



The following documentation is an electronically-submitted vendor response to an advertised solicitation from the *West Virginia Purchasing Bulletin* within the Vendor Self-Service portal at wvOASIS.gov. As part of the State of West Virginia's procurement process, and to maintain the transparency of the bid-opening process, this documentation submitted online is publicly posted by the West Virginia Purchasing Division at WVPurchasing.gov with any other vendor responses to this solicitation submitted to the Purchasing Division in hard copy format.

Header 8

List View

General Information

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Procurement Folder: 952504

Procurement Type: Central Purchase Order

Vendor ID: VS0000009159

Legal Name: AITA CONSULTING SERVICES INC

Alias/DBA:

Total Bid: \$59,777.85

Response Date: 10/27/2021

Response Time: 11:07

Responded By User ID: Richard2016

First Name: KEVIN

Last Name: KUMAR

Email: KEVIN@AITACS.COM

Phone: 732-658-4594

SO Doc Code: CRFQ

SO Dept: 0803

SO Doc ID: DOT2200000062

Published Date: 10/15/21

Close Date: 10/27/21

Close Time: 13:30

Status: Closed

Solicitation Description: GIATEC SURF KIT - 7722008

Total of Header Attachments: 8

Total of All Attachments: 8



Department of Administration
 Purchasing Division
 2019 Washington Street East
 Post Office Box 50130
 Charleston, WV 25305-0130

**State of West Virginia
 Solicitation Response**

Proc Folder: 952504
Solicitation Description: GIATEC SURF KIT - 7722008
Proc Type: Central Purchase Order

Solicitation Closes	Solicitation Response	Version
2021-10-27 13:30	SR 0803 ESR10272100000002647	1

VENDOR
 VS0000009159
 AITA CONSULTING SERVICES INC

Solicitation Number: CRFQ 0803 DOT2200000062
Total Bid: 59777.84999999999854480847716 **Response Date:** 2021-10-27 **Response Time:** 11:07:34
Comments:

FOR INFORMATION CONTACT THE BUYER

John W Estep
 304-558-2566
 john.w.estep@wv.gov

Vendor Signature X **FEIN#** **DATE**

All offers subject to all terms and conditions contained in this solicitation

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
1	Giatic Surf Meter or equal	11.00000	EA	5434.350000	59777.85

Comm Code	Manufacturer	Specification	Model #
20121908			

Commodity Line Comments: "SURF" unit, 100x200 mm (4"x8") Sample holder, Power adaptor, USB cable, PC communication software, User manual, Conductive gel, Verification kit, Additional set of conductive pads"

Extended Description:

Giatic Surf Meter or equal

Pricing Page					
Item Number	Quantity	Unit of Measure	Description	Unit Cost	Total
1	11	ea	GIATEC SURF CONCRETE METER OR EQUAL	\$5,434.35	\$ 59,777.85
Grand Total					\$ 59,777.85

GENERAL TERMS AND CONDITIONS:

1. CONTRACTUAL AGREEMENT: Issuance of an Award Document signed by the Purchasing Division Director, or his designee, and approved as to form by the Attorney General's office constitutes acceptance by the State of this Contract made by and between the State of West Virginia and the Vendor. Vendor's signature on its bid, or on the Contract if the Contract is not the result of a bid solicitation, signifies Vendor's agreement to be bound by and accept the terms and conditions contained in this Contract.

2. DEFINITIONS: As used in this Solicitation/Contract, the following terms shall have the meanings attributed to them below. Additional definitions may be found in the specifications included with this Solicitation/Contract.

2.1. "Agency" or "Agencies" means the agency, board, commission, or other entity of the State of West Virginia that is identified on the first page of the Solicitation or any other public entity seeking to procure goods or services under this Contract.

2.2. "Bid" or "Proposal" means the vendors submitted response to this solicitation.

2.3. "Contract" means the binding agreement that is entered into between the State and the Vendor to provide the goods or services requested in the Solicitation.

2.4. "Director" means the Director of the West Virginia Department of Administration, Purchasing Division.

2.5. "Purchasing Division" means the West Virginia Department of Administration, Purchasing Division.

2.6. "Award Document" means the document signed by the Agency and the Purchasing Division, and approved as to form by the Attorney General, that identifies the Vendor as the contract holder.

2.7. "Solicitation" means the official notice of an opportunity to supply the State with goods or services that is published by the Purchasing Division.

2.8. "State" means the State of West Virginia and/or any of its agencies, commissions, boards, etc. as context requires.

2.9. "Vendor" or "Vendors" means any entity submitting a bid in response to the Solicitation, the entity that has been selected as the lowest responsible bidder, or the entity that has been awarded the Contract as context requires.

3. CONTRACT TERM; RENEWAL; EXTENSION: The term of this Contract shall be determined in accordance with the category that has been identified as applicable to this Contract below:

Term Contract

Initial Contract Term: This Contract becomes effective on _____ and the initial contract term extends until _____.

Renewal Term: This Contract may be renewed upon the mutual written consent of the Agency, and the Vendor, with approval of the Purchasing Division and the Attorney General's office (Attorney General approval is as to form only). Any request for renewal should be delivered to the Agency and then submitted to the Purchasing Division thirty (30) days prior to the expiration date of the initial contract term or appropriate renewal term. A Contract renewal shall be in accordance with the terms and conditions of the original contract. Unless otherwise specified below, renewal of this Contract is limited to _____ successive one (1) year periods or multiple renewal periods of less than one year, provided that the multiple renewal periods do not exceed the total number of months available in all renewal years combined. Automatic renewal of this Contract is prohibited. Renewals must be approved by the Vendor, Agency, Purchasing Division and Attorney General's office (Attorney General approval is as to form only)

Alternate Renewal Term – This contract may be renewed for _____ successive _____ year periods or shorter periods provided that they do not exceed the total number of months contained in all available renewals. Automatic renewal of this Contract is prohibited. Renewals must be approved by the Vendor, Agency, Purchasing Division and Attorney General's office (Attorney General approval is as to form only)

Delivery Order Limitations: In the event that this contract permits delivery orders, a delivery order may only be issued during the time this Contract is in effect. Any delivery order issued within one year of the expiration of this Contract shall be effective for one year from the date the delivery order is issued. No delivery order may be extended beyond one year after this Contract has expired.

Fixed Period Contract: This Contract becomes effective upon Vendor's receipt of the notice to proceed and must be completed within _____ days.

Fixed Period Contract with Renewals: This Contract becomes effective upon Vendor's receipt of the notice to proceed and part of the Contract more fully described in the attached specifications must be completed within _____ days. Upon completion of the work covered by the preceding sentence, the vendor agrees that maintenance, monitoring, or warranty services will be provided for _____ year(s) thereafter.

One Time Purchase: The term of this Contract shall run from the issuance of the Award Document until all of the goods contracted for have been delivered, but in no event will this Contract extend for more than one fiscal year.

Other: See attached _____
Revised 07/01/2021

4. AUTHORITY TO PROCEED: Vendor is authorized to begin performance of this contract on the date of encumbrance listed on the front page of the Award Document unless either the box for “Fixed Period Contract” or “Fixed Period Contract with Renewals” has been checked in Section 3 above. If either “Fixed Period Contract” or “Fixed Period Contract with Renewals” has been checked, Vendor must not begin work until it receives a separate notice to proceed from the State. The notice to proceed will then be incorporated into the Contract via change order to memorialize the official date that work commenced.

5. QUANTITIES: The quantities required under this Contract shall be determined in accordance with the category that has been identified as applicable to this Contract below.

Open End Contract: Quantities listed in this Solicitation/Award Document are approximations only, based on estimates supplied by the Agency. It is understood and agreed that the Contract shall cover the quantities actually ordered for delivery during the term of the Contract, whether more or less than the quantities shown.

Service: The scope of the service to be provided will be more clearly defined in the specifications included herewith.

Combined Service and Goods: The scope of the service and deliverable goods to be provided will be more clearly defined in the specifications included herewith.

One Time Purchase: This Contract is for the purchase of a set quantity of goods that are identified in the specifications included herewith. Once those items have been delivered, no additional goods may be procured under this Contract without an appropriate change order approved by the Vendor, Agency, Purchasing Division, and Attorney General’s office.

6. EMERGENCY PURCHASES: The Purchasing Division Director may authorize the Agency to purchase goods or services in the open market that Vendor would otherwise provide under this Contract if those goods or services are for immediate or expedited delivery in an emergency. Emergencies shall include, but are not limited to, delays in transportation or an unanticipated increase in the volume of work. An emergency purchase in the open market, approved by the Purchasing Division Director, shall not constitute of breach of this Contract and shall not entitle the Vendor to any form of compensation or damages. This provision does not excuse the State from fulfilling its obligations under a One Time Purchase contract.

7. REQUIRED DOCUMENTS: All of the items checked below must be provided to the Purchasing Division by the Vendor as specified below.

BID BOND (Construction Only): Pursuant to the requirements contained in W. Va. Code § 5-22-1(c), All Vendors submitting a bid on a construction project shall furnish a valid bid bond in the amount of five percent (5%) of the total amount of the bid protecting the State of West Virginia. The bid bond must be submitted with the bid.

PERFORMANCE BOND: The apparent successful Vendor shall provide a performance bond in the amount of 100% of the contract. The performance bond must be received by the Purchasing Division prior to Contract award.

LABOR/MATERIAL PAYMENT BOND: The apparent successful Vendor shall provide a labor/material payment bond in the amount of 100% of the Contract value. The labor/material payment bond must be delivered to the Purchasing Division prior to Contract award.

In lieu of the Bid Bond, Performance Bond, and Labor/Material Payment Bond, the Vendor may provide certified checks, cashier's checks, or irrevocable letters of credit. Any certified check, cashier's check, or irrevocable letter of credit provided in lieu of a bond must be of the same amount and delivered on the same schedule as the bond it replaces. A letter of credit submitted in lieu of a performance and labor/material payment bond will only be allowed for projects under \$100,000. Personal or business checks are not acceptable. Notwithstanding the foregoing, West Virginia Code § 5-22-1 (d) mandates that a vendor provide a performance and labor/material payment bond for construction projects. Accordingly, substitutions for the performance and labor/material payment bonds for construction projects is not permitted.

MAINTENANCE BOND: The apparent successful Vendor shall provide a two (2) year maintenance bond covering the roofing system. The maintenance bond must be issued and delivered to the Purchasing Division prior to Contract award.

LICENSE(S) / CERTIFICATIONS / PERMITS: In addition to anything required under the Section of the General Terms and Conditions entitled Licensing, the apparent successful Vendor shall furnish proof of the following licenses, certifications, and/or permits upon request and in a form acceptable to the State. The request may be prior to or after contract award at the State's sole discretion.

The apparent successful Vendor shall also furnish proof of any additional licenses or certifications contained in the specifications regardless of whether or not that requirement is listed above.

8. INSURANCE: The apparent successful Vendor shall furnish proof of the insurance identified by a checkmark below and must include the State as an additional insured on each policy prior to Contract award. The insurance coverages identified below must be maintained throughout the life of this contract. Thirty (30) days prior to the expiration of the insurance policies, Vendor shall provide the Agency with proof that the insurance mandated herein has been continued. Vendor must also provide Agency with immediate notice of any changes in its insurance policies, including but not limited to, policy cancelation, policy reduction, or change in insurers. The apparent successful Vendor shall also furnish proof of any additional insurance requirements contained in the specifications prior to Contract award regardless of whether that insurance requirement is listed in this section.

Vendor must maintain:

- Commercial General Liability Insurance** in at least an amount of: \$1,000,000.00 per occurrence.
- Automobile Liability Insurance** in at least an amount of: _____ per occurrence.
- Professional/Malpractice/Errors and Omission Insurance** in at least an amount of: _____ per occurrence. Notwithstanding the forgoing, Vendor's are not required to list the State as an additional insured for this type of policy.
- Commercial Crime and Third Party Fidelity Insurance** in an amount of: _____ per occurrence.
- Cyber Liability Insurance** in an amount of: _____ per occurrence.
- Builders Risk Insurance** in an amount equal to 100% of the amount of the Contract.
- Pollution Insurance** in an amount of: _____ per occurrence.
- Aircraft Liability** in an amount of: _____ per occurrence.
- State of West Virginia must be listed as additional insured on insurance certificate. Certificate holder should read as follows:**

State of WV
1900 Kanawha Blvd. E., Bldg.5
Charleston, WV 25305

Notwithstanding anything contained in this section to the contrary, the Director of the Purchasing Division reserves the right to waive the requirement that the State be named as an additional insured on one or more of the Vendor's insurance policies if the Director finds that doing so is in the State's best interest.

9. WORKERS' COMPENSATION INSURANCE: Vendor shall comply with laws relating to workers compensation, shall maintain workers' compensation insurance when required, and shall furnish proof of workers' compensation insurance upon request.

10. [Reserved]

11. LIQUIDATED DAMAGES: This clause shall in no way be considered exclusive and shall not limit the State or Agency's right to pursue any other available remedy. Vendor shall pay liquidated damages in the amount specified below or as described in the specifications:

_____ for _____.

Liquidated Damages Contained in the Specifications.

Liquidated Damages Are Not Included in this Contract.

12. ACCEPTANCE: Vendor's signature on its bid, or on the certification and signature page, constitutes an offer to the State that cannot be unilaterally withdrawn, signifies that the product or service proposed by vendor meets the mandatory requirements contained in the Solicitation for that product or service, unless otherwise indicated, and signifies acceptance of the terms and conditions contained in the Solicitation unless otherwise indicated.

13. PRICING: The pricing set forth herein is firm for the life of the Contract, unless specified elsewhere within this Solicitation/Contract by the State. A Vendor's inclusion of price adjustment provisions in its bid, without an express authorization from the State in the Solicitation to do so, may result in bid disqualification. Notwithstanding the foregoing, Vendor must extend any publicly advertised sale price to the State and invoice at the lower of the contract price or the publicly advertised sale price.

14. PAYMENT IN ARREARS: Payments for goods/services will be made in arrears only upon receipt of a proper invoice, detailing the goods/services provided or receipt of the goods/services, whichever is later. Notwithstanding the foregoing, payments for software maintenance, licenses, or subscriptions may be paid annually in advance.

15. PAYMENT METHODS: Vendor must accept payment by electronic funds transfer and P-Card. (The State of West Virginia's Purchasing Card program, administered under contract by a banking institution, processes payment for goods and services through state designated credit cards.)

16. TAXES: The Vendor shall pay any applicable sales, use, personal property or any other taxes arising out of this Contract and the transactions contemplated thereby. The State of West Virginia is exempt from federal and state taxes and will not pay or reimburse such taxes.

17. ADDITIONAL FEES: Vendor is not permitted to charge additional fees or assess additional charges that were not either expressly provided for in the solicitation published by the State of West Virginia, included in the Contract, or included in the unit price or lump sum bid amount that Vendor is required by the solicitation to provide. Including such fees or charges as notes to the solicitation may result in rejection of vendor's bid. Requesting such fees or charges be paid after the contract has been awarded may result in cancellation of the contract.

