Keysight Technologies
Electronic Manufacturing Test Cooperative Support Service for Self-Maintainers

User's Guide

KEYSIGHT
TECHNOLOGIES

Contents

Introduction

The Keysight Technologies, Inc. Electronic Manufacturing Test (EMT) Cooperative Support Service for Self-Maintainers is subject to the Keysight Terms and Conditions for Automated Test Systems as well as the Keysight Terms and Conditions of Sale and Service (e.g., Exhibit S0015). By purchasing EMT Cooperative Support Service for Self-Maintainers, you, the Keysight customer, also referred to in this document as the self-maintainer, agree to comply with the terms and conditions set forth in these documents.

This user's guide has been prepared for customers who participate in EMT Cooperative Support Service for Self-Maintainers. It contains only a portion of the information set forth in the terms and conditions documents specified above. The guide focuses primarily on information necessary for participants to effectively utilize the service, and it describes how participants in the service interact with Keysight Technologies.

Prerequisites and Eligibility Requirements

The prerequisites and eligibility requirements for participation in EMT Cooperative Support Service for Self-Maintainers remain consistent over the life of the contract and are described briefly in the following sections. For complete details please refer to the appropriate sections of the Keysight Terms and Conditions of Sale and Service.
– Prequalification by a Keysight support representative
– Trained individuals
– Owned or leased equipment
– Uniform coverage
– Software support at current revision levels
– Spare parts kit
– Diagnostic support tools and documentation updates
– Access to electronic support for delivery of service notes
– Software operating system and application support
– Keysight technical assistance via phone or remote support via "Secure Remote Access"

Prequalification by a Keysight Support Representative

Participants must be prequalified by a Keysight support representative.

Trained individuals

The availability of at least two Keysight-trained customer service engineers per shift is required for participation in the self-maintenance service level. Keysight offers the required training in the form of formal lecture/lab courses, self-paced courses, and mentored self-paced courses as appropriate. (Consult your Keysight support representative for more details on the availability of any required training.) Maintenance training requirements are as follows:
– You must purchase the training courses that are required for its engineers and service engineers. You are responsible for the course fees, transportation, housing, and living expenses of the attendees. A minimum of two students must participate in the training program.
– Keysight will specify the format of the courses offered. The locations and times will be by mutual agreement between Keysight and you.
– Keysight will work with you to plan the training curriculum. Keysight will supply all applicable manuals and handbooks for classes and system maintenance use.
– Students should have a BSEE/BSET degree or equivalent and be fluent in English. You are responsible for ensuring that students attend all the applicable classes.
– For some classroom training courses, if the attendee's existing level of expertise is unclear, that individual will be required to complete a pretest to assist Keysight in determining the level of expertise and required training.
– Each individual who participates in the training program must be able to demonstrate an acceptable level of proficiency prior to the initiation of self-maintenance.

Owned or leased equipment

You must own or lease and have physical control of the selected systems that you plan to maintain at your facilities.

Uniform coverage

Coverage on all systems of the same type at the same location (department or site, whichever is relevant) must be covered by this self-maintenance level of service, or a higher level of service.

Prerequisites and Eligibility Requirements (continued)

Software support revision levels

All software and hardware products must be maintained at supported revision levels.

Spare parts kit

You must obtain a spare parts kit sufficient to address your unique situation and response time requirements. Stocking levels should take into consideration the number and types of systems, geography, other logistic considerations, and your uptime requirements. Spare parts are obtained separately from Keysight. Parts replenishment is described later in this user's guide.

You should develop a contingency plan in the event that the failed part is not part of the current spare parts kit. Keysight cannot guarantee that all system parts will be readily available. Please review this plan with your Keysight support representative to ensure that you are able to provide maximum system uptime and reliability.

Diagnostic support tools and documentation updates

You must purchase from Keysight all available diagnostic support tools and updates. You will provide a controller/workstation as necessary for specific systems.

