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NFC Ring - One Smart Ring, Unlimited Possibilities



The NFC Ring can be used to unlock doors, mobile phones and to transfer information and link people.

Visit NFCRing.com

Created by
John McLear

7,665 backers pledged £241,947 to help bring this project to life.

 **Last updated** [August 31, 2015](#)

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Funding period

Jul 20 2013 - Aug 19 2013 (30 days)

NFC Ring

Bradford, UK Technology

£241,947
pledged of £30,000 goal

7,665
backers

Story

We will be asking for your ring size in the survey once Kickstarter has finished.

The NFC Ring can be used to unlock doors, mobile phones, transfer information and link people. Best of all the NFC Ring glides right onto your finger - no updates, no charging, and no fuss.



Single Ring Close up



Reviews

Thank you very much, we appreciate all your support including reviews and sharing on social networks, without you we can't get this project to the place we all want it to be.

Melissa Fassbender and Eric Sorensen did a [hilarious video that is well worth watching](#).

[the-gadgeteer.com](#): We sent Julie one of our first prototypes of the NFC Ring and [here's what she had to say about the NFC Ring](#).

[nfcbrief.com](#): [Here's what NFC Brief Had to say about the McLearn NFC Ring](#), includes some great video reviews and exclusive pictures.

Russell Holly from [Geek.com](#) [did a hands on report of the Alpha NFC Ring that includes a video](#). Really worth a read and watch!

[fastcompany.com](#): [Here's what FastCompany had to say about the NFC Ring](#)

[gizmag.com](#): [Will Shanklin did a great write up for GizMag](#)

[techcrunch.com](#): [Natasha Lomas did a great write up for Techcrunch hopefully giving Apple a little nudge and really does a great job of explaining the available options](#).

[Dieter Jirmann wrote a piece in German/Deutsch about the NFC Ring](#)

[gizmodo](#): [Adam Clark Estes covered the NFC Ring in Gizmodo](#)

[Washington Post](#): [Emi Kolawole did a write up for the Washington Post](#)

[RackSpace](#): [Rackspace are offering 100\\$ for anyone who can hack the NFC Ring at DEFCON and we did a blog post with some suggested exploits](#)

[Radu Tyrsina did a good write up on Technology Personalized](#)

[Ryan Whitwam Android Police did a very visually appealing write up that explains the convenience of the NFC Ring](#)

Karl Dyer did a great review on the [NFC Ring for NFC World](#). We're huge fans of [NFC World](#) and use it as our go to source for [NFC industry news](#).

Mark Roberti at [RFID journal](#) did a [nice write up that includes a quote from John about how he hopes the ring starts a revolution](#)

[Nice video thoughts by Leo Laporte and Steve Gibson on the Security Now podcast](#). Plenty of "ooooh" going on! Thanks to Josh for the head nod about this.

Chris Burns of [SlashGear](#) did a [nice write up about the NFC Ring](#)

Megan Wollerton of [DVice](#) appreciated [John's phone unlocking skills in their coverage](#).

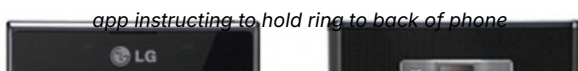
[Enter.co did a nice article for our Spanish speaking friends](#).

Meredith Popolo [did a nice write up for PC Mag that includes a poll to vote if you would have an NFC Ring](#)

Unlock your smart phone or tablet

When you take your phone out of your pocket, just slide your hand under and the NFC Ring will unlock it. It couldn't be more simple! A third party application is required for this, various exist so you can pick your own from the Google play store.

<https://play.google.com/store/apps/details?id=co.mclearn.nfcring&hl=en>





Privacy is paramount

The NFC Ring comes with two inlays, public and private so you can keep personal information as private as you want.

**Want to be able to use your ring to open
your house?**

No problem. Just grab yourself an NFC enabled door lock, install it and you will be ready to go!

