DRONE - FAQ

Here are some answers to questions asked frequently by people viewing the Reaper drone replica.

1. How is this drone model made?

The fuselage of the replica is formed around a cardboard tube, sometimes called a Sonotube (trade name), used as a form for pouring concrete. Plastic plumbing pipe is inserted in the tube to hold the wings, tail section and carriage. The pipes are held in place inside with parts made of rigid foam plastic insulation board and liquid foaming plastic. The cardboard tube is covered with fiberglass to make it weather resistant.

The nose and tail sections of the fuselage are molded in two halves in a vacuum plastic forming machine and then joined together and lined with expanding foam to make them rigid and dent-resistant. Then they are joined to the cardboard/fiberglass tube with Bondo, which is used to create the streamlined shapes of the fuselage.

The wings are made of plywood and the bombs and missiles of mailing tubes, aluminum flashing (fins) and molded plastic or foam plastic (noses).

The stand/lift for the drone is a sheet-rock lifter with its top platform removed to receive the drone carriage.

It takes one person about three days to assemble and finish a replica once the parts are made. The materials, including the lifter, cost about $350 per drone.

2. Is this the real size of the drone?

This replica is about 1/5 scale of the real Reaper drone. The real one has a wingspan of 66 feet and the fuselage is 36 feet long. The replica has an 8' fuselage and an 11' wingspan.

The real Reaper is powered by a 900 horsepower turbo-prop engine made by Honeywell that can push it along at up to 230 miles an hour at an altitude of up to 45,000 feet. It can stay aloft for 30 hours with no weapons on board and up to 20 hours with a full load. The Reaper can follow you when you leave your house in the morning, staying overhead all day to see who are talking to, where you go and what you do. It can be with you all the time except when you go into a building, then it can follow you when you leave.

A drone called the Global Hawk, larger than the Reaper, can listen to your cell phone calls and read your text messages.

3. How much does the drone cost, and how many of them are there?

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 A Reaper drone costs $28 million; one Hellfire missile
(Lockheed Martin/Raytheon) costs about $70,000; one Paveway bomb
(Lockheed Martin/Raytheon) about $20,000. The total cost of one
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weapons load for a Reaper — four Hellfire/ two Paveway — is at
least $320,000, a third of a million dollars.

 US taxpayers will have invested about $11.8 billion in Reapers over the life of its program,
which began in 2001 and will extend for at least several more years. The 2012 Department of
Defense budget sets aside $1.069 billion for Reapers. The Air Force is believed to have about 60
Reapers with plans to build a total of about 330.

4. How does the drone see you?

  The Reaper "sees" with radar and infrared beams and what is called electro-optical lens that are
in the turret under the nose. With this combination, the drone can see at night and see through
clouds and dust, although its "vision" is diminished as weather conditions deteriorate. It could
see us right now if it were overhead. (Assuming you are outdoors under reasonably clear skies
and not in rugged terrain.)

  It is essential to know, however, the drones do not have perfect sight, and so they are subject to
the problem of misidentification. Drone operators can and do kill the wrong people. For
example, in April 2011 a US drone killed two US troops because of misidentification.

  Drones have a history of killing non-combatants including women and children.

Note: In an April 2011 letter to a constituent, Congressman Maurice Hinchey, a member of the
Congressional pro-drone caucus, said "I am very concerned about the civilian casualties that
have resulted from misidentification of targets (by drones)."

    The Bureau of Investigative Journalism in London reported in
August 2011 that more than 160 children were among the at least
385 civilians killed by US drone attacks in Pakistan alone since
2004. The limitations in gathering information in remote areas,
as well as other problems, suggest that these casualty figures
are very conservative.

  You should know too that our government is experimenting with a drone system that will input
a computer image of your face so that drones could locate you and kill you automatically,
without a human command. ("A Future for Drones – Automated Killing", Washington Post,
Sept. 19, 2011)

  In addition, it is important to know that the Pentagon is developing a long-range bomber with
the capability of carrying nuclear weapons that will be able to be operated with a flight crew or
as a drone. (An artist conception of the bomber appears below.) This is extremely concerning
in view of the possibility that Iran electronically captured a US surveillance drone in December
2011.

The next generation bomber designed by Boeing and Lockheed Martin will have a 'global reach' operating as a piloted or an unmanned platform, on nuclear or conventional attack missions. Photo: Boeing - Defense Update, Jan. 7, 2011.

Identity is not the only problem. There is the question of due process.

