

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	075425-0061
		Application Number	
Title of Invention	VIDEO DISPLAY APPARATUS AND TERMINAL APPARATUS		

Filing By Reference:

Only complete this section when filing an application by reference under 35 U.S.C. 111(c) and 37 CFR 1.57(a). Do not complete this section if application papers including a specification and any drawings are being filed. Any domestic benefit or foreign priority information must be provided in the appropriate section(s) below (i.e., "Domestic Benefit/National Stage Information" and "Foreign Priority Information").

For the purposes of a filing date under 37 CFR 1.53(b), the description and any drawings of the present application are replaced by this reference to the previously filed application, subject to conditions and requirements of 37 CFR 1.57(a).

Application number of the previously filed application	Filing date (YYYY-MM-DD)	Intellectual Property Authority or Country

Publication Information:

☐ Request Early Publication (Fee required at time of Request 37 CFR 1.219)

☐ **Request Not to Publish.** I hereby request that the attached application not be published under 35 U.S.C. 122(b) and certify that the invention disclosed in the attached application **has not and will not be** the subject of an application filed in another country, or under a multilateral international agreement, that requires publication at eighteen months after filing.

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Prior Application Status	Pending	Remove	
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)
	Continuation of	14/649895	2015-06-04

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	075425-0061
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Prior Application Status	Pending	Remove	
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)
14649895	a 371 of international	PCT/JP2013/079953	2013-11-06
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Application Number	Country ⁱ	Filing Date (YYYY-MM-DD)	Access Code ⁱ (if applicable)
2012-267765	JP	2012-12-07	
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Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications

This application (1) claims priority to or the benefit of an application filed before March 16, 2013 and (2) also contains, or contained at any time, a claim to a claimed invention that has an effective filing date on or after March 16, 2013. ☐ NOTE: By providing this statement under 37 CFR 1.55 or 1.78, this application, with a filing date on or after March 16, 2013, will be examined under the first inventor to file provisions of the AIA.
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When this Application Data Sheet is properly signed and filed with the application, applicant has provided written authority to permit a participating foreign intellectual property (IP) office access to the instant application-as-filed (see paragraph A in subsection 1 below) and the European Patent Office (EPO) access to any search results from the instant application (see paragraph B in subsection 1 below).

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Title of Invention	VIDEO DISPLAY APPARATUS AND TERMINAL APPARATUS		

Applicant Information:

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Applicant	1	Remove
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If the applicant is the inventor (or the remaining joint inventor or inventors under 37 CFR 1.45), this section should not be completed. The information to be provided in this section is the name and address of the legal representative who is the applicant under 37 CFR 1.43; or the name and address of the assignee, person to whom the inventor is under an obligation to assign the invention, or person who otherwise shows sufficient proprietary interest in the matter who is the applicant under 37 CFR 1.46. If the applicant is an applicant under 37 CFR 1.46 (assignee, person to whom the inventor is obligated to assign, or person who otherwise shows sufficient proprietary interest) together with one or more joint inventors, then the joint inventor or inventors who are also the applicant should be identified in this section.

☒ Assignee	Legal Representative under 35 U.S.C. 117	Joint Inventor
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Person to whom the inventor is obligated to assign. Person who shows sufficient proprietary interest

If applicant is the legal representative, indicate the authority to file the patent application, the inventor is:

Name of the Deceased or Legally Incapacitated Inventor:

If the Applicant is an Organization check here. ☒

Organization Name

Mailing Address Information For Applicant:

Address 1	1-88, Ushitora 1-chome, Ibaraki-shi		
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Country	JP	Postal Code	567-8567
Phone Number		Fax Number	
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Application Data Sheet 37 CFR 1.76		Attorney Docket Number	075425-0061
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Assignee	1
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Complete this section if assignee information, including non-applicant assignee information, is desired to be included on the patent application publication. An assignee-applicant identified in the "Applicant Information" section will appear on the patent application publication as an applicant. For an assignee-applicant, complete this section only if identification as an assignee is also desired on the patent application publication.

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See 37 CFR 1.4(d) for the manner of making signatures and certifications.

Signature	/Tomoki Tanida/		Date (YYYY-MM-DD)	2018-02-06
First Name	Tomoki	Last Name	Tanida	Registration Number
				60,453

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SPECIFICATION

TITLE OF THE INVENTION

VIDEO DISPLAY APPARATUS AND TERMINAL APPARATUS

5

CROSS-REFERENCE TO RELATED APPLICATIONS

This application is a continuation of U.S. Patent Application
14/649,895, filed June 4, 2015, which is a National Phase of
10 PCT/JP2013/079953, filed November 6, 2013, which claims priority
to Japanese Patent Application No. 2012-267765, filed December 7,
2012. The subject matter of each is incorporated herein by reference
in entirety.

TECHNICAL FIELD

15 The present invention relates to a video display apparatus
and a terminal apparatus.

BACKGROUND ART

As a background art in this technical field, there is Japanese
20 Patent Application Laid-Open Publication No. 2009-65305 (Patent
Document 1). An object of the invention described in this
publication is "To provide a technique for appropriately providing
a seamless viewing style without depending on places by a terminal
apparatus and a large-screen information receiving terminal
25 apparatus".

As a solution to this issue, the publication describes "An
information receiving terminal apparatus includes means for
transmitting mobile viewing information to a terminal apparatus,
and a video information system controls a viewing environment for
30 satisfying respective requests from two or more users, and is
configured to enable the continuous viewing of a content viewed at
the information receiving terminal apparatus by the transmission

and reception of the content to and from the terminal apparatus and enable the continuous viewing conversely at the information receiving terminal of the content viewed at the terminal apparatus based on inter-terminal cooperation and center cooperation of time
5 code information for continuing content viewing from the information receiving terminal apparatus to the terminal apparatus."

Also, as another background art, there is Japanese Patent Application Laid-Open Publication No. 2001-275090 (Patent Document
10 2). An object described in this publication is "To provide a broadcast receiving apparatus capable of preventing a main story after a CM from being missed".

As a solution to this issue, the publication describes "A broadcast receiving apparatus 10 includes first and second tuners
15 13a and 13b that receive broadcasting and a RAM 18 that stores a received video, when a program on a channel which is being received by the first tuner 13a is being output, a predetermined amount of video of the program immediately before a most recent CM is stored in the RAM 18, when an instruction to switch the channel to another
20 channel is issued during the CM, the other channel is received by the second tuner 13b and a program on the other channel is output instead of the program on the channel being received by the first tuner 13a, and when the video immediately before the CM stored in the RAM 18 and the video on the channel being received by the first
25 tuner 13a are approximate to each other, the end of the CM is output."

RELATED ART DOCUMENTS

PATENT DOCUMENTS

Patent Document 1: Japanese Patent Application Laid-Open
30 Publication No. 2009-65305

Patent Document 2: Japanese Patent Application Laid-Open
Publication No. 2001-275090

SUMMARY OF THE INVENTION

PROBLEMS TO BE SOLVED BY THE INVENTION

As an effect of the invention, the above-mentioned Patent
5 Document 1 describes "While viewing a content with a family in a
living room by a large-screen receiving terminal apparatus (e.g.,
a television receiver), each individual can acquire information and
data for the convenience of the individual by a terminal apparatus
which is held at hand and carried by each individual.", and this
10 is convenient to use when a plurality of users continue to view the
same content. However, the Patent Document 1 does not take into
consideration the case where the plurality of users respectively
view different contents.

For example, Patent Document 1 does not particularly take into
15 consideration the fact that, when a plurality of users view a
television broadcasting by one video display apparatus and one of
the users switches a channel, the other users cannot continue to
view the channel before the switching.

Also, according to Patent Document 2, it is possible to prevent
20 a main story after a CM from being missed.

However, Patent Document 2 describes "Event information
including a type, a title, and a start time of an event such as a
CM is incorporated into data for digital broadcasting.", and has
an issue that the CM cannot be specified without such an operation.

25 Thus, an object of the present invention is to provide
user-friendly video display apparatus and terminal apparatus.

MEANS FOR SOLVING THE PROBLEMS

To solve the above-mentioned issue, for example, a
configuration described in the scope of the claims is adopted.

30 The present application includes a plurality of means for
solving the issue mentioned above, and one example thereof is a
terminal apparatus having a remote control function of a video

display apparatus, and the terminal apparatus includes: a communication unit that transmits a command related to setting of the video display apparatus and receives status information; a signal receiving unit that receives a signal output from a broadcast station and decodes a video content; a memory unit that stores a content of a command including a channel of the video content; and a display unit that displays the video content and various types of information. In the terminal apparatus, the communication unit transmits an identification code specific to the terminal apparatus when transmitting the command, and when the status information is received after a channel of the video display apparatus is set by remote control, the video content of the channel stored in the memory unit is decoded by the signal receiving unit and is displayed on the display unit.

Also, another example thereof is a terminal apparatus having a function of remotely controlling a video display apparatus that displays a video of a television program and a video serving as advertisement means accompanying a television program, and the terminal apparatus includes: a transmission unit that transmits a command related to setting of the video display apparatus; a television signal receiving unit that receives a television signal; and a memory unit that stores a channel that has been viewed without being switched for a predetermined period of time. In the terminal apparatus, the television signal receiving unit detects a start timing and an end timing of the video serving as the advertisement means, and when a channel selection button of a remote control function is pressed in a period of time from the start timing to the end timing, the transmission unit transmits a setting command of the channel, and further transmits a setting command of the channel stored in the memory unit in response to the end timing.

EFFECTS OF THE INVENTION

According to the present invention, it is possible to provide

user-friendly video display apparatus and terminal apparatus.

Issues, configurations, and effects other than the foregoing will become apparent from the following description of embodiments.

5

BRIEF DESCRIPTIONS OF THE DRAWINGS

FIG. 1 is a diagram illustrating a configuration of a video display system according to the first embodiment;

FIG. 2 is a block diagram illustrating a configuration of a terminal apparatus according to the first embodiment;

10 FIG. 3 is a block diagram illustrating a configuration of a video display apparatus according to the first embodiment;

FIG. 4 is a flowchart illustrating a process of the terminal apparatus according to the first embodiment;

15 FIG. 5(a) illustrates an example of display on a screen of the terminal apparatus according to the first embodiment;

FIG. 5(b) illustrates an example of display on a screen of the terminal apparatus according to the first embodiment;

FIG. 5(c) illustrates an example of display on a screen of the terminal apparatus according to the first embodiment;

20 FIG. 5(d) illustrates an example of display on a screen of the terminal apparatus according to the first embodiment;

FIG. 6 is a flowchart illustrating a process of the video display apparatus according to the first embodiment;

25 FIG. 7 is a flowchart illustrating a process of a video display apparatus according to the second embodiment;

FIG. 8 is a flowchart illustrating a process of a terminal apparatus according to the third embodiment;

FIG. 9 is a flowchart illustrating a process of a video display apparatus according to the third embodiment;

30 FIG. 10 is a flowchart illustrating a process of a video display apparatus according to the fourth embodiment;

FIG. 11 is a diagram illustrating a configuration of a video

display system according to the fifth embodiment;

FIG. 12 is a flowchart illustrating a process of a terminal apparatus according to the fifth embodiment;

FIG. 13(a) illustrates an example of display on a screen of
5 the terminal apparatus according to the third embodiment;

FIG. 13(b) illustrates an example of display on a screen of the terminal apparatus according to the third embodiment;

FIG. 13(c) illustrates an example of display on a screen of the terminal apparatus according to the fifth embodiment;

10 FIG. 13(d) illustrates an example of display on a screen of the terminal apparatus according to the fifth embodiment;

FIG. 14 is a flowchart illustrating a process of a video display apparatus according to the sixth embodiment;

FIG. 15 is a flowchart illustrating a process of a terminal
15 apparatus according to the seventh embodiment;

FIG. 16 is a flowchart illustrating a missing prevention process of the terminal apparatus according to the seventh embodiment;

FIG. 17 is a flowchart illustrating a process of a video
20 display apparatus according to the seventh embodiment;

FIG. 18 is a flowchart illustrating a missing prevention process of a terminal apparatus according to the eighth embodiment;

FIG. 19 is a flowchart illustrating a missing prevention process of a terminal apparatus according to the ninth embodiment;

25 FIG. 20 is a flowchart illustrating a missing prevention process of a terminal apparatus according to the tenth embodiment;

FIG. 21 is a flowchart illustrating a missing prevention process of a terminal apparatus according to the eleventh embodiment;

30 FIG. 22 is a flowchart illustrating a missing prevention process of a terminal apparatus according to the twelfth embodiment;

FIG. 23 illustrates an example of display on a screen of the

terminal apparatus according to the seventh embodiment;

FIG. 24 is a flowchart illustrating a process of a terminal apparatus according to the thirteenth embodiment;

FIG. 25 is a flowchart illustrating a process of a video
5 display apparatus according to the thirteenth embodiment;

FIG. 26 is a flowchart illustrating a process of a terminal apparatus according to the fourteenth embodiment; and

FIG. 27 is a flowchart illustrating a missing prevention
process of the terminal apparatus according to the fourteenth
10 embodiment.

DETAILED DESCRIPTION OF PREFERRED EMBODIMENTS

Hereinafter, embodiments will be described with reference to the drawings.

15 First Embodiment

FIG. 1 is a diagram illustrating a configuration of a video display system according to the first embodiment of the present invention. The video display system according to the present embodiment includes a plurality of terminal apparatuses 1 and a video
20 display apparatus 3.

The terminal apparatus 1 has a wireless communication function, and can transmit and receive various types of information to and from an Internet network. Also, the terminal apparatus 1 has a function of performing the control of the video display apparatus
25 3 in a remote place (hereinafter referred to as "remote control"), and a user can control a channel and an audio volume of the video display apparatus 3 by using the terminal apparatus 1. When the plurality of terminal apparatuses 1 need to be distinguished from one another, the terminal apparatuses 1 are written as terminal
30 apparatuses 1a, 1b, 1c, ... and the like.

A remote controller 2 is a control apparatus dedicated to the video display apparatus 3, and can operate the video display

apparatus 3 by infrared rays.

The video display apparatus 3 is an apparatus that receives and displays a video content, and can receive, for example, a television signal by wireless or by wire from a broadcast station 5 and display a video content based on the television signal. Also, the video display apparatus 3 can display a video content received from a network 7 via a wireless router 6, for example, an Internet content of a URL (Uniform Resource Locator) specified by the user or the like. Thus, the video display apparatus 3 can receive and display a video content delivered from a delivery source specified by the user or the like, for example, a specific broadcast station 5 and URL. The number of video display apparatuses 3 is not limited to one and a plurality of video display apparatuses 3 may be provided. Further, the terminal apparatus 1 also can receive and display the video content.

The broadcast station 5 is an apparatus that outputs a television signal.

The wireless router 6 has a wireless LAN (Local Area Network) function such as Wi-Fi (Wireless Fidelity), and can be connected to the network 7 via a communication network. The terminal apparatus 1 and the video display apparatus 3 can acquire and display a video content and various types of information from the internet network by being connected to the wireless router 6. Alternatively, although an example in which the wireless router 6 and the video display apparatus 3 are connected to each other by wireless has been illustrated, they may be connected to each other by wire.

FIG. 2 is a block diagram illustrating a configuration of the terminal apparatus 1 illustrated in FIG. 1.

A control unit 20 controls each of the units in the terminal apparatus 1. The control unit 20 is made up of a CPU (Central Processing Unit) or any control circuit or a dedicated circuit such as an ASIC (Appreciation Specific IC).

A television signal receiving unit 21 is made up of a signal processing circuit including a tuner, a decoding circuit and others in addition to an antenna, and receives a television signal output from the broadcast station 5, decodes a video and an audio, and sends
5 the decoded video and audio to a display unit 22 and an audio output unit 23.

The display unit 22 is, for example, a liquid crystal panel and displays various types of information. The audio output unit 23 is made up of, for example, an amplifier and a speaker, and outputs
10 various types of audios. An operation unit 24 is, for example, a touch pad, and receives an operation by the user and transmits an instruction based on the operation to the control unit 20. An apparatus obtained by integrating and combining the liquid crystal panel and the touch pad is generally referred to as a touch panel,
15 and an example using the touch panel is described in the present embodiment.

A memory unit 25 is made up of a ROM (Read Only Memory), a RAM (Random Access Memory), a flash ROM, and the like, and stores a program for controlling the terminal apparatus 1, various types
20 of setting values and video contents, and the like.

A LAN communication unit 26 transmits various types of commands to the video display apparatus 3 via the wireless router 6 or the like by using, for example, Wi-Fi. Further, the LAN communication unit 26 receives status information or the like from
25 the video display apparatus 3. The command is information with which the terminal apparatus 1 performs the remote control of the video display apparatus 3, and examples of the command include a power supply command for issuing an instruction to switch ON and OFF of a power supply and a setting command for designating a specific
30 channel and audio volume. The status information includes information capable of specifying whether remote control can be performed. Alternatively, the LAN communication unit 26 may

directly transmit and receive the command and the status information to and from the video display apparatus 3 without the wireless router 6 and the like by using, for example, infrared rays, Wi-Fi Direct, or Bluetooth (registered trademark).

5 When the command is transmitted, an identification code specific to the terminal apparatus 1 is also transmitted. An ID (identification) individually assigned to the terminal apparatus 1, a telephone number, and the like can be applied as the identification code. Generally, since it is assumed that one user
10 possesses one terminal apparatus 1, for example, a user ID given to each user by a manufacturer of the terminal apparatus 1 may be applied. In this case, the user ID is previously stored in the terminal apparatus 1 based on an operation by the user or the like.

FIG. 3 is a block diagram illustrating a configuration of the
15 video display apparatus 3 illustrated in FIG. 1.

A control unit 30 controls each of the units in the video display apparatus 3. The control unit 30 is made up of a CPU or any control circuit or a dedicated circuit such as an ASIC.

A television signal receiving unit 31 is made up of, for
20 example, a signal processing circuit including a tuner and a decoding circuit in addition to an antenna, and receives a television signal output from the broadcast station 5, decodes a video and an audio, and sends the decoded video and audio to a display unit 32 and an audio output unit 33. The television signal receiving unit 31
25 includes a plurality of signal processing circuits described above or the like, and can simultaneously receive a plurality of channels.

The display unit 32 is made up of, for example, a liquid crystal panel, a plasma panel, or an organic EL (ElectroLuminescence) panel, and displays various types of video contents and various types of
30 information.

An audio output unit 33 is made up of, for example, an amplifier and a speaker, and outputs various types of audios.

An infrared communication unit 34 receives a control command transmitted from a terminal apparatus having an infrared communication function or the dedicated remote controller 2 by using, for example, infrared rays, and transmits the instruction to the control unit 30.

A memory unit 35 is made up of a ROM, a RAM, a flash ROM, and the like, and stores an identification code of the terminal apparatus 1, which has transmitted a power supply command, in addition to a program for controlling the video display apparatus 3 and various types of setting and video contents. A storage such as an HDD (Hard Disc Drive) or a BD (Blu-ray (registered trademark) Disc) drive may be equipped.

A LAN communication unit 36 is connected to the wireless router 6 by wire or by wireless, and can receive a video content or the like from the Internet network or the like. Also, the LAN communication unit 36 receives various types of commands from the terminal apparatus 1 via the wireless router 6 or the like by using, for example, Wi-Fi. Also, the LAN communication unit 36 transmits status information to the terminal apparatus 1. The LAN communication unit 36 may directly transit and receive the command and the status information to and from the terminal apparatus 1 without the wireless router 6 or the like by using, for example, infrared rays, Wi-Fi Direct, or Bluetooth.

FIG. 4 is a flowchart illustrating a process of the terminal apparatus 1 according to the first embodiment of the present invention. This flowchart illustrates the process in the case where the terminal apparatus 1 performs the remote control of the video display apparatus 3.

In step S401, the terminal apparatus 1 waits until application software for performing the remote control of the video display apparatus 3 (hereinafter referred to as "operation application") is started based on an operation by a user.

FIG. 5 illustrates an example of various types of display on the touch-panel display unit 22 in the terminal apparatus 1. FIG. 5(a) illustrates a menu screen on which various types of application software are arranged in the terminal apparatus 1. When the user presses, for example, a "television" button displayed on the touch panel, the operation application is started.

In step S402, the terminal apparatus 1 selects the video display apparatus 3 serving as a target of the remote control based on the operation by the user. FIG. 5(b) illustrates an example of display on a selection screen in the case where there are two video display apparatuses 3 that can be selected as a target of the remote control. Here, it is assumed that a "television A" is selected.

When the video display apparatus 3 serving as a target of the remote control is selected, the terminal apparatus 1 displays various types of instructions that can be transmitted to the video display apparatus 3. FIG. 5(c) illustrates an example of display on an operation screen of the video display apparatus 3 in that case.

Next, in step S403, the terminal apparatus 1 confirms whether the user has performed an operation for ending the operation application. When the operation for ending the operation application, for example, the operation of pressing an "end" button displayed on the terminal apparatus 1 has been performed, the terminal apparatus 1 returns to a process of displaying a menu screen.

In step S404, the terminal apparatus 1 confirms whether the user has pressed a "power" button. When the "power" button displayed on the terminal apparatus 1 has been pressed, the terminal apparatus 1 transmits a power supply command and an identification code to the video display apparatus 3 (step S405), and repeats the process from step S403.

When the "power" button displayed on the terminal apparatus 1 has not been pressed, in step S406, the terminal apparatus 1

confirms whether the user has pressed a channel setting button of a remote control function. When a channel setting button such as a "1" button or a "2" button displayed on the terminal apparatus 1 has been pressed, the process proceeds to step S407, and the
5 corresponding channel is stored in the memory unit 25.

When the "1" button has been pressed, for example, "1" is stored in the memory unit 25. However, when "Ch+" has been then pressed, "2" is stored in the memory unit 25. When a setting command is specified by a relative value such as "Ch+" or "Ch-" like this,
10 an absolute value such as "2" is substituted and stored.

Next, in step S408, the terminal apparatus 1 transmits a selection command and an identification code of the corresponding channel to the video display apparatus 3, and repeats the process from step S403.

15 When the channel setting button displayed on the terminal apparatus 1 has not been pressed, in step S409, the terminal apparatus 1 confirms whether the other button has been pressed. Examples of the other button include an audio volume setting button.

When the user has issued an instruction to change setting of
20 the video display apparatus 3, the terminal apparatus 1 transmits a corresponding setting command and identification code to the video display apparatus 3 (step S410), and repeats the process from step S403.

When the other button displayed on the terminal apparatus 1
25 has not been pressed, in step S411, the terminal apparatus 1 confirms whether a channel switching notification has been received as status information.

When the channel switching notification has been received, the terminal apparatus 1 sets the channel stored in the memory unit
30 25 to the television signal receiving unit 31, and displays a received video on the display unit 22 and outputs an audio from the audio output unit 23 (step S412), and repeats the process from step

S403.

The channel switching notification is transmitted from the video display apparatus 3. For example, when channel switching by the terminal apparatus 1b other than the terminal apparatus 1a, which
5 has powered on the video display apparatus 3, has occurred, the video display apparatus 3 transmits the channel switching notification as status information to the terminal apparatus 1a.

When the terminal apparatus 1 has not received the channel switching notification, the terminal apparatus 1 repeats the
10 process from step S403.

FIG. 6 is a flowchart illustrating a process of the video display apparatus according to the first embodiment of the present invention. This flowchart illustrates the process performed when the video display apparatus 3 is remotely controlled by the terminal
15 apparatus 1.

In step S601, the video display apparatus 3 waits for receiving of a power supply command. When the power supply command has been received, the process proceeds to step S602, and the video display apparatus 3 is powered on. Then, in step S603, an identification
20 code when the power supply command has been received is stored in the memory unit 35. Here, it is assumed that an identification code of the terminal apparatus 1a has been received.

Next, in step S604, the video display apparatus 3 confirms whether the power supply command has been received again. When the
25 power supply command has been received, the process proceeds to step S605, and the video display apparatus 3 is powered off, and the process ends.

While toggle control to repeat power on/off every time the video display apparatus 3 receives the power supply command is
30 illustrated as an example in the present embodiment, a power-on command and a power-off command may be separated from each other.

When the video display apparatus 3 has not received the power

supply command in step S604, the process proceeds to step S606, and the video display apparatus 3 confirms whether a channel setting command has been received. When the channel setting command has been received, the process proceeds to step S607, and the command
5 is executed as instructed.

Next, in step S608, the video display apparatus 3 confirms whether an identification code when the channel setting command has been received matches the identification code stored in the memory unit 35. When the identification codes match each other, the process
10 from step S604 is repeated.

