

FEATURES

- **High Contrast and, Black Matrix Picture Tube**
- **Remote Control Function-** The convenient remote control unit provided with your set offers Volume UP/DOWN, Channel UP/DOWN, Mute, Channel display, Power ON/OFF, Picture control and channel recall.
- **Sleep Timer-** allows you to turn off the TV without using the POWER button on the TV or the STANDBY button on the remote control after a desired time period.
- **Picture Control Memory-** Your desired picture control setting will be memorized even if the TV is turned off.
- **Automatic Tuner Memory Programming-** stores all the active channels in your area into the tuner's memory for quick tuning.
- **Voltage Synthesized Tuning**
- **Game Mode-** allows TV display to be suitable for use with a TV GAME.
- **Teletext-** A simplified form of teletext operation is contained in this model.
- **CATV (Hyper Band)-** This TV correspond to HYPER BAND of the CATV.
- **Direct Button Operation-** When the TV is standby mode, just press CHANNEL Up or Down button or the number buttons and it will automatically turn on the TV.
- **Auto Shut Off Function-** If there is no air signal input from the antenna terminal and no operation for 15 minutes, the TV will turn itself off automatically.

PRECAUTION

- Place your TV in a room with adequate ventilation.
- Keep your TV set away from sources of direct heat, such as heat registers or direct sunlight.
- Do not place your TV on soft surfaces, such as rugs or blankets.
- Leave enough room for air to circulate around the bottom, top and back of the set.

NOTE:
When you disconnect the unit from the AC outlet, or if you have a power failure, sleep time setting memory will be lost. You have to repeat sleep time setting procedures.

WARNING:
TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE.

The serial number of this product may be found on the back of the TV. No others have the same serial number as yours. You should record the number and other vital information here and retain this book as a permanent record of your purchase to aid identification in case of theft.

Date of Purchase		Dealer Phone No.	
Dealer Purchase from		Model No.	
Dealer Address		Serial No.	

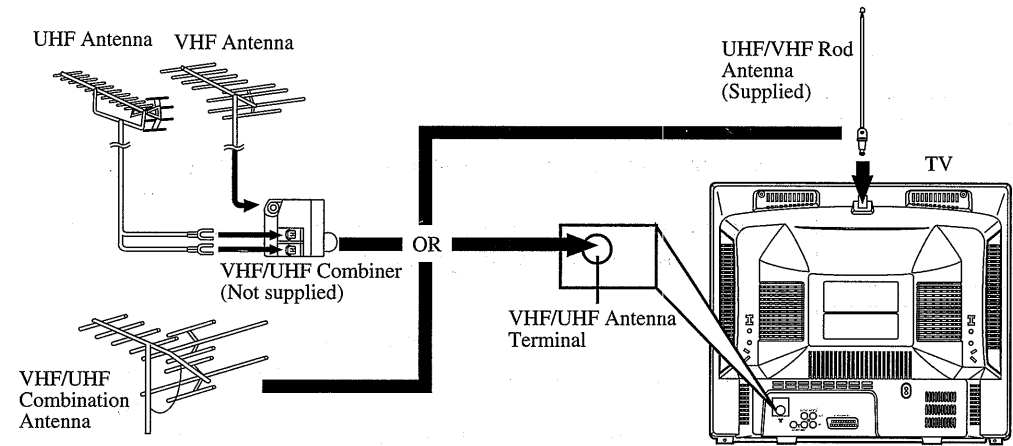
OEMN01176

L9531RB * * * * *

CONNECTIONS

ANTENNA CONNECTIONS

The UHF/VHF Rod Antenna (supplied) is detachable. Push the stem of the antenna into the hole which is located on the upper back cabinet of the TV.
Connect the Rod antenna or VHF/UHF Combination Antenna, etc. to VHF/UHF antenna terminal of TV as shown in drawing.



