

HCRC Flyer



AMA Charter #341

November 2024



It's not just the leaves falling!

Funding Status
On Downwind Leg

New Field Funding – Goal \$90K	
Fundraising (all sources)	
GoFundMe =	\$ 3,093
Certificate Program =	\$ 3,900
Money from Savings=	\$15,000
Planned Land Sale =	<u>\$20,000</u>
Total So Far	\$41,993
Needed for landing!	\$48,007

HCRC Meeting Notes for the October 3rd, 2024 HCRC Business Meeting Notes



No Quorum Present – 11 Members including 3 Executive Members present: Mike Shaw, Bill Ewers, Gus Coelho, Ron Paul, Bob Prosciak, Mark Wasielewski, Dan Kapinos, Pat Malone, Karl Hathaway, Shawn Kelsey and Lou Enselek

Reading of the minutes from the previous month was waived. Club finances for the month of September were reported and approved.

The Fall Cleanup is Saturday, October 19th with a rain date of Saturday, October 26th. Please come out to help maintain our field!

We are voting during the December meeting on raising the membership dues by \$10 across the board except for the one-time administration fee and the late fee.

We are voting for the executive officers during the December meeting due to the lack of quorum at the November meeting. Mike Shaw has been nominated for President, Pat Malone for Vice President, Gus Coelho for Treasurer and Bill Ewers for Secretary. We will accept nominations up to the time of the vote. We also would like to fill three board of directors positions.

Please come out to the December meeting so that we have a quorum.

We are working on fundraising to support the land purchase:

1. Go Fund Me – Now live! We ask everyone to alert their family and friends and ask them to donate! Mike sent out an email asking everyone to do this. Please feel free to copy and paste the email that he sent in your emails to you friends and family.
2. Selling Land Shares – We are now selling land shares. Please consider purchasing land shares to support this club initiative. Each share is a \$100 commitment and has a 5 year maturity period.

We have generated almost \$7K at this point. The rest of this money looks like it will have to come from within the club.

Tracy Page's widow, Dorothy, has donated all of Tracy's hobby collection to the club for us to sell and put the proceeds towards the land purchase. We will be offering items within the club and at swap meets.

Eaton and associates quoted \$1200 - \$1500 for a survey. If there is difficulty finding the pins indicating the property limits, the price accelerates and could be up to \$4K.



From the President's desk.....

Hello All,
Just a quick few words (well maybe not so few)

So, another flying season has come and gone. Hope you got out there and enjoyed yourself. It goes by so fast! This was our first season without our roomy, comfortable field we called home for so many years. It was so sad to see our old field just grown over and unused, but on a positive note, some of us were able to make due and continue to fly on our new, reduced field on our existing property. We were able to cut back the woods on the north end of the property to create a landing approach. We set up our flight stations just to the north of the large storage shed and put the solar charging station back into service. In the spring we intend to improve upon this. We have plans to move the picnic tables and pavilion back and in between the two storage sheds and away from the landing strip roll out so we can move the flight tables more southerly to in front of the storage shed and increase the distance from the northern end of the field and not be so cramped for our landing approaches. This of course is hopefully all temporary while we continue to accomplish our main objective. Buying 5 acres of land right next door.

On the physical side of the program all is great. The owner of the property that we plan to buy, Lenny, has worked on our behalf preparing the land for sale to us. He has cleared away all the trees on the adjacent property line as well as around the rest of it. It's graded fairly level and all set for us to take it over and set it up as our new home. The upsides are obvious and many. For one, we will own all our property for the first time ever as a club and avoid being asked to relocate or leave again in the future. We will also be back to having a similar amount of property that we enjoyed previously. Because of this we will be able to return to flying larger aircraft and holding public events once again. Below is a picture of the new property I took recently as viewed from the back of our small storage container. We would be buying back to where the grass changes height (dark green vs light green) and from Honey Pot Road to the river.



On the financial side all is coming along – slowly, but coming along. At this point in time, all in, we have about half the money, of the \$90K, we need available (see the cover page picture). This includes donations from the certificate and GoFundMe programs, the sale of our property across Honey Pot Road & most of the cash we have in the bank.

Sadly, the GoFundMe program has not been the cash cow we were hoping for to date. But we are still working on promoting this effort and trying to find those remaining donors to help us raise more of the needed funds. If you are interested in helping our small group of fund-raising volunteers, all are welcome!