When the identification codes do not match each other, the video display apparatus 3 transmits a channel switching notification as status information to the terminal apparatus 1a corresponding to the identification code stored in the memory unit
15 35 (step S609), and repeats the process from step S604.

Also, when the video display apparatus 3 has not received the channel setting command in step S606, the process proceeds to step S610, and the video display apparatus 3 confirms whether the other command has been received. When the other command has been received,
20 the video display apparatus 3 executes the command as instructed (step S611), and repeats the process from step S604. Examples of the other command include an audio volume setting command.

When the other command has not been received, the process from step S604 is repeated.

25 When the terminal apparatus 1a powers on the video display apparatus 3 by remote control in the above-described manner, the video display apparatus 3 is powered on.

Next, when the terminal apparatus 1a performs channel switching of the video display apparatus 3 by remote control, the channel of the video display apparatus 3 is switched as instructed.
30 When another terminal apparatus 1b performs channel switching of the video display apparatus 3 by remote control, the channel of the

video display apparatus 3 is switched as instructed, and a channel switching notification is transmitted as status information to the terminal apparatus 1a.

When the terminal apparatus 1a has received the channel
5 switching notification, the terminal apparatus 1a displays the video of the channel prior to the switching by the terminal apparatus 1b on the display unit 22, and outputs the audio thereof from the audio output unit 23.

Note that it is also possible to ask the user whether the start
10 of the display of the video and the output of the audio is permitted before the display of the video and the output of the audio are started. FIG. 5(d) illustrates an example of display on a screen of the terminal apparatus 1 at this time. Alternatively, it is also possible to ask the user whether the display and output may be
15 continued after they are started.

By the foregoing configuration, in the first embodiment of the present invention, when the channel of the video display apparatus set by the remote control from a terminal apparatus is switched by another terminal apparatus, a content displayed on the
20 video display apparatus prior to the switching is displayed on the terminal apparatus. Even if a channel set by a user is switched by another user, the user can view the channel by using the terminal apparatus at hand without any particular operation. Thus, it is possible to prevent the content from being missed.

25 Second Embodiment

FIG. 7 is a flowchart illustrating a process of a video display apparatus according to the second embodiment of the present invention.

Since steps S701 to S707 are similar to steps S601 to S607
30 illustrated in FIG. 6, the description thereof is omitted.

In step S708, the video display apparatus 3 confirms whether an identification code when a channel setting command has been

received matches an identification code stored in the memory unit 35. When the identification codes match each other, the video display apparatus 3 repeats the process from step S704.

When the identification codes do not match each other, the
5 video display apparatus 3 transmits a channel switching notification as status information to the terminal apparatus 1a corresponding to the identification code stored in the memory unit 35 (step S709). Next, the video display apparatus 3 stores the identification code when the channel setting command has been
10 received in the memory unit 35 (step S712), and repeats the process from step S704. Here, it is assumed that an identification code of the terminal apparatus 1b has been received.

Since steps S710 to S711 are similar to steps S610 to S611 illustrated in FIG. 6, description thereof is omitted.

15 When the terminal apparatus 1a powers on the video display apparatus 3 by remote control in this manner, the video display apparatus 3 is powered on.

Next, when the terminal apparatus 1a performs channel switching of the video display apparatus 3 by remote control, the
20 channel of the video display apparatus 3 is switched as instructed. When another terminal apparatus 1b performs channel switching of the video display apparatus 3 by remote control, the channel of the video display apparatus 3 is switched as instructed, and a channel switching notification is transmitted as status information to the
25 terminal apparatus 1a.

When the terminal apparatus 1a receives the channel switching notification, the terminal apparatus 1a displays the video of the channel prior to the switching by the terminal apparatus 1b on the display unit 22, and outputs an audio thereof from the audio output
30 unit 23.

When a terminal apparatus 1c further switches the channel of the video display apparatus 3 by remote control, the channel of the

video display apparatus 3 is switched as instructed, and a channel switching notification is transmitted as status information to the terminal apparatus 1b.

When the terminal apparatus 1b receives the channel switching
5 notification, the terminal apparatus 1b displays the video of the channel prior to the switching by the terminal apparatus 1c on the display unit 22, and outputs an audio thereof from the audio output unit 23.

By the foregoing configuration, in the second embodiment of
10 the present invention, a similar effect to that in the first embodiment can be obtained.

Thus, when the channel of the video display apparatus set by the remote control from a terminal apparatus is switched by another terminal apparatus and the channel is further switched by still
15 another terminal apparatus, a content displayed on the video display apparatus prior to the switching is displayed on each of the terminal apparatuses. Even if a channel set by a user is switched by another user, the user can view the channel by using the terminal apparatus at hand without any particular operation. Thus, it is possible to
20 prevent the content from being missed.

Third Embodiment

FIG. 8 is a flowchart illustrating a process of a terminal apparatus 1 according to the third embodiment of the present invention. This flowchart illustrates the process performed when
25 the terminal apparatus 1 performs the remote control of a video display apparatus 3.

Since steps S801 to S810 are similar to steps S401 to S410 illustrated in FIG. 4, description thereof is omitted.

In step S811, the terminal apparatus 1 confirms whether a
30 channel switching notification has been received as status information.

When the channel switching notification has been received,

the terminal apparatus 1 displays, on a display unit 22, the start of recording of the video on the channel, which the user has viewed on the video display apparatus 3 so far, into the memory unit 35 of the video display apparatus 3 (step S812), and repeats the process from step S803. FIG. 13(a) illustrates an example of display on a screen of the terminal apparatus 1.

The channel switching notification is transmitted from the video display apparatus 3. When channel switching by a terminal apparatus 1 other than the terminal apparatus 1, which has powered on the video display apparatus 3, has occurred, for example, the video display apparatus 3 transmits the channel switching notification as status information.

When the terminal apparatus 1 has not received the channel switching notification, it repeats the process from step S803.

FIG. 9 is a flowchart illustrating a process of the video display apparatus according to the third embodiment of the present invention. This flowchart illustrates the process performed when the video display apparatus 3 is remotely controlled by the terminal apparatus 1.

Since steps S901 to S907 are similar to steps S601 to S607 illustrated in FIG. 6, description thereof is omitted.

In step S908, the video display apparatus 3 confirms whether an identification code when a channel setting command has been received matches an identification code stored in the memory unit 35. When the identification codes match each other, the video display apparatus 3 repeats the process from step S904.

When the identification codes do not match each other, the video display apparatus 3 transmits a channel switching notification as status information to the terminal apparatus 1a corresponding to the identification code stored in the memory unit 35 (step S909). Next, in step S912, the video display apparatus 3 stores, in the memory unit 35, the identification code and channel

when the channel setting command has been received. Here, it is assumed that an identification code of the terminal apparatus 1b has been received. Next, the video display apparatus 3 sets the channel prior to the switching to a television signal receiving unit 31, records the received video and audio to the memory unit 35 (step S913), and repeats the process from step S904.

The television signal receiving unit 31 can simultaneously receive a plurality of channels by setting the plurality of channels. When the channel stored in the memory unit 35 is set in the television signal receiving unit 31, the channel setting displayed on the display unit 32 is left as it is.

Since steps S910 to S911 are similar to steps S610 to S611 illustrated in FIG. 6, description thereof is omitted.

When the terminal apparatus 1a powers on the video display apparatus 3 by remote control in this manner, the video display apparatus 3 is powered on.

Next, when the terminal apparatus 1a performs channel switching of the video display apparatus 3 by remote control, a channel of the video display apparatus 3 is switched as instructed.

When another terminal apparatus 1b performs channel switching of the video display apparatus 3 by remote control, the channel of the video display apparatus 3 is switched as instructed, and a channel switching notification is transmitted as status information to the terminal apparatus 1a.

Furthermore, the video display apparatus 3 records the content of the channel prior to the switching by the terminal apparatus 1b in the recording unit 35.

Note that it is also possible to ask the user whether the start of the recording of the content is permitted before the recording of the content is started. FIG. 13(b) illustrates an example of display on a screen of the terminal apparatus 1 at this time. Alternatively, it is also possible to ask the user whether the

recording may be continued after it is started.

By the foregoing configuration, in the third embodiment of the present invention, a similar effect to that in the first embodiment can be obtained.

5 Furthermore, when the channel of the video display apparatus set by remote control from a terminal apparatus is switched by another terminal apparatus, a content displayed on the video display apparatus prior to the switching is recorded in the video display apparatus. Even if the channel set by a user is switched by another
10 user, the content can be recorded in the video display apparatus without any particular operation by the user. Thus, it is possible to prevent the content from being missed.

Fourth Embodiment

FIG. 10 is a flowchart illustrating an operation of a terminal
15 apparatus according to the fourth embodiment of the present invention. This flowchart illustrates a process performed when the terminal apparatus 1 remotely controls a video display apparatus 3.

Since steps S1001 to S1010 are similar to steps S401 to S410
20 illustrated in FIG. 4, description thereof is omitted.

In step S1011, the terminal apparatus 1 confirms whether a channel switching notification has been received.

When the channel switching notification has been received, the terminal apparatus 1 sets the channel stored in the memory unit
25 to the television signal receiving unit 21, and records a received content in the memory unit 25 (step S1012), and repeats the process from step S1003.

The channel switching notification is transmitted from the video display apparatus 3. For example, when channel switching by
30 a terminal apparatus 1 other than the terminal apparatus 1, which has powered on the video display apparatus 3, has occurred, the video display apparatus 3 transmits the channel switching notification

as status information.

When the channel switching notification has not been received, the terminal apparatus 1 repeats the process from step S1003.

When a terminal apparatus 1a powers on the video display apparatus 3 by remote control in this manner, the video display apparatus 3 is powered on.

Next, when the terminal apparatus 1a performs channel switching of the video display apparatus 3 by remote control, the channel of the video display apparatus 3 is switched as instructed.

10 When another terminal apparatus 1b performs channel switching of the video display apparatus 3 by remote control, the channel of the video display apparatus 3 is switched as instructed, and the channel switching notification is transmitted as status information to the terminal apparatus 1a.

15 The terminal apparatus 1a records a content of the channel prior to the switching by the terminal apparatus 1b in the memory unit 25.

Note that it is also possible to ask the user whether the start of the recording of the content is permitted before the recording is started.

20 is started. Alternatively, it is also possible to ask the user whether the recording may be continued after the recording is started.

By the foregoing configuration, in the fourth embodiment of the present invention, a similar effect to that in the first embodiment can be obtained.

25

Furthermore, when the channel of the video display apparatus set by remote control from a terminal apparatus is switched by another terminal apparatus, the content displayed on the video display apparatus prior to the switching is recorded in the terminal apparatus.

30 Even if the channel set by a user is switched by another user, the content can be recorded in the terminal apparatus without any particular operation by the user. Thus, it is possible to

prevent the content from being missed.

Fifth Embodiment

FIG. 11 is a diagram illustrating a configuration of a video display system according to the fifth embodiment of the present invention. The video display system according to the present embodiment includes a plurality of terminal apparatuses 1 and a video display apparatus 3.

Since the terminal apparatuses 1, a remote controller 2, the video display apparatus 3, a broadcast station 5, a wireless router 6, and a network 7 are similar to those illustrated in FIG. 1, description thereof is omitted.

A VOD (Video On Demand) server 8 stores the same content as the content broadcasted from the broadcast station 5, and delivers the stored content to the terminal apparatus 1 and the video display apparatus 3 through the network 7.

FIG. 12 is a flowchart illustrating an operation of the terminal apparatus according to the fifth embodiment of the present invention. This flowchart illustrates the process performed when the terminal apparatus 1 remotely controls the video display apparatus 3.

Since steps S1201 to S1206 are similar to steps S401 to S406 illustrated in FIG. 4, description thereof is omitted.

In step S1207, the terminal apparatus 1 stores content information of a corresponding channel in the memory unit 25.

Since steps S1208 to S1210 are similar to steps S408 to S410 illustrated in FIG. 4, description thereof is omitted.

In step S1211, the terminal apparatus 1 confirms whether a channel switching notification has been received as status information.

When the channel switching notification has been received, the terminal apparatus 1 retrieves the VOD server 8 for a content based on content information stored in the memory unit 25 (step

S1212).

Next, in step S1213, the terminal apparatus 1 enters a VOD playback mode, and repeats the process from step S1203 when the VOD playback mode ends. FIG. 13(c) illustrates an example of display
5 on an operation screen of the terminal apparatus 1 in the VOD playback mode. In addition to playback, fast-forward and rewind, a user can view the content from the point where the channel has been switched if the time when the channel has been switched is stored. Alternatively, the content can be viewed from the beginning or can
10 also be viewed later.

The channel switching notification is transmitted from the video display apparatus 3. For example, when channel switching by a terminal apparatus 1 other than the terminal apparatus 1 which has switched the channel of the video display apparatus 3 has
15 occurred, the video display apparatus 3 transmits the channel switching notification as status information.

When the channel switching notification has not been received, the terminal apparatus 1 repeats the process from step S1203.

When a terminal apparatus 1a powers on the video display
20 apparatus 3 by remote control in this manner, the video display apparatus 3 is powered on.

Next, when the terminal apparatus 1a performs channel switching of the video display apparatus 3 by remote control, the channel of the video display apparatus 3 is switched as instructed.
25 When another terminal apparatus 1b then performs channel switching of the video display apparatus 3 by remote control, the channel of the video display apparatus 3 is switched as instructed, and the channel switching notification is transmitted as status information to the terminal apparatus 1a.

30 When the channel switching notification is received, the terminal apparatus 1a retrieves the VOD for a content of the channel prior to the switching by the terminal apparatus 1b.

Note that it is also possible to ask the user whether the start of the retrieval for the content is permitted before the retrieval is started. FIG. 13(d) illustrates an example of display on a screen of the terminal apparatus 1 at this time. For example, only when
5 a "YES" button displayed on the screen is pressed, the terminal apparatus 1 may enter the VOD playback mode.

By the foregoing configuration, in the fourth embodiment of the present invention, a similar effect to that in the first embodiment can be obtained.

10 Furthermore, when the channel of the video display apparatus set by remote control from a terminal apparatus is switched by another terminal apparatus, a content displayed on the video display apparatus prior to the switching can be retrieved from the VOD and displayed on the terminal apparatus. Even if the channel set by
15 a user is switched by another user, the user can retrieve the VOD without any particular operation and can view the channel by using the terminal apparatus at hand. Thus, it is possible to prevent the content from being missed.

Sixth Embodiment

20 FIG. 14 is a flowchart illustrating a process of a video display apparatus according to the sixth embodiment of the present invention. This flowchart illustrates the process performed when the video display apparatus 3 is remotely controlled by a terminal apparatus 1.

25 Since steps S1401 to S1407 are similar to steps S601 to S607 illustrated in FIG. 6, description thereof is omitted.

Since steps S1408 to S1409 are similar to steps S908 to S909 illustrated in FIG. 9, description thereof is omitted. Since steps S1412 to S1413 are similar to steps S912 to S913 illustrated in FIG.
30 9, description thereof is omitted.

In step S1410, it is confirmed whether another command has been received. When the other command has been received, the process

proceeds to step S1411. When the other command has not been received, the process proceeds to step S1414. Since step S1411 is similar to step S611 illustrated in FIG. 6, description thereof is omitted.

In step S1414, it is confirmed whether a content after channel switching has ended. When the content after the channel switching has ended, the process proceeds to step S1415, and the video display apparatus 3 reproduces a recorded content. When the content after the channel switching has not ended, the video display apparatus 3 repeats the process from step S1404.

10 When the terminal apparatus 1a powers on the video display apparatus 3 by remote control in this manner, the video display apparatus 3 is powered on.

Next, when the terminal apparatus 1a performs channel switching of the video display apparatus 3 by remote control, the channel of the video display apparatus 3 is switched as instructed. When another terminal apparatus 1b performs channel switching of the video display apparatus 3 by remote control, the channel of the video display apparatus 3 is switched as instructed, and a channel switching notification is transmitted as status information to the terminal apparatus 1a.

20 Furthermore, the video display apparatus 3 records a content of the channel prior to the switching by the terminal apparatus 1b in the memory unit 35, and reproduces the content when the content of the channel after the switching ends.

25 By the foregoing configuration, in the sixth embodiment of the present invention, a similar effect to that in the first embodiment can be obtained.

Furthermore, when the channel of the video display apparatus set by remote control from a terminal apparatus is switched by another terminal apparatus, the content displayed on the video display apparatus prior to the switching is recorded in the video display apparatus, and the content is reproduced when the content

of the channel after the switching ends. Even if a channel set by a user is switched by another user, the content is recorded and reproduced by the video display apparatus without any particular operation by the user. Thus, it is possible to prevent the content
5 from being missed.

Seventh Embodiment

FIG. 15 is a flowchart illustrating an operation of a terminal apparatus 1 when the terminal apparatus 1 remotely controls a video display apparatus 3.

10 In step S1501, the terminal apparatus 1 waits until application software for performing the remote control of the video display apparatus 3 (hereinafter referred to as "operation application") is started based on an operation by the user.

FIG. 5 and FIG. 23 illustrate an example of various types of
15 display on the touch-panel display unit 22 in the terminal apparatus 1. FIG. 5(a) illustrates a menu screen on which various types of application software are arranged in the terminal apparatus 1. When the user presses, for example, a "television" button displayed on the touch panel, the operation application is started.

20 In step S1502, the terminal apparatus 1 selects the video display apparatus 3 serving as a target of the remote control based on the operation by the user. FIG. 5(b) illustrates an example of display on a selection screen in the case where there are two video display apparatuses 3 that can be selected as a target of the remote
25 control. Here, it is assumed that a "television A" is selected.

When the video display apparatus 3 serving as a target of the remote control is selected, the terminal apparatus 1 displays various types of instructions that can be transmitted to the video display apparatus 3. FIG. 23 illustrates an example of display on
30 an operation screen of the video display apparatus 3 in that case.

Next, in step S1503, the terminal apparatus 1 confirms whether the user has performed an operation for ending the operation

application. When the user has performed the operation for ending the operation application, for example, the operation of pressing an "end" button displayed on the terminal apparatus 1, the terminal apparatus 1 returns to a process for displaying a menu screen.

5 In step S1504, the terminal apparatus 1 confirms whether the user has pressed a "power" button. When the user has pressed the "power" button displayed on the terminal apparatus 1, the terminal apparatus 1 transmits a power supply command to the video display apparatus 3 (step S1505), and repeats the process from step S1503.

10 When the user has not pressed the "power" button displayed on the terminal apparatus 1, the terminal apparatus 1 confirms whether the user has pressed a "missing prevention" mode button in step S1506. When the user has pressed the "missing prevention" mode button displayed on the terminal apparatus 1, the terminal apparatus
15 1 switches ON and OFF of a missing prevention mode (step S1507). When the missing prevention mode is ON, the terminal apparatus 1 turns off the missing prevention mode in step S1508, and when the missing prevention mode is OFF, the terminal apparatus 1 turns on the missing prevention mode in step S1509. Then, the process from
20 step S1503 is repeated.

 The missing prevention mode is for preventing a television program on an original channel from being missed after the end of a video of advertisement means accompanying the television program such as CM (Commercial Message, hereinafter referred to as
25 "commercial") or announcement means such as an announcement of a program. More specifically, even if the user switches the channel after the start of the video of the advertisement means or the announcement means, the channel is switched to the original channel at the timing of the end of the video. Thus, for example, even if
30 the user is viewing a television program on a channel A and switches the channel A to a channel B or a channel C after the television program is switched to a commercial, the display on the video display

apparatus 3 is switched to the channel A at the timing at which the commercial on the channel A ends and is switched to the television program.

When the user has not pressed the "missing prevention" mode
5 button displayed on the terminal apparatus 1, the terminal apparatus 1 confirms whether the user has pressed a channel selection button of a remote control function in step S1510. When the user has pressed a channel selection button such as a "1" button or a "2" button displayed on the terminal apparatus 1, the process proceeds to step
10 S1511, and a selection command of a corresponding channel is transmitted to the video display apparatus 3 and the process from step S1503 is repeated.

When the user has not pressed the channel selection button displayed on the terminal apparatus 1, the terminal apparatus 1
15 confirms whether the user has pressed the other button in step S1512. Examples of other setting changes include switching of an audio volume.

When the user has issued an instruction to change setting of the video display apparatus 3, the terminal apparatus 1 transmits
20 a corresponding setting command to the video display apparatus 3 (step S1513), and the process from step S1503 is repeated.

FIG. 16 is a flowchart illustrating a missing prevention process of the terminal apparatus 1.

When the missing prevention mode of the terminal apparatus
25 1 is ON in step S1600, the process proceeds to step S1601, and when the missing prevention mode is OFF, the process ends.

In step S1601, the terminal apparatus 1 waits for an elapse of a predetermined period of time, e.g., five minutes during which the user does not change a channel and there is no commercial
30 switching, and the terminal apparatus 1 stores the channel in the memory unit 25 in step S1602. The commercial switching mentioned here means switching from a television program to a commercial and

switching from a commercial to a television program. Generally, there is a point in which an audio is silent between a television program and a commercial, and the timing at which the commercial switching occurs can be detected when a television signal is received
5 by a television signal receiving unit 21 and a scene change where an audio is silent is detected.

Next, in step S1603, the terminal apparatus 1 receives a television signal of the channel stored in the memory unit 25 by using the television signal receiving unit 21, and waits for the
10 occurrence of the commercial switching. When the user has pressed a channel selection button of a remote control function while waiting for the occurrence of the commercial switching (step S1604), the terminal apparatus 1 transmits a selection command of a corresponding channel to the video display apparatus 3 (step S1605),
15 and repeats the process from step S1601.

Through steps S1601 to S1605, the terminal apparatus 1 detects the commercial switching after an elapse of a predetermined period of time without the channel change by the user, and determines that a commercial start timing has come (step S1606).

20 Next, in step S1607, the terminal apparatus 1 receives the television signal of the channel stored in the memory unit 25 by the television signal receiving unit 21, and waits for the occurrence of the commercial switching. When the user has pressed the channel selection button of a remote control function while waiting for the
25 occurrence of the commercial switching (step S1608), the terminal apparatus 1 transmits a selection command of a corresponding channel to the video display apparatus 3 (step S1609).

Also when the channel of the video display apparatus 3 is switched in step S1609, the terminal apparatus 1 waits for the
30 occurrence of the commercial switching of the channel stored in the memory unit 25 in step S1607.

Through steps S1607 to S1609, the terminal apparatus 1 detects

the commercial switching after the start of the commercial, and determines that a commercial end timing has come (step S1610).

Next, in step S1611, the terminal apparatus 1 transmits the selection command of the channel stored in the memory unit 25 to the video display apparatus 3, and repeats the process from step S1600. When the channel selection button of a remote control function has not been pressed in step S1608, the terminal apparatus 1 does not have to transmit the selection command of the channel stored in the memory unit 25 to the video display apparatus 3.

FIG. 17 is a flowchart illustrating an operation of the video display apparatus 3.

In step S1701, the video display apparatus 3 waits for receiving of a power supply command. When the power supply command has been received, the video display apparatus 3 is powered on (step S1702).

Next, in step S1703, it is confirmed whether the video display apparatus 3 has received the power supply command again. When the power supply command has been received, the video display apparatus 3 is powered off (step S1704). When the power supply command has not been received, the video display apparatus 3 confirms whether a channel selection command has been received in step S1705. When the channel selection command has been received, the video display apparatus 3 executes the channel selection command as instructed (step S1706), and repeats the process from step S1703.

When the channel selection command has not been received, the video display apparatus 3 confirms whether another command has been received in step S1707. When the other command has been received, the video display apparatus 3 executes the command as instructed (step S1708), and repeats the process from step S1703.

By the foregoing configuration, in the seventh embodiment of the present invention, the terminal apparatus 1 stores the channel when the user does not change a channel for a predetermined period

of time, and transmits a selection command of the channel to the video display apparatus 3 in response to a commercial end timing.

Even if the user switches a channel during a commercial, the channel returns to the channel prior to the switching when the commercial ends. Thus, it is possible to prevent a television program on the channel, which has been being viewed by the user, from being missed.

Instead of the terminal apparatus 1, the video display apparatus 3 may store the channel when the channel is not changed for a predetermined period of time, and the video display apparatus 3 itself may detect a commercial end timing and switch the channel to a corresponding channel.

Alternatively, instead of the configuration in which the terminal apparatus 1 or the video display apparatus 3 switches the channel in response to the commercial end timing, the user may be notified of the end of the commercial by a video or an audio, and the user himself/herself may operate the terminal apparatus 1 to switch the channel.

