



INSTRUCTION MANUAL

Program Timer 2

Series 3000 Model R-153

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TABLE OF CONTENTS

GENERAL DESCRIPTION	3
SPECIFICATIONS	4
INSTALLATION	5
Mounting	5
Open Collector Outputs	5
Computer Connection	5
Modem Connection	5
Printer Connection	6
Power	6
OUTPUT INDICATORS	6
Power	6
TX and RX	6
Outputs	6

GENERAL DESCRIPTION

The Series 3000 Model R-153 Program Timer 2 is a microprocessor-based timing controller with applications in the Cable/Commercial Television, Broadcasting, and Process Control Industries.

The Series 3000 Model R-153 Program Timer 2 provides the following capabilities:

- 999 event capability
- 16 open collector outputs
- PT2 computer software
- Front panel RS-232C computer port
- Rear panel RS-232C port for external modem
- Rear panel RS-232C port for external serial printer
- Real-time clock with 364 day programming

When the Series 3000 Model R-153 Program Timer 2 is shipped from the factory a 3000R-153/110 accessory kit is provided. Contained in each accessory kit is the following:

- CD containing Synopsis2 software and all pertinent manuals
- 3000R/22M rack mounting kit
- 9VAC, 600 mA wall transformer
- 6 foot RJ11 telephone line cord

SPECIFICATIONS

CLOCK ACCURACY:	4 seconds/day on battery back-up.
BATTERY BACK-UP:	Internal; retains memory for minimum of eight hours.
TIMED EVENTS:	999 maximum
COMPUTER INPUT:	RS-232C; RJ11 6x4 connector
MODEM INPUT:	RS-232C; RJ11 6x4 connector
PRINTER OUTPUT:	RS-232C; RJ11 6x4 connector
LOGIC OUTPUTS:	16 open collector; 30 VDC @ 40 mA. maximum; detachable screw barrier strips.
OUTPUT INDICATORS:	16 output status, TX, RD, and power.
PHYSICAL:	1.75 in H X 19 inW X 6.75 inD
POWER:	117 VAC +/- 10%, 60 Hz.

INSTALLATION

Mounting:

The R-153 requires a minimum of 1.75 vertical inches of space in a standard 19-wide EIA equipment rack. Slide the unit into the rack frame and secure it using the 3000R/22M mounting hardware supplied with the unit.

Open Collector Outputs:

The R-153 provides 16 open collector outputs, with connections made on the detachable screw barrier strips located on the rear panel.

Each open collector output is normally open to circuit common (Ground) and when switched 'ON' shorts to circuit common. Each open collector output is rated for 30 VDC at 40 mA. **Do not** apply more than 30 VDC or exceed more than 40 mA at any voltage.

A ground symbol is shown above each screw terminal that is connected to circuit common. The '+' symbol shows the positive voltage input for each open collector output.

Computer Connection:

The front and back panel RS-232C ports are connected in parallel; with the front panel connector intended for direct computer connection. Plug one end of the telephone line cord into the front panel connector and the other end into the DB9S provided in the accessory kit. Now attach the DB9S to the serial port of your computer.

The Synopsis 2 software will communicate with the 3000R-153 at no parity, 8 data bits, 1 stop, and 1200 baud. There is no setup required for this in the Synopsis 2 software or R-153.

Modem Connection:

The back panel RS-232C port is intended for use with an external modem. Plug one end of the telephone line cord into the 'CMP' connector located on the back panel and the other end to the DB25P connector provided in the accessory kit. Then attach the DB25P to your modem.

Unplug the R-153, apply power to your modem. Now plug in the R-153. The R-153's front panel 'TX' will flash for approximately 10 seconds. During this time any attached modem will be reset and initialized to: E0 Q0 V0 X1 S0=2 S12=48.

Printer Connection:

The 'PRT' connector on the back panel is intended for use with an external serial printer. Plug one end of the telephone line cord into the 'PRT' located on the back panel and the other end to the DB25S connector provided in the accessory kit. Then attach the DB25S to your external serial printer.

Power:

The R-153 requires 9VAC, which is provided by the wall transformer contained in the accessory kit. When AC power is applied to the R-153, you must wait about 30 seconds for it to initialize.

OUTPUT INDICATORS

Power:

The power indicator will light whenever the R-153 is powered by the 9 VAC wall transformer.

TX and RX:

The TX indicator will flash whenever the R-153 is sending data out on its RS-232C link. The RX indicator will flash whenever the R-153 is receiving data on its RS-232C link.

Outputs:

Each output indicator will light when the corresponding output is switched 'ON' (energized). When outputs are configured in the momentary operation, the corresponding output indicator will light for 250 mSec. when switched 'ON.'