DATREND Systems Inc.

AMPS-1

Quick Start Guide

Package Contents:

8000-453	AMPS-1
3140-429	RJ-12M to RJ-12M Tester Port Cable
3140-426	RJ-12F to DB9F Adapter
3310-004	Battery, Alkaline, 9V

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Introduction

This Quick Start Guide will provide basic information about Datrend's AMPS-1 Advanced Modular Patient Simulator.

Unpacking and Inspection

Upon receipt of the instrument, check the shipping carton for damage. If damage is found, stop unpacking the instrument. Notify the freight carrier and ask for an agent to be present while the instrument is unpacked. Inspect the instrument for physical damage such as bent or broken parts, dents, or scratches, and ensure all accessories are present. If any accessories are missing, immediately contact Datrend Customer Service and provide the AMPS-1 serial number.

AMPS-1 was designed for ease of use in a compact size. The ECG snaps and sockets were designed to provide flexibility of use. Each Lead provides for a standard snap lead (either on the front of AMPS-1 or along the top edge) and a corresponding tensioned banana jack. Connect ECG snap leads (or insert 3 or 4 mm banana leads) to the appropriate receptacles on AMPS-1.

Starting Up

Before starting, remove the battery cover, install the included 9-volt battery and replace the battery cover.

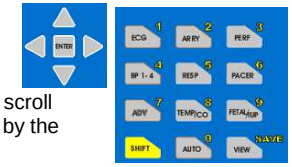
Press the Power button to turn AMPS-1 on.

The Power-up screen will briefly display the product revision number, then prompt you to make a selection.

```
DATREND SYSTEMS INC.
AMPS-1      REV 1.20
```

```
MAKE A SELECTION
```

The numeric keypad allows you to select the various simulations and the directional buttons allow you to scroll through menu options as indicated by the arrows on the display.



The ADV (#7) button is active for ECG, ARRY, BP 1-4, and AUTO functions. (See the individual sections for instructions.)

The SHIFT button toggles between NUMERIC and ALPHA (Feature selection) mode.

SHIFT Press SHIFT

```
0-NO SELECTION
```

Scrolls function: 0 - 511.
Press ENTER to activate the function or VIEW (SAVE) button to save current settings and change the default power-up settings.

Pressing SHIFT again toggles to ALPHA mode.

```
KEYPAD-  ALPHA
```

Pressing ECG, ARRY, PERF, etc. will go to that function.

The VIEW button will display settings of the current waveform. Pressing the VIEW button repeatedly will scroll through all of the current settings.

After a simulation function and parameter are selected, press the **ENTER** button to activate the simulation.

To begin, make your selection on the keypad:

1) **ECG**

```
ECG RATE
RATE:  80BPM
```

Scrolls function: ECG, AMPLITUDE, BASELINE IMPEDENCE and ARTIFACT.

- **ECG** (30, 40, 60, 80, 100, 120, 140, 160, 180, 200, 220, 240, 260, 280, 300 BPM)
- **AMPLITUDE** (5, 4, 3, 2, 1, 0.5, 0.25 & 0.1 mV)
- **BASELINE IMPEDENCE** (2000, 1500, 1000 & 500 Ω)
- **ARTIFACT** (Off, Wandering, Muscle, 50 Hz & 60 Hz).

ADV While in the ECG function, pressing ADV (#7)

```
ECG ST
ST DEPR:  +0.1mV
```

Scrolls function: ST, AXIS and NEONATAL.

- **ST** (+0.1, +0.2, +0.3, +0.4, +0.5, +0.6, +0.7, +0.8, 0, -0.8, -0.7, -0.6, -0.5, -0.4, -0.3, -0.2 & -0.1 mV)
- **AXIS** (NORMAL [INT], HORIZONTAL, VERTICAL)
- **NEONATAL** (ON or OFF)

2) **ARRY**

```
ARRHYTHMIA:  GEN1
ASYSTOLE 1
```

Scrolls function: GEN1, PVC1, PVC2, BLOCK, FIBRILL, TACHY, GEN2 and AED.

