

OPERATING MANUAL  
**MODEL 5820A**  
**CROSS CHANNEL**  
**SPECTRUM ANALYZER**

Manual Part Number: 800.6122

2nd Edition

**WAVETEK ROCKLAND, INC.**

Rockleigh Industrial Park  
Rockleigh, New Jersey 07647

Phone (201) 767-7900  
TWX 701-991-9852

Printed in the United States of America. All rights reserved. Contents of this publication may not be reproduced in any form without written permission.

Copyright © 1983 Wavetek Rockland, Inc.

Printed Revision 5/83

## TABLE OF CONTENTS

Section		Page
CHAPTER I - GENERAL INFORMATION		
1-1	Introduction	1-1
1-2	Safety Notes	1-2
1-3	Description	1-2
1-4	Specifications	1-4
CHAPTER II - INSTALLATION		
2-1	Introduction	2-1
2-2	Inspection	2-1
2-3	Installation	2-1
2-4	Power Requirements	2-2
2-5	General Operating Precautions	2-3
CHAPTER III - MANUAL OPERATION FUNDAMENTALS		
3-1	Introduction	3-1
3-2	Display, Indicators, Controls and Connectors	3-2
3-3	Powering Up	3-4
3-4	CRT Display Controls	3-7
3-5	The Set Up Section	3-13
3-6	Signal Inputs	3-32
3-7	Tracking Signal Output Section	3-34
3-8	Frequency Span Settings	3-40
3-9	Amplitude Settings	3-54
3-10	The Cursor	3-59
3-11	Processing Modes	3-63
3-12	Viewing Measurements	3-67
3-13	Transient Mode Operations	3-74
3-14	Recording on a Plotter	3-77
3-15	External CRT and Internal CRT Modes	3-85
3-16	Remote Data Input	3-85
CHAPTER IV - REMOTE OPERATION - IEEE-488/1978 STANDARD INTERFACE		
4-1	Introduction	4-1
4-2	The GPIB	4-1

4-3	The 5820A Instruction Language	4-3
4-4	5820A GPIB Instruction Language Commands and Arguments	4-5
4-5	Data Transfers	4-17
4-6	Front Panel Control	4-19
4-7	Reading the State	4-19
4-8	Service Requests	4-20
4-9	Displaying Messages	4-20
4-10	IEEE Commands	4-21

#### CHAPTER V - OPERATIONAL VERIFICATION

5-1	Introduction	5-1
5-2	Diagnostic Tests	5-1
5-3	Analog Section Verification	5-2
5-4	D.C. Balance Verification	5-2
5-5	Sensitivity & Amplitude Accuracy Verification	5-2
5-6	Frequency Accuracy Verification	5-3
5-7	Equivalent Input Noise Verification	5-4
5-8	Distortion Level Verification	5-4
	Operational Verification Data Sheet	5-5

#### APPENDIX A - TUTORIAL

	Device Schematic	A-1
--	------------------	-----

#### APPENDIX B - SUMMARY OF 5820 CONTROLS AND OPERATIONS

B-1	Installation - Power Requirements	B-1
B-2	Power Switch, Reset Switch and Remote Indicators	B-2
B-3	CRT Controls	B-3
B-4	Set Up	B-4
B-5	Inputs	B-19
B-6	Amplitude	B-20
B-7	Frequency	B-22
B-8	Processing	B-24
B-9	Viewing	B-26
B-10	Cursor	B-28
B-11	Tracking Signal	B-30
B-12	Recording	B-31
B-13	Transient Mode	B-32
B-14	Reverse Video	B-33
B-15	Airflow	B-33
B-16	Rear Panel	B-34