Eighth Embodiment

Next, the eighth embodiment of the present invention will be described below. A configuration, an effect, and the like in the present embodiment are similar to those in the seventh embodiment unless otherwise noted. Thus, a difference between the present embodiment and the seventh embodiment will be mainly described below, and description of common points is omitted as much as possible in order to avoid an overlap of the description.

FIG. 18 is a flowchart illustrating a missing prevention process of the terminal apparatus 1.

When a missing prevention mode of the terminal apparatus 1 is ON in step S1800, the process proceeds to step S1801, and when the missing prevention mode is OFF, the process ends.

When a user has not changed a channel for a predetermined

period of time, e.g., five minutes in step S1801, the terminal apparatus 1 stores the channel in the memory unit 25 in step S1802.

Next, in step S1803, the terminal apparatus 1 receives a television signal of the channel stored in the memory unit 25 by
5 a television signal receiving unit 21, and waits for the occurrence of commercial switching. When the user has pressed a channel selection button of a remote control function while the terminal apparatus 1 waits for the occurrence of the commercial switching (step S1804), the terminal apparatus 1 transmits a selection command
10 of a corresponding channel to the video display apparatus 3 (step S1805), and repeats the process from step S1801.

Through steps S1801 to S1805, the terminal apparatus 1 detects the commercial switching after an elapse of a predetermined period of time without the channel change by the user, and determines that
15 a commercial start or end timing has come (step S1806).

Next, in step S1807, the terminal apparatus 1 transmits the selection command of the channel stored in the memory unit 25 to the video display apparatus 3, and repeats the process from step S1800.

20 By the foregoing configuration, in the eighth embodiment of the present invention, a similar effect to that in the seventh embodiment can be obtained.

Furthermore, since the terminal apparatus 1 stores the channel when the user does not change the channel for a predetermined period
25 of time, and transmits a selection command of the channel to the video display apparatus 3 at the timing of start and end of the commercial, it is not necessary to distinguish the start and the end of the commercial, and the missing prevention process can be simplified.

30 Instead of the terminal apparatus 1, the video display apparatus 3 may store the channel when the channel is not changed for a predetermined period of time, and the video display apparatus

3 itself may switch the channel to the corresponding channel at the timing of start or end of the commercial.

Alternatively, instead of the configuration in which the terminal apparatus 1 or the video display apparatus 3 switches the channel at the timing of start or end of the commercial, the user
5 may be notified of the start or end of the commercial by a video or an audio, and the user himself/herself may operate the terminal apparatus 1 to switch the channel.

Ninth Embodiment

10 Next, the ninth embodiment of the present invention will be described below. A configuration, an effect, and the like in the present embodiment are also similar to those in the seventh embodiment unless otherwise noted. Thus, a difference between the present embodiment and the seventh embodiment will be mainly
15 described below.

FIG. 19 is a flowchart illustrating a missing prevention process of the terminal apparatus 1.

When a missing prevention mode of the terminal apparatus 1 is ON in step S1900, the process proceeds to step S1901, and when
20 the missing prevention mode is OFF, the process ends.

Since steps S1901 to S1905 are similar to steps S1601 to S1605 illustrated in FIG. 16, description thereof is omitted. Through steps S1901 to S1905, the terminal apparatus 1 detects commercial switching after an elapse of a predetermined period of time without
25 the channel change by the user, and determines that a commercial start timing has come (step S1906).

Next, in step S1907, the terminal apparatus 1 receives a television signal of the channel stored in the memory unit 25 by a television signal receiving unit 21, and waits for the occurrence
30 of the commercial switching. When the user has pressed a channel selection button of a remote control function while the terminal apparatus 1 waits for the occurrence of the commercial switching

(step S1908), the terminal apparatus 1 transmits a two-screen display start command to the video display apparatus 3 (step S1909), and transmits a selection command of a corresponding channel for an added screen to the video display apparatus 3 (step S1910). When the user has pressed the channel selection button of a remote control function again while the terminal apparatus 1 waits for the occurrence of the commercial switching, the terminal apparatus 1 does not have to transmit the two-screen display start command in step S1909.

Also when a channel of the video display apparatus 3 has been switched in step S1909, the terminal apparatus 1 waits for the occurrence of the commercial switching of the channel stored in the memory unit 25 in step S1907.

Through steps S1907 to S1910, the terminal apparatus 1 detects the commercial switching after the start of the commercial, and determines that a commercial end timing has come (step S1911).

Next, in step S1912, the terminal apparatus 1 transmits a two-screen display end command to the video display apparatus 3, and repeats the process from step S1900. The screen added later is erased when the two-screen display ends. The two-screen display end command does not have to be transmitted when the screen has not been switched to the two-screen display.

By the foregoing configuration, in the ninth embodiment of the present invention, a similar effect to that in the seventh embodiment can be obtained.

Furthermore, the terminal apparatus 1 stores the channel when the user does not change a channel for a predetermined period of time, and when the channel selection button is pressed during the commercial, the terminal apparatus 1 switches the video display apparatus 3 to the two-screen display and displays the channel on the added screen. Then, the terminal apparatus 1 ends the two-screen display in response to the timing of the end of the commercial.

Since the video on the original channel can be confirmed by the two-screen display even when the channel is switched, the user can switch the channel without worrying about missing a television program.

5 Instead of the terminal apparatus 1, the video display apparatus 3 may store the channel when the channel is not changed for a predetermined period of time, and the video display apparatus 3 itself may start and end the two-screen display.

Also, since the user can confirm both of the video on the
10 original channel and the video on the channel after the switching by the two-screen display, the user himself/herself may operate the terminal apparatus 1 to end the two-screen display instead of the configuration in which the terminal apparatus 1 ends the two-screen display in response to the timing of the end of the commercial.

15 Tenth Embodiment

Next, the tenth embodiment of the present invention will be described below. A configuration, an effect, and the like in the present embodiment are similar to those in the seventh embodiment unless otherwise noted. Thus, a difference between the present
20 embodiment and the seventh embodiment will be mainly described below.

FIG. 20 is a flowchart illustrating a missing prevention process of the terminal apparatus 1.

When a missing prevention mode of the terminal apparatus 1
25 is ON in step S2000, the process proceeds to step S2001, and when the missing prevention mode is OFF, the process ends.

Since steps S2001 to S2005 are similar to steps S1601 to S1605 illustrated in FIG. 16, description thereof is omitted. Through steps S2001 to S2005, the terminal apparatus 1 detects commercial
30 switching after an elapse of a predetermined period of time without the channel change by the user, and determines that a commercial start timing has come (step S2006).

Next, in step S2007, the terminal apparatus 1 receives a television signal of the channel stored in the memory unit 25 by a television signal receiving unit 21, and waits for the occurrence of the commercial switching. When the user has pressed a channel selection button of a remote control function while the terminal apparatus 1 waits for the occurrence of the commercial switching (step S2008), the terminal apparatus 1 transmits a selection command of a corresponding channel to the video display apparatus 3 (step S2009), and displays a video on the channel stored in the memory unit 25 in the terminal apparatus 1 on the display unit 22 (step S2010).

Also when a channel of the video display apparatus 3 has been switched in step S2009, the terminal apparatus 1 waits for the occurrence of the commercial switching of the channel stored in the memory unit 25 in step S2007.

Through steps S2007 to S2010, the terminal apparatus 1 detects the commercial switching after determining the commercial start timing, and determines that a commercial end timing has come (step S2011).

Next, in step S2012, the terminal apparatus 1 transmits a selection command of the channel stored in the memory unit 25 to the video display apparatus 3, and repeats the process from step S2000.

By the foregoing configuration, in the tenth embodiment of the present invention, a similar effect to that in the seventh embodiment can be obtained.

Furthermore, the terminal apparatus 1 stores the channel when the user does not change a channel for a predetermined period of time, switches the channel of the video display apparatus 3 when a channel selection button is pressed during a commercial, and displays a video on the original channel on the screen of the terminal apparatus 1. Then, the terminal apparatus 1 returns the channel

of the video display apparatus 3 to the original channel in response to the commercial end timing.

Since the video on the original channel can be confirmed by the terminal apparatus 1 even when the channel has been switched,
5 the user can switch the channel without worrying about missing a television program.

The video display apparatus 3 as well as the terminal apparatus 1 may also store the channel when the channel is not changed for a predetermined period of time, and the video display apparatus 3
10 itself may detect the commercial end timing to switch the channel to a corresponding channel.

Also, since the user can confirm the video on the original channel by the terminal apparatus 1, the user himself/herself may operate the terminal apparatus 1 to end the two-screen display
15 instead of the configuration in which the terminal apparatus 1 ends the two-screen display in response to the commercial end timing.

Eleventh Embodiment

Next, the eleventh embodiment of the present invention will be described below. A configuration, an effect, and the like in
20 the present embodiment are similar to those in the seventh embodiment unless otherwise noted. Thus, a difference between the present embodiment and the seventh embodiment will be mainly described below.

FIG. 21 is a flowchart illustrating a missing prevention
25 process of the terminal apparatus 1.

When a missing prevention mode of the terminal apparatus 1 is ON in step S2100, the process proceeds to step S2101, and when the missing prevention mode is OFF, the process ends.

Since steps S2101 to S2105 are similar to steps S1601 to S1605
30 illustrated in FIG. 16, description thereof is omitted. Through steps S2101 to S2105, the terminal apparatus 1 detects the commercial switching after an elapse of a predetermined period of time without

the channel change by the user, and determines that a commercial start timing has come (step S2106).

Since steps S2107 to S2109 are similar to steps S1607 to S1609 illustrated in FIG. 16, description thereof is omitted.

5 Through steps S2107 to S2109, the terminal apparatus 1 detects the commercial switching after the start of the commercial, and determines that a commercial end timing has come (step S2110).

 Next, in step S2112, the process is changed depending on whether a program on an original channel has ended. When the program
10 has not ended, the process proceeds to step S2111, and the terminal apparatus 1 transmits a selection command of the channel stored in the memory unit 25 to the video display apparatus 3 and repeats the process from step S2100. When the program has ended, the process does not proceed to step S2111, and the process from step S2100 is
15 repeated.

By the foregoing configuration, in the eleventh embodiment of the present invention, a similar effect to that in the seventh embodiment can be obtained.

 Furthermore, since the terminal apparatus 1 does not return
20 the channel to the original channel when the program has ended, the terminal apparatus 1 does not erroneously switch the channel which the user wishes to view next.

 Instead of the terminal apparatus 1, the video display apparatus 3 may store the channel when the channel is not changed
25 for a predetermined period of time, and the video display apparatus 3 itself may detect the commercial end timing and switch the channel to a corresponding channel.

Twelfth Embodiment

 Next, the twelfth embodiment of the present invention will
30 be described below. A configuration, an effect, and the like in the present embodiment are similar to those in the seventh embodiment unless otherwise noted. Thus, a difference between the present

embodiment and the seventh embodiment will be mainly described below.

FIG. 22 is a flowchart illustrating a missing prevention process of the terminal apparatus 1.

5 When a missing prevention mode of the terminal apparatus 1 is ON in step S2200, the process proceeds to step S2201, and when the missing prevention mode is OFF, the process ends.

 Since steps S2201 to S2202 are similar to steps S1601 to S1602 illustrated in FIG. 16, description thereof is omitted.

10 Next, in step S2212, the process is changed depending on whether the channel has a commercial. When the channel has a commercial, the process proceeds to step S2203, and when the channel has no commercial, the process does not proceed to step S2203 and the process from step S2200 is repeated. For example, whether or
15 not the channel has a commercial can be determined by storing a list of channels having no commercial in the memory unit 25 in advance and comparing the list of channels with the channel stored in step S2202.

 Since steps S2203 to S2205 are similar to steps S1603 to S1605
20 illustrated in FIG. 16, description thereof is omitted.

 Through steps S2201 to S2205 and step S2212, the terminal apparatus 1 detects the commercial switching in the channel having a commercial after an elapse of a predetermined period of time without the channel change by the user, and determines that a
25 commercial start timing has come (step S2206).

 Since steps S2201 to S2205 are similar to steps S1601 to S1605 illustrated in FIG. 16, description thereof is omitted. Through steps S2201 to S2205, the terminal apparatus 1 detects the commercial switching after an elapse of a predetermined period of time without
30 the channel change by the user, and determines that a commercial start timing has come (step S2206).

 Since steps S2207 to S2209 are similar to steps S1607 to S1609

illustrated in FIG. 16, description thereof is omitted.

Through steps S2207 to S2209, the terminal apparatus 1 detects the commercial switching after the start of a commercial, and determines that a commercial end timing has come (step S2210).

5 Next, in step S2211, the terminal apparatus 1 transmits a selection command of the channel stored in the memory unit 25 to the video display apparatus 3, and repeats the process from step S2200.

10 By the foregoing configuration, in the twelfth embodiment of the present invention, a similar effect to that in the seventh embodiment can be obtained.

15 Furthermore, since the terminal apparatus 1 does not perform the missing prevention process for the channel having no commercial, the missing prevention process is not erroneously performed when the channel is switched to the channel having no commercial. Since there is a scene change where an audio is silent even on the channel having no commercial, there is the possibility that the terminal apparatus 1 determines that the commercial switching has occurred, but it is possible to prevent this.

20 Instead of the terminal apparatus 1, the video display apparatus 3 may store the channel when the channel is not changed for a predetermined period of time, and the video display apparatus 3 itself may detect the commercial end timing and switch the channel to a corresponding channel.

25 Also, instead of the configuration in which the terminal apparatus 1 or the video display apparatus 3 switches the channel in response to the commercial end timing, the user may be notified of the end of the commercial by a video or an audio, and the user himself/herself may operate the terminal apparatus 1 to switch the
30 channel.

Thirteenth Embodiment

Next, the thirteenth embodiment of the present invention will

be described below. A configuration, an effect, and the like in the present embodiment are similar to those in the seventh embodiment unless otherwise noted. Thus, a difference between the present embodiment and the seventh embodiment will be mainly described
5 below.

FIG. 24 is a flowchart illustrating an operation of the terminal apparatus 1 when the terminal apparatus 1 remotely controls the video display apparatus 3.

Since steps S2401 to S2409 are similar to steps S1501 to S1509
10 illustrated in FIG. 15, description thereof is omitted.

In step S2410, the terminal apparatus 1 confirms whether a user has pressed a channel selection button of a remote control function. When the user has pressed a channel selection button such as a "1" button or a "2" button displayed on the terminal apparatus
15 1, the process proceeds to step S2411. Since step S2411 is similar to step S1511 illustrated in FIG. 15, description thereof is omitted.

Next, in step S2414, the process is changed depending on whether the terminal apparatus 1 has received a status indicating that there is no channel selection authority. Only when the status
20 has been received, the process proceeds to step S2415, and a video on a corresponding channel is displayed on the display unit 22 in the terminal apparatus 1. Then, the process from step S2403 is repeated. The status indicating that there is no channel selection authority is sent from the video display apparatus 3 when there is
25 no channel selection authority.

When the user has not pressed the channel selection button of a remote control function displayed on the terminal apparatus 1 in step S2410, the process proceeds to step S2412. Since steps S2412 to S2413 are similar to steps S1512 to S1513 illustrated in
30 FIG. 15, description thereof is omitted.

Thus, when there is no channel selection authority of the video display apparatus 3, the video on the corresponding channel is

displayed on the terminal apparatus 1.

FIG. 25 is a flowchart illustrating an operation of the video display apparatus 3.

In step S2501, the video display apparatus 3 waits for
5 receiving of a power supply command. When the power supply command
has been received, the video display apparatus 3 is powered on (step
S2502), and stores, in the memory unit 35, information indicating
which of terminal apparatuses 1 has transmitted the power supply
command, namely, an identification code which has been transmitted
10 together with the power supply command (step S2509). Here, it is
assumed that the terminal apparatus 1a has transmitted the power
supply command.

An IP (Internet Protocol) address, an ID (Identification)
individually assigned to the terminal apparatus 1, a telephone
15 number and the like are applicable to the identification code.
Generally, since it is assumed that one user possesses one terminal
apparatus 1, a user ID given to each user by a manufacturer of the
terminal apparatus 1 may be applied. In this case, the user ID is
previously stored in the terminal apparatus 1 based on an operation
20 by the user or the like.

Since steps S2503 to S2504 are similar to steps S1703 to S1704
illustrated in FIG. 17, description thereof is omitted.

Next, in step S2505, the video display apparatus 3 confirms
whether a channel selection command has been received. When the
25 channel selection command has been received, the video display
apparatus 3 confirms whether the channel selection command is a
setting command from a specific terminal apparatus 1, namely, the
terminal apparatus 1 that has issued an instruction to turn on power
(step S2510). When the channel selection command is the setting
30 command from the terminal apparatus 1 that has issued the instruction
to turn on power, the video display apparatus 3 executes the channel
selection command as instructed (step S2506), and repeats the

process from step S2503.

When the channel selection command is not the setting command from the terminal apparatus 1 that has issued the instruction to turn on power in step S2510, the video display apparatus 3 confirms
5 whether a channel being displayed is during a commercial (step S2511). When the channel is during the commercial, the video display apparatus 3 executes the command as instructed (step S2506), and repeats the process from step S2503. When the channel is not during the commercial, the video display apparatus 3 sends status
10 information indicating that there is no channel selection authority to the corresponding terminal apparatus 1 (step S2512), and then repeats the process from step S2503. Whether the channel is during the commercial may be transmitted from the terminal apparatus 1 in addition to being determined by the video display apparatus 3.

15 Since steps S2507 to S2508 are similar to steps S1707 to S1708 illustrated in FIG. 17, description thereof is omitted.

Thus, selection of the channel of the video display apparatus 3 can be performed only when it is instructed from the terminal apparatus 1a that has powered on the video display apparatus 3 during
20 a television program, and can be performed also when it is instructed from the terminal apparatus 1b in addition to the terminal apparatus 1a during a commercial. Also, an operation other than the selection of the channel can be performed from both of the terminal apparatus 1a and the terminal apparatus 1b.

25 By the foregoing configuration, in the thirteenth embodiment of the present invention, a similar effect to that in the seventh embodiment can be obtained.

Furthermore, the selection of the channel of the video display apparatus 3 can be performed only when it is instructed from the
30 terminal apparatus 1a that has powered on the video display apparatus 3 during a television program, and a video is displayed on the terminal apparatus 1b when it is instructed from the terminal

apparatus 1b. In addition, during the commercial, the channel selection can be performed also when it is instructed from the terminal apparatus 1b in addition to the terminal apparatus 1a.

Fourteenth Embodiment

5 FIG. 26 is a flowchart illustrating an operation of the terminal apparatus 1 when the terminal apparatus 1 remotely controls the video display apparatus 3.

 Since steps S2601 to S2605 are similar to steps S1501 to S1505 illustrated in FIG. 15, description thereof is omitted.

10 In step S2606, the terminal apparatus 1 confirms whether a user has pressed a "missing prevention" mode button. When the user has pressed the "missing prevention" mode button displayed on the terminal apparatus 1, the terminal apparatus 1 turns on a missing prevention mode, and repeats the process from step S2603.

15 When the user has not pressed the "missing prevention" mode button displayed on the terminal apparatus 1, the process proceeds to step S2610. Since steps S2610 to S2613 are similar to steps S1510 to S1513 illustrated in FIG. 15, description thereof is omitted.

 FIG. 27 is a flowchart illustrating a missing prevention
20 process of the terminal apparatus 1.

 When the missing prevention mode of the terminal apparatus 1 is ON in step S2700, the process proceeds to step S2701, and when the missing prevention mode is OFF, the process ends.

 In step S2701, the terminal apparatus 1 stores a channel
25 previously set by the user.

 Since steps S2707 to S2710 are similar to steps S1507 to S1510 illustrated in FIG. 15, description thereof is omitted. Through steps S2707 to S2709, the terminal apparatus 1 detects commercial switching after the start of a commercial, and determines that a
30 commercial end timing has come (step S2710).

 Next, in step S2711, the terminal apparatus 1 transmits a selection command of the channel stored in the memory unit 25 to

the video display apparatus 3, and turns off the missing prevention mode in step S2712. When the channel selection button of a remote control function has not been pressed in step S2708, the selection command of the channel stored in the memory unit 25 does not have to be transmitted to the video display apparatus 3.

By the foregoing configuration, in the fourteenth embodiment of the present invention, the terminal apparatus 1 stores the channel which is being viewed when the user has pressed the "missing prevention" mode button, and transmits the selection command of the channel to the video display apparatus 3 in response to the timing of the end of the commercial.

If the user has pressed the "channel" button after pressing the "missing prevention" mode button during the commercial, the channel returns to the channel prior to the switching at the end of the commercial even when the user switches the channel during the commercial. Thus, it is possible to prevent the television program on the channel which has been being viewed by the user from being missed.

Furthermore, when the "missing prevention" mode button is pressed during the commercial, a missing prevention mode is entered, and the missing prevention mode is canceled when the commercial ends. Therefore, the power consumption of the terminal apparatus 1 can be suppressed.

Instead of the terminal apparatus 1, the video display apparatus 3 may store the channel, and the video display apparatus 3 itself may detect the commercial end timing and switch the channel.

Also, instead of the configuration in which the terminal apparatus 1 or the video display apparatus 3 switches the channel in response to the commercial end timing, the user may be notified of the end of the commercial by a video or an audio, and the user himself/herself may operate the terminal apparatus 1 to switch the channel.

Note that the embodiments above have been described in detail so as to make the present invention easily understood, and the present invention is not limited to the embodiment having all of the described constituent elements. Also, a part of the configuration of one embodiment may be replaced with the configuration of another embodiment, and the configuration of one embodiment may be added to the configuration of another embodiment. Furthermore, another configuration may be added to a part of the configuration of each embodiment, and a part of the configuration of each embodiment may be eliminated or replaced with another configuration.

Some or all of the above-mentioned configurations, functions, processing units, and processing means may be implemented by hardware by designing them with integrated circuits or the like. Also, the above-mentioned configurations and functions may be implemented by software by interpreting and executing programs for implementing the respective functions by processors. Information such as a program, a table, a file, and the like for implementing each of the functions can be placed in a recording device such as a memory, a hard disk, or an SSD (Solid State Drive) or a recording medium such as an IC card or an SD card.

Control lines and information lines, which are considered to be necessary in description, are illustrated, and all control lines and information lines in products are not necessarily illustrated. In practice, it is right to think that almost all configurations are connected to one another.

REFERENCE SIGNS LIST

1... TERMINAL APPARATUS, 2... REMOTE CONTROLLER, 3... VIDEO DISPLAY APPARATUS, 5... BROADCAST STATION, 6... WIRELESS ROUTER, 7... NETWORK, 20... CONTROL UNIT, 21... TELEVISION SIGNAL RECEIVING UNIT, 22... DISPLAY UNIT, 23... AUDIO OUTPUT UNIT, 24... OPERATION UNIT, 25... MEMORY UNIT, 26... LAN COMMUNICATION UNIT, 30... CONTROL UNIT, 31... TELEVISION SIGNAL

RECEIVING UNIT, 32... DISPLAY UNIT, 33... AUDIO OUTPUT UNIT, 34... INFRARED
COMMUNICATION UNIT, 35... MEMORY UNIT, 36... LAN COMMUNICATION UNIT

CLAIMS

1. 1. A video display apparatus comprising:

5 a display unit that displays a video content from a broadcast station or from a video content delivery source;

a communication unit that executes two types of bi-directional wireless communication including first bi-directional wireless communication with a first wireless control device without going via a router and second bi-directional wireless communication via
10 a router with a second wireless control device that is different from the first wireless control device;

an infrared receiver unit that receives infrared rays from a third wireless control device; and

15 a controller that controls the display unit, the communication unit and the infrared receiver,

wherein, if a first command for changing a video content on the display unit from a first video content selected by the first wireless control device to a second video content is transmitted from the second wireless control device to the communication unit
20 via the router during the first video content is displayed on the display unit, the display unit terminates displaying the first video content and starts to display the second video content and the communication unit sends first information for informing termination of the displaying of the first video content to the first
25 wireless control device without going via a router, and

wherein, if a second command for changing a video content on the display unit from a second video content selected by the second wireless control device to another video content is transmitted from the third wireless control device to the infrared receiver unit by
30 infrared rays during the second video content is displayed on the display unit, the display unit terminates displaying the second video content and starts to display another video content and the

communication unit sends second information for informing termination of the displaying of the second video content via the router to the second wireless control device.

