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**MICROWAVE
PROBE RECEIVER**

LA50-440

INSTRUCTIONS FOR USE

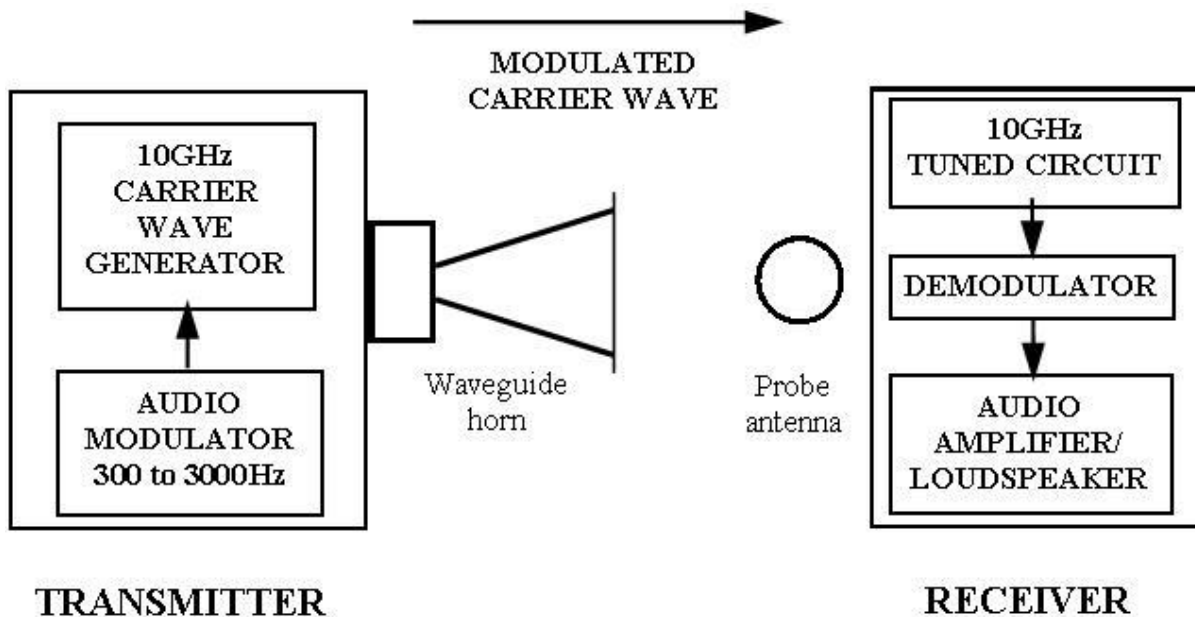
MICROWAVE PROBE RECEIVER

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INTRODUCTION

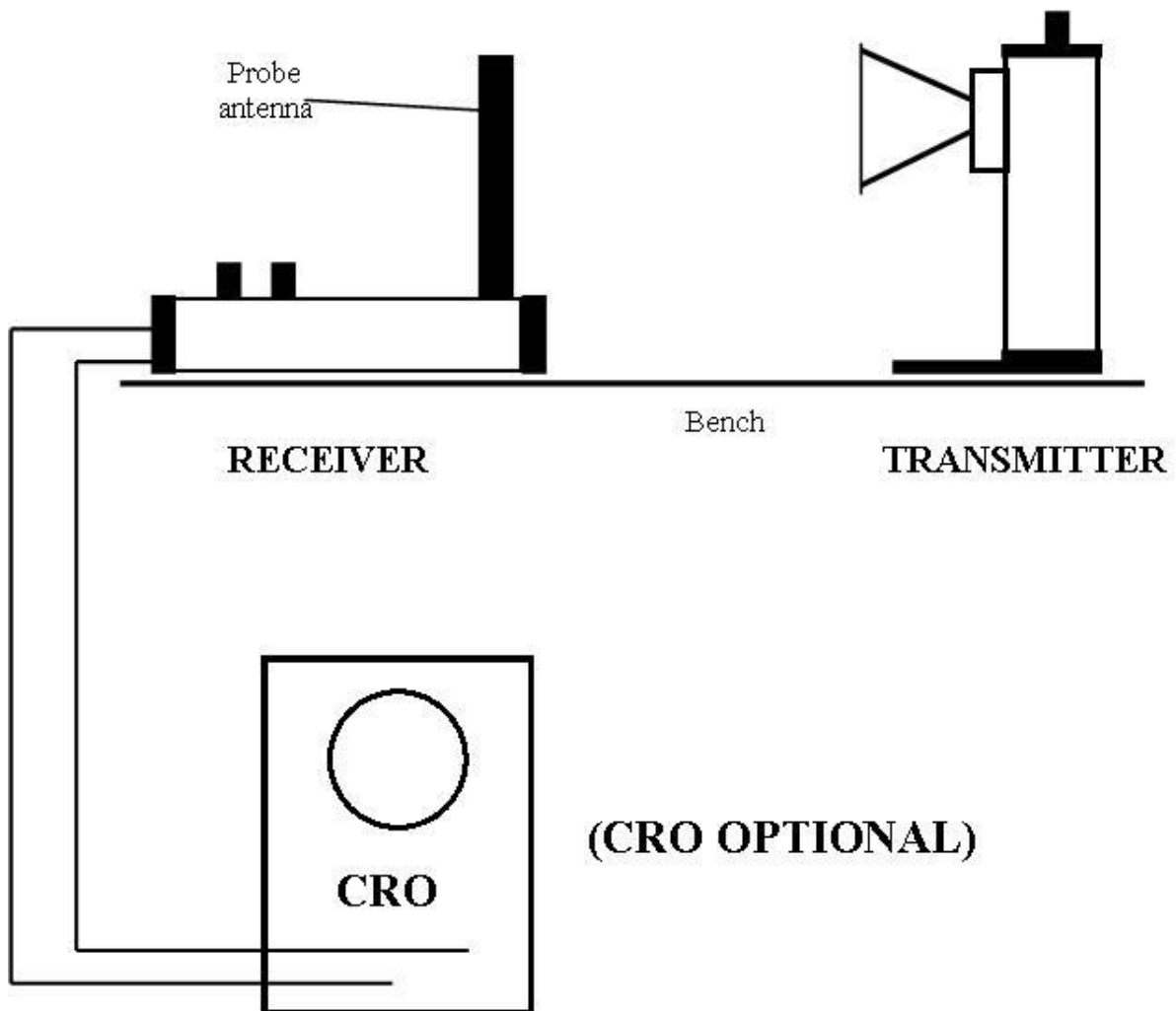
This Probe receiver is designed for use with the Lascells 3cm microwave system which includes a Horn Transmitter and Plate Antenna Receiver. It operates over a broad frequency range in the 10GHz band and might be usable with other microwave transmitters.

SYSTEM OVERVIEW



The system uses integrated Schottky diode detectors mounted in a black PVC tube at the front of the unit. The diode sensitivity is adjustable and the output from the audio amplifier can also be controlled. The receiving area for this detector is very small which facilitates position measurements but at the cost of receiver sensitivity.

EXPERIMENTAL ARRANGEMENT



The output from the detector can be taken to an oscilloscope if quantitative measurements are required. Connect the black output socket on the receiver to the negative input on the CRO and the red output socket to the signal input, usually red, on the CRO.

The CRO can monitor the audio signal as a waveform if the timebase is set to about 1ms/div or for amplitude measurements you might find that working with the timebase off is easier so that a straight line can be measured.

EXPERIMENTS

All the experimental arrangements for demonstrating the standard wave phenomena with this microwave system are detailed in the notes provided with the transmitter. In all cases the probe receiver can be used in place of the Plate Receiver but positional measurements can be more precise since the location of the detector is in the column rather than dispersed across the front face of the Plate Receiver.

NOTES

Other apparatus from Lascells Ltd. or major distributors.

MODULO 1	For showing AM FM modulation of a Carrier Wave.
ADC and DAC	For showing analogue and Digital conversion in Communications systems.
INFRA-RED LINK	For exploring the properties of Infra-red radiation as used in communications.
RF Telemetry SYSTEM	For exploring the properties of 433 MHz radio waves.
PHOTODETECTOR	For exploring the visible spectrum

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