# EXHIBIT 5. USER'S MANUAL & SCHEMATIC(BLOCK DIAGRAM)

## FM TRANSMITTER CERTIFICATION TO FCC PART 15 REQUIREMENT

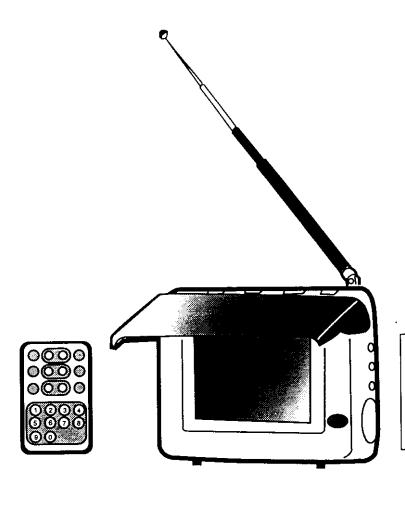
PRODUCT	4" TFT LCD COLO	4" TFT LCD COLOR TELEVISION						
FCC ID	MSE4000							
MODEL NO.	SW-4000	SERIAL NO.	N/A					
APPLICANT & ADDRESS		SAMWON ELECTRONICS INC. 694-2, KOJAN-DONG, NAMDONG-KU, INCHON, KOREA.						

REPORT NO.	OTC-RF-9803068	ISSUE DATE	March 23, 1998			
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# INSTRUCTION MANUAL 4" TFT LCD COLOR TELEVISION

SW-4000



#### **WARNING**

Do not watch TV when you drive a car. It will be a cause of traffic accident if you drive on giving a side glance with watching TV.

PLEASE READ THIS INSTRUCTION MANUAL COMPLETELY BEFORE OPERATING YOUR SET AND RETAIN FOR FUTURE REFERENCE.

#### INFORMATION TO THE USER

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

#### WARNING

Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

# **WARNINGS**



The exclamation point within the triangle is a warning sign alerting the user of important instructions accompanying the product.



The lightening flash with arrowhead symbol within the triangle is a warning sign alerting the user of "dangerous voltage" inside the unit.



To reduce the risk of electric shock do not remove the cover. No user serviceable parts inside the unit. Refer all servicing to qualified personnel.



This unit must not be exposed to moisture or rain.



The power switch in this unit is mounted on the secondary circuit and does not disconnect the whole unit from the mains in position off.



Ensure all connections are properly made before operating the unit.



This unit should be positioned so that it is properly ventilated. Avoid placing it for examples close to curtains, on the carpet or in a built-in installation such as a bookcase.



Do not expose this unit to direct sunlight or heat radiating sources.

#### ANTENNA INSTALLATION

Unless your TV is connected to a cable TV system or to a centralized antenna system, a good outdoor color TV antenna is recommended for best performance. However, if you are located in a good signal area, free from interferences, an indoor antenna may be sufficient.

## EXTERNAL ANTENNA CONNECTION

In most reception areas, the built-in telescopic antenna should be adequate for good reception.

However, if you cannot obtain satisfactory reception with it, the use of an external antenna is recommended.

#### **NOTES:**

- When using separate UHF/VHF antenna, use a commercially available UHF/VHF 75-Ohm Coupler. A Combination VHF/VHF antenna with 75-Ohm lead-in wire may be connected directly to the external antenna jack.
- When watching the TV in a car, the car antenna is recommended for a good reception.

#### **CAR ANTENNA**

When you view TV in a car, a car antenna is recommended for a good reception. Call your nearest TV store for information about a car antenna.

#### LOCATION

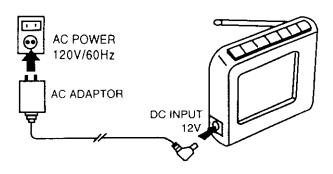
Select an area where sunlight or bright indoor illumination will not fall directly on the picture screen.

#### **POWER SUPPLY**

## **AC** operation

This TV operates on 120V/60Hz AC power.

