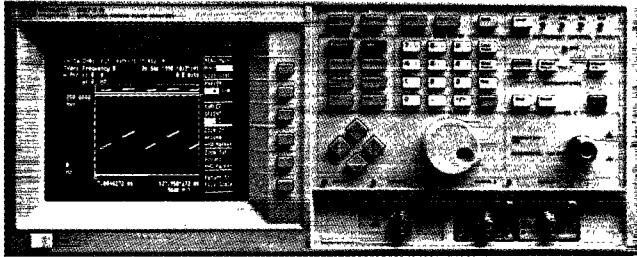


- Frequency, phase, and time-interval versus time
- 500 MHz signals (2 GHz with optional C channel)
- Fast time-interval histogram analysis
- Measure rise/fall time, pulse width, duty cycle
- Pulsed signal measurements (HP 5373A)



HP 5372A



### HP 5371A and HP 5372A: Measurement Versatility

A general-purpose modulation domain analyzer, the HP 5372A offers users a broad range of measurement capabilities:

- **Characterizing frequency modulation and drift:** Measure signals ranging from 125 milli-Hz to 500 MHz (up to 2 GHz with Channel C).
- **Characterize jitter and timing:** Measure intervals up to 8 seconds with 150 ps rms resolution.
- **Characterize wide-band modulation:** Up to 10 MHz continuous sample rate (13.3 MHz in fast measurement mode)
- **Choose the right type of measurement:** The HP 5372A offers 18 different measurement functions including frequency, time interval, continuous time interval, phase, and phase deviation.
- **Capture specific portions of a complex input signal:** Time interval detect and 24 arming combinations make it possible to catch many different types of events.
- **View data using powerful displays:** Select the display screen that gives the best understanding of the measurement results: vs. time, histogram, fast histogram, event timing, numeric, or window margin analysis, or optional jitter spectrum analysis.

The HP 5371A has fewer features than the HP 5372A and is offered for a lower cost. For a comparison of key specifications, see page 158.

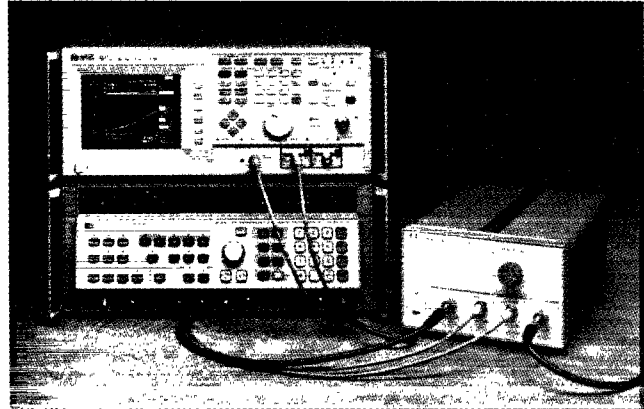
### Applications

When many different measurements must be performed, the HP 5372A is the analyzer of choice. Today's users take advantage of the HP 5372A to perform:

- Single-shot, precision VCO characterization (settling time, overshoot, and post-tuning drift)
- Jitter analysis (time deviation and FFT displays; optional jitter spectrum analysis software and FastPort interface)
- Phase-locked loop studies (rise time, ringing, overshoot, and settling time)
- Frequency stability measurements (continuous measurements, direct computation of root Allan variance)

### Specifications and Ordering Information

See page 158 for key specifications and ordering details.



Use the HP 5364A microwave mixer/detector (shown, right, with the HP 5373A) to bring the modulation domain to microwave frequencies between 2 and 18 GHz. The HP 5364A can be used with any modulation domain analyzer.

### HP 5373A: Pulsed System Design and Analysis

The HP 5373A modulation domain pulse analyzer minimizes the design and testing effort for radar systems and enhances design efforts for EW, ELINT, IFF, and related equipment and components. The analyzer measures modulation and carrier frequency on pulsed RF signals to 500 MHz. A detector channel can precisely measure envelope parameters such as pulse width and PRI, peak envelope power, percent AM, jitter, and more. The HP 5373A is easy to use and attractively priced compared to specialized or home-grown test sets used for radar and related advanced systems design.

Many measurement capabilities and built in statistics make the HP 5373A a powerful tool for gaining insight on the performance of pulsed systems. Use the HP 5373A to measure:

- Pulse width, duty cycle, rise and fall time
- Peak envelope power, % AM
- Frequency deviation of a chirped pulse
- Frequency agile systems
- Staggered PRI as a function of time
- Phase coded signals
- Phase and frequency switching and settling time of VCOs and PLLs
- Tracking and capture range of a PLL
- Statistics of timing jitter on pulse width, PRF, and other envelope parameters

### Dynamic Behavior of RF Signals

Today's radar systems produce complex signals and utilize dynamic modulation of phase, frequency, and time. The HP 5373A measures and displays intentional or unintentional modulation as a function of time—dynamic signals can be viewed in a single display. Markers provide read-out, graphic expansion, and measurement analysis to let you estimate agile carrier frequencies, chirp ranges, pulse widths, PRIs, and off time. Results may also be displayed numerically. Histogramming and statistical analysis simplify the study of such characteristics as unintentional jitter on a staggered PRI or transmitter misfire.

The HP 5373A makes single shot measurements. There is usually no need for a repeating signal. If a repetitive signal exists, the HP 5373A provides signal averaging for improved measurement resolution. A reference signal is not necessary in order to measure pulse-to-pulse phase coherence. Signals can be captured off the air and analyzed to determine if they came from a coherent transmitter.

### Specifications and Ordering Information

See page 158 for key specifications and ordering details.

