The i-Que Personal Robot by Manley/ToyQuest

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Review of the i-Que Personal Robot

by Tika Carr
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I got an i-Que Personal Robot in late 2007. This robot is touted as "The world's smartest Robot". It has the Miriam-Webster Student Dictionary of 70,000 words programmed into it, as well as the Encyclopedia Britannica. It roams about on it's own, discover things, ask questions, make comments, and find it's charging dock to charge itself some of the time. Other features include a calculator, alarm clock, memo and reminder system. It also has limited speech recognition. You can communicate with it and control it from a Blackberry-type device that transmits around 30 feet from the robot. This robot is one of the more advanced toys out there and it's voice is more articulated which is surprising since this robot does not use pre-recorded sound files, but actually has a text-to-speech engine built in. You can also get cartridges such as Space, Human Anatomy and Achievement and U.S. History which add more knowledge to his database, as well as new trivia games on those topics.

I first activated my i-Que at 7:19 pm on December 19, 2007. At first, he didn't power up when the On/Off/Sleep button was moved to "On". So I turned it off and to on a couple times. Maybe the button sticks a bit or didn't quite make contact on that pole in the switch, but once I did that, it all worked out ok. Blue lights came on in the area around his microphones first.

Sometimes he does take a little time to respond. He went through his factory start-up routine at first activation. When done, he didn't say he was going into his programming mode. But he may have become confused as he was moving at the same time and going *off* the black table I had him set up on. This type of surface was a bit of a problem for him at times. He works on infrared for pretty much everything, including sensors. The communicator uses RF radio frequency. The infrared needs something reflective and/or not dark for it to pick up things in order to work.

He's cute, humorous, and rather fun. Though more limited than I first anticipated. Even in text chat mode, you are limited to some abbreviations. He said he met the fridge, and then later said that the fridge said I had some leftovers that are way past it's prime (I don't really, though).

He does bump into things and his track system will make nasty click noises trying to continue. This happens when his bump sensors and IR can't see an object as it's too high up but then there's a lot of dark space under it. You can go into Drive mode and move him out or just pick him up and move him. He is a good sized robot. But not too heavy to grab in an emergency.

His battery life lasted about an hour and a half (7:32 pm - around 9 pm). When he wanted to recharge at first I didn't know what was going on because I wasn't able to see his face from where I was standing. He was going towards an inflatable chair and started pushing it. I moved it aside and he made for the Christmas Tree. I'm like don't you dare go after my tree! Well, the charging dock is in that direction too. He found it, but took his sweet time adjusting into the position and then when he docked it wasn't straight on, but more on a like 20 deg. angle or something. But at least he did find it.

I have found that if you turn him off, he loses all time and date functions. If you put his underside switch to Sleep mode and put him on the charger, the time and date might not always be remembered. In fact, this is even true if you leave the robot's underside switch in the On position even on the charger. He will not charge if the underside switch is in the Off position.

When he doesn't understand something he'll half chuckle, which is kind of cute and he'll say he doesn't understand, like when you are looking things up or something. If he can't find the item in his databanks he'll say it's not in his databanks. There's only History, Biography, and Animals in the Encyclopedia. But he does seem to know a bit of sports. I played a numbers trivia game with him and the questions ranged from easy to hard. Some of the choices he'd give were rather humorous.

He is a joy to play around with. There's some Easter Eggs to be discovered, such as special words to type in the text device. The LOSTSPACE one makes him say a little skit in a monotone robot voice like the robot from Lost In Space. He ends saying that those 60s robot voices were lame.

This little robot is a great learning tool and very interactive. He'll ask questions, ask you to rate things on a scale of 1 to 5, and try to remember your favorite TV shows. Sometimes he'll even ask you about your family or pets. i-Que is quiet for a little bit when he's first turned on but then as minutes pass, he will become more active, asking questions and roaming around the room. He's definitely an amusing robot.

Frequently Asked Questions

All About i-Que

Is i-Que a real robot or just a toy?

i-Que is a full-fledged robot which is programmed specifically to be a companion and teacher for children. He is fun, plays games, roams around, and attempts to learn about his owner and his environment. He makes a very sophisticated toy for children and adults alike. As with any electronic toy, adult supervision would be best when very young kids (in the lower recommended age group) are operating i-Que. Think of it as a family robot which both parents and kids can use together, and a robot which parents can utilize to teach their children. Great for Quality Time with the kids!

What can i-Que teach my children?

i-Que can teach many things. i-Que comes with a 70,000 word Miriam-Webster dictionary and topics on Animals, History (including a few popular sports), and Biographies of some of the most famous people. i-Que also has a ton of trivia bits programmed into his database on all kinds of subjects. Data cartridges can be purchased separately to further expand his knowledge.

i-Que also is a fun robot and can play different educational games, expanding a child's learning, reasoning and logic skills. Because i-Que can also be controlled remotely, a child can learn direction and hand-eye coordination skills.

Because one has to interact with i-Que, children will also learn how to follow instructions and pay attention. i-Que's voice is clear but sometimes he can be hard to understand. Paying close attention to his words and following his instructions exactly is rewarded with a robot that seems to do things on command! Something many children will enjoy. This is one way that parents can teach children that following instructions can result in rewards.

i-Que is a very sophisticated toy. Therefore it will take him some time to learn things. Children can learn patience as they watch him learn and grow. One can learn the basics of how any being learns through experience. In addition, children will learn responsibility much as they would in caring for a pet. But this is not just any pet. They would learn how to take care of sophisticated electronic equipment and how to play responsibly with others (some of i-Que's games allow more than one player to use the communicator). When used to it's fullest and under parental supervision and instruction, i-Que has many things he can teach. Parents may even find other things that the robot may demonstrate that can be useful to learn.

What do I need to know before I start using i-Que for the first time?

First, do *NOT* change the settings of *ANY* switches on the robot unit or the communicator! This is very important. You need to leave all switches set at factory settings. This is Ch1 for the robot and communicator, and SLEEP for the robot's On/Off/Sleep switch. You must recharge him in this SLEEP mode for up to 8 hours (minimum recommended is 5 but it's best to give him 8 hours). While you are waiting, a parent should read the entire manual and go over the basics with the primary user of the robot. The Communicator is not very intuitive so the manual is a must-read. Once you activate i-Que, take your time to go through what he asks and think before you do anything on the communicator.

Does i-Que have Artificial Intelligence?

Technically, no. However, many are equating the idea of 'Artificial Intelligence' with a machine's ability to 'learn'. i-Que is technically a pre-programmed fuzzy logic system that uses input of different types to store data, retrieve it and act according to information that it has previously stored. It is not really 'learning' as such, but basically just using a database of information to determine what actions to take, and then the computer will initiate certain movements, trigger motors, send words to the speaker, etc.

If i-Que really isn't an A.I., then why does he seem to be so smart?

Machines can be programmed to *emulate* certain types of things that we often take for granted such as intelligence and communication. We already are familiar with phone menu systems that talk and sometimes even understand our own words. They then use that input to do another task. Just as you use the mouse to click on an icon which tells the computer to open a program. The computer isn't 'smart' even though it knew what program to open. It's just part of the programming. What makes i-Que seem so marvelous is that his computer can process many different types of input (like bumps, sound of your voice, information from his communicator) and has a lot of programming and databases to make the robot react to these inputs. The more complex the program and actions, the more it appears to be intelligent, even if it is not.

We still are a ways off from having genuinely intelligent electronic robots in our homes. However, i-Que and other robots like him are paving the way.

When was IQ first released to the public?

According to a representative at Manley Toys, i-Que was released for public purchase in Fall 2007.

Will there be any further cartridges or improvements?

Manley/ToyQuest no longer supports or manufactures this robot. There were a limited amount of cartridges released and they, like the robot, are hard to find.

The box has some black stickers over some descriptions. Why?

We are not sure about this either. It may be that when the robot was manufactured, there may have been some features that were not installed after all or features that didn't work the way that they had hoped. If we find the answer, we'll let you know!

Communicating With i-Que

Why doesn't i-Que respond to my voice?

i-Que's microphones are not that sensitive. Furthermore, noises in the room will confuse the audio input and i-Que would not recognize the sounds. He'll just hear sounds. He may even ask "What's that?" and ask you to type in the description in the communicator. Also if you have a heavy English accent, he may not be able to understand you. For best results speak into one of the two microphones in the lit silver area on his base. Best to be a few inches to about a foot away at the longest distance. Also be sure that the Voice Recognition is set to 'On' in the Communicator Setup menu. If you have had i-Que turned off or the switch in the 'Off' position, or if he was in sleep mode or the switch in 'Sleep' position, then you'll have to reset the Voice Recognition to 'On' again.

i-Que can only recognize 4 words in English: i-Que (his name), Repeat, Yes and No. He is not able to recognize any other words. i-Que *cannot* have a verbal conversation with you because of this.

How do I talk to i-Que?

i-Que understands certain text abbreviations and you can use them to "talk" to him. We put "talk" in quotation marks because you are limited to using these abbreviations to communicate with i-Que. This is done via the Text Mode on the Communicator. There is a list of abbreviations he recognizes, including some common IM chat ones. However, some are not so easy to figure out and the manual does not explain them, only to try them and see what happens. Whenever you use one of these abbreviations, you type it in the Text Mode and press enter. i-Que will take a random response from his database that is linked to that abbreviation and say it. Some of them can be rather humorous!

For anyone who studies Artificial Intelligence and ChatBots, i-Que does not have a Natural Language processor. He uses pre-programmed responses which are triggered by input from the communicator or from one of the 4 recognized spoken key phrases.

Why didn't i-Que respond when I sent data from the Communicator?

There may be several reasons for this. Either i-Que or the Communicator (or both) may be low on battery power. i-Que may be soon ready for a recharge and/or you may need to replace the batteries in the communicator. Another reason may be that you are too far away from i-Que. The communicator's best signal range is 30 feet (even though some say it's 50 - 100 feet). Try again by getting closer to the robot. Also be sure there isn't anything working that can potentially interfere with the signal. Sometimes other radio-controlled toys or devices that transmit radio waves may interfere with the signal.

Another thing you can try is to press the Red 'No' button every 2 - 3 seconds until either the communicator or i-Que responds. This works especially well if you are in cartridge mode and are stuck in Triva or Search.

Can I change the sound of i-Que's voice?

i-Que has several voices you can set him to. Once set he will continue to use that voice. However, if you turn him off or take out his batteries (or if his battery charge expires completely), you may have to reset the voice again. Here's how to set up i-Que's default voice:

1. Press the MENU key.
2. Press 'spacebar' until you see SETUP (if you can't find it, press the MENU key again).
3. Press the blue ENTER key.
4. Press the 'spacebar' until you see 'Voice Select' and press the blue ENTER key.

