















PART NO: SY-2DCPD023-R-XDV-XM

| IMCA D023 | DESIGN for Surface Oriented (Air) Diving Systems           |
|-----------|--|
| IMCA D018 | Code of Practice for The Initial and Periodic Examination, |
|           | Testing and Certification of Diving Plant and Equipment    |



















| Sr. | Description  |  |
|-----|--|--|
| 1   | Powder coated marine grade aluminum non rust fascia (various colors available) |  |
| 2   | All engraved lines with each valve/fitting/regulator clearly marked            |  |
| 3   | DP alarm to connect to bridge with mute button (optional)                      |  |

### Design criteria for dive panel

1 x 0-230 fsw/70 msw Depth gauge, 6", 0.25 % accuracy, mirror scale, with calibration point, Diver 1, Color coded Blue

1 x 0-230 fsw/70 msw Depth gauge, 6", 0.25 % accuracy, mirror scale, with calibration point, Diver 2, Color coded

| Sr. | Part Number  | Description   | Qty |
|-----|--|---|-----|
| 1   | SY-PRO O2  | Oxygen analyzers with high low alarm (one per diver)          | 2   |
| 2   | SY-VFA-BV-23   | Flowmeters (per analyzer)                                     | 2   |
| 3   | SY-873-400   | Option 1 Aqua Environment high pressure Regulator w/gauges    | 2   |
| 4   | SY-44-1315-2081-005  | Option 2 Tescom high pressure regulator                       | 2   |
| 5   | SY-FLR-DS  | Flow Restrictor (one per diver)                               | 2   |
| 6   | SY-DIVMKII-COM   | Interspiro full face breathing air mask, communications,      | 1   |
|     | (Optional)   | 10 mtr of Communication cable with end fitting (one end to    |     |
|     |  | BA comms/other to chamber comms)                              |     |
| 7   | SY-UPS-DP (Optional)   | Emergency power back – UPS for video systems                  | 1   |
| 8   | SY-PG-A-2.5-5000   | High pressure gauges (incoming air supply) 0-5000 psi (Hp1)   | 2   |
| 9   | SY-PG-A-2.5-5000   | High pressure gauges (incoming air supply) 0-5000 psi (Hp2)   | 2   |
| 10  | SY-PG-A-2.5-500  | Low pressure gauge (regulated air supply) 0-500 psi           | 2   |
| 11  | SY-PG-A-2.5-500  | Low pressure gauge (common low pressure supply) 0-500 psi     | 2   |
| 12  | SY-PG-A-2.5-500  | Low pressure gauge (downstream for umbilical supply pressure) | 2   |
| 13  |  |   |     |
| 14  |  |   |     |
| 15  |  |   |     |
|     | Diver 2 - Independent h  | igh pressure line   |     |
| 16  | Diver 1 – Common high  | pressure line   |     |
|     | Diver 2 – Common high pressure line                                |   |     |
| 17  | Diver 1 – Common low pressure line                                 |   |     |
|     | Diver 2 – Common low   | oressure line   |     |
| 18  | All tubing used will be stainless steel high pressure              |   |     |
| 19  | All valves for incoming air supplies will be brass , high pressure |   |     |
| 20  | All valves for regulated supplies will be brass, high pressure     |   |     |















## **DIVE PANEL COMMUNICATION (Sold Seperately)**

| Sr. | Part Number | Description                          | Qty |
|-----|-------------|--------------------------------------|-----|
| 1   | 2820A-11    | Amron 2 diver radio with ac/dc power | 1   |
| 2   | 2405-28     | Push to talk microphone              | 1   |

## **DIVE PANEL DIVER CCTV SYSTEMS (Sold Seperately)**

| Sr. | Part Number           | Description  | Qty |
|-----|-----------------------|--|-----|
| 1   | SY-DIVERVISION SERIES | Diver 1/Diver 2 / Diver 3 , surface control unit, Synergy/Outland Technology       | 3   |
| 2   | SY-MON-15.5-TFT       | Diver 1/Diver 2 / Diver 3 , 15.5"waterproof TFT monitor                            | 1   |
| 3   | SY-DVR-1TB-HD         | Primary Recorder, 1 TB hard drive (simultaneuous recording of all diver)           | 1   |
| 4   | SY-DVR-1TB-HD         | Backup recorder (black box) 1 TB hard drive (simultaneous recording of all dives), | 1   |
|     |                       | USB out for recording to USB sticks, HDMI out for mirror image to be displayed     |     |
|     |                       | remotely via HDMI cables   |     |

















#### SY-2820A-11 AMCOM II TWO-DIVER RECHARGEABLE BASIC PORTABLE COMMUNICATOR





#### **NEWLY DESIGNED ENHANCEMENTS:**

#### **High Audio Fidelity**

Ultra-low noise circuit combined with noise suppression circuitry produces crystal clear speech. Automatic gain adjustment

will guard audio signal from distortion, enhance speaker protection and audio quality. Increases band width 47%.

## **Extended Battery Operation Time**

Audio amplifier card deploys the state-of-the-art Class-D digital audio power amplifier. Has very low power dissipation, produces less heat, and extends battery life up to 32%.

#### **Flexible Gain Settings**

The audio amplifier card has adjustable gain settings to accommodate different communication applications and environments.

#### **Ultra-Low Electromagnetic Interference (EMI)**

EMI is achieved through spread-spectrum and de-phase control techniques providing for optimum integration with diving systems.