- **GEN1** (Asystole 1, Asystole 2, Asystole 3, Bigeminy 1 PVC1, Bigeminy 2 PVC2, Trigeminy 1 PVC 1, Trigeminy 2 PVC2, PAC, PNC, Multifocal PVC, Frequent MF PVC)
- **PVC1** (PVC1 LVF*, PVC1 EARLY LVF*, PVC1 RonT LVF*, PVC1 6/MIN, PVC1 12/MIN, PVC1 24/MIN, PVC1 PAIR*, PVC1 RUN 5*, PVC1 RUN 11*)
- **PVC2** (PVC2 RVF*, PVC2 EARLY RVF*, PVC2 RonT RVF*, PVC2 6/MIN, PVC2 12/MIN, PVC2 24/MIN, PVC2 PAIR*, PVC2 RUN 5*, PVC2 RUN 11*)
- **BLOCK** (1ST DEGREE, 2ND DEGREE TYPE1, 2ND DEGREE TYPE2, 3RD DEGREE, RIGHT BUNDLE, LEFT BUNDLE)
- **FIBRILL** (ATRIAL FIB COARSE, ATRIAL FIB FINE, VENTRICULAR COURSE, VENTRICULAR FINE)
- **TACHY** (PAROXYSMAL & SUPRAVENT)
- **GEN2** (ATRIAL FLUTTER, SINUS, MISSED BEAT*, MISSED BT 80BPM, MISSED BT 120BPM, NODAL)
- **AED** (SVTACH @90BPM, SVTACH @120BPM, VTACH @140BPM, VTACH @160BPM, VTACH @180BPM, VTACH @190BPM, EMERGENCY 1, EMERGENCY 2, ELECTIVE CARDIOVER, DEFIB NOW, DEFIB R SYNC)

* The Arrhythmia waveform is simulated once before reverting to NSR 80

ADV While in the ARRY function, pressing ADV (#7)

```
ARRYTHMIA:AMPL
AMPL:  1mV
```

Inactive.

- **AMPL** (0.1, 0.25, 0.5, 1, 2, 3, 4 & 5 mV)

3) **PERF**

```
PERFORMANCE SHAPE
SHAPE:  SQUARE 2Hz
```

Scrolls function: SHAPE, SINE, WIDTH & AMPLITUDE.

- **SHAPE** (SQUARE 0.125 & 2Hz, PUL 1 Hz80ms & TRI 80Hz)
- **SINE** (60, 100, 0.05, 0.5, 1, 10, 25, 30, 40 & 50Hz)
- **WIDTH** (8, 12, 20, 40, 60, 80, 100, 120, 140, 160, 180 & 200ms)
- **AMPLITUDE** (1, 1.25, 1.50, 1.75, 2, 2.25, 2.50, 2.75, 3, 3.25, 3.50, 3.75, 4, 4.25, 4.50, 4.75, 5, 5.25, 5.50, 0.05, 0.10, 0.15, 0.20, 0.25, 0.30, 0.35, 0.40, 0.45, 0.5 & 0.75 mV)

4) **BP 1 - 4**

```
BP1  STATIC LOW
STATIC:   0 mmHg
```

BP 1-4 Toggles between BP1, BP2, BP3 & BP4 (if installed)

Scrolls function: STATIC LOW, STATIC HIGH, DYNAMIC 1 & DYNAMIC 2.

- **STATIC LOW** (0, 20, 40, 60, 80, 100, -10 & -5 mmHg
- **STATIC HIGH** (160, 180, 200, 240, 320, 400, 120 & 150 mmHg)
- **DYNAMIC 1** (ART 120/80, ART 90/40, ART 160/110, LT VENT 120/0 & RT VENT 25/0)
- **DYNAMIC 2** (LT ATRIAL 14/4, RT ATRIAL 15/10, PULM ART 25/10 & PULM W 10/2)

ADV While in any BP channel, pressing ADV (#7)

```
BP1  DYNAMIC 3
BP1:SWGNZ  AUTO15s
```

Scrolls function: DYNAMIC 3, SENSITIVITY, DEFAULT & RESP ARTIFACT.

- **DYNAMIC 3** (SWGNZ AUTO15s and SWGNZ MAN.)
- **SENSITIVITY** (5 or 40 uV/V/mmHg)
- **DEFAULT** (5 or 40uV SENS)
- **RESP ARTIFACT** (OFF, 1 ON & 2 ON)

5) **RESP**

```
RESP RATE
RATE: 20 BPM
```

Scrolls function: RATE, APNEA, IMPEDANCE, DELTA & RATIO.

