

Contents

1

The Basics	1-1
About This Manual	1-3
Manual Purpose	1-3
Intended Audience	1-3
Revision History	1-3
Manual Conventions	1-4
Product References	1-4
Definitions	1-4
Illustrations and Names	1-5
Common Operations	1-6
“Clicking” the Mouse	1-6
Radio Buttons	1-6
Check Boxes	1-7
Scroll Bars	1-7
Popup Lists	1-8
Unit Defaults Worksheet	1-9
Telemetry Alarm Control Defaults	1-9
Telemetry Unit Defaults	1-10

2

Safety	2-1
For Your Safety	2-3
Intended Use	2-3
Definitions	2-3
System Safety	2-4
Reference Literature	2-12
Classification	2-13
Underwriters Laboratories, Inc.	2-13
FCC Compliance Information Statement	2-14
Equipment Symbols	2-15

3

Equipment Overview 3-1

Introduction	3-3
--------------------	-----

ApexPro Telemetry System	3-4
--------------------------------	-----

Compatibility with Bedside Monitors	3-5
ApexPro Transmitters	3-6
ApexPro CH Transmitter	3-10
ApexPro FH Transceiver	3-11
Apex Oximeter SpO ₂ Module	3-12
Xpod™ Oximeter	3-13
Accutracker DX Noninvasive Blood Pressure (NBP) Monitor	3-14
DINAMAP® PRO Series Monitors	3-16
Antenna System	3-17
Receiver System	3-17
Unity Network	3-17
CIC Pro Clinical Information Center	3-18

4

Connection 4-1

ApexPro Transmitter Setup	4-3
---------------------------------	-----

ApexPro Transmitter Battery Installation	4-3
Battery Functional Life	4-4
ApexPro Transmitter Leadwires	4-5

Apex Oximeter Setup	4-7
---------------------------	-----

Apex Oximeter Battery Installation	4-7
Battery Functional Life	4-7
Apex Oximeter Connections	4-8
Xpod Oximeter Connection	4-9

Accutracker DX Setup	4-10
----------------------------	------

Tips for Monitoring	4-10
Battery Installation	4-10
Accutracker DX Functional Life	4-11
Accutracker DX Connections	4-12

DINALink™ Serial Cable	4-16
------------------------------	------

Interconnection Cables	4-17
------------------------------	------

5	Maintenance	5-1
	Biocompatibility	5-3
	Inspection	5-4
	Cleaning	5-5
	General Cleaning	5-5
	Cleaning the Transmitters	5-6
	More Intensive Disinfecting or Sterilization	5-8
	Cleaning the Power Unit	5-8
	Transmitter and Leadwire Storage	5-9
	Storage Guidelines	5-9
	Technical Maintenance	5-10
	Technical Specifications	5-10
6	Telemetry Setup	6-1
	Introduction	6-3
	Telemetry Factory Default Settings	6-4
	Service Password	6-5
	Telemetry Unit Defaults	6-7
	Viewing Telemetry Unit Defaults	6-7
	CIC Defaults	6-14
	Adjusting Alarm Volume	6-16
	Current Telemetry Listings	6-17
	Full Disclosure Defaults	6-19

7

Admit/View a Patient	7-1
About Admitting	7-3
Switching Transmitters	7-3
Terminology	7-3
Admit Instructions	7-5
Admit Procedure	7-5
Discharge Instructions	7-8
New Patient Button	7-9
Clearing a Patient Window	7-10
Viewing a Patient	7-11
Sample	7-11
Relearn	7-12
Viewing Another Patient	7-13
Viewing in the Single Patient Viewer	7-13
Viewing in the Multiple Patient Viewer	7-14
Viewing Patients Through Alarm Condition Indicators	7-16

8

Alarm Control	8-1
Alarm Structure	8-3
Patient Status Alarms	8-3
System Status Alarms	8-4
Alarm Control Tab	8-5
Accessing the Alarm Control Tab	8-5
Parameter Limits	8-6
Parameter Alarm Levels	8-7
Arrhythmia Alarm Levels	8-8
Alarms On/Off	8-9
Recalling Unit Defaults	8-12
Alarm Help	8-12
Printing Alarm Settings	8-13
Silencing Alarms	8-13
Alarm Pause Breakthrough	8-14
Unit Default Settings for Alarms	8-16
Telemetry Alarm Control Defaults	8-16