Software operation and application support

You must purchase Keysight software operating and application support for each system that applies to this service contract.

Maintenance Training

Required training

During participation in the Keysight EMT Cooperative Support Service for Self-Maintainers, new engineers may need to be added to the program due to turnover, employees taking on new responsibilities, or growth of your organization. Also, additional system capabilities may be added. In these instances, you are required to have engineers trained and qualified for performing self-maintenance.

Ordering training

Consult your Keysight support representative for assistance in determining what training is needed for compliance with the Keysight EMT Cooperative Support Service for Self-Maintainers agreement.

The courses may be in one of three formats:
– Formal lecture/lab, taught by a Keysight instructor in a Keysight factory or at your site
– Self-paced, which can be completed at your site
– Mentored self-paced, which is completed with a Keysight instructor present at the Keysight factory, or your site

Students will receive the current manual set for the system course at time of training. The students then retain these materials for their use in the maintenance of equipment covered under Keysight EMT Cooperative Support Service for Self-Maintainers. Each student must maintain manuals to the correct revision level during the life of the contract.

Cancellation and refund policy

You must consult your Keysight support representative to cancel any scheduled training. Cancellation of a course less than 30 days prior to the start date of the course will result in a cancellation fee of 50 percent of the purchase price of the course (applicable to lecture/lab and mentored self-paced training only).

No refund will be given for enrollees who fail to attend or fail to satisfactorily complete courses.

Contractual Services

The fixed annual fee established for Keysight EMT Cooperative Support
Service for Self-Maintainers entitles you to specific support
deliverables as well as access to Keysight systems and personnel.
Some of the features and deliverables are highlighted below:
– On-site startup visit
– Service notes for your system
– License to use hardware diagnostics and updates
– Remote troubleshooting assistance
– One escalated, on-site repair visit
– Parts replenishment (optional)
– Annual management reviews

On-site startup visit

The service startup visit is an extension of the "prequalification" process for customers
who qualify and sign up for Keysight's EMT Cooperative Support Service for Self-
Maintainers. You should plan ahead for this visit with your Keysight support representa-
tive and be prepared to discuss the following items:
– The overall Keysight EMT Cooperative Support Service for Self- Maintainers and
  specific system contract coverage. You should feel comfortable that you are set up
  for success and have a clear understanding of your responsibilities and Keysight's
  role in the program.
– Connection, availability, and demonstration of the remote troubleshooting call-in
  processes.
– The process for obtaining part replenishment approval, ordering parts, and returning
  failed parts to Keysight if you choose a cooperative support agreement with parts
  replenishment.
– The process for obtaining parts and returning failed parts to Keysight if you choose
  a cooperative support agreement that excludes parts replenishment.

Also, be prepared to verify the following:
– All required training has been successfully completed.
– You have an adequate spare parts kit to meet your uptime requirements.
– Your system meets all current Keysight specifications.
– You have appropriate maintenance service and diagnostics documentation on hand.
– Keysight has adequate remote access to the system with appropriate security
  procedures.

Service notes

Keysight EMT Cooperative Support Service for Self-Maintainers entitles you to access
service notes for covered systems. Please contact your local Keysight support represen-
tative for up-to-date service notes.

Service Note Interpretive Guide

A Service Note Interpretive Guide for qualified self-maintainers is included in this user's
guide as Appendix A, beginning on Page 12. Its purpose is to help ensure the correct
interpretation of Keysight hardware service notes by qualified Keysight self-maintenance
customers.

You must be familiar with the contents of Appendix A and you are responsible for strictly
adhering to the guidelines and specifications of this interpretive guide.

Contractual Services (continued)

If you perform a service note repair as indicated in the service note interpretive guide, and the part is to be provided by Keysight at no charge as specified in the interpretive guide, you must call the Keysight Response Center for the part. This number is the same as you would call for parts replenishment. Provide all of the same information and specify that this part is for a service note repair. Have the service note information available when you make the call.

