

# TSS 440

## Subsea pipe & cable tracking system



TSS technologies are proven in operation in some of the most exacting environments world-wide, and its equipment is established as the most accurate means of obtaining pipe and cable burial data. There is a need for a system that can detect the presence of both pipes and cables, and can provide accurate and reliable survey data, which describes the position of these cables on or beneath the seabed. The system needs to be flexible in its range of uses and in the variety of vehicles on which it can be installed to complete survey work.

### Specifications

<b>Product</b>	TSS 440
<b>Country of origin</b>	USA
<b>Manufacturer</b>	Teledyne Marine

## Industry standard subsea pipe and cable detection

There are thousands of miles of pipes and cables beneath our oceans. Commercial, legal, operational and environmental consideration demand that these remain in good order. This requirement creates a constant need to verify location, condition and burial status – operations that are complicated by the ever-changing seabed topography.

TSS is the world leader in developing and supplying technologies to meet these demands. Having developed the world's first commercial pulse induction pipe and cable survey system (TSS 340) in 1991, followed by the release of the TSS 350 AC tone cable survey system, TSS has gone from strength to strength and become the industry standard.

## Specifications

	440	350	Dualtrack
Surface display console	•	•	•
440 Subsea electronics pod	•		•
350 Subsea electronics pod		•	•
Power supply pod	•		•
Deepview software	•	•	•
ALT250 Altimeter	•	•	•
3-Axis Coil Cable Ass		•	•
Pod to ROV Cable	•	•	•
350 Coil Assy x 2		•	•
Coil mounting frame	•	•	•
Spare 350 Coil		•	•
440 Coil Assy x 4	•		•
Transit Cases	•	•	•
System Manuals	•	•	•
Transit Cases	•	•	•

## Product features

- Excellent detection and tracking performance
- High accuracy repeatable range data
- Pulse induction technology allows autonomous operation
- Suitable for pipe and cable tracking, burial and survey requirements
- System design facilitates quick and easy mobilisation
- Forward search mode for target location
- AC tone detection mode for measurement at increased burial depths

## Product features and benefits

- Windows™ based display and control software
- DSP techniques give quality control information
- Long range detection of buried subsea targets
- Pulse induction technology allows accurate survey information regardless of vehicle heading
- No time-consuming vehicle calibrations required
- Simple to install and service
- Easy to operate
- Fully integrated system with altimeter, spares and documentation

## Technical Specifications

		440	350
<b>System performance</b>	Detection range	A C Tone Cable detected at vertical range up to 10m and within a total horizontal swath width of 20m centred on the coil array	Pulse induction 3cm armoured cable depth and tracking at 1.2m; 1cm unarmoured cable depth and tracking at 0.6m
	Vertical measurement accuracy (in a low noise environment)	RMS 5cm or 5% of slant range – whichever is greater. Stated accuracy applies within the quality envelope of 4m. 3cm armoured cable depth and tracking at 1.2m; 1cm unarmoured cable depth and tracking at 0.6m	RMS 5cm or 5% of slant - range whichever is greater
<b>Subsea Electronics Pod (SEP)</b>	Dimensions	140mm (dia) x 450mm (h) (440 – 2 pods, 350 – 1 pod)	
	Weight per pod	10Kg in air; 2Kg in water	
	SDC communication	2-wire 20mA digital current loop or 4-wire 20mA digital current loop RS232 via a multiplexer	
	Voltage input	Standard 110V AC (input range 98-135V AC); Optional 240V AC (input range 198-270V AC)	
	ROV connection	Via 8-way waterproof connector	
	Voltage input	Standard 110V AC (input range 98-135V AV); Optional 240V AC (input range 198-270V AC)	
<b>SDC</b>	Hardware	19" military grade touch screen panel PC Rear mounted comms endorse for all external interfaces	
	Display resolution	1280 x 1080	
	Dimensions	599 x 480 x 345mm (including transit case)	
	Power consumption	250W max	
	Shock resistance	Operating: better than 5g for <10ms Non-operating: better than 40g for <10ms	
<b>Altimeter</b>	Dimensions	140mm (dia) x 290mm (h)	
	Frequency	200kHz	
	Range	30cm to 30m	
	Connection cable	4m length (7m length optional)	
	Connection to	Subsea electronics pod	
<b>Depth Rating</b>		All subsea components are depth rated to 3000m (optional 6000m)	
<b>Field Support Kit</b>		Supplied as part of the recommended system	
<b>Warranty</b>		12 months international warranty including parts and labour.	