

IFB: 122-16



MASSACHUSETTS
BAY
TRANSPORTATION
AUTHORITY

TECHNICAL SPECIFICATION EE&QA-868

REQUIREMENTS FOR THE REPAIR OF BUS ELECTRONIC MODULES

ISSUED: July 07, 2016

REVISIONS:

BUS OPERATIONS



**Equipment Engineering and Quality Assurance
Technical Specification**

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1.0 SCOPE

In order to reduce maintenance cost, the MBTA has developed a specification for repairing electronic modules used with the bus fleet. This specification establishes the general requirements for the repair of the following components:

MBTA Stock #	Part #	Description
025-94-132	G2A-DIO-888B	DINEX I/O Module
025-93-064	G2A-MBC-32	DINEX I/O Module
025-94-342	T2-32LED-R7-NE1	DINEX I/O Module
025-94-186	T2-ATS-01-R2	DINEX I/O Module
025-94-176	T2-DIO-240G-R7	DINEX I/O Module
025-09-178	T2-DIO-4OUT-K7	DINEX I/O Module
025-90-924	T2-DIO-888-K	DINEX I/O Module
025-69-126	T2-DIO-888-K7	DINEX I/O Module
025-69-128	T2-GW-J1939-R7	DINEX I/O Module
045-88-053	10045-w	Johnson Matthey CRT
025-85-236	12-00392-15	Module logic
026-94-043	916-PWRS-203	Power supply-Frt Sgn
025-85-234	12-00371-01	relay Board
025-95-040	29546210	Shift selector
025-69-129	360503-20C	Speakeasy Control
052-90-630	41-3590	TK Motor Controller
026-92-020	816-2979-1021J3	Twin Vision Controller Board
026-90-174	916-CONV-001	Twin Vision Convertor
026-92-243	906-1708-TV1	Twin Vision OCU
025-69-179	906-2111-000	Twin Vision OCU
025-95-012	70-100	Vanner Battery Equalizer
025-95-001	VMM1210	Vansco Mutiplex Module
025-90-923	VMM1210?	Vansco Mutiplex Module

Table 1



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2.0 GENERAL REQUIREMENTS

The specification that follows was developed to meet these needs, while taking advantage of the best service proven techniques and hardware available for yielding minimum maintenance and the highest reliability.

The contractor shall be solely responsible for the diagnostic and repair of the modules listed in Table 1.

All modules delivered under this specification shall be uniform and repaired per OEM standards and with the replacement of OEM parts. Any changes made to the parts in the modules shall be submitted to the Bus Engineering Superintendant for approval before any changes can be made. In all cases, the bidder must provide data sheets, drawings, technical description, performance history, service proven data, comparison test results and other data in sufficient detail to enable the Authority to determine if the proposed component is equal to the OEM component.

Repair of the listed parts from Section 1.0, Table 1 of Spec. EE&QA-868 shall be done on an as needed basis.

The successful bidder will be required to supply and affix permanent (per the MIL-STD-130 description below) labels to each component being repaired. The permanent label will be marked with an alphanumeric sequential serial number. Each component part number will require a dedicated serial number prefix followed by a sequential six digit number that will be used for tracking. Per MIL-STD-130, a permanent label is a label that is as permanent as the normal life expectancy of the item and be capable of withstanding the environmental tests and cleaning procedures specified for the item to which it is affixed.

3.0 DESCRIPTION OF WORK

All inspection, repair and testing will be performed per OEM specifications.

4.0 FIRST ARTICLE INSPECTION

A first article inspection shall be performed on the first two modules for each part listed in Section 1.0, Table 1 of Spec. EE&QA868. All repairs of each part shall be repaired in



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accordance with the approved first article. Each approved first article unit shall be retained at the MBTA as a "standard" till the last module is repaired.

5.0 WARRANTY AND GUARANTEES

- 5.1 All repaired parts shall be warranted and guaranteed from defects and related defects for one (1) year.

The warranty shall begin when the repaired parts are put into service at the MBTA. The warranty will NOT start at the time of delivery. It is anticipated that installation of all parts will be completed within one year of delivery.

