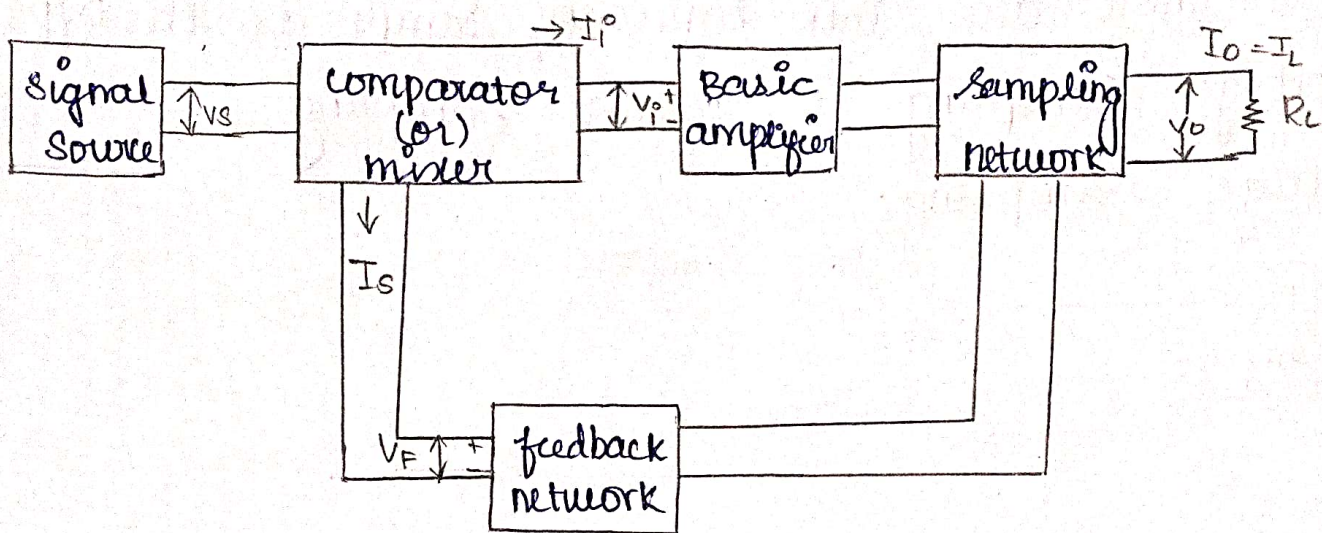


FEEDBACK BLOCK DIAGRAM:



FEEDBACK N/W CONSISTS OF THE FOLLOWING:

1. Signal source
2. Sampling network.
3. feedback network.
4. Mixer network.

Signal source:

It can be a voltage source (V_s) or current source (I_s).

FEEDBACK NETWORK:

It is a positive two port network. It may contain R , C or inductors. But usually a resistance is used as the feedback element. Here output current is sampled and the feedback element. Here output voltage, it takes a part of output as feedback signal to input mixer network.

$$V_f = \beta V_{out}$$

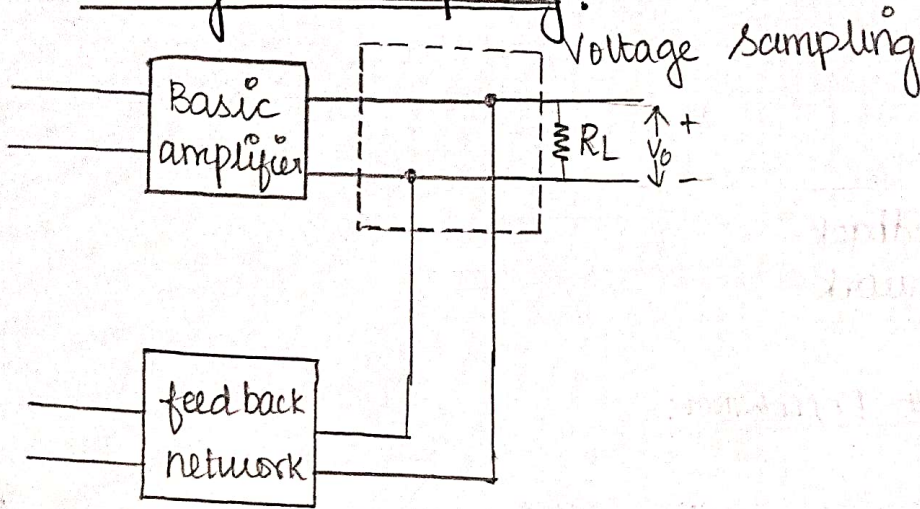
$$\beta = \frac{V_f}{V_{out}}$$

Sampling network:

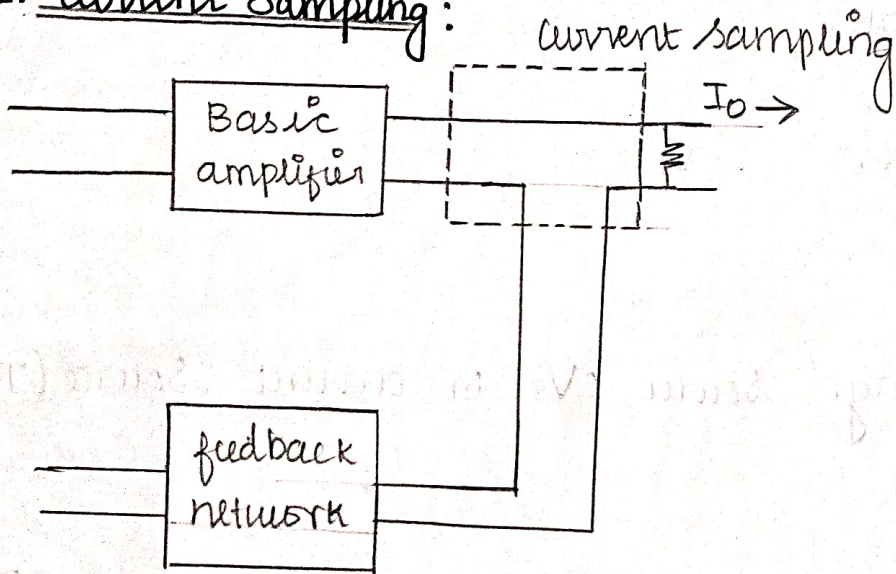
There are two types of sample as the O/P

1. Voltage sampling
2. current sampling.

1. Voltage sampling:



2. Current Sampling:



Output voltage is sampled by connecting the feedback network in shunt across the output.

Output current is sampled by connecting the feedback network in series.

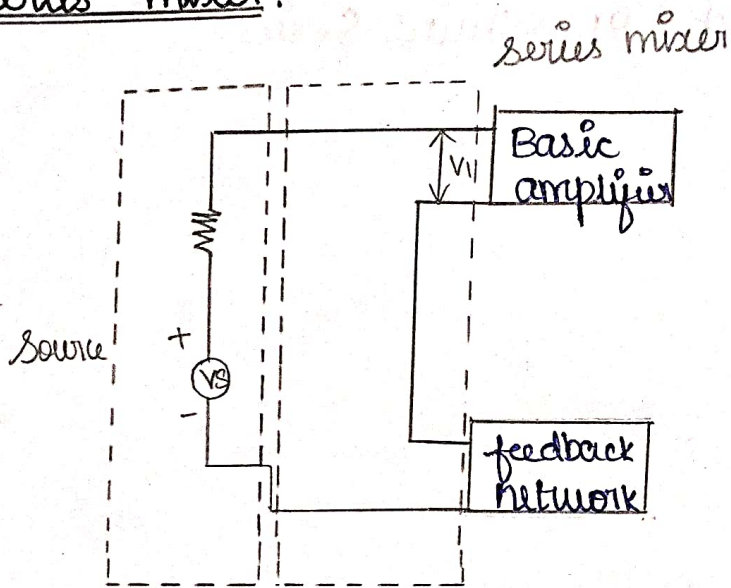
(feedback impedance should not exceed R_L)