Now i-Que will speak in the currently selected voice. Follow his instructions. If you like it, press the green 'Yes' button. If you don't like it press the red 'No' button. i-Que will cycle through them all and start at the beginning in case you missed the one you wanted to choose.

I got an answer right but he said it was wrong!

This is a result of the communicator not being understood properly by the robot. This can happen for several reasons. The robot or the communicator is running low on battery charge (though i-Que will automatically seek his docking station, so check your communicator batteries). Something may have been interfering with the signal from the communicator to the robot at the time you sent the transmission. Or, you are too far away from the robot for the signal to reach. Weak or distorted signals can cause i-Que to think you gave a wrong answer.

Why is voice recongition off every time I reactivate i-Que?

This is a known issue. The VR settings will default to "Off" when you recharge the robot or put him to sleep. VR is the "Voice Recognition", which is basically turning his on-board microphones on or off.

Spelling Game: How Do I Type In The Answer Before He's Done Talking?

When playing the spelling game, if you know the answer but type it in and press Enter when he's talking it won't register. Timing starts after he finishes talking. So if you know the answer before he's done with his definitions, just press the 'No' button first to stop him and then press Enter (you can type in your answer before pressing the 'No' button and it won't erase your answer).

Programming & Database

During i-Que's first setup, he said to press the 'Preview' button. I can't find it.

Actually, he said "Press the Green Yes" button. Some things he says may not be all that understandable. You need to pay attention and even then it might be difficult. Press the green button marked 'Yes' on the communicator to get him to start the setup process.

Can I program i-Que?

If you're talking about programming him using an external computer or using some sort of scripting or programming language, then no. The only programming capabilities is to store a routine of movements into i-Que's memory to be played back or to store words so that he can speak a phrase or paragraph that you can create yourself. Do realize that if you try to use inappropriate language, i-Que is pre-programmed to not store or speak the pre-programmed words. You'll have to start over from scratch and reprogram the speech.

Where's IQ's data on subjects other than sports, history, animals & biography?

i-Que's other information seems to be in bits of trivia he would define, in his dictionary and during trivia games. Unless you use a data cartridge, i-Que is limited only to History (including a few select sports), animals and biography. The dictionary has 70,000 words with definitions. It is from a student version of the dictionary so many words you think would be included may not be.

How do I get i-Que's status including what he has learned?

1. Press MENU and then 'spacebar' until you see SETUP (if you can't find it press MENU again).
2. Press the blue ENTER key.
3. Press 'spacebar' until you see 'Check Status' and press the blue ENTER key. i-Que will say the date, time, and a couple other things. There is also a status check button on the robot itself which will do the same thing.

To learn what information i-Que has retained, go into Text Mode and type in INFO? (including the question mark which is done using the SHIFT and then the 'G' key). i-Que will give a limited amount of information including who his owner is, the nickname, and a couple other things. If you find any of this missing, he did not get that information stored in the database. The manual will tell you what information he will give.

How do I 'start over' with i-Que? How do I reset him back to factory defaults?

There are three ways to reset the robot. However there is only one way to reset the robot to factory defaults. But before you do any of these, please realize he will lose *all* information he learned, including any maps he may have stored about things in your home (i.e.. where he bumped into something, etc.) and also will forget YOU, your likes and dislikes, your birthday. In a total reset, he'll be just like he was when you first took him out of the box and will go through his setup routine again.

One way to reset him via the SETUP menu on the communicator. The manual shows how to do this. The other method is to take a pen point and press the reset hole on the bottom of the robot. Finally, there is a reset button on the back lower right of the communicator, inset into a hole. Use a paper clip or pen point to press this to reset the robot and communicator.

To do a total reset where he will go through his setup routine, follow these steps:

1. Turn the robot's switch on the underside to "On".
2. Go into the Setup Menu and choose Reset.
3. After i-Que confirms the reset, turn the switch on the bottom of the robot to *Sleep Mode* (not Off).
4. At this point, it's best to put i-Que on his charging dock for a few hours. Once done, then you can turn the bottom switch to "On". i-Que should go through his default setup script.

Why does he keep asking me the same questions?

If you had not answered one of his questions before or had skipped it by not responding or selecting 'No', then i-Que will not store anything for the question in his databanks. As a result, if he finds there is no answer to a question he has selected at random, then he'll ask. Sometimes some questions he may ask again to see if you've changed your mind or want to change your response.

There is a known issue, however, with the i-Que asking for your birthdate. This can happen even several times during a powered-up session. This might just be a programming glitch. Setting his birthdate via communicator menu does exactly the same thing but he still will ask again maybe during the same session or another one.

i-Que says I dislike the things I like when I type INFO?

This is a known issue. He will speak a list of things you like. Then he'll say you *dislike* and speak the same list! It appears to be a programming bug.

What is the difference between sleep mode on the robot and communicator?

i-Que can be put into sleep mode both by the switch on the underside of the robot or via a menu item on the communicator. However, these two are *not* the same.

Putting i-Que into sleep mode using the switch on the underside of the robot will cause him to stay in a non-active standby mode. His clock and calendar should continue to work, and he can recharge if set on the docking base. But he will *not* be active. His head will go down and his lights will go out (except the green LED in the center of his face if he's charging). If he is not charging he will sit there as if turned off. He will not reactivate unless you position the switch on the underside to "On".

If you put the i-Que to sleep using the communicator, i-Que stays *Semi-Active*. His lights will not go out, but will dim. His head might stay up. He will say random things at times, and even snore! Some of the things he says may be quite humorous as he talks in his sleep!

Will he forget everything if I take his battery out?

The Flash RAM in the i-Que Robot is apparently non-volitile. You can remove the battery and leave it out for months and he will still remember you and most of your information. The only thing ihe will not remember is the time and date, which apparently is dependant on the battery, as well as the robot being placed in the On or Sleep mode. The only way to erase all information is to reset the robot via his communicator.

How do I get i-Que to recognize my pet robot?

When he asks if you have any pets, answer 'yes'. He will ask you if it's a dog or cat. Answer 'no'. He will then ask you to enter the name of the animal. Type in 'robot' (without quotes). Then proceed to answer his other questions about the pet robot.

Many thanks to "RoboPizza" from the RoboCommunity forums for this answer.

Autonomous Use and Roaming

Will i-Que roam around all the time when I'm trying to sleep?

No. There are many reasons and ways you can prevent this. First, his batteries only can last a certain amount of time (less than 2 hours) before he needs to recharge. Once he's recharging, he does not move from his base at all unless you press a button (any button) on his communicator. So he stays put and inactive the whole time until woken up via communicator (even if his switch is set to the 'On' position). You can also program him to be inactive during certain hours, or just turn his switch on the bottom to SLEEP. This way you can keep him off the charger and/or unplug the charger and he will stay put and never bother you.

How do I get i-Que to be quiet?

In order to get him to stop talking, press the red 'No' key.

If you want him to stop moving, go into Text Mode and type MOTORS? (including the question mark). He will not move. Though he may still talk.

You can always turn him off, or to preserve the time and date, and your birth date information, you can move his switch to SLEEP.

Why does my i-Que still bump into things or try to go off the table?

i-Que uses infrared sensors to navigate his environment. Infrared needs something reflective so that the signal will get back to the sensor and alert the system that something is or is not there. It does not work all that great on dark surfaces, however. Therefore a black table, dark rug, darkened room or corner may cause problems for i-Que. You can reposition him yourself by picking him up and setting him down in another place or by using the communicator to go into DRIVE MODE (Press MENU first and 'spacebar' to find the option. Press MENU again if you can't find the option). In DRIVE MODE you can remotely control i-Que and get him out of a bind.

Can I leave i-Que on 24/7?

According to the manual, i-Que is designed to stay on 24/7. However in reality this is not so. His batteries only last a certain amount of time before he has to recharge. Once docked, he won't move from there, or even activate unless you press a key on the communicator or remove him from the docking station. So this doesn't really make him very autonomous. Furthermore, i-Que may not always be able to get out of the way of things or able to avoid all obstacles. For this reason, it's best not to leave i-Que active unsupervized.

Can I have him stay inactive during certain hours?

You can program his Quiet Time using the Communicator. You need to go into the SETUP menu to find the Quiet Time setup. i-Que will help you set up the start and stop time. Start time will be when he stays quiet and stop time is when he'd be active again. Though this might only work if he's got a fairly good charge when the start time is encountered. He won't go into a sleep mode or appear shut off. His blue lights will be on, head up. But he will not move or say anything until the time which the quiet time ends.

He will activate if you use the communicator during those times. But once he's done with the task and you haven't given him another for awhile, he will not go exploring or asking questions. He'll stay still and quiet again until his pre-programmed end quiet time.

Why doesn't i-Que's head go down when I turn him off?

Apparently he was designed this way. The best way to get his head down is to put him in sleep mode first, then turn the switch to the "OFF" position once his head is down.

What do I do if his motor(s) will not turn off?

If i-Que's motors (wheels or other motors) won't turn off, but keep on running, then you will need to turn his switch on the bottom of the unit completely to the "OFF" position for 1 - 2 seconds. Then turn it to SLEEP or ON again. This will reset his motors. This may happen after docking or at any other time if you notice he's "stuck". Do not keep the switch in the OFF position for more than 15 seconds or you'll have to reset his time/date. Note that he may get stuck in a corner and make some loud "clacking" noises while he tries to navigate. This should not last long. It's best to pick him up and reposition him or put him in DRIVE MODE and back him out of the area. If all else fails and the motors are still going, then reset it as mentioned previously in this question. Using MOTORS? on the communicator may not shut his motors off in the instance that his motors are stuck on and running when they shouldn't be or can't shut off.

Support

How long is the warranty and who do I contact?

The warranty period is 30 days from the date of purchase (so if you purchased him online, it doesn't start the day the robot arrived at your doorstep, but starts on the day the online store charged your credit card). If you need to get warranty service, you'll need to contact ToyQuest Customer Service. They will more than likely make arrangements to replace the defective unit.

Who do I contact for tech support?

Tech Support is said to be available from riproarmedia.com. You'll have to e-mail 'help'. We typed it this way because we wish to help prevent spam. Just type 'help' without the quotes and the @ sign and the domain. Then use the subject "i-Que Tech Support Request" without quotes. Be sure you give them as much information about the problem as you can. You need to be very detailed and include any steps to take that will recreate the problem so they can see if they can recreate it on their end.

