

Firemon Alarm Signalling Equipment (ASE) Installation Checklist

Technical Instruction

TI-0157

Version 20

Effective 27 November 2024

Change Summary

Version	Date	Change description
20	27 November 2024	Update checklists and procedures Include Alteration of Service checklist Include additional checklists for RM3118 ASEs Update document template
19	11 December 2023	Restore missing section 7
18	18 November 2023	Clear comments
17	17 November 2023	Romteck RM3119 release

This document was created using Technical Instruction Template C-TEMP0168 Version 9.

Table of Contents

1	Purpose	4
2	Background	4
3	Scope	4
4	Responsibility	5
5	Legal Obligations	8
5.1 Fire Safety Pr	Managing an Isolated Alarm System, Partial Isolation or Temporary Disconnection: Alternat	ive 8
5.2	Can an ASE be (Completely or Partially) Temporarily Disconnected?	8
5.3	Can an ASE be Permanently Disconnected?	9
6	How to Become an Airservices Certified Maintainer or ASE Key Holder	9
7	Hardware Configuration	10
7.1	RM3119 Hardware Configuration	10
7.2	Antennas	10
7.3	Touch Keys	14
8	Acceptance Criteria	15
9	ASE Interfacing	15
9.1	ASE to FDCIE Interfacing	15
9.2	ASE to Communications Network Interfacing	18
10	Antenna Installation	18
11	New RM3119 Dual SIM ASE Installation	19
11.1	ASE Configuration and Testing	20
11.2	RM3119 ASE Installation Checklist	31
12	Alteration of Service (RM3119)	37
13	Alteration of Service (RM3118)	42
14	Disconnecting and Reconnecting of an ASE (RM3119)	46
15	Disconnecting and Reconnecting of an ASE (RM3118)	49
16	Replacement ASE	52
17	Replacement SIM	52
18	Misuse of Airservices SIMs	52
19	ASE Decommissioning	53
20	Definitions	54
21	References	55
Appendix A	How to Backup or Restore RM3119 Dual SIM ASE Configuration	56
A.1	ASE Config Software	56
A.1 Appendix B	ASE Config Software	56 61
A.1 Appendix B Appendix C	ASE Config Software ARFFS Contact details Notification Form 204 Explanations & ASE Status Screen	56 61 62

1 Purpose

This document defines the checks to be completed by the installer during the installation, modification and decommissioning of Alarm Signalling Equipment (ASE) for the Fire Alarm Monitoring System.

This document is to be used during the installation of each ASE prior to alarms being put into operational use. It is also to be used for any modifications to ASEs including relocations, replacements, and input modifications.

2 Background

The decommissioning of the 3G network by mobile carriers requires the replacement of existing legacy Alarm Signalling Equipment (ASE) devices which utilise these services for connectivity.

The latest generation Alarm Signalling Equipment (ASE) devices called the **Romteck RM3119** are being rolled out to replace existing legacy RM2118 and RM3118 "Lisa" (3G only) devices at monitored sites. The RM3119 device contains two mobile data modems, which provide a redundant uplink to the alarm monitoring network via two carriers, Telstra and Optus. The two SIMs required for the uplink are supplied by Airservices.

The existing 3G/4G RM3118 Telit ASEs will remain in service until the decommissioning of the 4G network.

3 Scope

This document applies to both the Contractor/Installer/Customers and Airservices Australia personnel in preparation for commissioning of an ASE.

It summarises test results captured as part of installation procedures at a single ASE site.

4 Responsibility

During the time that an ASE is not fully operational, it is vital for the customer to put in place alternative fire safety protections to ensure an appropriate level of fire safety during the outage.

To assist all building owners and managers to know their rights and responsibilities in relation to automatic alarm monitoring, an information guide (<u>Monitored Automatic Alarms</u>) has been developed as a joint initiative by the Victorian Building Authority, CFA, MFB, ADT, Chubb and Romteck GRID.

It is the responsibility of the customer to:

- 1. Must be aware and comply with all Building Regulations.
- 2. If their monitored automatic alarm system is not fully operational, it is vital to put alternative fire safety procedures in place to ensure an appropriate level of fire safety during this period.
- 3. As outlined in <u>How to Apply for Airservices Automatic Fire Alarm Monitoring</u>, for new installations or upgrades, ensure an <u>Application for Automatic Fire Alarm Monitoring Service</u> form has been received by Airservices.
 - a. Wait for written approval from <u>arfffirealarmmonitoring@airservicesaustralia.com</u>.
 - b. Provide local ARFFS staff with keys and other applicable information about the building.
 - c. Order the ASE and all associated equipment as defined in <u>Section 7</u>.
 - d. Organise an Airservices Certified Maintainer to configure and install the ASE. A list of accredited installers is available via: <u>Airservices ASE Installers</u>
 - e. Airservices will send the Telstra and Optus SIMs to your nominated Airservices Certified Maintainer.
 - f. Ensure the Installation Checklist in <u>Section 11</u> is completed and has been e-mailed to Airservices by your Airservices Certified Maintainer.
 - g. The Airservices Certified Maintainer is to organise a suitable date and time to perform end-to-end testing with Airservices.
 - h. A confirmation email will be provided by Airservices to notify the customer that commissioning has been completed successfully.
- To modify the Services monitored by ARFF, an <u>Application for Automatic Fire Alarm</u> <u>Monitoring Service</u> form requesting an "Alteration of Service" must be submitted to <u>arfffirealarmmonitoring@airservicesaustralia.com</u>. Alteration of Service checklist shall be used to commission the new input(s).
- Once an ASE is installed, a building permit from a registered building surveyor must be obtained to disconnect it. To decommission an ASE, an <u>Application for Automatic Fire Alarm</u> <u>Monitoring Service</u> form requesting a "**Removal of Service**" must be submitted to <u>arfffirealarmmonitoring@airservicesaustralia.com</u> The ASE Decommissioning checklist in <u>Section 19</u> must be completed.
- 6. An inspection and testing of a completed installation **may** be carried out by ARFFS. When a re-inspection of an ASE is required due to the installation not complying fully with the installation checklists or the standard of work for some reason is unacceptable at the time of the inspection, a re-inspection fee may be levied on the customer.
- 7. Ensure the installation, maintenance and repair of ASEs complies with the requirements of the relevant Australian Standards.

8. The ASE configuration is used to rebuild a failed ASE to meet Australian Standard restoration times. The ASE configuration is to be archived and stored as per the customer's company's policy. Airservices takes no responsibility for archiving or storage of the ASE configuration.

Note: No routine maintenance is required specifically for the ASEs. End-to-end testing of the ASE is performed as part of the monthly Australian Standards Fire Alarm checks (AS1851-2012).

Romteck Australia (https://www.romteck.com/) will supply:

- 1. New and replacement hardware as per <u>Section 7</u>.
- 2. Manage ASE and associated equipment Warranty provisions.
- 3. ASE Maintenance Configuration and Diagnostics Software for ASE and FSE Devices Operators Manual, version Revision 0.5 or greater
- 4. Romteck ASE CONFIG Operation Manual, version 0.1 or greater
- 5. Romteck RM3119 ASE Installation Manual, version 0.1 or greater
- 6. Romteck RM3119 ASE Operations Manual, version 0.1 or greater
- ASE RM3118 Alarm Signalling Equipment (ASE) Operation and Installation Manual, Revision 0.4 or greater

It is the responsibility of the installer/maintainer technician to:

- 1. Understand that while a monitored automatic alarm system is not fully operational, it is vital to put alternative fire safety procedures in place to ensure an appropriate level of fire safety during this period.
- 2. Diligently follow the instructions contained within this document where applicable.
- 3. The ASE is fitted with an electronic key, the maintainer is to retain a record of who those keys are assigned to. Will not give the key to anyone else to use. It is only for your use in accordance with your operational need and work requirement.
- 4. Routine servicing end-to-end system checks are to be performed as part of the AS1851 monthly FDCIE checks.
- 5. Maintain after hours or emergency contact numbers for the building. When a fault is detected in an ASE or FDCIE which requires repairs to be undertaken, every effort must be made to complete the repairs as soon as possible.
- 6. Hold sufficient spare ASEs to meet Australian Standards restoration times.
- 7. <u>Section 11</u> checklist shall be used to configure, install and commission a new ASE RM3119 or upgrading from a RM2118 / RM3118 to a RM3119.
- Should an existing ASE be disconnected and reconnected for any reason, upon the reconnection the <u>Section 14</u> or <u>Section 15</u> checks shall be conducted and emailed to Airservices.
- An e-mail must be sent to ARFFS when isolations are planned and likely to be over an extended period. Unplanned short-term isolations, the technician may advise ARFFS via phone.

- Arrange a time to perform live end-to-end commissioning testing.
 Note: 'Live end-to-end' commissioning testing activities occurs during normal business hours (Australian Eastern Standard Time).
- 11. Perform live end-to-end commissioning testing. Commissioning involves testing the primary and secondary communication paths and their signal strength. An end-to-end test is performed from the FDCIE through to the ARFFS station. All inputs connected to the ASE must be tested.
- 12. Provide the Customer a backup of the ASE configuration.