As for the certificate program, several members have purchased certificates to date and for that *I thank you for supporting your club!* It seems clear that if we are going to be successful with this purchase it will have to come from our own membership to make this happen. Our membership is down to about half of what it was prior to losing our old field. I understand that most that did leave us could not make the smaller accommodations work for their flying needs. Meanwhile, it will be up to us, the current dedicated members of HCRC to make this happen with our own wallets. Just as an example of how close we are to success; our membership is currently at around 65 members. If everyone was able to buy 7 certificates each at \$100 that would be the \$50K that we need right there. Now I know that not everyone is in a position to part with that much cash. Not everyone is in the same boat. Some could afford more and some not so much but that is the average. If you made a concerted effort to buy a certificate every other month or so for a few months it might be more palatable perhaps and impact your bank account a little easier. Plus, the way to look at it is it's a short-term interest free loan to the club for 5 years after which they can be redeemed. This is a club you joined to enjoy some of your limited leisure time pursuing a hobby you love. Help us make this club the best it can be. Getting this additional land purchased is Step 1. This will be our only chance to buy this land or it will be sold to someone else.

Time is running away. Our deadline to buy this property is now half gone with about 14 months remaining to our January 2026 deadline for purchase. We are on the home stretch now and the finish line is coming within sight. Your club needs you as much as it ever has. Please contribute to make this happen. Thank you.

And as always, I'll see you out there!

Mike

Flying News & Events

UPCOMING EVENTS

- **11/07** Business Meeting at the VFW in Florence, MA 7pm
- **12/05** Business Meeting at the VFW in Florence, MA 7pm



"How do I catch my phone to take it out of airplane mode?"

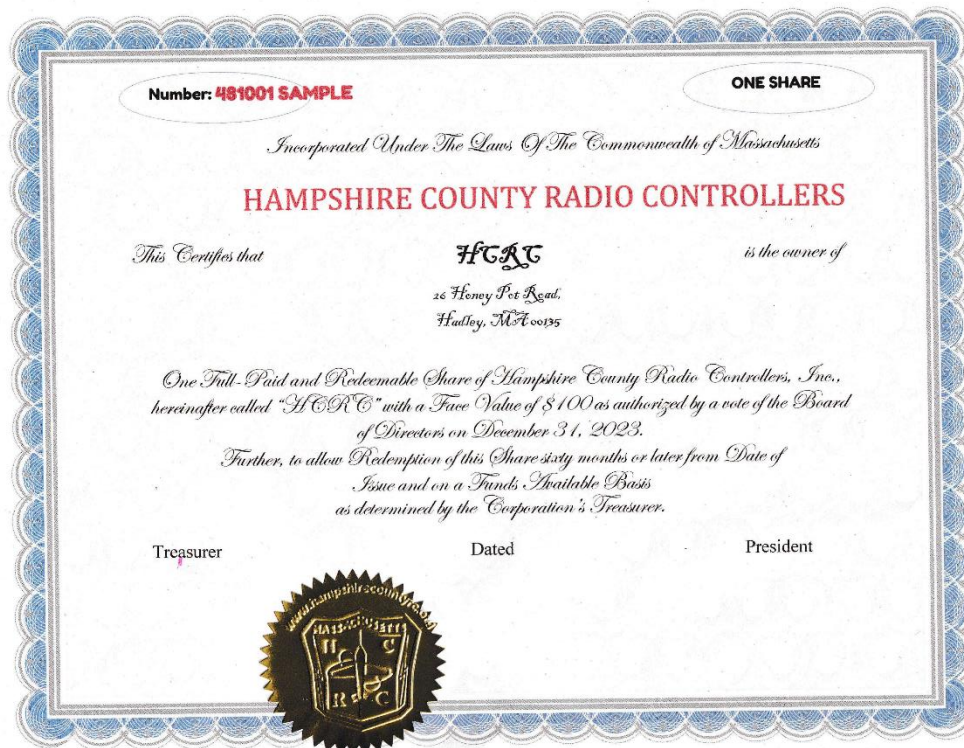
ATTENTION ALL HCRC CLUB MEMBERS AND SUPPORTERS
SHARES CERTIFICATE FUNDRAISER PROGRAM

Hello all,

Your club has now opened a shares certificate buying program to raise funds to purchase 5 acres of property next door to our old home on the opposite side of our 2.1 acre (70' strip) on Honey Pot Road. We only have two short years (01/01/2026) to raise the funds needed to purchase this property. These certificates are valued at \$100 per share. They will mature in 60 months to be able to be redeemed at face value on a funds available basis. Please purchase as many as you can reasonably afford. You can acquire these certificates one of two ways. Either bring cash or a check made out to HCRC to a business meeting and hand it to our Treasurer Gus Coelho or mail your check to Gus at 141 Holy Cross Circle, Ludlow, MA. 01056. Your certificate will be available by the next club business meeting or will be mailed out to you. All donations for the property purchase are being deposited into a dedicated bank account in the club's name and will be returned to the donor if the land purchase is unsuccessful. I thank you in advance for supporting this important funding program that will allow our club to continue well into the future.