5 2. A method for changing a content on the video display apparatus comprising:

 displaying step to display a video content from a broadcast station or from a video content delivery source, on a display unit of the video display apparatus;

10 first communication step to execute bi-directional wireless communication with a first wireless control device without going via a router;

 second communication step to execute bi-directional wireless communication via a router with a second wireless control device
15 that is different from the first wireless control device; and

 infrared ray receiving step to receive infrared rays from a third wireless control device;

 wherein, if a first command for changing a video content on the display unit from a first video content selected by the first
20 wireless control device to a second video content is transmitted from the second wireless control device to the video display apparatus via the router during the first video content is displayed on the display unit, the video display apparatus terminates displaying the first video content and starts to display the second
25 video content and the video display apparatus sends first information for informing termination of the displaying of the first video content to the first wireless control device without going via a router, and

 wherein, if a second command for changing a video content on
30 the display unit from a second video content selected by the second wireless control device to another video content is transmitted from the third wireless control device to the video display apparatus

by infrared rays during the second video content is displayed on the display unit, the display unit terminates displaying the second video content and starts to display another video content and the video display apparatus sends second information for informing
5 termination of the displaying of the second video content via the router to the second wireless control device.

3. A video display apparatus comprising:

a display unit that displays a video content from a broadcast
10 station or from a video content delivery source;

a communication unit that executes two types of bi-directional wireless communication including first bi-directional wireless communication with a first wireless control device without going via a router and second bi-directional wireless communication via
15 a router with a second wireless control device that is different from the first wireless control device;

an infrared receiver unit that receives infrared rays from a third wireless control device; and

a controller that controls the display unit, the communication
20 unit and the infrared receiver,

wherein, if a first command for changing a video content on the display unit from a first video content selected by the first wireless control device to another video content is transmitted from the second wireless control device to the communication unit via
25 the router during the first video content is displayed on the display unit, the display unit terminates displaying the first video content for changing a content to be displayed from the first video content to another video content and the communication unit sends first information for informing termination of the displaying of the first
30 video content to the first wireless control device without going via a router, and

wherein, if a second command for changing a video content on

the display unit from a second video content selected by the second wireless control device to another video content is transmitted from the third wireless control device to the infrared receiver unit by infrared rays during the second video content is displayed on the display unit, the display unit terminates displaying the second video content for changing a content to be displayed from the second video content to another video content and the communication unit sends second information for informing termination of the displaying of the second video content via the router to the second wireless control device.

4. A method for changing a content on the video display apparatus comprising:

displaying step to display a video content from a broadcast station or from a video content delivery source, on a display unit of the video display apparatus;

first communication step to execute bi-directional wireless communication with a first wireless control device without going via a router;

second communication step to execute bi-directional wireless communication via a router with a second wireless control device that is different from the first wireless control device; and

infrared ray receiving step to receive infrared rays from a third wireless control device;

wherein, if a first command for changing a video content on the display unit from a first video content selected by the first wireless control device to another video content is transmitted from the second wireless control device to the video display apparatus via the router during the first video content is displayed on the display unit, the video display apparatus terminates displaying the first video content for changing a content to be displayed from the first video content to another video content and the video display

apparatus sends first information for informing termination of the displaying of the first video content to the first wireless control device without going via a router, and

5 wherein, if a second command for changing a video content on
the display unit from a second video content selected by the second
wireless control device to another video content is transmitted from
the third wireless control device to the video display apparatus
by infrared rays during the second video content is displayed on
the display unit, the display unit terminates displaying the second
10 video content for changing a content to be displayed from the second
video content to another video content and the video display
apparatus sends second information for informing termination of the
displaying of the second video content via the router to the second
wireless control device.

15

ABSTRACT

The present invention provides user-friendly video display apparatus and terminal apparatus. In the present invention, a
5 terminal apparatus having a function of remotely controlling a video display apparatus includes a communication unit that transmits a command related to setting of the video display apparatus and receives status information, a signal receiving unit that receives a signal output from a broadcast station and decodes a video content,
10 a memory unit that stores a content of a command including a channel of the video content, and a display unit that displays the video content and various types of information. In this terminal apparatus, the communication unit transmits an identification code specific to the terminal apparatus when transmitting the command,
15 and when the status information is received after a channel of the video display apparatus is set by remote control, the video content of the channel stored in the memory unit is decoded by the signal receiving unit and is displayed on the display unit.

FIG. 1

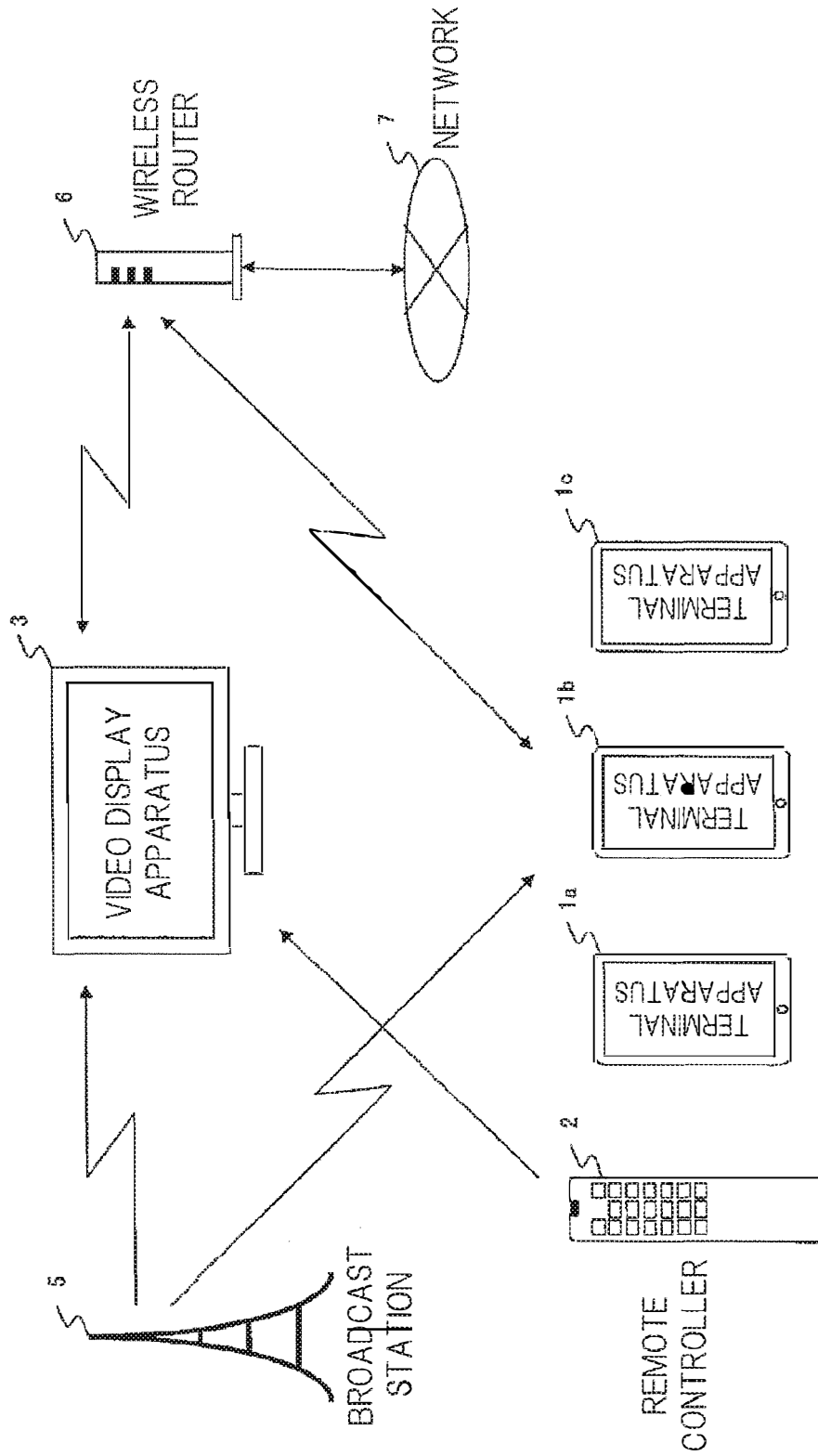


FIG. 2

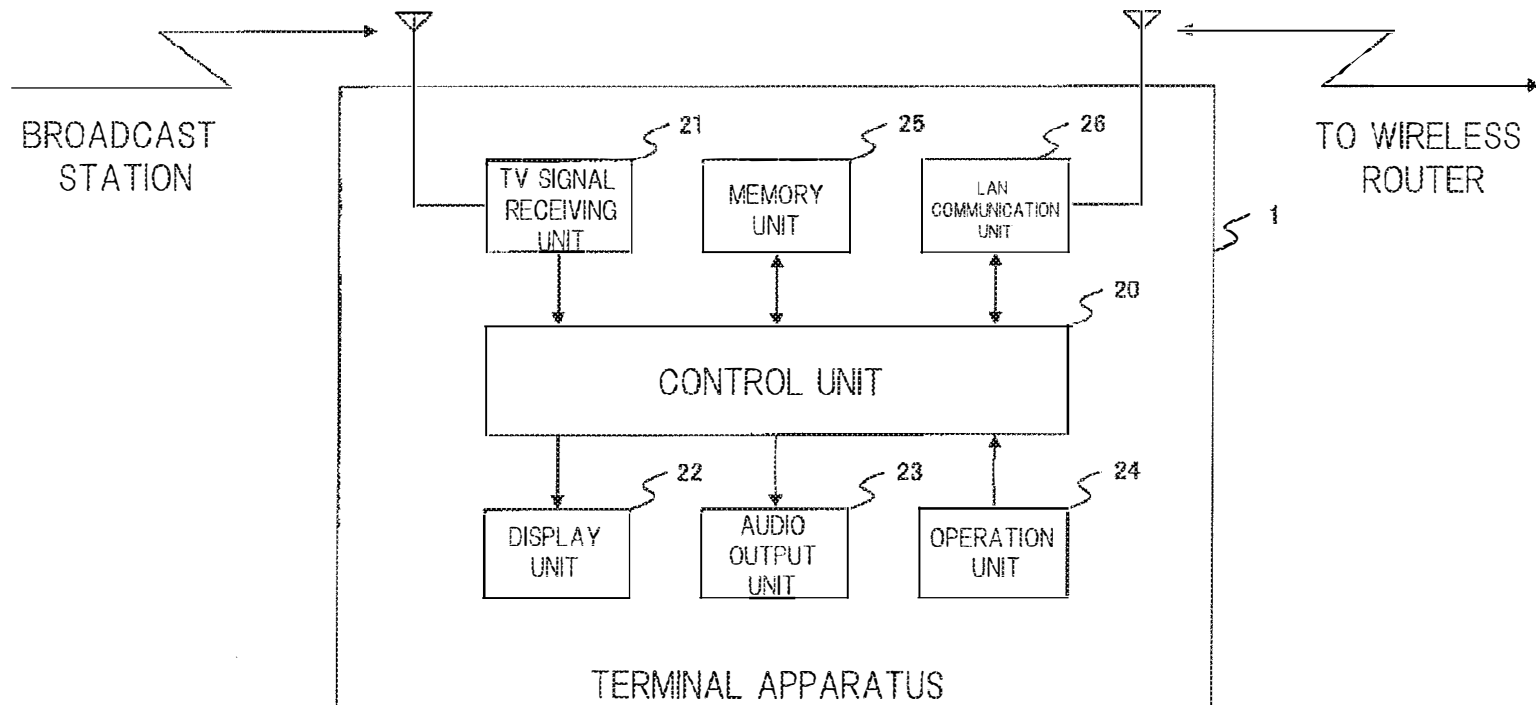
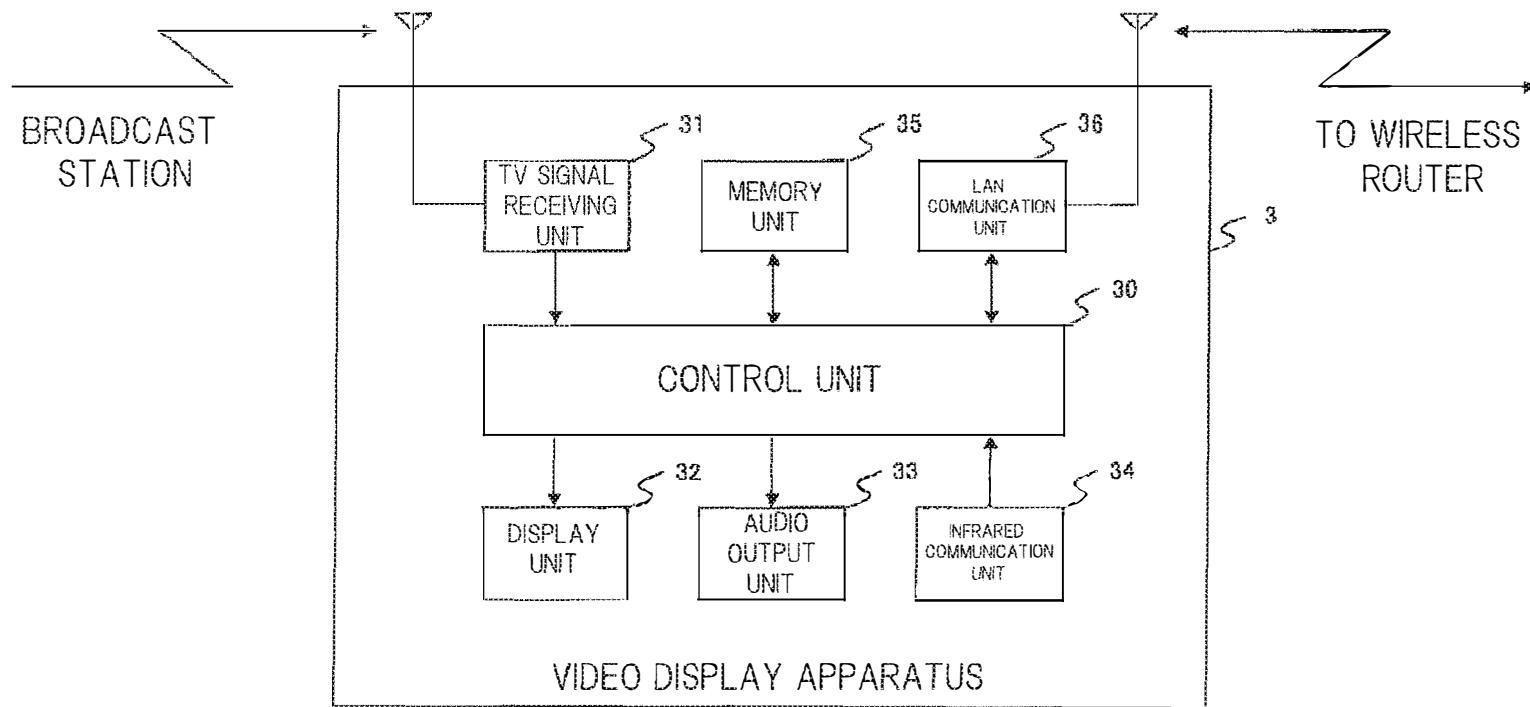
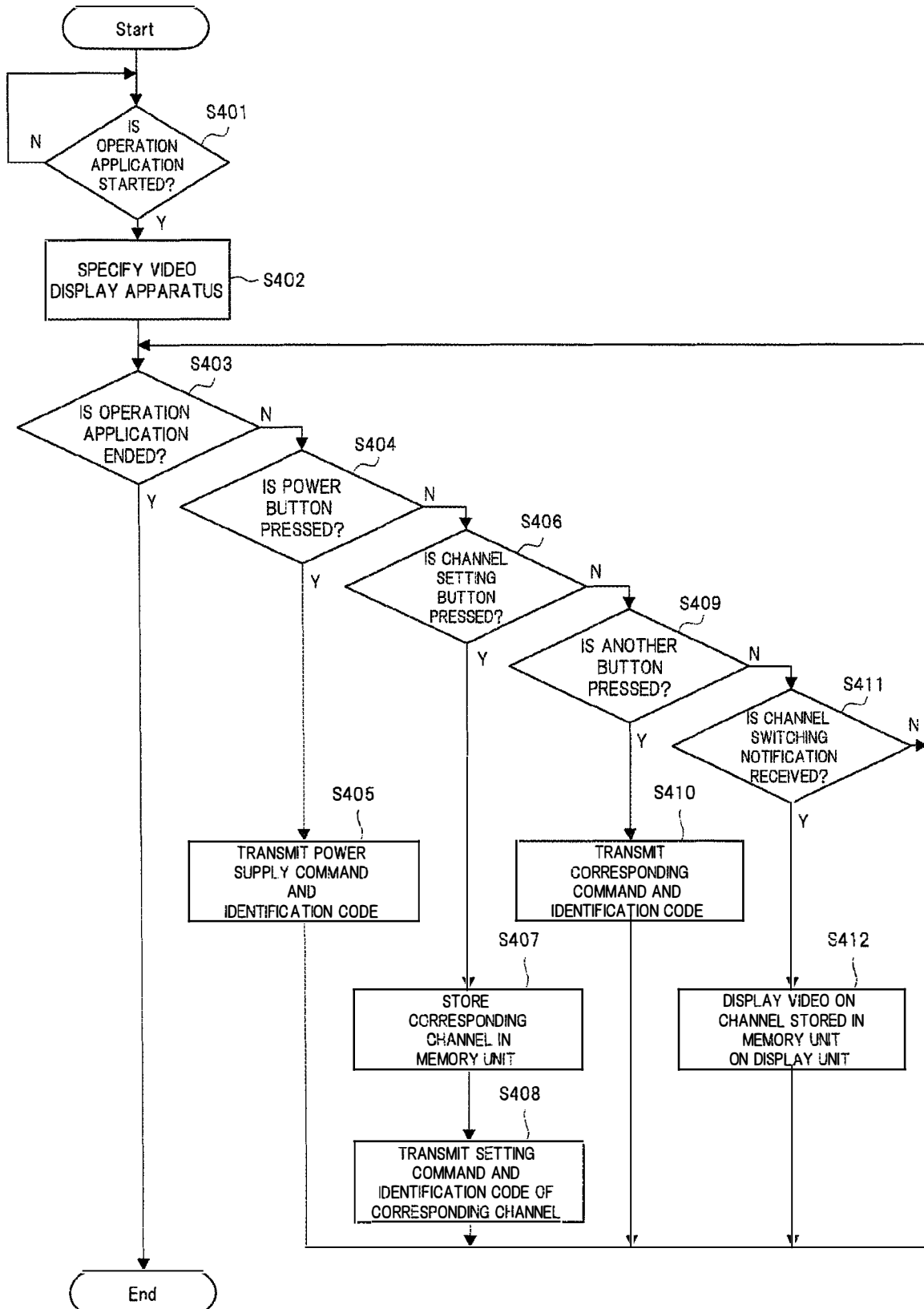


FIG. 3



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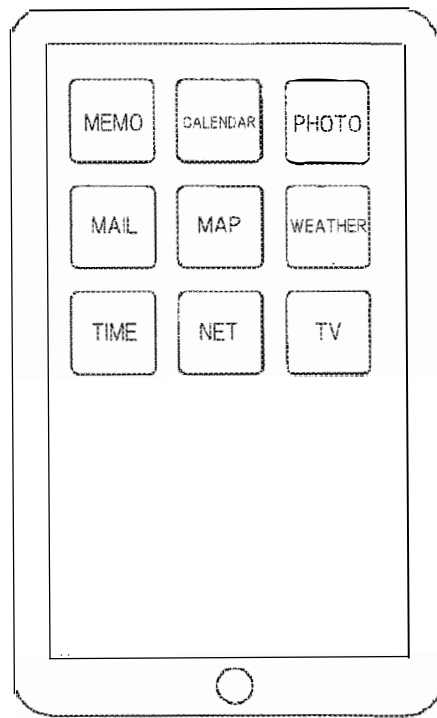
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FIG. 4



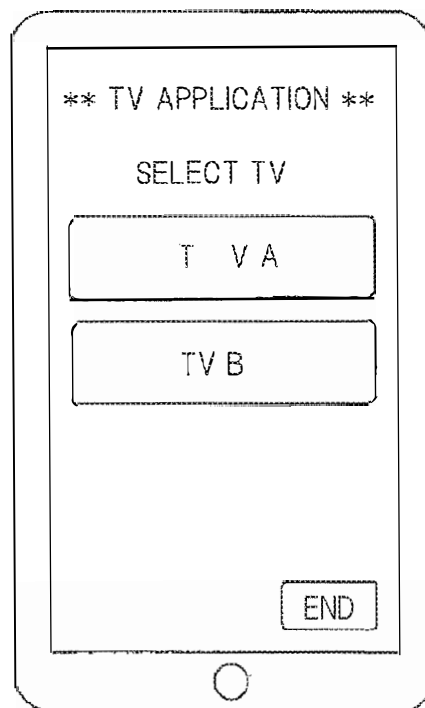
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FIG. 5

(a)



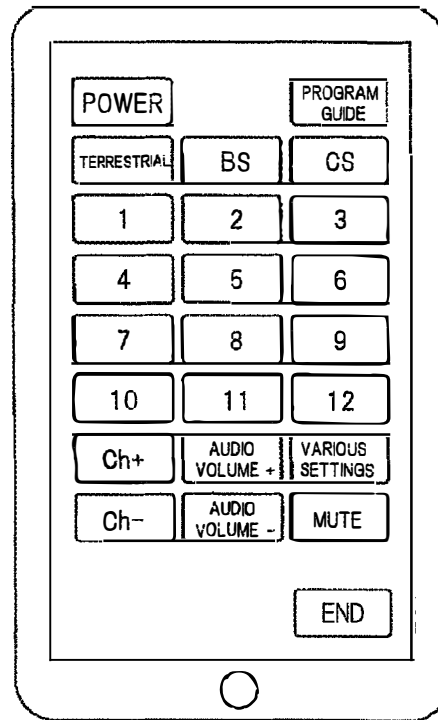
(b)



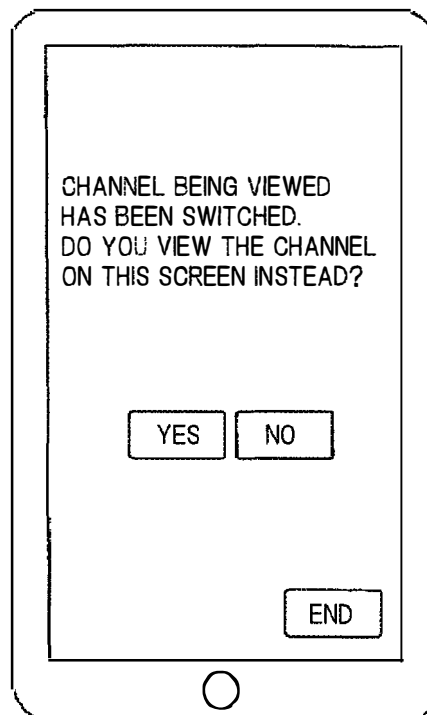
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FIG. 5

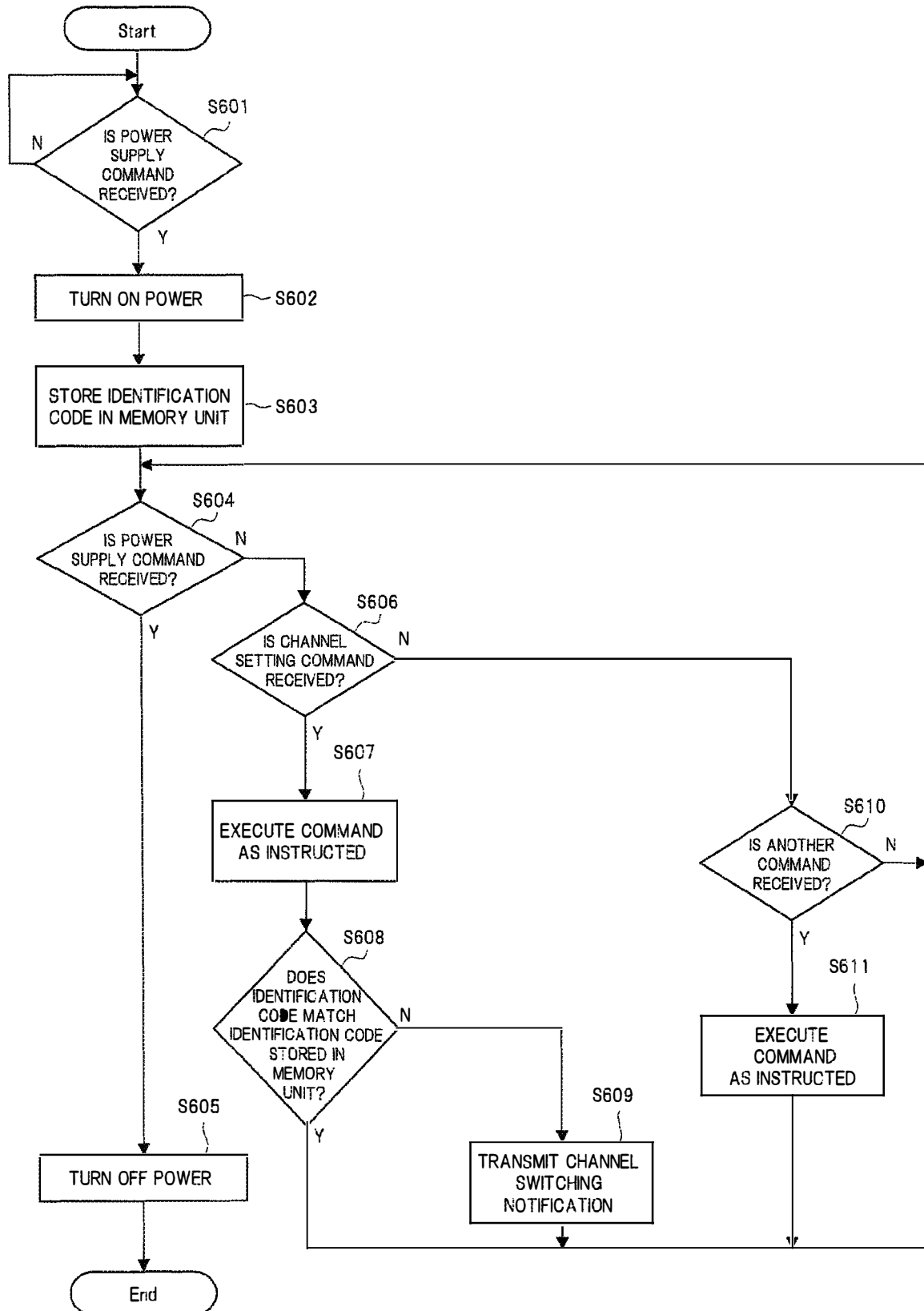
(c)



