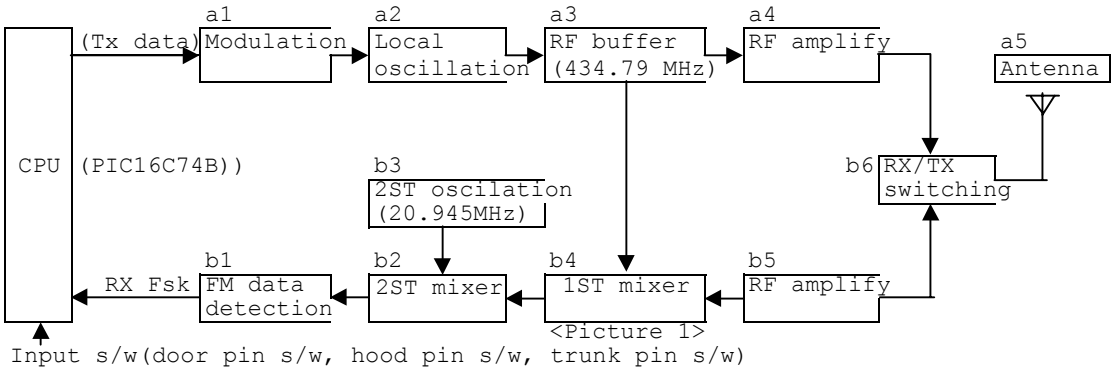
Circuit operation explanation

---- BRAIN rf block diagram ----



- A basic carrier frequency consists of a1, a2, a3 (on picture 1).
- Receiver : super heterodyne recever
- Modulation type : FM FSK(frequncy shift keying)
- Brain transmitting frequncy : 434.79MHz
- Brain receive local oscillation frequncy : 413.39MHz

1. Brain controller

1.1 Transmission

Transmission is executed when input s/w is sensed or received from the remote.
Modulation signal is occurred at CPU(location u2) pin no 35.
Modulation is formed at a1 (D2), a2 (Q3).
a3 (Q4) creates frequency 434.79MHz.
The frequency of 434.79MHZ is amplified through the components
of a4(Q5,Q6) and b6(rx/tx switching) and transferred to antenna.

1.2 Receiver

A carrier frequency (413.39MHz) amplifies at b5 (Q7, Q8) pass through a5 (antenna
b5 (Q7,Q8) receives signals of a3 (Q4), b4(Q9) and makes 1st IF (21.4MHz) to send
b2 (IC1) mixes with 2nd local oscillation frequency (20.945MHz) of b3 (X102) and
455Khz demodulates FM at b1 (X103) and quadrature detects
Sends Fsk out to CPU(location U2) pin no 36.