It is the responsibility of an ASE key holder to:

- 1. Understand that while a monitored automatic alarm system is not fully operational, it is vital to put alternative fire safety procedures in place to ensure an appropriate level of fire safety during this period.
- 2. Diligently follow the instructions contained within this document where applicable.
- 3. Only use the key in accordance with operational need and work requirement.
- 4. Not give or lend the key to anyone else.
- 5. Perform routine servicing end-to-end system checks as part of the AS1851 monthly FDCIE checks.
- 6. Notify ARFFS via email when isolations are planned and likely to be over an extended period. For unplanned short-term isolations, the technician may advise ARFFS via phone.

It is the responsibility of Airservices to:

- 1. Provide technicians with a single point of contact for the Airservices System. This support is available business hours Australian Eastern Standard Time via arffsystemsupport@airservicesaustralia.com.
- 2. Provide the Telstra SIM, Optus SIM and ASE configuration.
- 3. For new installations, to create an alarm shell in Firemon.
- 4. Local ARFFS staff will collect Building keys and other routine information about the building.
- 5. Assist in performing live end-to-end commissioning testing.
- 6. Generate an internal Commissioning Test Report.
- 7. Provide a commissioning report to the Customer.

5 Legal Obligations

The customer and technicians must comply with all state and territory regulations.

Fire alarm systems are complex in design and need to be maintained by a reputable fire maintenance company that has expertise in this field.

It is now an offence in most states and territories to damage or interfere with a fire indicator panel or other apparatus that transmits the signal to the fire services (monitored automatic alarm system) without reasonable excuse. Interference of this kind includes any action that causes the transmission of the signal to the fire service to be isolated, disconnected or disabled. This means that interfering with the ASE without a reasonable excuse is also an offence. Refer to Monitored Automatic Guidelines (<u>Monitored Automatic Alarms</u>) for more advice on managing an ASE.

Airservices recommends the customer adopt a minimum isolation policy. ASE isolations are not to be made to prevent false alarms from normal day to day activities.

If the monitored automatic alarm system is not fully operational, it is vital for the customer to put alternative fire safety procedures in place to ensure an appropriate level of fire safety during this period.

5.1 Managing an Isolated Alarm System, Partial Isolation or Temporary Disconnection: Alternative Fire Safety Procedures

ASE isolations are not to be made to prevent false alarms from normal day to day activities.

Follow the instructions provided by the relevant building surveyor with the building permit or occupancy permit. If these are not provided, please consider the actions outlined in Monitored Automatic Guidelines (Monitored Automatic Alarms).

5.2 Can an ASE be (Completely or Partially) Temporarily Disconnected?

For emergency work (e.g., in the case of equipment breakdown), or for prolonged maintenance requirements that require the ASE or its separate inputs to be disconnected, Airservices may agree to a written request to disconnect an ASE for a maximum of 24 hours without a building permit.

For all other temporary disconnections, a building permit must be obtained, and a copy provided to Airservices together with a reconnection date or best estimate for the length of the disconnection.

Examples of when temporary disconnections are required:

- For structural renovation affecting the entire site protected by the ASE.
- For non-occupancy of building ensure the site and/or building is made secure.

5.3 Can an ASE be Permanently Disconnected?

Once an ASE is installed, a building permit from a registered building surveyor must be obtained to disconnect an ASE.

6 How to Become an Airservices Certified Maintainer or ASE Key Holder

Fire alarm systems are complex in design and need to be maintained by a reputable fire maintenance company that has expertise in this field. The Airservices Certification process is a necessary part of the briefing the technicians must undergo before working on an ASE connected to the Airservices system. It is essential for the customer to confirm their technicians have had the minimum training. The certification is valid for 5 years. Upon expiry of the certification, the assessment must be retaken.

Airservices Certified Maintainer or ASE key-holder request form is available via the following link <u>TI-0223</u>.

7 Hardware Configuration

This section contains the current standard configuration and other important information.

7.1 RM3119 Hardware Configuration

Order the following equipment directly from Romteck Australia. 37 Collingwood St, Osborne Park WA 6017 Phone: +61 8 9244 3011

Airservices standard configuration includes the following hardware:

New Quantity	Replacement Quantity	Equipment
1	1	Romteck RM3119-WIP-ASE-F
2	See Antennas	PID 27389 Benelec 024584 Cellular 5G Dipole Antenna
2	See Antennas	PID 9988 Benelec 02729 Stainless Steel Wall Bracket 58mm
1	1	Romteck 470-ohm Resistor Board
2	2	Airservices will supply the Telstra and Optus SIMs for the RM3119 ASEs.

Note: If there is poor mobile reception on site a 3 metre or 5 metre coaxial cable may be required.

7.2 Antennas

Please read the following important information if you are replacing an existing ASE.

7.2.1 Benelec 024584 Cellular 5G Dipole Antenna

The Benelec 024584 Cellular 5G Dipole Antenna was also previously sold with RM3118 units for 4G connectivity. Although it has since been renamed, it is the same model and covers the same frequencies. If you are replacing an RM3118 ASE, you may use the existing Benelec 024584 antenna(s), and bracket(s) installed at the site and order the difference to meet the required quantity.

Pictured on the following page are two variants of the Benelec 024584 antenna. An existing 4G labelled variant on the left, and the new 5G labelled variant on the right. Both variants cover the same frequencies.

OFFICIAL Firemon Alarm Signalling Equipment (ASE) Installation Checklist Technical Instruction



7.2.2 Benelec 02458 Cellular (3G) Dual Band Antenna (Legacy)

Important!

The Benelec **02458** Cellular (3G) Dual Band Antenna is not authorised for use with the RM3119 ASE.

When identifying antennas, be sure not to mistake the Benelec **02458**<u>4</u> 4G/5G antenna for the Benelec **02458** 3G antenna, which is pictured on the following page.

Firemon Alarm Signalling Equipment (ASE) Installation Checklist Technical Instruction



7.3 Touch Keys

The RM3118/RM3119 ASEs use a Touch Key for access to key Test and key Isolate. Airservices is a Key Issuer and can issue keys with the key issuer code of "ASA". Touch Keys may only be issued to Airservices Certified Maintainers or ASE key-holders. Refer to <u>Section 6</u>.

Only valid keys may be used on the RM3118/RM3119 ASE. ASEs monitored by ARFFS are configured to accept keys from ALL key issuers.

Firemon records an audit trail of when a key is used to access the ASE. Firemon records the key issuer, key number and key serial number. Firemon also records events such as key Test and Isolation events.

Touch Keys are ordered via the <u>TI-0223</u> process.

8 Acceptance Criteria

Once all checks listed in <u>Section 11</u> (new ASE installation) or <u>Section 12</u> or <u>Section 13</u> (alteration of existing ASE) are successfully completed by the installer, a signed copy of the checklist shall be emailed to Airservices.

9 ASE Interfacing

9.1 ASE to FDCIE Interfacing

The ASE shall be connected to the Fire Detection Control and Indicating Equipment (FDCIE) relay contacts via a 470-ohm resistor board for monitoring of:

- "Fire Alarm"
- "System Fault"
- "Disconnected / Isolated"
- "Power Fault"

Refer to the wiring diagrams on the following two pages.

OFFICIAL Firemon Alarm Signalling Equipment (ASE) Installation Checklist Technical Instruction



OFFICIAL Firemon Alarm Signalling Equipment (ASE) Installation Checklist Technical Instruction



9.2 ASE to Communications Network Interfacing

The ASE acquires the alarm signals from the Fire Detection Control and Indicating Equipment (FDCIE) and transmits these to the Airservices Firemon system using two communications paths. The **primary path** is via **Telstra**, and the **secondary path** is via **Optus**.

Note that both communications paths are required to meet the reliability requirements in Australian Standard AS-1670.3.

10 Antenna Installation

The two antennas must be installed as per the Romteck RM3119 ASE Installation Manual:

- Never mount an antenna where it is likely to be within 200mm of a person's head.
- Never mount an antenna inside the FDCIE cabinet. This not only compromises the signal strength but can also interfere with the FDCIE.
- ASE antennas must not be mounted near other equipment's antennas.
 Refer to section 3.3.2.1 "Dual Antenna Separation" in the Romteck RM3119 ASE Installation Manual.
- ASE antennas must be suitably separated from each other. Refer to section 3.3.2.1 "Dual Antenna Separation" in the Romteck RM3119 ASE Installation Manual.
- Antenna cable should be kept as short as possible or low loss cable used to minimise signal loss.
- ASE antenna must not be mounted where they are susceptible to vandals.
- ASE antenna type and location must be such as to ensure suitable signal levels in all operating bands.

If there is poor mobile phone signal on site, adjusting the location and orientation of the antenna will make a marked difference to improving the reception. A 3 or 5 metre coaxial cable can be provided by Romteck Australia on request.

11 New RM3119 Dual SIM ASE Installation

The following checklist is to be used when installing or upgrading to the RM3119 ASE.

It must be completed by the installer.

If installing a new RM3119 ASE:

- A <u>Fire Alarm Monitoring Service Form</u> must have already been submitted and **accepted** by <u>arfffirealarmmonitoring@airservicesaustralia.com</u>.
- Order equipment as per <u>Section 7</u>.
- Airservices will express post the following to the nominated Airservices Certified Maintainer:
 - Telstra and Optus micro-SIMs
 - A copy of TI-0157 pre-filled with the required information.
- Airservices will provide the following information via e-mail to the nominated Airservices Certified Maintainer:
 - Zip file containing the baseline configuration device for ASEs connected to the Airservices system
 - o Site
 - Device Number
 - o Device Name
 - o Telstra Username, password and SIM IMSI
 - o Optus Username, password and SIM IMSI
 - Concentrator, Module, Line and Drop
- <u>Section 11.1</u> checklist shall be used to configure the ASE to connect to the Firemon test system. When configured, the new ASE will talk to the Airservices test network and hence alarms will not be displayed in the ARFFS Station.
- <u>Section 11.2</u> checklist is completed just prior and during live end-to-end commissioning testing. To ensure availability of all personnel, it is recommended this communication with <u>arffsystemsupport@airservicesaustralia.com</u> is made well before the installer goes to site.