- 5.2 The warranty shall cover labor costs incurred by the MBTA to remove and replace, or if applicable, package and ship the defective component(s). In addition, shipping costs to and from the manufacturer's facility shall be covered by the warranty. Packing materials shall be furnished and delivered to the MBTA by the Contractor.

- 5.3 A component that has been returned to the contractor for warranty repair shall be redelivered to the MBTA in no more than five (5) business days. It is critical that the contractor have the materials and manpower to complete warranty repairs or provide replacement parts in timely fashion. The contractor shall provide a written statement on compliance with this requirement and others that appear in this Section with their bid. The contractor may replace the MBTA Component with another from their stock provided it is repaired per EE&QA868.

- 5.4 Product Defects

A product defect is defined as cumulative failures of any kind in the same components or software in the same or similar application where such items covered by warranty and such failures occur in the warranty period in the specified proportion of the assemblies delivered. The proportion shall be twenty (20%) percent.

After identification of a product defect, the Authority and contractor shall mutually agree to and promptly undertake and complete a work program reasonably designed to prevent the occurrence of the same defect in all other systems. Where the specific defect can be solely attributed to particular



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identifiable parts) or software problem, the work program shall include redesign and/or replacement of the defectively designed and/or manufactured parts) and/or software in all systems. All costs shall be borne by the contractor.

The contractor shall meet on-site with the MBTA to provide the following information and mutually agree to a work program that does the following:

- description of the defect or failure or reason for the hardware or software modification
- description of the proposed hardware or software modification
- documentation or drawings of the proposed modification
- test procedures for the modification
- progress reports or deployment plan for the modification
- testing/demonstration period on one part for the modification

5.5 The bidder shall submit a written statement as to the terms of his warranty as part of his proposal and the extent of his compliance with the above requirements shall be taken into consideration by the Authority in evaluating the proposals received.

6.0 DRUG AND ALCOHOL FREE WORKPLACE REQUIREMENT

The Contractor, Contractor's employees, vendors, visitors, and volunteers are to be free of the effect of drugs, alcohol, controlled substances or other prohibitive substances when they are on MBTA property or performing MBTA business. In addition, all referenced parties are prohibited from using, possessing, selling or distributing any drugs, alcohol, controlled substances or other prohibited substances when they are on MBTA property or performing MBTA business. It is the responsibility of the Contractor to advise its employees of this requirement and to ensure that its employees meet this "fitness for duty" standard. Violators of this policy will not be allowed to remain on MBTA property or to continue conducting business for or with the MBTA. The Contractor will submit to the Authority within thirty (30) days of a Drug and Alcohol violation, a written report documenting the actions taken with regard to any of its employees who violate this policy. The Contractor will accept all liability arising from violation of this policy by his/her employees.



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7.0 AUTHORITY ACCESS TO WORK

The Authority shall have the right to witness and/or inspect any and all work, processes, methods, parts, materials, equipment, workmanship and tests that are furnished or used by the Contractor for this Contract and may reject, without cost or liability to the Authority, any of such that, in the opinion of the Authority, is defective or unsuitable for the use and purpose intended. The Contractor, at his own expense, shall reconstruct, replace or correct, as the case may be, any such defective or unsuitable items and work.

The presence of an Authority representative shall in no way alleviate the responsibility of the Contractor to perform such inspections, of both his product and processes and those of his subcontractors and vendors. In addition, such Authority inspection shall not relieve the Contractor of his responsibility to perform the overhaul and repair work in a quality manner in accordance with the requirements of the Specification.

Representatives of the Authority shall be permitted full and free access to the Contractor's facilities. The Contractor shall furnish such facilities and give such assistance for inspection as the Authority's representative may require, at no cost to the Authority.