(d)

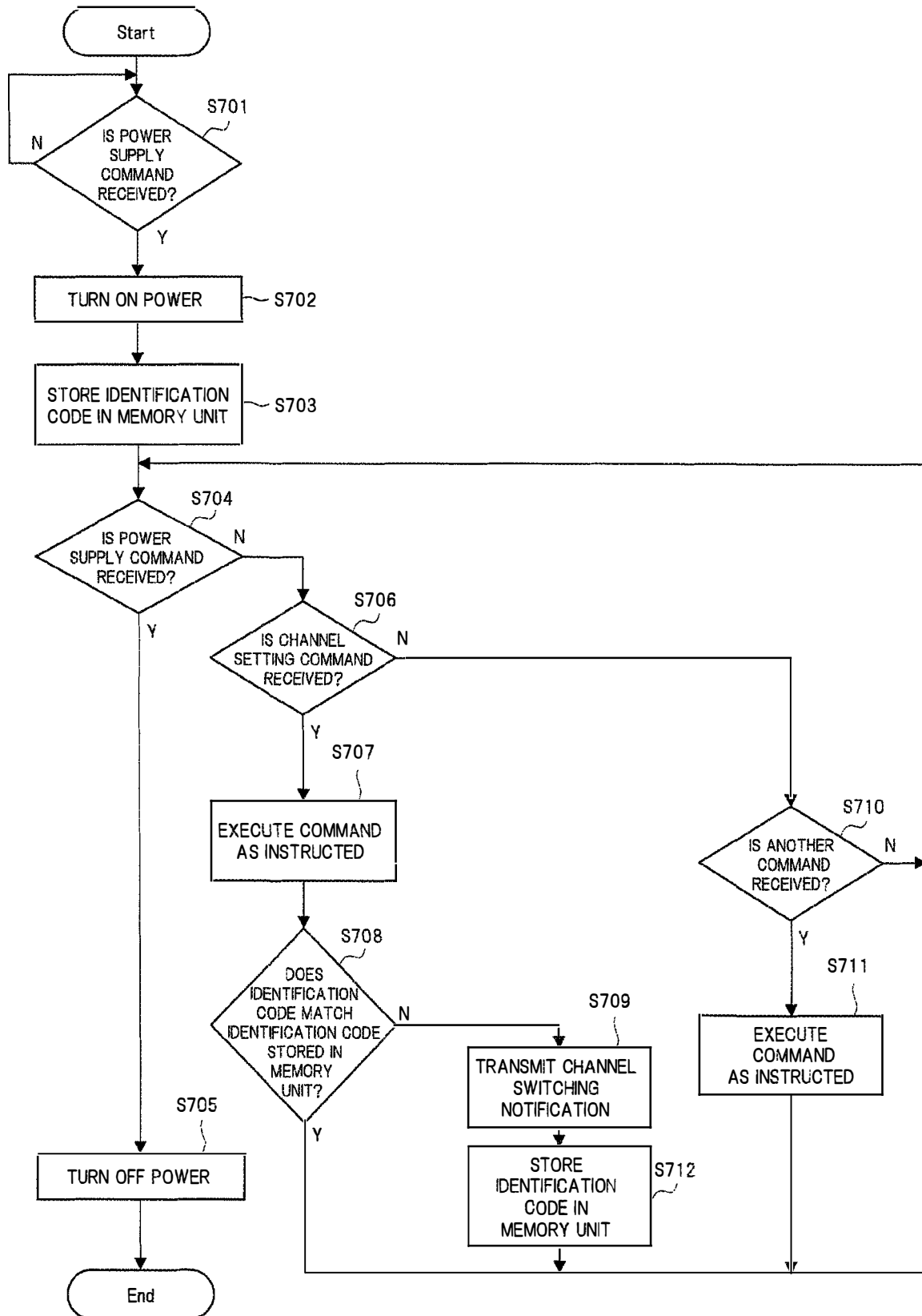


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FIG. 6



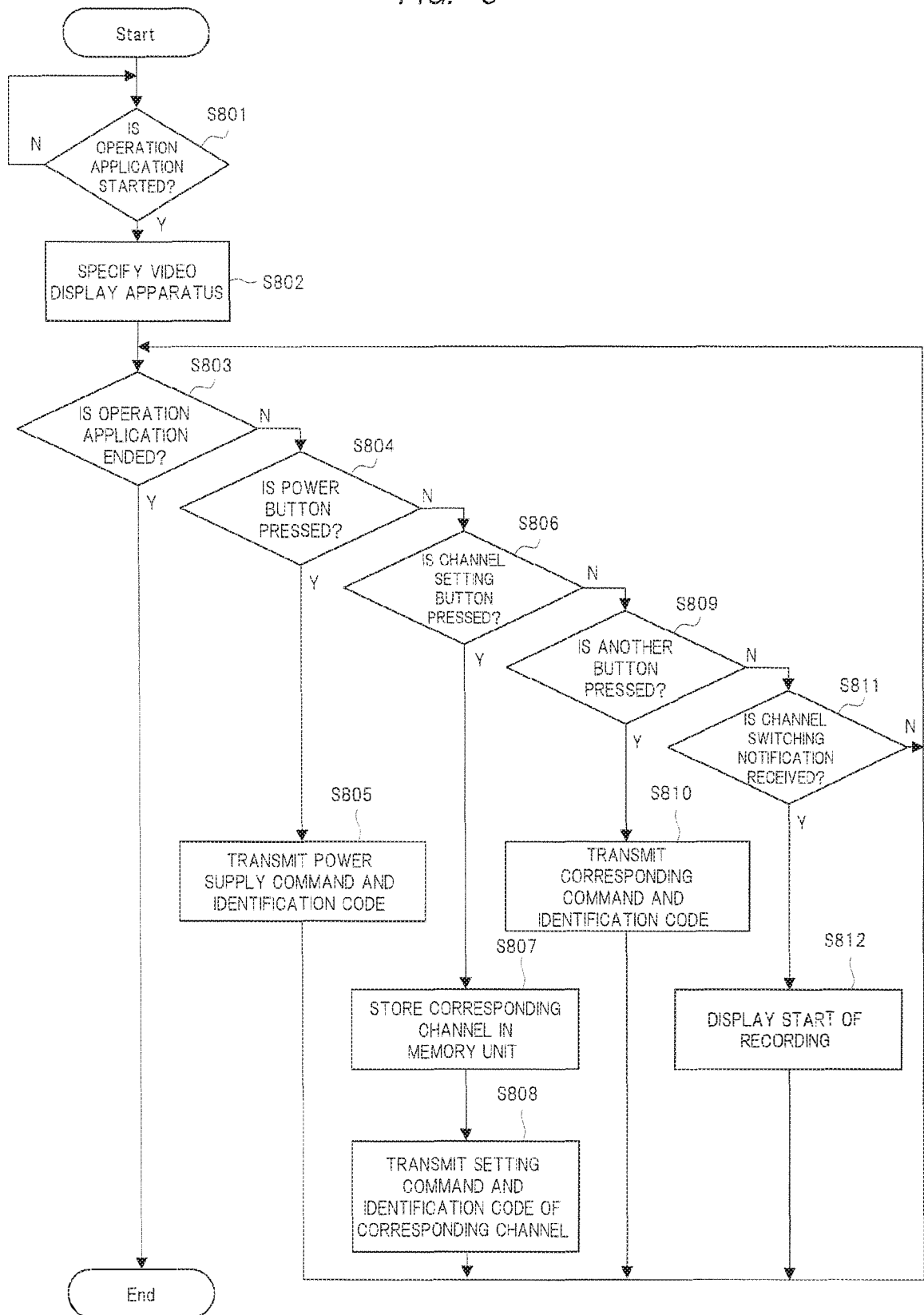
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FIG. 7

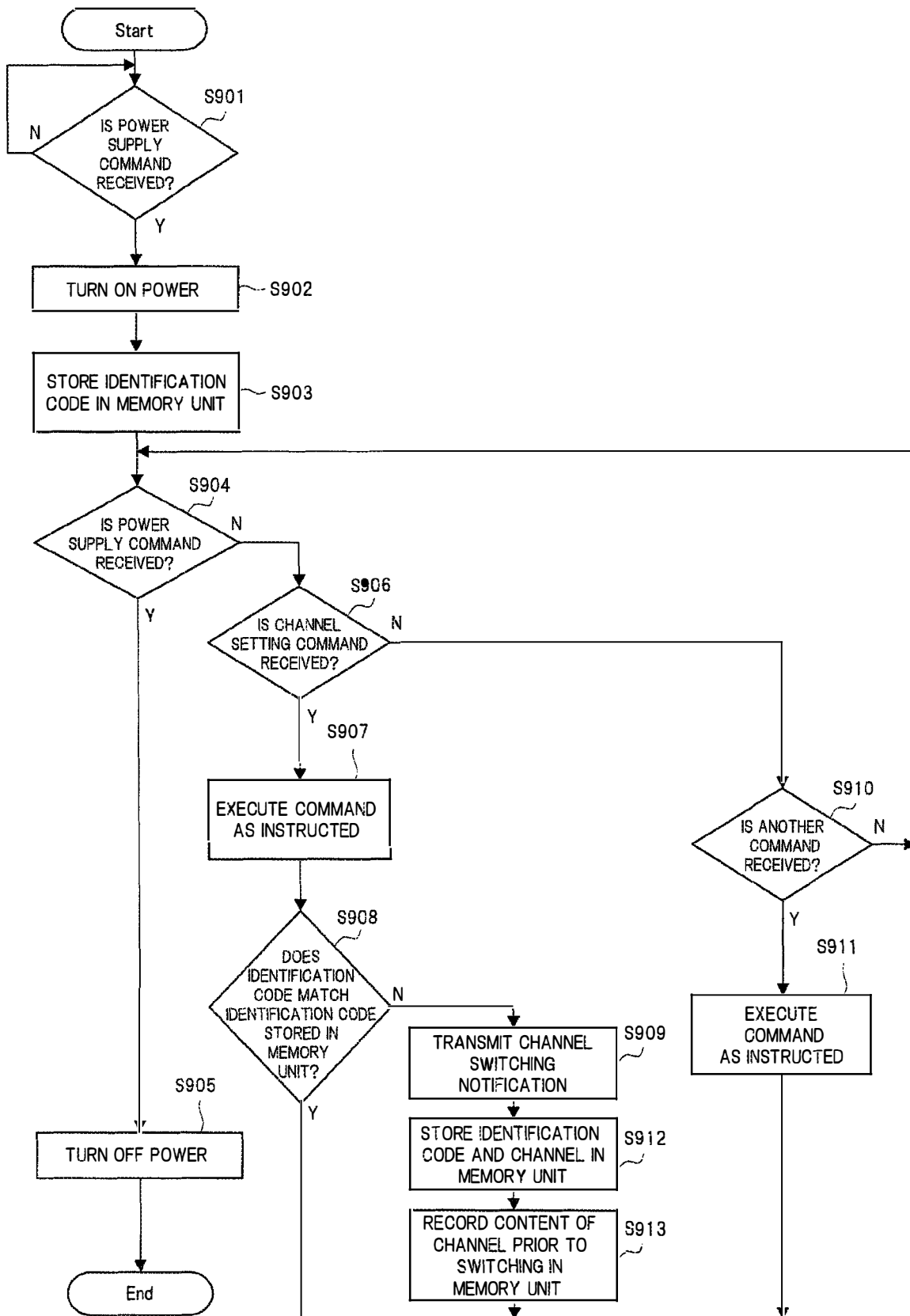


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FIG. 8



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FIG. 9



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FIG. 10

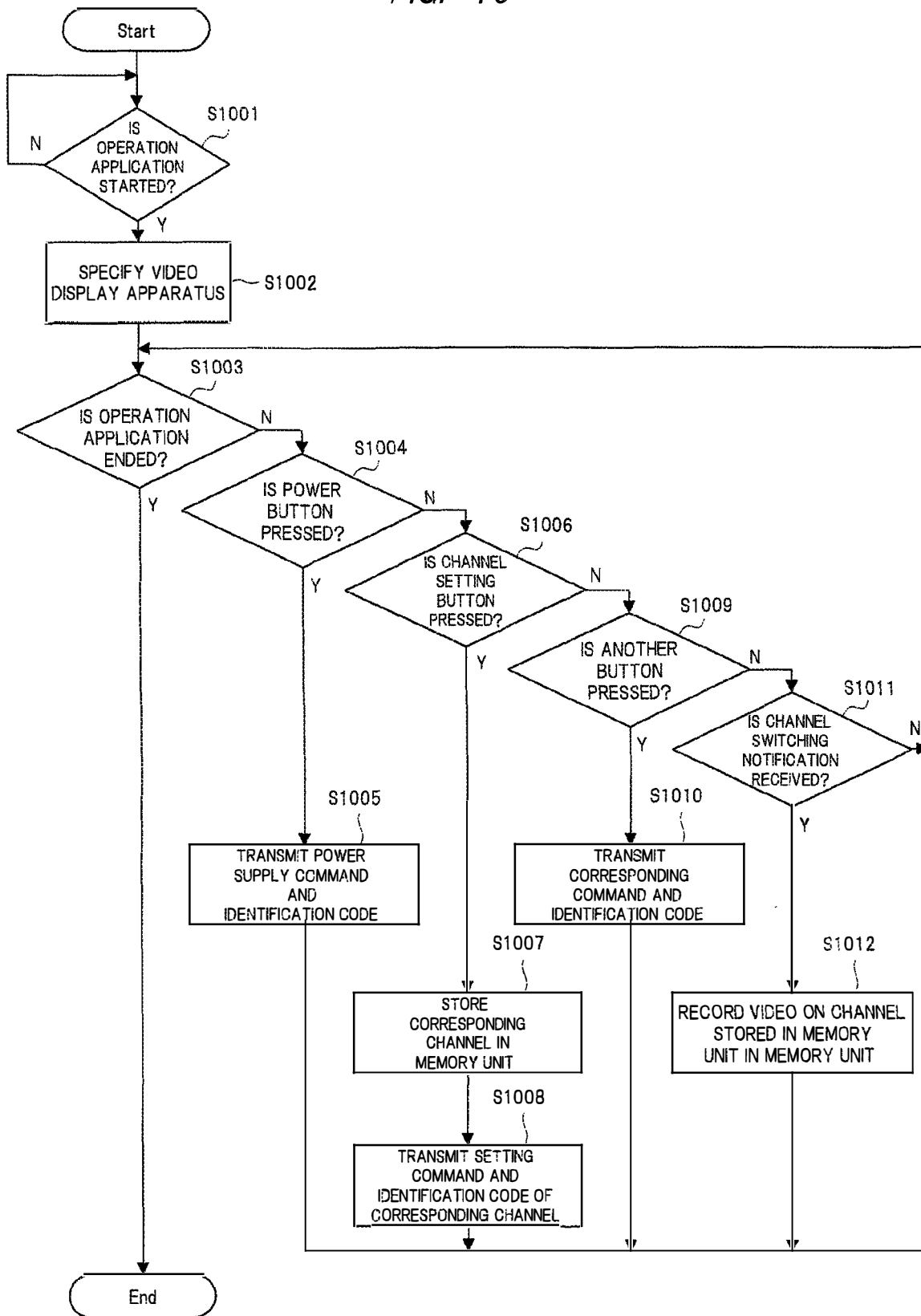
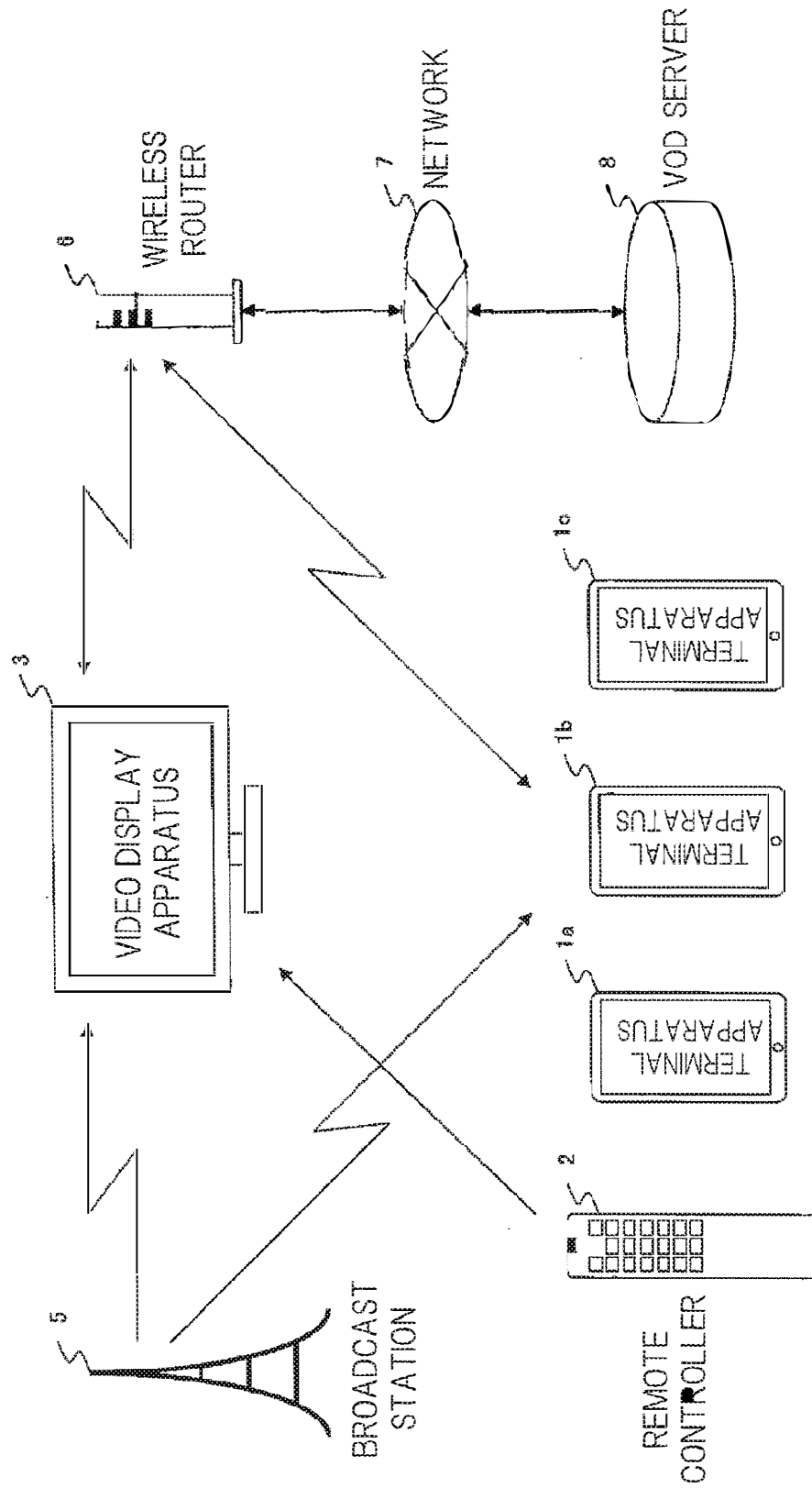


FIG. 11



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FIG. 12

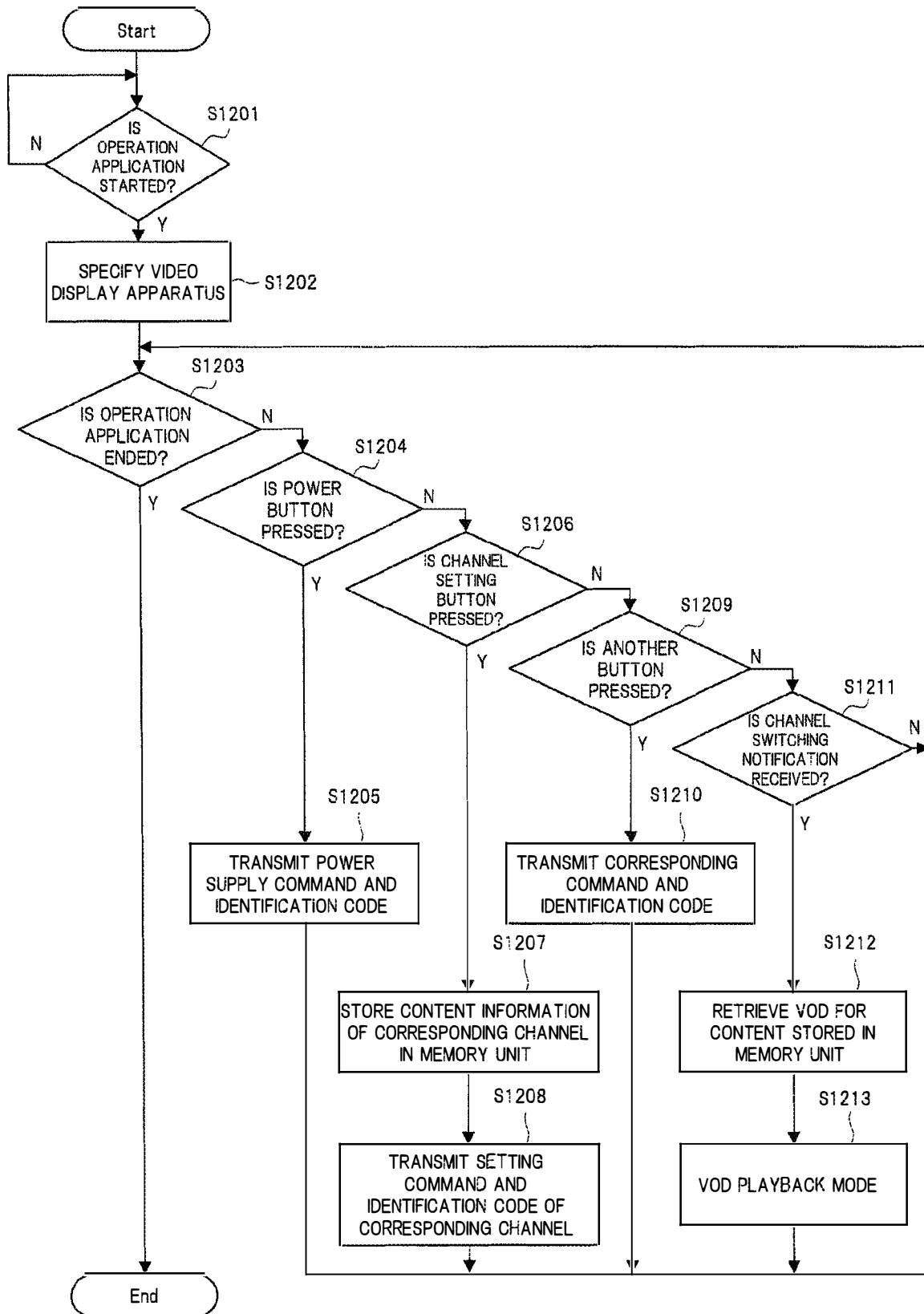
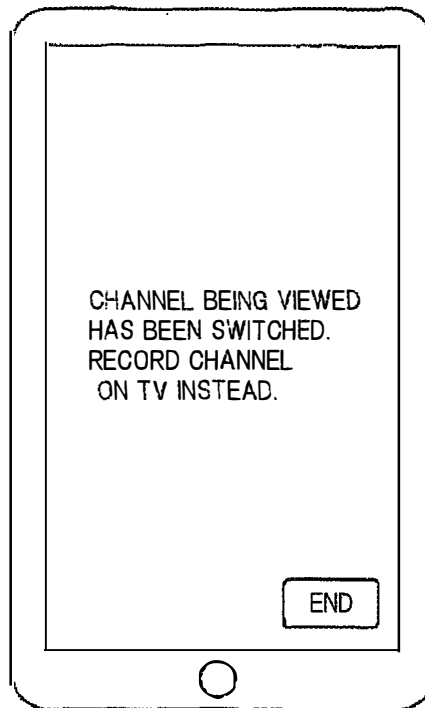