11.1 ASE Configuration and Testing

This section details the procedures to configure an ASE prior to on-site installation.

11.1.1 RM3119 Baseline Configuration Device

The RM3119 baseline configuration device is a device template used to configure new RM3119 ASEs prior to installation. This procedure details the steps to import the device into the ASE Config application.

If you have already imported the latest RM3119 baseline configuration device into the **ASE Config** application, skip this procedure.

- 1. Launch the **Romteck ASE Config** application.
- Optional: Navigate to "Setup" => "System Settings", and set "Data Directory" to a desired location.
- Navigate to "File" => "Import Device(s)...".
 Browse to and select "ASE_Baseline_1002_V3.zip" and click "Open" to import it. Click "OK" on the import successful prompt.

11.1.2 Contact Simulator

The contact simulator is a test device used to simulate the relay contacts of a FDCIE upon the ASE's inputs.

Pictured below is an example constructed out of 4 SPDT toggle switches mounted inside an ABS enclosure. Wiring is done with offcuts of CAT-5 cable (stranded core) terminated with 24 AWG bootlace ferrules. It is connected to a Romteck 470-ohm resistor board for testing RM3119 ASEs.



If you are configuring an ASE with additional inputs enabled, make sure you have an additional contact simulator and Romteck 470-ohm resistor board available.

11.1.3 ASE Configuration

This procedure details the steps to connect and configure an ASE prior to on-site installation.

1) Ensure the ASE is powered off.

laptop.

- 2) Install the Telstra micro-SIM into the onboard modem's micro-SIM socket.
- 3) Install the **Optus micro-SIM** into the **off**board modem's micro-SIM socket.
- 4) Connect the two **Benelec 024584** antennas to the ASE's two SMA terminated antenna leads.
- 5) Connect the Romteck RM3119 Programming Adaptor to the ASE's onboard serial connector "P6".
 Use a USB-C cable to connect the Romteck RM3119 Programming Adaptor to your PC or
- 6) Connect your **contact simulator** via a **470-ohm resistor board** to connector "**P3**". If you need to configure and test additional inputs, connect an additional **contact simulator** via an additional **470-ohm resistor board** to connector "**P2**".
- 7) Connect the ASE's DC power supply to connector "P7", then power on the ASE. Power is supplied via pin 4 (negative) and pin 5 (positive) of connector "P7". The ASE operates on any DC power supply between 8V to 30V.



- 8) Launch the **ASE Config** application.
- 9) Navigate to "Setup" => "System Settings..." and select the "Communication Settings" tab. Ensure "Com Port:" is set to the correct port, then click "OK".
 Hint: The exact COM port number associated with the Romteck RM3119 Programming Adaptor will depend on your system, the USB port used, as well as the number of existing COM ports present. To check COM port allocations, open "Device Manager" and expand "Ports (COM & LPT)", then look for "USB Serial Port (COM#)" where "#" is the COM port number.
- 10) Sort the device list by clicking on the "Firemon Device No" column header, then locate Firemon Device No 1002.

This blank ASE contains the Airservices baseline configuration, which is configured to connect to the **TEST** system.

- 11) Right-click **Firemon Device No 1002** and select "**Copy Device**". This will create a copy which is then highlighted.
- 12) Right-click on the newly created copy and select "Connect".

This will connect to the ASE and open the device configuration window.

If an "Address Mismatch" message appears, click "OK".

Informati	ion	×
•	Address Mismatch. The device's actual address	
	(Addressing Mode: C/M/L/D)	
	differs from that stored in the database	
	(Addressing Mode: C/M/L/D).	
	Issue a Read Configuration command to store the current device address and settings into the database, C Issue a Write Configuration command to apply the settings in the database to the device.	R
	Note that the program will not read the device status until the device and database addresses are the same	е.
	ОК	

- 13) Select the "**Device Details**" tab and update the following details using the information provided by Airservices (indicated in red in the image below):
 - a) "Concentrator"
 - b) "Module"
 - c) "Line"
 - d) "Drop"
 - e) "Firemon Device No"
 - f) In the "Building" field, use the naming convention: "XX-Building Name".
 Where "XX" is the region and "Building Name" is the name of the building.

Device Details	Configuration	IP Configuration	Point Configur	ation De	vice Status	BMS
Device 1	ype RM3119-	WIP-WIP-ASE-F				~
Addressing M	lode Concentra	ator Module/Line/Dr	op (C/M/L/D)	\sim		
Devic	e ID					
Concentr	ator 📃 🕭	Module	🗧 Line 📕	ē D	rop 📃 🗧	3
Firemon Device	e No 1002	۲				
Buil	ding ASE_Base	line_1002_V3		N	lo: 0	
Loca	ition					
	Area					
Con	tact					
Contact Phone	e No	After Hours		Fax:		
Commen	t #1					
Commen	t #2					
Commen	t #3					
Commen	t #4					
Commen	t #5					
Commen	t #6					
Commen	t #7					

- 14) Select the "**Configuration**" tab and update the following details (indicated in red in the image below):
 - a) In the "LCD Title:" field, enter "DEVICE ###", where "###" is the Firemon Device No.
 - b) In the "Low Voltage:" field, enter a value approximately 10% below the installed FDCIE power supply voltage.

Device Details	Configuration	IP Config	uration Point	Configuration	Device Status	BMS Points Statu	s Device Logs	Diagnostics
Primary Cor WIP1	WIP2	Seco Di	ndary Connect sabled 🔵 Wi	tion IP1 OWIF	22			
Inp Outpu WIP Lov Periodic Rep Tamper E Touch Key S	LCD Title: Low Voltage: Test Period: Test Alert: Input Debounce: Host Address: Output Pulse Period: WIP Low Signal Level: Periodic Reporting Period: Tamper Entry Timeout: Touch Key Security Code:		ICE NO. V	volts minutes (4 hours) minutes (3 hours 30 minutes) milliseconds 3G: -111 dBm; 4G: -144 dBm minutes minutes		 Always perform Periodic Report Report configuration changes Input Debounce in seconds Simple Link Status Output 1 Local LED Enable Web View Report Cell Changes Enable 16 Relay Outputs I2C Module Link Test on Signal Change 		
		Туре Т	ermination	Normal	/ Alarm I	nputs		
Type o	of PCB Inputs:	PCB P	lesistor	Closed	/470R 8	~		
Type of	of I2C Inputs:	12C I	Disabled		c) ~		
		1 2 3 X X X X X Ou Ou X X Ou	4 5 6 7 X tput Enables () tput Polarity () tput Pulsed (X	8 - Devices E (= Enabled) (= Normally Op = Pulsed)	elow (X = Enabl ven)	ed)		

- 15) Select the "IP Configuration" tab.
- 16) Under the "**IP Configuration**" tab, select the "**WIP 1 (IP Configuration #1)**" tab and update the following details (indicated in red in the image below):
 - a) In the "User Name:" field, enter the Telstra user ID provided by Airservices.
 - b) In the "**Password:**" field, enter the password provided by Airservices.

Device Details Configuration	IP Configuration Point Configuration Device Status BMS Points Stat
WIP1 (IP Configuration #1)	WIP2 (IP Configuration #2) Local IP Configuration
Access Point Name (APN):	telstra.corp
User Name:	
Password:	
Main Host Address:	TLS Enabled
Main Host Port:	10001
Backup Host Address:	TLS Enabled
Backup Host Port:	10001
Phone Number:	*99***1#
Link Heartbeat:	40 seconds
Acknowledge Wait:	7 seconds
Num Retries:	3
Link Retries:	3
Link Backoff:	2 minutes
Link Stable Period:	1 minutes
SIM PIN:	0000
Type Of Service:	0 DSCP = 0 (0x00), ECN = 0 (0x00) Rx Diversity Enabled

Note: For RM3118/9 ASEs, the PIN will be disabled (i.e., 0000)

- 17) Under the "**IP Configuration**" tab, select the "**WIP 2 (IP Configuration #2)**" tab and update the following details (indicated in red in the image below):
 - a) In the "User Name:" field, enter the Optus user ID provided by Airservices.
 - b) In the "**Password:**" field, enter the password provided by Airservices.