MIXER OR COMPARATOR:-

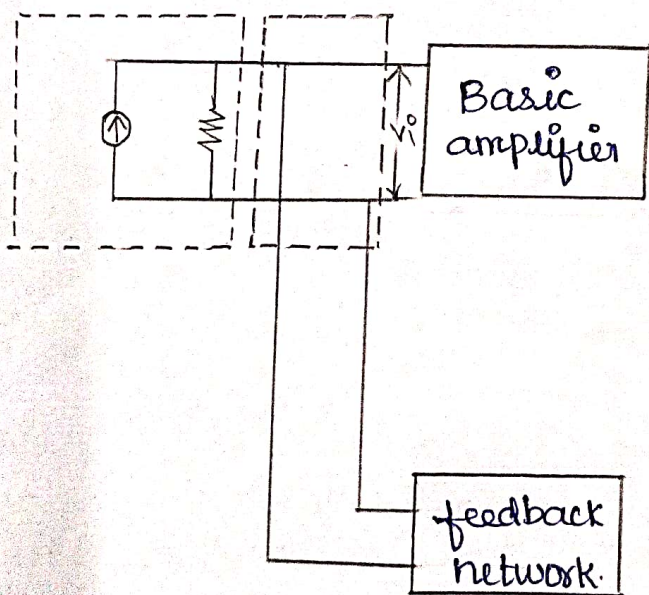
There are two types of mixing network

1. Series output connection.
2. Shunt input connection.

Series mixer:



Parallel mixer:



Classification of f/b amplifiers:

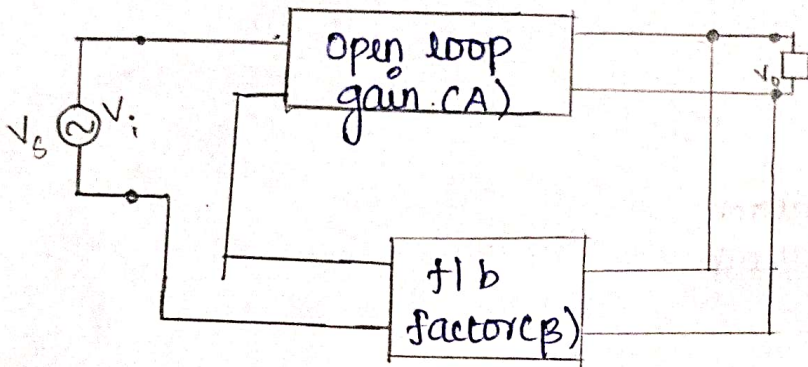
Sampling (O/P)

1. Voltage
2. Voltage
3. Current
4. Current

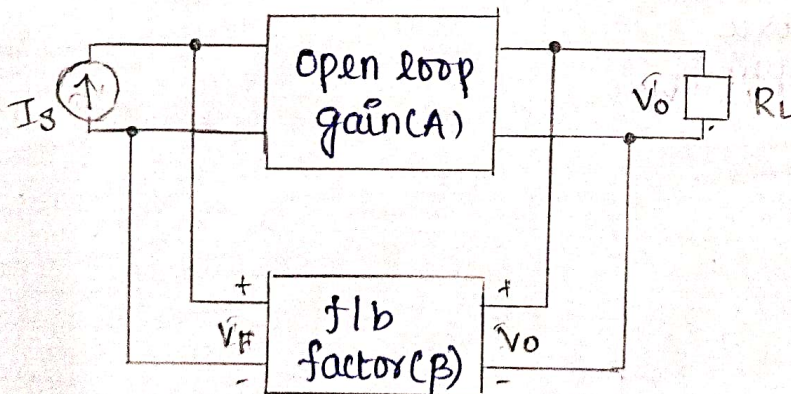
Mixing (I/P)

- Series feedback or Series-shunt
shunt feedback or Shunt-shunt
Series feedback or Series-Series
shunt feedback or Shunt Series

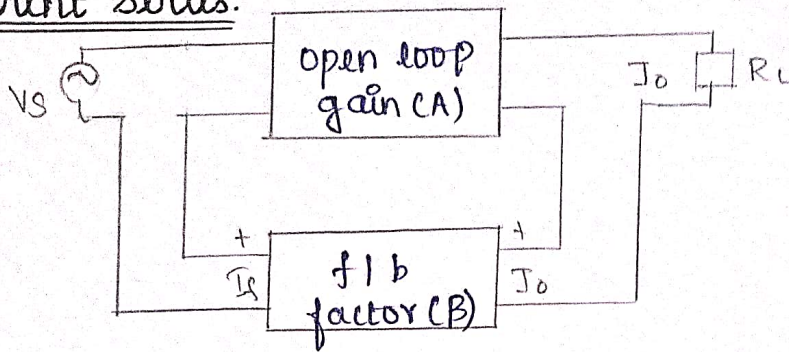
1) Voltage Series



2) Voltage Shunt



Current series:



Current shunt:

