

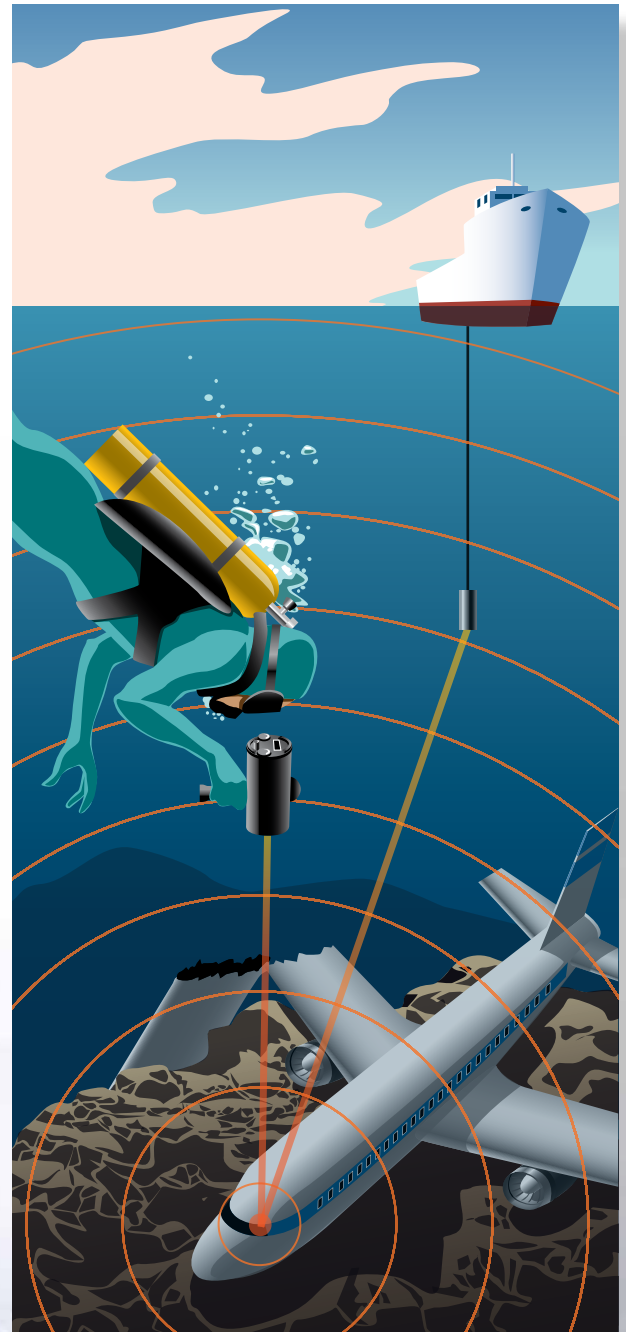
PRODUCT CATALOG
2012

Locator

ACOUSTIC LOCATOR PINGERS

Track, Locate, Recover

Teledyne Benthos provides a complete line of proven underwater locator products. Whether your needs are for the underwater locating of aircraft or other objects, underwater navigation, underwater tracking, search and recovery, military or special operations, Teledyne Benthos has a solution. Perhaps the most important product Teledyne Benthos produces is the FAA approved ELP-362D Emergency Locator Beacon, an underwater "pinger" used on flight and voyage data recorders to insure the safe and timely recovery of black boxes when aircraft or ships go down at sea.



INNOVATIVE UNDERSEA SYSTEMS TECHNOLOGY



**TELEDYNE
BENTHOS**

A Teledyne Technologies Company

50 Years of
Innovation
1962-2012

Underwater Location Devices

Pingers

A

ALP-365

Part Number:
004719

B

ALP-365/EL

Part Number:
005780

A **ALP-365** An advanced acoustic device, versatile in the offshore environment. The rugged aluminum housing ensures long life under extreme conditions. Water activated.