Device Details	Configuration	IP Configuration	Point Configuration	Device Status	BMS Points Statu
WIP1 (IP Co	nfiguration #1)	WIP2 (IP Configu	ration #2) Local IP	Configuration	
Access Poin	t Name (APN):	om2mase			
	User Name:				
	Password:				
Main	Host Address:		TLS Enable	d	
1	Main Host Port:	10001	•		
Backup	Host Address:		TLS Enable	d	
Bac	kup Host Port:	10001	•		
F	hone Number:	*99***1#			
L	ink Heartbeat:	40	seconds		
Ackn	owledge Wait:	14	seconds		
	Num Retries:	3	▲ ▼		
	Link Retries:	3			
	Link Backoff:	2	minutes		
Link	Stable Period:	1	minutes		
	SIM PIN:	0000			
Ту	pe Of Service:	0	DSCP = 0 (0x00),	ECN = 0 (0x00)	
		Rx Diversity En	abled		

Note: For RM3118/9 ASEs, the PIN will be disabled (i.e., 0000)

- 18) If no additional inputs are required, skip to Step 21.
- 19) Select the "Point Configuration" tab, then select the "Input Points" subtab.
- 20) For each additional input to be enabled, do the below steps. Do NOT modify inputs 1 to 4.
 - a) Untick the "Unused" checkbox.
 - b) Set the "Type" field to:
 "Fire Alarm" if alarm type is PRIMARY.
 "Fault Warning" if the alarm type is SECONDARY.
 - c) Tick the "Send Extra Info" checkbox.
 - d) Set the "Extra Info" field to the alarm's description.

Bľ	BMS Points Status Points Input Points											
	Type Termination Normal / Alarm Inputs											
1	Type of PCB Inputs: PCB Resistor Closed / 470R 8 v											
Type of I2C Inputs: I2C Disabled 0 V												
	Image: A state of the state											
	Point No	Group	Unused	Out Of Service	Inverted	Туре	Code	Zone Type	Zone Item No	Zone	Send Extra Info	Extra Info
	1	1				Fire Alarm	110	No Zone	0	000		Common Fire Alarm
	2	1				Fault Warning	300	No Zone	0	000		Common System Fault
	3	1				Disabled	570	No Zone	0	000		Common System Disabled
	4	1				Power Fault	314	No Zone	0	000		Common Power Fault
►	5	1				Fire Alarm		No Zone	0	000	v	Sprinkler
	6	1	~			Status		No Zone	0	000		Auxiliary 2
	7	1	~			Status		No Zone	0	000		Auxiliary 3
	8	1	•			Status		No Zone	0	000		Auxiliary 4

Example: Additional input 5 configured for a "Sprinkler" alarm.

- 21) Click "Write Configuration" to write the configuration changes to the ASE.
- 22) Click "Save Changes" to save the configuration in the local ASE Config database.
- 23) Close the device configuration window.
- 24) Close the ASE Config application.
- 25) Disconnect the USB connection to the ASE and unplug the RM3119 Programming Adaptor.

11.1.4 ASE Testing

This procedure details the steps to test an ASE prior to on-site installation.

- 1) Ensure the **Up** and **Down** arrows by the **primary** path "**P**" signal meter are alternatively flashing.
- 2) Ensure the signal strength for the **primary** path "**P**" is displaying **-109dBm** or greater.
- 3) Ensure the signal strength for the **secondary** path **"S**" is displaying **-109dBm** or greater.
- 4) Using the contact simulator:
 - a) Open the "**ALARM**" switch and verify "**ALM**" appears on the ASE's LCD screen. Close the "**ALARM**" switch.
 - b) Open the "**FAULT**" switch and verify "**FLT**" appears on the ASE's LCD screen. Close the "**FAULT**" switch.
 - c) Open the "**ISO/DIS**" switch and verify "**DIS**" appears on the ASE's LCD screen. Close the "**ISO/DIS**" switch.
 - d) Open the "**POWER**" switch and verify "**PWR**" appears on the ASE's LCD screen. Close the "**POWER**" switch.
- 5) Using the additional contact simulator (if applicable):
 - a) If Input 5 is configured, open the Input 5 switch.
 If the alarm type is PRIMARY, verify "ALM" appears on the ASE's LCD.
 If the alarm type is SECONDARY, verify "FLT" appears on the ASE's LCD.
 Close the Input 5 switch.
 - b) If Input 6 is configured, open the Input 6 switch.
 If the alarm type is PRIMARY, verify "ALM" appears on the ASE's LCD.
 If the alarm type is SECONDARY, verify "FLT" appears on the ASE's LCD.
 Close the Input 6 switch.
 - c) If Input 7 is configured, open the Input 7 switch.
 If the alarm type is PRIMARY, verify "ALM" appears on the ASE's LCD.
 If the alarm type is SECONDARY, verify "FLT" appears on the ASE's LCD.
 Close the Input 7 switch.
 - d) If Input 8 is configured, open the Input 8 switch.
 If the alarm type is PRIMARY, verify "ALM" appears on the ASE's LCD.
 If the alarm type is SECONDARY, verify "FLT" appears on the ASE's LCD.
 Close the Input 8 switch.
- 6) Power off the ASE.
- 7) Disconnect the ASE.

11.2 RM3119 ASE Installation Checklist

Installer's Name:	
Mobile Number:	
ASID Reference:	Device Number:
Building Name:	
Building Address:	

Note: When initially configured, the ASE will communicate with the Airservices test network and hence alarms will **not** be displayed in the fire station.

The following checklist is to be completed by the installer:

CHECK ITEM	Yes	N/A
Email <u>arffsystemsupport@airservicesaustralia.com</u> to organise a preferred time.		
Call the local ARFFS station and advise them you are on site to perform the installation. If replacing an existing ASE, advise them at the ASE will be offline for the replacement.		
Remove legacy Benelec 02458 3G antennas, if present. See Section 7.2.		
Two Benelec 024584 4G/5G antennas installed. See Section 7.2 and Section 10.		
Appropriate lightning and surge protection installed, if required.		
Any penetrations sealed and waterproofed.		
Inputs 1, 2, 3 and 4 are connected to the FDCIE via 470-ohm resistor board as per Section 9.		
The ASE's LCD screen shows status of "Normal".		
The ASE's primary (onboard) modem is connected to Airservices via Telstra . The LCD screen shows a signal strength for the primary path " P ", not flashing, and with alternating up/down arrow icon.		
The ASE's secondary (offboard) modem is connected to Airservices via Optus . The LCD screen shows a signal strength for the secondary path " S ", and not flashing.		
Record the signal strength for the primary path " P ":		
For 4G network connectivity, the signal strength must be -109dBm or greater.	-	
Record the signal strength for the secondary path "S":		
Signal Strength: - dBm For 4G network connectivity, the signal strength must be -109dBm or greater.		

Firemon Alarm Signalling Equipment (ASE) Installation Checklist Technical Instruction

CHECK ITEM	Yes	N/A
The ASE's "Low Voltage" threshold is approximately 10% below the DC power supply voltage.		
Measure and record the voltage drop across the terminals for Input 1 on the resistor board.		
Voltage Drop: mV		
The voltage drop must be less than 10mV . See <u>Appendix D</u> .		
Measure and record the voltage drop across the terminals for Input 2 on the resistor board.		
Voltage Drop: mV		
The voltage drop must be less than 10mV . See <u>Appendix D</u> .		
Measure and record the voltage drop across the terminals for Input 3 on the resistor board.		
Voltage Drop: mV		
The voltage drop must be less than 10mV . See <u>Appendix D</u> .		
Measure and record the voltage drop across the terminals for Input 4 on the resistor board.		
Voltage Drop: mV		
The voltage drop must be less than 10mV . See <u>Appendix D</u> .		
Activate Alarm on Input 1.		
Verify "ALM " appears on the ASE's LCD.		
Clear the Alarm.		T
Activate System Fault on Input 2.		
Verify "FLT " appears on the ASE's LCD.		
Clear the System Fault.		
Activate Isolated / Disconnected on Input 3.		
Verify " DIS " appears on the ASE's LCD.		
		I
Activate the Power Fault on Input 4 .		
Verity " PWR " appears on the ASE's LCD.		

Firemon Alarm Signalling Equipment (ASE) Installation Checklist Technical Instruction

	CHECK ITEM	Yes	N/A	
Record the deta	ils for the additional alarm being wired to Input 5 .			
Source:	E.g., FIP / SPKL / MCP			
Description:				
Alarm Type:	Either PRIMARY or SECONDARY			
Record the deta	ils for the additional alarm being wired to Input 6 .			
Source:	E.g., FIP / SPKL / MCP		1	
Description:				
Alarm Type:	Either PRIMARY or SECONDARY			
Record the deta	ils for the additional alarm being wired to Input 7 .			
Source:	E.g., FIP / SPKL / MCP		1	
Description:				
Alarm Type:	Either PRIMARY or SECONDARY			
Record the deta	ils for the additional alarm being wired to Input 8 .			
Source:	E.g., FIP / SPKL / MCP		1	
Description:	Description:			
Alarm Type:	Either PRIMARY or SECONDARY			
Measure and re	cord the voltage drop across the terminals for Input 5 on the resistor board.			
Voltage Drop:	mV			
The voltage drop	p must be less than 10mV . See <u>Appendix D</u> .			
Measure and re	cord the voltage drop across the terminals for Input 6 on the resistor board.			
Voltage Drop:	mV			
The voltage drop	p must be less than 10mV . See <u>Appendix D</u> .			
Measure and re	cord the voltage drop across the terminals for Input 7 on the resistor board.			
Voltage Drop:	mV			
The voltage drop	p must be less than 10mV . See <u>Appendix D</u> .			
Measure and re	cord the voltage drop across the terminals for Input 8 on the resistor board.			
Voltage Drop:	mV			
The voltage drop	p must be less than 10mV . See <u>Appendix D</u> .			