18. FUNDING: This Contract shall continue for the term stated herein, contingent upon funds being appropriated by the Legislature or otherwise being made available. In the event funds are not appropriated or otherwise made available, this Contract becomes void and of no effect beginning on July 1 of the fiscal year for which funding has not been appropriated or otherwise made available. If that occurs, the State may notify the Vendor that an alternative source of funding has been obtained and thereby avoid the automatic termination. Non-appropriation or non-funding shall not be considered an event of default.

19. CANCELLATION: The Purchasing Division Director reserves the right to cancel this Contract immediately upon written notice to the vendor if the materials or workmanship supplied do not conform to the specifications contained in the Contract. The Purchasing Division Director may also cancel any purchase or Contract upon 30 days written notice to the Vendor in accordance with West Virginia Code of State Rules § 148-1-5.2.b.

20. TIME: Time is of the essence regarding all matters of time and performance in this Contract.

21. APPLICABLE LAW: This Contract is governed by and interpreted under West Virginia law without giving effect to its choice of law principles. Any information provided in specification manuals, or any other source, verbal or written, which contradicts or violates the West Virginia Constitution, West Virginia Code, or West Virginia Code of State Rules is void and of no effect.

22. COMPLIANCE WITH LAWS: Vendor shall comply with all applicable federal, state, and local laws, regulations and ordinances. By submitting a bid, Vendor acknowledges that it has reviewed, understands, and will comply with all applicable laws, regulations, and ordinances.

SUBCONTRACTOR COMPLIANCE: Vendor shall notify all subcontractors providing commodities or services related to this Contract that as subcontractors, they too are required to comply with all applicable laws, regulations, and ordinances. Notification under this provision must occur prior to the performance of any work under the contract by the subcontractor.

23. ARBITRATION: Any references made to arbitration contained in this Contract, Vendor's bid, or in any American Institute of Architects documents pertaining to this Contract are hereby deleted, void, and of no effect.

24. MODIFICATIONS: This writing is the parties' final expression of intent. Notwithstanding anything contained in this Contract to the contrary no modification of this Contract shall be binding without mutual written consent of the Agency, and the Vendor, with approval of the Purchasing Division and the Attorney General's office (Attorney General approval is as to form only). Any change to existing contracts that adds work or changes contract cost, and were not included in the original contract, must be approved by the Purchasing Division and the Attorney General's Office (as to form) prior to the implementation of the change or commencement of work affected by the change.

25. WAIVER: The failure of either party to insist upon a strict performance of any of the terms or provision of this Contract, or to exercise any option, right, or remedy herein contained, shall not be construed as a waiver or a relinquishment for the future of such term, provision, option, right, or remedy, but the same shall continue in full force and effect. Any waiver must be expressly stated in writing and signed by the waiving party.

26. SUBSEQUENT FORMS: The terms and conditions contained in this Contract shall supersede any and all subsequent terms and conditions which may appear on any form documents submitted by Vendor to the Agency or Purchasing Division such as price lists, order forms, invoices, sales agreements, or maintenance agreements, and includes internet websites or other electronic documents. Acceptance or use of Vendor's forms does not constitute acceptance of the terms and conditions contained thereon.

27. ASSIGNMENT: Neither this Contract nor any monies due, or to become due hereunder, may be assigned by the Vendor without the express written consent of the Agency, the Purchasing Division, the Attorney General's office (as to form only), and any other government agency or office that may be required to approve such assignments.

28. WARRANTY: The Vendor expressly warrants that the goods and/or services covered by this Contract will: (a) conform to the specifications, drawings, samples, or other description furnished or specified by the Agency; (b) be merchantable and fit for the purpose intended; and (c) be free from defect in material and workmanship.

29. STATE EMPLOYEES: State employees are not permitted to utilize this Contract for personal use and the Vendor is prohibited from permitting or facilitating the same.

30. PRIVACY, SECURITY, AND CONFIDENTIALITY: The Vendor agrees that it will not disclose to anyone, directly or indirectly, any such personally identifiable information or other confidential information gained from the Agency, unless the individual who is the subject of the information consents to the disclosure in writing or the disclosure is made pursuant to the Agency's policies, procedures, and rules. Vendor further agrees to comply with the Confidentiality Policies and Information Security Accountability Requirements, set forth in <http://www.state.wv.us/admin/purchase/privacy/default.html>.

31. YOUR SUBMISSION IS A PUBLIC DOCUMENT: Vendor's entire response to the Solicitation and the resulting Contract are public documents. As public documents, they will be disclosed to the public following the bid/proposal opening or award of the contract, as required by the competitive bidding laws of West Virginia Code §§ 5A-3-1 et seq., 5-22-1 et seq., and 5G-1-1 et seq. and the Freedom of Information Act West Virginia Code §§ 29B-1-1 et seq.

DO NOT SUBMIT MATERIAL YOU CONSIDER TO BE CONFIDENTIAL, A TRADE SECRET, OR OTHERWISE NOT SUBJECT TO PUBLIC DISCLOSURE.

Submission of any bid, proposal, or other document to the Purchasing Division constitutes your explicit consent to the subsequent public disclosure of the bid, proposal, or document. The Purchasing Division will disclose any document labeled "confidential," "proprietary," "trade secret," "private," or labeled with any other claim against public disclosure of the documents, to include any "trade secrets" as defined by West Virginia Code § 47-22-1 et seq. All submissions are subject to public disclosure without notice.

32. LICENSING: In accordance with West Virginia Code of State Rules § 148-1-6.1.e, Vendor must be licensed and in good standing in accordance with any and all state and local laws and requirements by any state or local agency of West Virginia, including, but not limited to, the West Virginia Secretary of State's Office, the West Virginia Tax Department, West Virginia Insurance Commission, or any other state agency or political subdivision. Obligations related to political subdivisions may include, but are not limited to, business licensing, business and occupation taxes, inspection compliance, permitting, etc. Upon request, the Vendor must provide all necessary releases to obtain information to enable the Purchasing Division Director or the Agency to verify that the Vendor is licensed and in good standing with the above entities.

SUBCONTRACTOR COMPLIANCE: Vendor shall notify all subcontractors providing commodities or services related to this Contract that as subcontractors, they too are required to be licensed, in good standing, and up-to-date on all state and local obligations as described in this section. Obligations related to political subdivisions may include, but are not limited to, business licensing, business and occupation taxes, inspection compliance, permitting, etc. Notification under this provision must occur prior to the performance of any work under the contract by the subcontractor.

33. ANTITRUST: In submitting a bid to, signing a contract with, or accepting a Award Document from any agency of the State of West Virginia, the Vendor agrees to convey, sell, assign, or transfer to the State of West Virginia all rights, title, and interest in and to all causes of action it may now or hereafter acquire under the antitrust laws of the United States and the State of West Virginia for price fixing and/or unreasonable restraints of trade relating to the particular commodities or services purchased or acquired by the State of West Virginia. Such assignment shall be made and become effective at the time the purchasing agency tenders the initial payment to Vendor.

34. VENDOR CERTIFICATIONS: By signing its bid or entering into this Contract, Vendor certifies (1) that its bid or offer was made without prior understanding, agreement, or connection with any corporation, firm, limited liability company, partnership, person or entity submitting a bid or offer for the same material, supplies, equipment or services; (2) that its bid or offer is in all respects fair and without collusion or fraud; (3) that this Contract is accepted or entered into without any prior understanding, agreement, or connection to any other entity that could be considered a violation of law; and (4) that it has reviewed this Solicitation in its entirety; understands the requirements, terms and conditions, and other information contained herein.

Vendor's signature on its bid or offer also affirms that neither it nor its representatives have any interest, nor shall acquire any interest, direct or indirect, which would compromise the performance of its services hereunder. Any such interests shall be promptly presented in detail to the Agency. The individual signing this bid or offer on behalf of Vendor certifies that he or she is authorized by the Vendor to execute this bid or offer or any documents related thereto on Vendor's behalf; that he or she is authorized to bind the Vendor in a contractual relationship; and that, to the best of his or her knowledge, the Vendor has properly registered with any State agency that may require registration.

35. VENDOR RELATIONSHIP: The relationship of the Vendor to the State shall be that of an independent contractor and no principal-agent relationship or employer-employee relationship is contemplated or created by this Contract. The Vendor as an independent contractor is solely liable for the acts and omissions of its employees and agents. Vendor shall be responsible for selecting, supervising, and compensating any and all individuals employed pursuant to the terms of this Solicitation and resulting contract. Neither the Vendor, nor any employees or subcontractors of the Vendor, shall be deemed to be employees of the State for any purpose whatsoever. Vendor shall be exclusively responsible for payment of employees and contractors for all wages and salaries, taxes, withholding payments, penalties, fees, fringe benefits, professional liability insurance premiums, contributions to insurance and pension, or other deferred compensation plans, including but not limited to, Workers' Compensation and Social Security obligations, licensing fees, etc. and the filing of all necessary documents, forms, and returns pertinent to all of the foregoing.

Vendor shall hold harmless the State, and shall provide the State and Agency with a defense against any and all claims including, but not limited to, the foregoing payments, withholdings, contributions, taxes, Social Security taxes, and employer income tax returns.

36. INDEMNIFICATION: The Vendor agrees to indemnify, defend, and hold harmless the State and the Agency, their officers, and employees from and against: (1) Any claims or losses for services rendered by any subcontractor, person, or firm performing or supplying services, materials, or supplies in connection with the performance of the Contract; (2) Any claims or losses resulting to any person or entity injured or damaged by the Vendor, its officers, employees, or subcontractors by the publication, translation, reproduction, delivery, performance, use, or disposition of any data used under the Contract in a manner not authorized by the Contract, or by Federal or State statutes or regulations; and (3) Any failure of the Vendor, its officers, employees, or subcontractors to observe State and Federal laws including, but not limited to, labor and wage and hour laws.

37. PURCHASING AFFIDAVIT: In accordance with West Virginia Code §§ 5A-3-10a and 5-22-1(i), the State is prohibited from awarding a contract to any bidder that owes a debt to the State or a political subdivision of the State, Vendors are required to sign, notarize, and submit the Purchasing Affidavit to the Purchasing Division affirming under oath that it is not in default on any monetary obligation owed to the state or a political subdivision of the state.

38. CONFLICT OF INTEREST: Vendor, its officers or members or employees, shall not presently have or acquire an interest, direct or indirect, which would conflict with or compromise the performance of its obligations hereunder. Vendor shall periodically inquire of its officers, members and employees to ensure that a conflict of interest does not arise. Any conflict of interest discovered shall be promptly presented in detail to the Agency.

39. REPORTS: Vendor shall provide the Agency and/or the Purchasing Division with the following reports identified by a checked box below:

Such reports as the Agency and/or the Purchasing Division may request. Requested reports may include, but are not limited to, quantities purchased, agencies utilizing the contract, total contract expenditures by agency, etc.

Quarterly reports detailing the total quantity of purchases in units and dollars, along with a listing of purchases by agency. Quarterly reports should be delivered to the Purchasing Division via email at purchasing.division@wv.gov.

40. BACKGROUND CHECK: In accordance with W. Va. Code § 15-2D-3, the State reserves the right to prohibit a service provider's employees from accessing sensitive or critical information or to be present at the Capitol complex based upon results addressed from a criminal background check. Service providers should contact the West Virginia Division of Protective Services by phone at (304) 558-9911 for more information.

41. PREFERENCE FOR USE OF DOMESTIC STEEL PRODUCTS: Except when authorized by the Director of the Purchasing Division pursuant to W. Va. Code § 5A-3-56, no contractor may use or supply steel products for a State Contract Project other than those steel products made in the United States. A contractor who uses steel products in violation of this section may be subject to civil penalties pursuant to W. Va. Code § 5A-3-56. As used in this section:

- a. "State Contract Project" means any erection or construction of, or any addition to, alteration of or other improvement to any building or structure, including, but not limited to, roads or highways, or the installation of any heating or cooling or ventilating plants or other equipment, or the supply of and materials for such projects, pursuant to a contract with the State of West Virginia for which bids were solicited on or after June 6, 2001.
- b. "Steel Products" means products rolled, formed, shaped, drawn, extruded, forged, cast, fabricated or otherwise similarly processed, or processed by a combination of two or more or such operations, from steel made by the open heath, basic oxygen, electric furnace, Bessemer or other steel making process.
- c. The Purchasing Division Director may, in writing, authorize the use of foreign steel products if:

1. The cost for each contract item used does not exceed one tenth of one percent (.1%) of the total contract cost or two thousand five hundred dollars (\$2,500.00), whichever is greater. For the purposes of this section, the cost is the value of the steel product as delivered to the project; or
2. The Director of the Purchasing Division determines that specified steel materials are not produced in the United States in sufficient quantity or otherwise are not reasonably available to meet contract requirements.

42. PREFERENCE FOR USE OF DOMESTIC ALUMINUM, GLASS, AND STEEL: In Accordance with W. Va. Code § 5-19-1 et seq., and W. Va. CSR § 148-10-1 et seq., for every contract or subcontract, subject to the limitations contained herein, for the construction, reconstruction, alteration, repair, improvement or maintenance of public works or for the purchase of any item of machinery or equipment to be used at sites of public works, only domestic aluminum, glass or steel products shall be supplied unless the spending officer determines, in writing, after the receipt of offers or bids, (1) that the cost of domestic aluminum, glass or steel products is unreasonable or inconsistent with the public interest of the State of West Virginia, (2) that domestic aluminum, glass or steel products are not produced in sufficient quantities to meet the contract requirements, or (3) the available domestic aluminum, glass, or steel do not meet the contract specifications. This provision only applies to public works contracts awarded in an amount more than fifty thousand dollars (\$50,000) or public works contracts that require more than ten thousand pounds of steel products.

The cost of domestic aluminum, glass, or steel products may be unreasonable if the cost is more than twenty percent (20%) of the bid or offered price for foreign made aluminum, glass, or steel products. If the domestic aluminum, glass or steel products to be supplied or produced in a “substantial labor surplus area”, as defined by the United States Department of Labor, the cost of domestic aluminum, glass, or steel products may be unreasonable if the cost is more than thirty percent (30%) of the bid or offered price for foreign made aluminum, glass, or steel products. This preference shall be applied to an item of machinery or equipment, as indicated above, when the item is a single unit of equipment or machinery manufactured primarily of aluminum, glass or steel, is part of a public works contract and has the sole purpose or of being a permanent part of a single public works project. This provision does not apply to equipment or machinery purchased by a spending unit for use by that spending unit and not as part of a single public works project.

All bids and offers including domestic aluminum, glass or steel products that exceed bid or offer prices including foreign aluminum, glass or steel products after application of the preferences provided in this provision may be reduced to a price equal to or lower than the lowest bid or offer price for foreign aluminum, glass or steel products plus the applicable preference. If the reduced bid or offer prices are made in writing and supersede the prior bid or offer prices, all bids or offers, including the reduced bid or offer prices, will be reevaluated in accordance with this rule.