- **RATE** (0, 15, 20 , 30 , 40 , 60 , 80 , 100 & 120 BPM)
- **APNEA** (12 sec, 22 sec, 32 sec & Continuous)
- **IMPEDENCE** (2000, 1500, 1000 & 500 Ω)
- **DELTA** (0, 0.05, 0.1, 0.2, 0.5, 1, 2, 3, 4 & 5Ω)
- **RATIO** (Vent, I/E 5/1, I/E 4/1, I/E 3/1, I/E 2/1 & I/E 1/1)

6) **PACER**

```
PACEMAKER WAVE
WAVE:ASYNC 75BPM
```

Scrolls function: WAVE, AMPL WIDTH & POST/NEG.

- **WAVE** (ASYNC 75BPM, DEMAN FRE SIN, DEMAN OCC SIN, AV SEQUENTIAL, NON CAPTURE, NON FUNCTION)
- **AMPL** (20, 50, 100, 200, 500, 700, 2, 4, 8, 10, 12, 14, 16 & 18 mV)
- **WIDTH** (2.0, 1.0, 0.5, 0.2 & 0.1 mS)
- **POST/NEG** (Pace Pulse Negative & Positive)

7) **ADV** (see #1 ECG, #2 ARRY or #4, BP 1-4)

8) **TEMP/CO**

```
TEMPERATURE 400/700
TEMPERATURE 37C
```

Scrolls function: 37C, 38C, 40C, 30C, 35C.

PRESS 8) TEMP/CO AGAIN FOR CO

```
CARDIAC OUT BASE
BASE:37 DEGREES
```

Scrolls function: OUT BASE, OUT INJ, OUT L/M, OUT CURVES & INJECTATE.

- **OUT BASE** (36C, 37C & 38C)
- **OUT INJ** (2 DEGREES or 20 DEGREES)
- **OUT L/M** (3, 4, 4.5, 5, 5.5, 6, 6.5 & 7 L/MIN)
- **OUT CURVES** (CO TREND ON, CO TREND OFF, SLOW, FAULTY INJ, L/R SHUNT, CAL 1D/1SEC & 1D/4SEC)
- **INJECTATE** (INJT T1, INJT T2, INJT T3 & INJT T4)

9) **FETAL/IUP**

```
FETAL   RATE
RATE:  120BPM
```

Scrolls function: RATE, AMPLITUDE & WAVE.

- **RATE** (60, 90, 120, 150, 180, 210 & 240 BPM)
- **AMPLITUDE** (1, 2, 3, 4, 5, 0.1, 0.25 & .5 Mv)
- **WAVE** (EARLY, LATE & UNIFORM DECELERATION)

PRESS 9) FETAL/IUP AGAIN FOR IUP

```
FETAL   RATE
RATE:  120BPM
```

Scrolls function: IUP AMP & SENS.

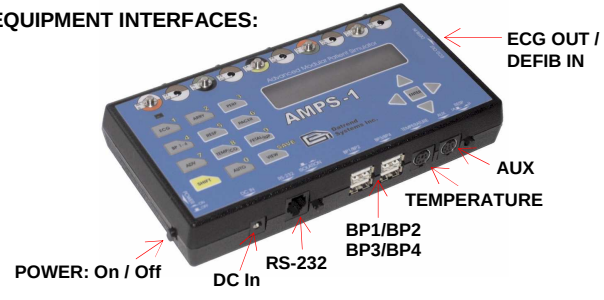
- **AMP** (0-50, 0-100 & 0-25 mmHg)
- **SENS** (5 or 40 uV/V/mmHg)

0) **AUTO**

```
AUTO1
FUKUDA DENSHI 01
```

Scrolls function: AUTO 1 - 10.

EQUIPMENT INTERFACES:



STANDARD ACCESSORIES:

3140-429	RJ-12M to RJ-12M Tester Port Cable
3140-426	RJ-12F to DB9F Adapter
3310-004	Battery, Alkaline, 9V

OPTIONAL ACCESSORIES:

7200-454	YSI-400 Temperature Cable
7200-455	YSI-700 Temperature Cable
7200-462 thru 472	Invasive BP Cables **
7200-473 thru 476	IUP Monitor Cables **

** visit www.datrend.com/AMPS_CABLES1.htm for monitor-specific ordering

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