

## Colour TV Trainer with Faults Creating Facility

**Model : SA-901**



**SINCOM SA-901 Colour TV Trainer (Digital TV)** is comprehensive trainer for the purpose of demonstrating the functionality, signal analysis, voltage analysis, and troubleshooting methods of Colour TV Receiver (Analog TV) equipped with 21" Picture tube and a remote control. It enables users to control all functions through the use of a remote control, and allows for the study of signal and voltage analysis in each individual section. Additionally, it offers the capability to create 30 different faults across all sections.

### Features

- ❖ Designed with careful consideration of safety precautions
- ❖ 21" CRT Picture tube enclosed in detachable fiber cabinet
- ❖ 30 Switch Faults Creating facility
- ❖ Push Buttons for AV/TV, Volume, Channel selection and Menu controls on board
- ❖ RF Tuner Input, AV IN on board
- ❖ AV OUT on board
- ❖ Stereo Sound Output
- ❖ Remote IR Sensor with LED indications
- ❖ Power ON/OFF Controls on board
- ❖ Facility to control all functions by Remote control and Control Panel
- ❖ Functional Block Diagram printed in multicolor on the front panel of the white board
- ❖ Enclosed in an attractive, light weight, High Quality elegant wooden cabinet
- ❖ Facility to connect external TV pattern Generator and Oscilloscope
- ❖ Interconnections by 2mm high quality banana sockets and pins.
- ❖ Maximum Test points to thoroughly explore all facets of the experiments

### Technical Specifications

▪ TV Type	: Analog TV
▪ TV Systems	: CCIR-B, PAL-G, 625 lines
▪ Power Supply	: 230V $\pm$ 15 % AC 50Hz
▪ Power Supply type	: SMPS
▪ Regulation	: 195V AC to 265V AC
▪ Power Consumption	: 80 Watt
▪ Tuner Input	: RF VHF/UHF
▪ Tuner Channel	: VHF 2 to 12 , UHF 21 to 68 , S-Band and Hyper Band

▪ Total Channels	: 230
▪ Picture Tube	: Flat 51cm / 21" (Diagonal)
▪ Video Out	: CCVS
▪ Sound type	: Stereo
▪ Sound Output	: 10 Watt max.
▪ RF Input Impedance	: 75 Ohms
▪ RF Sensitivity	: 50 $\mu$ v
▪ Picture IF Frequency	: 38.9 MHz
▪ Sound IF Frequency	: 33.4 MHz
▪ EHT Voltage	: 24 KV
▪ Gain Limited Sensitivity	: 55dB for Video & 30dB for Audio
▪ Distortions	: 10 to 15% in live program
▪ Controls on Board	: Volume, Channel selection, AV/TV, Menu
▪ Remote Control	: Control all functions
▪ Operating In Mode	: AV and TV
▪ Input Control	: RF IN, Audio and Video In
▪ Output Control	: Audio and Video Out
▪ Total Faults Switches	: 30
▪ Test Points	: 70 approx.
▪ Weight	: 15.0 kg (approx)
▪ Dimensions (cm)	: L 100 x W 20 x H 70
▪ Interconnections	: 2mm Banana sockets
▪ Operating Temperature	: 0-55°C, 85% RH

## Learning Scope

- To study the concept of Colour TV System.
- To study the principle of CTV Receiver.
- To study the Block diagram of CTV Receiver.
- To study the circuit diagram of CTV Receiver.
- To study the control Panel of CTV Receiver.
- To study Tuner section.
- To study VIF & SIF section.
- To study Sound Section.
- To study Colour/Chroma section.
- To study Colour Output section/CRT Drive section.
- To study the Sync separator section.
- To study Horizontal oscillator section.
- To study E.H.T. section.
- To study Vertical oscillator & Output section.
- To study Remote Control section.
- To study Switched Mode Power Supply.
- To observe and note the Voltages at various sections of CTV receiver.
- To observe and note the signals/waveforms at various sections of CTV receiver.
- To study the 30 faults on all above sections of CTV Receiver.

**Other Instruments Required :** Digital Multimeter, CRO, Antenna I/P, CTV Pattern Generator (Optional).

**Accessories Included :** Remote Control , AV RC cable, Patch Cords and Detail Instruction Manual.