43. INTERESTED PARTY SUPPLEMENTAL DISCLOSURE: W. Va. Code § 6D-1-2 requires that for contracts with an actual or estimated value of at least \$1 million, the vendor must submit to the Agency a supplemental disclosure of interested parties reflecting any new or differing interested parties to the contract, which were not included in the original pre-award interested party disclosure, within 30 days following the completion or termination of the contract. A copy of that form is included with this solicitation or can be obtained from the WV Ethics Commission. This requirement does not apply to publicly traded companies listed on a national or international stock exchange. A more detailed definition of interested parties can be obtained from the form referenced above.

44. PROHIBITION AGAINST USED OR REFURBISHED: Unless expressly permitted in the solicitation published by the State, Vendor must provide new, unused commodities, and is prohibited from supplying used or refurbished commodities, in fulfilling its responsibilities under this Contract.

45. VOID CONTRACT CLAUSES – This Contract is subject to the provisions of West Virginia Code § 5A-3-62, which automatically voids certain contract clauses that violate State law.

DESIGNATED CONTACT: Vendor appoints the individual identified in this Section as the Contract Administrator and the initial point of contact for matters relating to this Contract.

Kevin Kumar Manager
(Name, Title)
Kevin Kumar Manager
(Printed Name and Title)
825 Georges Rd, 3rd Floor, North Brunswick, NJ – 08902.
(Address)
(732) 658-4594
(Phone Number) / (Fax Number)
kevin@aitacs.com
(email address)

CERTIFICATION AND SIGNATURE: By signing below, or submitting documentation through wvOASIS, I certify that: I have reviewed this Solicitation in its entirety; that I understand the requirements, terms and conditions, and other information contained herein; that this bid, offer or proposal constitutes an offer to the State that cannot be unilaterally withdrawn; that the product or service proposed meets the mandatory requirements contained in the Solicitation for that product or service, unless otherwise stated herein; that the Vendor accepts the terms and conditions contained in the Solicitation, unless otherwise stated herein; that I am submitting this bid, offer or proposal for review and consideration; that I am authorized by the vendor to execute and submit this bid, offer, or proposal, or any documents related thereto on vendor's behalf; that I am authorized to bind the vendor in a contractual relationship; and that to the best of my knowledge, the vendor has properly registered with any State agency that may require registration.

By signing below, I further certify that I understand this Contract is subject to the provisions of West Virginia Code § 5A-3-62, which automatically voids certain contract clauses that violate State law.

AITA Consulting Services, Inc
(Company)

Michael A Accounts Manager & Inside Sales
(Authorized Signature) (Representative Name, Title)

Michael A Accounts Manager & Inside Sales
(Printed Name and Title of Authorized Representative)

10/27/2021
(Date)

(732) 658-5164
(Phone Number) (Fax Number)

West Virginia Ethics Commission



Disclosure of Interested Parties to Contracts

Pursuant to *W. Va. Code* § 6D-1-2, a state agency may not enter into a contract, or a series of related contracts, that has/have an actual or estimated value of \$1 million or more until the business entity submits to the contracting state agency a Disclosure of Interested Parties to the applicable contract. In addition, the business entity awarded a contract is obligated to submit a supplemental Disclosure of Interested Parties reflecting any new or differing interested parties to the contract within 30 days following the completion or termination of the applicable contract.

For purposes of complying with these requirements, the following definitions apply:

"Business entity" means any entity recognized by law through which business is conducted, including a sole proprietorship, partnership or corporation, but does not include publicly traded companies listed on a national or international stock exchange.

"Interested party" or *"Interested parties"* means:

- (1) A business entity performing work or service pursuant to, or in furtherance of, the applicable contract, including specifically sub-contractors;
- (2) the person(s) who have an ownership interest equal to or greater than 25% in the business entity performing work or service pursuant to, or in furtherance of, the applicable contract. (This subdivision does not apply to a publicly traded company); and
- (3) the person or business entity, if any, that served as a compensated broker or intermediary to actively facilitate the applicable contract or negotiated the terms of the applicable contract with the state agency. (This subdivision does not apply to persons or business entities performing legal services related to the negotiation or drafting of the applicable contract.)

"State agency" means a board, commission, office, department or other agency in the executive, judicial or legislative branch of state government, including publicly funded institutions of higher education: Provided, that for purposes of *W. Va. Code* § 6D-1-2, the West Virginia Investment Management Board shall not be deemed a state agency nor subject to the requirements of that provision.

The contracting business entity must complete this form and submit it to the contracting state agency prior to contract award and to complete another form within 30 days of contract completion or termination.

This form was created by the State of West Virginia Ethics Commission, 210 Brooks Street, Suite 300, Charleston, WV 25301-1804. Telephone: (304)558-0664; fax: (304)558-2169; e-mail: ethics@wv.gov; website: www.ethics.wv.gov.

West Virginia Ethics Commission
Disclosure of Interested Parties to Contracts

(Required by *W. Va. Code* § 6D-1-2)

Name of Contracting Business Entity: AITA Consulting Services, Inc Address: 825 Georges Rd, 3rd Floor,
North Brunswick, NJ – 08902.

Name of Authorized Agent: Michael A Address: 825 Georges Rd, 3rd Floor,
North Brunswick, NJ – 08902.

Contract Number: _____ Contract Description: _____

Governmental agency awarding contract: _____

Check here if this is a Supplemental Disclosure

List the Names of Interested Parties to the contract which are known or reasonably anticipated by the contracting business entity for each category below (*attach additional pages if necessary*):

1. Subcontractors or other entities performing work or service under the Contract

Check here if none, otherwise list entity/individual names below.

2. Any person or entity who owns 25% or more of contracting entity (not applicable to publicly traded entities)

Check here if none, otherwise list entity/individual names below.

3. Any person or entity that facilitated, or negotiated the terms of, the applicable contract (excluding legal services related to the negotiation or drafting of the applicable contract)

Check here if none, otherwise list entity/individual names below.

Signature: 

Date Signed: 10/27/2021

Notary Verification

State of New Jersey, County of U.S:

I, _____, the authorized agent of the contracting business entity listed above, being duly sworn, acknowledge that the Disclosure herein is being made under oath and under the penalty of perjury.

Taken, sworn to and subscribed before me this _____ day of _____, _____.

Notary Public's Signature

To be completed by State Agency:

Date Received by State Agency: _____
Date submitted to Ethics Commission: _____
Governmental agency submitting Disclosure: _____



Department of Administration
 Purchasing Division
 2019 Washington Street East
 Post Office Box 50130
 Charleston, WV 25305-0130

State of West Virginia
 Centralized Request for Quote
 Laboratory

Proc Folder: 952504			Reason for Modification:
Doc Description: GIATEC SURF KIT - 7722008			
Proc Type: Central Purchase Order			
Date Issued	Solicitation Closes	Solicitation No	Version
2021-10-15	2021-10-27 13:30	CRFQ 0803 DOT2200000062	1

BID RECEIVING LOCATION

BID CLERK
 DEPARTMENT OF ADMINISTRATION
 PURCHASING DIVISION
 2019 WASHINGTON ST E
 CHARLESTON WV 25305
 US

VENDOR

Vendor Customer Code: VS0000009159
Vendor Name : AITA Consulting Services, Inc
Address : 825 Georges Rd, 3rd Floor, North Brunswick, NJ – 08902.
Street :
City : North Brunswick
State : New Jersey **Country :** U.S **Zip :** 08902
Principal Contact : Kevin Kumar
Vendor Contact Phone: (732) 658-4594 **Extension:**

FOR INFORMATION CONTACT THE BUYER

John W Estep
 304-558-2566
 john.w.estep@wv.gov

Vendor
 Signature X

FEIN# 20-4246891

DATE 10/27/2021

All offers subject to all terms and conditions contained in this solicitation

ADDITIONAL INFORMATION**REQUEST FOR QUOTATION:**

The West Virginia Purchasing Division is soliciting bids on behalf of Materials Control, Soils, & Testing Division to establish a contract for the one-time purchase of (11) Giatec Surf concrete resistivity meter kits. Per the Bid Requirements, Specifications, Terms and Conditions attached to this solicitation

INVOICE TO**SHIP TO**

DIVISION OF HIGHWAYS
 MATERIALS, CONTROL,
 SOILS, & TESTING
 190 DRY BRANCH DR
 CHARLESTON WV
 US

DIVISION OF HIGHWAYS
 MATERIALS, CONTROL,
 SOILS, & TESTING
 190 DRY BRANCH DR
 CHARLESTON WV
 US

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
1	Giatec Surf Meter or equal	11.00000	EA	\$5,434.35	\$59,777.85

Comm Code	Manufacturer	Specification	Model #
20121908	Giatec Scientific Inc, Surf™	GIATEC SURF KIT	900037

Extended Description:

Giatec Surf Meter or equal

SCHEDULE OF EVENTS

<u>Line</u>	<u>Event</u>	<u>Event Date</u>
1	Tech Questions due by 10:00am	2021-10-21

	Document Phase	Document Description	Page
DOT2200000062	Final	GIATEC SURF KIT - 7722008	3

ADDITIONAL TERMS AND CONDITIONS

See attached document(s) for additional Terms and Conditions

STATE OF WEST VIRGINIA
Purchasing Division

PURCHASING AFFIDAVIT

CONSTRUCTION CONTRACTS: Under W. Va. Code § 5-22-1(i), the contracting public entity shall not award a construction contract to any bidder that is known to be in default on any monetary obligation owed to the state or a political subdivision of the state, including, but not limited to, obligations related to payroll taxes, property taxes, sales and use taxes, fire service fees, or other fines or fees.

ALL CONTRACTS: Under W. Va. Code §5A-3-10a, no contract or renewal of any contract may be awarded by the state or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective vendor or a related party to the vendor or prospective vendor is a debtor and: (1) the debt owed is an amount greater than one thousand dollars in the aggregate; or (2) the debtor is in employer default.

EXCEPTION: The prohibition listed above does not apply where a vendor has contested any tax administered pursuant to chapter eleven of the W. Va. Code, workers' compensation premium, permit fee or environmental fee or assessment and the matter has not become final or where the vendor has entered into a payment plan or agreement and the vendor is not in default of any of the provisions of such plan or agreement.

DEFINITIONS:

"Debt" means any assessment, premium, penalty, fine, tax or other amount of money owed to the state or any of its political subdivisions because of a judgment, fine, permit violation, license assessment, defaulted workers' compensation premium, penalty or other assessment presently delinquent or due and required to be paid to the state or any of its political subdivisions, including any interest or additional penalties accrued thereon.

"Employer default" means having an outstanding balance or liability to the old fund or to the uninsured employers' fund or being in policy default, as defined in W. Va. Code § 23-2c-2, failure to maintain mandatory workers' compensation coverage, or failure to fully meet its obligations as a workers' compensation self-insured employer. An employer is not in employer default if it has entered into a repayment agreement with the Insurance Commissioner and remains in compliance with the obligations under the repayment agreement.

"Related party" means a party, whether an individual, corporation, partnership, association, limited liability company or any other form or business association or other entity whatsoever, related to any vendor by blood, marriage, ownership or contract through which the party has a relationship of ownership or other interest with the vendor so that the party will actually or by effect receive or control a portion of the benefit, profit or other consideration from performance of a vendor contract with the party receiving an amount that meets or exceeds five percent of the total contract amount.

AFFIRMATION: By signing this form, the vendor's authorized signer affirms and acknowledges under penalty of law for false swearing (*W. Va. Code §61-5-3*) that: (1) for construction contracts, the vendor is not in default on any monetary obligation owed to the state or a political subdivision of the state, and (2) for all other contracts, that neither vendor nor any related party owe a debt as defined above and that neither vendor nor any related party are in employer default as defined above, unless the debt or employer default is permitted under the exception above.

WITNESS THE FOLLOWING SIGNATURE:

Vendor's Name: AITA Consulting Services, Inc

Authorized Signature:  Date: 10/27/2021

State of _____

County of _____, to-wit:

Taken, subscribed, and sworn to before me this ____ day of _____, 20__.

My Commission expires _____, 20__.

AFFIX SEAL HERE

NOTARY PUBLIC _____



Aita Technologies
(A AITA Consulting Services, Inc Company)
A Small, Minority and Woman owned business
WBENC | SBE | NMSDC | M/WBE | ISO 9001

AITA Consulting Services, Inc
825 Georges Rd, 3rd Floor,
North Brunswick, NJ – 08902.
Phone: (732) 658-5164 - 335
Fax: (732) 960-6819

May 03, 2021

To Whom It May Concern:

Due to COVID-19 restrictions, we are unable to obtain a signature from a notary public at this time. Thank you for your understanding.

Sincerely,

A handwritten signature in black ink that reads "Michael A". The signature is written in a cursive style with a large, looped initial 'M'.

Michael A
Accounts Manager & Inside Sales



AITA Technologies

(A Aita Consulting Services, Inc. Company)

A Woman and Minority owned Small Business

825 Georges Rd, 3rd Floor, North Brunswick, NJ – 08902

Quotation

Date:10/27/2021

WOSB	M/WBE	SBE	ISO 9001
FEIN: 20-4246891	DUNS: 025425934	CAGE: 5A1Z3	SAM Registered

AITA Quote#: MAQ0191	RFQ#: CRFQ-0803-DOT2200000062-1
-----------------------------	--

To John W Estep Purchasing Division DIVISION OF HIGHWAYS Phone: (304) 558-2566 Email: john.w.estep@wv.gov	From Michael A Sales Executive Phone: (908) 818-1239 Fax: (732) 960-6819 Email: michael@aitacs.com
--	--

Sno	Part#	Description	Qty	Unit Price	Ext Price
1	900037	"SURF™ unit, 100x200 mm (4"x8") Sample holder, Power adaptor, USB cable, PC communication software, User manual, Conductive gel, Verification kit, Additional set of conductive pads"	11	\$5,434.35	\$59,777.85
Sub Total					\$59,777.85
Tax					\$0.00
Total					\$59,777.85

Comments

- FOB - Destination.
- Payment terms are Net 30.
- Estimated delivery is within 30 business days ARO.
- Standard manufacturer warranty.
- Quote Validity - 11/30/2021

If you have any questions, or need any changes in the configuration, please contact me.

Thanks,

Michael A

Sales Executive

Phone: (908) 818-1239

Fax: (732) 960-6819

Email: michael@aitacs.com || Website: www.aitatechnologies.com



**GIATEC
SCIENTIFIC**

USER MANUAL



SURF™

SURFACE RESISTIVITY OF CONCRETE USING
WENNER FOUR-ELECTRODE METHOD

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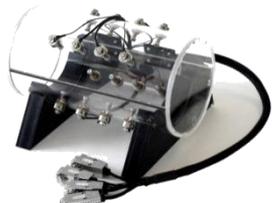
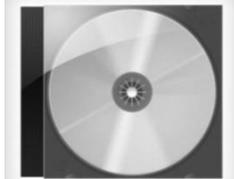
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PACKAGE CONTENTS

Item	Qty	Photo
Surf™ Measurement Device	1X	
Surf™ Cell with Connector Cable	1X	
Verification Dongle (High Range +Low Range)	2X	
Handheld probe (optional accessory)	1X	
Surf™ Data Monitor Software	1X	
External Power Supply	1X	

USB Communication
Cable

1X



Conductive Gel

1X



Conductive pads

16X



Note: Figures displayed above are not in scale.

