



**PIT TAG ANTENNA
MANUFACTURING, TEST, and INSTALLATION
TRAVELER
(September 22, 2004 Revision)**

ANTENNA MODEL #: AD-PRO-INC-A
ANTENNA SERIAL #: 02 DownStream-Left Bank
DATE OF MANUFACTURE: 09/14/04

MANUFACTURING AND TEST

ANTENNA DESCRIPTION
<p>Antenna Description: <i>ADult</i> Fish <u>JU</u>venile Fish <u>L</u>And Animal <u>O</u>ther</p> <p>Antenna Installation Location: <u>PROSSER DAM</u></p> <p>Shield Configuration: <i>IN</i>ternal <u>EX</u>ternal</p> <p>Shield Loop: <u>O</u>pen <i>C</i>losed</p> <p>Version: <u>A</u> B C D E F G H I J K L M N O</p> <p>Version Description: <u>Fish viewing window slot antenna (potted)</u></p> <p>Temporary ID#: <u>01 Lifting eyelet label faces inward</u></p>

ANTENNA ASSEMBLY PROCESS		
	Initials:	Date:
Antenna Coil Construction and Test	AC	9/13/04
Number of wraps: <u>14</u>		
Inductor Continuity: <u>0.4</u> Ohms		
Inductance: <u>350.8</u> uH (in shield) Q: <u>2.8</u>		
Post Potting Test:		
Inductor Ohms: <u>0.6</u> (15ft jumper cable attached)		
Inductance: <u>344.1</u> uH		

Capacitor Pack Assembly and Test Completed:	Initials:	Date:
Capacitor Pack Test:	AC	9/12/04
Initial Capacitance: 4515 pf		
Burn-in Time: 2 hours		
Transceiver Exciter SN: Biomark Lab		
Transceiver Exciter Voltage: 12 Volts		
Transceiver Exciter Current: 3.5 Amps		
Transceiver Phase: 0 %		
Transceiver Noise: 2 – 4 %		
Final Capacitance after potted: 4513 pf		
Remarks:		
Antenna Jumper Cable and Test Completed:	AC	9/10/04
Cable Ohms (Potted Continuity Check):		
Cable Lead #1: 0.3 Ohms (white pin 1)		
Cable Lead #2: 0.9 Ohms (black pin 7)		
Cable Shield: N/A Ohms (n/a on jumper cable pin 6)		
Meg Ohm Test:		
Meter Setting: 1K Volts		
Coil Lead #1 to Coil Lead #2: >4K Ohms		
Coil Lead #1 to Shield: >4K Ohms		
Coil Lead #2 to Shield: >4K Ohms		
Cable Length: 15 feet		
Shield Cable Preparation and Test Completed:	AC	9/10/04
Cable Ohms (Continuity Check): 0.3 Ohms		
Cable Length: N/A feet (grounding lug to internal shield).		
Final Antenna Assembly and Test Completed:	AC	9/13/04
Shield to Cable Termination Test: 0.3 Ohms		
Coil Continuity Test w/ 15ft jumper cable attached: 0.6 Ohms		
Final Coil Inductance Test (Post Potting): 344.1 uH		
Meg Ohm Test:		
Meter Setting: >1K Volts		
Coil Lead #1 to Coil Lead #2: >4K Ohms		
Coil Lead #1 to Shield: >4K Ohms		
Coil Lead #2 to Shield: >4K Ohms		
Phase Test: In-Phase Out-of-Phase		
Transceiver SN: Biomark Lab		
Pre-Potting Test (Antenna Characterization #1):		
Cable Length: 50 feet		
Exciter: 11.87 V		
Phase: 0 %		

INSTALLATION AND TEST

INFRA-STRUCTURE	Initials:	Date:
Masonry Construction Complete: N/A		
Remarks:		
Antenna (EXTERNAL) Shield Installation Complete:	Scott L	10/12/4
Shield Cable Ohms (Continuity Check): <u>.02</u> Ohms		
Shield Cable to Shield Connection Check: <u>.02</u> Ohms		
Shield Cable to Master Station Ground Check: <u>.02</u> Ohm		
Cable Length: <u>~20</u> feet		
Remarks:		
Cable Conduit Installation Complete:	Scott L	10/12/4
Ground Conduit: <u> X </u>		
Antenna Conduit: <u> X </u>		
Fiber-Optic Cable Conduit: <u> N/A </u>		
Power Conduit: <u> X </u>		
Remarks:		
Equipment Enclosure Installation Complete:	Scott L	10/12/4
Transceiver Cabinets: <u> X </u>		
UPS Cabinets: <u> X </u>		
Power Cabinets: <u> X </u>		
Ground Cabinets: <u> X </u>		
Fiber-Optic Cabinets: <u> X </u>		
Sunlight Hoods: <u> N/A </u>		
Remarks:		
PIT Tag Facility Installation Complete:	Scott L	11/16/4
Equipment Room Complete: <u> X </u>		
Computer Table: <u> </u>		
Computers (3 each): <u> </u>		
Software Installed: <u> </u>		
Cable Terminations Complete: <u> </u>		
Fiber-Optic Equipment Installed: <u> </u>		

Remarks:		