FIG. 13

(a)



(b)

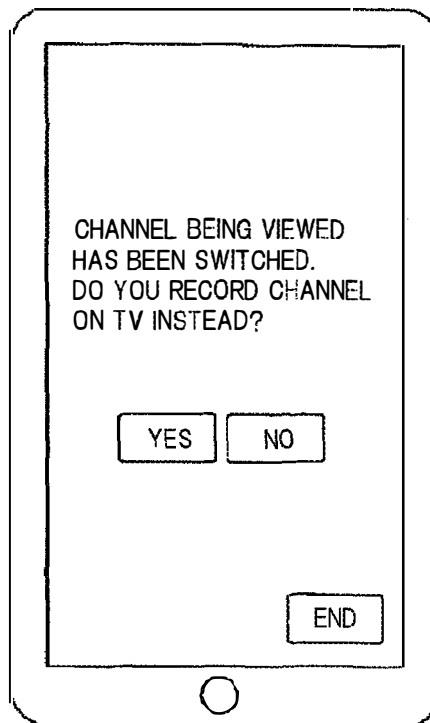
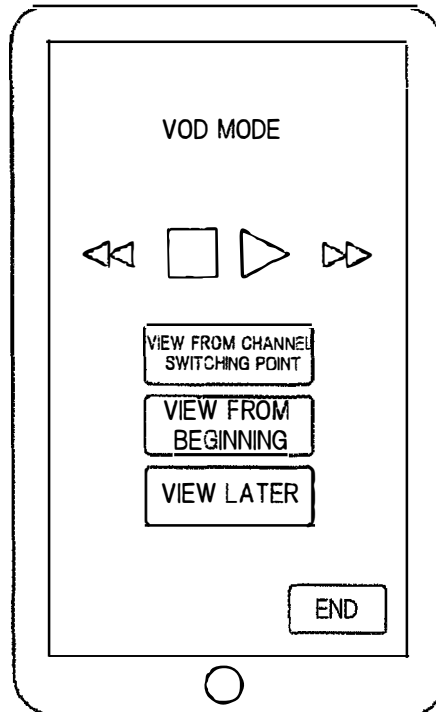
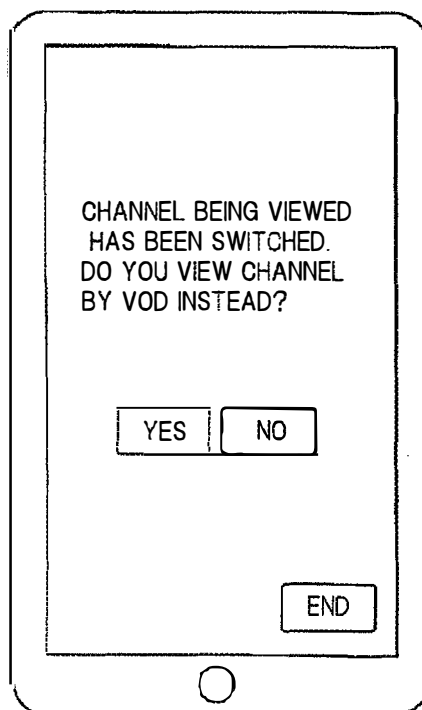


FIG. 13

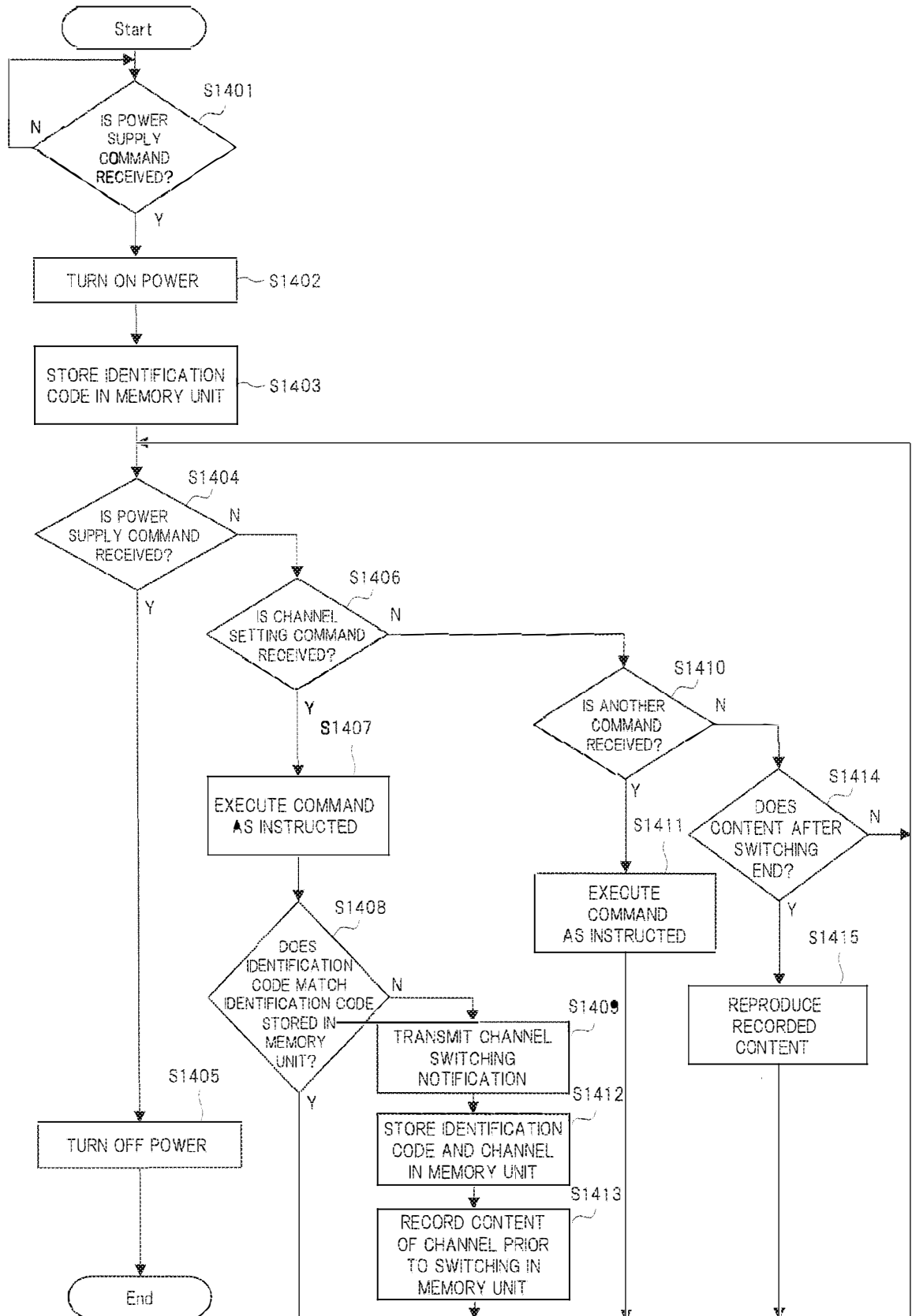
(c)



(d)



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FIG. 14



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FIG. 15

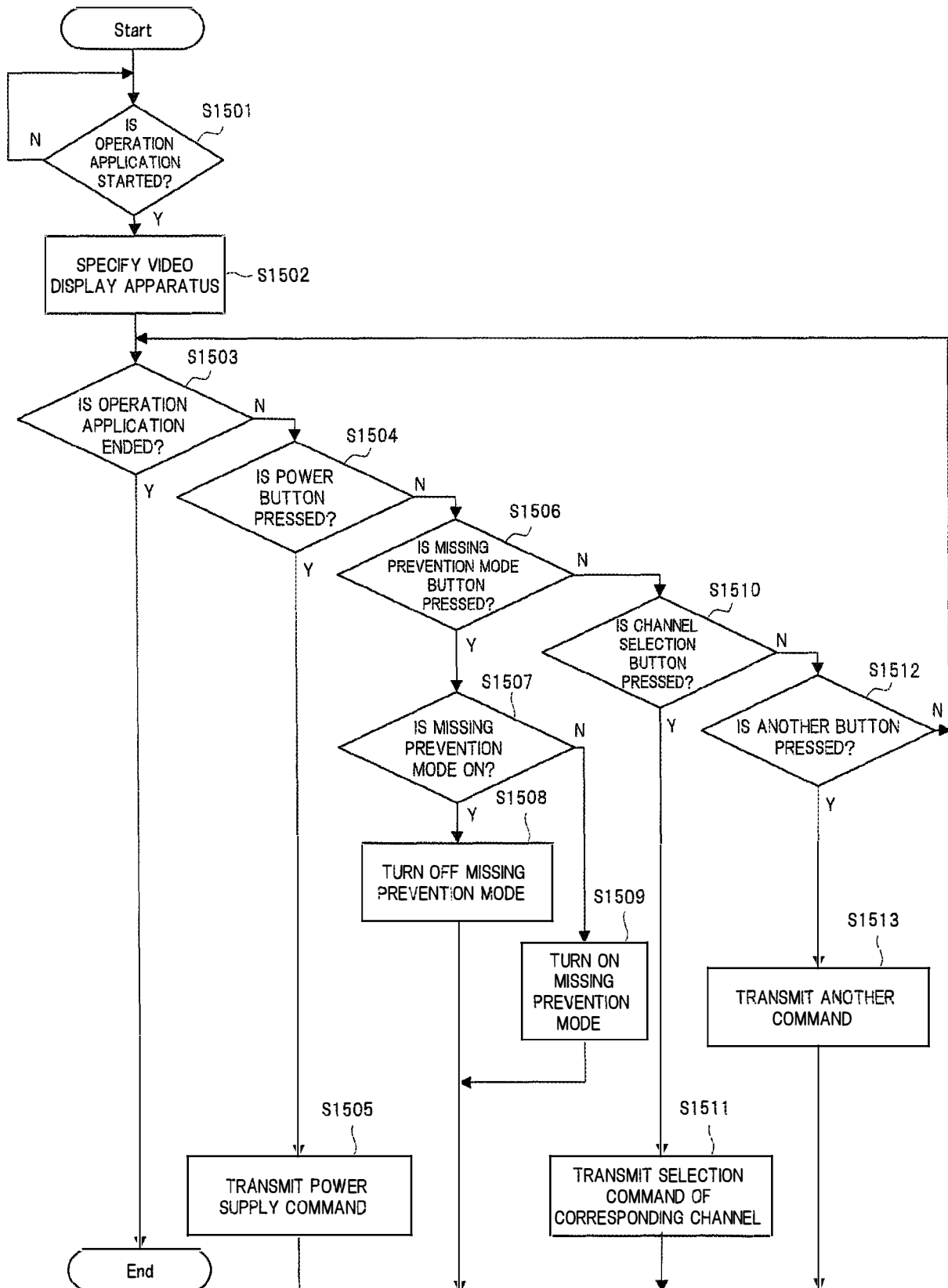
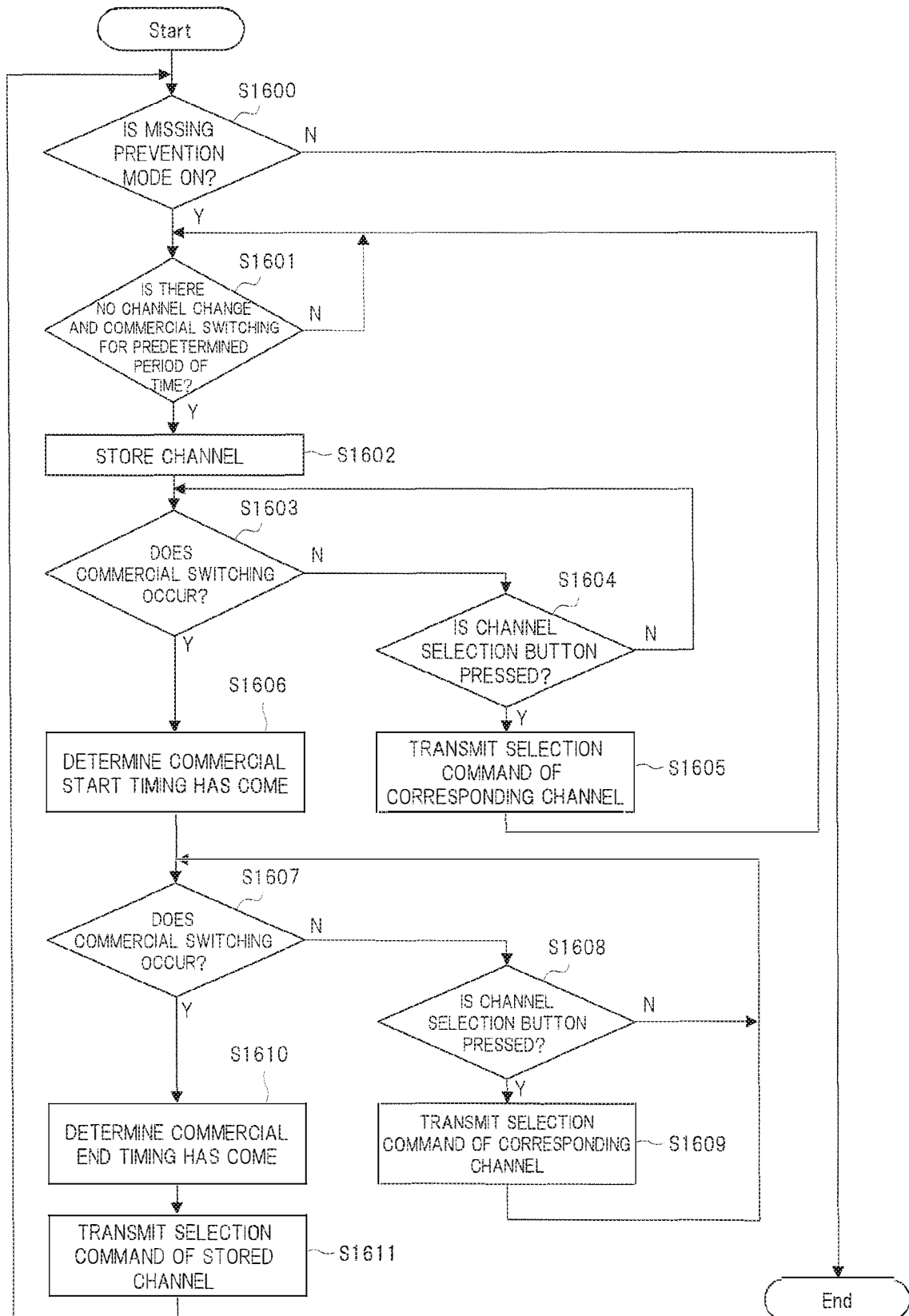
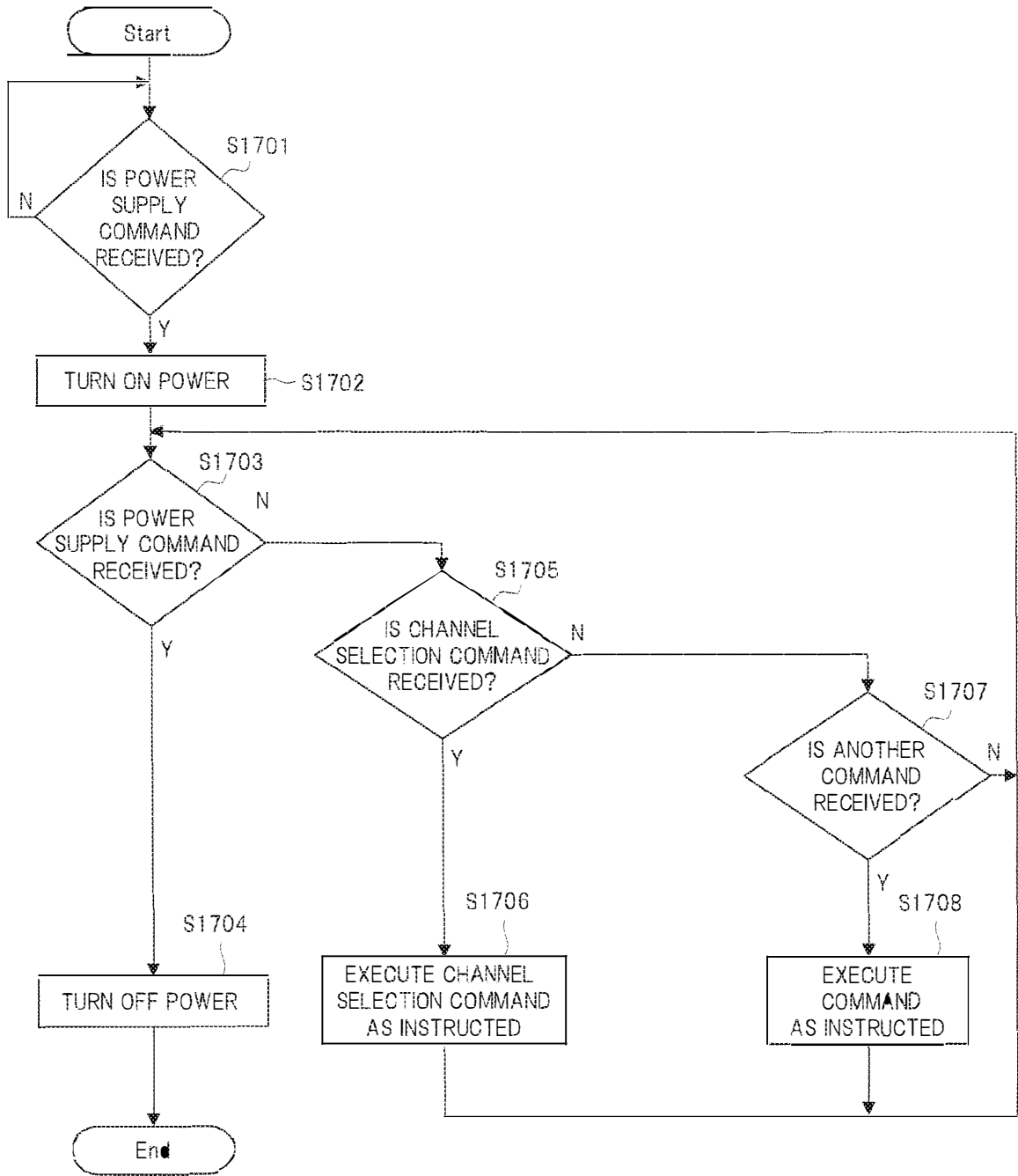


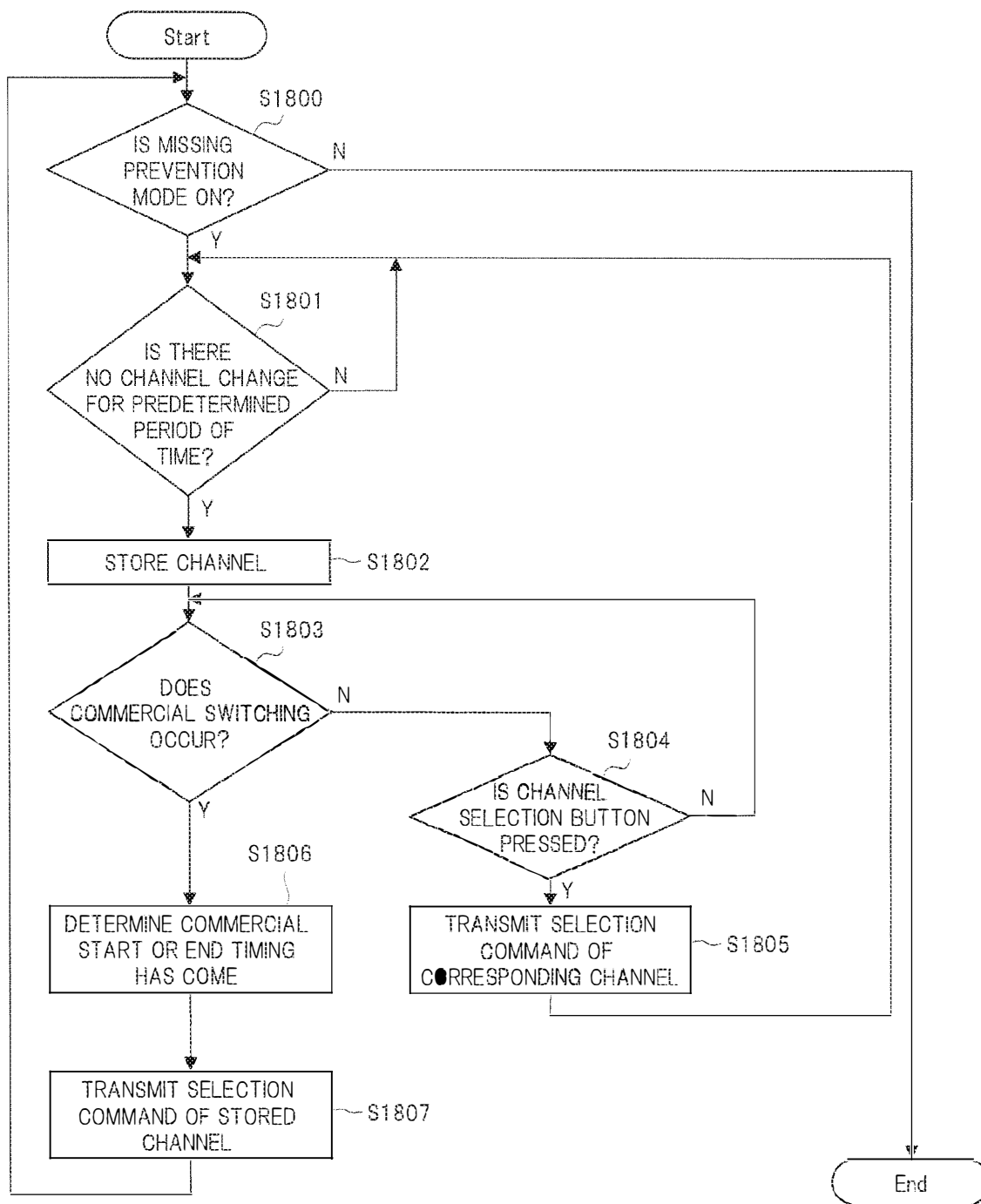
FIG. 16



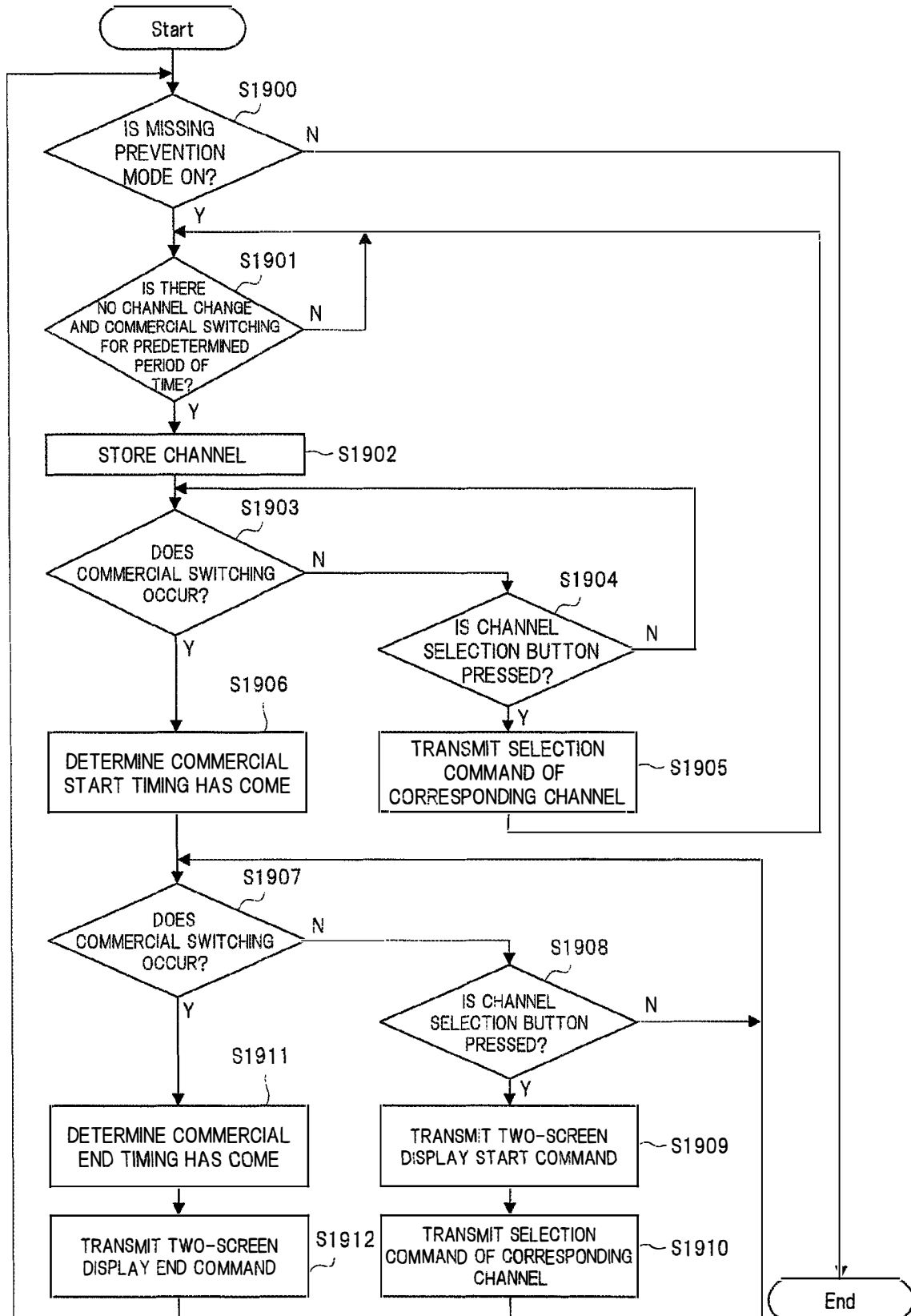
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FIG. 17



