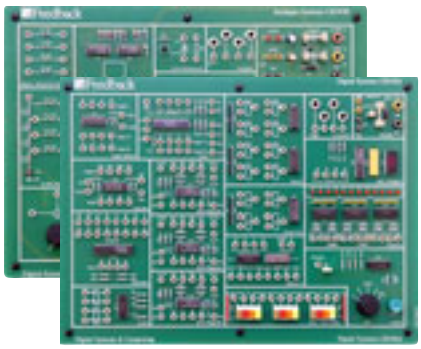
The CK341 is a versatile and easy to use equipment that allows rapid construction of Digital circuits using integrated devices. It also provides facilities for digital, analogue and hybrid circuits to be quickly assembled.

Curriculum Coverage

- Binary Numbers
- Basic Logic Operations
- Combinational Logic
- Karnaugh Maps
- The Simple Latch
- Clocked Flip-Flops
- The JK Flip-Flop
- Equivalence
- Non-equivalence and other circuits
- Binary Addition
- Registers
- Synchronous Counters
- Asynchronous Counters
- Codes & Code Converters
- 7-Segment Display

Analogue & Digital Systems CK342

DISCOVERY software



Two component-level boards continue the study of logic circuits up to microprocessor systems and use a range of medium scale integration devices.
CK342A covers digital devices and CK342B explores Analogue to Digital and Digital to Analogue conversion. CK342A can be used on its own, but CK342B must be used in conjunction with CK342A.

Digital Systems (CK342A)

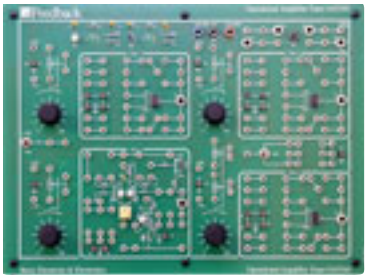
- Registers
- Counters
- The Arithmetic Unit ALU
- Addition seven Subtraction
- Data Storage and Retrieval
- Fetching an Instruction and its Operand

Analogue Systems (CK342B)

- D to A Conversion DAC
- DAC using Analogue Switch
- DAC based on R-2R Network
- Monolithic DAC
- A to D Conversion ADC
- Integrating ADC
- Sample & Hold

Operational Amplifier Tutor OAT343

DISCOVERY software



This component-level board features four operational amplifiers - one of which is constructed of discrete components, enabling work to be carried out on the internal circuitry.

Curriculum Coverage

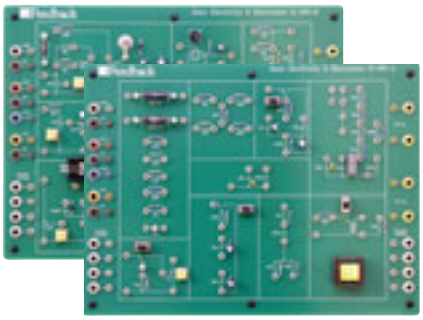
- Op-Amp Feedback Requirements
- Input Offset Voltage
- Slew Rate
- Frequency Response
- Common Mode Rejection Ratio
- Operational Amplifier Characteristics
- Inverting and Non-Inverting Modes
- Open-loop Voltage Gain
- CMRR
- Sign Changer or Inverter
- Scale Changer
- Summing Amplifier
- dc Voltage Follower
- Differential dc Amplifier
- Analogue Integration & Differentiation
- Linear and Non-Linear Oscillators

Electrotechnology, Analogue & Digital Electronics

A range of circuit-level work-boards that require a minimum of set-up time, leaving the student to focus on experimentation and circuit analysis.

Basic Electricity and Electronics 12-200

DISCOVERY software



Two pre-constructed work-boards provide 39 assignments. The first board covers basic principles of passive circuit theory, while the second focusses on semiconductor-related assignments.