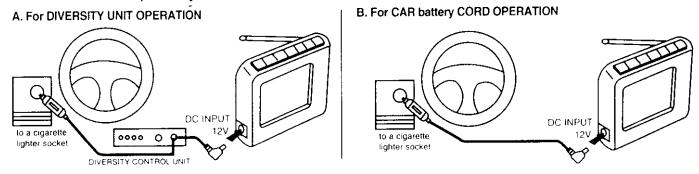
Connect one end the AC power cord to a wall socket and the other end to the 12V DC input socket on the left side of your TV.



## **DC** operation

Plug one end of the power cord into the cigar lighter socket on the dashboard of your car and the other end into the 12V DC socket on the left of your TV.

**CAUTION**: Always make sure that the polarity of the power cord matches the polarity of the socket on the car.



# REMOTE CONTROL

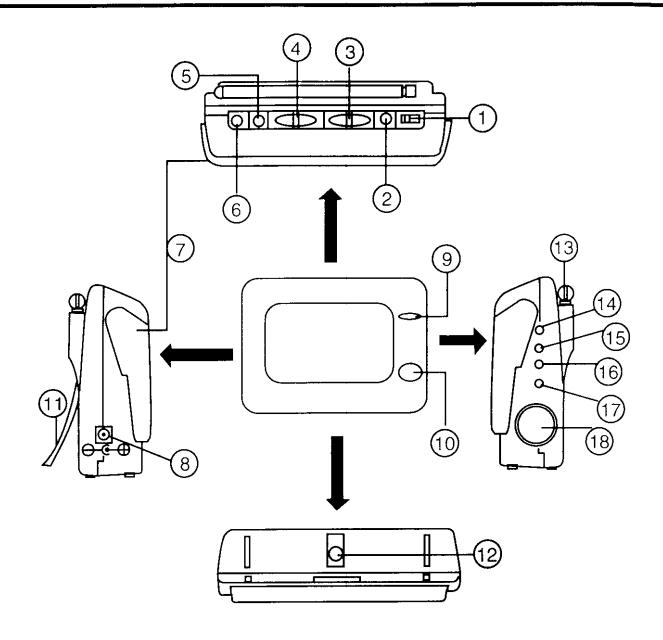
Use CR-2025 size batteries as specified inside the battery compartment.

### **FUNCTIONS AND CONTROLS**

- MAIN POWER SWITCH
   Main switch to switch the TV ON/OFF stand-by.
- POWER BUTTONPush the power switch TV ON/OFF.
- 3) CHANNEL UP/DOWN BUTTON To select the desired TV channel.
- 4) VOLUME, SET UP/DOWN BUTTON

  To adjust the volume level. Use to adjust the function selected on menu.
- 5) MENU BUTTON
  Use this button to see the main menu and move the cursor on the menu.
- 6) TV, GPS/VIDEO BUTTON
- 7) SUN SHADE
- 8) DC INPUT (12V)
- 9) STAND BY INDICATOR
- 10) REMOTE CONTROL SENSOR
- 11) STAND
- 12) STAND HOLE
- 13) TELESCOPIC ANTENNA

  Adjust the lenghth, direction and angle for best picture.

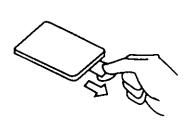


14) EXTERNAL ANTENNA JACK

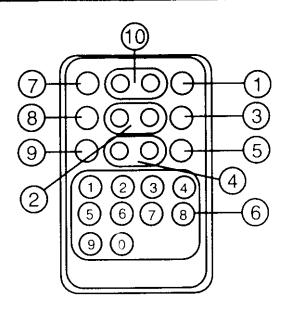
To connect an external TV antenna.

- 15) DIVERSITY ANTENNA JACK (VIDEO OUT) Use for connecting a diversity TV antenna.
- 16) GPS/VIDEO, AUDIO INPUT JACK Input terminal for VCR, GPS, Camera, etc.
- 17) EARPHONE JACK (STEREO EARPHONE JACK)
  Connect the earphone to this socket for private listening.
- 18) SPEAKER

# REMOTE CONTROL FUNCTIONS



· Rebbon delete a pull back



#### 1) POWER BUTTON

To switch the TV picture ON/OFF.

2) VOLUME UP/DOWN BUTTON

To adjust the volume level.

