



### Specification

#### Carrier generator

- Sub carrier : 1KHz ~ 20KHz and 1KHz ~ 30KHz With adjustable amplitude of 0~2 Vpp
- Pilot carrier : 256 KHz
- Modulation : Amplitude modulation DSBSC
- Multiplexing : 2 Channel frequency division multiplexing
- De-modulation : Amplitude de-modulation DSBSC
- De-multiplexing : 2 Channel frequency division de-multiplexing

#### Band pass filter

- Pass band : Filter 1 and 3 frequency range 8 ~12 KHz with  $f_c$  10 KHz  
Filter 2 and 4 frequency range 18 ~ 22 KHz with  $f_c$  20 KHz

#### Low pass filter

- 4 order butter worth filter

#### Switch faults

- 8 switch faults are provided on board to study different effects on circuits

#### Power supply

- GND, +5V, +12V, -12V

### Experiments

- To study frequency response of band pass filters
- Study of DSB modulation
- To study the operation of frequency division multiplexing
- Study of DSB demodulation
- To study the operation of frequency division demultiplexing
- To study the effects of out of band signaling
- To study effect of switch faults
- To study voice communication through FDM (optional)

Note: Specifications are subject to change.