How do I get another battery pack?

At one time you can get replacement battery packs from ToyQuest Customer Service. Since the robot is very old, they may not be able to replace battery packs. However, it wouldn't be a bad idea to ask them anyway.

The web site in the manual is no longer there, what's the correct URL?

According to a representative at Manely / ToyQuest, the ique-robot site is currently unavailable and they are still working out the finer details at the time the manual was printed. It is suggested that people visit the ToyQuest i-Que Robot site for further information.

Docking and Charging Issues

How do I get my i-Que to dock?

The i-Que robot is known to have problems finding it's docking station in some situations. The docking system uses an infrared sensor to get the i-Que to home in on it, like a beacon. If there are objects in the way between the robot and the docking station, or if there is other interference, then the i-Que may not find the station. Also the color of the wall where the charger is located may cause problems. Light colored walls are best. Remember, IR works best in light environments. Also be sure the area is well lit.

Very low battery power may cause i-Que to not be able to process well enough to find the docking station. In this case you'll have to put him on the charger yourself.

Even in an optimal environment, i-Que takes a good bit of time (over 1 minute) to adjust himself to the docking port. As he does this more often, he may learn the area well enough to cut down on the time it takes for him to actually dock. Though it does also depends on the above circumstances and his position (where he's located) when he starts to look for the docking station.

Why do I hear a high-pitched noise when i-Que is charging?

This is due to interference in i-Que's speakers from the docking station itself. It is harmless and nearly inaudible. People with very sensitive hearing and some pets may be disturbed by this, however. If this is the case, move i-Que's charging station to another optimal location where it will not bother anyone.

How long should I leave the robot on the charger?

The actual answer is unknown. When you first get i-Que out of the box and prior to his first activation, you must charge the batteries for a minimum of 5 hours (8 hours is suggested to be best). As for leaving i-Que on the charger continuously, this may not be a good idea for any electronic device. If you used i-Que and he went to charge, give him about 5 hours. Also note that a green light on the center of his face will slowly blink while he's charging. When he's done, the green light will not blink (his face will remain dark). Give it some time to observe because the green light goes on and off slowly. If you don't intend to use him for awhile, then unplug the docking bay and put him in SLEEP mode. If you are going to store him away for a lot longer, you may want to turn him off using the switch on the bottom of the unit. This slows the power drain since it will not use the batteries to keep the time/date (you'll have to reset them when you turn him back on again). If you don't plan to use the robot for 30 days or more, it's probably best to also remove his batteries. He will *not* lose what he learned though. This is all stored in flash RAM and will only be erased if you use the RESET function or his reset button on the bottom of the unit. Just taking out the batteries will be much like turning him off. You'll just have to reset the time/date functions. However, the advantage to removing the battery is that it helps protect the robot against potential battery leaks during long-term storage. Always wrap the batteries in plastic bags and store them away from the robot to prevent any potential damage. Before putting the batteries back in, inspect them carefully for any damage or leaks. If you find anything that doesn't look right, don't use the pack. Instead contact ToyQuest Customer Service for a replacement battery pack.

Why doesn't i-Que start charging?

Is i-Que's switch turned 'On' or in 'Sleep'? Is the charger plugged in? Are you sure he's aligned on the charger correctly? Is the electric outlet working? Is the charger plugged into the charging dock fully? Are the contacts dirty? (If they are, an adult must unplug the charger, wait about 1 hour, and then carefully clean the charging contacts with rubbing alcohol and a Q-tip, then let stand a few minutes to dry before plugging the unit back in.) These are some things that may cause i-Que to not start charging. i-Que is charging when the green light is glowing on the charger, and i-Que's green light in the center of his face is slowly blinking. Also keep in mind that if he's already fully charged, the light on his face will not blink even if the charging dock green light may be on.

Are the contacts on the charger dangerous to touch?

They shouldn't be. However, even though they have some protection circuitry, you will still want to discourage kids and pets from touching the contacts, even when the charger is not plugged in. It's best to put i-Que's charging system where he can find it but in an area where children and pets know they should not go. Older children should be taught never to touch open contacts. This also preserves the contacts from becoming too soiled to make proper contact.

How long does i-Que's batteries last between charges?

Approximately 1.5 - 2 hours, depending on use and how active he is. The more you do with him, the more battery power he'll take. So playing a lot of games or if he moves around a lot will diminish the amount of time he needs between charges.

i-Que seems very warm while charging. Is this normal?

During charging, i-Que's batteries will become quite warm as can other areas of the underside of the robot. This is normal. Within about 2 hours after charging stops (when i-Que's green light stops blinking), the temperature should return to normal.

What do I do if i-Que's light kept blinking after I take him off the charger?

This might happen if you take him off the charger while he's still charging. You can turn him to the "Off" position and back "On" or "Sleep" to fix this. Note that i-Que may lost his time and date settings if he's in the "Off" position for too long.

Troubleshooting

i-Que's head keeps going up and down and make clicking sounds.

This has been seen in some units. If your i-Que does this, it is more than likely defective and needs to be replaced. Call customer service and explain what is happening and request for a repair or replacement.

i-Que made a siren sound, lights went dim, and no response.

This has happened in an i-Que. What happened may have been a program error and he had went into Semi-Active Sleep Mode. To reset him again, turn the switch on the underside of the robot to *Sleep*, let the robot's head go down all the way, then turn the switch back to *On*. The robot should now operate properly.

What to do if i-Que malfunctions and won't respond.

The best thing to do is to turn the switch on the underside of the robot to *Sleep*, allow the head to go all the way down and then turn the switch back to *On* again.

The robot seems to only move in one direction or moves erratically.

The robot's sensors may be dirty and causing the robot to not read the information correctly. Follow the instructions in i-Que Robot Cleaning Procedure to properly clean the robot and then reactivate. If the problem continues, try resetting the robot. If there is still a problem, contact tech support.

Chat Abbreviations

Believe it or not, i-Que can have a conversation with you! However, you have to know his 'language'. Actually, it's a common chat language but for those that don't know all the different abbreviations and what they mean, here they are listed below. Some will get the same response every time, others might give you a different response each time you use it.

AAP	Always A Pleasure
ASAP	As Soon As Possible
B4N	Bye For Now
BAK	Back At Keyboard
BBIAF	Be Back In A Few
BBIAM	Be back in a minute
BBL	Be Back Later
BBS	Be Back Soon
BLNT	Better Luck Next Time
BTDT	Been There, Done That
CMMON	Come On!
CMON	Come On!
CRBT	Crying Real Big Tears
CUA	See You Around
CUL	See You Later
CUL8R	See You Later
DEGT	Don't Even Go There
FYI	For Your Information
G2CU	Good To See You
GAL	Get A Life
GG	Grins, Gotta Go, Good Grief, Good Game
GOTAGO	Got to Go
GOTTA GO	Got to go
GTG	Got to Go
HAGN	Have A Good Night
HAGO	Have A Good One
HHIS	Head Hanging In Shame
HOWRU	How Are You
HRU	How Are You
IB	I'm Back
IDUNNO	I don't know
ILOVU	I love you
ILY	I Love You
IMS	I am sorry
IUSS	If you say so
IYSS	If You Say So
KIT	Keep In Touch
L8R	Later
LD	Long Distance, Later Dude
LOL	Lots Of Laughter
LTNS	Long Time No See
MYOB	Mind Your Own Business
NIMBY	Not In My Back Yard
NO WAY	No Way
NOWAY	No Way
NWAY	No Way
OMG	Oh My Goodness
ONO	Over aNd Out (?), Oh No
OO	Over and Out
OOH	Out Of here
PDQ	Pretty Darn Quick
PU	Peew (that stinks)
PXT	Please eXplain That
ROFL	Rolling On (The) Floor Laughing
ROTFL	Rolling On The Floor Laughing
RUOK	Are You OK

SAL	Such A Laugh
SIT	Stay In Touch, Shift Into Turbo
SNAFU	Situation normal all fouled up
SORRY	Sorry
SRY	Sorry
SSDD	Same Stuff Different Day
SSINF	So stupid it's not funny
TA	Thanks A Lot
TAFN	That's All For Now
THNQ	Thank You
THNX	Thanks
THX	Thanks
TIAD	Tomorrow Is Another Day
TLK2UL8R	Talk to you later
TMI	Too Much Information, Too Much Internet
TTYL	Talk To You Later
TYVM	Thank You Very Much
UGTBKM	You've (U) Got to be kidding me
WASSUP	What's up
WASSUP?	What's Up
WU?	What's Up
WYSIWYG	What you see is what you get
XLNT	Excellent
YGTBKM	You've Got To Be Kidding Me
ZZZZ	Sleeping (bored)
ZZZZZ	Sleeping (bored)
ZZZZZZ	Sleeping (bored)

Skits

i-Que is able to do short little skits, often changing his voice to make things even more interesting! At the bottom of page 40 of the robot manual, you'll see there are several to get you started, such as *LOSTSPACE*, *ARNOLD*, and *CELLPHONE*. There are also quite a few others but they did not tell us what they were! Members of the now defunct Yahoo ique_robot Group have found a few.

The **highlighted keywords** are ones that will give you a different phrase each time the keyword is entered.

Oz	Conan
Cylon	Leno
ET	Letterman
Robbie	Oscar
KITT	Jerk
Rock	Smokey
Bart	Trump

How Infrared Sensors Work

by Tika Carr
December 22, 2007

i-Que's sensors are all infrared sensors. Infrared is like that in your remote control for your TV, stereo and other devices. It relies on a transmitter/receiver where one sends an invisible beam of light and the other end recieves it and acts on the pulses of that light. It also pulses so fast you can't really catch it. It works in only short range, and must have a bee-line from the transmitter to receiver. This is one type of infrared and is what i-Que uses for homing into his charging bay.

The other type of infrared sensor i-Que uses is for his navigation. This type is kinda like your optical mouse. When you move the mouse, the cursor moves to show the location of the mouse. When i-Que moves, he scans to see what is there. He has them on the underside to detect whether he's still on a flat surface or not, and also in the front and back to see what is in front or behind him. He can not see objects or shapes. This type of infrared depends on getting a signal reflected *back* to it. It too runs in pulses. If the beam isn't reflected back, then no action is taken. Or it doesn't 'see' anything. Let's think of it as if the light is reflected back then it's '1', and if no light is reflected back it's '0'.