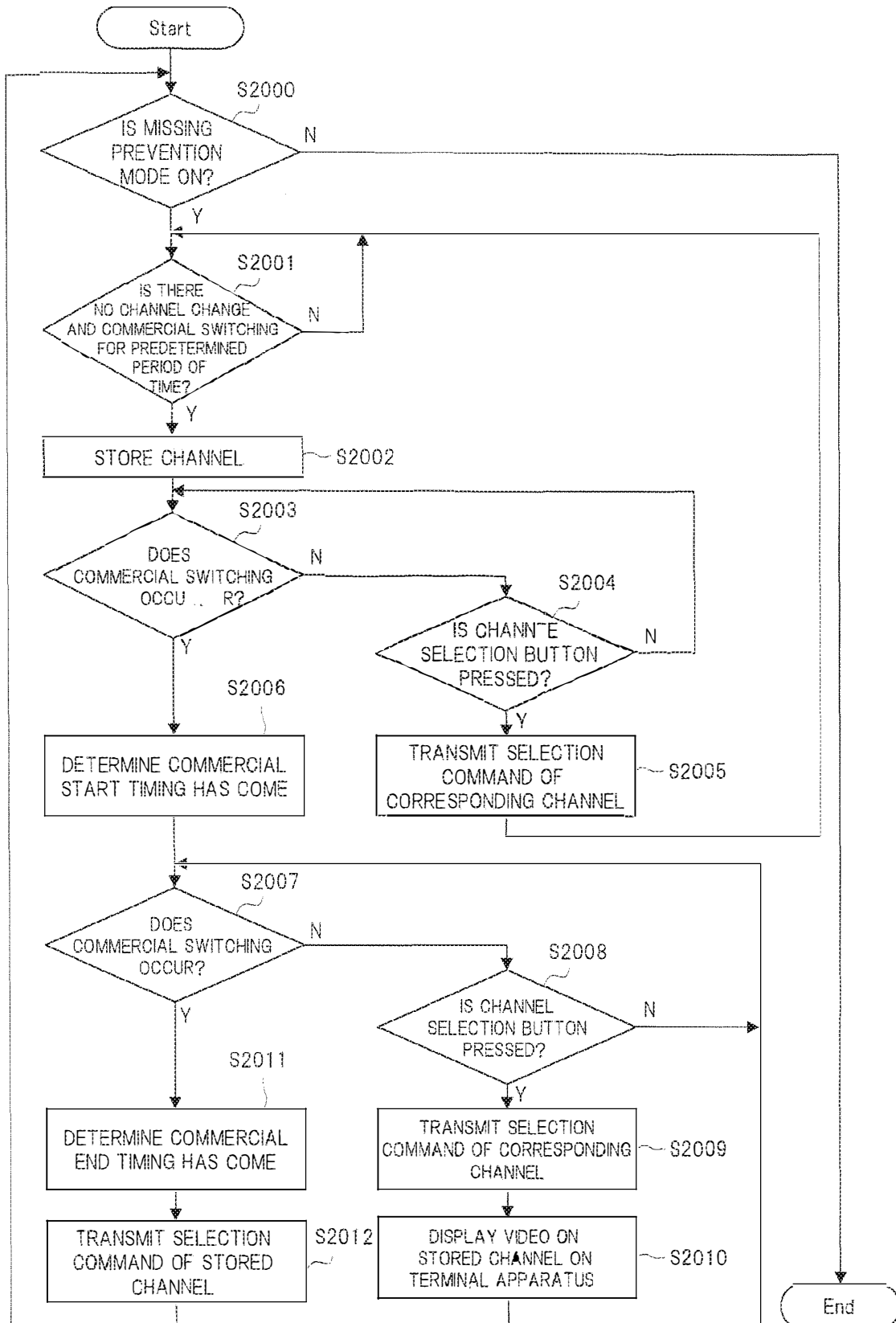
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FIG. 18



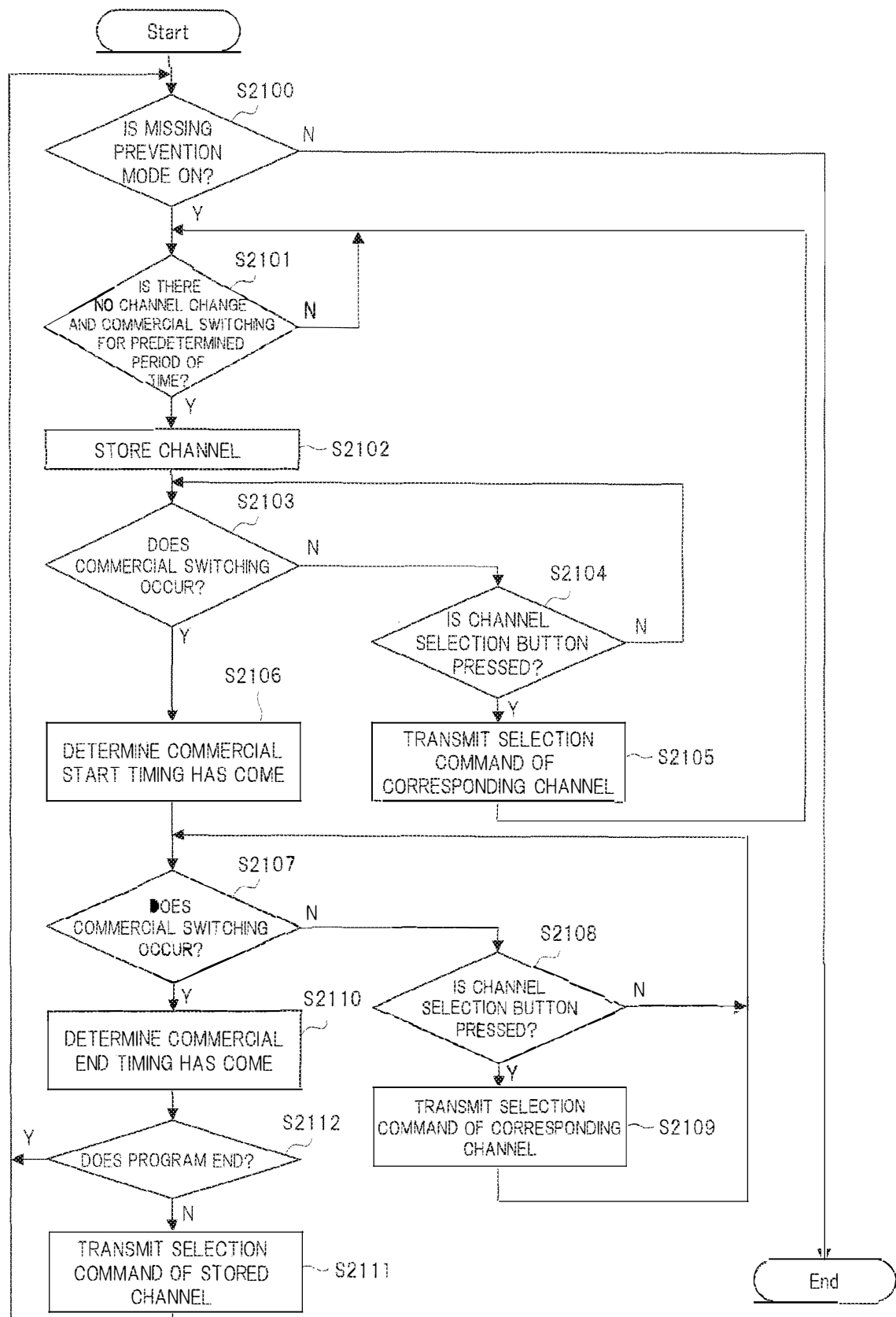
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FIG. 19



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FIG. 20



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FIG. 21



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FIG. 22

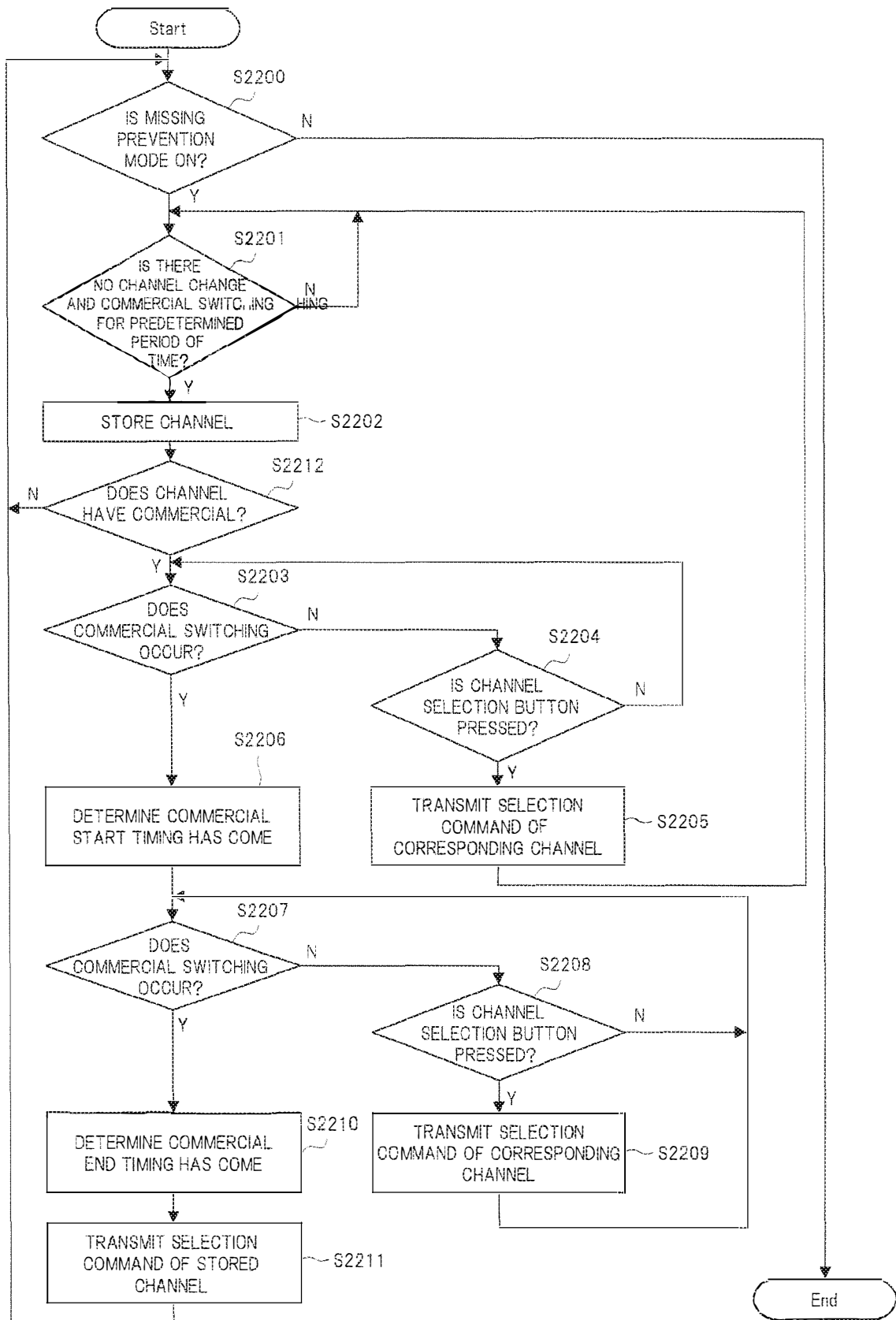
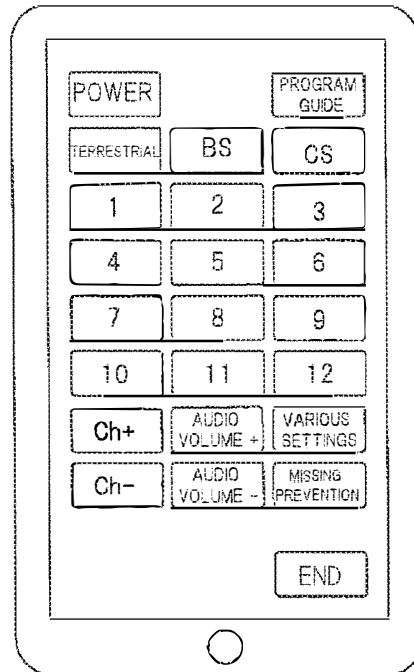
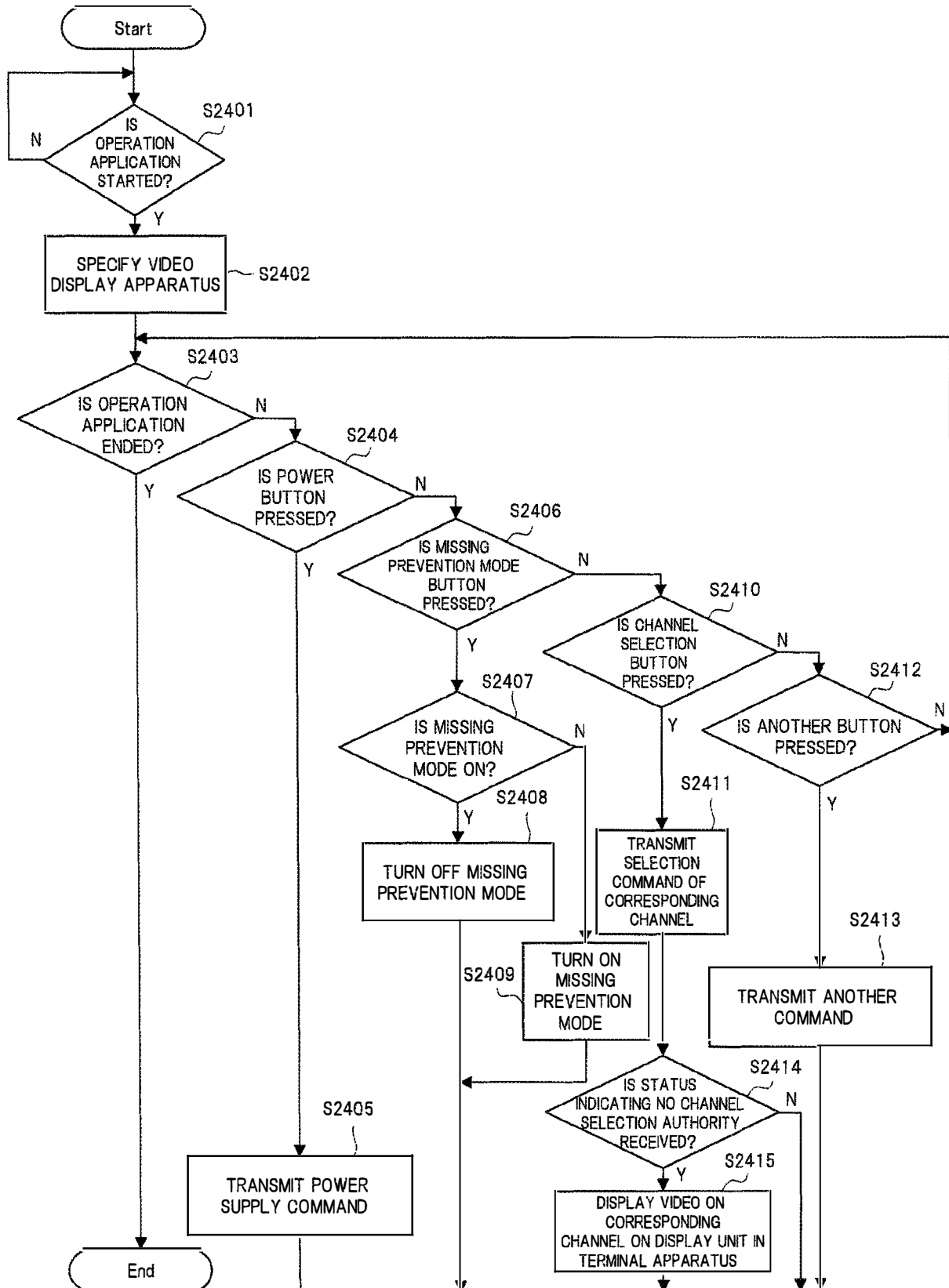


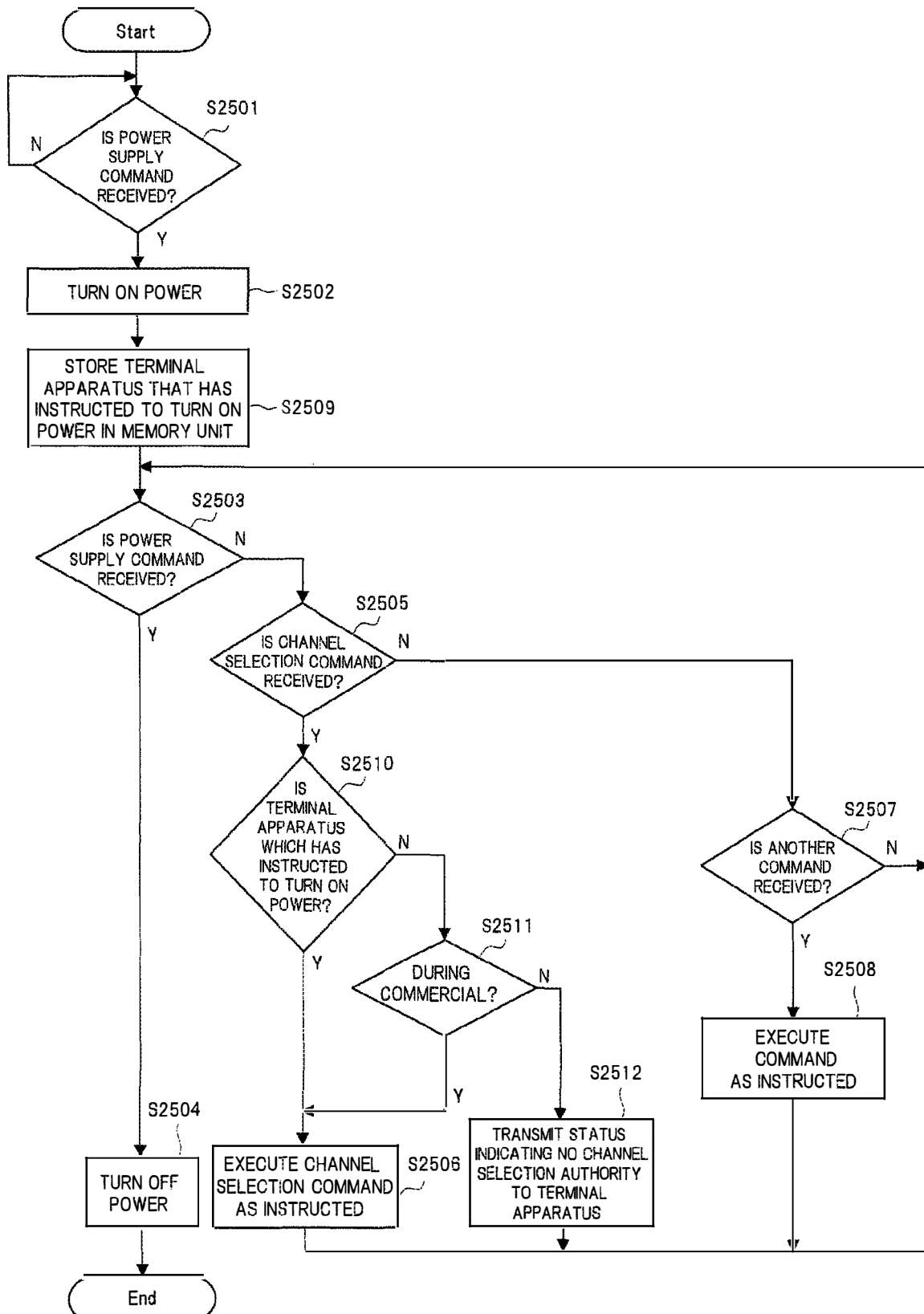
FIG. 23



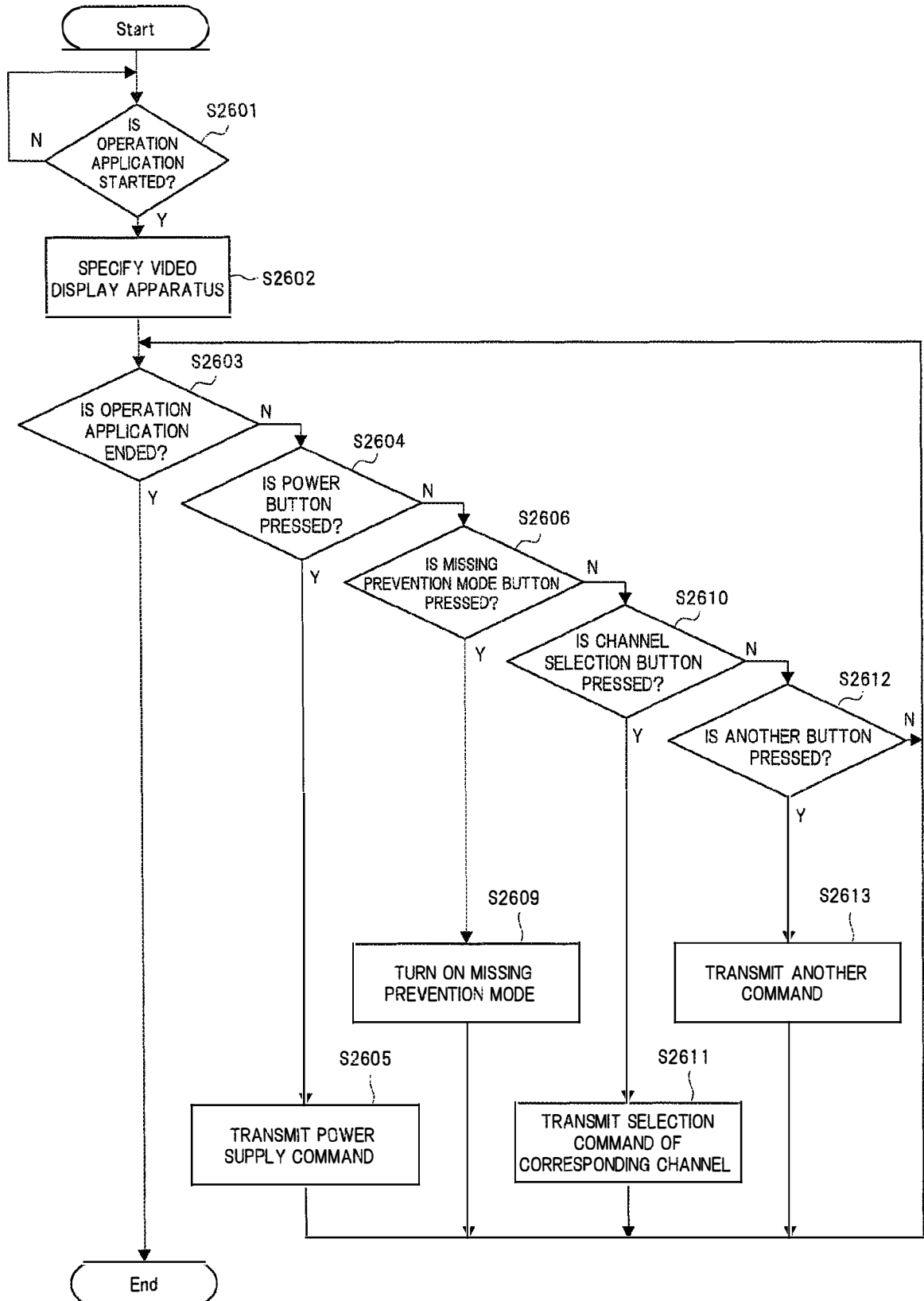
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FIG. 24