WARRANTY

LIMITED WARRANTIES

Giatic warrants the Product against defects in materials and workmanship under normal use (the “Warranty”) for a period of 12 months from the Delivery Date (the “Warranty Period”), on the condition that the Product has been completely paid for. Unless as otherwise mandated by local law, the Warranty Period does not restart if Customer receives a replacement appliance and/or replacement Software. This Warranty does not apply: (a) to consumable parts, such as batteries, Plexiglas cell units and cables unless damage has occurred due to a defect in materials or workmanship; (b) to cosmetic damage, including but not limited to scratches, dents and broken plastic on ports; (c) to damage caused by accident, abuse, misuse, neglect or failure to properly maintain (to include but not limited to water damage and/or condensation or improper temperatures during storage), or improper installation; (d) to damage caused by electrical disturbances or acts of God, to include but not limited to civil disturbance, war, flood, fire, rodents or insects; (e) where manufacturer’s serial numbers and security labels have been removed from the Product; and (f) to damage caused during shipment (due to Customer’s improper packaging) from Customer to Giatic in the case of Product returns for repair.

Giatic disclaims all other warranties, express or implied, including without limitation implied warranties of merchantability, fitness for a particular purpose, or against hidden or latent defects. Giatic’s responsibility for warranty claims is limited to repair or replacement. Giatic reserves the right to modify this Warranty at any time, at its sole discretion, and with notice to Customer.

Giatic does not warrant that the operation of the Product will be uninterrupted or error-free. Giatic is not responsible for damage arising from failure to follow instructions relating to the Product’s use. This Warranty is voided immediately if repair, modification (to include upgrades, expansions or usage or addition of non-manufacturer parts or accessories), alteration or other service is attempted other than by Giatic. In this regard, the integrity

of the appliance casing (aka the box) should not be violated for any reason, unless expressly authorized by Giatec in writing.

THE WARRANTY SET FORTH IS EXCLUSIVE AND NO OTHER WARRANTY, WHETHER WRITTEN OR ORAL, IS EXPRESSED OR IMPLIED. GIATEC SCIENTIFIC INC. SPECIFICALLY DISCLAIMS THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

* Please refer to the complete Terms and Conditions of Giatec's products for more details.

* The information contained in this document is subject to change without notice.

SAFETY INSTRUCTIONS

This chapter contains important safety instructions that you must follow when operating Surf™ and keeping it in storage. Read the following before any operation to ensure your safety and to keep the instrument in good condition. Keep the user manual in a safe place for future reference.

SAFETY SYMBOLS

In order to ensure the safety of the operator, and increase the service life of the instruments, pay attention to safety precautions described in this manual. These messages are indicated by a  symbol throughout this manual.

WARNING:	Identifies conditions or practices that could result in injury or loss of life.
CAUTION:	Identifies conditions or practices that could result in damage to Giatec Surf™ or to other properties.
ATTENTION:	Refer to the User Manual

GENERAL GUIDELINES

1. Always follow basic safety precautions when using this product to reduce risk of injury from fire or electric shock.
2. Read and understand all instructions in the documentation that come with Giatec Surf™.
3. Observe all warnings and instructions marked on the product.

DEVICE HANDLING



CAUTION

Giatec Surf™ device is a delicate testing instrument. The electronic parts and test cells are sensitive components. Please handle them with care.

- Do not place any heavy object on the Surf™ device.
- Avoid severe impact or rough handling that leads to damaging Surf™.
- Do not discharge static electricity to Surf™.
- Do not disassemble Surf™.

- Install the product in a protected location where no one can step on, or trip over the power cord. Keep the device in a location where the power cord cannot be damaged.

OPERATION



WARNING

- Device AC Input Voltage: 5V, 250 mA
- Only use the provided power supply adapter for operating Surf™.
- Do not perform measurement at circuits directly connected to Mains (Live circuit).
- Place the instrument in a place where the chance of spilling liquids on the device is negligible.

CLEANING THE INSTRUMENT



ATTENTION

- Unplug this device from wall outlets before cleaning.
- Use a soft cloth dampened in a solution of mild detergent and water.
- Do not use chemicals or cleaners containing harsh products such as benzene, toluene, xylene, and acetone.

OPERATION ENVIRONMENT



ATTENTION

- Location: Indoor, no direct sunlight
- Relative Humidity: 30% to 80%
- Temperature: 15°C to 45°C

STORAGE ENVIRONMENT



ATTENTION

- Location: Indoor
- Relative Humidity: 5% to 90%
- Temperature: 0°C to 60°C

INTRODUCTION TO GIATEC Surf™

Giater Surf™ is an advanced laboratory test device for measuring the surface electrical resistivity of hardened concrete cylinders or cores using the Four-Electrode measuring technique. Surface electrical resistivity technique has been standardized by AASHTO T 358.

The device can be operated as a stand-alone unit for measuring electrical resistivity in concrete samples. Alternatively, it can be controlled using Data Monitor software (for PC). This software provides a user-friendly tool to setup and run different test programs. The software provides real-time data visualization (tabulated data and live chart), and provides a convenient way to save the test results and generate report files.

ELECTRICAL RESISTIVITY OF CONCRETE

Durability of concrete depends largely on the properties of its microstructure such as pore network size and interconnections. A finer pore network with fewer connectivity, leads to lower permeability. Porous microstructure with a larger degree of interconnections, on the other hand, generally results in higher permeability and reduced durability.

The principle idea behind the electrical resistivity techniques is to quantify the conductive properties of the microstructure of concrete. The electrical resistivity of concrete can be described as the ability of concrete to withstand the transfer of ions subject to an electrical field. In other words, resistivity is the inverse of conductivity, which can be attributed to the degree of ionic movement in the pores. In this context, resistivity measurement can be used to assess the size and extent of the interconnectivity of pores. Electrical resistivity measurement provides a non-destructive approach to testing concrete materials, making it suitable for various quality control projects, condition assessment purposes, and research programs. Electrical resistivity is an inherent characteristic of concrete, and is independent of the geometry of the concrete sample.

APPLICATIONS

Electrical resistivity of concrete is well correlated with certain performance characteristics of concrete such as the chloride diffusion coefficient, water absorption, and the corrosion rate of embedded steel.

Electrical resistivity can be used as a measure of concrete resistance to chloride penetration. Similar to the Rapid Chloride Permeability (RCP) test, electrical resistivity measurement can be used in evaluating the ionic mobility within the pore solution of concrete. The RCP test was originally developed to quantify the chloride penetrability based on the electric charge passing through concrete over a specific period of time. Experiments show that there is good correlation between the surface electrical resistivity and the Rapid Chloride Permeability (RCP).

The qualitative relation between rapid chloride penetrability, RCP (ASTM C1202) and the surface electrical resistivity of concrete is presented in Table 1.

Table 1: Relationship between surface resistivity and chloride penetrability*

Chloride Penetration	56-Day Rapid Chloride Penetrability Charge Passed as per ASTM C1202	28-Day Surface Resistivity**
	(Coulombs)	(kΩ.cm)
High	>4,000	<10
Moderate	2,000-4,000	10-15
Low	1,000-2,000	15-25
Very Low	100-1,000	25-200
Negligible	<100	>200

* Adapted from Kessler et al. 2005

** At 23 °C

Surf™ is a laboratory device for measuring the surface electrical resistivity of concrete samples or concrete cores. This technique can be utilized for various applications such as:

- Performance-based quality control of concrete
- Estimation of the chloride diffusion coefficient in concrete
- Service life design of concrete structures
- Estimation of the remaining life of concrete structures
- Crack detection in concrete elements under load
- Monitoring the setting time in fresh concrete

MEASUREMENT CONCEPT

Concrete is a porous composite material, and depending on the moisture content (i.e., degree of the saturation of the pores), it may exhibit conductive or insulated characteristics. For example, a concrete sample might exhibit very high electrical resistance when it is dry, but the same concrete can have much lower resistance in saturated condition. Moreover, concrete has capacitive properties, which means it can hold electrical charge.

In engineering terminology, the concept of ‘impedance’ should be used to account for the impeding effect of the electrostatic storage of charge in concrete in addition to the normal resistance of concrete. Impedance, \mathbf{Z} , is described as a complex quantity that has an imaginary component called reactance, \mathbf{X} , and a real component called resistance, \mathbf{R} . In other words, the vector summation of these two components would result in an impedance vector, \mathbf{Z} . Therefore, the electrical impedance \mathbf{Z} can be also represented by a magnitude (Z) and a phase angle (φ) (Fig.1). Both the magnitude and phase angle of such a vector could vary depending on the frequency of the applied current.

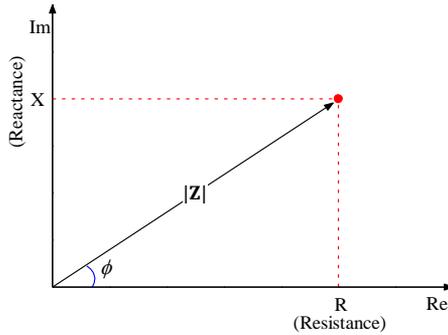


Figure 1: Impedance vector: Real and Imaginary components

Fig. 2 depicts the general concept behind the measurement of surface electrical resistivity using Giatec Surf™.

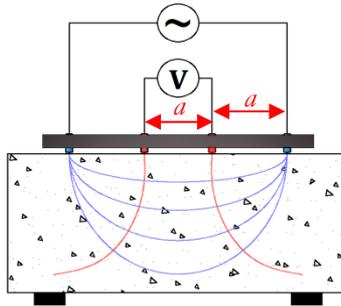


Figure 2: Schematic view of the test setup and the concept

One widely accepted setup is the Wenner array where the four electrodes are situated in a straight line and equally spaced; the two inner electrodes measure the electrical potential, V , created when the exterior electrodes insert an AC current, I , into the concrete. For a semi-infinite, homogeneous concrete, the surface electrical resistivity is calculated as:

$$\rho = 2\pi a \frac{V}{I}$$

where a is the distance between the electrodes (equally spaced).

DEVICE OVERVIEW

Giatic Surf™ has two main components: A measuring device (Fig. 3), and a sample holder. (Fig. 6). The measuring device can be used as a stand-alone equipment to perform the tests. It can also be connected to a personal computer (PC) using the USB connection port. The Data Monitor software, provided in the package, controls the device and can be used to record the test data. In this section, the key functions of these components are described.

Measuring Device

Surf™ measuring device can be used as a standalone data logger. The user can select the test method, and perform the test by using the control keys on the front panel of the device. The back panel provides connection terminals to the sample holder of the device.

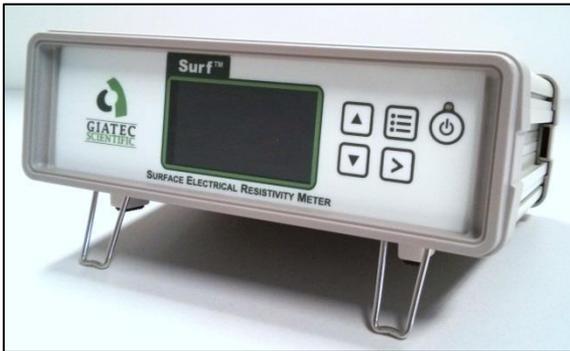


Figure 3: Surf™ Measuring Device

The front panel of the measuring device includes display, as well as, the control keypad. The sample holder electrodes are connected to the measuring device using the cables included in the package.

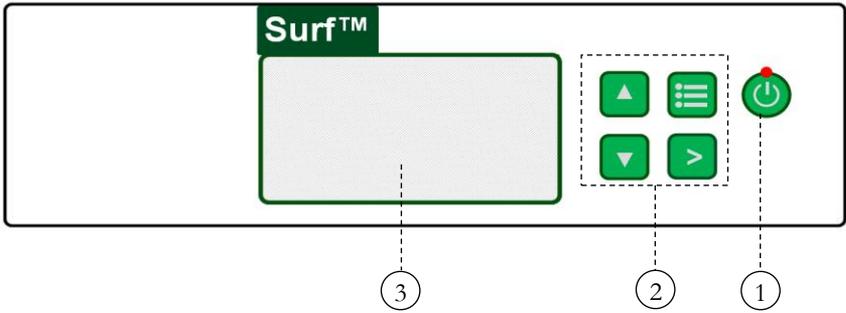


Figure 4: Front Panel

1. Main Power Key
2. Control Keypad
3. Display

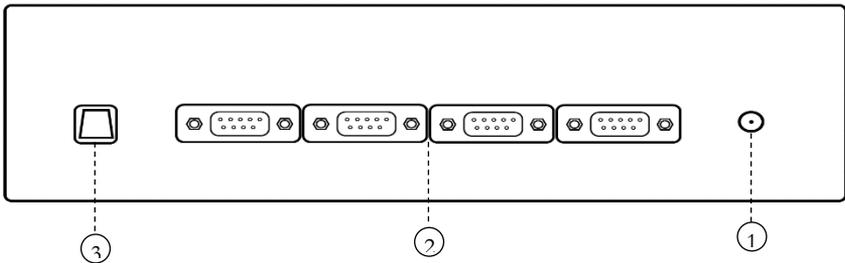


Figure 5: Back Panel

1. Power Inlet
2. Channels (1 to 4)
3. USB Communication Port

Sample Holder

Surf™ sample holder is designed to facilitate the eight time measurements of resistivity around the test sample as specified by AASHTO T 385 standard. It also reduces evaporation rate during the test. The sample holder has four sets of electrodes, placed at 90° array.

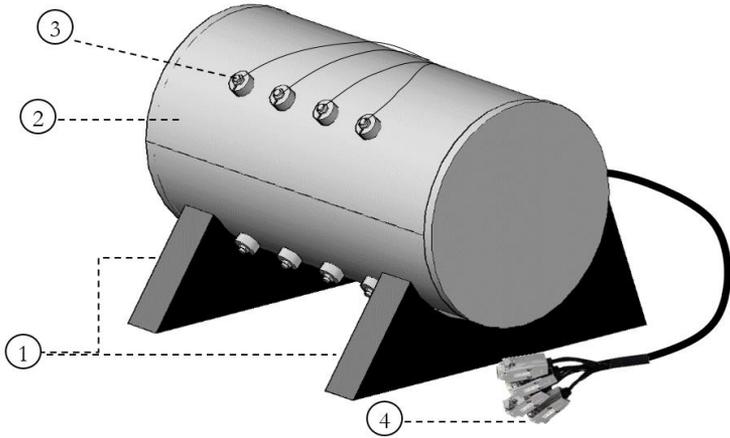


Figure 6: The Surf™ sample holder

1. Sample holder supports
2. Sample holder lid
3. Electrode(s)
4. Connection cables

Handheld Probe (optional)

Handheld probe is design to test concrete samples which do not fit in the sample holder. It can also be used to perform in-situ tests on concrete components.



Figure 7: The Surf™ Handheld probe

1. Handheld probe
2. Electrodes
3. Connection port

TEST SETUP

To start using Surf™, the user must set up the concrete sample in the sample holder. Surf™ sample holder provides a convenient approach to setting up concrete samples. The sample holder reduces the rate of evaporation, and eliminates the need for marking and rotating concrete samples.

