

Thursday, February 1, 2018

NBN And Emergency Lift Phones, Alarms, And Other Fixed Diallers

Emergency phones like those in Lifts, and Security Alarm Systems with back to base monitoring are also affected by the NBN changeover and cut-offs, therefore building owners and managers need to start considering what action they need to take, even if the NBN is not as yet active in your area, it likely won't be that far off, so you'll need to start planning for the changeover, it's also beneficial to change earlier, cheap PAYG mobile plans are more economical for standby emergency and idle telecommunications than PSTN line rental. As for Alarms, many B2B providers supply you with a SIM that includes all signal calls in your monthly B2B plan.

This process is not as daunting or expensive as it might sound, for example, with Lifts, you're not going to need lengthy and costly service calls, or have downtime to change over the panels, because the system stays the same, it's only the external part, on how it talks to the outside world, that changes. These systems are intelligent, with a lot of electronics behind them, as part of that, the system is pre-programmed by the Lift company on who to call in the event of emergency call button activation. These systems usually have a phone lead from them plugged into a telecommunications outlet on a normal PSTN phone line, just like your home phone, as this example shows. In the current set up, when the call button is pressed, it automatically dials the pre-determined phone number which usually is the Lift or Security company, it's exactly like if you pick up a normal phone and hit a stored number memory button. Most Alarm Systems with B2B monitoring operate the same way, all you need to do is make sure it's plugged into a working PSTN line.

And therein lies the problem, the PSTN line, it is the existing copper telecommunications network, which gets completely switched off 18 months after the area is formerly NBN ready. To get around this we need to go wireless - with a 3G or 4G dialler gateway - please, do not consider using VoIP for such critical infrastructure, somebody's life, maybe your own, may one day depend on that call button on a Lift, or panic button on your Alarm getting through to someone, help can't come if your internet is down, or high jitter because your Internet is lagged out, or worse, it's on FTTN technology.

NBN (see PDF) recommends cellular (3G, 4G etc) diallers be used for Lifts, Security, and Fire Alarmed Systems, as there is no battery backup on FTTN/FTTB/FTTC, and very limited backup on only some FTTP installs. Reliability is key, and WH&S Laws covering Lifts and Fire must also be consulted.

To overcome the PSTN line problem you first need to purchase a 3G dialler, the most commonly used unit is the Ness 106-249 3G single line dialler, this unit ranges in cost from around \$160 to \$200, so shop around. At around 18*12*4 cm, it's small enough to fit inside most Lift Control units, it also includes a backup battery capable of powering the unit for two or so hours, which although not appearing to be very long, should be ample time - let's face it, if you're stuck in a Lift, you're not really going to sit around for a couple of hours before calling for help. This unit also has an operating temperature range of 0-50°C, and is suitable for humid environments, making it the perfect fit for all Australian climates. Larger capacity multiple line units are also available from other manufacturers such as Aristel.

Next, purchase a SIM Card compatible with a 3G network, choose a cheap minimum value PAYG plan with a well established provider (so you know they'll still be around in years to come), you could use pre-paid, but I don't advise it, you don't want to be cut off for out of credit or past expiry if you didn't activate auto-renew, and most Telcos don't send warning Emails, just SMS's, which is pretty pointless since nobody gets them. There are however established companies that specialise in M2M (Machine to Machine) SIMs that are very well suited for Lifts and Alarms, one such example is M2Mone who at time of writing have very cheap PAYG plans at \$1.50 per month, plus per second timed calls, works out to be around 69c a minute - perfect for Lifts and Alarm Systems that mostly sit idle. As touched on earlier, for a B2B Security Alarm, talk to your B2B company first, most have special SIMs and deals.

Setting up the Ness device is as easy as inserting the SIM into the dialler, plugging in its external antenna, then unplugging the phone lead coming from your Lift Control unit from the phone wall outlet, and plugging it into the phone socket at the rear of the 3G dialler, power it up, and you're good to go.

Your new 3G set up now looks something like this...

A few side notes...

Blog Export: Noel's Muses, <http://blog.ausics.net/>

Make a note of the date the dialler was installed, as with everything with batteries, they need to be replaced eventually, so at the very least, get them tested every twelve months.

Some Lift systems may have their phone cabling hard wired, in this case, you'll need to seek out a Registered Cabler to sort it out for you.

The dialler doesn't have to be located in or even next to the Lift Control system, if the existing phone line is currently wired to an MDF, the dialler can be connected down there, or anywhere in between, for convenience and/or security. If this is for a Security Systems, before you go out and get any of this, it's possible your system is already capable of 3G services, either right now, or through purchase of a module or licence upgrade (yeah, I too despise these licence upgrade paths, someone's always out to rip us off every way they can).

If you're considering replacing or upgrading your entire Security System, you need to ensure it's 3G or 4G capable, if you need, or think one day you might need, back to base monitoring.

As for monitored Fire Alarms, you need to talk to your Fire Alarm Service Provider, your equipment may be under maintenance contract to be replaced by them, else discuss using a 3G or 4G dialler, such as above.

Hope this explains what needs to change for your Lifts and B2B Alarms. If you have other fixed dialler uses, like Doors, or Taxi phones, you may get away with using VoIP/SIP, but don't take any chances with services that may potentially save a life.

Usual Disclaimer: I have no direct relationship with any equipment manufacturer or cellular provider, I offer suggestions and examples based on what is known to work, and at fair and reasonable prices.

Posted by NoelB at 17:53

Gday Noel,

Do you know whether anyone can install this device, seems pretty plug and play.

or

Does it have to be a sparky or lift company?

Advice would be much appreciated!

Anonymous on Aug 16 2018, 11:06

Hi Ryan,

I can not see any requirements for an ACMA approved registered cabler (not all, in fact most sparkies, are not authorised to do data/telco cabling work as they are not registered cabler - their sparky tickets don't cover them for telco/data stuff) or lift company to do this work, since you are unplugging from a wall jack, and plugging into this device instead, one thing the article should have emphasized though is to test, test, and re test your outbound emergency call system to ensure each call gets out, if you have problems getting through, even though you have good signal, then you might need to check with your lift company, you can also test it by plugging an analog phone into it and calling someone, even your mobile.

Check your insurance policy/company as well, especially if you are installing this in a multi tenanted building, can't see there being any problems though, since once they cut off your copper service, you have to 'call out' somehow and everyone seems to be going 3G or 4G. They might have something in your policy about emergency call, so pays to check, do not consider any of this legal advice, only technical

Anonymous on Aug 16 2018, 16:26