

**Karox's Guide to Almost Everything in Eve**  
**Part 3 - Drones**  
**(Compiled with the assistance of Sumerio Rayej)**

Drones are the closest thing to a pet in space – sure, some people are known to have travelling companions that are a little on the small and fuzzy side, but a drone may well save your life... or end someone else's for them. They are self guided robots which perform a variety of functions, not just combat related, but there are also mining and logistic drones as well.

### **Skills**

The skills required for drones have their own sub-section in the skills list, imaginatively titled 'Drones.' The drones skill itself increases the number of active drones you can have in space, from 1 to 5, and should always be the first priority for anyone to raise – almost any pilot should want level 5. Drones have a control range which is usually more important than the specific range of their weapons. This is altered by the scout drone operation skill – adds 5km to the drone control range for each level that you have, ensuring that you can attack further and further away targets – this comes very important when you are fighting battlecruisers and battleships who often orbit (for NPC's, anyway) at very long ranges (can be up to 50km). Drones can target enemies up to 20km away without skills. With level 5 in scout drone operation, this increases to 45km.

Also, level 5 scout drone operation is required to use tech 2 scout (light and medium) drones. There are several other improvement skills for drones. The most important is probably drone interfacing. It has changed from past years – this originally was a modifier to allow more drones in space, but as the effects to having lots of drones in space caused lag issues, drone interfacing was modified to be a damage modifier.

It now grants a 20% bonus to drone damage (and mining yield) per level – a *very* significant bonus. Anyone who makes much use of drones should train this to at least level 4 – level 5 is worth it, especially for heavy drone users, but it takes quite a while to train. Also, there is drone navigation (so they move faster), drone durability (so they last longer under fire) and drone sharpshooting (so they hit their target easier). Other useful skills in the drone category are the individual discipline skills, such as armour repair or shield boosting drones, depending if you want to use that type of drone (be aware that your repair drones cannot be used on your own ship), and also electronic warfare drone interfacing. Whilst this skill is primarily used to allow the use of electronic warfare drones, it has a secondary effect of boosting the drone control range of 3km per skill level, which is useful for all drones.

Also, there is a specialist drone operation skill for each faction's drones. Each skill grants a damage bonus when using the tech 2 versions of that faction's combat drones. You need to train these skills to use each faction's tech 2 scout and heavy drones. Since tech 2 drones are *significantly* better than tech 1 drones, these skills (at the very least, Gallente drone specialization) should be in any drone user's plan. Note that they have no effect on the performance of tech 1 drones.

There are 2 'capital' level drone skills, fighters and advanced drone interfacing. These primarily affect carriers and motherships to allow them to fit drone control units to allow additional drones in space beyond the usual 5 (these ships also have skill bonuses to allow more drones too) and fighters are advanced forms of drones that can be assigned to fleet members and will travel through warp with them if they leave the vicinity of the mothership/carrier.

### **Using Drones**

Drones can be used to a greater or lesser extent by most cruiser and up sized ships. Some frigates can carry a small selection of drones, but these are generally limited to Gallente craft. Drones require 2 things to operate – a drone bay, which is built into the ship type and generally cannot be modified (although some ships can increase the size of their drone bay as skills increase) and

enough drone bandwidth to control the drones in question. Some ships have very sizeable drone bays, but only have a limited amount of drone bandwidth to prevent cruiser sized ships from launching a large number of heavy drones, for example. Bandwidth required for the drones, and the amount of space they take up in the drone bay are the same. Therefore, a 5m3 small drone also requires 5mbit of bandwidth to control.

Gallente are usually seen as the masters of drones, as they have some ships, for example the Vexor, Myrmidon and Dominix which gain bonuses to drone damage and hitpoints as part of their ship bonuses. Many other ships have sizeable drone bays and drone bandwidth though, and the Amarr even have ships, like the Arbitrator, that gain bonuses to drones.

The main benefit of drones, for most ships, is that they allow the equivalent of smaller calibre weapons to be used on larger ships without using up one of the fitting points. Small drones can be deployed to deal with frigates which would otherwise be able to avoid the damage from the larger guns of the battleship, whilst the pilot is concentrating on the larger ships they can do optimum damage to.

### **Commanding Drones**

You command drones through the drones window, which you'll only see when you're in space and if your ship has a drone bay with drones in it. Right click a drone or group of drones to give it a command. Most of the time, you'll be telling drones to launch, engage a target, or return to your drone bay. You can also tell them to return and orbit (the equivalent of a "heel" command), or you can scoop them to your drone bay (which only works if they are within 1500 m – otherwise, the drones ignore that command). In a fleet, the guard and assist commands are also useful. Guard tells your drones to attack anything that attacks the designated fleet member. Assist tells them to attack anything that the designated fleet member attacks.

If you have a drone bay large enough to carry multiple types of drones, it's usually a good idea to group your drones. Create groups by commanding a drone to "move > new" and then name the group to something sensible. You can then move other drones into any groups you've created. Without groups, you have to individually command your drones or give all your drones the same command.