   You can have your name put on a drone target list for any number of reasons, perhaps by a neighbor who wants revenge or because there is actually some evidence that you have conducted attacks. What should happen is that you are arrested by the police or the military of your country and that you are given the opportunity to defend yourself in court.

   That is not what is happening now.   The target list is compiled by the US, often the CIA, based on various intelligence information, and the kill order is given by US commanders, not military commanders of the country where the targeted person is being killed. There is no due process and no recognition of sovereignty.

   Certainly an individual can be assassinated by another person if they are on a kill list, which also denies due process, but the drones make assassination much easier, in fact routine, in large part because it can be done without sending an individual into a foreign country or to hard to reach areas.

There is also a problem with collateral damage.

   The Hellfire missile has a casualty radius of 60 feet and the Paveway bomb of 200 feet, so people anywhere near the intended target are likely to die or be severely injured. So if you are the target of a Hellfire missile, for example, everyone within a 60-foot radius is at severe risk.

5. Are drones flying over the United States?

   Drones, including unarmed Reapers, are now flying in limited areas of US airspace for testing and border patrol. However, legislation is pending in Congress that intends to open all US airspace to drones by September 30, 2015.   The Federal Aviation Administration has been reluctant to have drones enter general airspace because of safety concerns, but they are being pushed by the aerospace-weapons industry and police, who are already experimenting with drones.

   The FAA has valid safety reasons to be reluctant to put drones into the busy US commercial and private airspace, as evidenced by the crash of a Reaper in December 2011 when it developed engine trouble and overshot a Seychelles Island runway.

   An Air Force report released in 2011 states that the military is developing a 3-D sensing system for drones that will enable high-resolution imaging and "low-collateral-damage strikes in urban areas via target-quality 3D pixel coordinates."   It is apparent that equipment is being created that will allow attacks in US cities as well as elsewhere.

The drones can violate the privacy of people globally

   The US and other countries have been flying spy planes for many years. But drone surveillance is quite different because the drone can stay over a targeted person or group of people for hours or days, monitoring all their activities and those of their friends.
The US is developing solar powered drones and blimps that can, according to the Air Force report, "remain aloft for years." The report states: "Large airships containing football field size radars give extreme resolution/persistence."

   This all means that the US is developing the capacity to violate the privacy of millions of people globally around the clock, year after year, regardless of what country they may be living in. This means the ability to create a kind of drone surveillance/attack sphere around the world, gathering all manner of personal, business, resource and military information and with the capability of killing at will.

6. Aren't drones an inexpensive way to fight terrorism?

     There are concerns that drones are actually recruiting people to fight the US because: (1) they have killed non-combatants; (2) people are angry because they live in fear of drone attacks, never knowing when one will come; (3) people feel their national sovereignty is being violated by drone attacks, regardless of whether their government may give secret approval for drone

attacks, as appears to be the case in Pakistan.

The use of drones has destabilized the Pakistani government because many Pakistanis are outraged that their government allows US drone attacks inside Pakistan.

 MSNBC reported in December 20011 that the Pakistani government will shoot down US drones entering Pakistani airspace.

 Drones also make it easier to enter a war, as was true in Libya where they were used to support NATO air attacks in support of rebel forces. In December 2011, the US announced it is in negotiations to assist the rebel army, including training them, which will certainly lead to the stationing of US troops in Libya. The drone attacks in Libya were done without a declaration of war.

 Drones may make it more difficult to disengage from wars because they hold out the possibility of victory when politics and lack of military success would dictate an end to armed conflict. This appears to be the case in Afghanistan, where drones are widening the scope of hostilities, killing, and political unrest in neighboring Pakistan even as the on-the-ground military situation for the US worsens.

Terror or Cheap Access to Resources

 It is critical though that we ask ourselves if our wars are really about "terror." Or are we being continually frightened by our government in order to maintain our support for wars that are really about helping transnational corporations like ExxonMobil and Shell to get energy and other raw materials at highly profitable prices?

 If we look at where killer drones are being used, the Middle East, Central Asia and Africa we find that these are all are places that have large oil reserves, and/or control oil routes or where transnational corporations are seeking other resources at favorable prices.

 Drones are very powerful tools of intimidation. Government leaders in negotiations with transnational corporations like ExxonMobil or Shell are aware that they can be followed day and night by drones and killed at any time.