Thank You,

Management



ATTENTION ALL HCRC CLUB MEMBERS AND SUPPORTERS

GOFUNDME FUNDRAISER PROGRAM

Hello all,

Your club has a secondary fundraising program in place for anyone that may wish to donate to our cause. It is through *GofundMe.com*. The link to our fundraiser page is below. This program is very important to supplement our in-house Shares Program.

SHARING: This GFM program will only be successful by sharing the link below with everyone you know and some that you don't.

Please email this link to any and all people in your phone contact list: friends, family, coworkers, everyone. These are *your* people and will be the ones most interested in helping you/us. You can also text it to anyone you don't have an email address for. Also, share this link with any business and organization. You may have to do this a few times over a period of time to get people/organizations that meant to donate but may have let it "slip through the cracks" the first time. Friends and/or family members may come up to you and hand you cash to donate on their behalf. You can transfer these funds into the fundraiser as an "anonymous" donator as well. Another easy way to share this link is on your personal social media page, if you have one. After you post it, leave yourself a reminder to re-share it to yourself every 2-4 weeks and it will go back to the top of your timeline for all your peeps to see.

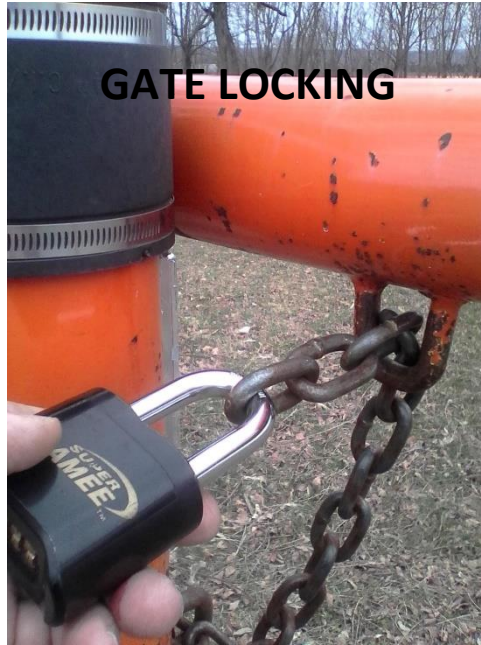
Donations have already started to come in but this program will only be truly successful and meet our goal with all of our help to promote it. All donations for the property purchase are being deposited into a dedicated bank account in the club's name and will be returned to the donor if the land purchase is unsuccessful.

Thank You,
Management

<https://gofund.me/7b63150f>

Model Airplane Club Losing Flying Field





The picture above shows the proper method of securing the gate. The Hannigans are using this gate to access their property as well. They have the combination to let themselves in. Also, be aware that they drive to the north end of their property by passing right behind the far side of our runway. Be extra cautious when you're flying and this happens. Last one out lock up if they are not there.

This month your editor is venturing into a different type article, a product review.

Some of you may know that I hold a FAA Part 107 UAS certificate for commercial drone. I have been flying commercial flights now since 2016! My primary aircraft is a DJI Mavic Pro and my backup a DJI Phantom 4 Pro. I've had quite a few people over the years ask me "what kind of drone should I buy?" My most common two-fold answer is "What do you want to do with it?" followed quickly by "How much money do you have?". That second one often ended their drone ownership dream!



Now, there are more options in the market and also more restrictions and a bit more confusion. The whole "remote ID" requirements made things a bit more complicated. The most frequent answer to the first question was something like "I just want to try one" or "To take pictures" or my favorite, "I just want to mess around with it." As long as these sort-of fit what your answer might be then and your goal isn't going to be flying under Part 107, then this review is for you!

The drone I selected to review had to meet the objective of "messing around" and be relatively inexpensive, easy to fly with good stability and flight performance, and perhaps as important, weigh less than 255 grams. That last one means you can fly this drone in a wide variety of places and don't need remote ID.



My review is of the new DJI Neo. It has good flight capabilities, is rock steady, doesn't require much training more than watching a few videos, and weighs just 135 grams, well below the 255 gram FAA limit. The simplest and least expensive version of the Neo comes in at a reasonable \$199. That's for a drone and battery. There's an optional flight controller for another \$159 but I'm choosing to stick with the basics here. (more on that controller later)

The Neo has an impressive camera capability, shooting stabilized movies in 4k/30fps and stills at 12k. There's a gimbal that can point the camera up 30 degrees and down a full 90 degrees.



Neo has several pre-programmed flight modes that you can control via a button on the drone. These autonomous modes include follow-me where before taking off from your upturned hand (there are prop guards) the drone 'learns' to recognize you (or whatever object it is pointing at) and then uses that to follow you as you walk, run, or even ride a bike (not too fast, its top speed is about 18mph in this mode). When you are done filming, just stop, face the drone and hold out your hand and it lands back on your palm!

1 Take off!

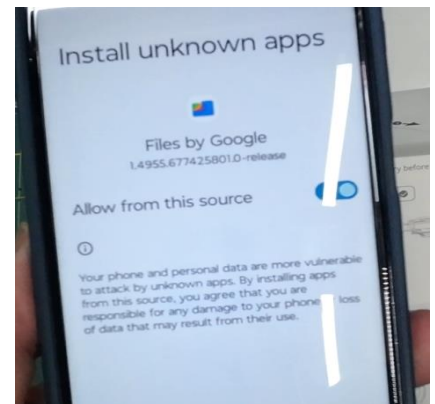
There are several other autonomous modes that use different flight patterns. I tried them all and they produced nice, steady video every time. Total flight time on a single charge is up to 18 minutes, a little less if it is windy. The battery recharges via a USB type C cable (included). Typical recharge times were about 30 minutes from a fully depleted battery. If you're planning on using it a lot, spring for a second battery at \$39.



I tried the follow-me down my driveway and there was a 6 knot wind. The Neo took off to about 6 feet and then hovered. As soon as I started move so did the drone. I turned my back and trotted, weaved back and forth, I couldn't shake it. I then stopped, turned towards it and held out my hand and it landed right in my palm and shut down. (Insert a few shots). The other pre-programmed modes worked the same.

2 Neo following me

The phone app. You'll need to load the DJI Fly app onto your phone. There are apps for both Android and Apple. I have an Android and the process is a bit complicated. You use the phone's camera to point to a QR code on the 'quick start' pamphlet. That sends your phone to a website where you can download a special file (the file name ends in .apk). After the download you have to find that file and click on it.



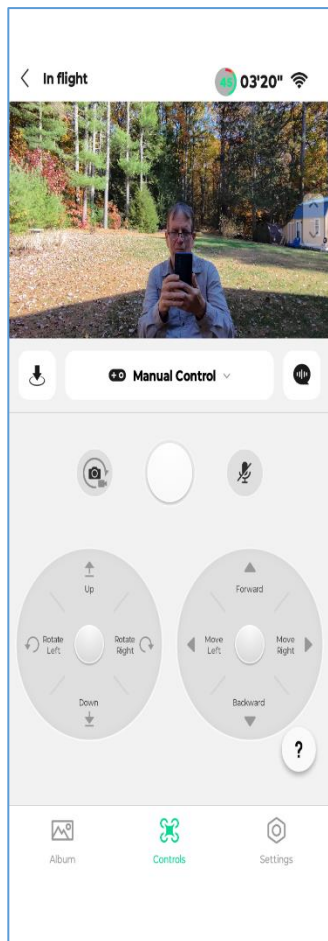
Your phone may block installation programs that are delivered this way (mine does and it's a good idea to keep it that way unless you know the source for the file). I had to enable what Google calls 'unknown apps' meaning that they didn't come from the Google Play store. Once I did the app loaded fine. (be sure to turn that control back off afterwards). Apple is probably different, you most likely go to the Apple App store and download it.

OK, once you have the app on your phone restart it. I needed to. I don't know why but that's what it took to work. Next, make sure you have a connection to your phone network. You'll need it to activate the drone. You cannot do this over WiFi because your phone will use WiFi to connect to the drone. DJI's Phantom 3 was like this too. I also discovered that I had to remove my phone case because there's a metal plate on the back that I use to mount the phone to a holder in my car. I have to do this each time I want to fly. The WiFi in phones just isn't that strong. You need to create an account on the DJI site and then activate the drone. Once you get the drone activated on the DJI system, you are all set.



The app provides access to all the pre-programmed flight modes and also is where you download the videos and stills you have shot. Unlike the Mavic there is no removable storage on the Neo, you have to use the app to retrieve the images and videos.

You can also change the flight characteristics for the autonomous modes (altitude, speed, camera settings, etc.) and for pretty much anything else the drone does. You'll need the app even if you buy the separate controller. The app gives you FPV right from the drone's camera so you can see exactly what it sees.