Share & transfer information

You can use your NFC Ring to share WiFi information, links to websites, contact information or whatever you think is suitable to be passed securely to your friends, smartphones and tablets. Your NFC Ring can also be used to start apps with custom settings (parameters), making it a really easy way to personalize the app experience to match your ring.

Your idea here

Unleash your own ideas for how to use the NFC Ring.

No charging required

The NFC Ring never needs charging, ever.

The NFC Ring's components



Ring Components and Structural Make up

An older ring without an inlay cover



Removed inlay cover shows NFC inlay

Our journey so far

We have been working on developing the NFC ring for over a year, our product was invented by John McLear to automatically unlock his mobile phone and to make jewellery practical. Ultimately, John knew at some point in his life he was going to have to wear a ring, and he wanted the ring to be practical, but personal. We started prototyping on a 3D printer using Tinkercad to create renders.



Some of the prototypes developed over the development period

Metal and RFID was the biggest problem we faced when developing the ring. Naturally metal absorbs the RFID signal from the antenna which means that induction fails and so does the ability to communicate with the ring. After several months of research and development John realised how to solve this problem by using an intermediate layer between the Ring and the inlay. The next problem was to source a thin enough intermediate layer.

Following a number of trips to China later we had sourced a 13mm intermediate layer and put together our first prototype. Five prototype rings were ordered and distributed to fellow tech enthusiasts, and that was when we discovered issues with the style, fitting and security. A few months later the style issue was addressed by allowing the NFC Ring owners to customize their own style and also by providing a set choice of colours.

A few months after that the problem of security was resolved by adding an additional inlay opposite the original inlay. This solves the security issue by creating an interference area stopping any powerful antennas being able to complete a full induction process and by using different hand gestures for different actions (closed fist for public, open hand for private).

Comfortable fitting took a long time and a lot of money to solve. The issue with the inlays was that the thinnest inlay on the market at the time of initial development was 12mm. This meant the ring was 13mm wide. This was incredibly uncomfortable as the ring is designed to be worn permanently such as a wedding band. Five very expensive prototypes later we had developed our own 6mm NFC Inlay, we decided on the NTAG203 chip because it was actually an NFC chip unlike some of the cheaper alternatives being used in the market.

So now we stand, ring in hand, production lined up, what we need now is a community of backers to start using the ring and spread the word!

Software

All of our software is open source, developed in Apache Cordova. As a side project we also contributed to various Cordova modules hopefully making future Cordova projects easier to implement. [John wrote about his development experience](#) should you be interested. [All of our repos are publicly visible on Github](#) and we're really keen to get early adopters as involved as possible to get things moving!

The future

Creating an open source platform will enable third parties to adopt the NFC Ring and consider making their devices NFC ready. Our end goal is to produce a ring that will make your day to day life better. We envisage being able to use your ring as a pedometer and to monitor your heart rate, we have [big plans](#) for the future and we would like you to be part of our journey.

3D print your own

We believe in sharing as much information as possible so we also publish useful links to documentation and other reference points on our [Github organization site](#). This includes 3D models so you can customise and 3D print your own ring at home!

What we're raising funds for

Mass producing the NFC inlays at such a small size and that can be read whilst surrounded by metal is expensive. Our MOQ (Minimum Order Quantity) is 10,000 units. Because we have been working on this secretly for 12 months our prototyping is complete. We know what does and doesn't work so now we just need funds for the mass production run.

How we're making the ring and getting it to you

Naturally when developing any new product the largest time is taken up in R&D and connecting suppliers/manufacturers and other stakeholders. So we approached the development of this company as we would approach the development of a web app. This meant we introduced high availability and scalability right from the start. It feels good to know that should one supplier be unable to grow as our demand increases, we have a second that can easily help facilitate our needs.

So what is the process?

Once our kickstarter is successful you will receive an email. This email will include a link to a page where you will be asked to take a photo of your hand holding a magnetic strip, like on a credit card. Don't worry, we don't keep these images or use them for payment. We do this so we can measure the size of the finger you want your ring to be on. If you don't have a webcam you can always use another means to find your ring finger size and enter it manually.

You will also be asked any product-specific questions such as what colour inlays you would like and if you have chosen a custom inlay design we will ask you to email your design through. Details will be provided based on the size of your ring.

During the delay between Kickstarter finalizing, assuming we hit our target, we will place the order with our RFID supplier and we will run our first MOQ inlay run of 100k Units. The lead time on these is a few weeks so during that period we will begin manufacturing inlay covers, rings and RFID reflective material. We have a 30 day credit account with this supplier so we can place the order early on to avoid delays on funding clearance.

Three weeks after Kickstarter finalises, we should have the inlays, inlay covers and reflective material ready to start manufacturing the first run of rings. Our minimum run will be 1000 units and will take roughly two weeks to complete. All of our factories and production is in China, they have already done practise shipping runs between each other to ensure they can handle the distribution requirements of our project.

Our Kickstarter funds should clear 4 weeks after the campaign finishes, at this point depending on how much we clear we will either manage completion from China or from the UK.

We are working with a ring factory that has a proven track record at delivering Kickstarter projects, this factory is responsible for taking orders, manufacturing the ring shape, cutting the covers and reflective material to size, inserting the components into the ring and sealing with the coating. The factory will also be responsible for any custom printing and engraving requested.

We're using a distribution provider CritSuccess, in the US to serve the Americans. CritSuccess has a track record at delivering on Kickstarter projects similar to this one. We are handling Europe distribution from the UK and Asia distribution from China.

Depending on scale we expect it will take up to 4 weeks for the rings to ship from China to the US. We have spoken to our importers who have assured us there are no issue importing this technology.

So assuming four weeks for production, four weeks for shipping and then a further one week for handling you should have your ring in late October, ready in time to wrap it up and get it ready for a stocking :)

Known Limitations

The normal NFC Ring does not work with The BlackBerry Z10 this phone you will need an alpha size ring. This is due to the way that the S4 and Z10 NFC chip-set and where RIM/Samsung place their antenna in their battery making it impossible for those phones to read small NFC Inlays consistently.

UPDATE: SAMSUNG ISSUE SOLVED! I'd still recommend having an Alpha and a Normal as it isn't great. BlackBerry is unsolvable, yay RIM.....

UPDATE PT II: We're working with Broadcom to try to come to a final resolution on this, it's a complex problem due to the number of factors that can affect performance.

Each phone has a sweet spot where the NFC Ring will work, find it and place your sweet spot sticker here.

The Nexus 7 Tablet has a known bug with initializing the camera for scanning QR Codes, when you try to use a QR code it will crash the app. You can still create actions locally though.

The Alpha Male Ring is really only for chaps with big fingers, because of it's large size normal size hands will look dwarven or hobbit like, further side affects include taking the longest possible route everywhere and having deranged company on your travels.

We ship all NFC Inlays unlocked, so it may be that at some point we

decide to send an update to your app that sets them to locked open, this is to stop someone writing a malicious NDEF record to your ring and locking it in that state.

Hat Tip

Various people have helped us along the way especially:

[Amal at dangerousthings.com specializes in NFC and RFID implants.](#) We worked together to develop the NFC Technology and sourcing various partners and components. He has a range of Implants and while we don't prefer implants you might so check his site out. What that man has done to his body in the name of this project is beyond all of our efforts.

[The Apache Cordova Team.](#) The Cordova team amazing at supporting us in implementing various plugins and bug-fixing issues and also their work on Cordova 3 has been fantastic.

Don C at [Chariot Solutions](#) - Don Wrote an amazing cordova/phonegap NFC plugin. He's also a good guy, good guy Don is good guy.

Our Investors, who you know, funded everything. John and Matt, John also built the project from nothing.

Our [Press release author, Gareth Halfacree](#) who turned our technical brain farts into something coherent.

[Our heroes at First10](#) especially Chris L and Rich who have both been with this project for months and have spent endless hours doing our 3D renders, product pictures, marketing video, banner adverts.. Just everything really.. Amazing effort.

