#4 KILL "SCRATCHES" (HIGH f STUFF)
WANT LOW PASS FILTER, $f = 10 \text{kHz}$

![Circuit Diagram]

$\frac{R}{R_{\text{load}}} \approx 0.1$

$R = 1 \Omega \cdot \Sigma$

ALSO,
$$C \approx \frac{1}{2\pi f_{3\text{dB}}} = 0.016 \mu F$$

$C \approx 0.02 \mu F$ OK TOO.

#5

![Circuit Diagram]

#6 SEE LAB EXAMPLE 2, P. 49.

$c_1, c_2$ CHOOSEN TO Satisfy $f_{3\text{dB}}$

ORDER OF FILTERS CAN BE SWITCHED AS LONG AS $R_1$ & $R_2$ APPROPRIATELY ADJUSTED.
#3 You want to kill "rumbles" (low f stuff)

→ design high pass circuit

\[ \text{FILTER} \]

\[ f_{3dB} = \frac{1}{2\pi RC} = 10 \, \text{Hz} \]

Find R, C.

6. Choose R to make \( R_{load} \) irrelevant

\[ R_{load} \approx R \]

→ use 10% rule of H.P.H.: \( R \approx \frac{R_{load}}{10} \)

\[ R \approx 1.6 \Omega \]

\[ C = \frac{1}{2\pi RF_{3dB}} \]

\[ C \approx 16 \mu F \]

\[ C \approx 20 \mu F \quad \text{OK too.} \]
V_{out} \rightarrow 16.6 \text{ ms} \rightarrow t

V_{2} \pm 0.7V

WAVESFORM IS SYMMETRIC
DIODES CLAMP OUTPUT.
USEFUL TRICK FOR LIMITING
VOLTAGE INPUT INTO
SENSITIVE AMPLIFIERS.