Now how does this help i-Que to see where he's going, find his charging bay and dock, and to not fall off tables? And why doesn't it always work? Infrared (also abbreviated as "IR") is not foolproof technology. But it gets the job done. It's also cheaper to produce circuitry for and keeps the cost of electronics within affordable levels.

Let's take a look at i-Que's docking station seek mechanism. When i-Que needs to charge, he'll put his head down and keep some red lights lit on his 'face'. He'll announce he's going to recharge. In this mode, he's using the little nub on his head to send/recieve beams to and from the docking station. He keeps doing this until he picks up the IR response beam from the charging station. Once he does that, he keeps using that as a means to try and align himself for docking. You'll notice a clear square-like area under the white nub on top of the docking station tower. This is probably how he aligns himself. If there is anything in between the robot and the docking station, then the signal could be lost, causing the robot to not be able to dock. i-Que may wonder a little in an effort to relocate the beacon. If he can't after a little bit longer he'll ask for help. Roombas use a similar technology as well. However, i-Que seems to also map out the area on the way to the docking station, so he is less likely to bump into things if you keep the docking station in the same place. Since there is limited range, he has to be within range as well. He may rely on previously stored mapping data to find the charger but also may just roam until he picks up the beam. If he gives up, he might have not had any 'clues' from mapping the area or got close enough to the charger to pick it up.

When he's roaming around, he may bump into some things that his sensors don't detect. He may even go off the edge of a flat surface. *Never* rely on him to stay on a table or chair! Even though he's supposed to avoid drops, the technology still is not that reliable and things can happen, possibly causing damage to the robot unit. The reason why he's bumping into things and falling off stuff is because the IR sensor needs a reflected beam. In other words, as stated above, he's recieving a '0' and not a '1' so he doesn't change direction because his sensors didn't indicate anything changed! His IR sensors work best on areas that will reflect back the beam. Dark areas and surfaces may not work well. You're probably thinking 'Now wait a minute! My optical mouse is on a black mouse pad and it works fine!' Take a good look at that mousepad. I bet if you look closely you'll see things like ridges and maybe slight 'sparklies'. Anything that can create a surface that will change from one spot to another. Take that mouse on a smooth glossy surface or a dark surface that doesn't have all that on it and I bet you won't be moving the mouse pointer too well. i-Que has this same problem.

There's more to infrared that meets the eye (no pun intended). To get a good idea exactly how infrared works, check out these links:

- What is IR wireless?
- An Introduction to Infrared Technology
- Infrared Wiki article

How to Clean the Sensors

In order to keep i-Que operating properly, you will need to clean the robot every so often. As the robot roams around, it can pick up lint, dust and dirt which can distort the information on it's sensors if these particles block them. Keep in mind that this is an electronic device and thus proper care must be taken while cleaning.

IMPORTANT NOTICE: *Cleaning of the robot should always be done by an adult. The robot is a sensitive electronic device which uses household current during charging. Children may be injured by electrical current and/or cleaning solution(s) if the cleaning process is not done properly.*

1. On the bottom of the robot, set the mode to "Sleep" using the "Off/Sleep/On" switch.
2. Use a couple tissues to clean the robots sensors. Use a soft lint-free cloth to clean the other areas of the robot. Do not moisten them with anything, especially not corrosive cleaners or household solutions. You may use a tiny bit of water and very mild non-abrasive soap on a soft cloth if you find a stained area. *Never* use any cleaning on the sensors themselves as this can damage them. Do *not* use any brushes or rough cloths, sponges or scrubbing implements on the robot. This may scratch and/or permanently damage sensors.
3. First clean off the underside. Clean the charging strips with a dry soft cloth. Note that some discoloration is normal. The charging strips are shown in figure 1 where the yellow arrows are pointing. Clean off the sensors that are circled in yellow in figure 1. To do this, take a rolled up corner of a tissue, insert into hole, and twist lightly a little. This helps knock loose dust and dirt. Do this for each sensor hole.

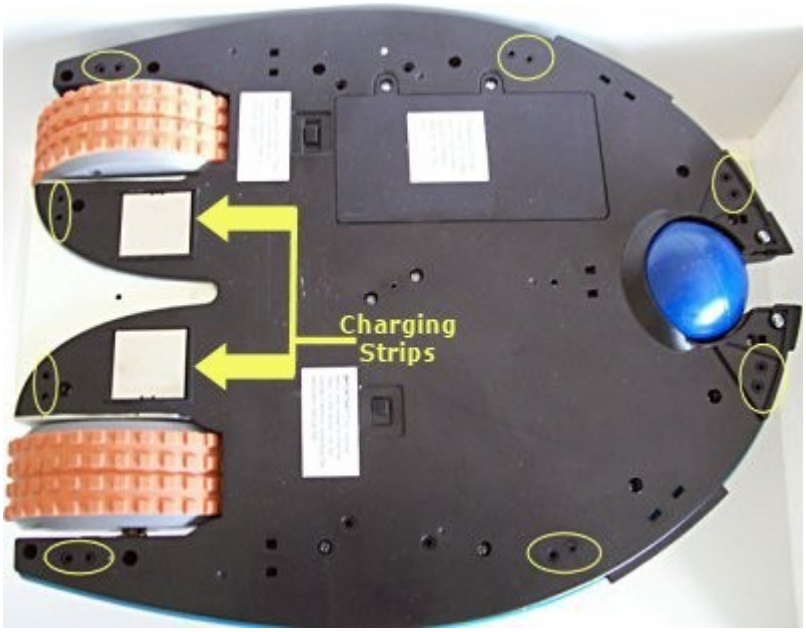


Figure 1

4. On the back of the robot are more sensor holes as shown circled in figure 2. Clean them as you did the sensors in step 3.

Figure 2

5. Next, dust off the entire robot with a soft cloth. Clean the ball and tracking wheels with a soft cloth and a small amount of mild non-abrasive soap and water solution. Be sure the robot is completely dry before you reactivate it.
6. Wipe the face with a soft cloth. You could try using a very small amount of non-ammonia window cleaner on a soft cloth on the face of the robot (do not use the window cleaner on any other areas). The sensors are shown circled in red on the face of the robot in figure 3. But they are behind the protective dark faceplate. If you keep the faceplate clean then these sensors will work best.
7. Clean off the front sensors shown circled at the bottom in figure 3. Do this in the same way you cleaned the small sensors in steps 3 and 4 above using a rolled up corner of a clean tissue.
8. Finally clean off the robot's IR sensor on the top of it's head with a soft cloth. This is the sensor it uses to find the charging base. This is circled in figure 3 as well.

Figure 3

9. Now we will do the charging base. Keeping the charging base clean will also increase the chances that the robot will find it. Dust and other contamination can weaken the IR signals and make the base hard for the robot to find.

   WARNING: *To prevent risk of fire or shock which can result in personal injury or death, always unplug the charging unit from the wall before you start to clean it. Remove the adapter from the charging unit as well, so that you can clean the base without getting tangled in the cord. Always inspect the cord for damage. Do not use if the cord becomes damaged. Some damage may occur if the robot had accidentally run over the cord in the course of finding the base. For this reason, inspect the cord regularly.*

   As shown in Figure 3, there are two areas on the top of the charging base that have sensors. Clean these with a soft cloth. Mild non-abrasive soap and water can also be used. Clean the rest of the charging base including the metal contacts with a dry soft cloth. Be sure that any wet areas of the base are dry before plugging it back into the electrical outlet.

Unit 2 Belt Drive

by Tika Carr
January 22, 2009

At 1:33 pm EST on November 19, 2008 I received another i-Que Personal Robot that is need of repairs. I named him Unit 2 and he joins his 11 month old "brother" Unit 1 (which I didn't name until after Unit 2 arrived). I purchased Unit 2 knowing that there were problems with his drive train not allowing the robot to turn. I got a good deal on it from someone in my Yahoo i-Que Robot group. I bought this robot primarily as an experimental unit in hopes to learn more about this robot and maybe even enhance it's capabilities.

The one thing that I found that was a surprise is that he won't recharge even when he says he's going to. His Green light doesn't go on. If I press the base's slow charge/start button it goes on but when I release the button, it goes off. Doing some tests and exchanging the batteries and chargers between both i-Que robots, I determined there was a problem with Unit 2's charging system. This issue was fixed after complete disassembly to diagnose the movement problems. Seems maybe a connector may have got loose in shipping. Once reassembled, all connectors firmly in place, the robot charged normally on the included docking base.