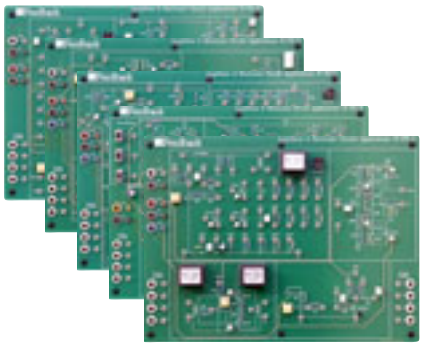
Curriculum Coverage

- Resistance
- Resistor networks
- Resistors in series and parallel
- Superposition theorem
- Thévenin's theorem
- Power
- Capacitance
- Capacitors in series and parallel
- Time constant
- Electromagnetic induction
- Inductance
- RMS value of an ac waveform
- Resistance in ac circuits
- Capacitance in ac circuits
- Inductance in ac circuits
- Capacitive reactance
- Inductive reactance
- The series CR circuit
- The series LR circuit
- Impedance of a series CR circuit
- Impedance of a series LR circuit
- Impedance of a series LCR circuit
- Parallel impedances
- Power in ac circuits
- Series resonance
- Parallel resonance
- The transformer
- The semiconductor diode
- Half-wave rectification
- Full-wave rectification
- The zener diode
- Transistor familiarisation
- The common-emitter transistor circuit
- The silicon controlled rectifier (SCR)
- The TRIAC
- Trigger devices – the DIAC and UJT
- The field effect transistor

On the two boards, 19 different circuit areas are provided. Each board has 2mm patching sockets to allow different value components to be connected as well as 4mm diameter sockets for external power and test equipment.

Amplifiers and Electronic Circuit Applications 12-210

DISCOVERY software



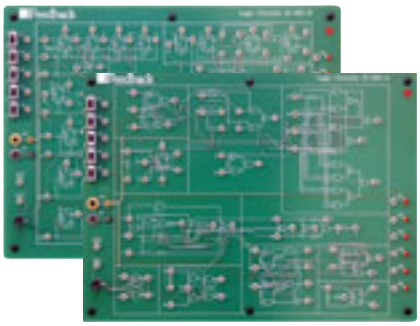
The 12-210 series of pre-constructed work-boards comprise five boards with 28 ready-built circuits supporting 37 assignments. Courseware comprises a reference manual and a student's manual including underlying theory, assignment tuition and circuit patching diagrams. 2mm patching leads are used to make the necessary connections on the boards.

Curriculum Coverage

- Using electronic amplifiers
- dc gain
- ac gain
- Amplitude distortion
- Frequency and phase distortion
- Negative feedback
- Frequency response
- The ac amplifier
- The operational amplifier
- Push-pull amplifiers
- Passive attenuators
- Applications
- Common-emitter amplifier
- Emitter follower
- Complementary push-pull
- Amplifier
- Differential amplifier
- Operational amplifier
- Astable multivibrator
- Phase-shift oscillator
- The Schmitt trigger
- Voltage regulator
- TTL NAND gate
- Exclusive-OR gate
- Set-reset flip-flop
- D flip-flop
- Clocked SR flip-flop
- J-K flip-flop

Logic Circuits 12-220

DISCOVERY software



These work-boards require only a minimum of circuit-level patching, with the 2mm leads, supplied. Assignments are very easy to set up and follow as the boards have supporting features such as switchable logic levels, LED and seven segment display indicators, as well as clocking signals. The boards clearly show the component functions and symbols, to aid understanding.

Curriculum Coverage

- Binary Numbers
- Combinational Logic
- Basic Logic Operations
- Karnaugh Maps
- The Simple Latch
- Clocked Flip-Flops
- The JK Flip-Flop
- Equivalence
- Non-equivalence and other circuits
- Binary Addition
- Registers
- Synchronous & Asynchronous Counters
- Counters
- Codes & Code Converters
- 7-Segment Display

Electrotechnology, Analogue & Digital Electronics

Circuit-level boards to address the vocational needs of fault-finding & servicing.

Applications with Fault-finding and Electronic Servicing

DISCOVERY software

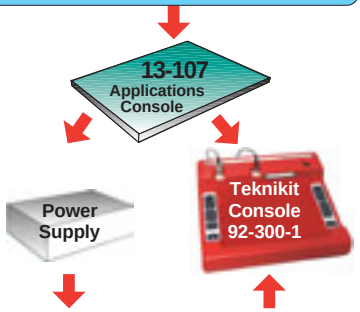
The range of electronic circuits is supplied as two sets of boards: Fault Finding (13-201) and Electronic Servicing (13-202). Each requires the Applications Console (13-107) and a Teknikit Console (92-300-1), which provide built-in power supplies and Virtual Instrumentation software that provides a PC-driven, 2-channel oscilloscope, digital multimeter and digital frequency meter. Alternatively, the board sets can be used with conventional test instruments and power supply from the console or 92-445.