CHECK ITEM	Yes	N/A
Activate the alarm on Input 5.		
If the alarm type is PRIMARY , verify " ALM " appears on the ASE's LCD. If the alarm type is SECONDARY , verify " FLT " appears on the ASE's LCD. Clear the alarm.		
Activate the alarm on Input 6.		
If the alarm type is PRIMARY , verify " ALM " appears on the ASE's LCD.		
If the alarm type is SECONDARY , verify " FLT " appears on the ASE's LCD.		
Clear the alarm.		
Activate the alarm on Input 7.		
If the alarm type is PRIMARY , verify " ALM " appears on the ASE's LCD.		
If the alarm type is SECONDARY , verify " FLT " appears on the ASE's LCD.		
Clear the alarm.		
Activate the alarm on Input 8.		
If the alarm type is PRIMARY , verify " ALM " appears on the ASE's LCD.		
If the alarm type is SECONDARY , verify " FLT " appears on the ASE's LCD.		
Clear the alarm.		

CHECK ITEM		
Place the ASE into test mode .		
Call Airservices ARFFS System Support.		
 Confirm the following details: 1) Your Name and Phone Number. 2) The Building Name, Building Address and the ASE Device Number. 3) The details of any additional alarms. 		
 Keep the ASE in test mode until instructed otherwise. Airservices will then perform the following activities: Make the appropriate checks and system modifications. Reconfigure the ASE to communicate with the operational network. Notify the local ARFFS station of end-to-end testing. Instruct you to remove the ASE from test mode. Instruct you to activate and clear connected alarms. 	1	
When instructed, remove the ASE from test mode .		
When instructed, activate Alarm on Input 1 . Wait for confirmation, then clear the Alarm .		
When instructed, activate System Fault on Input 2 . Wait for confirmation, then clear the System Fault .		
When instructed, activate Isolated / Disconnected on Input 3 . Wait for confirmation, then clear the Isolated / Disconnected status.		
When instructed, activate the Power Fault on Input 4 . Wait for confirmation, then clear the Power Fault .		
When instructed, activate the alarm on Input 5 .		
Wait for confirmation, then clear the alarm.		
When instructed, activate the alarm on Input 6 . Wait for confirmation, then clear the alarm.		
When instructed, activate the alarm on Input 7 . Wait for confirmation, then clear the alarm.		
When instructed, activate the alarm on Input 8 . Wait for confirmation, then clear the alarm.		

Firemon Alarm Signalling Equipment (ASE) Installation Checklist Technical Instruction

CHECK ITEM	Yes	N/A
Use the ASE Config application to take a backup of the ASE's configuration.		
Store the backup as per your company's policy.		
If upgrading from an RM3118, send Telstra and Optus SIMs to:		
ARFFS System Support		
Airservices Australia		
Alan Woods Building, 25 Constitution Avenue		
Canberra ACT 2601		
Airservices will de-activate the Telstra and Optus SIMs.		

Installer's Signature:	Date:
Comments:	
-	

Note: Electronic submissions are not required to be signed.

Email this completed form to: arffsystemsupport@airservicesaustralia.com

12 Alteration of Service (RM3119)

The installer must complete this checklist when modifying inputs on an existing RM3119 ASE.

Prior to commencing this activity, an <u>Application for Automatic Fire Alarm Monitoring Service</u> form, requesting an **Alteration of Service** must be submitted to, and **accepted** by Airservices.

Installer's Name:		
Mobile Number:		
ASID Reference:	Device Number:	
Building Name:		
Building Address:		

	CHECK ITEM	Yes	N/A
Email <u>arffsyster</u>	nsupport@airservicesaustralia.com to organise a preferred time.		
Call the local Al	RFFS station and advise them you are on site to perform the alteration.		
Place the ASE i	nto test mode prior to performing the alteration.		
Record the deta	ails for the additional alarm being wired to Input 5.		
If this alarm is b	eing removed, enter "REMOVED" for "Source:".		
Source:	E.g., FIP / SPKL / MCP		
Description:			
Alarm Type:	Either PRIMARY or SECONDARY		
Record the deta	ails for the additional alarm being wired to Input 6.		
If this alarm is b	eing removed, enter " REMOVED " for " Source: ".		
Source:	E.g., FIP / SPKL / MCP		
Description:			
Alarm Type:	Either PRIMARY or SECONDARY		
Record the deta	ails for the additional alarm being wired to Input 7.		
If this alarm is b	eing removed, enter "REMOVED" for "Source:".		
Source:	E.g., FIP / SPKL / MCP		
Description:			
Alarm Type:	Either PRIMARY or SECONDARY		
Record the deta	ails for the additional alarm being wired to Input 8.		
If this alarm is b	eing removed, enter "REMOVED" for "Source:".		
Source:	E.g., FIP / SPKL / MCP		
Description:			
Alarm Type:	Either PRIMARY or SECONDARY		

Firemon Alarm Signalling Equipment (ASE) Installation Checklist Technical Instruction

CHECK ITEM	Yes	N/A
Measure and record the voltage drop across the terminals for Input 5 on the resistor board.		
Voltage Drop: mV		
The voltage drop must be less than 10mV . See <u>Appendix D</u> .		
Measure and record the voltage drop across the terminals for Input 6 on the resistor board.		
Voltage Drop: mV		-
The voltage drop must be less than 10mV . See <u>Appendix D</u> .		
Measure and record the voltage drop across the terminals for Input 7 on the resistor board.		
Voltage Drop: mV		
The voltage drop must be less than 10mV . See <u>Appendix D</u> .		
Measure and record the voltage drop across the terminals for Input 8 on the resistor board.		
Voltage Drop: mV		1
The voltage drop must be less than 10mV . See <u>Appendix D</u> .		

	CHECK ITEM	Yes	N/A
Do	the following to enable or disable additional inputs on the ASE:		
1)	Unscrew the four retaining screws on the ASE front panel and carefully remove it.		
2)	Connect the Romteck RM3119 Programming Adaptor to the ASE's onboard serial connector " P6 ". Use a USB-C cable to connect the adaptor to your laptop.		
3)	Launch the Romteck ASE Config application.		
4)	Navigate to "Setup" => "System Settings" and select the "Communication Settings" tab. Ensure "Com Port:" is set to the correct port, then click "OK". Hint: The exact COM port number associated with the Romteck RM3119 Programming Adaptor will depend on your system, the USB port used, as well as the number of existing COM ports present. To check COM port allocations, open "Device Manager" and expand "Ports (COM & LPT)", then look for "USB Serial Port (COM#)" where "#" is the COM port number.		
5)	In the list of devices, locate the ASE by matching its "Firemon Device No" to the ASE's Device Number per the information at the top of this checklist.		
6)	Right-click on the device and click " Connect ". This will display the device configuration window.		
7)	Verify you see "Comms State: COMMS OK:" at the bottom of the window.		
8)	Click " Read Configuration ". On the warning prompt, click " Yes ". On the information prompt, click " OK ".		
9)	Select the "Point Configuration" tab, then select the "Input Points" subtab.		
10)	For each additional input to be enabled, do the below steps. Do NOT modify inputs 1 to 4.		
	a) Untick the "Unused" checkbox.		
	 b) Set the "Type" field to: "Fire Alarm" if alarm type is PRIMARY. "Fault Warning" if the alarm type is SECONDARY. 		
	c) Tick the "Send Extra Info" checkbox.		
	d) Set the "Extra Info" field to the alarm's description.		
11)	For each additional input to be disabled, do the below steps. Do NOT modify inputs 1 to 4.		
	a) Tick the "Unused" checkbox.		
	b) Set the " Type " field to " Status ".		
	c) Untick the "Send Extra Info" checkbox.		
	 d) Set the "Extra Info" field to "Auxiliary #" Where "#" is the value of "Point No" minus 4. 		
12)	Click "Write Configuration". On the information prompt, click "OK".		
13)	Click " Save Changes ", then close the device configuration window. Retain this as a backup of the ASE's configuration.		
14)	Close the Romteck ASE Config application.		
15)	Disconnect the Romteck RM3119 Programming Adaptor from the ASE.		
16)	Carefully reseat the ASE front panel and reinstall the four retaining screws.		
	Continued on next page.		

CHECK ITEM	Yes	N/A
Activate the alarm on Input 5.		
If the alarm type is PRIMARY , verify " ALM " appears on the ASE's LCD. If the alarm type is SECONDARY , verify " FLT " appears on the ASE's LCD. Clear the alarm.		
Activate the alarm on Input 6.		
If the alarm type is PRIMARY , verify " ALM " appears on the ASE's LCD. If the alarm type is SECONDARY , verify " FLT " appears on the ASE's LCD. Clear the alarm.		
Activate the alarm on Input 7.		
If the alarm type is PRIMARY , verify " ALM " appears on the ASE's LCD. If the alarm type is SECONDARY , verify " FLT " appears on the ASE's LCD. Clear the alarm.		
Activate the alarm on Input 8 .		
If the alarm type is PRIMARY , verify " ALM " appears on the ASE's LCD. If the alarm type is SECONDARY , verify " FLT " appears on the ASE's LCD. Clear the alarm.		

CHECK ITEM	Yes	N/A	
Call Airservices ARFFS System Support.			
 Confirm the following details: 1) Your Name and Phone Number. 2) The Building Name, Building Address and the ASE Device Number. 3) Confirm the details of the additional alarms being added or removed. 			
 Keep the ASE in test mode until instructed otherwise. Airservices will then perform the following activities: Make the appropriate checks and system modifications. Notify the local ARFFS station of end-to-end testing, if applicable. Instruct you to remove the ASE from test mode. Instruct you to activate and clear additional alarms, if applicable. 			
When instructed, remove the ASE from test mode.			
When instructed, activate the alarm on Input 5 . Wait for confirmation, then clear the alarm.			
When instructed, activate the alarm on Input 6 . Wait for confirmation, then clear the alarm.			
When instructed, activate the alarm on Input 7 .			
vvalt for confirmation, then clear the alarm.			
When instructed, activate the alarm on Input 8.			
Wait for confirmation, then clear the alarm.			

