



## KL-900C

### AM/FM/ASK/FSK Transmitter & Receiver System



The KL-900C AM/FM/ASK/FSK Transmitter and Receiver System is a comprehensive and self-contained system suitable for carrying out AM/ASK and FM/FSK transmission experiments.

The complete system contains KL-900C1 and KL-900C2, eight separate modules being included:

- AM transmitter & receiver modules
- FM transmitter & receiver modules
- ASK/AM transmitter & receiver modules
- FSK/FM transmitter & receiver modules

#### ► Features

- System consists of ASK/AM transmitter and receiver, and FSK/FM transmitter and receiver.
- Both AM & FM modules are equipped with 8-bit DIP switch for fault-finding experiments.
- Provide comprehensible experiment manual.

#### ► KL-900C1

#### ► Specifications

##### 1. KL-93061A AM/DSB Transmitter

- (1) With perfect AM Transmitter for producing 1MHz
- (2) Equipped with 8-bit DIP switch for circuits fault simulations

##### 2. KL-93062A AM Transistorized Radio

- (1) AM Receiver frequency range : 535KHz ~1605KHz
- (2) Intermediate frequency : 455KHz
- (3) Equipped with 8-bit DIP switch for circuits fault simulations

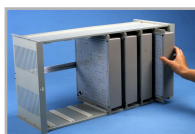
##### 3. KL-93063A FM Transmitter

- (1) With perfect FM Transmitter for producing 10.7MHz intermediate frequency
- (2) Equipped with 8-bit DIP switch for circuits fault simulations

##### 4. KL-93064A FM Stereo Radio

- (1) FM Receiver frequency range : 88MHz-108MHz
- (2) Frequency shown by 7 segment LED display
- (3) Equipped with 8-bit DIP switch for circuits fault simulations

##### 5. KL-99001 Storage cabinet



KL-99001

#### ► List of Experiments

##### 1. KL-93061A AM/DSB Transmitter

Experiment curriculum includes:  
Crystal Oscillator, Modulator percentage, Sine wave/Voice Modulator, Balance Modulator, RF Amplifier, Adjust & Coupling, Antenna Adjust

##### 2. KL-93062A AM Transistorized Radio

Experiment curriculum includes:  
Oscillator Mixer, 1st IF Amplifier, 2nd IF Amplifier, Audio Amplifier

##### 3. KL-93063A FM Transmitter

Experiment curriculum includes:  
Crystal oscillator, Frequency Modulator, RF buffer, Reference oscillator, Frequency Tachometer and Audio Modulator

##### 4. KL-93064A FM Stereo Radio

Experiment curriculum includes:  
Tuner, FM IF Amplifier, FM MPX, Audio Amplifier

#### ► Accessories (KL-98003A)

1. CI-18001 Power Supply x 2
  - (1) Output :  $\pm 5V$ , 0.5A ;  $\pm 12V$ , 0.5A
  - (2) Input : AC 110/220V
2. Connection leads and plugs x 1 set
3. Telescope antenna x 3 pcs
4. Mini-microphone x 2 pcs
5. Experiment manual



## ► KL-900C2

### ► Specifications

#### 1. KL-93065 ASK/AM Transmitter

- (1) Amplitude-shift keying (ASK) transmitter  
Carrier frequency : 1.0MHz & 1.6MHz
- (2) Data transmission format :
  - a. Start bit
  - b. 64-bit encoded data : 8-bit data encoded by 8-bit spread spectrum setting
  - c. Stop bit
- (3) Data transmission :
  - a. Direct modulation
  - b. Manchester encoding
- (4) Data rate :
  - a. 100/62.5Hz
  - b. 160/100Hz
  - c. 1.6K/1KHz
- (5) AM audio modulation signal :  
Audio input : mono microphone input

#### 2. KL-93066 ASK/AM Receiver

- (1) AM receiver frequency range : 535KHz~1605KHz
- (2) Intermediate frequency : 455KHz
- (3) Data receive mode :
  - a. Direct demodulation
  - b. Manchester decoding
- (4) Data rate:
  - a. 100/62.5Hz
  - b. 160/100Hz
  - c. 1.6K/1KHz
- (5) AM audio demodulation signal :  
Audio output : 0.2W 8Ω speaker

#### 3. KL-93067 FSK/FM Transmitter

- (1) Frequency-shift keying (FSK) transmitter, which is able to produce 10.7MHz intermediate frequency.
- (2) Data transmission format :
  - a. Start bit
  - b. 64-bit encoded data : 8-bit data encoded by 8-bit spread spectrum setting
  - c. Stop bit
- (3) Data transmission :
  - a. Direct modulation
  - b. Manchester encoding
- (4) Data rate :
  - a. 100/62.5Hz
  - b. 160/100Hz
- (5) FM audio modulation signal :  
Audio input : Mono microphone input

#### 4. KL-93068 FSK/FM Receiver

- (1) FM receiver frequency : 10.7MHz
- (2) Data receive mode :
  - a. Direct demodulation
  - b. Manchester decoding
- (3) Data rate:
  - a. 100/62.5Hz
  - b. 160/100Hz
- (4) FM audio demodulation signal :  
Audio output : 0.2W 8Ω speaker

#### 5. KL-99001 Storage cabinet

### ► List of Experiments

#### 1. KL-93065 ASK/AM Transmitter

- (1) AM experiment curriculum includes :  
RF amplifier, adjustment of the coupling, antenna adjustment
- (2) AM analog modulation experiment curriculum includes :  
AM audio amplifier, audio transmission.
- (3) ASK digital modulation experiment curriculum includes :  
ASK CDMA experiment, ASK manchester experiment, direct modulation transmission experiment, manchester encoding transmission experiment

#### 2. KL-93066 ASK/AM Receiver

- (1) AM experiment curriculum includes :  
1st IF amplifier, 2nd IF amplifier and audio amplifier
- (2) AM analog demodulation experiment curriculum includes :  
AM audio amplifier, audio receiver experiment
- (3) ASK digital demodulation experiment curriculum includes :  
ASK direct demodulation experiment, manchester decoding experiment

#### 3. KL-93067 FSK/FM Transmitter

- (1) FM experiment curriculum includes :  
Buffer amplifier tuning measurements, RF amplifier tuning measurements
- (2) FM analog modulation experiment curriculum includes :  
FM audio amplifier, audio transmission
- (3) FSK digital modulation experiment curriculum includes :  
FSK CDMA experiment, FSK manchester experiment, direct modulation transmission experiment, manchester encoding transmission experiment

#### 4. KL-93068 FSK/FM Receiver

- (1) FM experiment curriculum includes :  
FM IF amplifier
- (2) FM analog demodulation experiment curriculum includes :  
FM audio amplifier, audio receiver experiment
- (3) FSK digital demodulation experiment curriculum includes :  
FSK direct demodulation experiment, manchester decoding experiment

### ► Accessories (KL-98003B)

1. CI-18001 Power Supply x 2
  - (1) Output : ±5V, 0.5A ; ±12V, 0.5A
  - (2) Input : AC 110/220V
2. Connection leads and plugs x 1 set
3. Telescope antenna x 3 pcs
4. Mini-microphone x 2 pcs
5. Experiment manual

### ► Optional Accessory

#### 1. Rack frame (KL-97003)



KL-97003