The circuit boards from either set can be fitted onto the Applications Console, which in turn fits onto the Teknikit Console, to draw power and, if relevant, to communicate with the PC.

Discovery Software describes specific design considerations, circuit operation and test procedures. Interactive displays guide the student through the set-up of each assignment, as well as the management of individual or combination fault conditions.

Electronic Circuit Applications
Fault Finding

13-201 Applications with Fault Finding - 8 plug-in boards for 8 single circuits.



Curriculum Coverage

Applications with Fault-finding 13-201

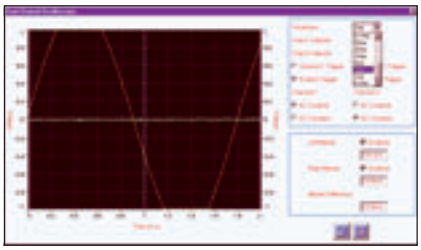
8 plug-in boards covering 8 single circuits.

- Diode Circuits
- Regulated Power Supply Circuits
- Transistor Amplifier
- Two stage Amplifier with overall feedback
- Light Emitting Diode flasher
- Digital to Analogue converter
- Logic Interface
- Waveform Generator

Fault Combinations

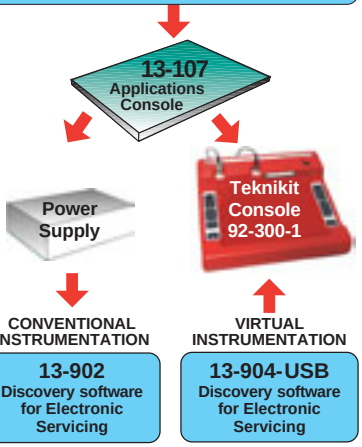
- short circuit
- open circuit
- reverse connection
- incorrect value component
- incorrect component

Teknikit Console shown with Applications Console.



Electronic Circuit Applications
Electronic Servicing

13-202 Electronic Servicing with 9 dual circuit & 1 single circuit plug-in boards.



Curriculum Coverage

Electronic Servicing 13-202

9 dual-circuit and one single circuit plug-in boards covering 19 single circuits.

- Bridge Rectifier with smoothing
- Bridge Rectifier with series regulator
- Single Stage Audio Amplifier
- FET Single Stage Audio Amplifier
- Op-amp Integrator
- Differential Amplifier
- 555 Timer
- Schmitt Trigger
- Unijunction Transistor Oscillator
- Astable Multivibrator
- Monostable Multivibrator
- Crystal Oscillator
- RC Phase Shift Oscillator
- Colpitts Oscillator
- Combination Logic Circuit - 1
- Combination Logic Circuit - 2
- Asynchronous Counter
- Shift Register

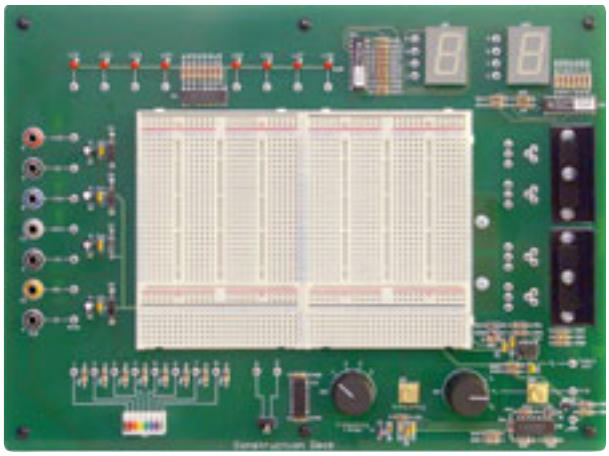
Single circuit board

- Synchronous Counter

Electrotechnology, Analogue & Digital Electronics

These component-level kits use a breadboard construction deck.

Electricity & Electronics Construction Deck 11-100



An understanding of basic electricity and electronics is vital to any electrical engineer's basic knowledge and is also an essential introduction for students of other areas of learning. This Construction deck and choice of three training kits provides an effective and low cost solution.