For the best reception, adjust the Rod antenna's length and position. (Avoid handling the top section when making adjustments).
Note:
We recommend using an outdoor antenna for best condition, especially when receiving TV program with TELETEXT page.
In weak signal areas, it may be necessary to utilize a signal booster or to use a high gain antenna.

INFORMATION ON PRODUCT CERTIFICATION

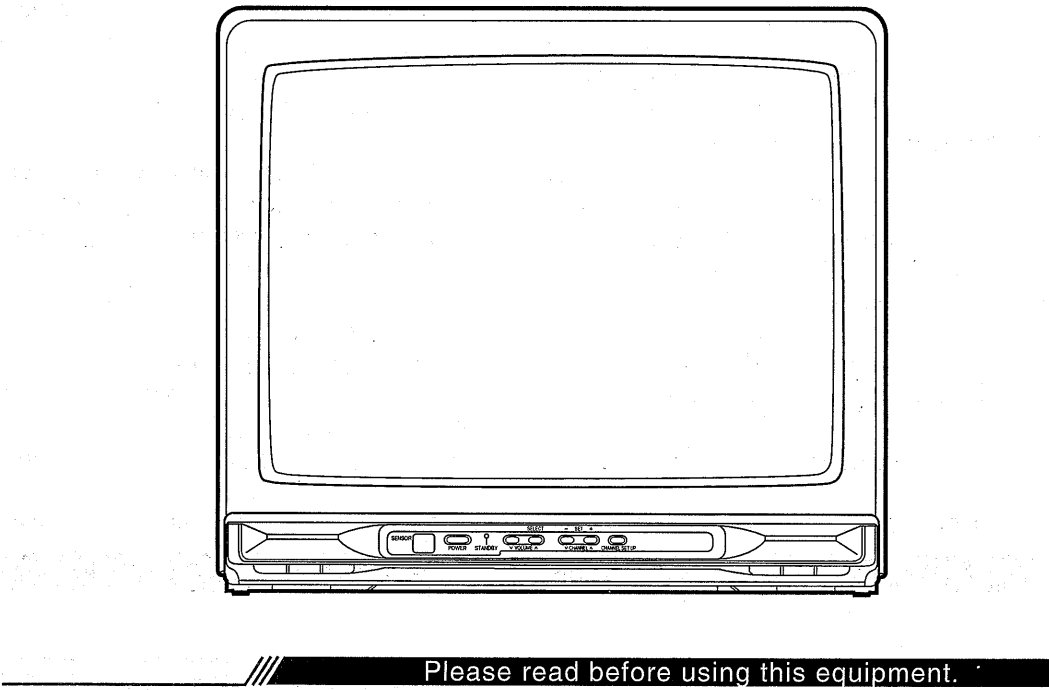
COLOUR TELEVISION RECEIVER
MODEL TV-2000T MK10 HYPER FUNAI
certified by GOST-ASIA,
Official Representative of GOSSTANDART of Russia
(Registration number in State Register - ROSS SG.0001.11.BZ02)

Certificate of Conformity:	No. ROSS MY.BZ02.B00967
Certificate of Conformity issued:	October 03, 1996
Certificate of Conformity valid till:	October 03, 1999
Model TV-2000T MK10 HYPER Funai complies with the requirements of normative documents:	safety - GOST 12.2.006-87/IEC 65-85 EMC - GOST 18198-89