ANTENNA INSTALLATION AND TEST		
	Initials:	Date:
Antenna Pre-Installation Checkout:	Scott L	9/17/4
Transceiver SN: <u>2464</u>		
Phase Test: In-Phase Out-of-Phase		
Meg Ohm Test: <u>N/A</u>		
Meter Setting: <u> </u> - Volts		
Coil Lead #1 to Coil Lead #2: <u> </u> Meg Ohms		
Coil Lead #1 to Shield: <u> </u> Meg Ohms		
Coil Lead #2 to Shield: <u> </u> Meg Ohms		
Cable Length: <u>45</u> feet		
Exciter: <u>13.2V</u> V V		
Phase: <u>3</u> % % %		
Signal: <u>3-5</u> % % %		
Current: <u>3.5A</u> % %		
Jumpers Used: <u>1000 , 4700 x2 , 2200</u>		
PIT Tag Test: <u>READ</u> <u>NO-READ</u>		
Remarks:		
The transceiver S/N is not the one that is in service and allocated to this antenna. The production xcvr is 2464		
Antenna Mounting Complete:	Scott L	9/17/4
Antenna Position #: <u>Orientation East and West X</u>		
Antenna Mounted: <u> </u>		
Base Plate Installed: <u> </u>		
Antenna Cables Pulled: <u>X</u>		
Ground Cable Pulled: <u>X</u>		
Remarks: <u> </u>		
Antenna Electronic Equipment Installed:	Scott L	9/17/4
Transceiver Installed: <u>X</u>		
UPS Installed: <u>X</u>		
AC Power Installed: <u>X</u>		
Antenna Cable Pulled and Connector Installed: <u>X</u>		
Shield Cable Pulled and Terminated: <u>X</u>		
Fiber Optics Installed: <u>X</u>		
All Cabinet Ground Interconnects Installed: <u>X</u>		

Remarks:		
ANTENNA INSTALLATION AND TEST (CONTINUED)		
	Initials:	Date:
Antenna Installation Checkout (Pre-Water up):	Scott L	10/12/4
Transceiver SN: 2464		
Meg Ohm Test:		
Meter Setting: 1000 Volts		
Coil Lead #1 to Coil Lead #2: INF Meg Ohms		
Coil Lead #1 to Shield: INF Meg Ohms		
Coil Lead #2 to Shield: INF Meg Ohms		
Cable Length: ~25 feet		
Exciter Voltage: 14.3 Volts		
Transceiver Temperature: 22 degrees Celsius		
Phase: 1 %		
Signal: 5 %		
Current: 4.5 % Display not calibrated		
Jumpers Used: 10k , 2.2k , 1k ,		
FDXB Noise Level: 4 %		
Noise Level: 3 %		
Noise Peak: 6 %		
Alarm Threshold: 2500 ma		
Frequency Equalization Adjustment Complete: x		
Pit Tag Read Test:		
Signal Detection Test:		
Center Z-Axis Distance (Front to Back): N/A Inches		
100% Hit Rate Test: OK		
Center Z-Axis Distance (Front to Back): 14 inches		
Center Rotation Test: _____ degrees		
Full Area Scan Test: Pass X Fail		
Speed Test: Pass Fail		
Remarks:		
Antenna Installation Checkout (Water up):	Scott L	11/16/4
Transceiver SN: 2464		
Meg Ohm Test:		
Meter Setting: 1000 Volts		
Coil Lead #1 to Coil Lead #2: Inf Meg Ohms		
Coil Lead #1 to Shield: Inf Meg Ohms		
Coil Lead #2 to Shield: Inf Meg Ohms		
Cable Length: ~25 feet		

ANTENNA INSTALLATION AND TEST (CONTINUED)		
	Initials:	Date:
Exciter Voltage: <u>14.2</u> Volts	Scott I	
Transceiver Temperature: <u>33</u> degrees Celsius		
Phase: <u>3</u> %		
Signal: <u>4-6</u> %		
Current: <u>4.2</u> % Calibrated display		
Jumpers Used: _____		
FDXB Noise Level: <u>6</u> %		
Noise Level: <u>3-6</u> %		
Noise Peak: <u>8</u> %		
Alarm Threshold: <u>3900mA</u>		
Frequency Equalization Adjustment Complete: <u>x</u>		
Virtual Tag Read Test Complete: Pass x Fail		
Remarks:		
Jumpers used will be determined after the system has stablized		
In-Service Date:	Scott L	11/16/4
Final system check out on 11/16/04.		
Ladder watered up at 11:00 am		
The system had not had time to completely warm up.		
Quadtech data: Pre-Water-up Date 10/29/04	Scott L	
Frequency: 134.2 Khz Voltage: 5Vac PP		
L: 31.69uH		
Rs: 2.5 Ohms		
Q: 10.33		
Sweep File # 102904-2		
Remarks:		
The above measurements were taken with the capacitors in series with the antenna windings		
Note that the sequence of events for this installation does not necessarily correspond chronologically with this flow traveler. Hence why the dates for each test do not flow in order.		
Radio Modem allocation		
Masters PIT-tag room)		
Right Coil 02: 916-9272		
Slaves (Ladder)		

Right Coil 02: 916-9433		