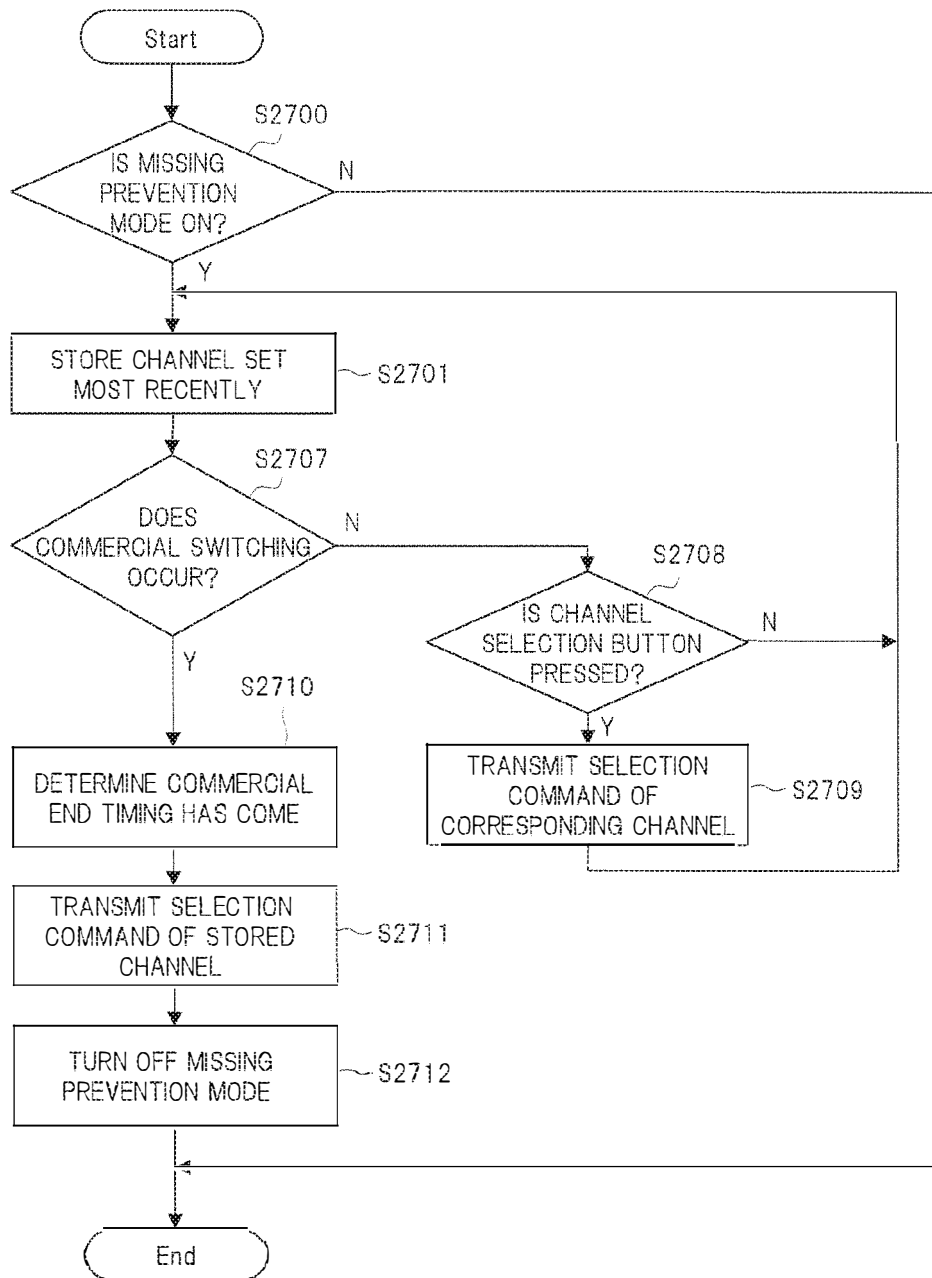
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FIG. 25



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FIG. 26



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FIG. 27



申請データシート(37 CFR 1.76)を使った実用及び意匠登録出願宣言書(37 CFR 1.63)
DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET
(37 CFR 1.76)

発明の名称
Title of
Invention

VIDEO DISPLAY APPARATUS AND TERMINAL APPARATUS

下記発明者である私は、つぎのことがらを宣誓します。
As the below named inventor, I hereby declare that:

本宣誓は
This declaration
is directed to:



添付されている、あるいは
The attached application, or



____年____月____日に提出された米国出願番号またはPCT国際出願番号____に宛てられています。
United States application or PCT international application number PCT/JP2013/079953 filed on 6/November/2013.

上記の出願は私自身、あるいは私が権限を授与したものによって行われたものです。
The above-identified application was made or authorized to be made by me.

私は本出願書中にあらわれるもとの発明者、あるいはもとの共同発明者です。
I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.

本宣誓書において故意に虚偽の申し立てを行った場合は 18 U.S.C. 1001 により、罰金あるいは最高五(5)年の禁固刑、あるいはその両方による罰則の対象となることを認めます。

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

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発明者の正式氏名
LEGAL NAME OF INVENTOR

発明者: Masayuki HIRABAYASHI
Inventor:

日付(任意): Aug 15, 2013
Date (Optional):

署名: Masayuki Hirabayashi
Signature:

備考: 出願データシート(PTO/SB/14 あるいはその同等用紙)は、発明の自主独立体全体の命名を含め、本用紙に添付すること。なお残余の発明者ごとに PTO/SB/AIA01 用紙を使用する。

Note: An application data sheet(PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form. Use an additional PTO/SB/AIA01 form for each additional inventor.

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NOTE: This form is to be submitted with the Power of Attorney by Applicant form (PTO/AIA/82B) to identify the application to which the Power of Attorney is directed, in accordance with 37 CFR 1.5, unless the application number and filing date are identified in the Power of Attorney by Applicant form. If neither form PTO/AIA/82A nor form PTO/AIA/82B identifies the application to which the Power of Attorney is directed, the Power of Attorney will not be recognized in the application.

Application Number	Not Yet Assigned		
Filing Date			
First Named Inventor	Masayuki HIRABAYASHI		
Title	VIDEO DISPLAY APPARATUS AND TERMINAL APPARATUS		
Art Unit	N/A		
Examiner Name	Not Yet Assigned		
Attorney Docket Number	075425-0061		
SIGNATURE of Applicant or Patent Practitioner			
Signature	/Tomoki Tanida/	Date (Optional)	February 6, 2018
Name	Tomoki Tanida	Registration Number	60,453
Title (if Applicant is a juristic entity)			
Applicant Name (if Applicant is a juristic entity)			
NOTE: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4(d) for signature requirements and certifications. If more than one applicant, use multiple forms.			
☒	*Total of <u>1</u> forms are submitted.		

POWER OF ATTORNEY TO PROSECUTE APPLICATIONS BEFORE THE USPTO

I hereby revoke all previous powers of attorney given in the application identified in the attached statement under 37 CFR 3.73(c).

I hereby appoint:



Practitioners associated with Customer Number:

20277

OR



Practitioner(s) named below (if more than ten patent practitioners are to be named, then a customer number must be used):

Name	Registration Number

Name	Registration Number

As attorney(s) or agent(s) to represent the undersigned before the United States Patent and Trademark Office (USPTO) in connection with any and all patent applications assigned only to the undersigned according to the USPTO assignment records or assignments documents attached to this form in accordance with 37 CFR 3.73(c).

Please change the correspondence address for the application identified in the attached statement under 37 CFR 3.73(c) to:



The address associated with Customer Number:

20277

OR

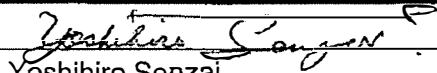
☐ Firm or Individual Name			
Address			
City			
Country			
Telephone		Email	

Assignee Name and Address: Hitachi Maxell, Ltd.
1-88, Ushitora 1-chome, Ibaraki-shi, Osaka, Japan

A copy of this form, together with a statement under 37 CFR 3.73(c) (Form PTO/SB/96 or equivalent) is required to be filed in each application in which this form is used. The statement under 37 CFR 3.73(c) may be completed by one of the practitioners appointed in this form, and must identify the application in which this Power of Attorney is to be filed.

SIGNATURE of Assignee of Record

The individual whose signature and title is supplied below is authorized to act on behalf of the assignee

Signature		Date	03/02/2015
Name	Yoshihiro Senzai	Telephone	
Title	President & Chief Executive Officer		

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If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:	:	Customer Number: 20277
Masayuki HIRABAYASHI	:	
	:	
Application No.: Not Yet Assigned	:	Confirmation No.: N/A
	:	
Filed: Concurrently Herewith	:	Art Unit: N/A
	:	
For: VIDEO DISPLAY APPARATUS AND TERMINAL APPARATUS	:	Examiner: Not Yet Assigned

INFORMATION DISCLOSURE STATEMENT (IDS)

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Pursuant to 37 C.F.R. §§ 1.56, 1.97, and 1.98, the attention of the United States Patent and Trademark Office is hereby directed to the references listed on the attached PTO/SB/08. It is respectfully requested that the information be expressly considered during the prosecution of the above-identified application, and that the references be made of record therein and appear among the "References Cited" on any patent to issue therefrom.

This Information Disclosure Statement accompanies the new patent application submitted herewith.

Copies of the references on the PTO/SB/08 are not provided as they were previously cited by or submitted to the Office in prior parent application number 14/649,895 and relied on in the above-identified application for an earlier effective filing date under 35 U.S.C. § 120.

In accordance with 37 C.F.R. § 1.97(g), the filing of this Information Disclosure Statement shall not be construed as a representation that a search has been made. In accordance with 37 C.F.R. § 1.97(h), the filing of this Information Disclosure Statement shall not be construed

to be an admission that the information cited in this Information Disclosure Statement is, or is considered to be, material to the patentability as defined in 37 C.F.R. § 1.56(b).

It is submitted that the Information Disclosure Statement is in compliance with 37 C.F.R. § 1.98, and the Examiner is respectfully requested to consider the listed references.

Applicant believes no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 50-0417, under Order No. 075425-0061 from which the undersigned is authorized to draw.

Respectfully submitted,

MCDERMOTT WILL & EMERY LLP

/Tomoki Tanida/

Tomoki Tanida
Registration No. 60,453

500 North Capitol Street, N.W
Washington, DC 20001
Phone: (202) 756-8196 TT:mec
Facsimile: (202) 756-8087
Date: February 6, 2018

**Please recognize our Customer No. 20277 as
our correspondence address.**

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)

Application Number		
Filing Date		2018-02-06
First Named Inventor	Masayuki HIRABAYASHI	
Art Unit	N/A	
Examiner Name	Not Yet Assigned	
Attorney Docket Number	075425-0061	

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Examiner Initial*	Cite No	Patent Number	Kind Code ¹	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	6476825	B1	2002-11-05	Croy et al.	
	2	8223662	B2	2012-07-17	Deshpande et al.	
	3	8749426	B1	2014-06-10	Hastings et al.	
	4	6317168	B1	2001-11-13	Seo	

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	1	20090070840	A1	2009-03-12	Kamimaki et al.	
	2	20030043789	A1	2003-03-06	Kajima et al.	

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Not for submission under 37 CFR 1.99)

Application Number		
Filing Date		2018-02-06
First Named Inventor	Masayuki HIRABAYASHI	
Art Unit	N/A	
Examiner Name	Not Yet Assigned	
Attorney Docket Number	075425-0061	

3	20140118625	A1	2014-05-01	Cho
4	20110164188	A1	2011-07-07	Karaoguz et al.
5	20110032424	A1	2011-02-10	VanDuyn et al.
6	20120084653	A1	2012-04-05	Kota et al.
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9	20100157978	A1	2010-06-24	Robbins et al.
10	20030064709	A1	2003-04-03	Gailey et al.
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12	20090201855	A1	2009-08-13	Weniger et al.
13	20030091030	A1	2003-05-15	Yegin et al.

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Not for submission under 37 CFR 1.99)

Application Number		
Filing Date		2018-02-06
First Named Inventor	Masayuki HIRABAYASHI	
Art Unit	N/A	
Examiner Name	Not Yet Assigned	
Attorney Docket Number	075425-0061	

14	20130330053	A1	2013-12-12	Lee et al.
15	20100053441	A1	2010-03-04	Tokashiki et al.
16	20130312040	A1	2013-11-21	Kim et al.
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18	20140229994	A1	2014-08-14	Fell et al.
19	20120173753	A1	2012-07-05	Moorthy
20	20120054790	A1	2012-03-01	Kim
21	20130031594	A1	2013-01-31	Sansom et al.
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23	20110085088	A1	2011-04-14	Modi et al.
24	20100058414	A1	2010-03-04	Kyals et al.

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Not for submission under 37 CFR 1.99)

Application Number		
Filing Date		2018-02-06
First Named Inventor	Masayuki HIRABAYASHI	
Art Unit	N/A	
Examiner Name	Not Yet Assigned	
Attorney Docket Number	075425-0061	

25	20080201736	A1	2008-08-21	Gordon et al.
26	20100031288	A1	2010-02-04	Scott et al.
27	20120223819	A1	2012-09-06	Burgess et al.
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30	20070127408	A1	2007-06-07	Sakamoto
31	20080165906	A1	2008-07-10	Ho et al.
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33	20090058597	A1	2009-03-05	Shibagaki et al.
34	20100023975	A1	2010-01-28	Gupta et al.
35	20060204229	A1	2006-09-14	Onodera

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Not for submission under 37 CFR 1.99)

Application Number		
Filing Date		2018-02-06
First Named Inventor	Masayuki HIRABAYASHI	
Art Unit	N/A	
Examiner Name	Not Yet Assigned	
Attorney Docket Number	075425-0061	

36	20060245734	A1	2006-11-02	Amano et al.
37	20080238755	A1	2008-10-02	Cruz et al.
38	20090055540	A1	2009-02-26	Foti et al.
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44	20110072459	A1	2011-03-24	Hiraoka
45	20120026299	A1	2012-02-02	Arai

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Application Number		
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First Named Inventor	Masayuki HIRABAYASHI	
Art Unit	N/A	
Examiner Name	Not Yet Assigned	
Attorney Docket Number	075425-0061	

Examiner Initial*	Cite No	Foreign Document Number ³	Country Code ²	Kind Code ⁴	Publication Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear	T ⁵
	1	2009-65305	JP	A	2009-03-26	Hitachi Ltd.		
	2	2001-275090	JP	A	2001-10-05	Matsushita Electric Ind. Co., Ltd.		
	3	2007-251369	JP	A	2007-09-27	Sharp Corp.		
	4	2007-208872	JP	A	2007-08-16	Seiko Epson Corp.		
	5	2003-69906	JP	A	2003-03-07	Pioneer Electronic Corp.		
	6	08-008668	JP	A	1996-01-12	Fujitsu Ltd.		
	7	2010-074579	JP	A	2010-04-02	Sony Corp.		
	8	101510965	CN	A	2009-08-19	Shenzhen Temobi Technology Development Co., Ltd.	(With English Abstract and Translation)	
	9	101951368	CN	A	2011-01-19	Shenzhen Coship Electronics Co., Ltd.	(With English Abstract and Translation)	

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Application Number	
Filing Date	2018-02-06
First Named Inventor	Masayuki HIRABAYASHI
Art Unit	N/A
Examiner Name	Not Yet Assigned
Attorney Docket Number	075425-0061

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T ⁵
	1	Office Action issued in corresponding Chinese Patent Application No. 201380063530.4, dated July 4, 2017 with English Translation.	
	2	International Search Report issued in corresponding International Application No. PCT/JP2013/079953, dated February 18, 2014, with English Translation.	
	3	Non-Final Office Action issued in corresponding parent Application No. 14/649,895, mailed on May 26, 2017.	
	4	Non-Final Office Action issued in corresponding parent Application No. 14/649,895, mailed on January 4, 2016.	
	5	Final Office Action issued in corresponding parent Application No. 14/649,895, mailed on September 9, 2016.	
	6	Notice of Allowance issued in corresponding U.S. Patent Application No. 14/649,895, mailed on November 29, 2017.	

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Examiner Signature		Date Considered	
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. ² Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). ³ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁴ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁵ Applicant is to place a check mark here if English language translation is attached.

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Not for submission under 37 CFR 1.99)

Application Number	
Filing Date	2018-02-06
First Named Inventor	Masayuki HIRABAYASHI
Art Unit	N/A
Examiner Name	Not Yet Assigned
Attorney Docket Number	075425-0061

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Tomoki Tanida/	Date (YYYY-MM-DD)	2018-02-06
Name/Print	Tomoki Tanida	Registration Number	60,453

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

**CERTIFICATION AND REQUEST FOR PRIORITIZED EXAMINATION
UNDER 37 CFR 1.102(e) (Page 1 of 1)**

First Named Inventor:	Masayuki HIRABAYASHI	Nonprovisional Application Number (if known):	
Title of Invention:	VIDEO DISPLAY APPARATUS AND TERMINAL APPARATUS		

APPLICANT HEREBY CERTIFIES THE FOLLOWING AND REQUESTS PRIORITIZED EXAMINATION FOR THE ABOVE-IDENTIFIED APPLICATION.

1. The processing fee set forth in 37 CFR 1.17(i)(1) and the prioritized examination fee set forth in 37 CFR 1.17(c) have been filed with the request. The publication fee requirement is met because that fee, set forth in 37 CFR 1.18(d), is currently \$0. The basic filing fee, search fee, and examination fee are filed with the request or have been already been paid. I understand that any required excess claims fees or application size fee must be paid for the application.
2. I understand that the application may not contain, or be amended to contain, more than four independent claims, more than thirty total claims, or any multiple dependent claims, and that any request for an extension of time will cause an outstanding Track I request to be dismissed.
3. The applicable box is checked below:

I. ☒ Original Application (Track One) - Prioritized Examination under § 1.102(e)(1)

- i. (a) The application is an original nonprovisional utility application filed under 35 U.S.C. 111(a). This certification and request is being filed with the utility application via EFS-Web.
---OR---
(b) The application is an original nonprovisional plant application filed under 35 U.S.C. 111(a). This certification and request is being filed with the plant application in paper.
- ii. An executed inventor's oath or declaration under 37 CFR 1.63 or 37 CFR 1.64 for each inventor, or the application data sheet meeting the conditions specified in 37 CFR 1.53(f)(3)(i) is filed with the application.

II. ☐ Request for Continued Examination - Prioritized Examination under § 1.102(e)(2)

- i. A request for continued examination has been filed with, or prior to, this form.
- ii. If the application is a utility application, this certification and request is being filed via EFS-Web.
- iii. The application is an original nonprovisional utility application filed under 35 U.S.C. 111(a), or is a national stage entry under 35 U.S.C. 371.
- iv. This certification and request is being filed prior to the mailing of a first Office action responsive to the request for continued examination.
- v. No prior request for continued examination has been granted prioritized examination status under 37 CFR 1.102(e)(2).

Signature <u>/Tomoki Tanida/</u>	Date <u>February 6, 2018</u>
Name (Print/Typed) <u>Tomoki Tanida</u>	Practitioner Registration Number <u>60,453</u>

Note: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4(d) for signature requirements and certifications. Submit multiple forms if more than one signature is required.*

☐

*Total of _____ forms are submitted.

Privacy Act Statement

The **Privacy Act of 1974 (P.L. 93-579)** requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
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6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (*i.e.*, GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
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9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Electronic Patent Application Fee Transmittal

Application Number:				
Filing Date:				
Title of Invention:	VIDEO DISPLAY APPARATUS AND TERMINAL APPARATUS			
First Named Inventor/Applicant Name:	Masayuki HIRABAYASHI			
Filer:	Tomoki Tanida/Marcus Cunningham			
Attorney Docket Number:	075425-0061			
Filed as Large Entity				
Filing Fees for Track I Prioritized Examination - Nonprovisional Application under 35 USC 111(a)				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
UTILITY APPLICATION FILING	1011	1	300	300
UTILITY SEARCH FEE	1111	1	660	660
UTILITY EXAMINATION FEE	1311	1	760	760
REQUEST FOR PRIORITIZED EXAMINATION	1817	1	4000	4000
Pages:				
Claims:				
Miscellaneous-Filing:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
PUBL. FEE- EARLY, VOLUNTARY, OR NORMAL	1504	1	0	0
PROCESSING FEE, EXCEPT PROV. APPLS.	1830	1	140	140
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				5860

Electronic Acknowledgement Receipt

EFS ID:	31714110
Application Number:	15889735
International Application Number:	
Confirmation Number:	3694
Title of Invention:	VIDEO DISPLAY APPARATUS AND TERMINAL APPARATUS
First Named Inventor/Applicant Name:	Masayuki HIRABAYASHI
Customer Number:	20277
Filer:	Tomoki Tanida/Marcus Cunningham
Filer Authorized By:	Tomoki Tanida
Attorney Docket Number:	075425-0061
Receipt Date:	06-FEB-2018
Filing Date:	
Time Stamp:	15:41:42
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	\$ 5860
RAM confirmation Number	020718INTEFSW00002595500417
Deposit Account	500417
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The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

37 CFR 1.16 (National application filing, search, and examination fees)

37 CFR 1.17 (Patent application and reexamination processing fees)

Exhibit 1002

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37 CFR 1.19 (Document supply fees)
37 CFR 1.20 (Post Issuance fees)
37 CFR 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Transmittal of New Application	Transmittal.pdf	32171	no	1
			9e379b5dc92df34ecc8525200223aee773768e6		
Warnings:					
Information:					
2	Fee Worksheet (SB06)	Fees.pdf	30126	no	1
			5cbc7d817a510669f73df359355547c875432b8b		
Warnings:					
Information:					
3	Application Data Sheet	ADS.pdf	1822662	no	8
			ab970b8e0afa82c3b679835aa3a6b55721e3929e		
Warnings:					
Information:					
4		Specification.pdf	232330	yes	54
			19835634402ee140b7e05fca601237c189ea3f26		
	Multipart Description/PDF files in .zip description				
	Document Description		Start	End	
	Specification		1	48	
	Claims		49	53	
	Abstract		54	54	
Warnings:					
Information:					
5	Drawings-only black and white line drawings	Figures.pdf	2396006	no	29
			03d535657aa48cf677d0ca3a323962f5337cfbcb		
Exhibit 1002					

Exhibit 1002

Warnings:					
Information:					
6	Oath or Declaration filed	Declaration.pdf	91721	no	1
			4b97994b9d4fa2e3a57972e0a688c8bc9127ab5b		
Warnings:					
Information:					
7	Power of Attorney	POA.pdf	91858	no	2
			c65ed8a97a0d9a0d3ac0f252945683d50b3608f7		
Warnings:					
Information:					
8	Transmittal Letter	IDS_Transmittal.pdf	21232	no	2
			c27a5addac580f0151e61d0882a2809799e8fcbd		
Warnings:					
Information:					
9	Information Disclosure Statement (IDS) Form (SB08)	IDS.pdf	1037037	no	9
			e107a6acd9535ecbb59906d0b7e5289cbe1b40e7		
Warnings:					
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10	TrackOne Request	Track_One.pdf	113897	no	2
			4ca299d1c0731a3b24c3638c4df23d1f76de0c71		
Warnings:					
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11	Fee Worksheet (SB06)	fee-info.pdf	40209	no	2
			82dfb45891f187a355075477ce101b5d92076e6a		
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If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

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Document code: WFEE

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