OWNER'S
MANUAL


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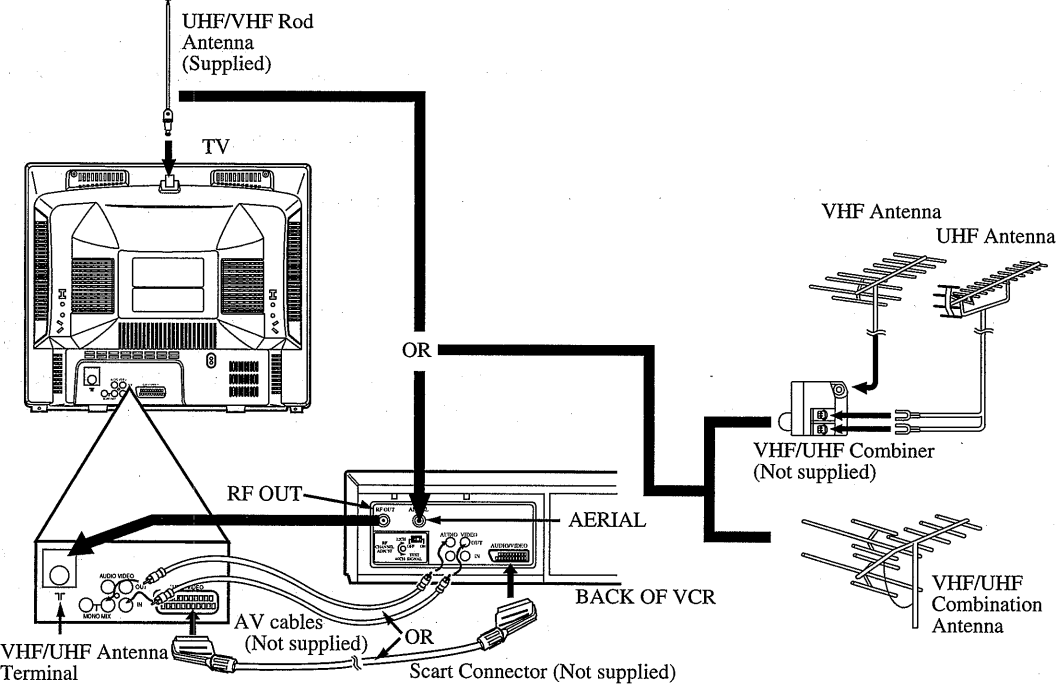
20 INCH
COLOR TELEVISION
WITH TELETEXT
TV-2000T MK10 HYPER



EXTERNAL INPUT CONNECTIONS

Connect TV and VCR as following picture.
It will be changed AV mode by pushing 2 times "0/AV" button of remote control unit to watch VCR playback.

Connect TV and VCR with scart connector. TV input select will change automatically to VCR when it starts the playback, even if watching the TV program and also you may record the TV program while you are watching.

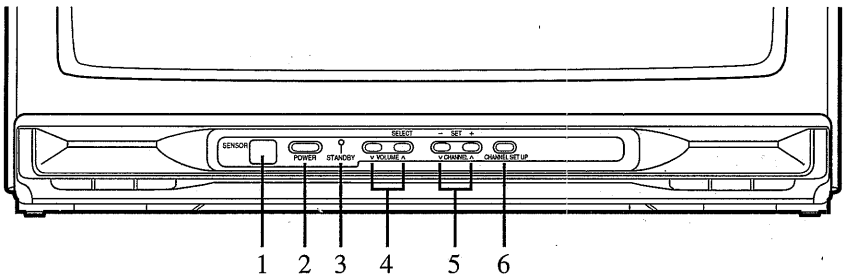


NOTE:
This scart jack does not match for R.G.B type signals as personal computer video game. Please refer to the pin connections for scart jack described in "SPECIFICATIONS".

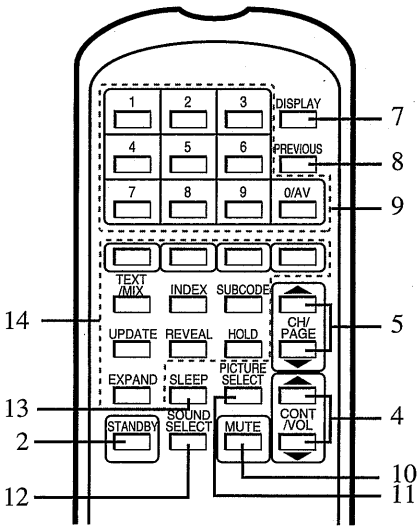
This TV is based on monaural system but has two speakers. The input source through scart jack or RCA jacks will be heard as monaural even if it is stereo signal.