Preparing the Sample Holder

Step 1: Connect the sample holder to the back panel of the measuring device. If you want to use the device with the Data Monitor program (PC), you need to use the USB cable provided in the package.

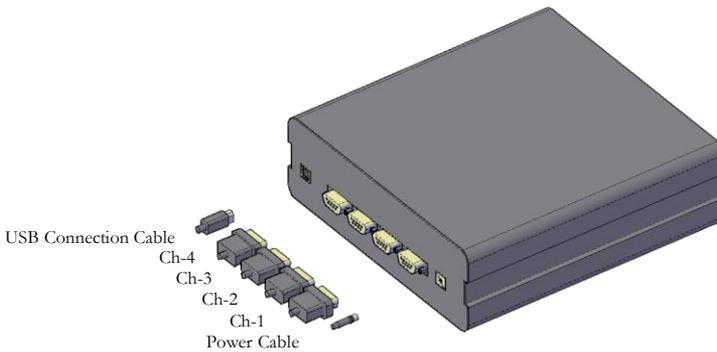


Figure 8: Connecting the sample holder and the USB cable to the measuring device

Step 2: Remove concrete sample from the curing room and place it in the sample holder. Align the top and bottom end of the concrete cylinder with the rubber supports inside the sample holder.

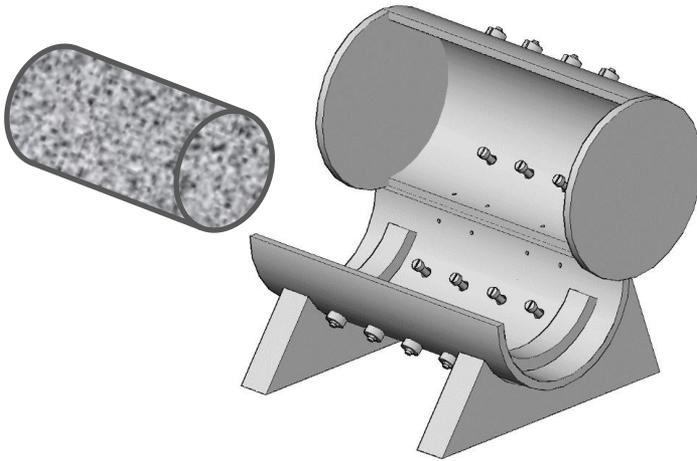


Figure 9: Place the concrete sample inside the sample holder

Preparing the Handheld Probe (Optional)

Step 1: Using the connection cable, connect the one end of the cable to the handheld probe.

Step 2: Follow the instructions in Fig. 8 to connect the other end of the cable to any of the channels on the back of the surf device.

Step 3: Wet the sponges and place them at the tip of the electrodes.

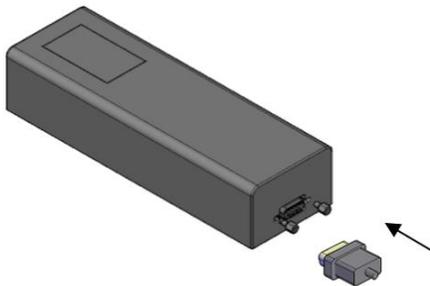


Figure 10: Connecting handheld probe to the surf measurement device

DEVICE OPERATION

Giatic Surf™ can either be used as a stand-alone unit, or it can be controlled using a computer. The stand-alone operation is a quick and simple way to start the test, while using the device in remote mode provides more testing options, data logging, and data visualization.



Before turning on the device, make sure that the sample holder is appropriately connected to the device.

STAND-ALONE OPERATION

The main power switch of Surf™ is located on the front panel of the device. Press and hold the power key  to turn on the device. The LED light on the power key, as well as, the device display will turn on, showing the test parameters.

Please note that if this is the first time you are using the device, the default test parameters will appear on the device display (ASTM Test Method). For future use, the test method selected in your previous tests will appear on the screen.



Figure 11: Test Parameters on the LCD display

Main Menu

The system setup can be changed by pressing the **Menu** key  from the front panel. The menu options will then appear on the LCD display. Using the **Up** and **Down**  **Down**  keys on the front panel, the user can access these options.



Figure 12: Main Menu

Test Method

The user can select the appropriate test method by selection one of the following available options: 1) AASHTO TP95, 2) ASTM and 3) Custom. Using the **Up** and **Down** keys on the front panel. User should select their preferred test method procedure.

Note: AASHTO TP95 is the previous standard name for the ASSTHO T358.



Figure 13: Test Method

AASHTO TP95: When you select to run the test according to the AASHTO T358 standard test procedure, the default settings of the device are set to meet the specifications and requirements of the standard. The signal frequency is set to 13 Hz and the nominal voltage is limited to 25 V in

accordance with the requirements of the standard. The electrode spacing on the sample holder is set to 38.1 mm as specified by AASHTO.

To start the test, press the Menu key  on the front panel to go to the **Test Parameters** page. Then press the Start key.

The measurements are performed in two rounds for each set of electrodes, making a total of 8 readings for each sample. The average electrical resistivity ($\bar{\rho}$) is calculated and displayed on the screen.

Ch	Rnd1	Rnd2	(kΩ.cm)
1:	24.9	24.8	$\bar{\rho}$: 25.3
2:	25.1	24.9	
3:	25.0	25.1	
4:	26.5	26.0	

> Start
 Menu

Figure 14: Test Method

ASTM: When you select to follow the proposed ASTM procedure, the default settings of the device are changed to values proposed by the work group. The signal frequency range (10Hz – 10kHz) meets the requirements of the proposed procedure. The spacing of the electrodes on the sample holder is set to 38mm (and 50mm), as specified by the ASTM. The user should select from the two different sample holder sizes provided in the **Sample Holder** menu by pressing **Up** and **Down** buttons (Fig 13). The sample size and the electrode spacing affect the geometry factor used in calculating the resistivity value.

Sample Holder	
• Type I : 100mm (4")	
Type II: 150mm (6")	

> Select
 Back

Figure 15: Sample Holder

To start the test, press the Menu key  on the front panel to go to the **Test Parameters** page. Then press the Start key. $\bar{\rho}$ represents the average resistivity and ρ represents the average resistivity modified by the shape factor.

Ch	Rnd1	Rnd2	(kΩ.cm)
1:	24.9	24.8	$\bar{\rho}$: 25.3
2:	25.1	24.9	
3:	25.0	25.1	ρ : 12.9
4:	26.5	26.0	

> Start
 Menu

Figure 16: Sample Holder

Custom: In the custom mode, the user has the option to change the frequency. The frequency can be selected in the range of 13 Hz to 100 Hz. In the custom mode, only the ‘resistance’ of the test sample will be displayed. The user needs to apply the appropriate geometry factors for calculating the ‘resistivity’ of concrete.

Test Frequency

13
Hz

> Select
 Back

Test Parameters

Method: Custom

Frequency: 30Hz

Unit: Ω

> Start
 Menu

Figure 17: Sample Holder

To start the test, press the Menu key  on the front panel to go to the **Test Parameters** page. Then press the Start key.

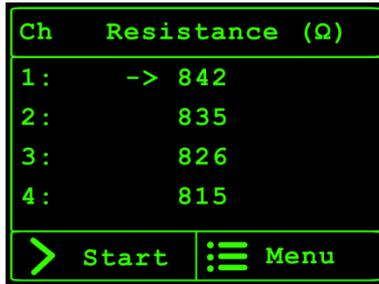


Figure 18: Sample Holder

The resistance values will be displayed on the screen.

Screen Contrast

The user can adjust the contrast of the LCD screen through **Screen Contrast** option available in the **Main Menu** (Fig. 17). You can adjust the contrast of the LCD using the **Up** and **Down** keys.



Figure 19: The Screen Contrast menu

DATA MONITOR SOFTWARE OPERATION

Click on the Surf™ Data Monitor icon on the desktop to launch the software. Alternatively, you can open the software from **Programs** in the Windows **Start Menu**.



You should first install Data Monitor Software on your computer. Please refer to the Installing Data Monitor Software section of the user manual.

The device should be connected to the PC with the USB cable, and turned on before launching the Data Monitor software.

The Surf™ Data Monitor home window will appear on the screen. If the device is not connected to the PC, or if the device has not been turned on, a message box will appear on the screen. The user is asked to turn on the device and check the connection cable. Click on the refresh button to connect to the device. Once it is connected, the menu strip box at the top of this form will be enabled.

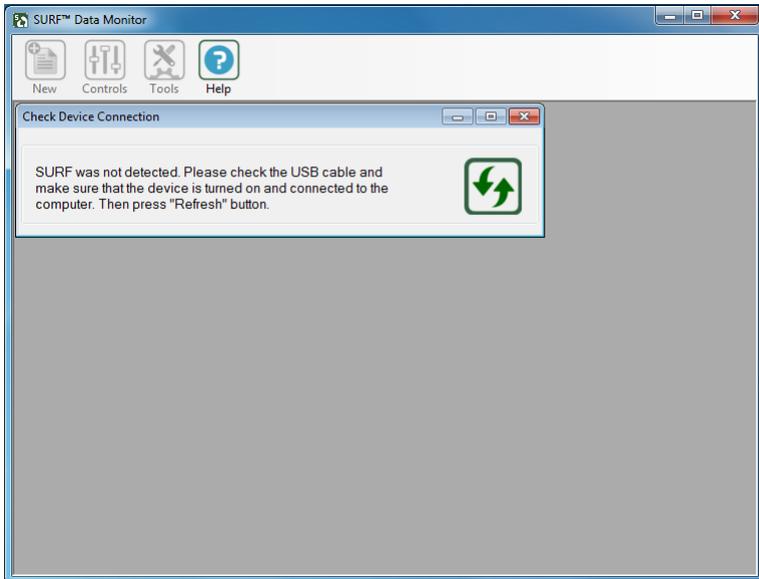


Figure 20: Check for Device Connection

In the main menu, Click on **New** menu item, and select **New Project** to start a new test session.

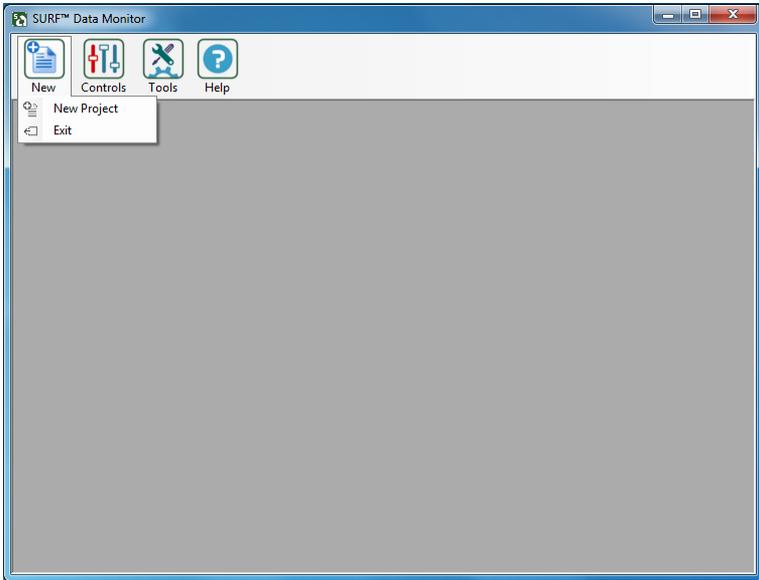


Figure 21: Start a New Test Session

In the new wizard form (Fig. 20), enter the project name, and project description such as; the source of cylinders, operator, and special notes.

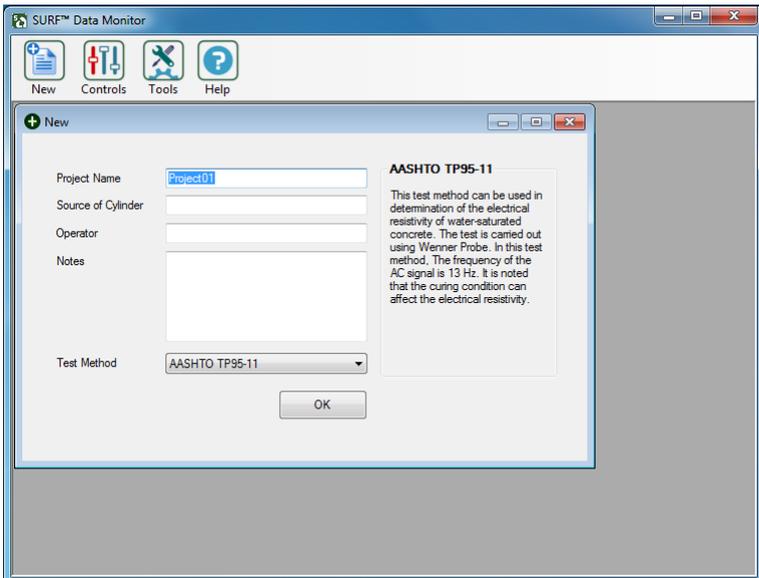


Figure 22: New Project Wizard

Select the test method. There are different test methods available in the Data Monitor program: AASHTO TP95, ASTM, and the Custom method.

Note: AASHTO TP95 is the previous standard name for the ASSTHO T358.

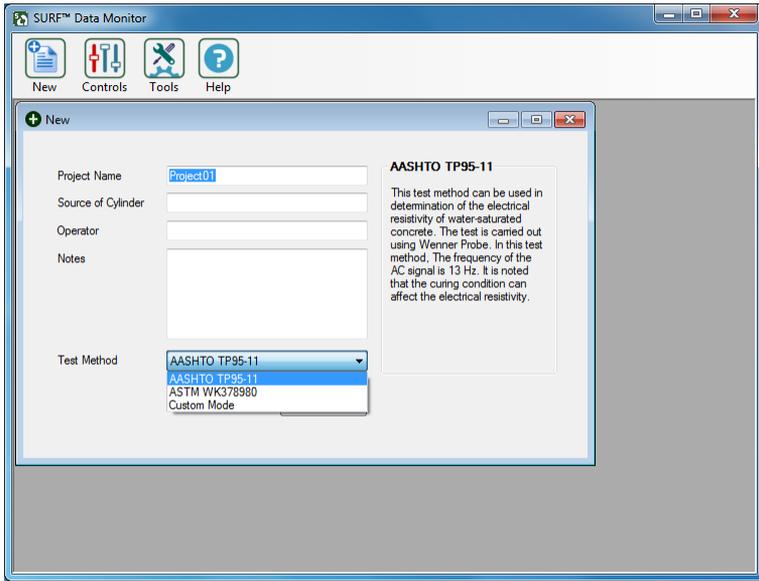


Figure 23: Select the test method

AASHTO TP95

The AASHTO TP95 form has two main parts (see Fig. 22). The top section of the form is dedicated to the test setting and control keys. The bottom section of the form is designed to display the real-time measurements, as well as the tabulated data (when the data logger is running).

Test Setting

The user can select the concrete sample size and the curing condition. The measurements will be modified according to the standard requirements.

The user can select the test sample (i.e., A, B, or C) and perform the test. The measurements will be performed in two rounds, and the data will be stored in the table. If you need to repeat the test, reselect the same sample name, and start the measurements again.