I'm a pilot and I like to fly things! The app also lets you fly the drone directly. It lets you change the autonomous modes. The FPV mode is called Manual Control and has two virtual joysticks that you tap. These control altitude, yaw, slew (side-ways left and right), and forward and backwards. There's another control that lets you change the camera gimbal up and down. This is also where you can switch camera modes from video to stills (and back) as needed. You don't have to launch from your hand if you don't want to, all it takes is a tap on the button on the screen then a countdown happens and the drone lifts off a couple of feet and hovers.

I found the two little virtual joysticks to be a little clunky compared to real joysticks but as long as you keep your speed down it was fine. You just tap or press in an area (climb, descend, yaw left-right, slew left-right, go forward or backward). In this mode the range of flight maxes out at 50 meters horizontal and 30 meters vertical. It was during this mode that I discovered that the car mount on the back of my phone drastically reduced this range so I took off the case to fly.

Flying was very much like the Mavic and Phantom. You stop telling it to go forward and it pitches up to put on the brakes and hovers, all automatically. Same for yaw, climb, descend, etc. If you descend close to the ground (or your hand) it will assume you are landing and start a countdown to automatically land. You can cancel it if needed.

3 Screen Capture from Android

I flew the Neo around my house and took some stills. One shot is of my roof. As I pushed the little drone up and up it finally reported it was at maximum altitude (50 meters) and just stopped. I was able to take some nice shots. The camera was excellent. I did notice that the little drone was being bounced around a bit by the wind but it generally held its position. (The Mavic has a stabilized gimbal and that image you see never bounces or moves around).



There are some big differences between the Mavic and the Neo that are important to note here (other than the \$1,000 price difference). The first is that Neo uses the camera and two downward facing sensors for positioning and the Mavic uses multiple GPS signal (I typically fly with 12 or more GPS satellites which gives the Mavic positioning within 1 centimeter in all 3 axis) forward sensors and downward sensors. Because the Neo uses its camera to establish the autonomous flight modes, it will warn you on the phone if it is too dark or if the surrounding are not complex enough (I'm not kidding on that one, it needs textures!)

4 Mavic Pro vs Neo

The other big difference is the Neo has zero collision avoidance. The only sensors it has are on the bottom and it uses those for landing. On the Mavic I have flown it straight at a wall at > 30mph and it came to a dead stop on its own (I was training a new part 107 pilot). If you do that with the Neo you'll be going home with a pile of pieces. That's really important if you're doing one of those follow-me flights and you walk under something that is below the flight path. It won't stop and will just run into the object (i.e. tree, bridge, building, etc.) If you are going slow enough it might survive a bump, the prop guards are pretty robust, but I didn't test that. So, you need to keep yourself aware of the environment that you are flying in. Since the Neo doesn't have any GPS DJI is saying that where you fly is up to you. That means if you are in controlled airspace and someone sees you, it's on you. My Mavic is Geo Fenced and I can fly in restricted airspace but I have to say I have a waiver (which I do get from the FAA when needed).



There is an optional flight controller that adds some much better control through the joysticks. It also adds considerably to the flight performance increasing the max speed to 38mph and range to 6 miles (not a typo) horizontal and up to the max permissible altitude of 400 feet AGL although it would be invisible to the naked eye so it would be illegal without an FAA waiver. The controller boosts the price by another \$159.

5 Optional Flight Controller

So, the answer to the “what drone should I buy” could be a Neo. This is true if you just want an airborne camera platform to take some cool videos or stunning stills as long as they are within the flight limits. I could see taking this on a vacation because it is so tiny, why not take it? A caution though. The US is actually pretty lax about drone rules compared to Canada, the UK, and the EU. Taking and flying even this drone could end up costing you some serious fines.

I’d say the Neo is a fun little drone that is super easy to fly. It is way better than some of the cheap toy drones out there that are so unstable you’d be lucky if you don’t destroy it on the first flight. I’m still debating if I want to spring for the remote controller mostly because I have two other drones that I can choose from. All in all, I think DJI has hit a sweet spot with the Neo. It’s a fun little drone to ‘mess around’ with.

<p><i>Max Ascent Speed</i></p> <ul style="list-style-type: none">• 0.5 m/s (Cine mode)• 2 m/s (Normal mode)• 3 m/s (Sport mode)
<p><i>Max Descent Speed</i></p> <ul style="list-style-type: none">• 0.5 m/s (Cine mode)• 2 m/s (Normal mode)• 2 m/s (Sport mode)
<p><i>Max Horizontal Speed (near sea level, no wind)</i></p> <ul style="list-style-type: none">• 6 m/s (Normal mode)• 8 m/s (Sport mode)• 16 m/s (Manual mode)

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