9

Printing	9-1
Initiating a Graph	9-3
Automatic Alarm Graphs	9-3
Transmitter Initiated Graphs (Manual Graphs)	9-4
Graph Messages	9-5
Graph All Patients	9-6
Initiating a Graph All Patients Request	9-7
Graph Location Defaults	9-8
Stopping a Graph	9-9
Graph Paper Out Indicator	9-10
Graph Setup Tab Sheet	9-11
Graph Waveforms Controls	9-12
Graph Location Controls	9-13
Graph Speed Controls	9-15
Laser Printer	9-16

10

Patient Data	10-1
Introduction	10-3
Alarm Histories	10-4
Event Directory	10-5
Event Window	10-5
Alarm Histories Buttons	10-6
Graphic Trends	10-8
Trend Directory Window	10-9
Cursor	10-10
Time Resolution Menu	10-11
Graphic Trends Buttons	10-11
Printing Graphic Trends	10-13

Vital Signs	10-14
Sort Mode	10-15
Increment	10-15
Scroll Bars	10-16
Printing Vital Signs	10-16
Full Disclosure	10-17
Full Disclosure Options	10-18
Time Focus	10-20

11

ECG Monitoring	11-1
Introduction	11-3
Data Synchronization	11-3
Patient Preparation	11-4
Skin Preparation	11-4
Electrode Placement	11-4
Special Considerations for 6-Lead Monitoring	11-10
V FAIL Message	11-10
Relearn	11-10
ECG Monitoring	11-11
ECG in the Multiple Patient Viewer	11-11
ECG in the Single Patient Viewer	11-12
ECG Limits	11-13
ECG Artifact	11-14
ECG Tab Sheet	11-15
Accessing the ECG Tab Sheet	11-15
Display Lead	11-16
Relearn	11-16
Size	11-16
Detect Pace	11-17
Lead Analysis	11-22
Arrhythmia	11-24
Full Arrhythmia Conditions	11-26
Lethal Arrhythmia Conditions	11-29
PVC Limit	11-29
ST	11-29
Va Lead and Vb Lead	11-29
AFIB Identification	11-30
ST Analysis	11-31
ST Deviation Alarm	11-32

Arrhythmia Troubleshooting	11-33
Pacemaker Troubleshooting	11-35
Interface Connector Ports	11-35
ST Troubleshooting	11-37

12 SpO₂ Monitoring 12-1

Introduction	12-3
SpO ₂ Probe Safety	12-4
Infants and Pulse Oximetry	12-5
Signal and Data Validity	12-6
Signal Strength Indicator	12-6
Error Messages	12-7
SPO₂ Monitoring	12-8
SPO ₂ in the Multiple Patient Viewer	12-8
SPO ₂ in the Single Patient Viewer	12-9
SPO ₂ Limits	12-9
SPO₂ Tab Sheet	12-10
Accessing the SPO ₂ Tab Sheet	12-10
Rate	12-11
Size	12-11
Troubleshooting	12-12
SpO ₂ Messages	12-12

13 NBP Monitoring 13-1

Introduction	13-3
Safety Considerations	13-4
Programming the Blood Pressure Monitor	13-5
Setting the Measurement Interval	13-5
Setting Test Parameters	13-6
Setting Limits	13-8
Software and Hardware Versions	13-8
Patient Preparation	13-9
Microphone Placement	13-11

NBP Monitoring	13-13
NBP in the Multiple Patient Viewer	13-13
NBP in the Single Patient Viewer	13-13
NBP Limits	13-14
Pressures Tab Sheet	13-15
Accessing the Pressures Tab Sheet	13-15
Auto	13-16
Cuff Size	13-16
Clear Message	13-16
Troubleshooting	13-17
NBP Status Messages	13-17
Message Glossory	A-1
Message Glossary	A-3
Alarm Messages	A-3
Graph Messages	A-5
Transmitter-Related Messages	A-6
System Status Messages	A-6
Patient Status Messages	A-7
Supplies	B-1
Contact Information	B-3
Abbreviations and Symbols	C-1
Abbreviations and Symbols	C-3
Abbreviations	C-3
Symbols	C-7
ApexPro FH Transceiver	D-1
The Basics	D-3
About the ApexPro FH Transceiver	D-3
Programming Transceivers	D-4
Safety	D-5
Warnings, Cautions, and Notes	D-5

Equipment Overview	D-7
ApexPro FH Transceiver Operating Instructions	D-7
Push Button Function and Use	D-7
Attendant Present/Procedure Alarm Silence (PAS) Unlock Button	D-8
Procedure Alarm Silence (PAS) Button	D-9
LED Indicators Function	D-11
Connections	D-13
Connecting the ApexPro FH Transceiver to Accessory Devices	D-13
Maintenance	D-16
Cleaning	D-16
Storage and Usage	D-20
Index	Index-1

For your notes