

SONOTRONICS

GSA PRODUCT OVER- VIEW, PRICE LIST, TERMS and CONDITIONS

December 2018

**Contract Number:
GS-07F-473AA**



SONOTRONICS

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PRODUCTS OVERVIEW

Sonotronics is a unique solution provider: manufacturing ultrasonic transmitters, receivers and hydrophones to aid in the relocation and tracking of underwater animals and equipment. Founded in 1971, Sonotronics' products are used worldwide in applications ranging from relocation of lost, submerged equipment to understanding behavior of lethal jellyfish.

The Sonotronics Equipment Marker product line allows for the relocation of an object previously marked with a pinger in a variety of marine environments, and new sensors can now allow topside monitoring of the tilt angle of underwater instrument packages: in many cases this eliminates the need to have divers confirm proper orientation. Tracked equipment include submersible ROVs and AUVs, water monitoring equipment, divers, and virtually any other underwater object. Applications can include military, ocean oil drilling operations, surveying, fisheries, and many others. There are three simple steps to the implementation of the system:

- 1. Marking the target with a pinger:** The pinger is attached to the object prior to deployment via convenient mounting holes. Pingers are activated at the time of deployment, and then are deactivated when the object returns to the boat, allowing for longer battery lifetimes.
- 2. Location of vicinity and dive direction:** The deck unit receiver is used to determine that the object is still in the vicinity, and appropriate direction to begin the dive.
- 3. Approach to the target using the Underwater Diver Receiver:** The diver then enters the water wearing waterproof headphones, listening to the strength of the transmissions from the pinger. Gain control and signal strength indication allows for accurate bearing as the diver approaches the object. The UDR may be programmed to scan several frequencies, allowing for many pingers to be tracked.

It is not always necessary to purchase the deck unit receiver and the underwater receiver. If equipment is in shallow, clear water, the deck unit may be sufficient. If the vicinity of the equipment to be located is established, only an underwater receiver may be necessary.

Equipment Marker Products:

- **Equipment Marker Pingers:** Special high output pingers with holes for ease of mounting. Various combinations of lifetime, size, range, and telemetry options available.
- **NEW! Tilt Angle Monitoring:** Pingers reporting their angle of orientation to gravity in real time. Allows for monitoring of tilt angle during equipment deployment applications.
- **Deck Unit Receiver (MANTRAK kits):** Receivers used on the search vessel to determine the vicinity and bearing to begin a dive towards target.
- **Underwater Diver Receivers:** UDR allows for approach directly to the target in extreme low visibility environments.
- **NEW! UDR-Kit:** Includes a UDR with adapter allowing use of surface hydrophones, converting a UDR into a simple deck receiver!

ULTRASONIC TRACKING RECEIVERS

SONOTRONICS receivers offer superb performance for both manual (active) and passive systems, and provide optimum detection ranges when used with SONOTRONICS hydrophones and sonic tags.

NARROW BAND RECEIVER: USR-14

The USR-14 offers wide tuning range and narrow band reception ideal for use in noisy environments. Housed in a Pelican 1150 case, the USR-14 receiver is available with optional dual hydrophone inputs, and with internal memory and real-time-clock for unattended data logging. The two line LCD displays both frequency and interval, as well as ID and telemetry data.

- FREQUENCY:** 30 - 150kHz
- BANDWIDTH:** 500 Hz, 7 pole response.
- OUTPUT:** Headphone jack, optional data ports for data logging, GPS.
- POWER:** Internal rechargeable batteries with charger.
- SIZE:** 9.3"L. x 7.8"W x 4.5"D
- INPUT:** BNC connector (s).
- SENSITIVITY:** 10 uVolts for >35 dB (S+N)/N ratio.
- DISPLAY:** 2 x 16 LCD.

UNDERWATER DIVER RECEIVER: UDR

The UDR is a handheld diver operated receiver with waterproof Headphones and a Pelican case. The unit will detect any Sonotronics transmitter and is used for a wide variety of applications. These applications include up close monitoring of animal habitat and behavior, recovery of tagged equipment, and many others. The unit uses audio signal strength in the headphones as the primary detection scheme. This has a distinct advantage over the use of signal strength indicators, which are easily fooled in high noise environments.

- FREQUENCY:** Programmable: 30 to 90 kHz
- DISPLAY:** LCD: displays frequency and pulse interval.
- SENSITIVITY:** 20uVolts for 30 dB (S+N)/N
- SIZE:** 16cm x 11cm x 20cm
- WEIGHT(in air) :** UDR:900g Headphones:415g
- POWER:** Internal rechargeable battery with charger.
- BATTERY LIFE:** 5 Hours, recharge time 12 hours.

