





Table of Contents

03 Summary

03 Overview of Commissioning Process

04 Commissioning process outline

05 Roles and Responsibilities

06 Supporting Documents

07 Requirements for System

08 Representative Contacts

Summary

This Commissioning Plan provides the details for the install and commissioning of the Stanilite Nexus RF Emergency Lighting system and what will be involved at each step throughout the project.

- This commission plan outlines and describes the commissioning process that is used by Electrical Supply Corp for the Nexus RF System.
- This plan identifies the roles and responsibilities of each party throughout the duration of the project.
- This plan will preview and explain the documentation that is used throughout this process.

This plan will not include details of using the Nexus RF system, for any explanation on the use of the system please consult the ABB product manuals or consult an Electrical Supply Corp representative to arrange a training session.

Overview of Commissioning Process

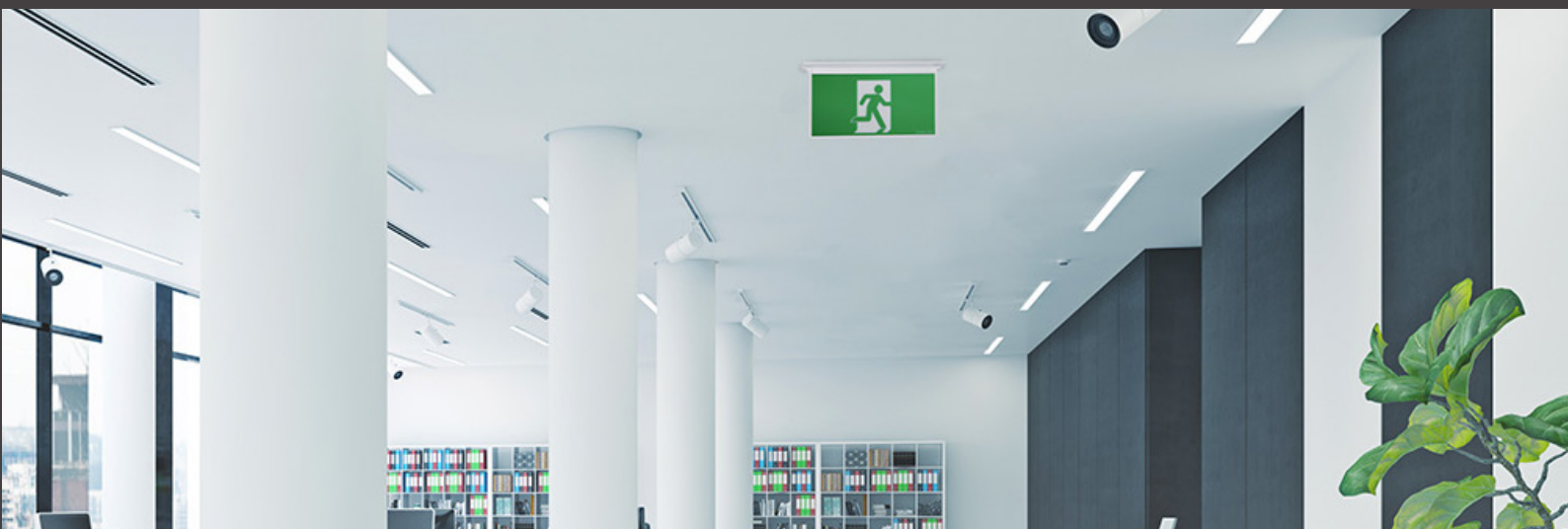
The commissioning of the Nexus RF system is the process of programming the records gathered by the electrical contractor onto the system so the fittings shown on the system accurately reflect the information produced on the As-Builts.

The Nexus RF System is a wirelessly communicating emergency lighting system that is comprised of two main components, the fittings and the controller/router units. Once the fittings are provided power they will begin to broadcast their RF signal and begin to communicate with other fittings and router units in the “fluid-mesh” communication protocol they have been programmed with. The routers will be connected together over the buildings data network. Electrical Supply Corp will liaise with the Electrical Contractor around the networking requirements so it can be raised through the job project management channels, while applying for these it is our usual process to also apply for a remote access into site. A remote access is essential for an efficient handover as numerous site visits should not be required and the system can be snagged and refined remotely. A remote access also has the benefit of providing an easy, future proofed way of providing site support and remote service through the life of the system.

Once the job is at a sufficient stage an Electrical Supply Corp representative will head to site to program the routers and do the preliminary commissioning of the system. If there are any outstanding issues remaining after the representative has left site these will be completed remotely via the remote access.