B **ALP-365/EL** Same options as the standard ALP-365 but with extended battery life. Uses six 9V alkaline or lithium batteries, operates up to 180 days in extreme conditions. Water activated.

| SPECIFICATIONS | ALP-365 | ALP-365/EL |
|---|---|---|
| Frequency | 25 to 40 kHz in .5 kHz increments (user selectable) | 25 to 40 kHz in .5 kHz increments (user selectable) |
| Acoustic Output re 1 μ Pa@1m (acoustic Power) | 162 dB (.125W) 168 dB (.5W) 174 dB (2W) 177 dB (5W) | 162 dB (.125W) 168 dB (.5W) 174 dB (2W) 177 dB (5W) |
| Pulse Length | 4 ms | 4 ms |
| Pulse Repetition | 2 pulse/sec, 1 pulse/sec, or 1 pulse/2 sec (user selectable) | 2 pulse/sec, 1 pulse/sec, or 1 pulse/2 sec (user selectable) |
| Housing | Aluminum | Aluminum |
| Weight in Air | .68 kg (1.5 lbs) | 1.0 kg (2.25 lbs) |
| Dimensions | Length: 18.42 cm (7.25 in); Diameter 5.08 cm (2.0 in) | Length: 30.2 cm (11.88 in); Diameter 5.08 cm (2.0 in) |
| Power Source | Two 9V alkaline or two 9V lithium batteries. Customer supplied | Six 9V alkaline or six 9V lithium batteries. Customer supplied |
| Battery Life | Pulse repetition dependent. 0.125W: 20-26 days 9V alkaline; 45-60 days 9V lithium 0.5W: 10-20 days 9V alkaline; 20-45 days 9V lithium 2W: 3-10 days 9V alkaline; 6-20 days 9V lithium 5W: 1-4 days 9V alkaline; 2-8 days 9V lithium | Pulse repetition dependent. 0.125W: 60-78 days 9V alkaline; 135-180 days 9V lithium 0.5W: 30-60 days 9V alkaline; 60-135 days 9V lithium 2W: 9-30 days 9V alkaline; 18-60 days 9V lithium 5W: 3-12 days 9V alkaline; 6-24 days 9V lithium |
| Depth Rating | 750 m (2460 ft) | 750 m (2460 ft) |

Underwater Location Devices

Pingers

C ELP-362A

Part Number:
010611



D ELP-362A/PL

Part Number:
B-260-48



C ELP-362A is a small, rugged underwater pinger rated to full ocean depth. Its compact size makes it ideal for use on ROVs, AUVs, ordnance and equipment recoveries. It can withstand extreme shock, vibration, pressure and temperature. Water activated.

D ELP-362A/PL offers the same features as the ELP-362A but with activation by power loss through an external connector. Best suited for use on ROVs or AUVs and will automatically activate when a vehicle loses power. Only operates when submerged in water and will not turn on at surface when vehicle is shut down. No other power loss pinger is as compact, rugged and deep rated.

| SPECIFICATIONS | ELP-362A |
|---|--|
| Frequency | 37.5 kHz (± 1 kHz) |
| Acoustic Output re 1 μ Pa@1m (acoustic Power) | 160.5 dB (.125W) |
| Pulse Length | 10 ms |
| Pulse Repetition | 1 pulse/sec |
| Housing | Aluminum |
| Weight in Air | 190 g (6.7 oz) |
| Dimensions | Length: 10.16 cm (4 in); Diameter: 3.30 cm (1.3 in) |
| Power Source | 7.2V lithium battery |
| Battery Life | >30 days |
| Depth Rating | 6096 m (20,000 ft) |

Recovery Equipment for the ELP-362A
DPL-275 Diver Operated Pinger Receiver
(pg. 5)

Underwater Location Devices



E ATS-260 Acoustic Test Set

Part Number:
006108

E **ATS-260** The Benthos ATS-260 Acoustic Test Set is a small and rugged tester for checking the battery life of ELP-362 Emergency Locator Beacons. The ATS-260 is highly reliable and is small enough to fit in a tool box. Interchangeable probes allow for testing of beacons in tough or tight access environments. A high intensity LED indicates battery status and beacon operation is verified by a high pitched tone with LED readout. The ATS-260 comes complete with an interchangeable right angle probe and extension cable, compact carrying case, and operator instructions. Part number: 006108.