#### **Outdoor Rated AC Power Module**

Weather resistant, IP65 rated AC power entry module accommodates country specific AC power cords.

## **Country Specific V-Lock AC Power Cord**

At time of order, simply choose the IP54 rated Locking AC power cord you need.

#### **FEATURES:**

- Single volume control for both divers.
- Diver's umbilicals can be set up on 4-wire mode (full duplex) or 2-wire mode (push-to-talk) or any combination of the two modes for each diver.
- · Ability to use both dynamic and pre-amplified diver microphones with a unique circuit that detects microphone type and automatically adjusts volume levels.
- The divers' connections consist of cross-talk and separate speaker and microphone inputs.
- Internal charger allows for simultaneous charging and operation of the unit while protecting the rechargeable battery from being over-charged. Automatically supplies power to the audio amplifier when AC power is disconnected to allow for continued operation.
- See Tech Note (below) for recommended accessories.

















#### **SPECIFICATIONS:**

- Input Impedance (Each Input): 250 Ohms
- Frequency Response: 300 10000 Hz
- Common Mode Rejection: 40 dB Minimum
- Current Drain Maximum Full Volume: 3 Amps
- Minimum Quiescent: 0.190 Amps
- Output Impedance: 4 Ohm
- Power Supply Voltage: 12 VDC Nominal (9 Volts Minimum 16 Volts Maximum)
- AC Power Operating Range: 90-264 VAC, 50-60 Hz
- Sensitivity (Input): 0.5 mV
- Output Power (RMS @ 4 Ohm Load, 12 VDC): 10 Watts Audio
- Battery Life: 45 hours
- Dimensions: 10 in. H x 9 in. W x 14.5 in. L (25.4 cm x 22.9 cm x 36.8 cm)
- Weight: 16.25 Lbs. (7.37 Kg)

#### INCLUDED WITH COMMUNICATOR:

SY-2820A-11AMCOM II Two-Diver Rechargeable Basic Portable Communicator with Outdoor Power Module and International Locking Power Cord includes:

- (1) SY-2890-05 Amron 12 VDC Sealed Lead Acid Gel-Cell Rechargeable Battery with Slide terminals
- (1) SY-282XA-UM Amron Two Diver Portable Communicator User Manual

#### **AVAILABLE OPTIONS:**

- SY-2460SM-28 Amron Single Muff Operator Headset with Boom Mic and Dual Banana Plugs
- SY-2405-28 Amron Hand-Held Push-to-Talk Microphone
- SY-2401-28 Amron Deluxe Headset with Boom Mic
- SY-2460-28Amron Standard Headset with Boom Mic
- SY-2822-28 Amron Remote Walk-and-Talk (4-wire mode)
- SY-2821-28 Amron Remote Walk-and-Talk (2-wire mode)

#### **TECH NOTE:**

All communicators will inherently transfer topside noise to the divers when the tender speaks directly into the communicator's panel speaker. To eliminate background noise at the surface, we recommend purchasing the 2405-28 Push-to-Talk Microphone (not included with this model). For optimum communications, it is recommended to use the 2401-28 Deluxe Headset with Boom Mic, topside. For tender maneuverability, use the 2401-28 Deluxe Headset with Boom Mic along with the 2822-28 Remote Walk-and-Talk (4-wire mode) or the 2821-28 Remote Walk-and-Talk (2-wire mode). For wireless tender communications, order the 2825A-03 Two Diver Deluxe Portable Communicator with built-in Wireless Tender option.









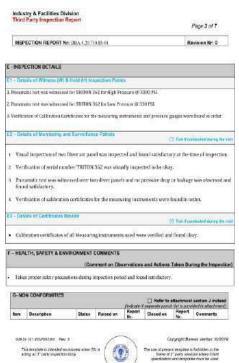






| Diving panel          | Bureau Veritas   |
|-----------------------|--|
| Imca                  | D018 / D023  |
| Class                 | Bureau Veritas pressure test witness for entire system |
| Fmea                  | As built by Synergy                                    |
| Fmea stamped by class | As built by Synergy and reviewed by Class (optional)   |
| Warranty              | One year Synergy manufacturing warranty                |

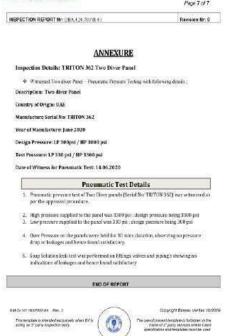








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#### **ORDERING INFORMATION**

| Sr. | Part Number   | Description  |
|-----|---------------|--|
| 1   | SY-2DCPD023-  | TWO DIVER AIR PANEL WITH 1 X AMRON RADIOS,         |
|     | R-2DV-2M      | D1 / D2 VIDEO SYSTEMS                              |
| 2   | SY-2DCPD023-  | TWO DIVER AIR PANEL WITH 1 X AMRON RADIOS,         |
|     | R-1DV-1M      | D1 VIDEO SYSTEMS                                   |
| 3   | SY-2DCPD023-R | TWO DIVER AIR PANEL WITH 1X AMRON RADIOS (NO CCTV) |
| 4   | SY-2DCPD023   | TWO DIVER AIR PANEL (NO RADIO , NO CCTV)           |

## **BESPOKE DESIGNS - ANY CONFIGURATION AS PER CLIENT REQUIREMENT**















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