The construction deck comprises a breadboard area for circuit construction and a range of features to support the practical work. These include a signal generator with approximate sine, square and triangular waveforms, a power amplifier and heat-sink assemblies for power devices. For digital work, 8 logic inputs and 8 LED level indicators are provided. There are also two seven-segment Displays (1 x hex, 1 x BCD), a de-bounced switch and a TTL output from the function generator.

Transfer sockets are provided that convert from 4mm to wire insert sockets. All circuit connections are made using the tinned copper wire provided. A cutting and stripping tool is also supplied.

Each Training Set comes with a boxed kit of appropriate components and a comprehensive training manual, with subject theory and practical exercises that feature overlay diagrams for each assignment. These can be photocopied and pinned to the breadboard to show how and where to connect components.

To perform the assignments, the 92-445 external power supply with the following range of power outputs is required: +5V, ±15V dc, 0 to +20V dc variable and 2 x 12V rms ac.

The following kits are available for use with the 11-100 Construction Deck.
Each kit is supplied with a comprehensive manual and circuit construction overlays.

Curriculum Coverage

11-110 Basic Electricity & Electronics Kit

A set of components is supplied in a sectionalised case with a range of assignments covering the following:

- Resistance
- Resistor networks
- Resistors in series & parallel
- Superposition theorem
- Thévenins theorem
- Power
- Capacitance
- Capacitors in series & parallel
- Time constant
- Electromagnetic induction
- Inductance
- RMS Value of an ac waveform
- ac resistive circuits
- ac capacitive circuits
- ac inductive circuits
- Capacitive reactance
- Inductive reactance
- The series CR circuit
- The series LR circuit
- Impedance of a series CR circuit
- Impedance of a series LR circuit
- Impedance of a series LCR circuit
- Parallel impedances
- ac power
- Series resonance
- Parallel resonance
- The transformer
- The semiconductor diode
- Half-wave rectification
- Full-wave rectification
- The zener diode
- Transistor familiarisation
- The Common-emitter transistor circuit
- The silicon controlled rectifier (SCR)
- The TRIAC
- Trigger devices - the DIAC and UJT

11-120 Electronic Devices & Circuits Kit

This kit of components is presented in a similar style to the 11-110. The assignments cover the following:

- Using electronic amplifiers
- dc gain
- ac gain
- Amplitude distortion
- Frequency & phase distortion
- Negative feedback
- Frequency response
- The ac amplifiers
- The operational amplifier
- Push-pull amplifiers
- Passive attenuators
- Applications
- Common-emitter amplifiers
- Emitter follower
- Complementary push-pull amplifier
- Differential amplifier
- Operational amplifier
- Astable multivibrator
- Phase-shift oscillator
- The schmitt trigger
- Voltage regulator
- TTL NAND gate
- Exclusive-OR gate
- Set-reset flip flop
- D flip flop
- Clocked SR flip flop
- J-K flip flop

11-130 Digital Electronics Kit

This kit of components is presented in a similar style to the 11-110. The assignments cover the following:

- Binary Numbers
- Basic Logic Operations
- Combinational Logic
- Karnaugh Maps
- The Simple Latch
- Clocked Flip-Flops
- The JK Flip-Flop
- Equivalence
- Non-equivalence and other circuits
- Binary Addition
- Registers
- Synchronous Counters
- Asynchronous Counters
- Codes & Code Converters
- 7-Segment Display

Curriculum and e-learning Materials

All of Feedback's teaching products are supplied with full curriculum material. Feedback also offers Discovery interactive e-learning software, with IMS-compliant content and Discovery Lab Manager, a networked lab delivery system.

Paper-based Curriculum Material

Full curriculum material is supplied with each board product, including:

- Underlying theory
- Illustrative graphics
- Practical assignment guidance
- Questions
- Real-world applications and examples

Curriculum manuals are supplied as printable PDF files on CD for easy printing. Hardcopy manuals are also available.