8.0 BIDDER REQUIREMENTS

- 8.1 The bidders shall, at the request of the MBTA, present evidence that they are fully competent and have the necessary facilities, equipment, and financial resources to fulfill the repair(s) of this specification. The MBTA reserves the right to determine whether or not said facilities are sufficiently adequate to supply the MBTA's requirement of the repaired parts.
- 8.2 The bidder's products shall have at least two years' experience relating to the specific use outlined in this proposal with a transit company or transportation related industry. Evidence of this experience shall be provided to the MBTA upon request.
- 8.3 If the contractor or any subcontractor has been cited or under investigation for noncompliance with Federal, State or local laws, ordinances, rules or regulations, the contractor shall notify the MBTA in writing immediately and provide suitable explanatory information. Failure to make such disclosures at the time of bidding

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shall be cause for rejection of the bidder's proposal or immediate termination of the contract after award. Disclosures will be reviewed, evaluated and addressed by the MBTA with the contractor on a case-by-case basis.

- 8.4 The successful bidder shall assume responsibility for the remanufactured parts delivered whether provided by the bidder or by a subcontractor. The successful bidder shall be responsible for informing all subcontractors of specification requirements and ensuring compliance. Please note that this includes insurance requirements. An insurance binder for all subcontractors must be obtained by the successful bidder and provided to the. A written statement on fulfilling this requirement shall be supplied with their bid.
- 8.5 The contractor shall provide adequate supervision, oversight and training to maintain strict work discipline and perform all work in full compliance with all applicable laws and regulations, particularly those pertaining to occupational safety and health.
- 8.6 Before submitting a bid each prospective contractor shall (1) examine specification Documents thoroughly, (2) become familiar with conditions that may in any manner effect cost, progress or performance of the work specified, (3) familiarize themselves with the configuration of the MBTA's bus fleet modules, (4) be familiar with Federal, State and local laws, ordinances, rules and regulations that may affect the cost, progress or performance of the work specified and (5) study and correlate information thus determined with the Specified Documents. Therefore, submission of a bid shall indicate that the contractor is completely and thoroughly familiar with these.
- 8.7 Bidders are required to be either ISO 9001:2008 or ISO 9001:2015 certified. If the successful bidder is ISO 9001:2008 certified, they will be required to have an ISO 9001:2015 certificate prior to September 2018. The ISO certificate must be from an IAF accredited organization that meets CASCO standards. If a bidder uses a subcontractor, they subcontractor will also need to meet the same ISO requirements as the bidder. Letters of certification, and proof of IAF accreditation and CASCO conformity are required to be submitted as part of the bid package. If the successful bidder does not transition from ISO 9001:2008 to ISO 9001:2015 and supply the updated certificate to the MBTA prior to September 2018, the MBTA shall have the right to cancel the contract.

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9.0 DELIVERY

The contractor shall deliver remanufactured parts to:

Warranty Dept.
 MBTA Main Repair Facility
 Component Exchange
 Building # 1, Door # 12
 80 Broadway
 Everett, MA 02149

Deliveries shall be made Monday through Friday between the hours of 6:30 AM and 1:45 PM excluding holidays. The contractor shall prepare delivery tickets that indicate the types of remanufactured parts, serial numbers and quantities that are delivered. The contractor shall obtain the signature of MBTA Personnel making delivery of the parts on these delivery tickets. A copy of each delivery ticket shall be provided to the MBTA after they are signed.

The contractor shall be responsible for all freight charges for the pickup and delivery of repaired parts.

If at any time during the contract, the contractor fails to comply with the specified deliver requirements, the MBTA shall the right to cancel the contract.

The contractor shall submit an invoice having the cost for the number of parts delivered with each shipment. The MBTA shall pay for only those parts that have been delivered.



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10.0 APPROVALS

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Everett Main Repair Facility

Date: 7/7/16

Approved By: John Brundage
John Brundage- Project Manager
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8/9/16

Approved By: Michael Burrows
Michael Burrows – Supervisor
Everett Bus Main Repair Facility

Date: 7/7/16

Approved By: Paul Flynn
Paul Flynn – Superintendent
Everett Bus Main Repair Facility

Date: 7/7/16

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11.0 REVISION RECORD

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	Original release		