OPERATING CONTROLS AND FUNCTIONS

- FRONT PANEL -



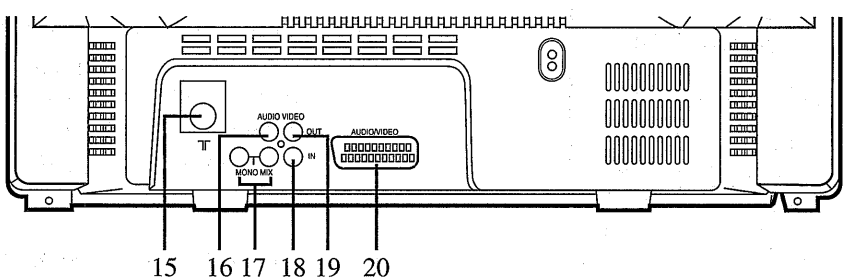
- REMOTE CONTROL -



- 1** **INFRARED SENSOR WINDOW**- Receives the infrared control signals from the remote control unit.
- 2** **POWER (STANDBY) button**-To turn the unit on and standby.
- 3** **STANDBY indicator**- Lights when power is connected and lights off when the unit is turned on.
- 4** **VOL(UME) Up/Down buttons**- Press to control the volume in TV mode.
- CONT(ROL) Up/Down buttons**- Press to increase (or decrease) picture control using picture control functions. (only on the remote control unit)

- 5** **SELECT button**- Press to determine your selection and proceed to next step in channel preset mode. (only the VOLUME Up button on the main unit)
- 6** **CH(ANNEL) Up/Down buttons**- Press to up (higher) or down (lower) positions in TV mode.
- PAGE Up/Down buttons**-Press to up or down the page in TELETEXT mode.
- SET +/- buttons**- Press to select band or to tune the receiving channel in channel preset mode. (only on the main unit)
- 7** **CHANNEL SET UP button**- Press to preset the tuner memories in TV mode. Press to change the displayed language in TELETEXT mode.
- 8** **DISPLAY button**-Press to display the position number on the screen. Press again, display disappears.
- 9** **PREVIOUS button**-Press to call previous received channel.
- 10** **NUMBER buttons**-Press two digits to directly access any channel you choose. For example, press "0" then "6" for channel 6, or press "1" then "3" for channel 13.
- 0/AV button**-Press to select TV or VCR mode. (For example, press "0" then "0" for VCR mode. "AV" appears on the screen.)
- To release VCR mode, press two digits to directly access any channel you choose or press CH(ANNEL) Up/Down button.
- 11** **MUTE button**-Press to mute sound.
- To release mute mode, press VOL(UME) Up/Down or MUTE button.

- REAR PANEL -

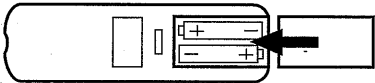


- 11** **PICTURE SELECT button**- Press to select the picture adjustment function. Refer to "PICTURE ADJUSTMENT".
- 12** **SOUND SELECT button**- Press to select your desired sound quality for NEWS, MUSIC or CINEMA.
- 13** **SLEEP button**-Press to set up the sleep function. Refer to "SETTING THE SLEEP TIMER".
- 14** **Available TELETEXT buttons**- Refer to "TELETEXT OPERATION".
- 15** **VHF/UHF antenna terminal**- Connect a VHF/UHF antenna or Rod antenna.
- 16** **AUDIO OUT terminal**- Relays the audio signal to a connected external audio component.
- 17** **AUDIO IN terminals (MONO MIX)**- Connect to the audio output jack of a video camera or VCR.
- This TV is based on monaural system but has two speakers. The input source through scart jack or RCA jacks will be heard as monaural even if it is stereo signal.
- 18** **VIDEO IN terminal**- Connect to the video output jack of a video camera or VCR.
- 19** **VIDEO OUT terminal**- Relays the video signal to a connected external video component.