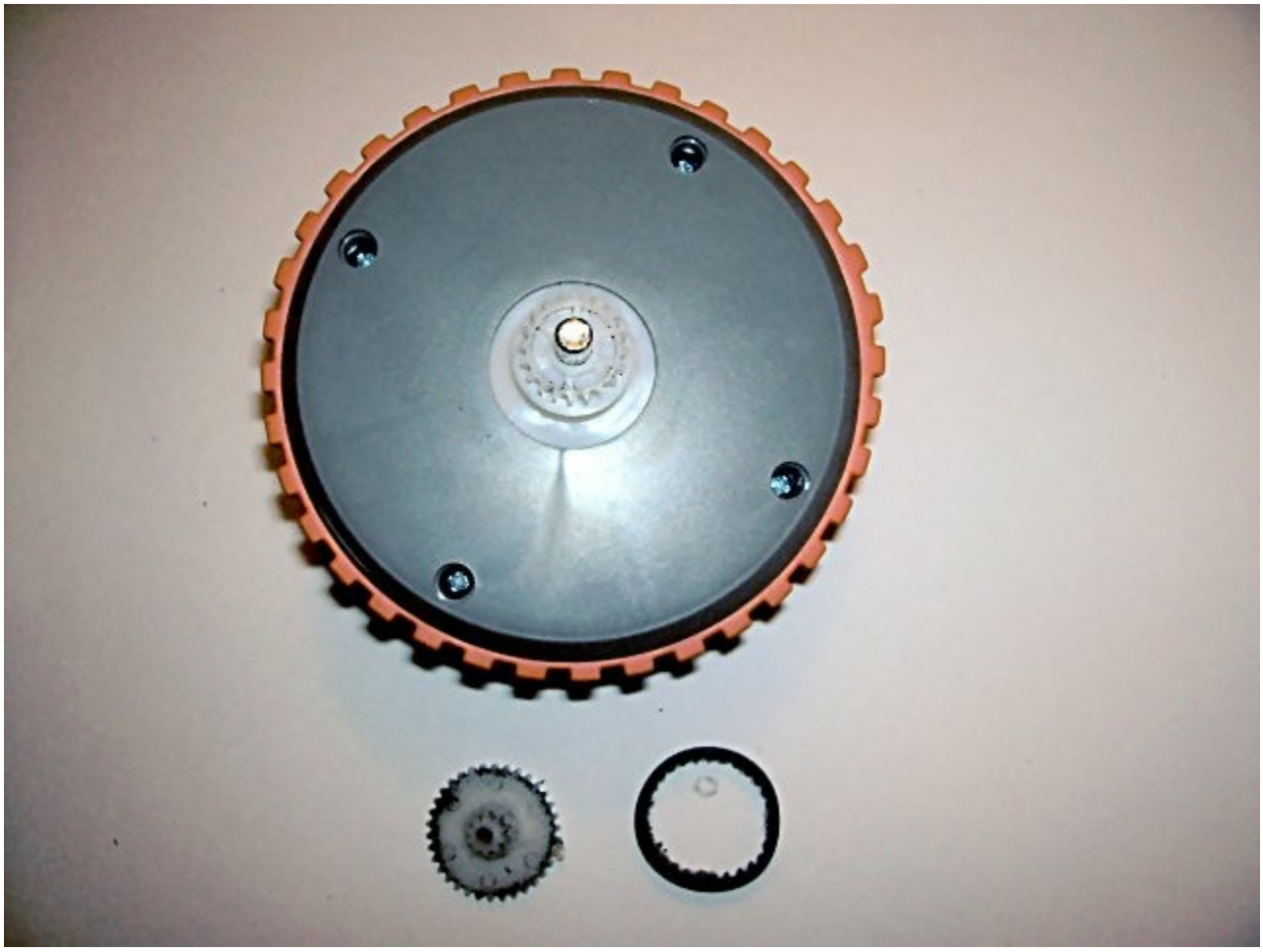
I was thinking before I got the bot that I would set him up with the robotic voice instead of the more natural sounding voice. Well, when I started him up, that's the voice he spoke in after I put in his batteries! This shows that even after a few months of non-use, the robot did remember it's previous owner's information and settings. I did eventually reset the robot via the communicator but then I changed the default voice back to the monotone robot voice. Unit 1 is kept set at the default voice. This way I can tell who's talking if both units are active. I have Unit 1 set to channel 0 and Unit 2 set to channel 1 on the communicator, so as not to interfere with commands from one or another. Though it would be neat to control them both in unison from the same controller for things like dances. That'll be awhile though, as I'm having problems finding a drive belt for the movement problem in Unit 2.

Speaking of which, I looked more closely at the belt and when I went to clean it off, I see that the hair was burned and melted a bit into the belt. Also it appears that some of the teeth on the belt are missing. At one part, the belt was warn down so thin I'm concerned it's gonna break. So he needs a new belt. Anyone know where to find one? The other side is pretty bad. Here's photos and specs.

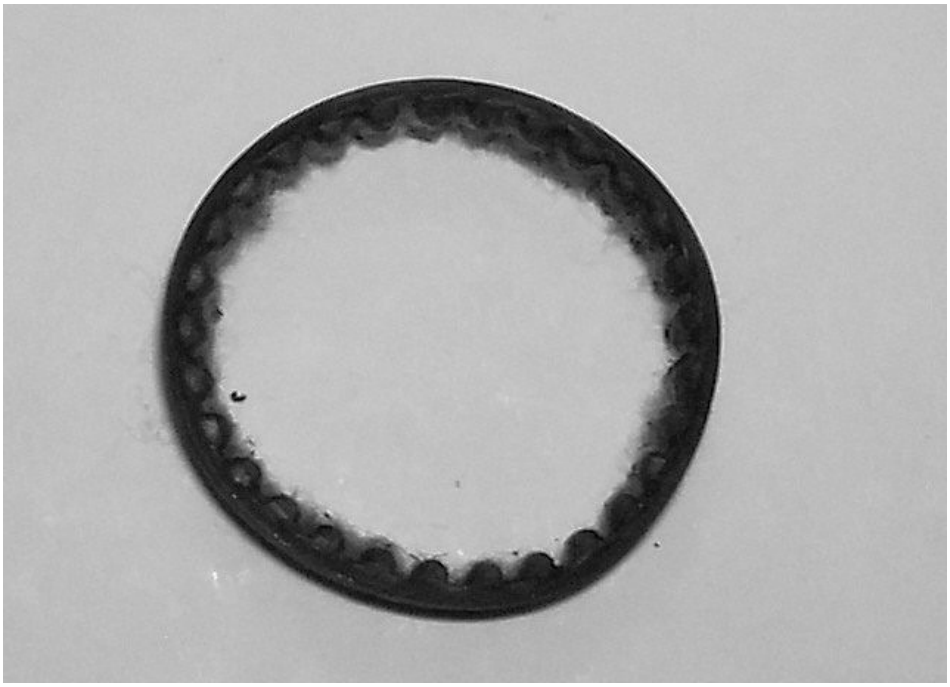
Here's how bad it was:

Note that the photos below show the GOOD side of the belt (for best reference).

Wheel, gearbox gear (belt goes on the small gear in center) and belt:



Close-Up of bad belt:



Specs:

Belt:

3.75" circumference (outer area of belt)
.125" Pitch
1/4" width
1/16" profile thickness (not including the teeth)
1/8" profile thickness of the teeth
1/16" spacing between teeth
Approx. 1" in diameter

Wheel inner gear (wheel is the larger item with orange treads):
10/16" Diameter not including teeth
20 teeth

Gearbox gear inner gear:
1/4" Diameter not including teeth
10 teeth

Both gears have a tooth profile height of 1/16", inner tooth gap of 2mm and outer tooth gap of 3mm.

You would need two of these belts.

Disassembly and Motor Fix

If you're having problems with your i-Que turning or moving at all, this document may help you solve the problem.

WARNING: *This document contains detailed instructions which must be followed precisely. It will also void your warranty becuase it requires you to open up the unit. Mechanical and technical skills are required.*

DISCLAIMER: *I'm not to be held responsible if you somehow destroy your bot while following these directions. Follow these instructions at your (and your bot's) own risk!*

Checklist:

Please do the following before making a repair attempt. This will help rule out any other possible causes, and save you time.

1. Check that the batteries in the communicator are good.
2. Be sure that the robot's battery pack is fully charged.
3. Clean the robot's sensors.
4. If steps 1 - 3 do not work, Reset the robot.

If the above steps do not resolve the issue, it's time to take apart the robot to check the drive motor gearbox and assembly, and make any replacements.

PARTS NOTICE: *At this time, I am unable to locate replacement parts for the i-Que. However, when I do I will update this document.*

WIRING NOTICE: *Wiring may be shown as a different color in the photos due to color changing due to flash in the camera. Best to go by the text for the wiring sequences.*

CONNECTOR REMOVAL NOTICE: *Be careful when unhooking cables as sometimes the base of the cable may come off the circuit board. Go slowly and if you see the plug not coming out of the base of the plug and the whole thing coming off the board, use two hands and/or a pair of needle nose pliers to hold the base to the board and pull only the plug out. Be sure that the base of the connector is flush against the board after removal so that the connector plug can make proper full connection.*

What You Need:

- Windex is good for cleaning sensors and the outter plastic parts, except gears. For that just use a dry, lint-free cloth.
- Having some vinyl or latex disposable gloves is useful (gears in gearbox have lots of grease).
- Grease safe for use on plastic gears (in case you need to regrease them).
- Q-Tips (good for cleaning)
- Rags (one coarse like an old dishcloth and one cotton lint-free soft cloth)
- Tissues
- Small-width Phillips screwdriver. If it's too wide, it won't fit into the holes on the underside of the robot. Also the groves on the screwdriver head must not be too shallow.
- Long needle-nose pliers (useful in case a screw gets loose - literally!)
- Small plastic bags, pen and masking tape. ***** YOU NEED THIS! ***** This is so you can keep track of what screws went where as there are different sizes.
- Electrical tape

Disassembly of Robot:

1. Remove Battery cover and battery. Remove the screws that are circled. Note the locations of the screws and mark a small plastic bag and put those screws in. This way you can keep track for later reassembly.

Figure 1

2. Set the robot on it's side as so with the two pieces open. Notice I used some styrofoam packing from the original box to prop the bottom part up. You will need something for the parts to lean against.

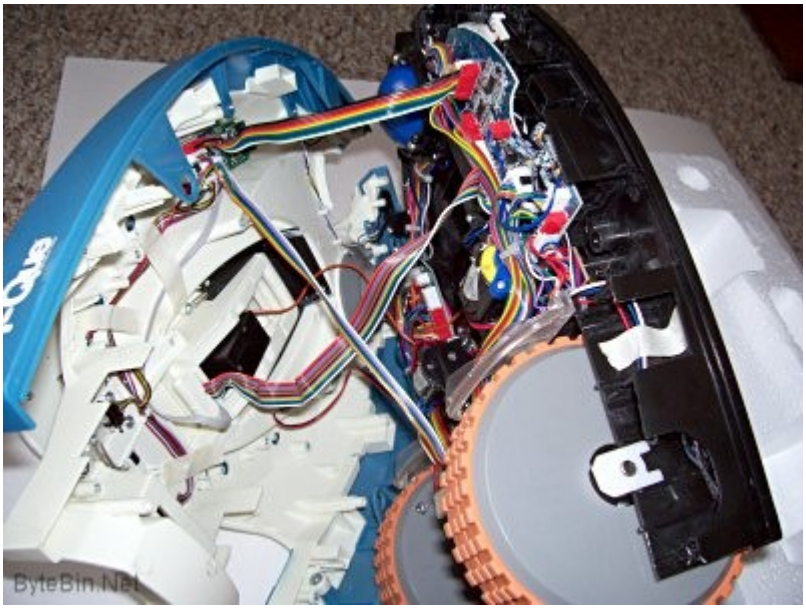


Figure 2

3. There a couple cables that are connecting the top assembly to the bottom one. Locate the one on the top part of the unit as shown. This cable is located just below the center black plastic box-looking item. Follow that cable to the main board and unhook it as shown in step #4.

