



**Ohaus Corporation**  
19A Chapin Road  
P.O. Box 2033  
Pine Brook, NJ 07058-2033

**MODEL  
CW-11 INDICATOR**

**SERVICE MANUAL**

## TABLE OF CONTENTS

	Page No.
<b>CHAPTER 1 INTRODUCTION</b>	
1.1 Introduction .....	1-1
1.2 Service Area .....	1-1
1.3 Tools and Test Equipment Required .....	1-2
1.3.1 Special Tools and Equipment List .....	1-2
1.3.2 Standard Tools and Test Equipment List .....	1-2
1.4 Specifications .....	1-3
<b>CHAPTER 2 THEORY OF OPERATION</b>	
2.1 CW-11 Theory of Operation .....	2-1
2.2.1 Power Supply Circuit U12 .....	2-1
2.2.2 Power Monitor Circuit U9 .....	2-1
2.2.3 Microprocessor U7 .....	2-1
2.2.4 MELSI U8 .....	2-1
2.2.5 Memory Storage U11 .....	2-1
2.2.6 LCD Display Information .....	2-1
2.2.7 Display ON/OFF .....	2-1
2.2.8 A/D Converter .....	2-1
2.2.9 Load Cell Excitation Voltage .....	2-2
2.2.10 RS232 Operation .....	2-2
<b>CHAPTER 3 INITIAL OPERATIONAL TESTS</b>	
3.1 Introduction .....	3-1
3.2 Visual Inspection .....	3-1
3.3 Connecting the Indicator to a Scale Base or Simulator .....	3-2
3.4 Connecting RS232 Interface .....	3-2
3.4.1 Hardware .....	3-2
3.5 Connecting Power .....	3-3
3.5.1 Cautionary Note .....	3-3
3.5.2 Turning the Indicator ON .....	3-3
3.5.3 Power ON/OFF .....	3-3
3.6 Scale Base Setup .....	3-3
3.7 Calibration Menu Protection .....	3-3
3.7.1 Disabling Legal for Trade Operation .....	3-3
<b>CHAPTER 4 TROUBLESHOOTING</b>	
	Page No.
4.1 Troubleshooting .....	4-1
4.2 Diagnostic Guide .....	4-1
4.2.1 Diagnosis .....	4-1
4.3 Error Codes .....	4-3

## **CHAPTER 5 MAINTENANCE PROCEDURES**

5.1	Preventive Maintenance .....	5-1
5.1.1	Preventive Maintenance Checklist.....	5-1
5.2	Testing .....	5-1
5.2.1	Power Test.....	5-1
5.2.2	Setup Parameters .....	5-2
5.2.3	Performance Tests Using a Scale Base .....	5-3
5.2.3.1	Increasing/Decreasing Load Test .....	5-3
5.2.4	Performance Tests Using a Load Cell Simulator .....	5-4
5.2.5	Overload/Underload Test.....	5-4
5.2.6	Calibration Retention .....	5-4
5.2.7	RS232 Interface Test .....	5-4
5.2.8	Print Menu Setup .....	5-5
5.2.9	Print Test .....	5-5
5.2.10	RS232 Commands .....	5-5
5.2.11	Output Formats .....	5-5
5.3	Replacement of Major Components .....	5-5
5.3.1	Power Connection and Fuse .....	5-6
5.3.2	Main Printed Circuit Board Replacement.....	5-7
5.3.3	Top Cover/Keyboard Overlay Replacement .....	5-8
5.3.4	LCD Replacement (optional procedure) .....	5-8
5.3.5	Transformer Replacement (optional procedure) .....	5-9
5.4	Drawings .....	5-9
5.5	Parts List .....	5-11

## **LIST OF TABLES**

TABLE NO.	TITLE	PAGE NO.
1-1	Computer Interface Cables .....	1-2
1-2	Data Interface Cables .....	1-2
1-3	Specifications .....	1-3
3-1	RS-232 Pin Designations .....	3-2
4-1	Diagnostic Guide .....	4-2
4-2	Error Codes .....	4-3
5-1	RS-232 Menu Structure .....	5-4
5-2	Replacement Parts List .....	5-11

## **LIST OF ILLUSTRATIONS**

FIGURE NO.	TITLE	PAGE NO.
2-1	CW-11 Indicator Block Diagram .....	2-2
3-1	RS-232 Connector Pin Layout.....	3-2
5-1	Connector Locations .....	5-9
5-2	Keypad Wiring Diagram .....	5-10
5-3	Interconnection Diagram .....	5-10

This is a “Table of Contents preview” for quality assurance

The full manual can be purchased from our store:

[https://the-checkout-tech.com/manuals/ohaus/CW-11 Indicator service manual.html](https://the-checkout-tech.com/manuals/ohaus/CW-11%20Indicator%20service%20manual.html)

And our free Online Keysheet maker:

<https://the-checkout-tech.com/Cash-Register-Keysheet-Creator/>

[HTTPS://THE-CHECKOUT-TECH.COM](https://THE-CHECKOUT-TECH.COM)