- 20** **AUDIO/VIDEO socket**- Connect to the audio/video socket of a video camera or VCR.

INSTALLING THE BATTERIES

- 1** Slide the battery compartment cover on the remote unit.
- 2** Insert 2 "R6" penlight batteries into battery compartment in the direction as indicated by the polarity (+ / -) markings. Batteries installed with incorrect polarity may damage the remote unit.



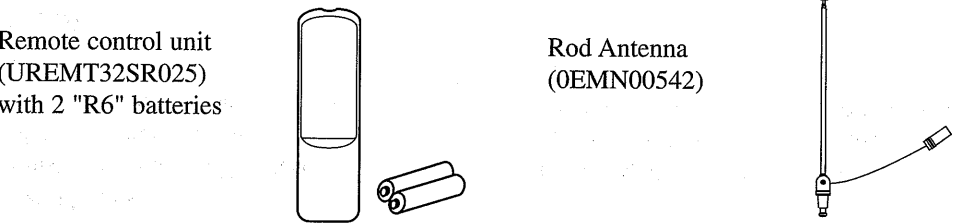
- 3** Replace the cover.

TROUBLESHOOTING GUIDE

Sometimes a performance problem can be easily solved by checking seemingly apparent but often overlooked possibilities. Before arranging for service, check these items. It could save your time and money.

QUICK SERVICE CHECK LIST	PROBLEM												
	Remote Control Doesn't Work	Bars On Screen	Picture Distorted	Picture Rolls Vertically	No Color	Poor Reception on Some Channels	Weak Picture	Lines or Streaks in Picture	Ghosts in picture	Picture Blurred	Sound OK, Picture Poor	Picture OK, Sound Poor	No Picture or Sound
Try a new channel, if OK, then possible station trouble.			×	×	×	×	×	×	×	×	×	×	×
Is TV plugged in? Power at outlet?	×												×
Is TV's POWER button on?													×
Is antenna connected to terminal on the back of the set?					×	×	×		×		×		×
If outside antenna is being used, check for broken wire.		×	×	×	×	×	×	×	×	×	×		×
Check for local interference.		×		×		×		×	×		×	×	
Turn off with POWER button and then turn it on after about a minute.													×
Adjust COLOR control.					×								
Adjust CONTRAST & BRIGHTNESS control.							×				×		
Check batteries in Remote Control.	×												

SUPPLIED ACCESSORIES



MAINTENANCE

CABINET CLEANING

- Wipe the front panel and other exterior surfaces of the TV with a soft cloth immersed in luke-warm water and wrung dry.
- Never use a solvent or alcohol. Do not spray insecticide liquid near the TV. Such chemicals may cause damage and discoloration to the exposed surfaces.

PICTURE TUBE CLEANING

Wipe the picture tube of the TV with a soft cloth. Before cleaning the picture tube, disconnect the power cord.

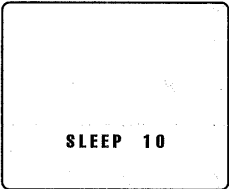
OPERATIONS

- 1
- Press POWER button on the TV or press STANDBY button on the remote control to turn on the TV.
- 2
- Select the desired channel with CHANNEL Up or Down button.
- 3
- Adjust the volume to desired listening level using VOLUME Up or Down button.
- 4
- Adjust picture controls for a natural looking image. (See "PICTURE ADJUSTMENT".)

SETTING THE SLEEP TIMER

The sleep timer function enables you to shut off the power without pressing POWER button on the TV or STANDBY button on the remote control after a desired period.

