
# Title goes here

DOC NUM

Status: DRAFT

| Prepared By | Organization | Date |
|---|---|---|
| Author<br>Title | NRAO Electronics Div. | 1/1/2000 |

| Approvals | Organization | Signatures |
|---|---|---|
| Name<br>Title | NRAO Electronics Division | |
| Name<br>Title | NRAO Electronics Division | |
| Name<br>Title | NRAO Electronics Division | |

| Released By | Organization | Signature |
|---|---|---|
| Name<br>Title | NRAO Electronics Division | |

## Change Record

| Version | Date | Author | Affected Section(s) | Reason |
|---|---|---|---|---|
| 01 | Aug 15, 2023 | R. Nguyen | All | Initial Draft |
| 02 | Aug 16, 2023 | T. Anderson<br>R. Nguyen | All | Edits |
| A | Aug 16, 2023 | T. Anderson | All | Review |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

# Contents



# List of Figures

# 1 Introduction

## 1.1 Purpose

## 1.2 Scope

## 1.3 Verb Convention

"Must" for an obligation; "must not" for a prohibition.

"May" for a discretionary action; "should" for a recommendation.

"Will" is used to indicate a future happening/action.

# 2 Related Documents and Drawings

## 2.1 Applicable Documents

The following documents may not be directly referenced herein, but may provide necessary context or supporting material.

| Ref. No. | Document Title | Rev/Doc. No. |
|---|---|---|
| AD01 | Desiderata for Solar Observing with the EVLA | EVLAM_70 |
| AD02 | EVLA Hardware Modifications in Support of Solar Observing | EVLAM_72 |

## 2.2 Reference Documents

The following documents are referenced within this text:

| Ref. No. | Document Title | Rev/Doc. No. |
|---|---|---|
| RD01 | Solar Brightness Temperature and Corresponding Antenna Noise Temperature at Microwave Frequencies | Online |
| RD02 | Antenna Engineering Handbook | DSOC Bookcase |
| RD03 | Tools of Radio Astronomy | Privately Owned |
| RD04 | X-Band System Performance of the Very Large Array | Online |
| RD05 | 10-60 GHz G/T Measurements Using the Sun as a Source–A Preliminary Study | Online |

# 3 Section title

Section text here

## 3.1 Subsection

Subsection text here

(1) List item

(2) List item

## 3.2 Subsection

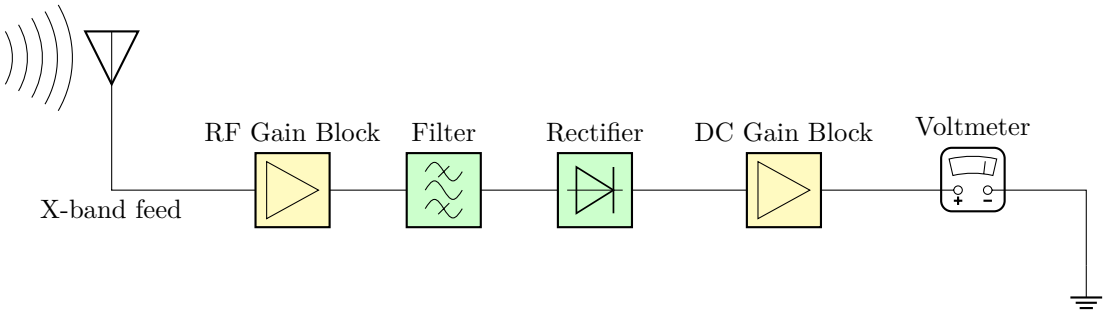


Figure 1: Block diagram.