The commissioning of the system is matching the unique MAC address identifiers with their SPUID or location reference number. The SPUID's will be set up at the beginning of the job by Electrical Supply Corp as part of the preliminary planning. These SPUID numbers will be marked on the construction drawings and used as reference throughout the install.

Once the system is ready to be handed over documents will be provided showing the Test Result, Date and Running Duration for each fitting, this will accompany any other site documentation needed.



Nexus RF Commissioning Process Outline

Preliminary Phase

1. Electrical contractor contact details are given to Electrical Supply Corp by wholesaler as order is confirmed.
2. Contact is made to the contractor by an Electrical Supply Corp representative
3. Details are given to the contractor regarding the function and operation of the Nexus RF emergency lighting system, how the work on site will need to be carried out, what resource will be provided to the contractor and where the responsibilities for each party lay.
4. Original Lighting plans will be provided to Electrical Supply Corp.
5. Emergency Light Fittings will be numbered with SPUID reference number by Electrical Supply Corp and returned to contractor along with record keeping spreadsheet and any other documents relevant to the job.
6. Controller/Router units will have their install location specified if this has not been built into the provided plans.
7. Contractor will pass on contact details for contractors controlling the Data install and the IT management for Electrical Supply Corp to assist with the install of the network ports for the router/controller units.

Construction Phase

1. Electrical Supply Corp to liaise with Data and IT contractors to ensure provisions for Controller/Router units are included during construction and the IT management team are setting up for the routers to connect over the Building Data Network.
2. Electrical contractor to install fittings and keep MAC Address records as per Electrical Supply Corps instructions.
3. If any variations of the plans are issued during the build that effect the Emergency Lighting Layout Electrical Supply Corp to be notified and provided plans so that the appropriate changes can be made.
4. Communication to be kept during this phase to provide further information regarding handover dates and progress on the job.

Commissioning Phase

1. Once a handover date has been finalised the Contractor will need to inform Electrical Supply Corp representative of the date and provide status of job progress.
2. When the requirements to commission the Nexus RF system are fulfilled Electrical Supply Corp will book a trip to site to commission the system, Please note that a minimum 2 week notice is required before any site visits are booked in.
3. Once the commissioning has been completed and all faults cleared Electrical Supply corp will issue the documentation requested to assist with the handover of this system.

Defect Liability Phase

1. For the follow 12 months post completion Electrical Supply Corp will carry out the 6 monthly testing and reporting for site to help with the building sign off. After this date a handover to the Facilities Manager will take place.
2. Any repairs or replacement of fittings during this 1 year period will be arranged through the site contact. Electrical Supply Corp will liaise with contractor to resolve any faults that may arise on system following these DLP Repairs.



Roles and Responsibilities



Electrical Supply Corp

- Works in with the Electrical Contractor to commission the Nexus RF System as a whole.
- Liaises with Key Contacts throughout the project to relay the requirements of the system.
- Tracks progress throughout the job and ensures that all requirements are being fulfilled to allow for functional system.
- Creates supporting documents throughout the job to record key details about the Nexus RF system and its components.
- Pre-number emergency lighting construction drawings with the SPUID reference number, please note that this will include the numbering of initial construction drawings and any variations will be amended onto these initial drawings. N.B any additional documentation required (i.e numbering As-Built drawings post-handover) will be seen as an extra and a charge may be incurred for undertaking this extra work.
- Produces commissioning file for system from Contractors As-Installed MAC address records.
- Creates fitting tracking report for commissioning status of project and handover.
- If required can produce a direct test report from system.
- Carries out DLP testing for 1 year post completion.
- Supports System throughout lifetime of product, including training, documentation and anything else that may be required.



Electrical Contractor

- Works in with Electrical Supply Corp to commission the Nexus RF System as a whole.
- Communicates with Electrical Supply Corp around projects timeline and provide Construction Drawings at the beginning of the job.
- Keeps contact with Electrical Supply Corp around any variation to the lighting plan that affects the Emergency Lighting Layout.
- Accurately records the MAC address of the fittings that are installed.
- Inspects and remedies any fault recorded on Electrical Supply Corps Tracking Report.
- Liaises with Project Manager to raise any requests or queries, passes on contact details where applicable
- Records any details related to the physical networking of the routers.



Project Manager

- Mediates between contacts on job as needed.