F ELP-362A Beacon Mount



F **ELP-362A Beacon Mount**
Part number: 006186

Accessories

ELP-362A Battery Kit
Part number: B-260-53
Includes:

- Lithium battery
- Lubricated O-ring
- Replacement instructions

Torque Adaptor for Battery Replacement of ELP-362A Series Pingers
Part number: 008407

SPECIFICATIONS

| | |
|------------------|--|
| Operational Life | Up to 3 years based on usage |
| Dimensions | 5.8" x 10" x 0.8" (15 cm x 2.5 cm x 2.0 cm) |
| Weight in Air | 190 g (6.7 oz) |
| Battery Part # | PX28LPC |

Underwater Location Devices

Pingers

G
DPL-275
 Part Number:
 005607



H
DPL-275XS
 Part Number:
 005606



G DPL-275 is our most advanced system for locating and tracking underwater pingers. The DPL-275 steers users to pingers operating between 5 and 80 kHz. It can be used as a diver-held unit or converted to a surface unit using the DHA-151 (pg.6).

H DPL-275XS offers the same features as DPL-275 but also includes the DHA-151, allowing it to be used from a surface vessel.

I BC-75 Battery charger.
 Part number: 001451

| SPECIFICATIONS | DPL-275 | DPL-275XS |
|---|---|--|
| Frequency | 5-80 kHz, 2 kHz bandwidth | 5-80 kHz, 2 kHz bandwidth |
| Acoustic Output re 1µPa@1m (acoustic Power) | Hydrophone directivity: typically 30° between 3 dB limits | Hydrophone directivity: typically 30° between 3 dB limits |
| Pulse Length | n/a | n/a |
| Pulse Repetition | n/a | n/a |
| Housing | PVC | PVC |
| Weight in Air | 3.08 kg (6.8 lbs) | 3.08 kg (6.8 lbs) |
| Dimensions | Length: 27 cm (10.63 in); Diameter: 11.4 cm (4.5 in) | Length: 27 cm (10.63 in); Diameter: 11.4 cm (4.5 in) |
| Power Source | 10.8V rechargeable NiCad battery pack | 10.8V rechargeable NiCad battery pack |
| Battery Life | 16 hours per 12-hour charge | 16 hours per 12-hour charge |
| Depth Rating | 183 m (600 ft) | 183 m (600 ft) |
| Notes | Comes complete with compass, bone conduction earphone, rechargeable battery pack with charger, operation manual, and water-tight, shock- resistant carrying case. | Comes complete with compass, bone conduction earphone, rechargeable battery pack with charger, operation manual, and water-tight, shock-resistant carrying case. * With DHA-151 surface conversion kit. |

DPL, DHA, APR are the diver and shipboard devices used to home-in on the ELP and ALP series of pingers

| | | | |
|-----------------------------------|---|---|--|
| Diver unit only DPL-275 | Diver & surface units DPL-275XS | Converts DPL-275 into surface unit DHA-151 (pg.6) | Surface control unit only with no DPL APR-272 (pg.6) |
|-----------------------------------|---|---|--|

Underwater Location Devices

Pingers

J

DHA-151

Part Number:
001865



K

APR-272

Part Number:
007014



J **DHA-151** Surface Directional Hydrophone Kit converts the DPL-275 into a surface unit. The DHA-151's directional hydrophone allows users to quickly navigate any surface vessel to a pinger source.