License to use diagnostics and updates

Licensed diagnostics are provided as tools for troubleshooting failures in covered systems to the field replaceable unit level (FRU).

Training and Documentation

Your service engineers receive Keysight-provided training in the use of diagnostics tools and are given a full set of service manuals. These manuals, as well as service notes, should be referenced in the diagnostics troubleshooting process. Success in using the diagnostic tools depends on proper utilization by your service engineers of the training they receive.

Remote troubleshooting assistance

As a self-maintainer you are responsible for maintaining your systems. You are required to diagnose problems by following the procedures learned in Keysight training and described in the training documentation, Keysight service manuals, diagnostics manuals, and service notes. You are required to provide the repair and support. Once you have diagnosed a problem, you are responsible for swapping out the part or FRU (as needed or appropriate) and returning the failed part to Keysight after return authorization has been received (per the parts replacement contract). You are responsible for tracking problems and resolutions for later reference and use in future troubleshooting and problem solving.

You are required to identify and have two Keysight trained authorized callers to act as focal points for your maintenance organization. These focal points are responsible for screening and diagnosing problems. In situations where these focal points require back-up assistance from the Keysight Response Center or when they need to receive authorization and order replenishment parts, only these authorized callers are eligible to call the Keysight Response Center. In some cases, "Secure Remote Access" may be engaged so Keysight technicians can diagnose the problem.

Requirements before Calling the Keysight Response Center

The Keysight Response Center provides access to system experts and engineers for diagnostic troubleshooting assistance after you have exhausted all of the avenues available to you for troubleshooting. Before calling on the Keysight Response Center for assistance in diagnostic troubleshooting, you must ensure that the qualified service engineer performing the diagnostics has completed all the following tasks:
  – Referred to all applicable service manuals
  – Referred to other training material received in the Keysight training course
  – Referred to service notes
  – Referred to your own internal failure/resolution tracking system
  – Performed troubleshooting using all of the above resources

Only when all of these steps have been taken without success should an authorized caller call the Keysight Response Center for technical assistance. Upon receiving a call back from the expert, plan to provide complete details of the failure, including the symptom of the problem and what actions have been taken to solve the problem.

Contractual Services (continued)

Placing the call

When placing a call to the Keysight Response Center, state that you are a Keysight EMT Cooperative Support Service for Self-Maintainers customer. State the system handle or serial number so the Keysight technician can properly process the call. The Keysight Response Center will provide you with a reference number and an expert will return your call at the system-designated phone number as soon as possible. Keysight's goal is to return your call within 2 hours. Should you fail to receive a call back within 2 hours, place another call to the Keysight Response Center and state the situation referring to the reference number you have been given.

Remote system access

If the system expert deems it necessary to access the system remotely, he or she will inform you of that need. You will then enable access to the system and monitor the connection. The expert will work with you to complete the diagnosis of the system. When the diagnostics have been completed, you will disconnect the system access.

Keysight response center hours/telephone number

Call the Keysight Response Center at the number given to you by your Keysight support representative.

Keysight response center troubleshooting activities

Upon receiving your call, the Keysight Response Center system expert will assist with the following actions:
- Interpreting a diagnostic or assisting in determining if a part is necessary to solve the problem
- Isolating the appropriate failed FRU (possibly through remote system access)
- Confirmation of a failed FRU
- Authorize part replacement, if applicable
- Dispatch appropriate Keysight resources to your site, as needed

Parts replenishment (optional)

For part replacement authorization and replenishment, your authorized caller should contact the Keysight Response Center. Replenishment parts are defined as parts used to replenish your spare parts kit(s) when you have used a stocked part in a given repair situation, or if a repair situation requires a part not available in your spare parts kit(s).

To replenish your spare parts kit(s) or to order a needed part not in your spare parts kit(s), your authorized caller should call the Keysight Response Center. (If you do not have the parts replacement contract option, contact the Keysight Support Materials Organization at the phone number provided by your Keysight support representative.)