 The use of the military in support of corporations has a long history for the US. In 1935, the much-decorated Marine general Smedley Butler wrote:

 I spent 33 years and four months in active military service and during that period I spent most of my time as a high class muscle man for Big Business, for Wall Street and the bankers. In short, I was a racketeer, a gangster of capitalism. I helped make Mexico and especially Tampico safe for American oil interests in 1914. I helped make Haiti and Cuba a decent place for the National City Bank boys to collect revenues in. I helped in the raping of half a dozen Central American republics for the benefit of Wall Street. I helped purify Nicaragua for the International Banking House of Brown Brothers in 1902-1912. I brought light to the Dominican Republic for the American sugar interests in 1916. I helped make Honduras right for the American fruit companies in 1903. In China in 1927 I helped see to it that Standard Oil went on its way

unmolested. Looking back on it, I might have given Al Capone a few hints. The best he could do was to operate his racket in three districts. I operated in three continents."

 (It might be useful to have this quote printed on a card to hand out.)

   Drones give US politicians and business executives the impression that deadly force will be able to be used indefinitely in government and business negotiations, because they seem to offer the ability to conduct wars with no significant political consequences. Drones are relatively cheap tools of war, and they make killing possible without "boots on the ground." They seem to be a perfect way to maintain dominance in the struggles over natural resources.

   Apart from deadly blowback from drone warfare, we have to ask ourselves whether the military option for getting oil at favorable prices is preventing the US from developing non-fossil fuel energy sources at a pace necessary to even stabilize global warming.

8. Do other countries have drones?

  Right now at least 50 nations have drones of some kind. Drones range in size from an insect to the Global Hawk, the large, jet-powered surveillance drone that has a 130 feet wingspan and a top speed of nearly 500 miles and hour.

   Many of the drones are the size of large, radio-controlled model planes that are used on the battlefield to find the enemy.

   China has displayed a drone prototype, and it and Russia have asked to examine the RQ-170 surveillance drone that was downed by Iran in December 2011.

   Iran has claimed to have used electronic means to take control of the US drone, and this is likely given that drone technology is spreading rapidly. While the US appears to have drone superiority, this is likely a momentary advantage, and we must realize that we in the US may soon be subject to drone surveillance and attack.

9. What can we do?

  a. The first thing we can do is demand of the President and the Congress that the US stop drone attacks worldwide and stop drone spying.

  b. We must also petition the United Nations to establish an international ban on killer drones and spy drones similar to the ban on land mines.

  c. We must divest in companies that build killer and spy drones and urge our public, religious and educational institutions to divest.

  (List of companies to divest.)

These are publicly traded companies that make components of the Reaper.

Boeing – Intelligence workstation and mission planning system; laser guidance for bombs.
ITT Corp – Sensors; bomb and missile release mechanisms.
Honeywell – Turboprop engine.
L-3 Communications – Sensors; satellite communications link; tactical data link.
Lockheed Martin – Hellfire missiles; Paveway laser-guided bombs
Microsoft – Software for detection of humans and human-made objects.
Northrup Grumman – All weather surveillance radar.
Raytheon – Targeting system for Hellfire missiles; Paveway laser-guided bombs; AIM-92 Stinger missiles.

  The airframe of the Reaper is made by General Atomics Corp. a privately-held company in San Diego, California.

d. We must also take non-violent direct action to block operations at military bases flying killer drones and spy drones and companies making them.

  (List of Reaper operations centers in the US)

  (List of sites of drone component manufacture in the US)

  e. We must also call for a ban on lobbying by arms makers and for limiting the salaries of the arms-making CEOs to $1 a year as first steps in reducing the pressures to go to war.

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Here is a Drone song written by Nora Freeman, of the Raging Grannies in Westchester County, New York.

Drones, by Nora Freeman, WOWW gaggle
tune: "This Old Man" 12/4/10

Guns and bombs, nukes and tanks
Mean lots of money in the bank
For KBR and Boeing too
Who foots the bill?
It's me and you

Even if they replace tanks
Those for peace cannot give thanks
A company called ITT
Makes unmanned drones for you and me.

Every drone costs thirteen mil
A "safer way" they say, to kill!*
Americans, not in harm's way
But Pakistanis die each day.
*solo for Shirley

[musical interlude]

Drones over Afghanistan
Kill many women, kids, and men
Controlled from half a world away
They stalk people at work and play.

Thirteen million dollars, wow!
We could use that dough right now
For teachers here and nurses there
And for green jobs everywhere.
[last line is elongated]