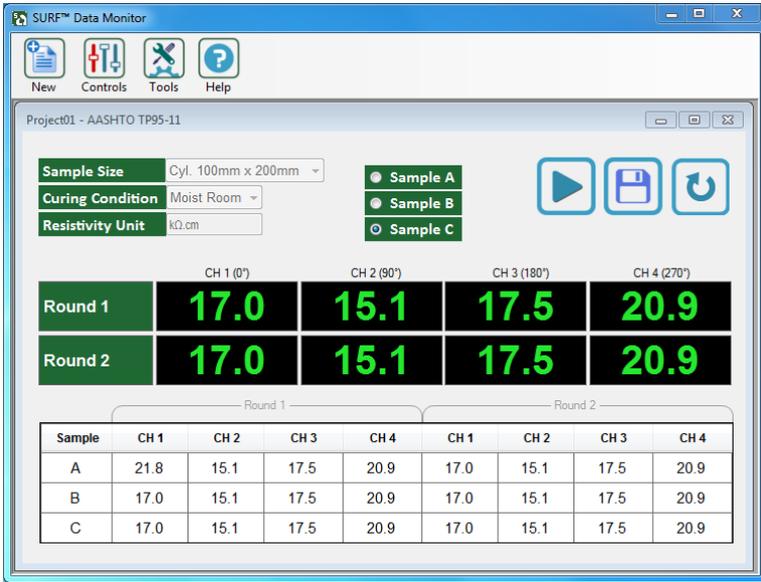


Figure 24: The AASHTO test mode screen

Control Keys

On the top right corner of the form, the user can find the control keys. The control keys can be used to start/stop a test (i.e. logging the measurements), display the test results and generate test reports.

Table 2. Summary of Control Keys

Icon Name	Default	Enabled	When
Start			Default
Save			When the test is successfully completed or after pressing Stop
Stop	-		After pressing Start
Reset		-	Reset the test parameters/Clears all recorded data

Alternatively, the user can use the control keys under the Controls menu item to proceed with the test.

ASTM

The ASTM form also has two main parts (see Fig. 23). The top section of the form is dedicated to the test setting and control keys. The bottom section of the form is designed to display the real-time measurements, as well as the tabulated data (when the data logger is running).

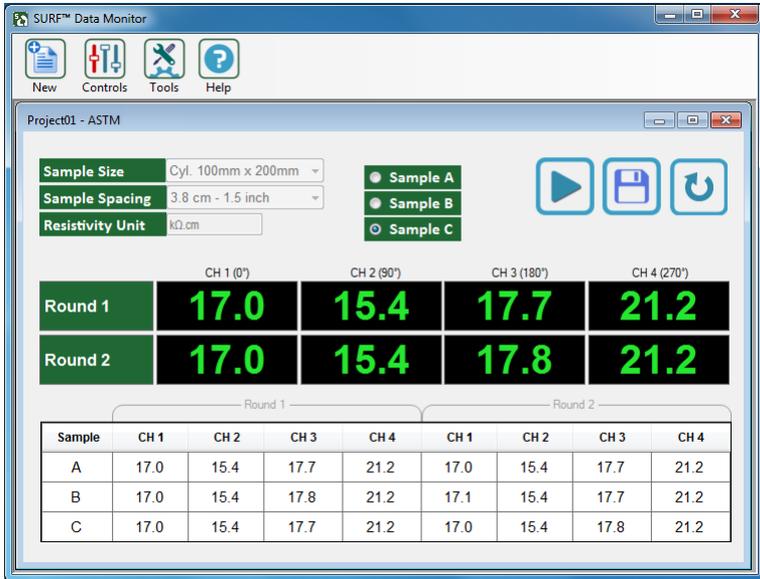


Figure 25: The ASTM test mode screen

Test Setting

The user can select the size of concrete samples, and the electrode spacing (38 mm, and 50mm). The user can also select the test sample (i.e., A, B, or C) and perform the test. The measurements will be performed in two rounds, and the data will be stored in the table. If you need to repeat the test, reselect the same sample name, and start the measurements again.

Custom Mode

The custom mode form (Fig. 24) is designed to control the test parameters such as signal frequency (13Hz – 100 Hz), and data log interval. The user can also select any custom combination of the test channels.

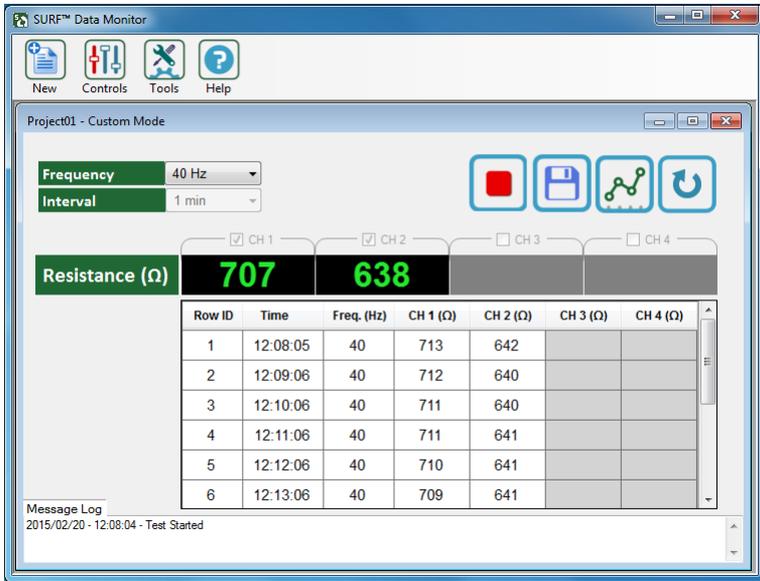


Figure 26: The Custom mode screen

The test can theoretically adapt any sample size, with different probe spacing; hence, electrical resistance (instead of resistivity) is recorded in this mode. The Custom mode benefits from real-time data plotting (chart) which makes data visualization more convenient.

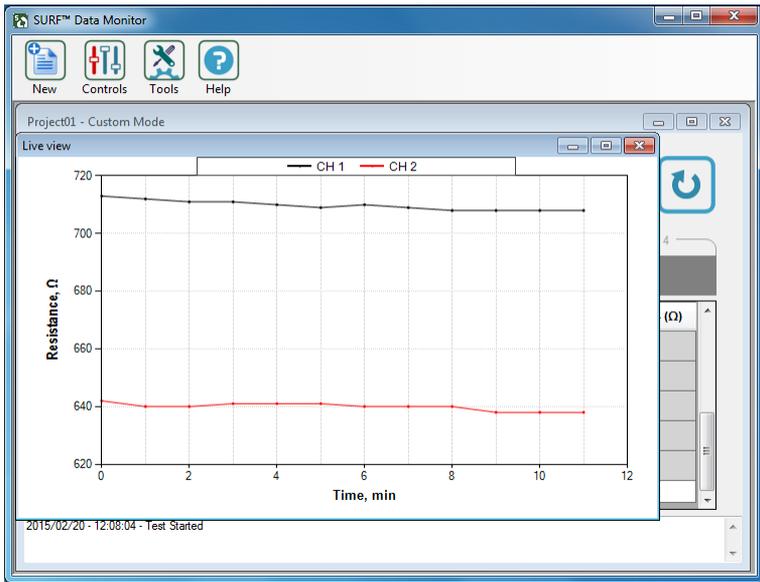


Figure 27: Real-time visualization of data in Custom mode

FIRMWARE UPGRADE

If there is any update for the firmware of the Giatec Surf™ device, the firmware upgrade files will be sent to the customers. These files will be used to upgrade the firmware of the device. You can access the firmware upgrade from the Tools menu item.

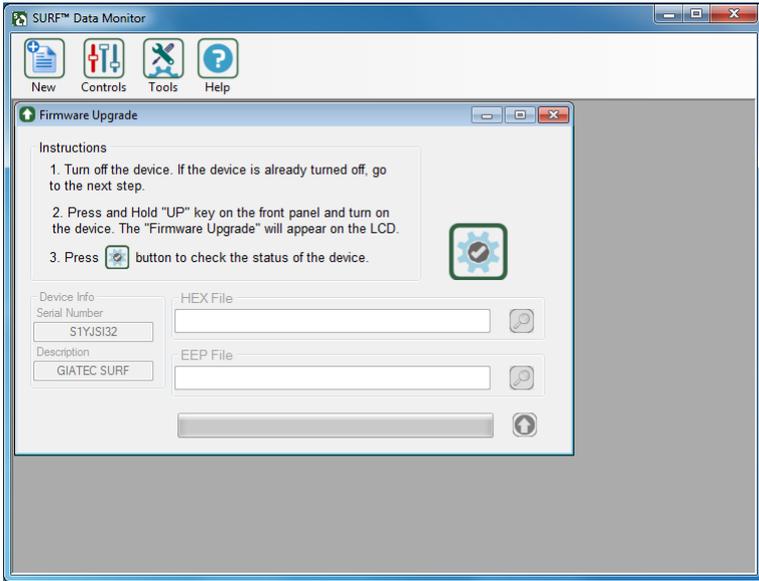


Figure 28: Firmware Upgrade

The user has to turn on the device in the Firmware upgrade mode. To do so, hold the Up key  and press the power switch on the front panel.

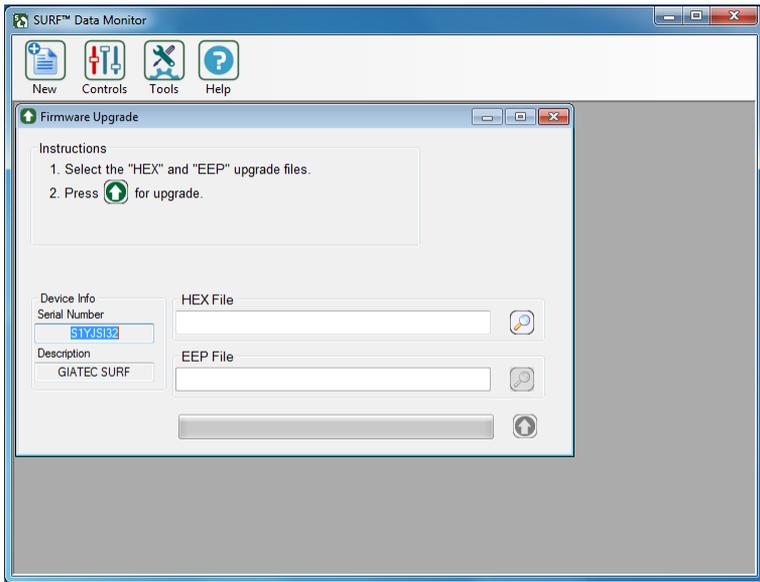


Figure 29: Firmware Upgrade

If the device is not in the correct mode, the user is asked to follow the instructions and try again. Click on the verify button to check the status of the device. If the device is appropriately set to **Firmware Upgrade** mode, the following screen will appear.

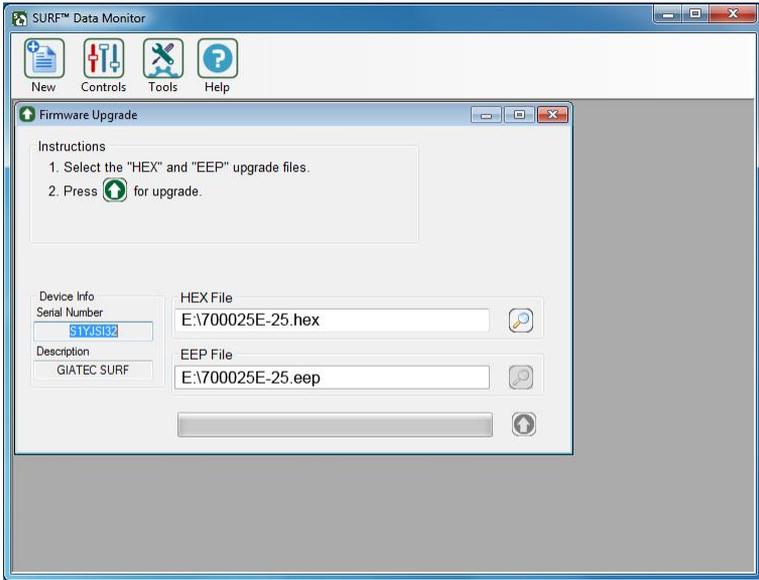


Figure 30: Select Hex and Eep Upgrade files

Select the appropriate .Hex and .Eep files provided by Giatec Scientific Inc. Click on the Upgrade button to start the upgrade. Upon completion, the following screen will appear and the device will return to the test mode:

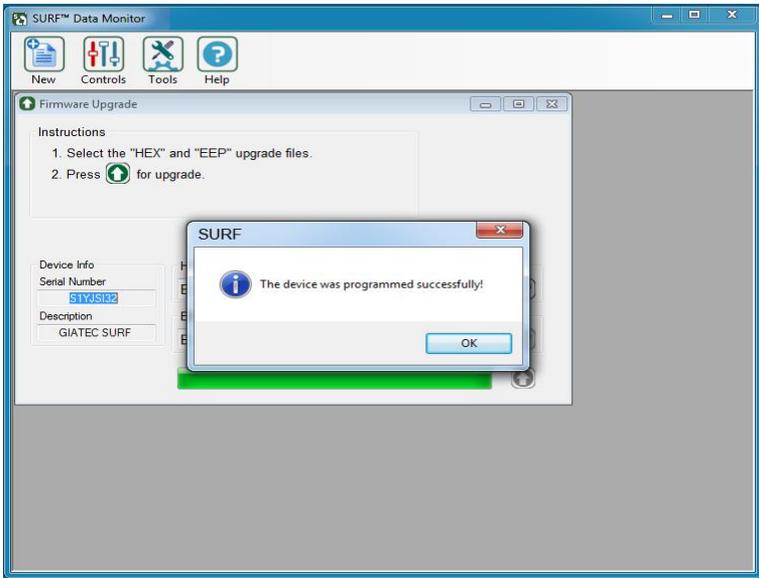


Figure 31: Firmware Upgrade

DEVICE VERIFICATION

Two different dongles are provided with Surf™ that can be used to ensure the appropriate functionality of the device. One dongle is designed to verify the accuracy of low range measurements (less than 100 kΩ.cm); while the other dongle is for the high range measurement (typically in the range of 100 kΩ.cm to 1,000 kΩ.cm).

Verify the device and measurement accuracy of the device using the high and low dongles. If the device does not pass the verification procedure, it should be returned to Giatec for hardware calibration. The hardware calibration is also advised to be conducted once per year to ensure the appropriate functionality and accuracy of the measurements.

The verification process can be performed using any of the following two procedures:

Using the Front Panel

Using the **Up** and **Down** keys on the front panel, select the **Device Verification** from the Main Menu.



Figure 32: Device verification

Follow the instruction on the display to verify the accuracy of each channel in low and high range of resistivity (see Fig 31).

Connect the low range dongle to Channel 1 and press **Next**. Continue the verification for all 4 channels. After all channels have been tested in the low range, remove the low range dongle, and replace it with the high range dongle. Follow the same procedures for channels 1 to 4.