Delivery

Replenishment parts are shipped with an expected delivery within 3 to 5 business days (within the U.S.) after receipt of the order (on a best-efforts basis). Expedited shipments may be available for an additional charge.

Contractual Services (continued)

Return the replaced part

You are responsible for returning defective parts to Keysight. After you have made your parts request to the Keysight Response Center and have received the part(s), please to do the following:

Package the failed part in the box in which the replacement part was shipped and label the box with the return address Keysight provided during the authorization process. You must provide for pickup and delivery to Keysight by an approved carrier within 2 business days.

Annual management review

Your Keysight support representative will be aware of your interactions with Keysight throughout the year. Each year, that representative will meet with you at your site or by telephone to review self-maintenance activities over the course of the past 12 months. This review should take approximately 2 to 4 hours.

During this review, your Keysight support representative will pay particular attention to downtime, parts usage and returns, communications with the Keysight Response Center, and any program or process suggestions you might have. You will also have the opportunity to discuss additional needs such as training for new service engineers, or additional parts stocking requirements for systems that need to be added to your Keysight EMT Cooperative Support Service for Self-Maintainers agreement.

Resources

In addition to this user's guide, you must read and be familiar with Attachment A, the Keysight Terms and Conditions of Sale and Service (e.g., S0015).

Please fill in the information below and keep it available for future reference. This will help your system engineer or technician when a call is made to the Keysight Response Center.

Response Center phone number: _____

System handle: _____

System callback phone number:_____

System remote access phone number: _____

Dedicated Engineer name: _____

Phone number: _____

Dedicated Engineer name: _____

Phone number: _____

System type:

System model number: _____

Subsystem type: _____

Serial number: _____

Note: Only your engineers or technicians who have been trained by Keysight are authorized to contact the Keysight Response Center.

Appendix A:
Service Note Interpretive Guide

Introduction

Ongoing product modifications may include hardware, firmware, or general information. Some of these may be significant enough to be documented in a service note and communicated to the Keysight support organization as well as qualified self-maintenance customers. This guide is provided to help ensure the correct interpretation of Keysight hardware service notes by qualified Keysight self-maintenance customers.

Under the EMT Cooperative Support Service for Self-Maintainers, Keysight expects you to perform the labor component of service note repairs. Parts specified for certain service note repairs are available to you at no charge, with the only exception being the "Modification Available" service note classification. You may purchase parts for this type of modification from Keysight. Please note that as a self-maintainer you will not be reimbursed for labor.

You must be familiar with the contents of this appendix and you are responsible for strictly adhering to the guidelines and specifications of this interpretive guide.

Service note administrative information

Each service note contains administrative information that provides details regarding when and where to perform a modification and, if applicable, how long a modification will be available at no charge. Not all information contained in the administrative information section is pertinent to self-maintainers. However, the primary information contained in the administrative information section is defined in the following sections of this appendix to help you interpret service notes.

Service note classifications

There are five classes of service notes used to identify modifications, each of which is determined by the scope of the modification. Each service note class is described in the following paragraphs.

Priority safety (PS)

This class of service note denotes a serious operator hazard concerned with the normal operation of the product. These service notes require immediate repair action and involve a special effort to contact all customers who own the product. Keysight prefers that priority safety repairs be completed by Keysight personnel either on site or at an authorized Keysight repair center, but as a self-maintainer you may also choose to perform this class of repairs.

Safety (SA)

This class of service note denotes a minor or marginal safety hazard. It can also apply when noncompliance to a safety-related standard, license, or testing agency evaluation has been discovered. Safety service notes are implemented during the normal course of providing support.

Modification recommended (MR)

These service notes are developed to correct manufacturing or design problems that affect product performance or reliability. This includes modifications that correct a product's performance to meet its published specifications.

Appendix A:
Service Note Interpretive Guide (continued)

Modification available (MA)

These service notes communicate information about product enhancements. The enhancements typically improve a product's performance, serviceability, reliability, or operation.