And last but not least, you. By supporting this project you are making your own future be just a little bit more cool.

Stretch Goals

We are very excited to share our stretch goals!

£30,000 - Multiple rings/inlay ← ACHIEVED!

£32000 - Sweet Spot Sticker with every ring ← ACHIEVED!

£35,000 - Choice of Steel or Titanium Ring for all models. ← ACHIEVED!

£40,000 - We provide An Android NFC Phone Unlock App, saving you 3\$ on the Play Store! ← ACHIEVED!

£50,000 - Investigate Windows Phone App ← ACHIEVED!

£60,000 - Provide 1/2 size rings IE 7.5, 8.5, 9.5.... ← ACHIEVED!

£70,000 - Contribute source code & Lobby Android community for NFC unlock in core ← ACHIEVED!

£80,000 - Create option of stealth bomber black ring (all black) ← ACHIEVED!

£100,000 - 5 color inlay options (white, black, black carbon fiber, silver, wood). ← ACHIEVED!

£110,000 - Windows Phone App ← ACHIEVED!

£125,000 - Nickel free Titanium Ring Option ← ACHIEVED!

£150,000 - Different color options for the ring metal (IE Black/Blue) ← ACHIEVED!

£200,000 - Ten color inlay options, chose from 10 different color sets.

£225,000 - Transparent Inlay cover option, see the electronics inside the ring!

£250,000 - The Collection: £50 gets you 3 Rings (Alpha, Normal, Stealth Bomber), 3x Inlays (one of each size), a chain and a box.

£275,000 - All Kickstarter Limited Edition Ring backers receive a free Alpha Ring.

£300,000 - ALL BACKERS RECEIVE 50% REDUCTION ON THEIR FIRST ORDER AT STORE.NFCRING.COM

Risks and challenges

Our factory has experience in delivering rings across the US, UK and China however we face some obstacles delivering to other countries. We have two distribution centres and are working with previous successful

kickstarter projects to help us resolve this.

The NFC tags we use have limited space, this is a limitation imposed by the industry. We have designed a custom NFC inlay for this ring and as tags get larger and inlays smaller we are attempting to find a happy compromise between size/storage.

Some mobile phones have very poorly placed NFC antennas. This can lead to weak signal which stops NFC functioning fully with the Ring. We aim to contribute to a blacklist of mobile phones that we know don't support NFC functionality well.

[Learn about accountability on Kickstarter](#)

Questions about this project? [Check out the FAQ](#)

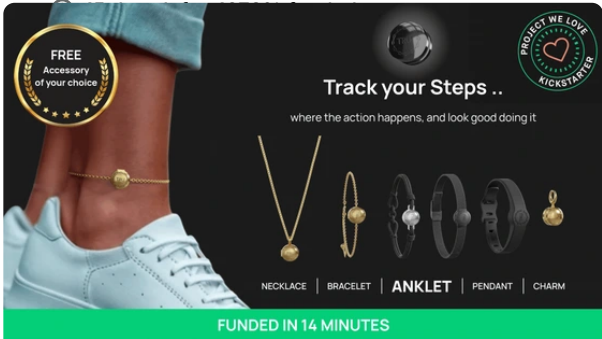
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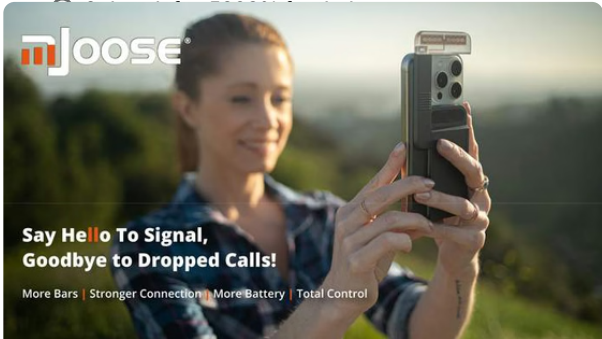
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9 days left

88% funded

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