3) BLUE BUTTON

To switch the blue screen ON/OFF.

4) CHANNEL UP/DOWN BUTTON

To select a TV channel stored in memory.

5) TV/AV BUTTON

To select TV or VIDEO mode.

6) 0~9 NUMBERED BUTTONS

Press these buttons to select directly a channel number. To call a two digit channel number, press two buttons continuously within 3seconds.

7) MENU BUTTON

Use this button to see the main menu and move the cursor on the menu.

8) MUTE BUTTON

To eliminate the sound of TV/AV, press this button. Press it again to resume the sound.

9) RECALL BUTTON

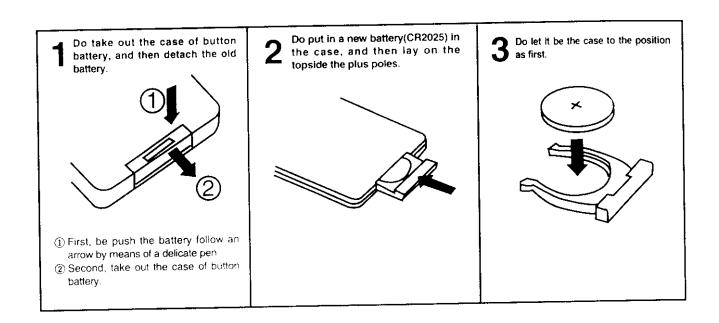
To see the present channel number and time on the screen, press this button. The time display will disappear after 5 seconds but the channel number will remain until this button is pressed again.

10) SET BUTTON +, -

Use to adjust the function selected on menu.

# HOW TO EXCHANGE OF A BATTERY FOR REMOTE CONTROL

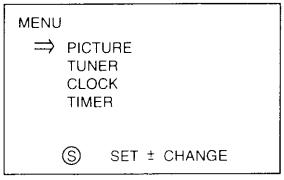
If there is no power, even though you intend to operate remote control when TV is taken on, it is high time that you should exchange the old battery with new battery. (generally, the life span of a battery is about one year in case of that you use it.)



## HOW TO CONTROL FUNCTIONS ON THE MENU

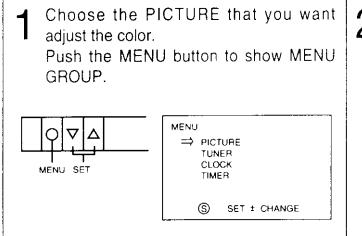
#### **MAIN MENU**

Press first the MENU button to see the MAIN MENU GROUP shown below. You can choose one of these modes by moving the cursor. To move the cursor, press the MENU button. If you choose the mode to be adjusted, press the SET + or SET - button.



#### **PICTURE**

You can get the PICTURE color that you prefer with this function.



Choose PICTURE in MENU GROUP and push SET ± button. The PICTURE CONTROL GROUP will be shown on the PICTURE. Push SET ± button. The notch mark will move and the color will be adjusted. You can adjust CNT, BRI, AND, TNT by same way.

PICTURE

⇒ COL IIIII

SET ± CHANGE

PICTURE RESET

#### **TUNER**

To pick up the menu of TUNER GROUP shown below, press the SET button.

```
TUNER

⇒ AUTO SEARCH
POS (1 2)(SKIP)
AFT (ON)
(VHF - L) ( | | | | | | · · · · · · )

S SET ± CHANGE
```

#### **AUTO-SEARCH**

See chapter "HOW TO CONTROL AUTO SEARCH AND STORE".

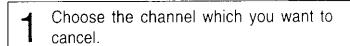
#### **POSITION**

Choose position number with the channel UP/DOWN buttons.

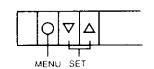
#### **SKIP**

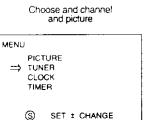
When auto store is completed, all other channel positions. except the positions stored, will be on SKIP status.

Use this function to cancel some positions which have no good PICTURE or are stored repeatedly.