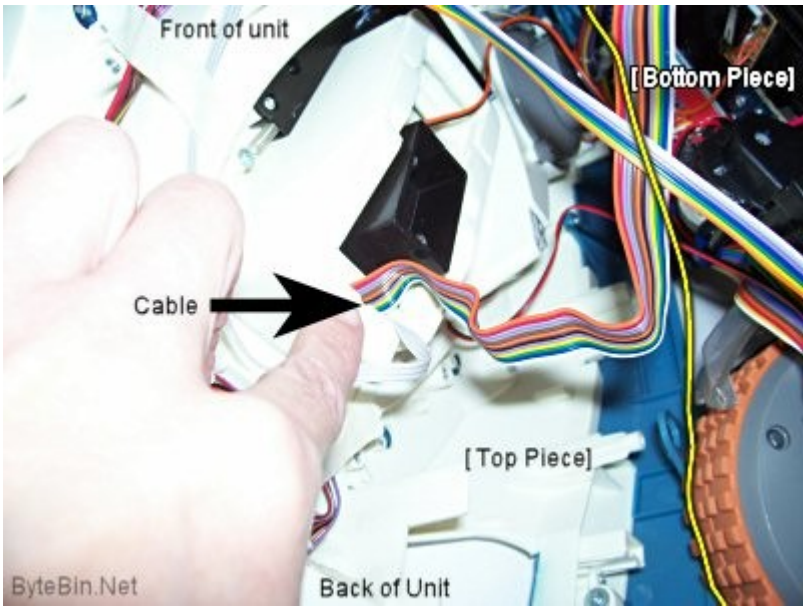


Figure 3

4. You'll notice between the wheels is the main CPU board and cartridge board. There is a row of connectors here which are covered by *masking tape*. Take off and throw away the masking tape. You can cover this during reassembly with electrical tape which is a better idea anyway. (They used *a lot* of masking tape in this unit!)

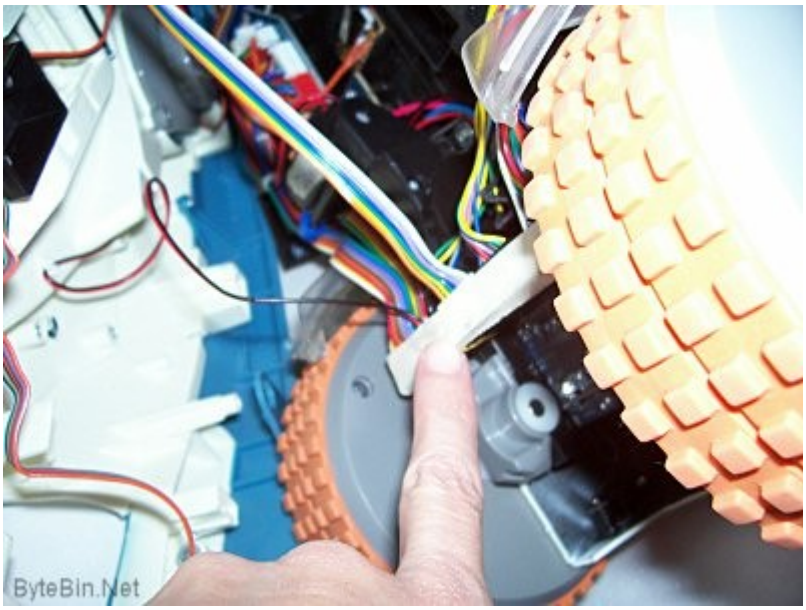


Figure 4a

5. Once uncovered, remove *only* the cables noted below from the mainboard. Do not remove any other cables then those described.

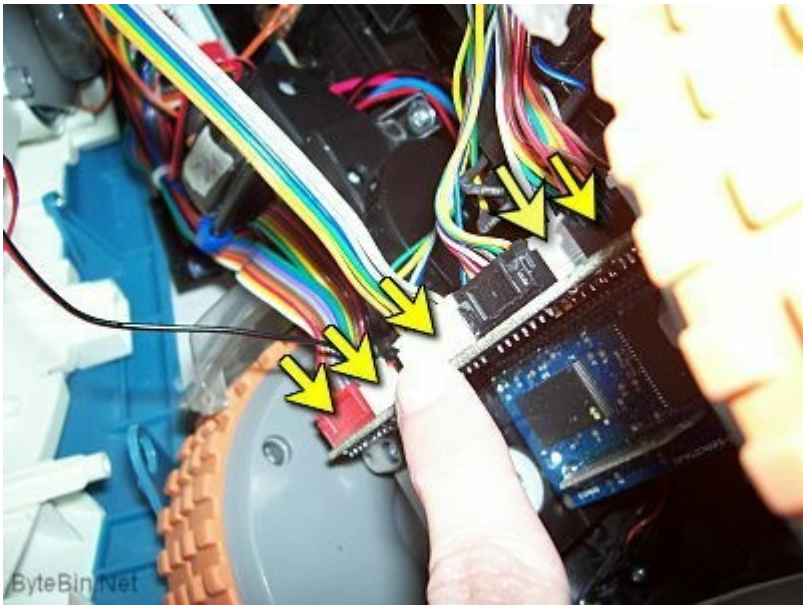


Figure 4b

NOTE for Reassembly:

Note each cable and the way it goes in. With the unit's back wheels facing you. Wiring is Left to Right unless noted otherwise.

Large white connector (This is coming in from the top piece): orange, yellow, green, blue, purple, grey, white

Large red connector on top: white, yellow, red, orange, brown, grey, purple, blue, green

Small white connector: red, black

White connector (Under two black connectors) (Wiring Left to Right): white, grey, purple, blue, green, yellow, orange, red, brown

Small black connector (Wiring goes Top to Bottom: red, orange, black

6. Unplug the larger set of orange and black cable from by motor #240 (the left-side with back of robot towards you).

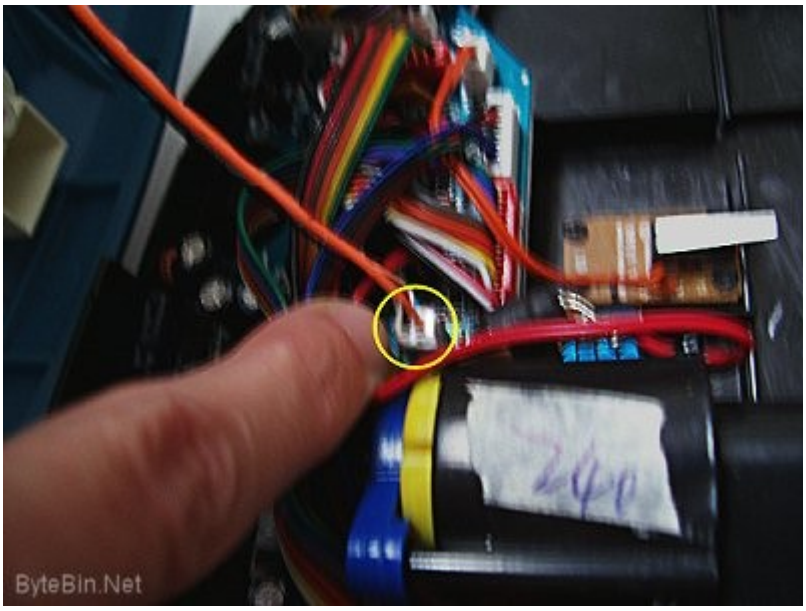


Figure 5

NOTE for Reassembly:

This plug is white, and the notched end goes towards the wheels.

7. Unplug the smaller black/orange wire with black plug (speaker connector) from the front near where the blue ball is. This is the front of the circuit board located just behind the left back where which motor #240 hovers over.

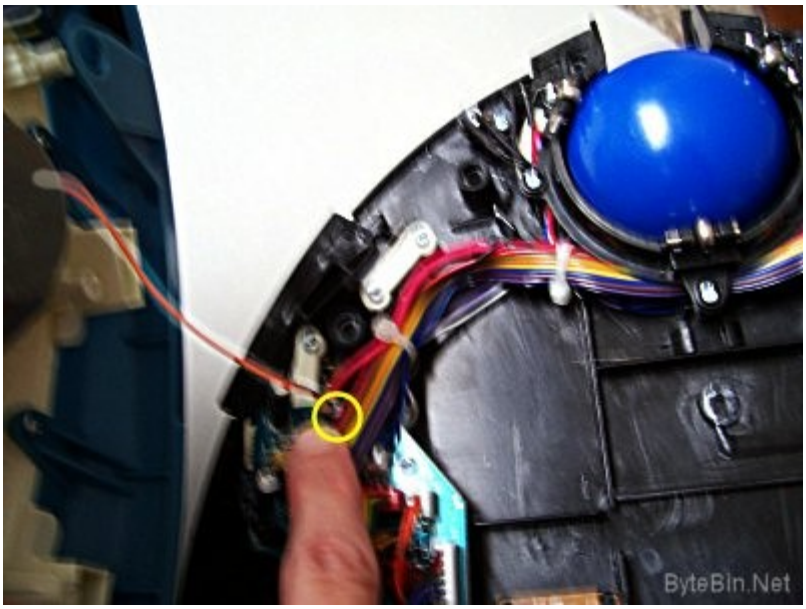


Figure 6

NOTE for Reassembly:

The notched end of this connector goes towards the front of the unit. So that with the back facing you, the wiring is Left to Right: orange, black.

8. Disconnect the top piece from the battery board located behind the right side wheel with the robot's wheels towards you. This is a red connector at the front of the board as shown.

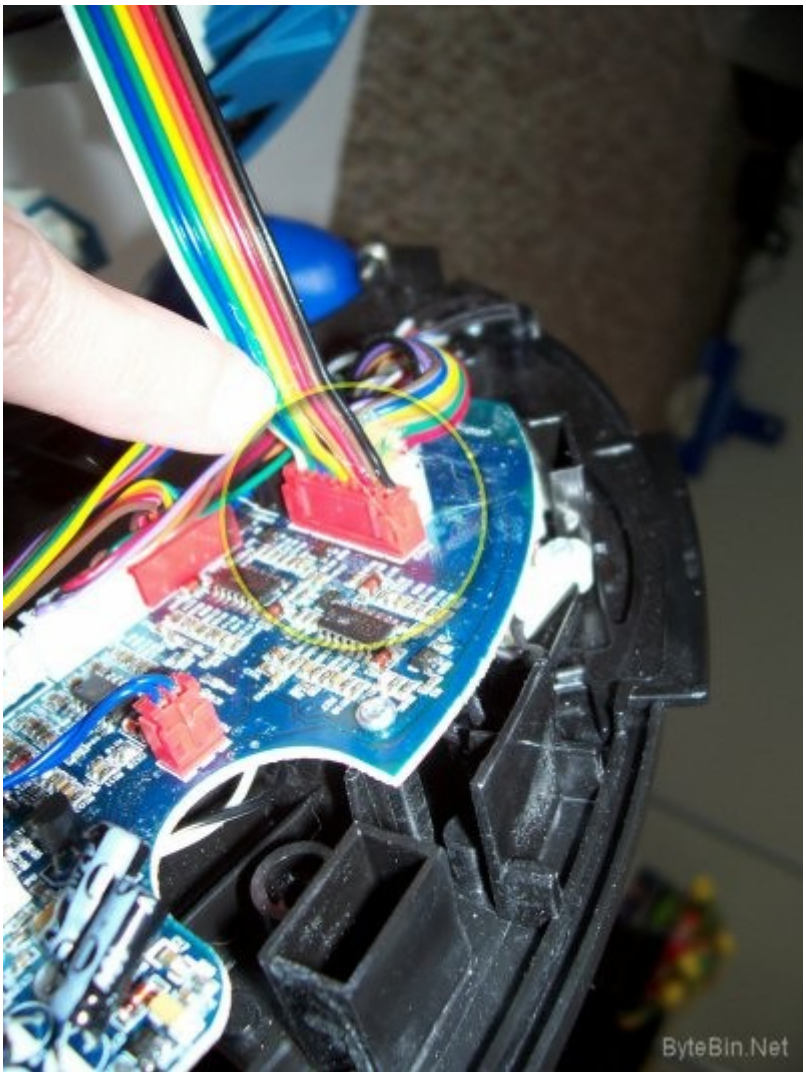


Figure 7

NOTE for Reassembly:

The red connector wiring is as follows Left to Right: white, aqua, blue, green, yellow, orange, red, brown, black.

