

Description

FIELD OF THE INVENTION

This invention concerns the field of radio/VCR/television receiver input signal switching controls.

BACKGROUND OF THE INVENTION

It is standard practice in the United States for broadcasters to insert into program material, at various points, a number of commercial messages of the program's sponsors. Many viewers find these messages to be an irritating interruption of their viewing pleasure.

Accordingly, many techniques have been devised in an effort to avoid being subjected to these commercial messages. One such technique is to merely mute the sound via, for example, a mute push-button on a remote control handunit. A remote control having such a mute function is known from the RCA CRK33 remote control transmitter handunit manufactured by Thomson Consumer Electronics, Inc., Indianapolis, Indiana. Unfortunately, muting the sound does not remove the video of the unwanted commercial message, and the viewer must watch the commercial in order to know when it has ended, and therefore, when the viewer can "unmute" the sound.

An improved sound muting technique is known from US-A- 3,870,956 (Wolff) issued 11 March 1975. Wolff discloses a circuit to mute the sound of a television receiver for a predetermined time, at the end of which time the receiver sound circuitry is automatically unmuted. The circuitry of Wolff, however, does not affect the video, and thus a viewer is subjected to a series of silent commercial messages.

Of course, a viewer may simply tune to a second channel when a commercial message is displayed on the first tuned channel. A problem with this technique is that the viewer has no way of knowing when the commercial message on the first channel is finished. Consequently, the viewer may be late in returning to the first channel, and may miss a portion of the program he was watching.

SUMMARY OF THE INVENTION

In order to overcome the above-stated problems, it is desirable that a tuning system include a timer circuit which can be enabled by a user, before changing channels to avoid a commercial message, and a memory circuit which, in response to the enabling of the timer, stores data indicative of the currently tuned channel. The timer circuit would, upon expiration of a predetermined time period, return the tuning system to the original channel by use of the stored channel data.

An apparatus according to the invention comprises the features defined in claim 1.

In an embodiment of the invention, a television system having picture-in-picture (PIX-IN-PIX) capability, that is, the capability to produce signals which when displayed include a first program in a main viewing area of a display screen and a second program in a secondary (inset) viewing area of same display screen, switches a first program currently selected to occupy the main viewing area to the secondary viewing area in response to the sequence of the enabling of a timer, and a selection of a different program. Upon expiration of the timer period, the first program is redisplayed in the main viewing area.

In another embodiment of the invention, the controller allows selection of signals from different signal sources such as a VCR, compact disc player, AM/FM stereo tuner or the like, to be substituted for the signal from any other of these sources, during the timed period. Upon expiration of the timed period, the originally selected signal source will be reselected.

BRIEF DESCRIPTION OF THE DRAWING

FIGURE 1 shows in block diagram form a system suitable for use with the invention.

FIGURE 2 illustrates a remote control handunit suitable for use with the invention.

FIGURES 3 and 4 are flowcharts of a program used by the controller of FIGURE 1, and are useful in understanding the invention.

FIGURE 5 illustrates a display screen suitable for use with an aspect of the invention.

FIGURE 6 illustrates, in block diagram form, apparatus suitable for use with another aspect of the invention.

DETAILED DESCRIPTION OF THE EMBODIMENTS

The invention will now be described with respect to an embodiment in a television receiver environment, however, it should be understood that the invention is equally applicable to radio receivers and videocassette recorders (VCRs).

Referring to FIGURE 1, an antenna 100 receives radio frequency (RF) signals and applies them to a tuner assembly 102. Tuner assembly 102 selects and amplifies a particular RF signal under control of a tuner controller 104 which provides bandswitching signals and tuning voltage signals to tuner assembly 102 via a band switch 106.

Tuner assembly 102 converts the received RF signal to an intermediate frequency (IF) signal and provides IF output signal to IF amplifier and detector 108. IF amplifier and detector 108 amplifies the IF signal applied to its input terminal and detects the video information contained therein. This detected video

information is then applied as one input to a video multiplexer switch unit 110, the other input of which is connected to a video input terminal 112.

Tuner controller 104 generates the before-mentioned tuning voltage signals and bandswitching signals in response to control signals applied from a system control microcomputer MC 114. Microcomputer 114 receives user-initiated commands from an infrared (IR) receiver 116 and from a keyboard 118. Microcomputer 114 includes program memory (ROM) (not shown) and stores channel-related data in a random access memory (RAM) 120. RAM 120 may be of either the volatile or non-volatile type. One skilled in the art will recognize that if volatile memory is utilized that it may be desirable to use a suitable form of standby power to preserve its contents when the receiver is tuned off.

Video multiplexer switch unit 110, under control of system control microcomputer 114, selects either a video signal derived from a received RF signal, or a video signal input at terminal 112, for connection to a video signal processor (not shown).

IR receiver 116 receives IR signals transmitted by, for example, a remote control handunit such as the one shown in FIGURE 2 and designated 200. Remote control handunit 200 may include keys 202 for entering the digits 0-9, for entering channel up and channel down commands and for turning the receiver on and off. Remote control handunit 200 may also include a key 204 (labelled ANT) for selecting, as a signal source, either the antenna, or a video input terminal, via control of multiplexer switch unit 110. Remote control handunit 200 may also include a key 206 (labelled TIMER), a key 208 (labelled CLEAR), and a key 320 (labelled SWAP), the operation of which will be described below. Remote control handunit 200 includes therein electronic circuitry (not shown) for encoding a signal to be transmitted by an IR diode 212 in accordance with the particular keys pressed.

Operation of the apparatus illustrated in FIGURES 1 and 2 will now be described with reference to FIGURES 3 and 4.