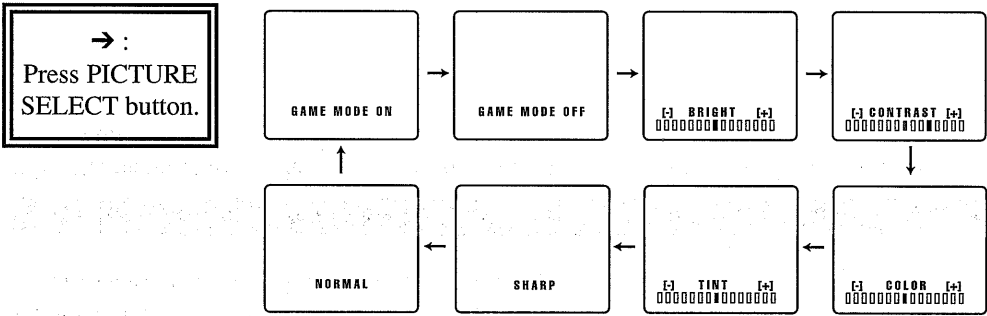
- 1
- Press SLEEP button on the remote control.
- 2
- You may change the sleep time with pressing the SLEEP button on the remote control repeatedly. The timer is set up to 90 minutes by every 10 minutes.
(The timer display counts up and sleep timer will be displayed on the screen when you press the SLEEP button on remote control.)



PICTURE ADJUSTMENT

Select the feature you wish to adjust with the PICTURE SELECT button and adjust it with the CONT(ROL) ▲ or ▼ button. You must use the remote control for this procedure.

Note:In these steps, the display will disappear from the screen after 5 seconds even though you may not be finished. Press PICTURE SELECT button repeatedly until the display returns to the screen.



- 1
- GAME MODE**
ON: to adjust to the most suitable position for TV GAME
OFF: to return to normal TV display
- 2
- BRIGHT**
Adjust until the whitest parts of the picture are as bright as you prefer.
[▲] : to increase brightness
[▼] : to decrease brightness
- 3
- CONTRAST**
Adjust to increase or decrease contrast.
[▲] : to increase contrast
[▼] : to decrease contrast
- 4
- COLOR**
Adjust to be brilliant or pale color.
[▲] : to brilliant color
[▼] : to pale color

- 5
- TINT**
Adjust to obtain natural skin tones.
[▲] : to greenish color
[▼] : to reddish color
Note: This function is operative when the TV receives NTSC signal from Audio/Video In jacks.
- 6
- SHARPNESS**
Select SHARP or SOFT with the CONT(ROL) ▲ or ▼ button.
- 7
- COLOR TEMPERATURE**
Select NORMAL, HIGH (Bluish color), LOW (Reddish color) with the CONT(ROL) ▲ or ▼ button.

TELETEXT OPERATION

A simplified form of teletext operation is contained in this model. The handset buttons described below make the teletext functions available when those buttons are pressed. To enter the teletext mode, press the handset button marked TEXT/MIX. At the top of the displayed teletext page will be all the relevant information as shown example below.

LANGUAGE SELECTION

- 1
- Press CHANNEL SET UP button on the TV repeatedly until "A MODE" or "B MODE" is displayed.
- 2
- If you want to select another language than displayed, press CHANNEL SET UP button on the TV.
NOTE:
Selected language mode can be receive following languages teletext.
Now enter the page number you require by pressing the corresponding handset digits 1-9 and 0. As you enter each digit, it will replace a digit in the page number in the top left hand side of the screen. Once the last digit has been entered, the search routine will begin, and continues till the page number entered is captured.

A MODE	B MODE
ENGLISH	POLISH
CZECHOSLOVAKIAN	CZECHOSLOVAKIAN
GERMAN	GERMAN
ESTONIAN	SWEDISH/HUNGARIAN
LETTISH/LITHUANIAN	_____
RUSSIAN	_____
UKRAINAN	_____
_____	(Reserved)

- EXPAND button-** Once your required page is on display, pressing this button once will enlarge the top half of the page. Pressing the second time will enlarge the bottom half of the page, and the third time will return the display to its normal size.
- PREVIOUS button-** This button enables you to alternate between the current page on display and the previous selected page. For example, if you are watching page 120 after previously watching page 110, then by pressing this button, page 110 is searched for and displayed once more. A second press of the button will return page 120 to the screen again.

