

Pre-Build Preparation Guide

Purpose: Comprehensive preparation before starting a custom build

Date: 2025-01-03

Status: Preparation checklist and workflow

■ Goal

Prepare everything before starting the build to ensure:

- ■ All configurations are correct
- ■ All tools are ready
- ■ Monitoring is set up
- ■ Efficient workflow established

■ Pre-Build Checklist

1. System Status ■

- [] ****Docker running:**** ``docker info`` should work
- [] ****No build running:**** ``docker ps -a | grep moode-builder`` should be empty
- [] ****Latest image checked:**** Know which image is current
- [] ****Disk space:**** At least 20GB free for build

2. Configuration Verification ■

- [] ****User config:**** ``FIRST_USER_NAME=andre`` in ``imgbuild/pi-gen-64/config``
- [] ****Password:**** ``FIRST_USER_PASS=0815`` in config
- [] ****SSH enabled:**** ``ENABLE_SSH=1`` in config
- [] ****Display config:**** ``config.txt.override`` has correct settings
- [] ****Services:**** All custom services in place
- [] ****Scripts:**** All custom scripts in place

3. Tools Ready ■

- [] ****Build tool:**** ``./tools/build.sh`` exists and is executable
- [] ****Monitor tool:**** ``./tools/monitor.sh`` exists and is executable
- [] ****Test tool:**** ``./tools/test.sh`` exists and is executable
- [] ****Toolbox:**** ``./tools/toolbox.sh`` works

4. GitHub MCP Setup ■

- [] ****GitHub token:**** Added to ``.env``
- [] ****GitHub MCP active:**** Can search repositories
- [] ****Ready to research:**** Can check moOde source code if needed

■ Pre-Build Verification Commands

Run these before starting:

```
# 1. Check Docker
docker info

# 2. Check no build running
docker ps -a | grep moode-builder

# 3. Check build tool
cd ~/moodeaudio-cursor
./tools/build.sh --status

# 4. Check disk space
df -h | grep -E "(/$|/Users)"

# 5. Check configuration
grep "FIRST_USER_NAME" imgbuild/pi-gen-64/config
grep "ENABLE_SSH" imgbuild/pi-gen-64/config

# 6. Check latest image
ls -lht imgbuild/deploy/*.img | head -1
```

■ Build Workflow

Step 1: Pre-Build (Before Starting)

1. ****Run verification commands**** (see above)
2. ****Check all configurations**** are correct
3. ****Ensure no build is running****
4. ****Have monitoring ready****

Step 2: Start Build

```
cd ~/moodeaudio-cursor
./tools/build.sh --build
```

Step 3: Monitor Build

Option A: Using monitor tool

```
./tools/monitor.sh --build
```

Option B: Manual monitoring

```
# Watch logs
docker-compose -f docker-compose.build.yml logs -f

# Check status
docker ps -f name=moode-builder
```

Step 4: Post-Build

```
# Validate build
./tools/build.sh --validate

# Check image
ls -lh imgbuild/deploy/moode-r1001-arm64-*.img
# Deploy if ready
```

```
./tools/build.sh --deploy
```

■ Monitoring & Efficiency Tools

Available Tools

1. ****`./tools/build.sh`****
 - **`--build`** - Start build
 - **`--monitor`** - Monitor build progress
 - **`--status`** - Check build status
 - **`--validate`** - Validate build image
 - **`--deploy`** - Deploy to SD card
 - **`--cleanup`** - Cleanup old images
2. ****`./tools/monitor.sh`****
 - **`--build`** - Monitor build
 - **`--pi`** - Monitor Pi status
 - **`--all`** - Monitor everything
3. ****`./tools/toolbox.sh`****
 - Interactive menu for all tools

Efficiency Tips

- ■ Use **`toolbox.sh`** for interactive workflow
- ■ Use **`build.sh --monitor`** for automated monitoring
- ■ Use GitHub MCP to research issues if needed
- ■ Keep build logs for reference

■ Using GitHub MCP for Build Preparation

Now that GitHub MCP is active, I can:

- ■ ****Research moOde source code**** if issues arise
- ■ ****Check for updates**** in moOde repository
- ■ ****Find solutions**** in GitHub issues/PRs
- ■ ****Read documentation**** from GitHub
- ■ ****Compare configurations**** with official moOde

Example uses:

- "Check moOde repository for display configuration"
- "Find solutions for build errors"
- "Compare our config with official moOde"

■ Ready to Build?

Before starting, confirm:

1. ■ All checklist items completed

2. ■ Verification commands passed
3. ■ Tools are ready
4. ■ Monitoring is set up
5. ■ GitHub MCP is active

■ Next Steps

1. ****Run pre-build verification**** (commands above)
2. ****Review configurations**** one more time
3. ****Start build**** when ready: ``./tools/build.sh --build``
4. ****Monitor progress**** using tools
5. ****Use GitHub MCP**** if issues arise

Ready to proceed? Let me know when you want to start the build! ■