K **APR-272** Portable Acoustic Pinger Receiver is used for tracking underwater pingers from the surface. The APR-272 coupled with the DHA-151 will provide directionality. Unit comes supplied with omnidirectional hydrophone.

| SPECIFICATIONS | DHA-151 | APR-272 |
|---|--|--|
| Frequency | Refer to the DPL-275 | 5-80 kHz, 2 kHz bandwidth |
| Acoustic Output re 1 μ Pa@1m (acoustic Power) | Hydrophone directivity: typically 30° between 3 dB limits | Omnidirectional hydrophone |
| Pulse Length | n/a | n/a |
| Pulse Repetition | n/a | n/a |
| Housing | PVC | ABS plastic alloy |
| Weight in Air | 3.63 kg (8 lbs) | 3.63 kg (8 lbs) |
| Dimensions | Cable length: 6 m (20 ft); Staff assembly length 1.4 m (4.5 ft) | Length: 21.6 cm (8.5 in); Width 15.2 cm (6.0 in); Depth: 14.5 cm (5.7in) |
| Power Source | n/a | 12V rechargeable cell |
| Battery Life | n/a | 24 hours per 16-hour charge |
| Depth Rating | n/a | n/a |
| Notes | The kit includes a directional hydrophone, staff and cable assembly, compass and headset. Can be purchased with DPL-275 (DPL-275XS). | The kit includes an omnidirectional hydrophone, rechargeable battery pack with charger, headphones and manual. There is also a connector that allows for an external 12 VDC power source. Note: DHA-151 optional with APR-272. |

DPL, DHA, APR are the diver and shipboard devices used to home-in on the ELP and ALP series of pingers

| | | | |
|--|--|--|---|
| Diver unit only DPL-275 (pg.5) | Diver & surface units DPL-275XS (pg.5) | Converts DPL-275 into surface unit DHA-151 | Surface control unit only with no DPL APR-272 |
|--|--|--|---|

Transponders

L

UAT-376

Part Number:
006199



M

UAT-376/EL

Part Number:
000980



Transponders provide divers or shipboard units range and bearing to the underwater unit for easy location of subsea equipment

L **UAT-376** is a general purpose, acoustic ranging/bearing device for underwater applications. Operating in the mid-range frequency band of 20- 35 kHz, it is designed to be used with a variety of diver or ship installed acoustic interrogators.

M **UAT-376/EL** is a general purpose, acoustic ranging device for underwater applications with a stretch housing design that offers an extended battery life for longer deployments.

| SPECIFICATIONS | UAT-376 | UAT-376/EL |
|---|--|--|
| Frequency | Receive: 26 kHz; Transmit: 25, 27, 28, 29, 30, 31, 32 kHz | Receive: 26 kHz; Transmit: 25, 27, 28, 29, 30, 31, 32 kHz |
| Acoustic Output re 1 μ Pa@1m (acoustic Power) | 180 dB (8W) | 180 dB (8W) |
| Pulse Length | 5 ms | 5 ms |
| Pulse Repetition | Receiver turn-around time: 20 ms from interrogation; transmit lockout time: 246 ms | Receiver turn-around time: 20 ms from interrogation; transmit lockout time: 246 ms |
| Housing | Aluminum | Aluminum |
| Weight in Air | .68 kg (1.5 lbs) | 1 kg (2.25 lbs) |
| Dimensions | Length: 18.42 cm (7.25 in); Diameter: 5.08 cm (2.00 in) | Length: 30.2 cm (11.88 in); Diameter: 5.08 cm (2.00 in) |
| Power Source | Two 9V alkaline or 9V lithium batteries | Six 9V alkaline batteries or 9V lithium batteries |
| Battery Life | Alkaline: 4 months or 150,000 replies Lithium: 8 months or 300,000 replies | Alkaline: 12 months or 450,000 replies Lithium: 24 months or 900,000 replies |
| Depth Rating | 750 m (2460 ft) | 750 m (2460 ft) |

DRI, ACU (pg.8) are the diver and shipboard devices used to obtain range and bearing to the UAT transponders to enable relocation of the devices.

Underwater Location Devices

Transponders

M

DRI-267

Part Number:
004720



N

ACU-266

Part Number:
000738



M **DRI-267** Dive Ranger Interrogator employs advanced acoustic technology to guide users to underwater sites marked with underwater acoustic transponders. Designed primarily for divers, it can also be converted to a surface unit by using the optional ACU-266 Surface Conversion Kit.

N **ACU-266** Surface Conversion Kit allows the operator to locate and track up to 7 different transponders from the surface when coupled with the DRI-267. Includes rugged aluminum staff assembly, harness and LCD that displays even in sunlit conditions.

O **BC-75** Battery charger.
Part number: 001451

| SPECIFICATIONS | DRI-267 | ACU-266 |
|---|--|---|
| Frequency | Receive: 25, 27, 28, 29, 30, 31, 32 kHz (user selectable). Transmit: 26 kHz | Refer to the DRI-267A |
| Acoustic Output re 1 μ Pa@1m (acoustic Power) | 184 dB (20W) | n/a |
| Pulse Length | 5 ms | n/a |
| Pulse Repetition | 1 pulse/sec or 1 pulse/2 sec (user selectable) | Refer to the DRI-267 |
| Housing | PVC | ABS plastic alloy |
| Weight in Air | 3.4 kg (7.5 lbs) | 1.58 kg (3.5 lbs) |
| Dimensions | Length: 30.5 cm (12.0 in); Diameter: 11.4 cm (4.5 in) | Length: 21.6 cm (8.5 in); Width: 15.2 cm (6.0in); Depth: 7.6 cm (3.0 in) |
| Power Source | 10.8 V rechargeable NiCad battery pack | 10.8 V rechargeable NiCad battery pack |
| Battery Life | 12 hours per 12-hour charge | 8 hours per 12-hour charge |
| Depth Rating | 183 m (600 ft) | n/a |
| Notes | 24 kHz receive frequency available | RS-232 interface at 2400 bps. LCD display has 8 user selectable contrast settings |

DRI, ACU are the diver and shipboard devices used to obtain range and bearing to the UAT transponders (pg.7) to enable relocation of the devices.

Underwater Location Devices

Transponders



P

**XT-6001
TR-6001**

P XT-6001 & TR-6001 Acoustic Transponders are glass instrument housings with general purpose transponder electronics. The XT-6001 is an expendable transponder. The TR-6001 incorporates a burn wire release mechanism for ease of recovery. They can be used for acoustic navigation or location marking.

13", XT-6001

Part Number:
D-855-98

13", TR-600

Part Number:
D-855-96

17", XT-6001

Part Number:
D-855-85

17", TR-600

Part Number:
D-855-97

**13", XT-6001
with Titanium
VPT installed**

Part Number:
D-855-98-1

**17", XT-6001 with
Titanium VPT
installed**

Part Number:
D-855-85-1

| SPECIFICATIONS | XT-6001 & TR-6001 - 17 in |
|---|--|
| Frequency | 7-17 kHz in 250 Hz increments |
| Acoustic Output re 1µPa@1m (acoustic Power) | 185 dB (20W) |
| Pulse Length | 10 ms |
| Turn Around Delay | Standard turn around delay is factory set to 3 ms. Adjustable from 3-30 ms |
| Housing | Glass sphere, positively buoyant |
| Weight in Air | 26 kg (60 lbs) - 17 in |
| Dimensions | 24 in maximum diameter |
| Power Source | 16 amp-hour alkaline battery pack |
| Battery Life | Up to 2 years |
| Depth Rating | 6700 m (22,000 ft) |
| Notes | XT model is expendable; TR model has burn wire release. UDB 9400 deck box is the surface unit used to range to and release these transponders. |

Part Number: B-270-344 Burn Wire Module
 Part Number: 014534.....Burn Wire Retrofit Kit
 Part Number: 014529..... Rearming Kit

High Powered Acoustic Pingers & Beacons

BFP-312

Bottom Finding Pinger

Part Number: 001855

A bottom finding pinger, used in conjunction with a standard 12 kHz shipboard bathymetric recorder can be used to monitor the height off bottom of instruments or sampling equipment being lowered through the water column. The instrument can be used effectively for positioning of CTD instrumentation, fishing nets, coring tools, water bottles or other items where accurate vertical positioning relative to the bottom is required.