Installer's Signature:	Date:	
Comments:		

Note: Electronic submissions are not required to be signed.

Email this completed form to: arffsystemsupport@airservicesaustralia.com

13 Alteration of Service (RM3118)

The installer must complete this checklist when modifying inputs on an existing RM3118 ASE.

Prior to commencing this activity, an <u>Application for Automatic Fire Alarm Monitoring Service</u> form, requesting an **Alteration of Service** must be submitted to, and **accepted** by Airservices.

Installer's Name:		
Mobile Number:		
ASID Reference:	Device Number:	
Building Name:		
Building Address:		

	С	HECK ITEM	Yes	N/A
Email arffsystemsupport	t@airservicesaustral	lia.com to organise a preferred time.		
Call the local ARFFS sta	ation and advise the	m you are on site to perform the alteration.		
Place the ASE into test	mode prior to perfor	rming the alteration.		
Record the details for th	e additional alarm b	eing wired to Input 3 EOLRB terminals.		
Source:		E.g., FIP / SPKL / MCP		
Description:				
PRI:	SEC:	Either WIRED or BRIDGED		
The " ISO " EOLRB termi	nals on Input 3 mus	t remain BRIDGED .		
Record the details for th If this alarm is being ren	e additional alarm b noved, enter " REMO	eing wired to Input 4 EOLRB terminals. VED " for " Source: ".		
Source:		E.g., FIP / SPKL / MCP		
Description:				
PRI:	SEC:	Either WIRED or BRIDGED		
The "ISO" EOLRB termi	nals on Input 4 mus	t remain BRIDGED .		
Measure and record the	voltage drop across	s each set of non-bridged terminals for Input 3.		
PRI Voltage Drop:	mV	SEC Voltage Drop: mV		
The voltage drop must b	be less than 10mV . S	See <u>Appendix D</u> .		
Measure and record the	voltage drop across	s each set of non-bridged terminals for Input 4.		
PRI Voltage Drop:	mV	SEC Voltage Drop: mV		
The voltage drop must b	be less than 10mV . S	See <u>Appendix D</u> .		

	CHECK ITEM	Yes	N/A
Do	the following to enable or disable additional inputs on the ASE:		
1)	Unscrew the four retaining screws on the ASE front panel and carefully remove it.		
2)	Connect the ASE to your laptop via a USB A to USB Micro B cable to connector P5.		
3)	Launch the Romteck ASE Maintenance application.		
4)	Navigate to "Setup" => "System Settings" and select the "Communication Settings" tab. Ensure "Com Port:" is set to the correct port, then click "OK". Hint: The exact COM port number associated with the ASE will depend on your system, the USB port used, as well as the number of existing COM ports present. To check COM port allocations, open "Device Manager" and expand "Ports (COM & LPT)", then look for "USB Serial Port (COM#)" where "#" is the COM port number.		
5)	In the list of devices, locate the ASE by matching its " Firemon Device No " to the ASE's Device Number per the information at the top of this checklist.		
6)	Right-click on the device and click " Connect ". This will display the device configuration window.		
7)	Verify you see "Comms State: COMMS OK:" at the bottom of the window.		
8)	Click " Read Configuration ". On the warning prompt, click " Yes ". On the information prompt, click " OK ".		
9)	Select the " Configuration " tab.		
10)	On the "Input Enables (X = Enabled):" row, click the button corresponding to the additional inputs to enable or disable them. Do NOT modify inputs 1 and 2. Example showing additional Input 3 enabled: 1 2 3 4 5 6 7 8 - - - - Devices Below (X = Enabled) X X - - Input Enables (X = Enabled): - - - Input Enables (X = Normally Open X X X X X X X X X		
11)	Click "Write Configuration". On the information prompt, click "OK".		
12)	Click " Save Changes ", then close the device configuration window. Retain this as a backup of the ASE's configuration.		
13)	Close the Romteck ASE Maintenance application.		
14)	Disconnect the USB cable from the ASE.		
15)	Carefully reseat the ASE front panel and reinstall the four retaining screws.		

Firemon Alarm Signalling Equipment (ASE) Installation Checklist Technical Instruction

CHECK ITEM	Yes	N/A
Activate the alarm (PRI) on Input 3 .		
Verify " ALARM Z3 " appears on the ASE's LCD. Clear the alarm.		
Activate the fault (SEC) on Input 3.		
Verify "FAULT Z3 " appears on the ASE's LCD. Clear the fault.		
Activate the alarm (PRI) on Input 4 .		
Verify " ALARM Z4 " appears on the ASE's LCD. Clear the alarm.		
Activate the fault (SEC) on Input 4.		
Verify " FAULT Z4 " appears on the ASE's LCD. Clear the fault.		

CHECK ITEM	Yes	N/A
Call Airservices ARFFS System Support.		
 Confirm the following details: 1) Your Name and Phone Number. 2) The Building Name, Building Address and the ASE Device Number. 3) Confirm the details of the additional alarms being added or removed. Keep the ASE in test mode until instructed otherwise. 		
 Airservices will then perform the following activities: 1) Make the appropriate checks and system modifications. 2) Notify the local ARFFS station of end-to-end testing, if applicable. 3) Instruct you to remove the ASE from test mode. 4) Instruct you to activate and clear additional alarms, if applicable. 		
When instructed, remove the ASE from test mode.		
When instructed, activate the alarm (PRI) on Input 3.		
Wait for confirmation, then clear the alarm.		
When instructed, activate the fault (SEC) on Input 3 . Wait for confirmation, then clear the fault.		
When instructed, activate the alarm (PRI) on Input 4 . Wait for confirmation, then clear the alarm.		
When instructed, activate the fault (SEC) on Input 4 . Wait for confirmation, then clear the fault.		

Installer's Signature:	Date:
Comments:	

Note: Electronic submissions are not required to be signed.

Email this completed form to: arffsystemsupport@airservicesaustralia.com

14 Disconnecting and Reconnecting of an ASE (RM3119)

Should an ASE be disconnected and reconnected for any reason, upon the reconnection the below checklist shall be conducted. If a building remains occupied while this work is carried out, upon completion it is essential that the below checklist testing be completed at the time of reconnection. If the building is not occupied when the work is completed, the below checklist testing shall be completed as soon as practical. Email the signed form to: arffsystemsupport@airservicesaustralia.com.

Installer's Name:	
Mobile Number:	
ASID Reference:	Device ID:
Building Name:	
Building Address:	

CHECK ITEM	Yes	N/A
Call the local ARFFS station and advise them about the nature of the activity.		
Place the ASE into test mode. Record the start date and time of the activity below.		
Date: Time:		
Once the activity has been completed, confirm the ASE is:		
1) Powered on and displaying a status of " Normal ".		
2) Displaying a signal strength for " P ", not flashing, and with alternating up/down arrow icon.		
3) Displaying a signal strength for "S", and not flashing.		
Measure and record the voltage drop across the terminals for "ALM" on the resistor board.		
Voltage Drop: mV		
The voltage drop must be less than 10mV . See <u>Appendix D</u> .		
Measure and record the voltage drop across the terminals for "FLT" on the resistor board.		
Voltage Drop: mV		
The voltage drop must be less than 10mV . See <u>Appendix D</u> .		
Measure and record the voltage drop across the terminals for "ISO/DIS" on the resistor board.		
Voltage Drop: mV		
The voltage drop must be less than 10mV . See <u>Appendix D</u> .		
Measure and record the voltage drop across the terminals for "PWR" on the resistor board.		
Voltage Drop: mV		
The voltage drop must be less than 10mV . See <u>Appendix D</u> .		

CHECK ITEM	Yes	N/A
Measure and record the voltage drop across the terminals for Input 5 on the resistor board.		
Voltage Drop: mV		
The voltage drop must be less than 10mV . See <u>Appendix D</u> .		
Measure and record the voltage drop across the terminals for Input 6 on the resistor board.		
Voltage Drop: mV		
The voltage drop must be less than 10mV . See <u>Appendix D</u> .		
Measure and record the voltage drop across the terminals for Input 7 on the resistor board.		
Voltage Drop: mV		
The voltage drop must be less than 10mV . See <u>Appendix D</u> .		
Measure and record the voltage drop across the terminals for Input 8 on the resistor board.		
Voltage Drop: mV		
The voltage drop must be less than 10mV . See <u>Appendix D</u> .		
Call the local ARFFS station and advise them you are about to test the alarms.		
Stay on the line with the ARFFS station so you can confirm they receive the alarms.		
Activate the Alarm on Input 1.		
Verify " ALM " appears on the ASE's LCD.		
Verify the ARFFS station has received the primary alarm.		
Clear the Alarm.		
Activate the System Fault on Input 2.		
Verify "FLT" appears on the ASE's LCD.		
Verify the ARFFS station has received the secondary alarm.		
	1	
Activate the Isolated / Disconnected on Input 3.		
Verify the AREES station has received the status		
Clear the Isolated / Disconnected status.		
Activate the Power Fault on Input 4 .		
Verify " PWR " appears on the ASE's LCD.		
Verify the ARFFS station has received the secondary alarm.		
Clear the Power Fault .		