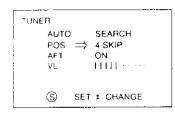


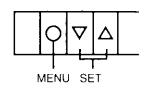




- Press MENU button and MENU GROUP will be shown.
- Press MENU button again to move the cursor to TUNER.

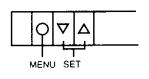
Press SET + or - button to show TUNER GROUP on the picture.



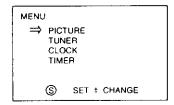


- Press MENU button to move the cursor to POS number.
- Press SET + or button to show SKIP status.

3







 To remove TUNER GROUP after SKIP the channel, press MENU button 4 times. TUNER will be changed to MENU.

Press SET + or - button to show MENU GROUP. MENU GROUP will be displayed. Press MENU button 4 time again, MENU GROUP will be disappeared from the picture.

Note: In order to escape from TUNER GROUP quickly after step 2, you can proceed as follows;

Press volume UP or DOWN button and CHANNEL UP or DOWN button once each by using remote control (not by using buttons on the TV)

The selected channel is skipped now.

# **AFT (AUTOMATIC FINE TUNING)**

When you tune a TV channel with fine tuning, it is recommended to set to AFT OFF mode. After tuning, return to AFT ON mode.

#### **BAND SELECT**

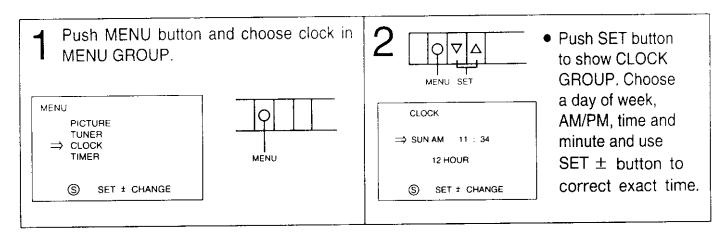
Select one of the bands VHF-L, VHF-H and UHF when you tune with fine tuning.

#### **FINE TUNING**

The BARS will increase or decrease according to the tuning of each band with SET + or SET - buttons.

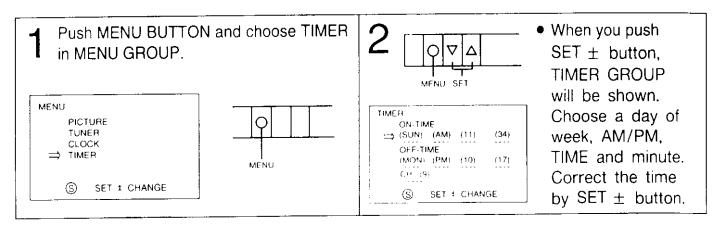
# **CLOCK**

You can reserve a day of the week, AM/PM and time. AM/PM and time will be shown when you push channel button( $\nabla \triangle$ ).



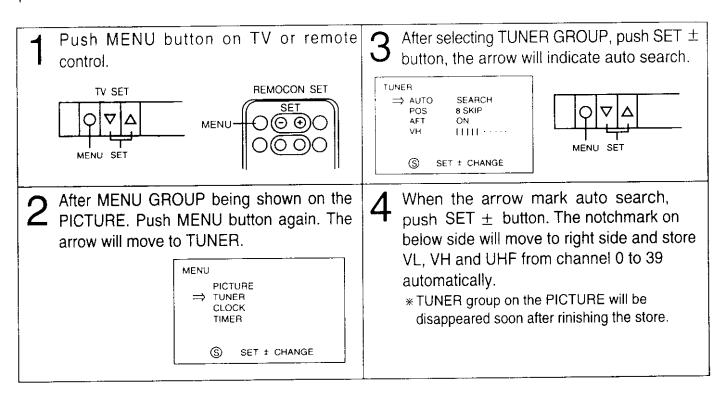
#### **SLEEP TIMER**

You can reserve ON-TIME, and OFF-TIME of PICTURE.



# AUTO-SEARCH HOW TO CONTROL AUTO SEARCH AND STORE

This unit autohatically search and store up to 40 broadcasting channels into channel position numbers from 0 to 39 in order VHF-L, VHF-H and UHF.



