



Sciencetech TechBooks are compact and user friendly learning platforms to provide a modern, portable, comprehensive and practical way to learn Technology. Each TechBook is provided with detailed Multimedia learning material which covers basic theory, step by step procedure to conduct the experiment and other useful information.

**Sciencetech TechBook 2201 DSB/SSB AM Transmitter** is a comprehensive learning solution specifically designed to study basic operation as well as to provide conceptual and step by step understanding of DSB/SSB Amplitude modulation and transmission system through measurement of voltages and observation of waveforms at various test points. Block wise modular organization of circuit function with supporting technical information makes it easy to understand the process of AM generation and transmission. The exercises conceived to provide a practical approach to the subjects enable a deep analysis of the subjects and will guide the students to understand each function.

### Features

- A self contained TechBook
- Functional blocks with self explanatory waveforms and technical details indicated on board
- Oscillator controlled carrier frequency
- LED indication for signal flow and selection
- More than 25 nos. gold plated test points for waveform observation and analysis
- 8 Switched faults for troubleshooting at different functional blocks
- Telescopic antenna for transmission of AM signal
- On board audio jacks provided for Microphone and Earphone connection
- On board Speaker provided for audio communication
- Online Product Tutorial

## Scope of Learning

- Study of Balance modulator and Band pass filter for DSB AM generation
- Study and calculation of Modulation index using trapezoidal method
- Study of Balance modulator and Ceramic band pass filter for SSB AM generation
- Study of tuned Amplifier for AM transmission

## Technical Specifications

<b>Audio Oscillator</b>	:	With adjustable Amplitude & Frequency (300 Hz - 3.4 KHz)
<b>Audio Output</b>	:	Amplifier with speaker
<b>Modulators</b>	:	Balanced Modulator with Band pass Filter (1 MHz) - 2 nos.
<b>Balanced Modulator</b>	:	1 No. (455 KHz)
<b>Ceramic Bandpass Filter</b>	:	1 No. (455 KHz)
<b>Carrier Frequency</b>	:	1 MHz (Oscillator controlled)
<b>Transmitter Amplifier Output</b>	:	(Gain adjustable) DSB (1 MHz), SSB (1.445 MHz) connected to Antenna/cable
<b>Switched Faults</b>	:	8 nos.
<b>Interconnections</b>	:	2mm Banana socket
<b>Test Points</b>	:	27 nos
<b>Power Supply</b>	:	110-220 V AC $\pm 10\%$ , 50/60Hz
<b>Power Consumption</b>	:	4 VA approximately
<b>Dimensions (mm)</b>	:	W 326 $\times$ D 252 $\times$ H 52
<b>Weight</b>	:	2 Kg. approximately
<b>Operating Conditions</b>	:	0-40°C, 80% RH
<b>Product Tutorial</b>	:	Online (Theory, procedure, reference results, etc).
<b>Included Accessories :</b>		
Patch Cord 16"	:	2 nos.
Mains Cord, TechBook Power Supply, Microphone, Earphone:		1 no.