Factorio- Doing an all achievements run

Will do a series of videos focusing on the first 90 minutes, figuring out what works and then attempting to do the run once confident in the first 90 minute design. I have included the time I believe each phase should be done to maintain the required schedule, if schedule is an issue. Each run will be done on my YouTube Channel, http://www.youtube.com/c/whereisroadster/ , or the playlist at https://www.youtube.com/playlist?list=PL3yeyMx6eI0zxi6TorkLGuD8XdLfhcO6J

Key Phases:

1. Pre- Assembly machine 1 (0:13)
2. Using a single assembly machine 1 (0:40)
3. Red/Green Science preparation (1:00)
4. Getting on the Track (1:30)
5. Setting up construction bots(2:10)

Map Setup:

Base settings “Rail World”
Turn iron/ copper resources to the “Very Rich”.
Turn off evolution, pollution spread to the lowest settings
Turn down trees and water. Can turn water off outside of the starting area. Turn down enemy bases to “Very Poor”, “None” for cliffs
Use the preview area. Taking a screenshot of the map can help find oil.

Pre-Assembly machine 1 (0:13)

- Note, it might help to get a deconstruct planner set to “Huge Rocks” to find them easier.

1. Start mining iron. Get enough wood to keep it smelting for a while (5 trees?)
2. Look for the “Huge Rocks” and mine. These will contain coal. Should get about 10 of these, need 250+ coal. After first one, replace wood with coal in furnace, keep looking for more.
3. Collect some wood too, around 50+ preferred.
4. Keep mining iron until at least 118 (Preferred at least 150). This should take about 8 minutes for min, 10 preferred
5. Switch to copper. Keep going until at least 34 (50 preferred). 90 seconds.
6. Begin to hand craft the required items (1 steam furnace, 10 red science, 1 wood power pole, 1 offshore pump, 1 research lab). Save the boiler for last. For bonus, craft 5 gears, 3 green circuits, and 4 pipes for the Assembly Machine 1 and boiler.
7. When a sufficient stockpile of everything is collected, collect the furnace, make boiler, and setup the initial power interface. Research Assembly Machine 1, and build it.
8. While researching, keep burner miner on iron and manually collect the ore as it drops.

Using a single Assembly Machine 1: (0:40)

1. Build the following early on: 4+ stone furnaces, many power poles (Depends on how far away Iron is, needs wood and copper first)
2. Stretch the power to the iron mining area.
3. Build 5 iron pickaxes (5 pole builds first), 5 gears, 3 Green circuits.
4. Hand craft 1 electric mining drill, making sure all parts were assembled first.
5. Place down the iron mining drill with one of the furnaces as a direct output. Place a second once such that rotating the furnace will put ore in to that furnace.
6. Set up copper mining using the burner drill and furnace
7. Set up the 4th stone furnace close to iron. You will be dumping iron here you mine manually.
8. Set up the assembly machine 1 and research lab near iron mining setup. The Assembly Machine 1 should be making red science. (0:18)
9. Do the following until the research is done for assembly machine 2s:
    a. Ensure that all furnaces have fuel
    b. Rotate the electric mining drill periodically to ensure it is filling both furnaces
    c. Collect iron and copper, placing them in to the red science maker. If needed, make more gears until you have at least 30 required for the Assembly Machine 2.
    d. Place science from the Assembly Machine 1 in to the research lab.
    e. Mine iron ore by hand and place it in to your spare furnace
    f. Collect more coal and wood (Ensure red science can be made for some time!)
10. Manufacture the parts for an Assembly Machine
11. When research is complete, manufacture the Assembly Machine 2, making sure to pick up the Assembly Machine 1 first. Ensure that all parts are available first

Red/Green Science preparation (1:00)

1. Manufacture gears and circuits required to manufacture many more Assembly Machine 1s. You will need at least 5
2. Use the AM2 to build the most complex things, drills and more assembly machines. The others should be dedicated to gears, copper wire, green circuits, power poles, and stuff like that.
3. Build and connect 4 electric drills going in to a chest for coal.
4. Build chests and electric mining drills. Target at least 6 for iron, 2 for copper. Early mining should be about 3 iron to 1 copper, including smelting. Need 12 furnaces for iron, 4 for copper.
5. Build smelting columns where you will place them permanently. Periodically manually dump iron and copper ore in to them, as well as coal. Should be close to iron lines
6. Increase the power to 5 boilers/ steam engines.
7. Set up lab and one red science manufacture to get logistics, steel processing
8. Build more assembly machines, and start to make belt and inserters.
9. Connect coal to power station to automate. Increase coal miners to 6.
10. Double the smelting capacity and miners

11. Set up automated iron smelting, using boxes to feed the coal initially.
12. Start setting up your research base, at least to make inserters and belts. Use yellow inserters for now, slowly upgrade appropriate ones to blue.
13. Feed copper in to smelting column.
14. Start a small amount of steel processing, off the main grid. 6 smelters should be sufficient. Will need at least 54 steel smelted, more will help with steel smelting later on. Put 100 iron in each.
15. Ends with 5 red science and 6 green science machines producing, and at least 8 labs (More preferred) Get red science going first, then labs, then green science.

Getting on the Track (1:30)

1. Continue to gradually increase power, smelting, mining, and automation of building stuff. Should be able to double at least in this period of time.
2. Research direct path to locomotion. This will be Engine, Logistics 2, Railroad
3. Start making some pipes.
4. As Engine is complete, set up 2 machines making engines, 10 steel each.
5. Start setting up  brick smelting, 2 steel half-columns, and second iron smelting column. (Optional for now)
6. Build 4 segments of rail and a rail engine.
7. Set up limited production of a few medium electric poles, for improved smelting of steel.

Setting up bots(2:10)

1. Steel Smelter setup. Then ensure second iron column going, then Inserters, assembly machines, chests, power poles, pipes, power components, oil stuff (Minus refinery), etc, and belts should be automatic.
2. Building a car at this point in time can be very helpful, reducing the difficulty in running pipes and lines.
3. Research should primarily be oil components, and robot components.
4. Set up an initial oil collection, around 12 machines.
5. Set up oil refinery, using the last of your 111 builds to hand craft 5 refineries.
6. Start with plastic, then set up red circuits
7. Ensure that construction ports are set up.
8. Next comes lubricant, then batteries.
9. Set up 2 tanks to initially store light/heavy oil. Gas can be more directly controlled.
10. Ensure that lubricant is going for robots, gas for sulfuric acid, and use light oil to make solid fuel for now.
11. Set up bot assembly area, with 6 frame machines, 3 engines, 3 electric engines, with room for a 4th machine/ 8 frames as time allows.
12. Set up roboports, and start passive providing all essential components.Expand roboport coverage as required.