CHECK ITEM	Yes	N/A
Activate the alarm on Input 5.		
If the alarm type is PRIMARY , verify " ALM " appears on the ASE's LCD.		
If the alarm type is SECONDARY , verify " FLT " appears on the ASE's LCD.		
Verify the ARFFS station has received the alarm as the correct type.		
Activate the alarm on Input 6.		
If the alarm type is PRIMARY , verify " ALM " appears on the ASE's LCD.		
If the alarm type is SECONDARY , verify " FLT " appears on the ASE's LCD.		
Verify the ARFFS station has received the alarm as the correct type.		
Clear the alarm.		
Activate the alarm on Input 7.		
If the alarm type is PRIMARY , verify " ALM " appears on the ASE's LCD.		
If the alarm type is SECONDARY , verify " FLT " appears on the ASE's LCD.		
Verify the ARFFS station has received the alarm as the correct type.		
Clear the alarm.		
Activate the alarm on Input 8.		
If the alarm type is PRIMARY , verify " ALM " appears on the ASE's LCD.		
If the alarm type is SECONDARY , verify "FLT" appears on the ASE's LCD.		
Verify the ARFFS station has received the alarm as the correct type.		
Clear the alarm.		
Remove the ASE from test mode. Record the end date and time of the activity below.		
Date: Time:		

Installer's Signature:	 Date:
Comments:	

Note: Electronic submissions are not required to be signed.

Email this completed form to: arffsystemsupport@airservicesaustralia.com

15 Disconnecting and Reconnecting of an ASE (RM3118)

Should an ASE be disconnected and reconnected for any reason, upon the reconnection the below checklist shall be conducted. If a building remains occupied while this work is carried out, upon completion it is essential that the below checklist testing be completed at the time of reconnection. If the building is not occupied when the work is completed, the below checklist testing shall be completed as soon as practical. Email the signed form to: arffsystemsupport@airservicesaustralia.com.

Installer's Name:	
Mobile Number:	
ASID Reference:	Device ID:
Building Name:	
Building Address:	

CHECK ITEM					
Call the local ARFFS station and advise them about the nature of the activity.					
Place the ASE into test mode. Record the start date and time of the activity below.					
Date: Time:					
Once the activity has been completed, confirm the ASE is:					
1) Powered on, displaying "INPUTS Normal" and "COMMS Normal".					
2) Displaying a signal strength for " P ", not flashing, and with alternating up/down arrow icon.					
3) Displaying a signal strength for " S ", and not flashing.		_			
Measure and record the voltage drop across each set of non-bridged terminals for Input 1.					
PRI Voltage Drop: mV SEC Voltage Drop: mV					
The voltage drop must be less than 10mV . See <u>Appendix D</u> .					
Measure and record the voltage drop across each set of non-bridged terminals for Input 2.					
ISO Voltage Drop: mV					
The voltage drop must be less than 10mV . See <u>Appendix D</u> .					
Measure and record the voltage drop across each set of non-bridged terminals for Input 3.					
PRI Voltage Drop: mV SEC Voltage Drop: mV					
The voltage drop must be less than 10mV . See <u>Appendix D</u> .					
Measure and record the voltage drop across each set of non-bridged terminals for Input 4.					
PRI Voltage Drop: mV SEC Voltage Drop: mV					
The voltage drop must be less than 10mV . See <u>Appendix D</u> .					

CHECK ITEM	Yes	N/A
Call the local ARFFS station and advise them you are about to test the alarms.		
Stay of the line with the ARFFS station so you can commit they receive the alarms.		
Activate the Alarm on Input 1.		
Verify "ALARM Z1" appears on the ASE's LCD.		
Verify the ARFFS station has received the primary alarm.		
Clear the Alarm.		
Activate the Fault on Input 1.		
Verify "FAULT Z1" appears on the ASE's LCD.		
Verify the ARFFS station has received the secondary alarm.		
Clear the Fault.		
Activate the Zone Isolate on Input 2 .		
Verify " ISOLATE Z2 " appears on the ASE's LCD.		
Verify the ARFFS station has received the status.		
Clear the Zone Isolate .		

Firemon Alarm Signalling Equipment (ASE) Installation Checklist Technical Instruction

CHECK ITEM	Yes	N/A
Activate the alarm (PRI) on Input 3 .		
Verify "ALARM Z3" appears on the ASE's LCD.		
Verify the ARFFS station has received the alarm.		
Clear the alarm.		
Activate the fault (SEC) on Input 3 .		
Verify "FAULT Z3" appears on the ASE's LCD.		
Verify the ARFFS station has received the fault.		
Clear the fault.		
Activate the alarm (PRI) on Input 4 .		
Verify "ALARM Z3" appears on the ASE's LCD.		
Verify the ARFFS station has received the alarm.		
Clear the alarm.		
Activate the fault (SEC) on Input 4 .		
Verify "FAULT Z3" appears on the ASE's LCD.		
Verify the ARFFS station has received the fault.		
Clear the fault.		
Remove the ASE from test mode. Record the end date and time of the activity below.		
Date: Time:		

Installer's Signature:	Date:	
Comments:		

Note: Electronic submissions are not required to be signed.

Email this completed form to: arffsystemsupport@airservicesaustralia.com

16 Replacement ASE

Fire alarm systems are complex in design, and need to be maintained by the customer's reputable fire maintenance company that has expertise in this field. Whenever there is a fault with the fire alarm monitoring equipment, Airservices will notify the customers. The responsibility to rectify any fault / defect resides with the customer as the owner / occupier of the building. The installer/maintainer holds a stockpile of ASEs that are to be used to replace a customer's failed device. The process will depend on the failure mode. As a guide the process will typically involve:

- 1) The two SIMS are to be installed in the new hardware
- 2) The ASE Maintenance application and <u>Appendix A.1.4</u> procedures are to be used to load the ASE configuration.
- 3) <u>Section 11</u> checks shall be conducted and emailed to Airservices.

17 Replacement SIM

- 1) Contact Airservices arffsystemsupport@airservicesaustralia.com to order a replacement SIM.
- 2) Send faulty SIM to:

ARFFS System Support, Airservices Australia Alan Woods Building 25 Constitution Avenue Canberra ACT 2601

18 Misuse of Airservices SIMs

Airservices performs a monthly audit of SIM usage. If Airservices detects a SIM is being misused, Airservices will:

- 1) Notify the customer using the normal fault notification process.
- 2) Deactivate the misused SIM.
- 3) Send a replacement SIM to the customer.
- 4) Invoice the customer for the extra SIM charges.

19 ASE Decommissioning

Once an ASE is installed, a building permit from a registered building surveyor must be obtained to disconnect it. To decommission an ASE, a <u>Removal of Service</u> form must be submitted to <u>arfffirealarmmonitoring@airservicesaustralia.com</u>.

The following checklist is to then be completed. Email the signed form to arffsystemsupport@airservicesaustralia.com.

Installer's Name:				
Mobile Number:				
ASID Reference:	Device ID:	_		
Building Name:				
Building Address:				
The following checklist is to	o be completed by the Installer:			
	CHECK ITEM Ye	s	N/A	
Confirmation received from	Airservices that the ASE configuration has been cleared.			
Remove the ASE from the F	DCIE.			
Send the Telstra and Optus	SIMs to:			
ARFFS System Support Airservices Australia Alan Woods Building 25 Constitution Avenue Canberra ACT 2601				
Note: Airservices will de-acti	ivate the Telstra and Optus SIMs.			

Installer's Signature: _____ Date: _____ Date: _____

Note: Electronic submissions are not required to be signed.

Email this completed form to: arffsystemsupport@airservicesaustralia.com

20 Definitions

Within this document, the following definitions apply:

Term	Definition
ALM (alarm monitoring)	Fire Alarm
ARFFS	Aviation Rescue Fire Fighting Service
ASE	Alarm Signalling Equipment
AWG	American Wire Gauge
COM (relay / switch contacts)	Common
COM (port)	Serial communications port
DC	Direct Current
EOLRB	End Of Line Resistor Board
FCC	Fire Control Centre
FDCIE	Fire Detection Control and Indicating Equipment
FIP	Fire Indicator Panel Legacy terminology for FDCIE.
FLT (alarm monitoring)	System Fault
FTDI	Future Technology Devices International Limited
GPRS	General Packet Radio Service
HSDPA	High Speed Downlink Packet Access
ISO/DIS (alarm monitoring)	Isolated / Disconnected
LCD	Liquid Crystal Display
МСР	Manual Call Point
N.C.	Normally Closed
N.O.	Normally Open
PC	Personal Computer
POTS	Plain Old Telephone System
PWR (alarm monitoring)	Power Fault
RB	Resistor Board (See also EOLRB)
SIM	Subscriber Identification Module
SMA	SubMiniature version A
SPDT	Single Pole Double Throw
SPKL	Sprinkler
SPST	Single Pole Single Throw
USB	Universal Serial Bus

Term	Definition
USB-A	USB Type-A plug / port
USB-C	USB Type-C plug / port
WIP	Wireless Internet Protocol

21 References

Title

ASE Maintenance Configuration and Diagnostics Software for ASE and FSE Devices

Firemon Fire Alarm Signalling Equipment (ASE) Configuration, Integration and Commissioning

Romteck ASE CONFIG Operation Manual

ROMTECK RM3118 Alarm Signalling Equipment (ASE) Operation and Installation Manual

Romteck RM3119 ASE Installation Manual

Romteck RM3119 ASE Operations Manual

Appendix A How to Backup or Restore RM3119 Dual SIM ASE Configuration

A.1 ASE Config Software

A.1.1 External Customer Technicians

The latest version of ASE Config Software and Romteck RM3119 ASE Installation Manual are ordered via the <u>TI-0223</u> process

Note: ASE Config Software Version 1.15.0 or higher is required. Airservices recommends only installing the software on Windows 10 or later.