SUR-3: SUBMERSIBLE ULTRASONIC RECEIVER

The SUR-3 is a submersible receiver designed to detect and log to flash memory the presence of an animal wearing a Sonotronics ultrasonic transmitter. The SUR contains an integrated hydrophone, flash memory, and transponding feature, allowing the user to interrogate the unit from a distance and determine presence/absence of data in the unit.

- FREQUENCY:** 30 - 90 kHz, Programmable
- BANDWIDTH:** 500 Hz
- POWER:** 1 or 2 Lithium D Cell Batteries (SUR contains 2 D cell sockets)
- LIFETIME:** 10 months typical with 2 D cells.
- SIZE:** 36cm length, 6.1cm diameter
- WEIGHT:** 900g (with 2 D cells installed), positive buoyant in water
- INPUT:** Onboard hydrophone, RS232 data connection.
- MEMORY:** 2MByte standard (200000 + detections)

EQUIPMENT MARKER PINGERS

These pingers are designed and packaged specifically for the purpose of marking equipment for later recovery.

- FREQUENCY:** 32 - 83 kHz
- RANGE:** 1km to 4km
- EMT-01-1: 48 month, medium range transmitter (1km)
- EMT-01-2: 18 month, High power transmitter (3km)
- EMT-01-3: Very high power transmitter (4km), with user replaceable batteries.

- EMT-AR-1: 48 month, medium range transmitter angle reporting pinger (5 degree resolution)
- EMT-AR-2: 18 month, high power transmitter angle reporting pinger (5 degree resolution)

MANUAL TRACKING KITS

MANTRAK

The manual (active) tracking kit consists of all the tools necessary to facilitate manual tracking. These tools include:

- USR-14 narrow band receiver
- DH-4 directional hydrophone
- Professional grade headphones
- External speaker
- Extra battery pack (allows up to 16 hours operation—8 per battery pack)
- 1 EMT-01-1
- Pelican case
- DC and AC charge/power adapters

MANTRAK-TT

Manual (active) tracking kit with tilt angle reporting pingers: Same as above, however substitute 2 EMT-AR-1 tilt pingers for the 2 EMT-01. Particularly helpful in monitoring the attitude of sub-surface instruments such as ADCPs.

MANTRAK-TH

Manual (active) tracking kit containing all the tools of the MANTRAK kit, plus a TH-2 towable, omni-directional hydrophone, allowing tracking from a boating moving at speeds up to 5 knots.

UDR-Kit

This kit includes a UDR diver receiver, a UDR-BNC adapter to allow attachment of external hydrophones for surface, a DH-4 directional hydrophone, and an EMT-01-1 transmitter enclosed in a single pelican case.

Instrument Marking/Oceanographic Products:						
Equipment Marker Transmitters (Weights in Air)						
<i>Model Number</i>	<i>Length</i>	<i>Diameter</i>	<i>Wt (in H₂O)</i>	<i>Range</i>	<i>Lifetime</i>	<i>GSA net price</i>
GSA-EMT-01-1	99mm	19mm	40g	To 1km	48 months	\$261.96
GSA-EMT-01-2	99mm	19mm	40g	To 3km	18 months	\$302.27
GSA-EMT-01-3	201mm	32mm	223g	¹ To 4km	¹ Up to 45 days	\$483.63
Tilt Angle Monitoring Transmitters (Weights in Air)						
GSA-EMT-AR-1	99mm	19mm	39g	To 1km	48 months	\$342.57
GSA-EMT-AR-2	99mm	19mm	39g	To 3km	18 months	\$382.87
Receivers						
<i>Model Number</i>	<i>Description</i>					<i>GSA net price</i>
GSA-UDR	Underwater Diver Receiver, Headphones, Case					\$2821.16
GSA-UDR-Kit	UDR with adapter for external hydrophone, DH-4, and 1 EMT tag					\$3465.99
GSA-MANTRAK	Manual Tracking Kit (contains USR-08, DH-4, 1 EMT tags and accessories)					\$2821.16
GSA-MANTRAK-TH	Manual Tracking Kit (with TH-2 towable, omni-directional hydrophone)					\$3143.58
GSA-MANTRAK-TT	MANTRAK kit, substitute EMTs with 2 EMT-AR-1 tilt pingers					\$3224.18
GSA-SUR-3	Submersible Ultrasonic Receiver w/RS232 interface and 2MB memory					\$1088.16

NOTES:

¹ Depends on battery configuration: the EMT-01-3 supports 3 battery systems, allowing choices for range and lifetime.

- Lifetime is based upon 1 15ms ping per second. Faster ping rates may cause a shortening of tag lifetime.
- Achievable ranges are based upon the particular pingers output detected by a Sonotronics USR-08 receiver and DH-4 hydrophone combination, under good sea conditions.