Be sure to check your "drone settings" – right click the arrow at the top left of the drone window. By default, drones are set to "defensive" so that they will only attack what you direct them to attack. If you want your drones to attack anything that attacks you, set them instead to "aggressive". That's especially useful if you expect that you may be damped or jammed. Your drones will keep fighting even if you can't manage to target opponents.

Be careful though, with the "aggressive" setting in missions that have multiple waves. You and your drones can get into serious trouble if aggressive drones inadvertently attack or destroy the ship that triggers the next wave before you are ready. It's generally a good idea to select "focused fire", to ensure that your drones work together to destroy one target at a time. Don't worry about the "attack and follow" setting, which only matters if you fly a capital ship with fighter drones.

It's *highly* recommended that *any* drone user add at least one handy shortcut – hit "esc" and go to the shortcuts tab. Assign a shortcut key to "all drones – engage target". F9 used to be perfect prior to weapon grouping, but any key will do. The ability to quickly command drones to attack or redirect their attack without resorting to mouse clicks will almost certainly save your ship, at some point, in PvE or PvP.

### **Combat Drones**

These are the type that are most commonly used by the masses, and have been described as 'little whirring bundles of death' by many of their supporters. They come in all sizes from small to large, relating to the equivalent size of weapon, so small drones work well against frigates, medium

drones work well against cruisers, and large drones are very effective against battleships.

Each race's drone has a different damage type and other bonuses, for example, the Gallente drones do thermal damage, and have the largest damage modifier, but are slow to reach their target. Caldari and Amarr drones have around a mid-level speed but gain benefits to shields or armour, and Minmatar drones are the fastest. The damage potential of a drone is determined by the opponent's resist to its damage type, of course, but against a zero resist opponent, the damage dealing ranges from Gallente, down to Caldari, Minmatar and then Amarr with the lowest damage modifier. As they have a fairly low damage modifier, and also that they are only particularly useful against shields (where thermal can also do quite well) the Amarr drones have quite a bad reputation as being fairly useless.

This table shows the various combat drones:

	Amarr (EM)	Minmatar (Exp)	Caldari (Kin)	Gallente (Therm)
Light	Acolyte	Warrior	Hornet	Hobgoblin
Medium	Infiltrator	Valkyrie	Vespa	Hammerhead
Heavy	Praetor	Berserker	Wasp	Ogre
Sentry	Curator	Bouncer	Warden	Garde

One thing to remember if you are using your drones in combat (especially PVE) is that they can be targeted separately. When facing NPC's, an experienced drone user will generally let the enemy ships target the pilot first, then launch their drones once they have taken all of the attention of the enemies, so their drones will not be attacked. Against another pilot this can be safely ignored as they can quite often shoot out the drones and target multiple things at once.

By using this tactic, it can be possible to get away from training too long in the durability skill if you only intend to use drones against NPCs but care should always be taken to not pull more than you can handle as you will still be taking the full force of the damage whilst the drones chip away at your opponents. In order to get the attention of NPCs at the start of the fight, it's customary to fit at least one weapon to the ship, but a target painter can also be used.

Also, if your ship's drone bay is large enough, sentry drones can be used to target far away opponents and then pull in the sentry drones when the enemies are approaching, so they lock back onto the pilot – note, this doesn't always work, as some NPCs will not target your ship until you actually shoot or paint (or use other ECM on) them.

If a drone starts taking fire, it's usually a good idea to return it to your drone bay, since most drones can't take much punishment. Note, though, that if the drone is a long way from your ship, the return order could get it killed. Drones travel under microwarp drive when moving to or from a target (even in deadspace). As with ships, that greatly increases their signature radius, and since they will also move in a straight line when returning, they may begin taking damage a lot faster than if you just let them continue to orbit and shoot at their target.

### **Sentry Drones**

These are a variant of combat drones in that they can't move once they are deployed, they act as 'gun emplacements' and can make quite effective sniper platforms for ships that can use them well. Use of sentry drones requires consideration, though, since if a pilot flies away they may have to risk abandoning their drones if they can't get back to them, but if pilots stay static, they risk taking much more damage from the opponents' weapons without suitable defensive manoeuvres. Also, because they are the same size as heavy drones, and their tracking speed is poor (making them ineffective against small ships that get close enough to orbit), you typically want a ship with a rather large drone bay if you plan to use sentries so that you can have other drones as backup.

Note that sentry drones will *not* attack a target farther from you than your drone control range. Many people assume that the reason drones won't attack targets beyond your control range is

because that would force them to fly beyond your control range. That assumption sometimes leads to the erroneous conclusion that sentry drones will shoot at whatever you tell them as long as the drones stay close to your ship. Since sentry drones are most effective at longer range, it's usually a good idea to fit at least one drone link augmentor (see last section) to extend your ship's drone control range. Another ship mod that is highly useful for sentry drones is the omnidirectional tracking link, which increases drone optimal range and tracking.

Lastly, sentry drones are the only drones that can have their damage improved by a ship mod – the sentry damage augmentor rig. In fact, a set of Garde II drones boosted by a sentry damage augmentor will actually inflict more damage than a set of Ogre II heavy drones.