- TEXT/MIX button-** If you wish to view the TV program will be returned. When that page has been captured, the page number will appear in the extreme top left hand corner of the screen. Now press the TEXT/MIX button, and the teletext page you selected will be displayed. When you want to watch TV program with TELETEXT page, press TEXT/MIX button again. Once you have finished using any of the teletext facilities described, pressing the TEXT/MIX button will return you to normal TV operation.
- HOLD button-** If a selected page has sub pages, it contains more than one page of information, then pressing this button will keep the displayed page on view continually. When this is done the word HOLD will appear in place of the page number. Once you have read that page, press HOLD button again to resume normal teletext operation.

- SUBCODE button-** When a teletext page has sub pages as described previously, you can decide which of the pages you wish to view. Press the SUBCODE button, and four dashes will appear in place of the page number at the extreme top left of the page. Using the handset digits, enter the sub page number you require, e.g. 0005 for page 5, or 0017 for page 17 etc. Next press the PREVIOUS button. The TV pictures is now returned, and after a short period of time, the sub page number you selected appears in the top left hand corner of the screen. Press PREVIOUS button to view your selected sub page. To return to normal teletext operation, press SUBCODE button once more.

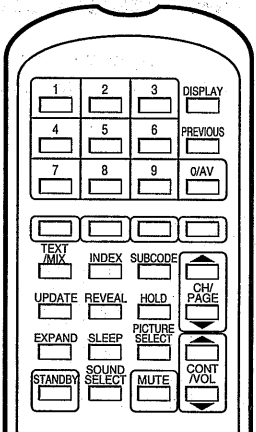
- REVEAL button-** On certain teletext page, (quiz pages for example), the answers are not displayed. Pressing this button will reveal the hidden information.
- RED, GREEN, YELLOW, and CYAN buttons-** When FASTEXT is available, there will be four colored page numbers displayed at the bottom of the teletext page on display. Should you desire to view one of these pages, then simply press the corresponding colored button on the handset.
- When that page is captured and displayed, four new page numbers will appear at the bottom of the page. To select one of these, press the corresponding colored handset button as previously explained. Repeat this procedure for as long as desired.

- CH/PAGE "▲"("▼") buttons**
CH(ANNEL) buttons - Press to up (higher) or down (lower) positions in the TV mode.
PAGE "▲"("▼") buttons - Use to teletext page up (higher) or down (lower) in Teletext mode.

- UPDATE button-** The TV picture is displayed when the UPDATE button is pressed but, as soon as the teletext page you have selected is updated, that page number is displayed in the TV picture. You can then press the TEXT/MIX button to see the revised page. If, however, a newsflash or subtitle is selected, the complete newsflash or subtitle is inserted in the TV picture. That newsflash or subtitle will be cancelled if the UPDATE button is pressed again but as soon as an updated version is transmitted, it will be inserted in the picture.
NOTE:
While in update mode (by pressing UPDATE button), CH/PAGE "▲" (or "▼") button can be functioned as teletext page up or down operation. No channel up or down for TV channel in this mode.

- INDEX button-** Use to see the index information.
NOTE:
While no Teletext broadcasting, last received image are displayed when you select teletext mode.

- REMOTE CONTROL -



PREPARATION FOR USE

CHANNEL CHART

The chart on the right describes the channels. You will receive the band you select when you use the channel memory programming.
This TV correspond to HYPER BAND of the CATV.

BAND	TELEVISION SYSTEM	
	PAL/SECAM B/G	SECAM D/K
VHFL	2~4 + CATV	R1~R5 + CATV
VHFH	5~12 + CATV	R6~R12 + CATV
UHF	21~69	21~69

PRESETTING THE TUNER MEMORIES

To preset a channel or to change a preset channel, follow the procedure below.

1

Connect the power cord to a standard AC outlet.