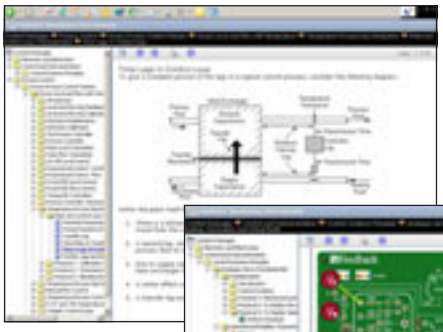
Discovery e-learning Software

Discovery e-learning Software is available to complement the educational value of the hardware and printable curriculum. It offers the following features to provide an interactive balance of PC-based learning and practical tasks:

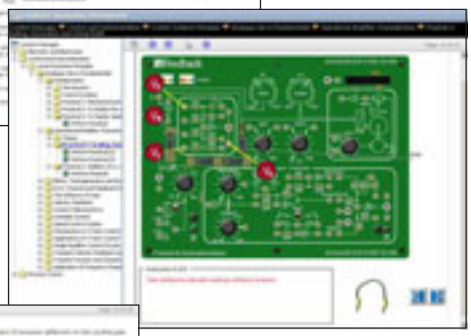
- Easy navigation
- User-friendly content
- Interactive graphics
- Question sets: multiple choice + free-form questions
- Virtual Instrumentation on the PC screen
- Standard web and browser technology
- Standalone or server-based operation
- IMS-compliant content for use in Discovery Lab Manager or any other conforming networked lab delivery environment

This integrated suite of browser-based laboratory assignments can be installed either on stand-alone PC-laboratory equipment workstations or networked and centrally served.

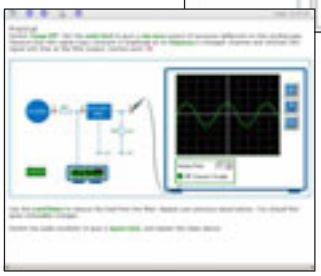
Designed to operate as part of a resource-based learning system, Discovery software can equip whole networks of student PCs and laboratory equipment.



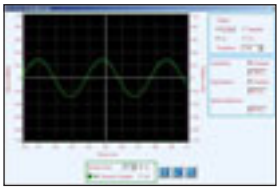
Theory page



Patching and configuration information



Practical questions are multiple choice + free-form. This example shows virtual instrumentation.

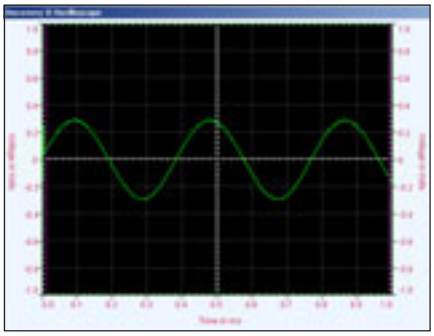


Board Type	Material Delivery			Test & Measurement	
	Paper-based	e-learning		Conventional	Virtual Instrumentation
Circuit-level (on-board)	•	•		•	•
Component-level (on-board)	•	•		•	•
Component-level (carrier-mounted)	•	•		•	•
Component-level (breadboard)	•			•	

Discovery Software - Virtual Instrumentation

Discovery's virtual instrumentation software gathers on-board circuit data information and provides a valuable on-screen display that represents a cost and space-saving alternative to conventional test and measurement instrumentation. Virtual instrumentation supports:

- 2-channel 100 MHz oscilloscope
- Digital voltmeter (rms and dc)
- 50 MHz spectrum analyser
- 20 MHz frequency meter
- X-Y plotter