9. Now you can separate the two parts. Set aside the top part as we'll be working with the bottom part of the unit.

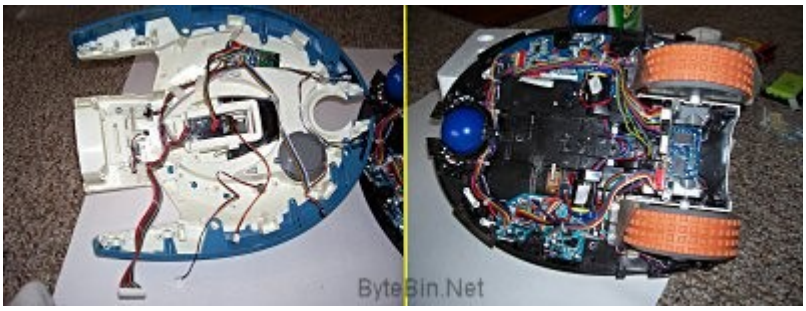


Figure 8

Remove drive housing screws.

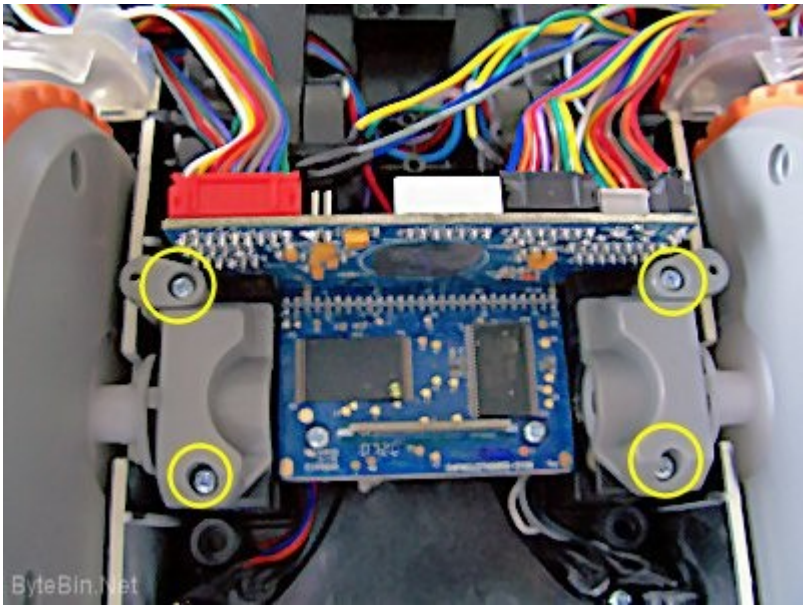


Figure 9

10. We still need to remove some more cables from the battery board (located on the right with the wheels towards you) to free up some things.

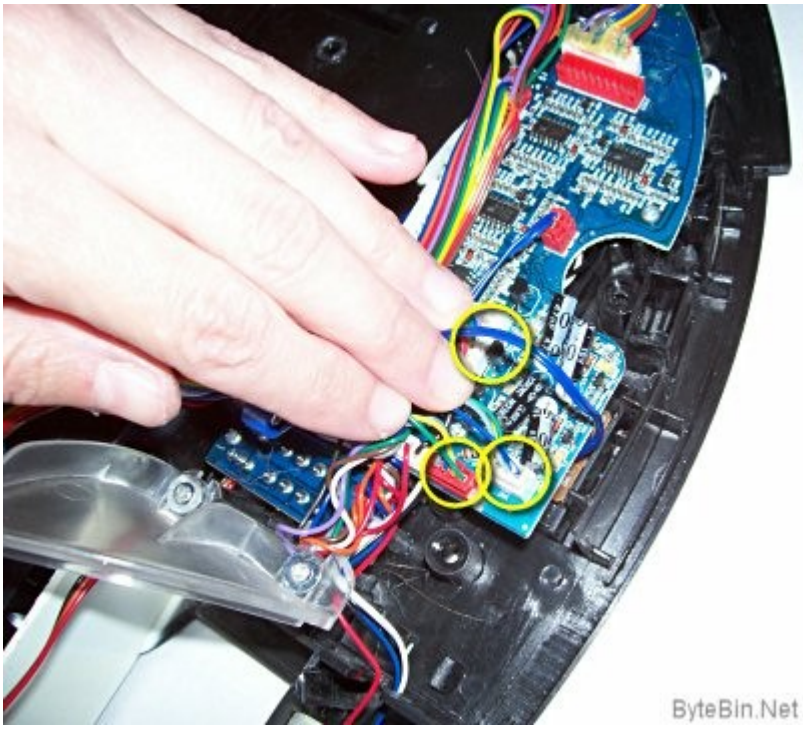


Figure 10a

NOTE for Reassembly of above connectors:

Small red connector (Left to Right): grey, blue, yellow, green

Small white connector (Left to Right): yellow, green, grey, blue

Large White Connector (Front of Unit to Back): white, grey, purple, blue, green, yellow, orange, red, brown.

These are near the front of the unit:

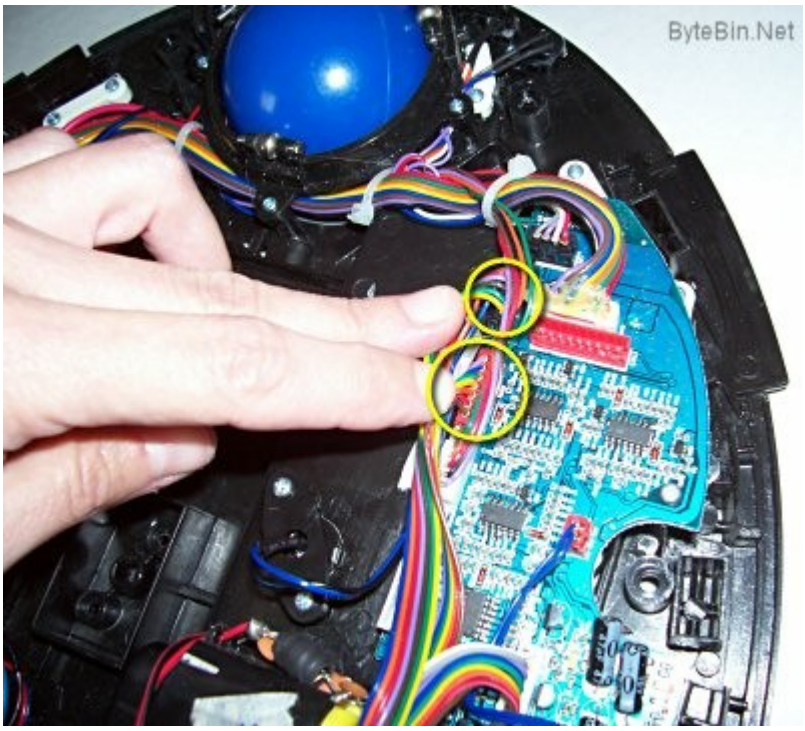


Figure 10b

NOTE for Reassembly of above connectors:

Red connector (Front of Unit to Back): purple, blue, green, yellow, orange, red, brown
Black connector (Front of Unit to Back): blue, orange, red, purple, brown, green, yellow

11. Remove the gearbox screws.

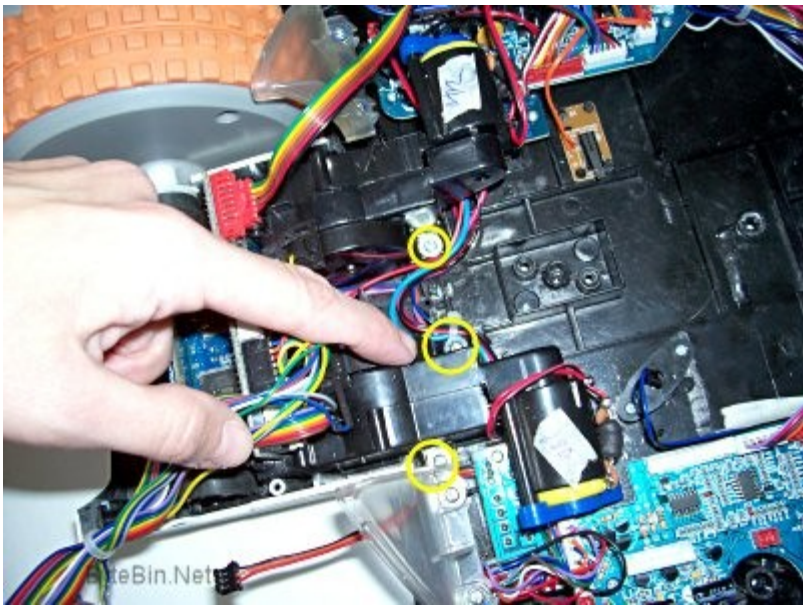


Figure 11a

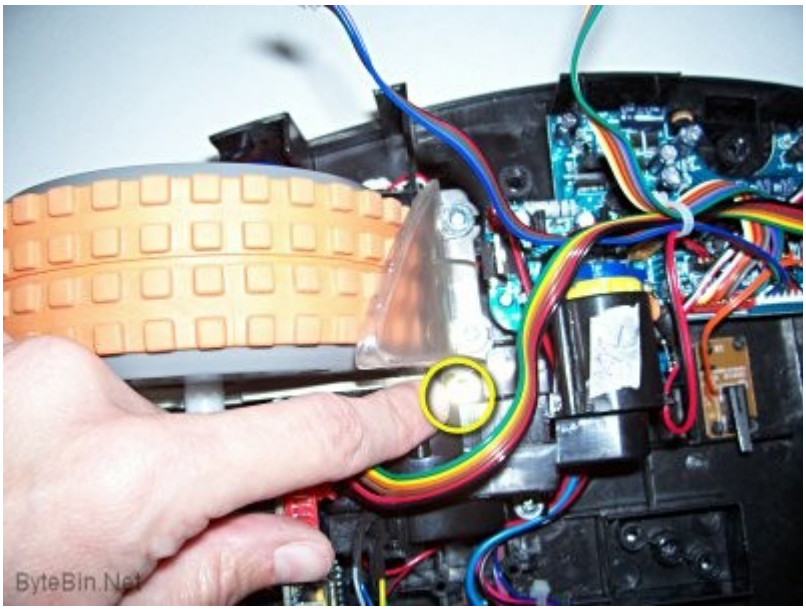


Figure 11b

12. Remove the main board/cartridge board assembly by lifing it upwards. Then disconnect the red connector now that it's clear.

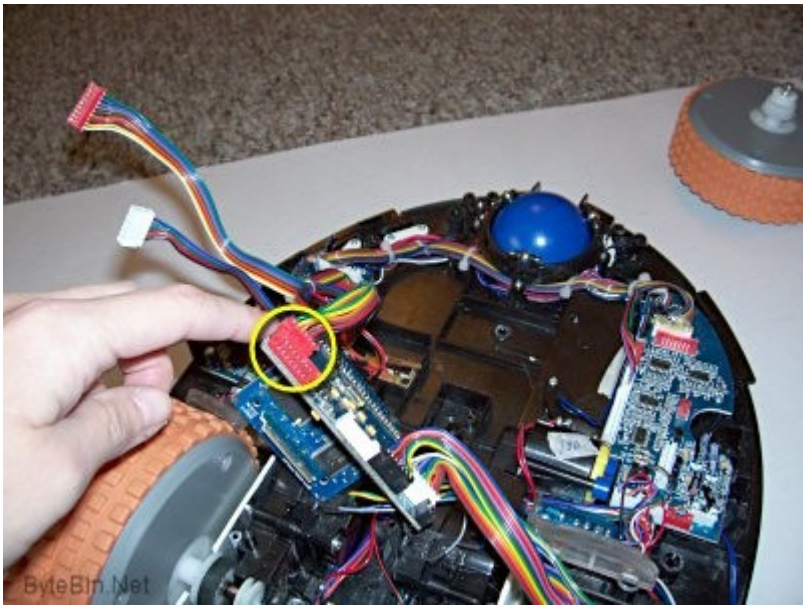


Figure 12

NOTE for Reassembly:

Red connector (From Left to Right with back of unit facing you): green, yellow, orange, brown, red, black

13. Removing the gear boxes and wheels can be a bit tricky. Do one side at a time. First, note the outer side of each wheel has a white clip on it. Carefully pull the wheel upward and then move the clip to the side and remove.

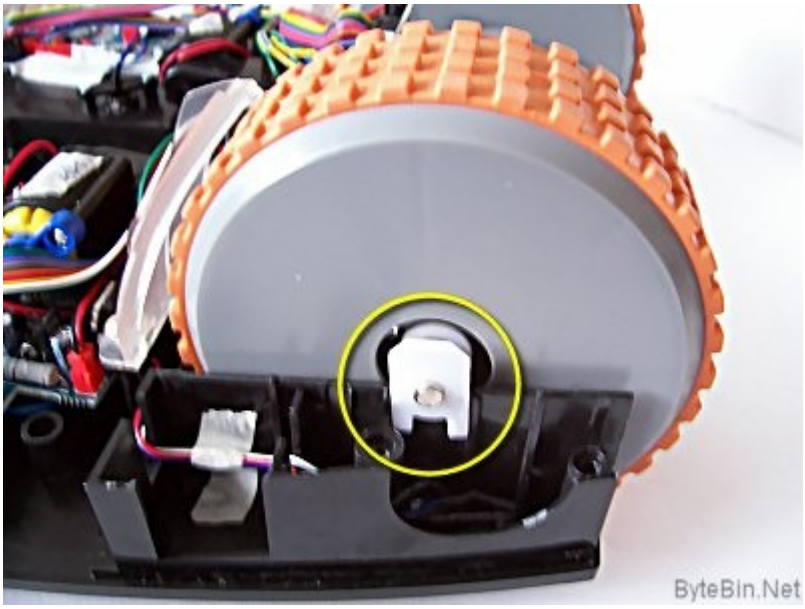


Figure 13a

Now, hold the wheel so it takes tension off the belt (loosens it). Grab a pair of needle nose pliers and gently pry up the white plastic piece on the inner side.

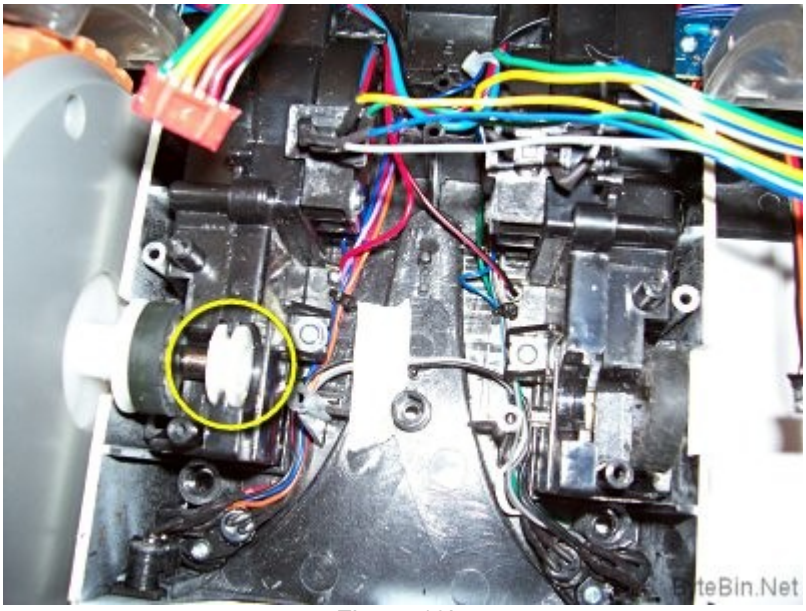


Figure 13b

Once you do that, the wheel and gear box can be removed. Do this for the other side. Do not try to remove the belts just yet.

14. Remove the gearbox screws as shown.

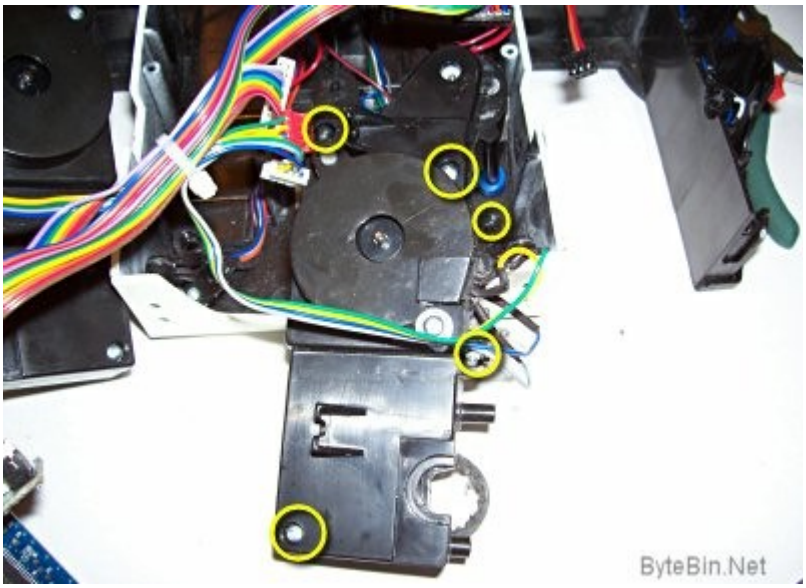


Figure 14

15. Put on a pair of gloves and open the gear box. There's grease in here (*lots* of it) so that's why you'll want the gloves on. It's messy.

    Carefully lift up and remove the belt gear. You may want to clean it off and apply some more grease to it.

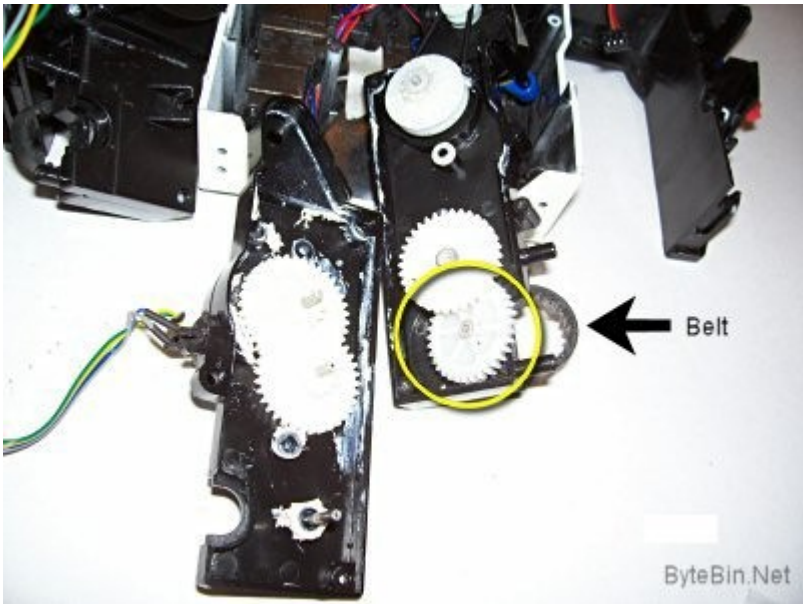


Figure 15

16. Remove the belt from the other side and inspect. Clean it off if needed. If the belt appears to be worn or mangled, then it will need to be replaced.
17. Once repaired, reassemble the robot in the opposite order that you took it apart, paying extra attention to the **NOTE for Reassembly** sections for putting the connectors on correctly.
18. Be sure the battery is fully charged before powering up the robot to see if he's responding better.