Figure 33: Device verification procedure

After the verification process is finished, the results are displayed for each channel at low and high ranges.

Ch	Range->	Low	High
1:		Pass	Pass
2:		Pass	Pass
3:		Pass	Fail
4:		Pass	Pass

The screenshot shows a table with the following data: Channel 1: Pass (Low), Pass (High); Channel 2: Pass (Low), Pass (High); Channel 3: Pass (Low), Fail (High); Channel 4: Pass (Low), Pass (High). At the bottom, there is a right arrow button and a menu icon labeled "Back".

Figure 34: Device verification results



A Failure message (i.e., **Fail**) indicates that the device requires recalibration or service. Please contact technical support.

Using Data Monitor Software

The user can also verify the accuracy of the device using the Data Monitor software. Select the Device Verification from Tools menu, and follow the instruction to perform the verification process. The results of the verification will be displayed in front of the channel name (Fig. 33).

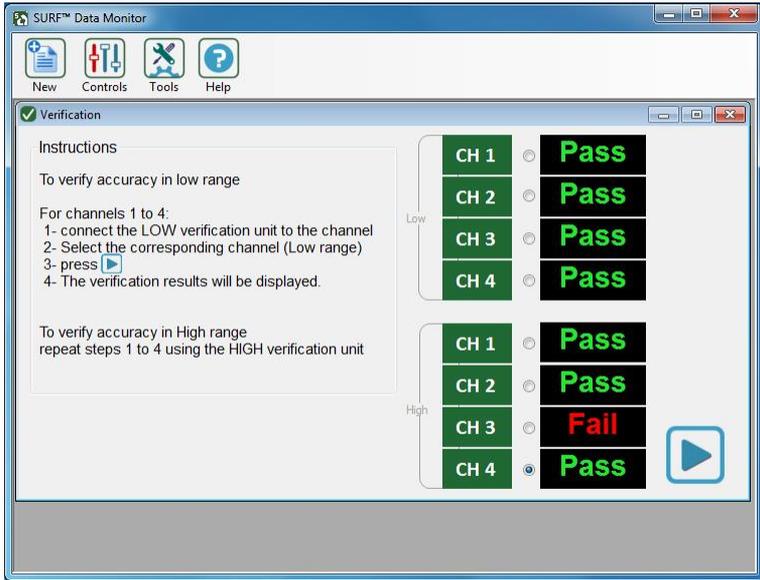


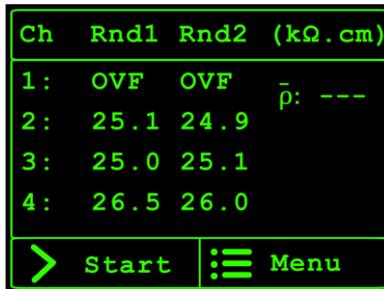
Figure 35: Device verification results

MESSAGES

The user may encounter error notifications while performing the test using the Surf™ device.

OVF

The OVF message (see Fig. 34) appears when the device is reading high electrical resistivity values. The high values can be attributed to poor connection between the electrodes and the surface of concrete, or to the loose connection between channels and the connecting cables. This error can also appear when the surface of concrete sample is too dry.



Ch	Rnd1	Rnd2	(kΩ.cm)
1:	OVF	OVF	$\bar{\rho}$: ---
2:	25.1	24.9	
3:	25.0	25.1	
4:	26.5	26.0	

> Start
☰ Menu

Figure 36: OVF error message during the test

If this notification appears on the screen, follow the procedure below to resolve the issue:

Apply generous amount of conductive gel to the tip of the electrodes in order to improve the electrical connectivity of the electrodes and the surface of concrete. Repeat the test to check if the issue is resolved.

If the error message still exists, turn off the device; check the connecting cables to the electrodes, and the connection plugs to the rear panel of the device and then turn on the device again to verify if the error has been resolved.

If the previous procedures did not solve the problem, try testing another concrete sample with a lower electrical resistivity. If the error message disappears, it indicates that the resistivity of the testing sample is higher than the device measurement range.

After trying all these trouble shooting steps, if the problem persists, please contact Giatec Scientific Inc. technical support for assistance.

CEE

The CEE message appears when the inner electrodes are not in contact with the surface of concrete, or there is a water flow between the two electrodes. If this error message appears, check if the electrodes in the corresponding channel are properly sitting on the concrete surface (full contact). Make sure that there is no excess water in between the electrodes on the surface of concrete.

Ch	Rnd1	Rnd2	(kΩ.cm)
1:	24.9	24.8	$\bar{\rho}$: ---
2:	CEE	CEE	
3:	25.0	25.1	
4:	26.5	26.0	

> Start ☰ Menu

Figure 37: OVF error message during the test

If the surface of the concrete is too dry, conductive gel can be applied on the tip of the electrodes to improve the electrical connectivity between the electrodes and the surface of concrete sample.

If these procedures did not resolve the issue, please contact the technical support of Giatec Scientific Inc. for assistance.



If there is any error in any of the channels, the device will not show any average value.

INSTALLING DATA MONITOR SOFTWARE

Surf™ Data Monitor software can be used to control the measuring device, perform the tests, and log the test data on your computer. In order to be able to use the Surf™ Data Monitor, you must install the software on your PC. You should also connect the measuring device to the PC using the USB cable provided.

DEVICE DRIVER

When you connect the Surf™ measuring device to your computer for the first time, Microsoft Windows will automatically install the required driver if your computer has access to internet. A pop-up message will appear on the lower right corner of the screen (Windows taskbar).

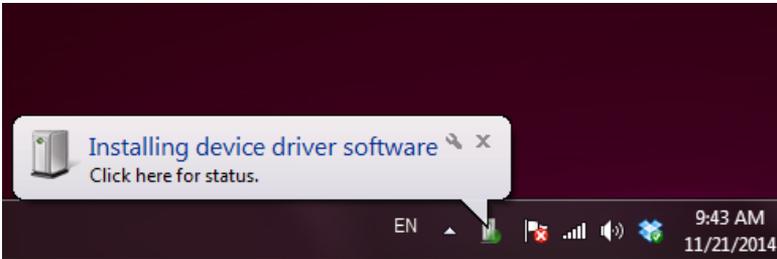


Figure 38: Installing the device driver

When the installation has successfully completed, a message will appear to confirm:

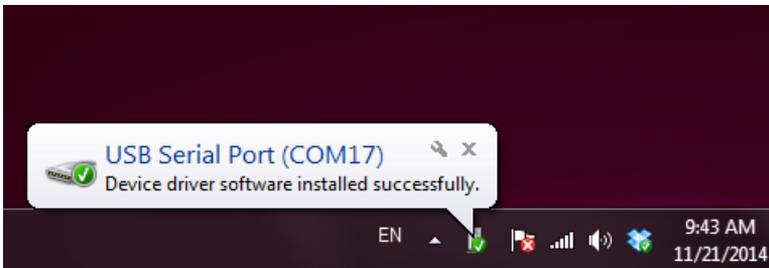


Figure 39: USB Serial Port successfully installed on the computer

If your computer is running an older version of Windows (i.e., XP or 2000), or if your computer does not have internet access, you have to install the driver manually. The driver file is located on the Surf™ Data Monitor CD. In order to install, or update a previously unsuccessful installation, go to the

Device Manager. In Windows, you can access **Device Manager** under **System** in the **Control Panel**.

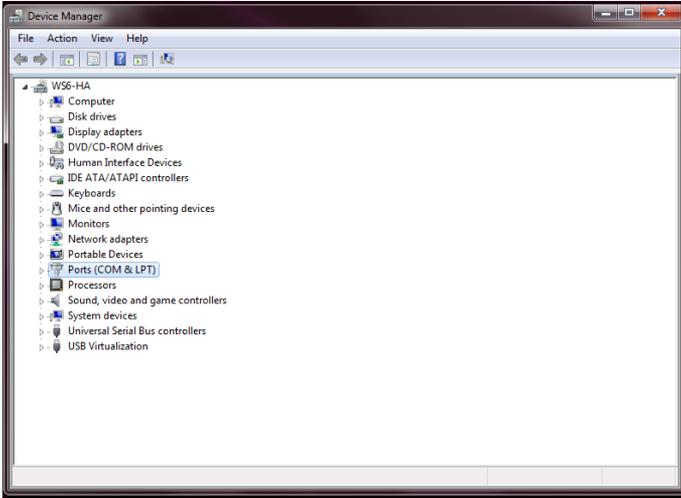


Figure 40: Device Manager window

Right click on the **USB Serial Port**, and select **Update Driver Software**.

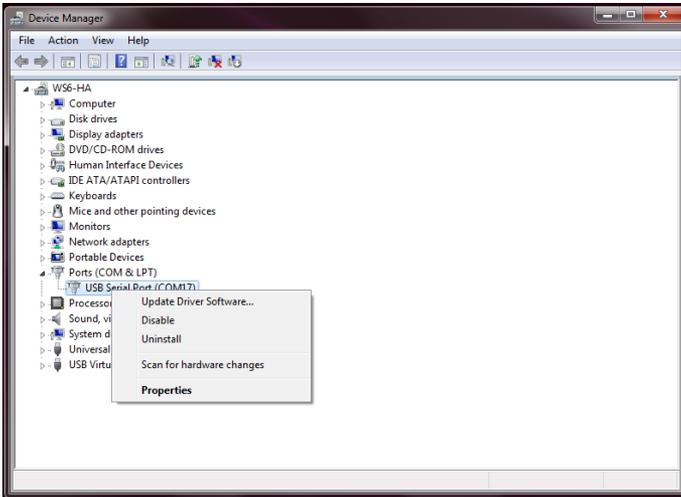


Figure 41: Update Driver Software

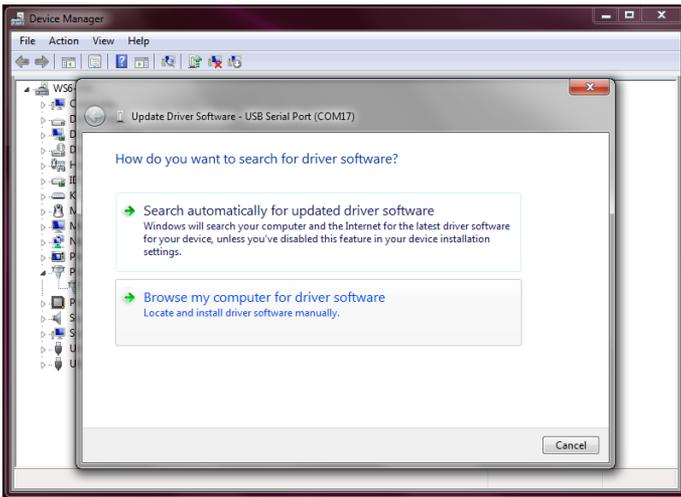


Figure 42: Select Browse my computer

Select the Driver provided on the software CD and click on Next to install the driver.

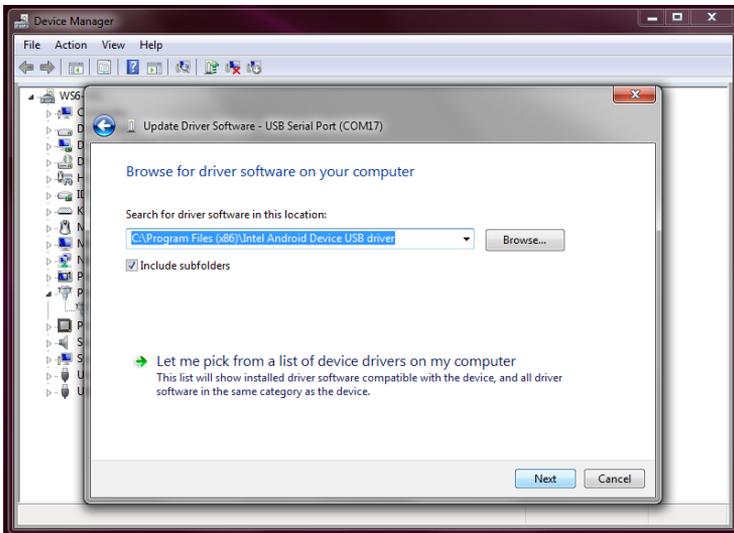


Figure 43: Select the driver file and browse for the file on the CD

INSTALLING DATA MONITOR SOFTWARE

Insert the Surf™ Data Monitor software CD in your computer's CD-ROM drive. The Setup file is an autorun application. If the autorun did not start automatically, start the setup by clicking on the setup file in the installation CD.

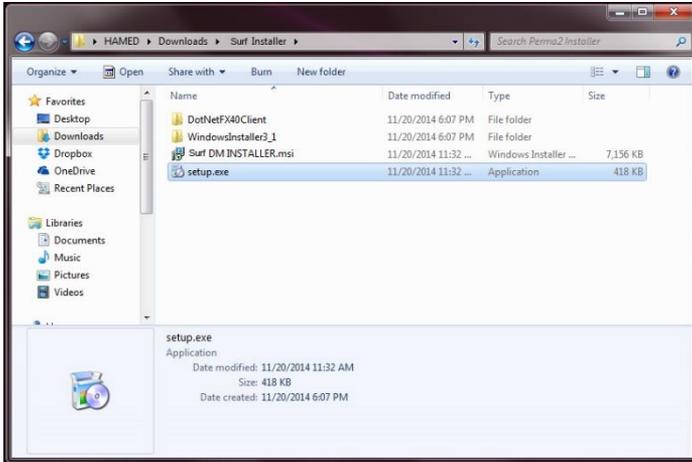


Figure 44: Click on Setup to start installing the Surf Data Monitor

The setup wizard will guide you through the rest of the installation process. Follow the instructions on your screen to install the software. This process may be different depending on the version of your operating system (Windows XP, 2000, 7 or 8). Following a successful installation, a Surf™ Data Monitor icon will be created on your desktop. Click on this icon to run the software.

MAINTENANCE

Repairs and servicing not covered in this user manual should only be performed by qualified personnel. Periodically wipe the case with a damp cloth. Do not use abrasives or solvents.

SERVICE

If Surf™ does not turn on; check the power supply cord to see if it is connected properly. If Surf™ still does not work properly; review this user manual to make sure you are operating it correctly.

If Surf™ malfunctions, first try to check its functionality using the verification dongles. If that fails, call Giatec Scientific technical support's number provided on the back of this manual. After consulting with our technical support department, if return is required, the instruction for packaging and returning the device will be provided.

REPLACEMENTS

For Surf™ service use only the replacement part specified. The USB communication cable is intended to be used only by Surf™ device and connecting it to other instruments might damage the cable. To order replacement parts, call Giatec Scientific Inc. using the number provided on the back of the user manual or on the back of the device.

For latest updates, please refer to the Giatec website.