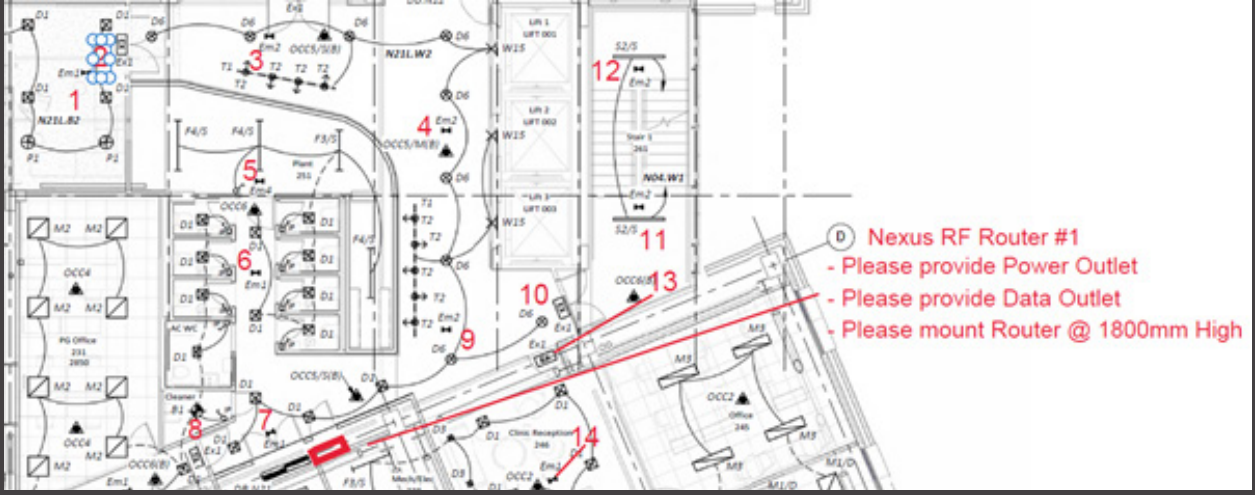
End User

- Receives system, documentation and training of their Nexus RF System

Engineer

- Creates specification and job designs.
- Liaises with Electrical Supply Corp around Emergency Lighting design or Producer Statement documents if needed.

1.



D Nexus RF Router #1
 - Please provide Power Outlet
 - Please provide Data Outlet
 - Please mount Router @ 1800mm High

An Example of how Electrical Supply Corp will prenumber the SPUID numbers of the emergency light fittings onto the construction drawings, also shows the specification of one of the routers.

3.

						Total Fitting Count		
						Fault Count		
						Faulty Percentage		
For any questions or issues during installation, please contact: Jake Keller -027 204 0047 or jake@electrical.co.nz						Nexus RF Sample Site		
Luminaire Part number	Luminaire Battery code	MAC address	SPUID	Building Area	Position	Floor	Area	DWG
SFNRF1LEDP	0301301P	8ABE2F00	1	Nexus RF Sample Site	On Landing	Ground	Lobby	EML01-E05-100
PQFNRF1LEDP	0301302P	E0F82D00	2	Nexus RF Sample Site	Above Entry Door	Ground	Lobby	EML01-E05-100
SFNRF1LEDP	0301301P	AAB2E00	3	Nexus RF Sample Site	By Entry Door	Ground	Lift Lobby	EML01-E05-100
SFBNRF1LEDP	0301301P	30BA2F00	4	Nexus RF Sample Site	In front of lifts	Ground	Lift Lobby	EML01-E05-100
	-		5	Nexus RF Sample Site	Entrance to Toilet Block	Ground	Toilet Block	EML01-E05-100
SFNRF1LEDP	0301301P	36C72F00	6	Nexus RF Sample Site	Main Corridor	Ground	Toilet Block	EML01-E05-100
SFNRF1LEDP	0301301P	E2B42F00	7	Nexus RF Sample Site	By Switchboard Cupboard	Ground	Lift Lobby	EML01-E05-100
PQFNRF1LEDP	0301302P	67942E00	8	Nexus RF Sample Site	By Switchboard Cupboard	Ground	Lift Lobby	EML01-E05-100
SFBNRF1LEDP	0301301P	15912E00	9	Nexus RF Sample Site	Exit to Stairwell	Ground	Lift Lobby	EML01-E05-100
PQFNRF1LEDP	0301302P	COE52F00	10	Nexus RF Sample Site	Exit to Stairwell	Ground	Lift Lobby	EML01-E05-100
SFBNRF1LEDP	0301301P	B2BE2F00	11	Nexus RF Sample Site		Ground	Stairwell	EML01-E05-100
SFBNRF1LEDP	0301301P	EDA82E00	12	Nexus RF Sample Site		Ground	Stairwell	EML01-E05-100
PQFNRF1LEDP	0301302P	E0EB2F00	13	Nexus RF Sample Site	Above Entry Door	Ground	Clinic Reception	EML01-E05-100
SFNRF1LEDP	0301301P	EDB52E00	14	Nexus RF Sample Site	Centre Ceiling	Ground	Clinic Reception	EML01-E05-100

An example of the Tracking Report generated throughout the commissioning for test results and fitting Status. N.B All information under the yellow header is replicated from the "Commissioning Information Spreadsheet"

4.

