



An ISO 9001:2015 Co.

SINC [®]

Sindhu ELECTRONICS & COMMUNICATIONS PVT. LTD.

Electronics Educational Trainer Kits

Colour TV Trainer with Faults Creating Facility

Model : SA-901



SINC 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

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|---------------------|--|
| ▪ 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 |

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- 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 μ 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.