Surf™ TECHNICAL SPECIFICATIONS

General

Type	Value
Measurement Channels	4
Measurement Display on LCD	Yes
LCD Display Area	65×33 mm
Dimensions of Device	200×160×70 mm
Software	Surf™ Data Monitor

Reading Range and Accuracy

Reading Range	Frequency range	Accuracy
0.1 – 100 KΩ.cm	13 – 100 Hz	± (0.1+1%)
100 – 1000 KΩ.cm	13 – 100 Hz	± (1+1%)

Measurement Time

Frequency	Single measurement time	Testing time (8 measurements)
13 – 100 Hz	1.5 seconds	<15 seconds

Operating Conditions

Type	Value
Operating temperature	15 ~ 45 °C
Operating humidity	30 ~ 80%
Storage temperature	0 ~ 60°C
Operating voltage/current	100-250 V, 50/60Hz

TERMS AND CONDITIONS OF SALE ("SALE AGREEMENT")

Please read this Sale Agreement before using the Giatec Scientific Inc. ("Giatec") product (the "Product"). By finalizing Your purchase order, You, the purchaser of the Product, and, if applicable, any end user ("End User") on whose behalf You are making this purchase for (You and the End User are hereafter collectively referred to as "Customer"; Customer and Giatec are hereafter together referred to as "Parties") agree to be bound by and accept the terms and conditions provided below. If You and/or the End User, as the case may be, disagree with these terms and conditions, do not finalize Your order, or if the order has been placed, return the Product immediately upon receipt without using it.

Payment; Purchase Price and Associated Charges. Payment must be made at the time of order unless otherwise agreed to by the Parties. Customer will pay the total purchase price plus shipping and handling, if any, as specified on the emailed invoice. Customer is also responsible for all taxes related to this purchase and to the import of the Product, if applicable, to include but not limited to all sales taxes, value-added taxes, import taxes/customs/duties and any other similar taxes imposed by any governmental entity.

Title; Risk of Loss. Title to the Product passes to Customer when the Product is paid for in full. However, Giatec bears all responsibility for loss of or damage to the Product during initial shipment after purchase and until Product is received by Customer, unless Customer selects its own mode of shipping. In repair cases, risk of loss is borne by Customer for return of the Product, but by Giatec following repair and upon return to Customer.

Limited Warranties. Giatec warrants the Product against defects in materials and workmanship under normal use (the "Warranty") for a period of 12 months (#) from the Delivery Date (the "Warranty Period"), on the condition that the Product has been completely paid for. Unless as otherwise mandated by local law, the Warranty Period does not restart if Customer

receives a replacement appliance and/or replacement Software. This Warranty does not apply: (a) to consumable parts, such as batteries, Plexiglas cell units and cables unless damage has occurred due to a defect in materials or workmanship; (b) to cosmetic damage, including but not limited to scratches, dents and broken plastic on ports; (c) to damage caused by accident, abuse, misuse, neglect or failure to properly maintain (to include but not limited to water damage and/or condensation or improper temperatures during storage), or improper installation; (d) to damage caused by electrical disturbances or acts of God, to include but not limited to civil disturbance, war, flood, fire, rodents or insects; (e) where manufacturer's serial numbers and security labels have been removed from the Product; and (f) to damage caused during shipment (due to Customer's improper packaging) from Customer to Giatec in the case of Product returns for repair.

Giatec disclaims all other warranties, express or implied, including without limitation implied warranties of merchantability, fitness for a particular purpose, or against hidden or latent defects. Giatec's responsibility for warranty claims is limited to repair or replacement. Giatec reserves the right to modify this Warranty at any time, at its sole discretion, and with notice to Customer.

Giatec does not warrant that the operation of the Product will be uninterrupted or error-free. Giatec is not responsible for damage arising from failure to follow instructions relating to the Product's use. This Warranty is voided immediately if repair, modification (to include upgrades, expansions or usage or addition of non-manufacturer parts or accessories), alteration or other service is attempted other than by Giatec. In this regard, the integrity of the appliance casing (aka the box) should not be violated for any reason, unless expressly authorized by Giatec in writing.

Technical Support. Giatec will provide technical support to Customer in accordance with the then-current support policy in effect and in accordance with the Warranty provided herein, unless full payment for the purchase of the Product is not received. Giatec will respond to Customer support problems by phone or by email inquiry. If a support problem cannot be

rectified via phone or email, Customer will be provided with return instructions.

Customer agrees and understands that it may be necessary for Giatec to collect, process and use Customer data to perform the support and repair obligations identified herein. This may include the necessity to transfer data to affiliate third parties that are contracted with Giatec to assist in meeting these obligations. In doing so, Giatec will (i) protect and keep confidential such information, (ii) not use such information for reasons other those discussed above, and (iii) not sell, distribute or pass on such information to any third party.

Repair. Customer should carefully inspect the Product upon its delivery. Customer should maintain all original packaging upon receiving the Product until the Product has been installed and is found to be in proper working order.

If the Product arrives to Customer (the date of arrival is referred to herein as the “Delivery Date”) damaged or defective at initial delivery, Customer must notify Giatec Technical Support within 30 days from the Delivery Date of the condition of the Product and obtain return instructions if needed. Product must then be returned immediately to Giatec for repair or replacement at Giatec’s discretion. Giatec will then arrange for delivery of temporary or Permanent replacement Product. Customer is responsible for properly packing the return shipment of the Product. Giatec will arrange for shipping and insurance.

If Customer fails to notify Giatec within 30 days of the Delivery Date, (i) the Refund Policy below will not apply, (ii) Customer will bear the cost of returning the Product for repair, and (iii) damaged Product will not be accepted.

If during the Warranty Period (as described herein) but following the initial 30 day period the Product is not working properly, Customer must contact Giatec Technical Support to confirm the problem and obtain return

instructions if needed. Customer will pay shipping and insurance costs when returning the Product for repair.

If the Product is returned for repair or replacement at any time following purchase by Customer and Giatec discovers that the Warranty is inapplicable due to the reasons provided above (see the “Limited Warranties” section hereof), the Product will not be repaired and will be returned to Customer at Customer’s expense, unless Customer authorizes and pays for repair. Whether Customer authorizes repair or not, Giatec reserves the right to charge a “No Fault Found” fee where the Product is found not to be defective due to any fault of Giatec.

Any Giatec reseller or distributor involved in the purchase of the Product is not authorized to make any modification, extension, or addition to the Limited Warranties provided by Giatec herein, although any such reseller or distributor may provide its own warranty in addition to the warranty coverage provided by Giatec.

Refund Policy and Product Return. On a case-by-case basis, Giatec reserves the right to authorize a full refund of any Product purchase made where a refund is requested within 30 days of the Delivery Date. In such cases where a refund is approved, End User will return the Product to Giatec if the End User made such order itself. If the Product was ordered by a distributor or reseller, such distributor or reseller will coordinate with Giatec for the return of the Product. In either case, Customer is responsible for shipping and insurance charges and any damage to the Product which takes place en route to Giatec. Giatec reserves the right to charge a nominal restock fee for any such returns.

Limitation of Liability. Giatec is not liable under any other agreement between End User and a Giatec reseller or distributor for the provision of support (to include but not limited to an extended warranty or any support, service or repair agreement).

If found to have breached this Sale Agreement, Giatec is not liable for any amount above the aggregate dollar amount paid by Customer for the

purchase of the Product under this Sale Agreement. Except as provided in the Warranty and to the extent permitted by law, Giatec is not responsible for indirect, special, incidental or consequential damages resulting from any breach of this Sale Agreement, including but not limited to loss of use; loss of revenue; loss of actual or anticipated profits (including loss of profits on contracts); loss of the use of money; loss of anticipated savings; loss of business; loss of opportunity; loss of goodwill; loss of reputation; loss of, damage to or corruption of data or software programs; or any indirect or consequential loss or damage howsoever caused including the replacement of equipment and property, any costs of recovering, programming, or reproducing any program or data stored or used with the Product and any failure to maintain the confidentiality of data stored on the product. The foregoing limitation shall not apply to death or personal injury claims, or any statutory liability for intentional and gross negligent acts and/or omissions.

Not For Resale. The Product may not be purchased for resale purposes by Customer unless Customer is a legal and authorized reseller of Giatec products.

High Risk Uses. Customer will not purchase the Product for usage in connection with any high risk or strict liability activity (including, without limitation, air travel, space travel, firefighting, police operations, vehicle operations, power plant operations or power generation applications, transport management systems, military operations, rescue operations, hospital and medical operations or the like) whereby such usage could cause or contribute to damage to property or injury to persons.

Software License. The Product is and contains, the intellectual property of Giatec, and is protected by Canadian, U.S. and international copyright, patent, trade secret laws and international treaties. This Agreement is not intended to grant, and shall in no way be construed to grant, to Customer any rights in the intellectual property of Giatec, including the intellectual property in the Products. The Customer shall obtain a non-exclusive license to use the software contained in the Product (the “Software”) only in accordance with the terms of the Software License Agreement, attached hereto as Exhibit A, and the Customer shall agree with its terms prior to installing the Software.

Customer acknowledges that the Software is the intellectual property of Giatec and respects Giatec's rights as the intellectual property rights holder. Customer may not and customer agrees not to, or to enable others to, copy, decompile, reverse engineer, disassemble, attempt to derive the source code of, decrypt, modify, or create derivative works of the Software or any part thereof (except as and only to the extent any foregoing restriction is prohibited by applicable law). Any attempt to do so is a violation of the rights of Giatec. By virtue of this Sale Agreement, Customer acquires only the right to use the Software as contained in the Product and does not acquire any rights of ownership. All rights, title and interest in the Software shall at times remain the property of Giatec.

Product Disposal/Recycling. Giatec is unable to dispose of or recycle the Product following use. End User may dispose of or recycle the Product or arrange for the same through the Giatec distributor or reseller which made the Product sale. Any disposal or recycling of the Product must be done in accordance with local government directives.

Export. Customer must comply with all export laws and restrictions and regulations of Canada. Furthermore, Customer will not export, or allow the export or re-export of the Product in violation of any such restrictions, laws or regulations. Additionally, Customer agrees to comply with the above and represents and warrants that it is not located in, under the control of, or a resident of any restricted country.

Entire Agreement. This Sale Agreement constitutes the entire understanding of the Parties as to the subject matter hereof and supersedes all prior offers, agreements, arrangements, negotiations and understanding, written or oral between the parties relating to that subject matter.

Severability; Assignment. If any provision of this Sale Agreement is held to be unenforceable for any reason, the legality or enforceability of the remaining terms shall not be affected or impaired. The failure of Giatec to act with respect to a breach of this Sale Agreement by Customer or others does not constitute a waiver and shall not limit Giatec's rights with respect to such breach or any subsequent breaches. Giatec expressly reserves the right

to assign this Sale Agreement and to delegate any of its obligations hereunder. Customer may not assign, delegate or otherwise transfer (whether by operation of law or otherwise) this Sale Agreement or any of Customer rights or obligations hereunder without the prior written consent of Giatec. Giatec may assign the provision of repair services to third parties.

Governing Law; Dispute Resolution. All disputes arising out of or in connection with this Sale Agreement shall be finally settled under the Rules of Arbitration of the International Chamber of Commerce by one or more arbitrators appointed in accordance with the said Rules. The place of arbitration shall be Ottawa, Ontario, Canada. The language of the arbitration shall be English. For the purposes of this arbitration, this Sale Agreement shall be governed by and construed under Ontario law as such law applies to agreements between Ontario residents entered into and to be performed within Ontario, Canada. The decision of the arbitrators shall be binding upon the parties hereto, and the expense of the arbitration (including without limitation the award of attorneys' fees to the prevailing party) shall be paid as the arbitrators determine. The decision of the arbitrators shall be executory, and judgment thereon may be entered by any court of competent jurisdiction.

Any non-English language translation of this Sale Agreement is done for local requirements and in the event of a dispute between the English and any non-English versions, the English version of this Sale Agreement shall govern.

EXHIBIT A: END USER SOFTWARE LICENSE

IMPORTANT

PLEASE READ THE TERMS AND CONDITIONS OF THIS SOFTWARE LICENSE AGREEMENT CAREFULLY BEFORE AGREEING TO INSTALL THE SOFTWARE. THIS IS A LEGAL AGREEMENT BETWEEN GIATEC AND THE END USER (“CUSTOMER”).

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BY CLICKING ON THE “I ACCEPT THE TERMS IN THE LICENSE AGREEMENT” RADIO BUTTON BELOW, YOU, ON BEHALF OF CUSTOMER, AGREE TO, AND ARE LEGALLY BOUND BY, THE TERMS AND CONDITIONS OF THIS AGREEMENT.

IF YOU DO NOT AGREE WITH, AND DO NOT WISH TO BE LEGALLY BOUND BY, THE TERMS AND CONDITIONS OF THIS AGREEMENT DO NOT CLICK ON THE “I ACCEPT THE TERMS IN THE LICENSE AGREEMENT” RADIO BUTTON AND THE INSTALLATION PROCESS WILL STOP.

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Limited Warranty

Giatec warrants the physical compact disk(s) on which the Software is distributed to be free from defects in materials and workmanship and that the Software will function in substantial accordance to the specifications for a period of one (1) year from the date of shipment of the Software to Customer. General and specific limitations on this warranty are described in Giatec's "Warranty" statement, and are incorporated by reference. THE WARRANTIES DESCRIBED HEREIN AND/OR ACCOMPANYING PRODUCTS ARE IN LIEU OF ALL OTHER WARRANTIES OR CONDITIONS AND, SAVE AS OTHERWISE PROVIDED HEREIN, GIATEC MAKES AND THERE ARE NO OTHER WARRANTIES OR CONDITIONS OR REPRESENTATIONS OF ANY KIND WHETHER EXPRESSED OR IMPLIED, AND GIATEC EXPRESSLY DISCLAIMS THE IMPLIED WARRANTIES OR CONDITIONS OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, AND THOSE ARISING BY STATUTE OR OTHERWISE IN LAW OR FROM A COURSE OF DEALING OR USAGE OF TRADE. GIATEC DOES NOT REPRESENT OR WARRANT THAT THE PRODUCTS WILL MEET ANY OR ALL OF ANY ORGANIZATION'S PARTICULAR REQUIREMENTS, THAT THE OPERATION OF THE PRODUCTS WILL BE ERROR FREE OR UNINTERRUPTED. Any written or oral information or advice given by Giatec distributors, agents or employees will in no way increase the scope of this warranty.

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This Agreement constitutes the entire agreement between you and Giatec and supersedes any prior agreement concerning the Software. Giatec is not bound by any provision of any purchase order or any other type of correspondence (written or verbal). Should any court of competent jurisdiction find any provision in this Agreement to be illegal, unenforceable, invalid, or to be overreaching, in whole or in part and for any reason, such illegal, unenforceable, invalid or overreaching provisions or part thereof shall be stricken from this Agreement, and such provision shall not affect the legality, enforceability, or validity of the remainder of this Agreement. This Agreement is governed by the laws of the Province of Ontario and any disputes or claims arising hereunder shall be under the exclusive jurisdiction of the courts situated in the City of Ottawa, Province of Ontario.

GIATEC SCIENTIFIC INC.
245 MENTEN PLACE, SUITE 300,
OTTAWA, ON, K2H 9E8, CANADA

PHONE: +1 (613) 240-7451
FAX: +1 (613) 280-1544
SUPPORT@GIATECSCIENTIFIC.COM
WWW.GIATEC.CA