Precision pingers and positioning beacons require high power, long life and a high level of frequency and repetition rate stability to allow asynchronous operation with shipboard recording and processing instrumentation.

Features:

- Monitor instrument height off bottom
- Sea floor positioning beacons



| SPECIFICATIONS | BFP-312 |
|--|--|
| Operating Frequency | 12 kHz |
| Carrier Frequency Stability | ±50 Hz |
| Source Level | 195 dB re 1 µPA @ 1 meter |
| Repetition Rate | 1 second or 0.5 second when activated by mercury tilt switch |
| Repetition Rate Stability | ±50 µsec |
| Pulse Length | Internally selectable 0.5, 2, 5, 10 msec |
| Battery Type | 20 replaceable "C" cells |
| Operating Life: | |
| Alkaline Expendable Batteries | 250 hrs @ 1PPS, 0.5 msec pulse width |
| Rechargeable Battery Charging Time Using Model BC-31 Battery Charger | 16 hours maximum |
| Pressure Housing | Aluminum anodized |
| Operating Depth | 10,000 meters (32,800 ft) |
| End Cap Closure | Single bolt closure |
| Transducer Beam Pattern | 180° Omni-directional |
| Operating Temperature | -5° to +50°C |
| Storage Temperature | -20° to +81° C |
| Dimensions | 5 in. O.D. X 26 in. long Transducer end 7 in. O.D |
| Weight | |
| In Air | 42 lbs (19 kg) |
| In Water | 23 lbs (10.5 kg) |

High Powered Acoustic Pingers

BFP-312HP

High Power Bottom Finding Pinger

Part Number: A-260-26

Model BFP-312HP High Power Bottom Finding Pinger

- 210 dB source level
- 100 hour operating life
- Data telemetry option
- External connector for battery charging and control to/from auxiliary instrumentation
- Missed ping option allows periodic skipping of a transmit burst for checking absolute depth of pinger
- Internally selectable repetition rate
- Single bolt end cap closure



| SPECIFICATIONS | BFP-312HP |
|--|--|
| Operating Frequency | 12 kHz |
| Carrier Frequency Stability | ±50 Hz |
| Source Level | 210 dB re 1 µPA @ 1 meter |
| Repetition Rate | 1 second or 0.5 second when activated by mercury tilt switch |
| Repetition Rate Stability | ±50 µsec |
| Pulse Length | Internally selectable 0.5, 2, 5, 10 msec |
| Battery Type | 20 replaceable "C" cells |
| Operating Life: | |
| Alkaline Expendable Batteries | 100 hours @ 1 PPS, 0.5 msec pulse width |
| Rechargeable Battery Charging Time Using Model BC-31 Battery Charger | 16 hours maximum |
| Pressure Housing | Aluminum anodized |
| Operating Depth | 10,000 meters (32,800 ft) |
| End Cap Closure | Single bolt closure |
| Transducer Beam Pattern | 50° conical |
| Operating Temperature | -5° to +50°C |
| Storage Temperature | -20° to +81° C |
| Dimensions | 5 in. O.D. X 32 in. long Transducer end 7 in. O.D |
| Weight | |
| In Air | 70 lbs (31.75 kg) |
| In Water | 33 lbs (15 kg) |

Terms & Conditions

Seller's Offer, and any order issued by Buyer to Seller for the goods and/or services specified herein, is strictly limited to Seller's Terms and Conditions of Sale, which can be found at www.benthos.com

50 Years of 
Innovation
1962-2012



49 Edgerton Drive, North Falmouth, MA 02556 USA
Tel +1 508.563.1000 • Fax +1 508.563.6444 • E-mail: benthos@teledyne.com

*Specifications and pricing subject to change without notice. ©2012 TELEDYNE BENTHOS
Other products and company names mentioned herein may be trademarks and/or registered trademarks.*

Rev 1312