GeorgiaFIRST
Building Robots ... Building Futures

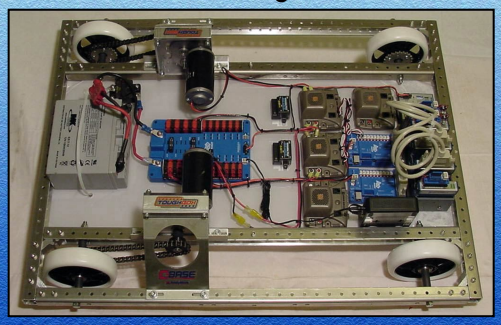
Robot Quick Build Session

RQBS Intro - Instructions

Produced by
Mannie Lowe, Georgia FIRST

Special Thanks to
Georgia Tech RoboJackets
Phillip Marks
Jevawn Roberts
With appreciation to the Oklahoma RQBS

Finished Kitbot – This is the goal!**



** - our robot will not look exactly like this – but it will be close

Getting Started

Break into 2 sub-teams:

- Electronics/Programming (Phillip Marks – lead)
- Transmission/Frame (Jevawn Roberts – lead)

Get parts and go to rooms

Expected time:

0:00-0:30	Introduction, Pull parts from kit
0:30-2:00	Electronics team assembly/Programming
0:30-2:00	Transmission & Frame assemblies
2:00-3:00	Mount electronics board and test
3:00-4:00	Run robot or troubleshoot; clean-up

Rules

1. Wear safety glasses! Put them on now.
2. You are responsible for your own kit of parts.
3. Do not drill into any tables!
4. Start practicing 'Gracious Professionalism' today.

The Plan

Get each team their parts and dismiss them in this order:

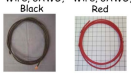
1. Electronics/Programming team
2. Transmission/Frame team

Programming Team

Pull the software CD from the Control Systems box and go to the Electronics Room with your team's laptop.

Electronics Team: Parts to Pull from Plastic Bins

Wire, 6AWG, Black



Wire, 6AWG, Red

Battery Charger

Quick-Disconnect Battery Connector

Tie wraps, 4" and 8"

Terminal bag

Terminal lugs:
Both crimp and screw-type lugs for the thick 6 AWG battery wire are in the kit
(no picture available)

Circuit Breaker

Remainder of Electronics Team Parts

Control System Box
(If you didn't already get yours ahead of time)

Also take:
- 17"x37" electronics board
- 8"x24" driver station board
- 'Goody' bag, minus the 'sandwich bag' of various nuts/bolts (give that to the Frame Team)

1 Battery Box
(separate box – not in bins)

Tools for the Electronics Team

Wire strippers
Wire cutters
Wire crimpers
Phillips screwdriver - #2
Flat Screwdriver
Supplied Wago flat screwdriver
3/8" combination wrench
10mm combination wrench
Tape measure
¼" and 3/8" Drills
*** 7/16" combination wrench**
*** Cordless drill**

*** Return these 2 items to Frame Team as soon as the holes are drilled and the ¼-20 bolt tightened in the electronics base plate.**

Once the Electronics Team has all the parts and tools, go to the Electronics Room

Parts to Pull for the Transmission Assembly

Frame Kit – Pull the parts boxed in red

Parts to Pull from Plastic Bins

2 CIM Motors

2 Sprockets, 15-tooth

All the other parts shown are for the Frame Team.

Parts to Pull for the Frame Assembly

Parts to Pull from Plastic Bins

- Remainder of the frame kit shown on the previous page
- Sandwich bag of items from the 'Goody' bag,

2 Master links

Box of Chain
(no picture available)

Note: If the Transmission Assembly and Frame Assembly are to be done in the same room, start the Assembly PowerPoint presentation (and referenced video) for the Frame Team first.

Good luck

- Remember your Gracious Professionalism
  - Veterans: Help the rookie teams out
  - When you have finished your part of the assembly, see if you can help someone else
- Safety Glasses – ALWAYS!!!!
- Have fun, but no horsing around

GO FIRST!

GeorgiaFIRST
Building Robots ... Building Futures

Thank You!

- Georgia Tech RoboJackets
  - Phillip Marks
  - Jevawn Roberts
  - Stefan Posey
  - Aakash Gihwala
  - and many more
- Georgia FIRST
  - Connie Haynes, Regional Director
  - Jeremy Roberts, Ass't Regional Director
  - Rick Folea
  - Mannie Lowe
  - Ray Spurlin
- Georgia FRC Beta Team