Virtual instrumentation and practical procedures

Discovery Lab Manager

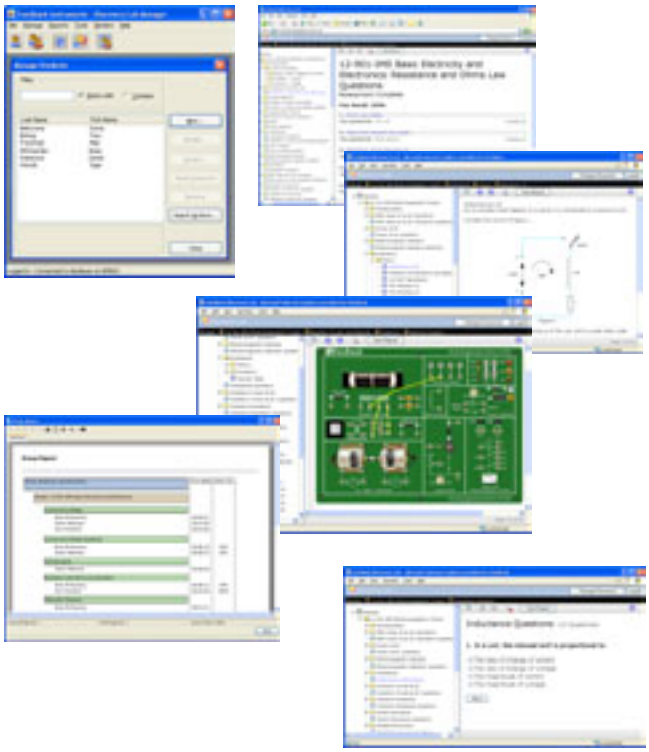
The Discovery Lab Manager (DLM) is an easy-to-use utility which enables you to maximise the potential of your Feedback Discovery e-learning material and to get the best out of your Feedback hardware.

The DLM is designed for use in a networked laboratory environment with up to 30 active students at any time. It allows a tutor to track and assess students on the network and to manage Discovery e-learning material.

The Discovery based curriculum material comprises a large number of assignments which contain back-ground, theory, practical and testing information relevant to the course being studied. These assignments are now presented as learning objects which are held within a content repository in the DLM. They are tagged with appropriate searchable keywords by a curriculum expert which allows tutors to easily find learning material that suits precise teaching needs.
Custom courses for individual or group requirements can be created in minutes.

Within the DLM, students are assigned password protected learning accounts. The students can be assigned to single or multiple groups and then access to the learning material can be determined by the tutor. There is also provision for assessment and testing of students and groups with comprehensive reporting and data exporting facilities.

The Feedback DLM uses all the latest e-learning standards and technologies and can be used with the latest versions of all Feedback Discovery software.



Features

- Lab Delivery System
- Tutor controlled learning environment
- Web-based delivery system
- Student and Group Management
- Module Management
- Repository Management
- Sophisticated reporting
- Allows student activity to be tracked

Benefits

- Allows efficient use of laboratory resources
- Improves student productivity in the lab
- Allows more efficient use of tutor time

Ordering Information

Consoles / Power Supplies

Teknikit Console (including power supply)	92-300
Teknikit Console with 92-300 Virtual Instrumentation software	92-300-1
Power Supply	92-445

Circuit-level (pre-constructed boards)

Pre-mounted boards

Basic Electricity & Electronics A and B	12-200
Discovery software for Basic Electricity & Electronics	12-920
Amplifiers & Electronic Circuit Applications A, B, C, D and E	12-210
Discovery software for Amplifiers & Electronic Circuit Applications	12-921
Logic Circuits A and B	12-220
Discovery software for Logic Circuits	12-922
Applications with Fault Finding	13-201
Electronic Servicing	13-202

Component-level boards

Pre-mounted boards

Electromagnetism Trainer	12-100
Discovery software for Electromagnetism Trainer	12-911
Operational Amplifier Tutor	OAT343
Discovery software for Operational Amplifier Tutor	12-910
Logic Tutor	LT345
Discovery software for Logic Tutor	21-905
Analogue and Digital Systems (boards A & B without power supply)	CK342
Digital Systems Trainer (without power supply)	CK342A
Analogue Systems Trainer (add-on board to CK342A)	CK342B
Discovery software for Analogue & Digital Systems	21-901(342A) & 21-902(342B)

Carrier-mounted component sets

Construction Deck (for use with EEC471-2, EEC473-4 and EEC475-6)	EEC470
Basic Electricity & Electronics	EEC471-2
Discovery software for Basic Electricity & Electronics	12-901
Amplifiers & Electronic Circuit Applications	EEC473-4
Discovery software for Amplifiers & Electronic Circuit Applications	12-902
Power Electronic Devices and Applications	EEC475-6
Advanced Logic Trainer	CK341

Loose component kits

Electricity & Electronics Construction Deck	11-100
Basic Electricity & Electronics (requires 11-100)	11-110
Electronic Devices & Circuits (requires 11-100)	11-120
Digital Electronics (requires 11-100)	11-130

Electricity & Electronics - 0205-2 **Printed in England.**

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