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A Bibliography of the Theory and Application of the Phase-Lock Principle

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Preface

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# Contents

I. Introduction .......................................................... 1  

II. Listings by Categories ............................................. 2  
   A. Books and Monograms ........................................... 2  
   B. Basic Theory .................................................... 2  
   C. Nonlinear Theory ............................................... 6  
   D. Acquisition ..................................................... 9  
   E. Stability .......................................................... 12  
   F. Threshold ........................................................ 14  
   G. Demodulator and Discriminator ............................... 16  
   H. Performance ..................................................... 21  
   I. Tracking .......................................................... 23  
   J. Phase-Locked Receivers ....................................... 25  
   K. AGC, AFC, and APC Systems .................................. 27  
   L. Synchronization ................................................ 30  
   M. Operation in Presence of Noise or Interference .......... 32  
   N. Oscillator and Frequency Multipliers ...................... 35  
   O. Cycle Slipping .................................................. 37  
   P. Applications ................................................... 38  
   Q. Digital Phase-Locked Loops .................................. 41  
   R. Miscellaneous .................................................. 44  

III. Alphabetic Listing by Authors ................................ 48
Abstract

Since much has been recorded on the phase-locked loop, a literature search was conducted in an effort to collect and compile as many references on the subject as possible. Although not all inclusive, this report presents a comprehensive listing of approximately 800 references covering the past two decades of work reported throughout the world. The compilation is given in two parts: first by categories, and then alphabetically by authors.
I. Introduction

As the reader may be made aware by the mere weight of this report, the world has had much to say about the phase-locked loop over the past two decades. Several years ago, the authors decided to compile as many references on this subject as possible and list them both categorically and alphabetically into one report. The project sounded easy enough. A computer search of the literature generated a six-inch-thick printout of references that had been keyed to such words as "phase lock," "tracking systems," etc. The task remained, however, to first weed out those which did not appear to be appropriate, and then incorporate those with references which we had accumulated over the years, if not already included in the list.

But the more we stirred around in it, the more we found and the bigger the job got. Some references were missing page numbers, journal references, and were otherwise incomplete; others contained errors in the title, journal reference, date, etc. We have attempted to check as many sources as possible, but we know that we still do not have a complete set of references, that in the ones given here errors yet remain, and that some are still inadequate for the reader to locate the cited work.

Readers who detect omitted references or errors in the ones given or who can supply missing information in these references are requested to contact the authors so that the supplemental information can be incorporated into future updates of this report.
II. Listings by Categories

A. Books and Monograms


B. Basic Theory


Phase-Locked Loop Study, Phase I (June 15, 1961) and Phase II (Dec. 15, 1961) of Project 2-520-1202, Motorola, Inc., Military Electronics Division, Scottsdale, Ariz.


C. Nonlinear Theory


Chalkley, H. B., False Lock in Sampled-Data Phase Lock Loops, University Microfilms, Virginia Polytechnic Institute, Blacksburg.


Cleland, L. L., Improvement of Phase-Locked Loops by the Introduction of Nonlinearities, University Microfilms, Purdue University, Lafayette, Ind.


Hussein, A. W., Phase-Error Statistics and a Second-Order Phase-Locked Loop and Design of an Optimum Decision Unit for Space Communications, University Microfilms, Virginia Polytechnic Institute, Blacksburg.

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Square-Wave Correlation Function for the First-Order Loop," in Supporting


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Thomas, E. F., Investigation and Analog Simulation of the Type Two and Type
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Viterbi, A. J., "Phase-Locked Loop Dynamics in the Presence of Noise by Fokker-

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Range of a Phase-Locked Loop," Proc. National Electronics Conference, Chi-


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tion System," Instrument Society of America 13th National Aerospace Sym-

"Automatic Acquisition for Narrow Bandwidth, Phase-Locked, Reference Loops," in The Deep Space Instrumentation Facility, Space Programs Summary 37-21,


**E. Stability**


F. Threshold


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**G. Demodulator and Discriminator**


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Riedel, E. G., Jr., *The Effect of Frequency Tracking, the Use of a Phase Lock Loop, and Predicted Tracking on Receiver Sensitivity*, AD-286920, Air Force Institute of Technology, Wright-Patterson AFB, Ohio, Aug. 1962.


J. Phase-Locked Receivers


K. AGC, AFC, and APC Systems


L. Synchronization


**M. Operation in Presence of Noise or Interference**


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N. Oscillator and Frequency Multipliers


Sakaroff, S., "Frequency-Controlled Oscillators," Communications, Vol. 19, No. 50, pp. 7–9, 1939.


**O. Cycle Slipping**


**P. Applications**


Gee, T. H., An Analytical and Experimental Investigation of a Frequency-Shift-Keyed Signal Generated by a Phase-Locked-Loop with Application to Narrow-band FSK, University Microfilms, Virginia Polytechnic Institute, Blacksburg, Va.


Q. Digital Phase-Locked Loops


R. Miscellaneous

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