

# COLOUR TV TRAINER (MODEL : XPO - COL TV)



## Features of TV Trainer

- 1) Colour TV kit provided with the trainer is the latest one which based on modern Technologies with remote control and not on any outdated ICs.
- 2) Main Colour TV kit Mounted in all open fashion into a drawer with CRT. Firmly supported on compact Alluminium flat Rack. For easy viewing transparent acrylic cover provided.
- 3) The complete trainer mounted on a Alluminium profile and table top model.
- 4) The Complete functional Block diagram of TV is distributed on single PCB (470 x 230 mm) on the stand as shown in diagram.
- 5) Trainer consists of 9 function blocks giving a good idea about different important section of TV receiver and a fault panel having 14 non-destructive faults.
- 6) Experiment panel provide 39 direct accessible test points to observe different audio, video signals and output of different sections in non-destructive manner.
- 7) Non destructive Faults have been implemented through pulser switches (14 nos.) mounted on PCB to prevent corruption of picture quality.
- 8) Facility to connect VCD, DVD and Video games.
- 9) 2 Nos. of good sound quality speaker are provided at sides of TV Trainer.
- 10) IR sensor & manual keyboard are provided on front panel for easy access.
- 11) The panel showing list of functional blocks for Colour T.V. Trainer complete with set of cables to connect TV Circuit PCB kit under acrylic cover.

- a) Antenna cum tuner panel / P1.
  - b) I.F. Amplifier cum detector panel / P2.
  - c) FM Detector and Audio output Panel / P3.
  - d) Sync. Separator, Horizontal Oscillator and EHT Section Panel / P4.
  - e) Vertical oscillator and Vertical Output Panel / P5.
  - f) Pal Decoder Panel / P6.
  - g) Video Amplifier and Colour Picture Tube base panel / P7.
  - h) S.M.P.S. Panel / P8.
  - i) I.R. Remote Receiver Panel / P9.
  - j) Fault Panel with 14 non-Destructive Faults / P10.
- 12) Fault panel provides opportunity for student to tackle some commonly arising faults given on fault panel by just shorting through 2 mm patch cords or pulser switch.
- 13) All 14 faults may be inserted in the TV circuit in a non-destruction manner. Removing the patch cor restores fully working TV operation.

## 14) List of 14 Nos. of Faults :

- 1) Sync. Separator problem
- 2) Vertical Height Control
- 3) Colour Control
- 4) Vertical Sync Problem
- 5) Red Colour Problem
- 6) Vertical Oscillator Problem
- 7) Blue Colour Problem
- 8) Brightness Control
- 9) Contrast Control
- 10) Green Colour Problem
- 11) V.I.F. Problem
- 12) Audio Control Problem
- 13) AGC Problem
- 14) VHF<sub>HIGH</sub> Band Problem

## 15) Set of Manuals :

- 1) Student Workbook (SW),
- 2) Instructor Guide and technical Reference (IG).

## 16) Mechanical Dimensions & Weight

560mm (L) X 560 mm (W) X 600mm(H), 28 kg

- 17) SW explains of total 81 review questions and practical exercises to test knowledge gained by students and list of additional 86 faults which should be created under guidance. While IG, the instructor friendly part of manual consist of bill of material and wiring details of trainer along with circuit diagram.

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