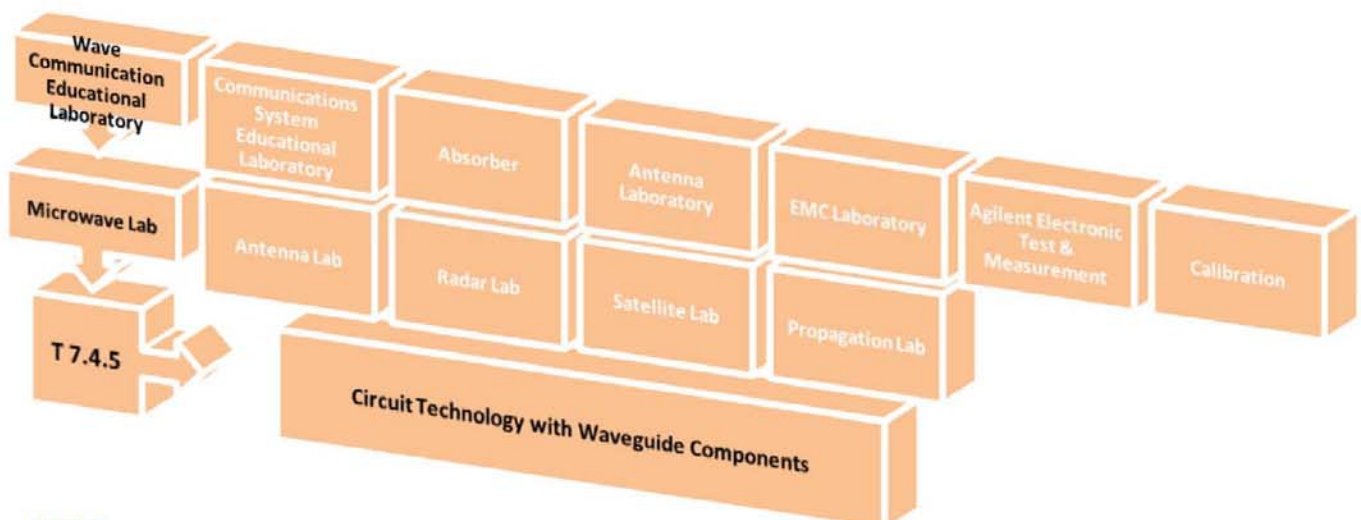




All of the microwave components in this equipment set are needed to permit the set up of extensive experiments and rather complex circuits. Emphasis now is no longer on the individual components but rather on the overall setup. The experimental setup shown is for phase synchronization by injection locking.

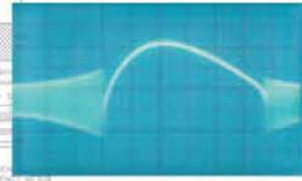
Topics

- Mechanically tuned oscillators
- Gunn oscillator with varactor tuning
- Modulation
- Frequency conversion
- Phase synchronization by injection locking



The result is no simple sine wave

The frequency of a free-running power oscillator will be prompted to oscillate within certain limits by a controlling oscillator of less power. The frequency range between the two oscillators at which synchronization (frequency equality) prevails will be clearly recognizable. The controlling oscillator's frequency stability will thereby be imposed on the power oscillator. A skilled experiment for advanced learners.



EQUIPMENT SET LIST

Circuit Technology with Waveguide Components

QUANTITY	CAT. NO	DESCRIPTION
2	737 01	Gunn Oscillator
1	737 015	Dielectric Tuning Unit
1	737 017	Varactor Tuning Unit
1	737 021	Gunn Power Supply with SWR Meter
1	737 025	Gunn Power Supply with Modulator Control
1	737 03	Coax Detector
1	737 035	Transition Waveguide/Coax
1	737 05	PIN Modulator
1	737 06	Isolator
1	737 065	Circulator
1	737 08	Waveguide Detector
1	737 09	Variable Attenuator
1	737 10	Moveable Short
1	737 111	Slotted Measuring Line
2	737 12	Waveguide 200 mm
1	737 13	Slide Screw Transformer
1	737 14	Waveguide Termination
1	737 16	Frequency Meter
1	737 18	Cross Directional Coupler
2	737 21	Large Horn Antenna
1	737 29	Waveguide Propagation Accessories
1	737 399	Set of 10 Thumb Screws M4
1	524 010SUSB	CASSY-Starter USB
1	568 692	Book: Circuitry with Wave Guide Components



Air traffic and RF technology

The continuously expanding volume of air traffic cannot operate safely without the approval of efficient air traffic control. But even on-board, the exchange of data between systems must be handled by ever-faster carrier frequencies.

