

Introducing the new extended use battery for your battery operated Talk thru.

Norcon now has the extended use battery powered talk thru. It features a lithium-ion (Li-ion) battery, which is an advanced battery technology that uses lithium ions as a key component of its electrochemistry.

Compared with traditional battery technology, lithium-ion batteries charge faster, last longer and have a higher power density for more battery life in a lighter package. It enables the user to have more operation time on a single charge, when compared to earlier Ni-Cd battery.

Li-ion batteries have a number of advantages. They have one of the highest energy densities of any battery technology as of today. Li-ion batteries have no memory effect, a detrimental process where repeated partial discharge/charge cycles can cause a battery to 'remember' a lower capacity. This is an advantage over Ni-Cd, which display this effect. Li-ion batteries also have low self-discharge rate (discharge without use).

Charge your lithium-ion battery whenever you want. There's no need to let it discharge 100% before recharging. Lithium-ion batteries work in charge cycles. You complete one charge cycle when you've used (discharged) an amount that equals 100% of your battery's capacity — but not necessarily all from one charge. For instance, you might use 75% of your battery's capacity one day, then recharge it fully overnight. If you use 25% the next day, you will have discharged a total of 100%, and the two days will add up to one charge cycle. It could take several days to complete a cycle.

The capacity of any type of battery will diminish after a certain amount of recharging. With lithium-ion batteries, the capacity diminishes slightly with each complete charge cycle. Lithium-ion batteries are designed to hold at least 80% of their original capacity for a high number of charge cycles, which varies depending on the use.

In view of the amount of energy stored in lithium ion batteries and the nature of their chemistry, etc., it is necessary to ensure that the batteries are charged in the appropriate manner and with the appropriate charger and equipment. Our extended use Lithium ion battery pack include various mechanisms to prevent damage and danger. These include a built in monitor and charging board. The charging board has presets for voltage and current calibration. These presets are calibrated in the factory for optimum safety and performance.

Tampering and or changing the presets will nullify warranty and will compromise safety of these high performance battery pack.

Frequently asked questions about Li-ion battery in your talk thru:

1. What is the difference between lithium ion battery and nickel-cadmium battery?

NiCad cells used a nickel-hydroxide cathode and a cadmium-hydroxide anode. The electrolyte consisted of potassium, sodium, and lithium hydroxides. NiCad cells were rechargeable and delivered a nominal 1.2 V.

In Li-ion cells, the anode is graphite and the cathode is a compound of lithium and some other metal. The electrolyte is a mixture of organic carbonates. Fully charged, the output of a single Li-ion cell is approximately 4.2 V.

2. Which type of battery is better?

Even though each type of battery has its own advantages and disadvantages, Lithium-ion (or Li-ion) batteries are smaller in size, require low maintenance and are environmentally safer than **Nickel-cadmium** (also called **NiCad** or **Ni-Cd**) batteries. While they have similarities, Li-ion and NiCad batteries differ in their chemical composition, environmental impact, applications and costs.

3. How is the Li-ion battery better in my talk thru unit?

The Ni-Cd battery being used was rated for 1000 mA/h. The new Li-ion battery is rated for 2500mA/h.

In terms of charging frequency, if you were charging your talk thru every day, you will now have to charge every three or four days approximately (depending on use). The new battery has three times more capacity than the earlier Ni-Cd battery. As before, the red led on the control panel will indicate the level of remaining charge in your battery operated unit. As the red led becomes dimmer, the unit will need to be charged. **Never let the red led go out completely**. Doing so may damage the battery permanently. Plug in the charger as the red led gets dimmer.

4. What is the life of the Li-ion battery pack?

The life of the battery pack is rated to be greater than the Ni-Cd battery pack (if used correctly).

5. Can I still order TTU-1DX with Ni Cad batteries?

No. The Ni-Cad batteries are discontinued due to availability issues.

6. How will I replace my existing Ni Cd battery unit ?

We can retrofit the older unit. It will require additional hardware and charge management control board which will have to be done in the factory.