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7. Operation

Operation through SSH

connect via SSH - adjust the port number and possibly also the user scanner

```
ssh -p 9001 scanner@hayguen.hopto.org
```

in case you are already connected to the host - as different user

```
sudo su -l scanner
```

start the scanner (as scan user)

```
startBgScanLoop.sh
```

stop the scanner (as scan user)

```
stopBgScanLoop.sh
```

check results while scanning - before having uploaded (as scan user)

```
scanEvalFMcmpPS.sh  
scanEvalFMcmpPI.sh  
scanEvalDABens.sh  
scanEvalDABensTii.sh  
scanEvalDABprogs.sh
```

upload all results (as scan user)

```
stopBgScanLoop.sh wait  
prepareScanResultsForUpload.sh all  
uploadScanResults.sh
```

probably, you want to edit the upload comment FMLIST_UP_COMMENT - before uploading (as scan user)

```
cd ~/.config/fmlist_scan
nano fmscan.inc
```

and after the upload, you might want to restart the scanner (as scan user)

```
startBgScanLoop.sh
```

and probably also restart monitoring

```
monitorBgScanLoop.sh
```

Operation through Webserver

all operations can be done through the webserver

see '[Setup control webserver](#)' in [setup_scanner_software](#)

Buzzer status tones

The scanner reports its status primarily via the piezo-buzzer. The detection of Broadcast-FM and DAB stations is reported with tone sequences on each scan. See configuration entry FMLIST_SCAN_PWM_FEEDBACK

Event	Tone sequence
Welcome at startup	short short short long short
FM success (at least 1 transmitter)	short short, short
FM failure	short short, long
DAB success (at least 1 station)	short long, short
DAB failure	short long, long
Write error for result	3 x (long long long)

In addition to these operating results, there are other tone sequences to sign

- Start the scanner
- Error status, e.g. no RTL dongle found
- Scan results saved

Test / listen with `scanToneFeedback.sh` or the webserver

The individual LED colors have no dedicated meaning. They are switched over for each recognized station. There is no changeover if the next station is detected within/below one second - in order to limit the changes.

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