

Phys 123/223
ES 153

Lesson 6

Review

BJT Diff Amp

New

Operational Amplifier
(op amp)

OA - open loop

OA - closed loop

Golden rules

negative feedback

Unity Gain Follower
(buffer)

non-inverting amp

Inverting Configuration
"current summa"

inverting amplifier

Summing amplifier

virtual ground

Current to voltage
converters

differentiator

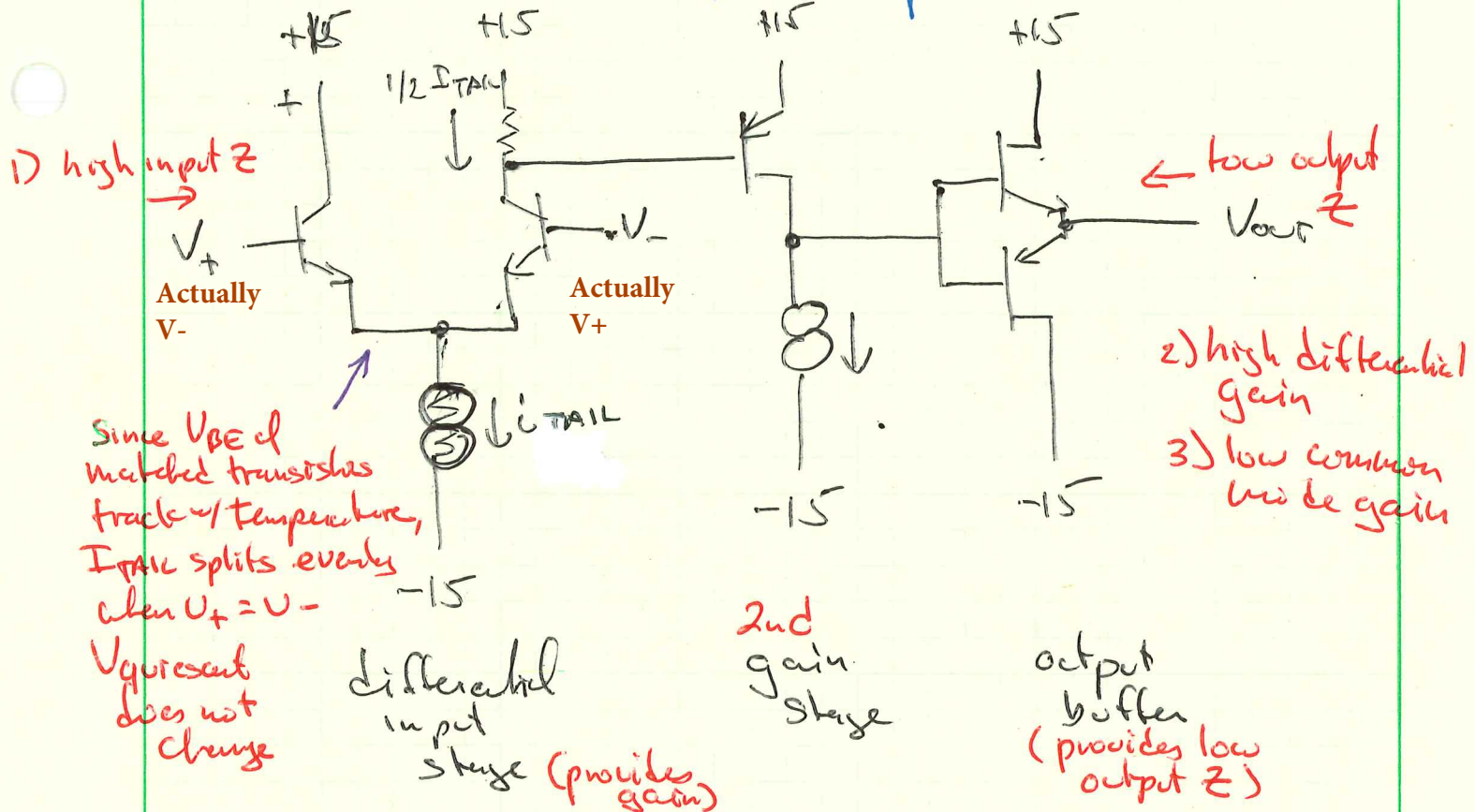
integrator

Push-Pull Amplifier

Limitations of
these O.A. circuits

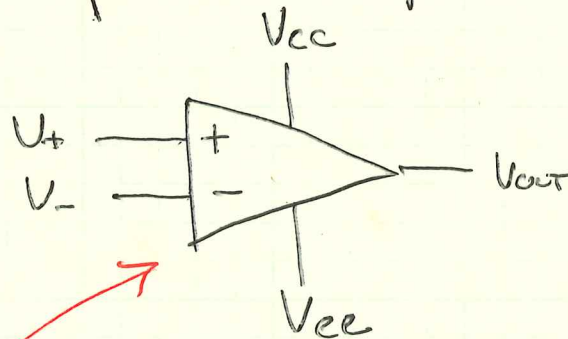
Review BJT difference amp

PART I
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operational amplifier (op amp)

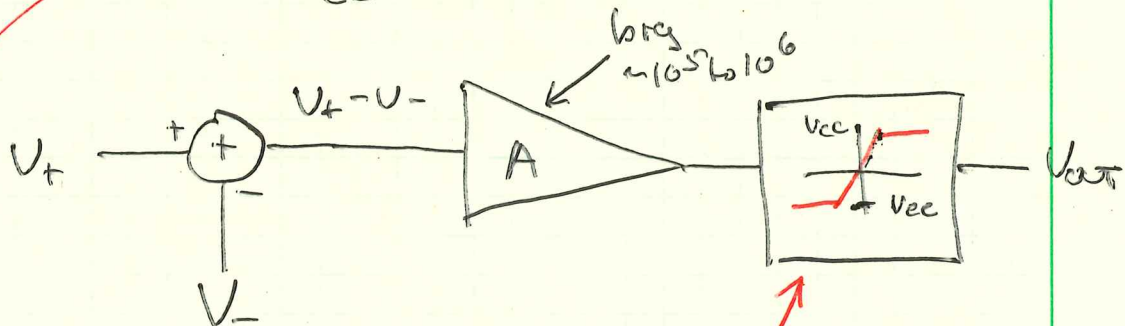
5 terminal device
(requires power)



LF411
LM358
LM741

used in 123

ideal op amp



not very useful
"open loop"

$V_{cc} > V_{ee}$

output is limited
to $< V_{cc}$ and $> -V_{cc}$