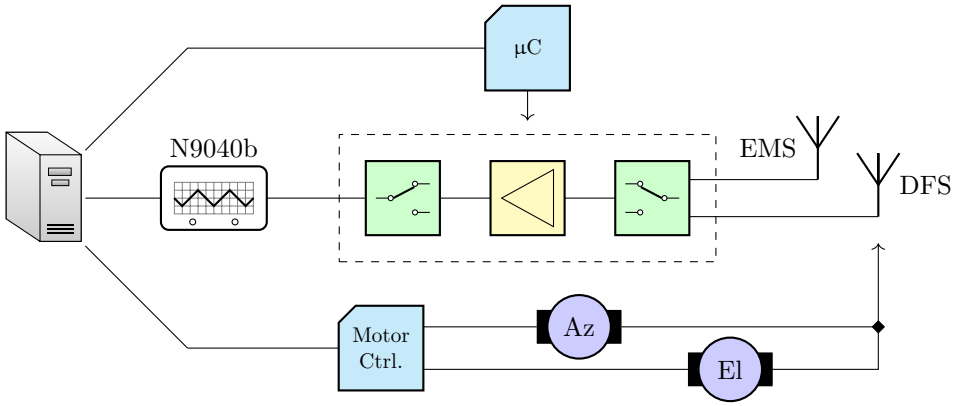


Figure 2: Block diagram 2.

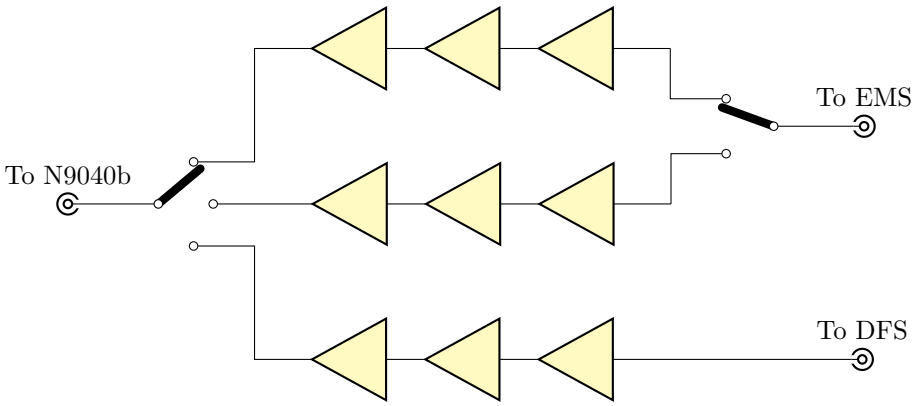


Figure 3: Block diagram 3.

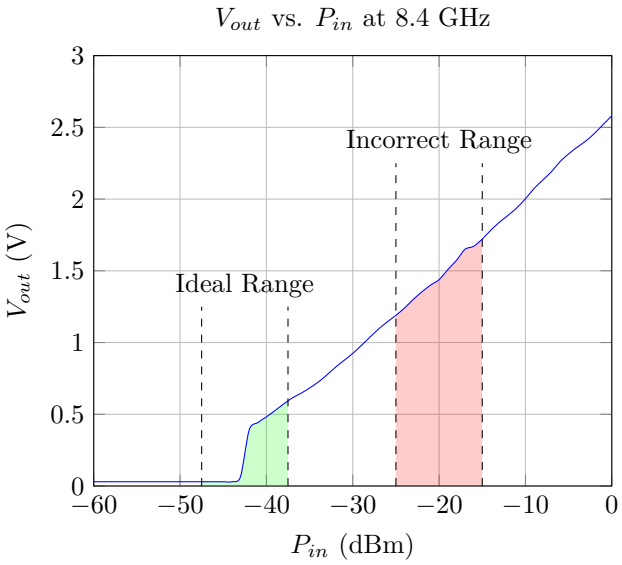


**Figure 4: Graph from imported data**

# 4 Section title

## 4.1 Subsection

Example equation below

$$P_R = P_{sun} + P_{noise} \tag{1}$$
$$P_R = SA_e\Delta f + k_B T \Delta f$$

where: $S$ is the source flux density in W m$^{-2}$ Hz$^{-1}$,
$A_e$ is the effective aperture area in m$^2$
$\Delta f$ is the receiver bandwidth in Hz,
$k_B$ is the Boltzmann constant in J K$^{-1}$, and
$T$ is the system noise temperature in K.

Example table below

| | $S_{\text{min}}$ | $S_\mu$ | $S_{\text{max}}$ |
| --- | --- | --- | --- |
| 2.8 GHz | 70 SFU | 150 SFU | 280 SFU |
| 8.8 GHz | 152 SFU | 326 SFU | 608 SFU |

**Table 1: Solar Flux Density $S$ at 8.8 GHz and 2.8 GHz**