For any questions or issues during installation, please contact: Jake Keller -027 204 0047 or jake@electrical.co.nz									
Nexus RF Sample Site Router Details									
Nexus ID	IP Address	MAC Address	Building	Level	Area	Location	Data Port	Switch Port	
1	172.31.145.10	7C:01:0A:A1:27:A4	Nexus RF Sample Site	Ground	Lift Lobby	DB Cupboard	FD-G / 33	CPH8-3650(10.98.3	
2	172.31.145.11	7C:01:0A:A0:F0:27	Nexus RF Sample Site	Lv 1	Lift Lobby	DB Cupboard	FD-1 / 14	CPH8-3650(10.98.3	
3	172.31.145.12	7C:01:0A:96:29:1C	Nexus RF Sample Site	Lv 2	Lift Lobby	DB Cupboard	FD-2 / 08	CPH8-3650(10.98.3	

Documentation

2.

Nexus RF Sample Site									
Unit Type	MAC address	SPU_ID	Position	Floor	Area	DWG	Grid Ref	DB	Circuit
EM1	8ABE2F00	1	On Landing	Ground	Lobby	EML01-E05-100	A / 1	DB1001	R2
EX1	E0F82D00	2	Above Entry Door	Ground	Lobby	EML01-E05-100	A / 1	DB1001	R2
EM2	AAB2E00	3	By Entry Door	Ground	Lift Lobby	EML01-E05-100	B / 1	DB1001	R2
EM2	30BA2F00	4	In front of lifts	Ground	Lift Lobby	EML01-E05-100	C / 2	DB1001	R2
EM4	320D3000	5	Entrance to Toilet Block	Ground	Toilet Block	EML01-E05-100	B / 3	DB1001	R2
EM1	96C72F00	6	Main Corridor	Ground	Toilet Block	EML01-E05-100	B / 4	DB1001	R2

An Example of a completed Commissioning Information Spreadsheet. N.B on site the MAC address column would ideally have the Barcoded MAC address stickers from the fittings instead of handwritten numbers.

13	OK	Fault Status's	Action Needed
	Pending	Failed Discharge	Replace Battery
2	F Failed	Faulty Connections	Inspect battery/head connections
	Offline	Faulty Unit	Replace Fitting
15%		Unit Offline	Check Power/Replace fitting

Grid Ref	DB	Circuit	Commission	Initial test resu	-> Test Date	Fault Status	Action Needed
A/1	DB1001	R2			25/02/2020		
A/1	DB1001	R2				Fitting not tested	ESC To test
B/1	DB1001	R2			25/02/2020		
C/2	DB1001	R2			25/02/2020	Fitting Currently Offline	
B/3	DB1001	R2				No MAC address recorded	Install Fitting/Get MAC address
B/4	DB1001	R2			25/02/2020		
C/4	DB1001	R2		Fail	25/02/2020	Faulty Head	Inspect/Replace Head
B/6	DB1001	R2			25/02/2020		
C/3	DB1001	R2			25/02/2020		
D/3	DB1001	R2		Fail	25/02/2020	Faulty Connections	Inspect battery/head connections
E/1	DB1010	W3				Fitting not seen on System	Check Power, MAC address and Aerial Connection
E/3	DB1010	W3				Fitting not seen on System	Check Power, MAC address and Aerial Connection
D/5	DB1001	R2			25/02/2020		
D/6	DB1001	R2			25/02/2020		

Requirements for the Nexus RF System

- Accurate Record keeping of MAC address information.
- Open communication of all parties throughout install.
- Access to the Building Data Network to network routers together.
- Remote Access into Buildings Data Network if possible.
- Proper install of all aerials and associated components of Nexus RF Emergency Lights.
- Power and Data outlets at each router location.
- Original Plans provided to allow SPUID numbering.
- Co-operation to fault find and snag site

	Gateway Address	Subnet
5.33) / 18	172.31.145.1	255.255.255.0
5.34) / 12	172.31.145.1	255.255.255.0
5.35) / 06	172.31.145.1	255.255.255.0



Electrical Supply Corp Representative Contacts



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