Information only (IO)

This service note communicates information about the product (e.g., manual changes, recommended replacement parts, and parts that are no longer available and have been replaced by a new Keysight part number). In some cases, modifications are necessary when a new replacement component is not an exact fit.

Action category

Keysight follows these categories strictly, and self-maintainers must do so as well. Improper repair actions regarding these categories could increase parts cost associated with the program, potentially driving up the price of the program. Unusually high parts usage will be reviewed during Keysight's ongoing account review process. Keysight may terminate Keysight EMT Cooperative Support Service for Self- Maintainers who fail to comply with the Keysight hardware service note action category repair specifications. The three action categories are described in the following sections.

Immediately

Typically, this category is used for priority safety service notes and occasionally for modification recommended notes. This type of repair should be performed as soon as possible. The no-charge period is a minimum of 1 year from the date that is printed on the service note, which is called the publication date.

On specified failure

This category of service note indicates a potential failure situation. Parts are made available to you when the specified failure occurs. Self-maintainers must not perform the repair prior to the occurrence of the specified failure. The no-charge period is a minimum of 2 years from the service note publication date.

Agreeable time

This category of service note is used for modifications that should be made to affected units at your convenience. The no charge period is a minimum of 1 year from the service note publication date.

Location category

As a self-maintainer, you will typically perform service note repairs at your own site. It is important to note that the location category is applicable only if you choose to have Keysight perform the repair. The location category defines where Keysight will perform the repair.

On-site

The modification is performed by Keysight-qualified support personnel at your site.

Appendix A:
Service Note Interpretive Guide (continued)

Service center

You are responsible for returning the product to the nearest Keysight Customer Service Center. The modification is performed by Keysight qualified support personnel.

Customer installable

Modifications may be performed by you. Parts and modification instructions may be provided at no charge, depending on the service note classification. These repairs are customer-installable whether or not you are a self-maintainer.

Availability (PS, SA, MR only)

This is the defined period of time that all resources (parts, documentation, and expertise) will be available for the modification. This is not the no-charge period. Note that the modification may be incorporated into updated versions of the product.

Labor standards (PS, SA, MR only)

This is the expected amount of time it will take to complete the repair.

Performance enhancement (MA only)

The modification will enhance the performance of the product over and above what it was originally designed to do. You may purchase this modification.

Serviceability/reliability enhancement (MA only)

The modification improves reliability or provides for more efficient servicing of the product. You may purchase this modification.

Service inventory/used parts

This is self-explanatory.

Responsible until

This is the last date that Keysight will provide the modification to you at no charge. This is called the no-charge period.

Summary of Service Note Payment Conditions

| Service Note Type | Location Category | | | No-Charge Period |
	On Site	Service Center	Customer Installable	
Priority Safety	1	2	NA	Indefinitely
Safety	1	2	3	Indefinitely
Modification Recommended	1	2	3	4
Modification Available (Reliability)	5	5	5	NA-Reliability
Modification Available (Performance)	5	5	5	NA-Performance

If the you perform the repair (which is the typical scenario), parts are provided by Keysight at no charge, but you will not be reimbursed for labor. The only exception is the "Modification Available" classification, in which you must purchase the modification. If authorized for "On Specified Failure," the no-charge period is a minimum of 2 years; all others are a minimum of 1 year. If Keysight performs the repair, the number in the table above should be interpreted as follows:
1. Service will be performed on-site at no charge to you.
2. Parts and labor are at no charge to you when the you return the unit to a Keysight Customer Service Center for repair. If you request on-site service, the service will be performed at no charge, except for travel.
3. The modification can normally be completed by you. If you request Keysight to perform the service, the service will be performed at no charge at Keysight's convenience.
4. If authorized for "On Specified Failure," the no-charge period is a minimum of 2 years; all others are a minimum of 1 year.
5. You may purchase the modification.

For more information on Keysight Technologies' products, applications or services, please contact your local Keysight office. The complete list is available at: www.keysight.com/find/contactus

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