MISCELLANEOUS INFORMATION

WEIGHTS/SIZES/RANGES/LIFETIMES

Weights of tags are in water. Ranges are in deep sea water at sea state zero. Assumes no temperature stratification. Sizes are to the closest 0.5 mm. Lifetimes are based on actual measured current consumption of individual tags, along with battery manufacture's *published* capacity ratings. SONOTRONICS does not test or guarantee these published specifications. Note that there is a small current drain when transmitters are “asleep” with their magnets on. In some cases this can significantly reduce life when tags are shelved for periods of time before the study.

STANDARD CRYSTAL FREQUENCIES

32.0 to 40.0, 50.0, 60.0, 69.0 to 83.0 kHz in 1 kHz increments.

TOLERANCE

Tolerance for tag length is + or - 3%.

Tolerance for tag weight is + or - 10%.

**GENERAL SERVICE ADMINISTRATION
FEDERAL SUPPLY SERVICE
AUTHORIZED FEDERAL SUPPLY SCHEDULE PRICELIST**

Online access to contract ordering information, terms and conditions, up-to-date pricing, and the option to create an electronic delivery order are available through GSA Advantage!, a menu-driven database system. The INTERNET address for GSA Advantage! is: <https://www.gsaaadvantage.gov/>

SCHEDULE TITLE: Schedule 66, Scientific Equipment and Services

CONTRACT NUMBER: GS-07F-473AA

CONTRACT PERIOD: 05/17/2010 through 5/16/2015

CONTRACTOR: Sonotronics, Inc.
3169 S. Chrysler Avenue
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Fax: 520-294-2040
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CONTRACT ADMINISTRATOR: Sue LaMarine

BUSINESS TYPE AND SIZE: Small

INFORMATION FOR ORDERING ACTIVITIES:

1a. Table of awarded special item number(s) with appropriate cross-reference to item descriptions and awarded price(s).

SIN	Description
66-604	Underwater release, Transponders, Buoys & Platforms and Oceanographic Analysis and Display Systems

1b. Identification of the lowest priced model number and lowest unit price for that model for each special item number awarded in the contract.

SIN	Model	Description	Price
66-604	GSA-EMT-01-1	Transmitter	\$261.96

1c. Not applicable.

2. Maximum order. - \$150,000

3. Minimum order. \$100.00

4. Geographic coverage (delivery area). – Domestic, 50 states, Washington, DC, PR, US territories and to a CONUS port of consolidation point for orders received from overseas activities.
5. Point(s) of production (city, county, and State or foreign country). – Tucson, AZ
6. Discount from list prices or statement of net price. – 20% from the accepted pricelist.
7. Quantity discounts. - None
8. Prompt payment terms. – net 30 days.
- 9a. Government purchase cards are accepted at or below the micro-purchase threshold.
- 9b. Government purchase cards are accepted or not accepted above the micro-purchase threshold.
10. Foreign items (list items by country of origin). - None
- 11a. Time of delivery. – 30 days ARO
- 11b. Expedited Delivery. Items available for expedited delivery are noted in this price list.
- 11c. Overnight and 2□day delivery. Contact Contractor.
- 11d. Urgent Requirements. Contact Contractor.
12. F.O.B. point(s). - Origin
- 13a. Ordering address(es). – Same as contractor.
- 13b. Ordering procedures: For supplies and services, the ordering procedures, information on Blanket Purchase Agreements (BPA's) are found in Federal Acquisition Regulation (FAR) 8.405-3.
14. Payment address - Same as contractor
15. Warranty provision. Standard commercial warranty.
16. Export packing charges, if applicable - Not applicable.
17. Terms and conditions of Government purchase card acceptance (any thresholds above the micro-purchase level). - Not applicable
18. Terms and conditions of rental, maintenance, and repair (if applicable). Not applicable
19. Terms and conditions of installation (if applicable). Not applicable
20. Terms and conditions of repair parts indicating date of parts price lists and any discounts from list prices (if applicable). Not applicable
- 20a. Terms and conditions for any other services (if applicable). Not applicable
21. List of service and distribution points (if applicable). Not applicable

22. List of participating dealers (if applicable). Not applicable

23. Preventive maintenance (if applicable). Not applicable

24a. Special attributes such as environmental attributes (e.g., recycled content, energy efficiency, and/or reduced pollutants). Not applicable

24b. If applicable, indicate that Section 508 compliance information is available on Electronic and Information Technology (EIT) supplies and services and show where full details can be found (e.g. contractor's website or other location.) The EIT standards can be found at: www.Section508.gov/. Not applicable

25. Data Universal Number System (DUNS) number. – 18-629-1621

26. Notification regarding registration in Central Contractor Registration (CCR) database. – registered.



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