

Analog Communication Trainers



DSB / SSB AM Transmitter Trainer ST 2201
DSB / SSB AM Receiver Trainer ST 2202
FM Transmitter / Receiver Trainer ST 2203

Features:

- Self Contained Trainers with built-in DC Power Supply
- FM trainer with Reactance & Varactor Modulations and (1) Detuned Resonant (2) Quadature (3) Forster Seeley (4) Ratio & (5)PLL Detectors
- AM Trainer with Sensitivity, Selectivity and Fidelity Experiments
- On board Input-output & test points
- Operating manual & Student work-book
- 8 switched faults in each module



Scienteck Analog Communication Trainers are designed to cover the fundamental aspects of the subject. They are student friendly & completely self contained, having all the basic required circuits and controls on board. Different techniques of AM and FM Transmission & Detection are described in the manuals & covered in the experiments. Student troubleshooting work is included through switched faults in each trainer. This forms a complete training package of Analog Communication Technology.

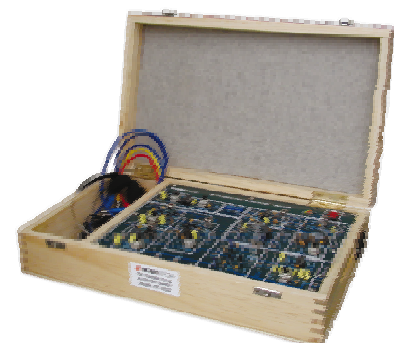
Scienteck also has a complete range of Digital Communication Trainers and Fiber Optic Trainers.



DSB/SSB AM Transmitter Trainer ST 2201



DSB/SSB AM Receiver Trainer ST 2202



FM Transmitter Receiver Trainer ST 2203

... the best learning tools !

DSB/SSB AM Transmitter Trainer ST 2201

- Crystal controlled carrier frequency
- On-board Audio Oscillator, Modulators, BP Filters, 455 kHz Generator, Transmitting Antenna and Speaker

TECHNICAL SPECIFICATIONS

Audio Oscillator:	With adjustable Amplitude & Frequency (300 Hz - 3.4 KHz)
Audio Output:	Amplifier with speaker / headphone
Modulators	2 Nos Balanced Modulators with Band pass Filters (1 MHz), 1 No Balanced Modulator (455 KHz), 1 No Ceramic Bandpass Filter
Carrier Freq.:	1 MHz (Crystal controlled)
Transmitter Output:	Amplifier (Gain adjustable) DSB (1MHz) SSB (1.445MHz) connected to Antenna/ cable
Switched Faults:	8 Nos.
Interconnections:	4mm Banana Socket
Test Points:	27
Power:	230V \pm 10% , 50Hz
Dimensions (mm):	W 419, H 90, D255
Weight:	2.8 Kgs (approx.)
Accessories included:	Line cord, Manuals, Set of patch cords

Experiments included:

- * Study of carrier frequency generation
- * Study of DSB & SSB AM generation & Transmission
- * Study of Transmitter tuned circuits

DSB/SSB AM Receiver Trainer ST 2202

- Variable capacitor tuning
- On-board LO, BFO, RF Amp, Mixer, IF Amps., Detectors, Audio output Receiving Antenna, AGC & Speaker

TECHNICAL SPECIFICATIONS

Construction:	Superhetrodyne
Freq.Range:	525 KHz to 1.605 MHz
Intermediate Freq:	455 KHz
Input Circuits:	1) RF Amplifier 2) Mixer 3) Local Oscillator 4) Beat Frequency Oscillator 5) IF Ampl. 1 6) 1F amplifier 2
Tuning:	With Variable Capacitor (ganged) Dial marking on board
Receiving media:	Telescopic Antenna & RF cable (Switchable)
Detectors	(1) Diode Detector (For DSB) (2) Product Detector (SSB)
Audio Output:	Amplifier with speaker/ Headphone
Automatic Gain control:	Switchable
Switched Faults:	8 No.s
Interconnections:	4 mm banana sockets
Test points:	50
Power:	230V \pm 10% , 50Hz
Dimensions (mm):	W 419 , H 90, D255
Weight:	2.8 Kgs (approx.)
Accessories included	Line cord, Manuals, Set of patch cords

Experiments included:

- * Study of DSB & SSB AM reception & detection by diode / product detectors
- * Study of AGC
- * Study of Receiver tuned circuits
- * Study of Sensitivity, Selectivity & Fidelity of Receiver

FM Transmitter Receiver Trainer ST 2203

- On-board Audio Oscillator, Modulators, Detectors, Amplitude Limiter & Filter

TECHNICAL SPECIFICATIONS

Audio Oscillator:	With adjustable Amplitude & Frequency (300 Hz - 3.4 KHz)
FM Modulator:	2 Nos (1) Reactance Modulator (with carrier Freq. adjustment) (2) Varactor Modulator (with carrier Freq. adjustment)
Mixer / Amplifier:	1 No. (With Gain adjustment) Allows FM input signal to be amplitude modulated by a noise input prior to demodulation
Transmitter output Freq:	455 KHz
FM Demodulator:	5 No.s (1) Detuned Resonant Detector (2) Quadrature Detector (3) Foster -Seeley Detector (4) Ratio - Detector (5) Phase Locked Loop Detector
Low Pass Filter/ Amplifier	3.4 KHz. Cut off Freq. (with adjustable gain)
Amplitude Limiter:	1 Nos
Switched Faults:	8 No.s
Interconnections:	4 mm banana sockets
Test points:	74
Power:	230V, \pm 10% , 50Hz
Dimensions (mm):	W 419, H 90, D255
Weight:	2.8 Kgs (approx.)
Accessories included	Line cord, Manuals, Set of patch cords

Experiments included:

- Study of 2 types of FM modulators & 5 different types of demodulators
- Effect of noise on FM transmission & Study of tuned circuits
- Separate VCO circuit to demonstrate FM Waveforms