2

Press POWER button on the TV or press STANDBY button on the remote control to turn on the TV.
If the TV is in VCR mode, change to TV mode by pressing CHANNEL Up/Down button or the number buttons.

3

Press CHANNEL SET UP button on the TV more than a few seconds.
The yellow channel indicator on the screen will begin to search for all available stations in your area.
When AUTO MEMORY action is completed, the lowest memorized channel reappears on the screen.

1

1

MEMORIZING INDIVIDUAL CHANNEL

1

Press CHANNEL SET UP button on the TV once.
● If you press CHANNEL SET UP button on the TV more than a few seconds, AUTO MEMORY action starts.

2

Press SET + or – button on the TV repeatedly to select the channel position number. (Example : Channel 10)
Then, press SELECT button on the TV.

3

If selected channel is in "SKIP" mode, press SET + or – button on the TV repeatedly until desired band (VHFL, VHFH, UHF) is displayed on the screen. (Example : VHFL)
Then, press SELECT button on the TV.

4

Press and hold SET + or – button on the TV until your desired TV program appears on the screen.
Then, press SELECT button on the TV.

● When you will keep pressing SET + or – button, the band will change VHFL, VHFH, UHF.

5

Press CHANNEL SET UP button on the TV to return to TV mode.

PREPARATION FOR USE (cont'd)

TO SKIP A PRESET CHANNEL

1

Press CHANNEL SET UP button on the TV once.
● If you press CHANNEL SET UP button on the TV more than a few seconds, AUTO MEMORY action starts.

2

Select the channel that you wish to skip by pressing SET + or – button on the TV. (Example : Channel 10)
Then, press SELECT button on the TV.

3

Press SET + or – button on the TV repeatedly until the word "SKIP" is displayed on the screen.
Then, press SELECT button on the TV.

4

Press CHANNEL SET UP button on the TV to return to TV mode.

SPECIFICATIONS

GENERAL SPECIFICATIONS

Television system: PAL B/G SECAM D/K, B/G
(Video in only): NTSC 3.58 TV Standard
NTSC 4.43 TV Standard

Channel coverage:
PAL, SECAM B/G: VHF:2 ~ 12 + CATV
UHF:21 ~ 69

SECAM D/K: VHF:R1~R12 + CATV
UHF:21~69

Note: This TV correspond to HYPER BAND of the CATV. This model is designed for 8MHz channel plan CATV.

Tuning System: Voltage synthesized tuning system

Channel access: Channel UP or DOWN
Antenna terminals: VHF/UHF 75 ohm unbalanced (IEC-type)

Video input/output: RCA jacks
Audio input/output: RCA jacks
Video/Audio input/output: Scart jack (21 pin)

PIN CONNECTIONS

Contacts, signal levels and impedances

Contact 1 Sound output (MONO) 0.5V 1kohm
Contact 2 Sound input (MONO) 0.5V 10kohm
Contact 3 Sound output (MONO) 0.5V 1kohm
Contact 4 Sound, ground
Contact 5
Contact 6 Sound input (MONO) 0.5V 10kohm
Contact 7
Contact 8 Remote switching
Contact 9
Contact 10
Contact 11
Contact 12
Contact 13
Contact 14
Contact 15
Contact 16
Contact 17 Video signal, ground
Contact 18
Contact 19 Video output 1.0Vpp 75ohm
Contact 20 Video input 1.0Vpp 75ohm
Contact 21 Shielding

ELECTRICAL SPECIFICATIONS

Music power: 5W (total), 4ohm x 2

OTHER SPECIFICATIONS

Remote control: Digital encoded infrared light system

Operating temperature: 5°C to 40°C (41°F ~104°F)
Power requirements: AC220-240V, 50Hz
Power consumption
(Maximum): 74W
Picture tube: 20"
Dimensions: 485(W) x 468.5(D) x 432(H) mm
Weight: 16Kg

● Designs and specifications are subject to change without notice and without our legal obligation.