# HOW TO ASSIGN A STORED TV CHANNEL TO A CHANNEL POSITION.

Assigning a stored TV channel to a channel position is needed to unify real broadcasting channel because stored channel by AUTO SEARCH is not matched with real broadcasting channel. Assigning from high channel is recommended when you assigning stored TV channels to channel positions.

Ex) When you want to assign the auto stored channel 8 on the picture (real broadcasting channel 9) to program position 9.

STORED CHANNEL BY AUTO SEARCH	12	9	8	7	5	2	STORED FROM 0 to 39
THE CHANNEL WILL BE UNFFED WITH FEAL CHANNEL	↓ 11	↓ 8	7	6	3	2	THE CHANNEL THAT YOU WANT TO CHANGE

After selecting TUNER, push SET + or Choose the channel that you want to assign SET - button to show TUNER GROUP and press MENU button to show MENU Press MENU button to move cursor to GROUP. indicate channel POS number. Press MENU button again to choose TUNER in MENU GROUP. AUTO SEARCH REMOCON SET TV SET POS ⇒ 8 11111 0000 MENU SET CHANNEL  $\nabla$ <del>∥</del>0@00 MENU -SET ± CHANGE CHANNEL Change to channel  $\bigcirc \bigcirc \bigcirc \bigcirc \bigcirc \bigcirc$ MENU SET CHANNEL POS 9 by using TUNER channel button. 8 **AUTO** SEARCH PICTURE TUNER Delete SKIP with POS ⇒ 9 1141 ----SET + or - button TIMER if number 9 marks SET ± CHANGE ® SET ± CHANGE SKIP in rear. TUNER After selecting channel 9, move the cursor in front AUTO SEARCH of bars(fine tuning) by using MENU button. POS Press SET + or - button once to store auto stored ⇒ 1118 .... channel 8 into program position number 9. MENU SET SET ± CHANGE 9 MENU ⇒ MENU ⇒ PICTURE TUNER SEARCH AUTO POS AFT ON |||||

 To remove TUNER GROUP after assigning the channel, move the cursor to TUNER by using the MENU button. TUNER will change to MENU. Press SET + or - button to show MENU GROUP. Press MENU button 4 times, then TUNER GROUP will be disappearde.

SET ± CHANGE

MENU SET

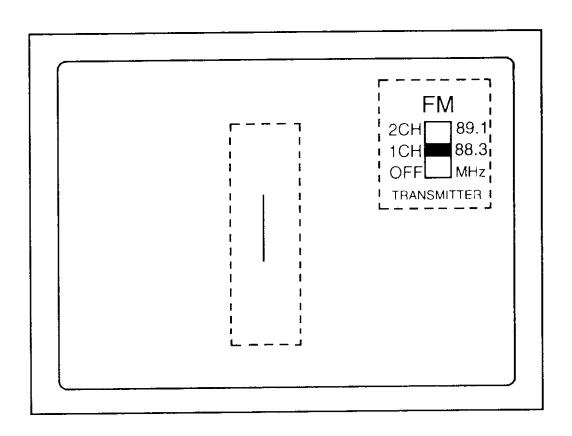
Note: In order to escape from TUNER GROUP quickly after step3, you can proceed as follows; Press volume UP or DOWN button and CHANNEL UP or DOWN button once each by using remote control (not by using buttons on the TV).

The selected channel 8 is assigned to channel 9 now.

SET : CHANGE

Note: AUTO SEARCH and STORE is recommended for programming channels instead of MANUAL TUNING with FINE TUNING because MANUAL TUNING takes much longer time.

When you listen to the sound with FM radio. (A function of FM transmitter)



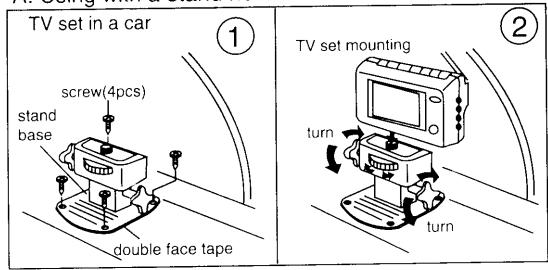
# -Listen to the sound with utilization of FM radio. (A function of FM radio)

- OFF/1···88.3 MHz/2···89.1 MHz.
   (Newly convert by three step)
- FM radio Adjust the frequency to one of any direction of 1 or 2.
- The operating of volume adjust by side of radio.
- When you make use of FM transmitter, do stretch an color antenna of radio.

