

Pi4 AirPlay Speaker — One-Page Cheat Sheet

1. Install PipeWire & disable PulseAudio

```
sudo apt update
sudo apt install -y pipewire pipewire-pulse pipewire-utils

# Stop & disable PulseAudio
systemctl --user stop pulseaudio.service pulseaudio.socket
systemctl --user disable pulseaudio.service pulseaudio.socket

# Enable PipeWire
systemctl --user enable --now pipewire pipewire-pulse

# Verify
pactl info    # Should show "PulseAudio (on PipeWire ...)"
```

2. Install Shairport Sync

```
sudo apt install -y shairport-sync
```

3. Configure ALSA → PipeWire

```
/etc/asound.conf:
```

```
pcm.!default {
    type pipewire
}

ctl.!default {
    type pipewire
}
```

4. Configure Shairport Sync

```
/etc/shairport-sync.conf:
```

```

general = {
    name = "Luchtspel";
    output_backend = "alsa";           # Force ALSA → PipeWire
    interpolation = "soxr";
    drift_tolerance_in_seconds = 0.005;
    ignore_volume_control = "no";
    volume_range_db = 60;
    metadata_enabled = "yes";
};

sessioncontrol = {
    allow_session_interruption = "yes";
    allow_session_termination = "yes";
};

alsa = {
    output_device = "default";
    mixer_control_name = "Master";
    mixer_device = "default";
    playback_format = "S16_LE";
    buffer_time = 20000;               # 20ms → low latency
    disable_silence = "yes";
};

```

No `[pa]` section — PulseAudio is disabled.

5. Create systemd user service

`~/.config/systemd/user/shairport-sync.service`:

```

[Unit]
Description=Shairport Sync AirPlay Receiver (User)
After=pipewire.service pipewire-pulse.service
Requires=pipewire.service pipewire-pulse.service

[Service]
Type=simple
ExecStart=/usr/bin/shairport-sync -c /etc/shairport-sync.conf -vv
Restart=on-failure
Environment=XDG_RUNTIME_DIR=/run/user/%U
ExecStartPre=/bin/sleep 2    # ensure PipeWire ready

```

[Install]

WantedBy=default.target

Enable service:

```
sudo loginctl enable-linger pi    # replace 'pi' with your username
systemctl --user daemon-reload
systemctl --user enable --now shairport-sync
```

6. Verify & test

```
pactl list short sinks           # USB DAC should appear
pw-top                           # Confirm Shairport Sync connected
paplay /usr/share/sounds/alsa/Front_Center.wav  # Test audio
```

- Works headless, low latency, audio routed to USB DAC
- Ready for AirPlay streaming (video & music)

✓ **Optional tweaks:** - Increase `buffer_time` slightly (30000–40000) if occasional crackling - Ensure Wi-Fi link quality >50/70 for smooth playback