An advanced use of sentry drones is to let them help you “tank”. Sentry drones have much heavier shields and armor than other drones, so if you stay close to them, you can safely let them draw some enemy fire. When a sentry starts taking damage, scoop it and immediately launch it again. The enemy will have to waste time retargeting the sentry drone to continue doing damage to it (if the enemy is an NPC, this is time when they happily won't be shooting anything), during which time your drone's shields will be recharging. Your sentry, on the other hand, can begin shooting again immediately, assuming you still have a target locked. If your sentries happen to take armor damage, even if you don't like to use remote armor repairers, rest assured that they are absurdly cheap to repair in a station.

### **Logistics Drones**

These are the remote repairers of the drone world. Shield and Armour repair drones are both available depending on what the pilot wishes to use. One of the most important things to realise with these types of drones is that they have absolutely no direct benefit to the pilot – after all there's no way to target yourself to set the drones to repair your own ship.

These can only be used to repair other ships. They come in light, medium and heavy varieties depending on the available drone space and the amount repaired per cycle. A flight of 5 repair drones will repair a ship actually a little better than a comparably sized armour repairer or shield booster – in other words, having a buddy assign 5 large armour maintenance bots to repair your ship is even better than being able to fit one more large armour repairer module.

### **Electronic Warfare Drones**

These come in varying flavours, ECM, Sensor Damping, Tracking Disruption, Target Painting, Webifier and Energy Neutraliser drones.

The most commonly used drone type is the ECM drones, which whilst they do not get any bonuses from the ECM based skills, have proven to be quite effective at jamming ships when there are 5 drones swarming around the target. ECM Drones operate in a similar way to the ECM modules, just on a much smaller scale – the jamming strength for the drones is much smaller, but there will be as many chances at jamming per round as there are drones on the target (the numbers are not cumulative, but each give an individual chance based on the sensor strength of the target).

The remainder of the drones are not very commonly seen, due to the mechanics of how they work, for example webifier drones are stacking penalised so after 3 drones on a target there is next to no reduction applied, and the individual reductions are very small. It is usually best to use ECM drones to try and remove the target from battle instead of lower its effectiveness for a short time. Note that with the change to missiles in Quantum rise, the target painter drones have started gaining some use, but in comparison to using combat drones to do damage, these are generally seen as a poor choice.

The most important fact about Electronic Warfare drones is that the skill for them improves the drone control range for all of your drones – 3km per skill level gives the drones an effective pre-module range of 60km.

## **Mining Drones**

Mining drones are used to complement mining operations. They simply travel out to an asteroid that you target, mine away until they are full (they fill after 1 minute orbiting the target asteroid) and return to your drone bay whilst depositing the ore in your cargo hold. If you directed them to “mine”, they’ll then orbit your ship until you direct them to mine again. Why that command exists is a mystery, since miners most always command them to “mine repeatedly” so that the drones will keep making trips until the asteroid is depleted or your cargo hold is full.

They are not as efficient as using mining lasers, as they require time to travel to and from the asteroid whereas lasers are instantaneous, and because they are fairly slow moving, this travelling time can be quite noticeable when the ship is at maximum targeting range for the laser. Plus, unlike combat drones, they don’t have a microwarp drive speed, so you can’t speed them up with a drone navigation computer (see last section). Typically, though, to improve efficiency, a miner will use his lasers on far away asteroids and have mining drones work on closer rocks.

Many mining ships which can fit drones tend to use them as an offensive tool to remove the NPCs which spawn around the asteroid belts. If using mining drones, realize that you will need to call them back to your drone bay when NPC “belt rats” arrive both to protect the drones (mining drones die easily) and to allow you to deploy combat drones to protect your mining ship. Be sure that your mining ship has enough “tank” to repel the damage might receive during this drone-swapping, since recalling mining drones can take up to 30 seconds or more if you’ve directed them to mine rocks far from your ship.

## **Drone Upgrades**

There are several modules which help with improving your mastery of drones.

The Drone Link Augmenter module adds 20km to your maximum targeting range with drones. This can be very useful for some ships, especially those that use sentry drones as a type of sniper, and it can allow lower skilled pilots to reach reasonable ranges of drone control. With scout and heavy drones though, it should be noted that reaching longer ranges (70km and more) means that the drones will spend a lot of time moving and not shooting, lowering the DPS they generate considerably. Also, if the drone gets into trouble at that sort of range, they are usually destined to die due to the travel time involved with getting back to the safety of the drone bay.

The Drone Navigation Computer increases the speed that your drones can warp to the target, but does not increase the speed that they orbit the target once they get there. This assists with travel but does not have any negative issue with tracking so if you can afford the midslots to use this module, it can only be a benefit.

The Omnidirectional Tracking Link module increases the tracking and range of a drone's weapons meaning that they can start shooting sooner, and can hit more often when orbiting. Again, a very good module to use if you can spare the slots, *especially* if you use sentry drones. With the help of one or two of these modules, garde drones actually track well enough to be used against close orbiting ships down to battlecruiser, or even cruiser size.