A.1.2 Initial Setup and Licensing

When connecting the **Romteck RM3119 Programming Adaptor** for the first time, ensure the PC / laptop is connected to the network, as Windows may need to download and install the appropriate USB-to-Serial FTDI driver. Once the driver is installed, the PC does not need to remain connected to the network.

- 1) On the PC / laptop, start "Device Manager".
- 2) Use a **USB-C** cable to connect the **Romteck RM3119 Programming Adaptor** to your PC / laptop.
- 3) Wait a few moments for Windows to retrieve and install the device driver.
- 4) Verify a new com port is listed under "Device Manager" => "Ports (COM & LPT)" called "USB Serial Port (COMX)" where "X" is the com port number. Note that if you connect the Romteck RM3119 Programming Adaptor to a different USB port, or another USB to serial adaptor is connected, the assigned COM port number may change.

ASE Config installs in **Express Mode** and requires a license to operate in **Unrestricted Mode**. Use the following procedure to license ASE Config.

- 1) Launch ASE Config.
- 2) Navigate to "Help" > "License Manager..." and select "Request License"
- 3) Save the generated **license request file** ".**Irq**" to the desktop.
- 4) Email a license request to <u>licenses@romteck.com</u> with the "**.lrq**" file attached.
- 5) Once Romteck respond with a license, save the attached ".lic" to your PC / laptop.
- 6) Navigate to "Help" > "License Manager..." and select "Install License".
- 7) Browse to and select the ".lic" file, then click "Open"
- 8) On the "**Confirm**" prompt, verify the details are correct, then click "**Yes**"

ASE Config must be pointed to the correct com port. Use the following procedure to set the com port number ASE Config will use.

- Navigate to "Setup" > "System Settings..." If you receive a "Com Port is not available" error, click "OK"
- 2) Select the "**Communication Settings**" tab
- 3) In the "**Com Port:**" dropdown, select the port associated with the **Romteck RM3119 Programming Adaptor** connected to your PC / laptop, then click "**OK**"

A.1.3 Saving an ASE's Configuration

- 1) Use a **USB-C** cable to connect the **RM3119 Programming Adaptor** to your PC / laptop.
- 2) Insert the Romteck RM3119 Programming Adaptor into connector "P6" on the ASE.
- 3) Start the **ASE Config** application.
- 4) Select "File" > "Add Device...".
- 5) Select "**Type 53: RM3119-WIP-WIP-ASE-F**" and click "**OK**". This will create and highlight a new device in the list.
- 6) Right-click the newly created device and select "**Connect**" If an "**Address Mismatch** ..." prompt displays, click "**OK**"
- 7) On the bottom left of the device window, confirm you see "Comms State: COMMS OK: ...".
- 8) On the top right of the device window, click "**Read Configuration**" You will be prompted to confirm. Click "**Yes**".
- 9) Verify you receive a "**Read configuration command completed successfully**" prompt. Click "**OK**"
- 10) Click the "Configuration" tab.
- The "LCD Title:" field will contain "DEVICE ###", where "###" is the Firemon Device Number. Copy this number.
- 12) Click the "Device Details" tab.
- 13) Update the "Firemon Device No" field with the number you copied in Step 11.
- 14) Update the "Building" field with the Firemon Device Number, building name and address. Important: The Firemon Device Number is added to the "Building" field as the ASE Config application currently does not allow the "Firemon Device No" field to be included in the filenames of exported devices.

Additionally, ensure the text in the "**Building**" field does not match any other devices' "**Building**" field in the ASE Config application. For instance, if you have multiple backups of the same device, add a date code to the field.

- 15) On the bottom right of the device window, click "Save Changes"
- 16) Close the device window.
- 17) Remove the Romteck RM3119 Programming Adaptor from connector "P6" on the ASE.

- 18) Select "File" > "Export All Devices...".
 Important: Do not use "File" > "Export Device" as it does not include sufficient meta data in the file name.
- 19) On the "Export All Devices" dialogue, click "Define fields..."
- 20) On the fields selection prompt, do the following:
 - a) Click "<<"
 - b) Select "Building (Prompt 1)" and click ">".
 - c) Select "Device Address (Conc_Module_Line_Drop)" and click ">".
 - d) Verify "Fields in file name" lists only the following in order: Building (Prompt 1)
 Device Address (Conc_Module_Line_Drop)
 - e) Click "OK"
- 21) Ensure the "Export Directory" field is set to
 "C:\ProgramData\Romteck\ASEConfig\Export\".
 Alternatively, select another suitable location to store the exported data.
- 22) Click "OK" and wait for the export to complete.
- Verify you receive a "Successfully exported all device data to:" prompt. Click "OK".
- 24) Navigate to "C:\ProgramData\Romteck\ASEConfig\Export\", or the alternative location you selected for the export in Step 21.
- 25) Copy or archive the zip file as per your company's policy.
- 26) If this backup is for an Airservices internal device, e-mail the zip file to arffsystemsupport@airservicesaustralia.com

A.1.4 Restoring an ASE's Configuration

Warning: **BEFORE** you proceed, ensure the Telstra and Optus micro-SIMs are **NOT** installed.

- 1) Use a **USB-C** cable to connect the **RM3119 Programming Adaptor** to your PC / laptop.
- 2) Insert the Romteck RM3119 Programming Adaptor into connector "P6" on the ASE.
- 3) Power on the ASE.
- 4) Start the **ASE Config** application.
- 5) Select "File" > "Import Device(s)..."
- 6) Navigate to the location of the device to import and select the zip file, then click "Open"
- 7) Confirm you receive an "Import Successful ..." prompt. Click "OK" The imported device will be highlighted in the list. Alternatively, sort by the "Device No" column and select the last device.
- 8) Right-click on the imported device and select "**Connect**" If an "**Address Mismatch** ..." prompt appears, click "**OK**"
- 9) On the bottom left of the device window, confirm you see "Comms State: COMMS OK: ...".
- 10) On the top right of the device window, click "Write Configuration"
- 11) Verify you receive a "Write Configuration command completed successfully" prompt. Click "OK"
- 12) Close the device window.
- 13) Remove the Romteck RM3119 Programming Adaptor from connector "P6" on the ASE.
- 14) Power off the ASE.
- 15) Install the Telstra micro-SIM into the onboard modem's micro-SIM socket.
- 16) Install the Optus micro-SIM into the offboard modem's micro-SIM socket.

Warning: Do **NOT** power on the ASE until it has been installed and wired into the FDCIE. The ASE will communicate back to the local ARFFS station once powered on.

Appendix B ARFFS Contact details

ARFFS Station	FCC Contact Number
ADELAIDE	(08) 8154 4010
ALICE SPRINGS	(08) 8958 4710
AVALON	(03) 5282 7010
AYERS ROCK	(08) 8956 1910
BALLINA	(02) 6618 7710
BRISBANE	(07) 3860 3210
BROOME	(08) 9194 3310
CAIRNS	(07) 4042 4910
CANBERRA	(02) 6243 2110
COFFS HARBOUR	(02) 6691 7610
COOLANGATTA	(07) 5590 2710
DARWIN	(08) 8920 4810
GLADSTONE	(07) 4973 5410
HAMILTON ISLAND	(07) 4948 5610
HOBART	(03) 6248 3410
KARRATHA	(08) 9183 6210
LAUNCESTON	(03) 6391 6810
MACKAY	(07) 4968 3010
MELBOURNE	(03) 9286 3110
NEWMAN	(08) 9130 7110
PERTH	(08) 9373 9210
PORT HEDLAND	(08) 9158 5910
ROCKHAMPTON	(07) 4930 7410
SUNSHINE COAST	(07) 5458 2910
SYDNEY	(02) 9556 5510
TOWNSVILLE	(07) 4759 1810
WHITSUNDAY COAST	(07) 4945 6910

Appendix C Notification Form 204 Explanations & ASE Status Screen

Refer to Section 3.7 "Viewing The LCD" in the Romteck RM3119 ASE Installation Manual.

Appendix D Notification Form 204 High Number of FDCIE Faults

If a high number of FDCIE faults are being reported, do the following:

- 1) Check if the FDCIE is generating the faults. Take corrective action on the FDCIE if necessary.
- 2) Inspect the wiring between the FDCIE, resistor board and ASE. Check for signs of moisture, corrosion, or other damage. Check for loose or incorrect terminations. Replace, re-terminate, and properly secure the wiring as necessary.
- 3) With the ASE connected to the FDCIE and powered on, use a multimeter to measure and record the voltage drop between each pair of input terminals on the resistor board. Perform the measurements while the associated FDCIE relay contacts are in the Normally Closed position. If the voltage drop on a pair of input terminals is greater than 10mV, clean the relay contacts or install a replacement relay if necessary.



This page is intentionally blank