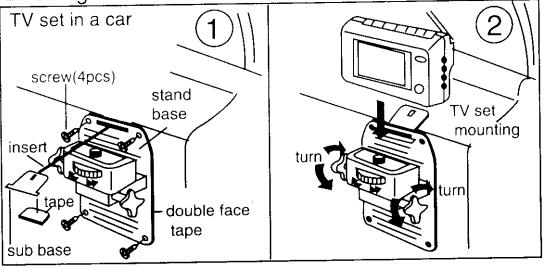
# THE METHOD FOR STAND MOUNTING

TV set in a car

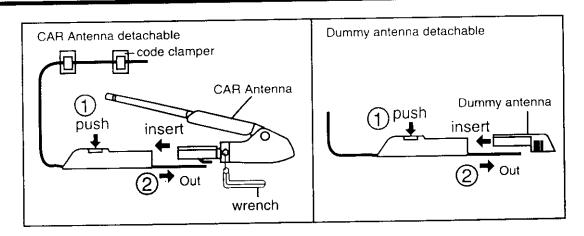
A. Using with a stand horizontal



B. Using with a stand vertical

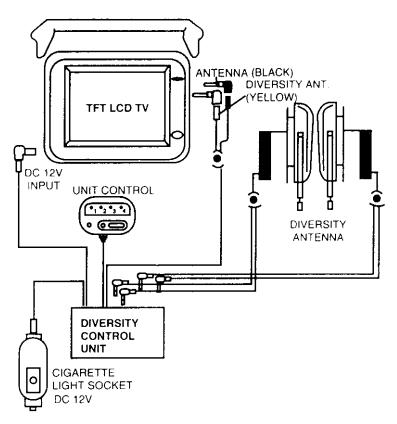


# **DIVERSITY ANTENNA DETACHABLE**



# **TYPICAL CONNECTION DIAGRAM**

• Diversity antenna connection in a car.



## SPECIAL FEATURES

## **AUTO MUTE**

If no broadcast signal or strong noise gets into a receiving channel, the audio becomes mute automatically.

#### **BLUE SCREEN**

If no broadcast signal or noise gets into a receiving channel, after 10 seconds the screen will be automatically replaced by a blue screen.

# LAST MODE MEMORY

Even though the main power is cut off and the unit is plugged in again, this unit keeps the memory of last mode.

## **AUTO SWITCH OFF**

If no broadcast signal or strong noise gets into a receiving channel continously for more than 10 minutes, the TV switches automatically to stand-by.

# **CLOCK AND TIMER RESET**

When the unit is cut from main power, the setting of CLOCK and TIMER will be reset. Rearrange the setting when the unit is newly plugged in main power. On stand by mode (switch off), the unit retains the setting.

## MEMORY CAPACITY

This unit stores a maximum of 40 TV channels in position numbers from 0 to 39.

#### **SPECIFICATIONS**

#### 4" TFT LCD COLOR TV

Picture size: 4" (W80.7mm X H60.0mm)

Television systems: NTSC

Channel coverage: VHF channel LOW CH 2-6

HIGH CH 7-13

UHF channel 14-69

Antenna: Telescopic antenna for VHF and UHF.

75-ohm external antenna jack for VHF and UHF.

Speaker: 28mm dia.

Audio out : 200mm (280mw)

Power requirements: 120VAC/60Hz with supplied AC power adaptor.

12V DC car battery with car battery cord.

Dimensions: 150(W)X46(D)X120(H)mm

Weight: 470g (NET)

Accessories supplied : AC power adaptor 1pc

Remote control unit 1pc
Antenna matching unit 1pc

Car battery cord 1pc

Option Accessories: TV stand 1pc

Diversity antenna (L/R) 1pc Diversity control unit 1pc

(In this case, car battery cord will not be supplid)

Due to continuous improvements, features and design could be subject to variations without