If a viewer is watching a television program on, for example, channel 3, and the television program is interrupted for a commercial message, the viewer may avoid receiving the commercial message by pressing timer key 206 of remote control handunit 200, and then tuning other channels in the usual way.

When system control microcomputer 114 receives IR or keyboard data, it enters a keycode decoding routine, the relevant portion of which is shown in the flowchart of FIGURE 3. The illustrated portion of the decoding program first checks (step 300) to see if the received code is the CLEAR keycode. If the CLEAR key has been pressed, then the timing function will be terminated, and the receiver will not automatically return to the stored channel. If the received keycode is not the CLEAR keycode, the routine next

checks (step 310) for the "commercial timer" or TIMER keycode. If the TIMER keycode is not received, the program is exited (step 315). However, if the TIMER keycode is received, the program determines if the commercial timer is active (step 320). If not, the current status of the antenna switch is stored (step 325) (if the receiver is so equipped), data indicative of the currently tuned station is stored in memory 120, the commercial timer active flag is set (step 330), and the timer count is set to an initial time period of 30 seconds (commercial messages, often simply referred to as "commercials" are usually presented in multiples of 30 seconds in the United States). The time remaining in the count is displayed on the display screen via an on-screen display (OSD) integrated circuit 335. Displaying the remaining time on the receiver screen reminds the viewer that he has selected the timer function, and that at the end of the timer period, the receiver will automatically return the tuner to the channel watched when the timer function was initiated, unless the viewer cancels the timer function by pressing the "clear" key. This feature prevents a viewer (who may have forgotten that he engaged the timer) from being surprised when the stored channel is automatically returned upon the expiration of the timer period.

If during the decoding of the received keycode it is determined that the keycode is the TIMER keycode and the timer is already active, then the time period is incremented by 30 seconds (step 340). Because the timer is already active, and channel data is already stored, it is assumed that the viewer merely wants to extend the time for viewing the currently tuned channel. Therefore, upon second and subsequent TIMER keypresses, data relating to the currently tuned channel is not stored. The maximum time period may be set to any value by the system designer and programmed into system ROM. In the illustrated embodiment the maximum time period is 1 hour (step 350). If the timer period is incremented by a viewer beyond 59 minutes, the preferred operation is that the timer "wraps around" to 0 minutes without clearing the seconds (step 360). This operation is preferred because the viewer has selected the timer function, and therefore the timer function should be performed. In this case, the timer function is executed by timing the remaining seconds until 0:00. Alternatively, incrementing beyond 59 minutes could be treated in the same way as a CLEAR command. This is not preferred because the viewer, in this case, has selected the timer function, and has not issued a CLEAR command, but nonetheless, the timer function is terminated.

Of course, the timer period need not be incremented in discrete units of 30 seconds as described above. Alternatively, the timer period may be entered digit by digit via the numbered keys of remote control handunit 200, after a initial activation of the TIMER

key.

The portion of the program of microcomputer 114 illustrated by the flowchart of FIGURE 4 is entered once each second in response to an interrupt (which may be derived by a counter (not shown) counting cycles of the AC line). Upon entering this portion of the program, microcomputer 114 checks to see if the commercial timer is active (step 400). If not, the routine is exited. If so, a check of time remaining is made (step 405), and if the timer count is not equal to 0 minutes, 0 seconds, the count is decremented by 1 second (step 410), the remaining time is sent to the OSD circuit for display (step 415), and the routine is exited (step 420). If the time in the counter is equal to 0 minutes, 0 seconds, then the channel memory 120 is addressed, and a comparison made (step 425) to determine if the receiver is currently tuned to the channel which was tuned when the timer key was pressed. (If the receiver is equipped with a video multiplexer switch unit 110 for switching between an antenna derived signal and a baseband video signal, then a check of video multiplexer switch unit status would also be made.) If the receiver is tuned to the same channel, then no action need be taken other than to clear the commercial timer active flag (step 430), and remove the "time remaining" display from the screen (step 435). If the current channel (or video multiplexer switch unit status) is different from the stored channel (or video multiplexer switch unit status) then the commercial timer active flag is cleared (step 440), the stored channel selected and the video multiplexer switch unit status, if applicable, is restored (step 445), and the program exited (step 450).

In another embodiment of the invention, a television system (i.e. television receiver, VCR, or video-disc player) includes PIX-IN-PIX (picture-in-picture) capability wherein a secondary television picture, derived from a different source than the main picture, is displayed in smaller form and is usually located in an inset in a corner of the television screen.

FIGURE 5 illustrates such a PIX-IN-PIX display on a television screen 500. The main picture 510 is displayed over the majority of the display screen, while the secondary picture is displayed in an inset 520 in smaller form. The positions of the programs displayed as the main picture and secondary picture may be interchanged by the use of a SWAP key 210 on remote control handunit 200.

When a commercial message appears in a first program (displayed as the main picture), a viewer, in accordance with another aspect of this invention, may start the timer and, by changing channels move the first program to the inset position, and the newly selected channels to the main position. In this way, the first program is displayed in the inset position, and the viewer is free to change the channel displayed in the main screen during the timer period. The first program will return automatically to the main display

area when the timer period expires. The time remaining 530 is displayed on the screen as a reminder to the viewer that the timer is engaged, and that the original program will be redisplayed in the main screen at the end of the timer period. Note that the first program is transferred to the inset position only if a different channel had been selected. If no different channel is selected, then only a timer function is enabled, with no video signal switching required. Note that upon expiration of the timed period, the original program can alternatively be redisplayed over the entirety of the screen, thus cancelling the PIX-IN-PIX function.

Although the diagram of FIGURE 1 shows a single tuner and a separate video input, the scope of the invention is intended to encompass signals derived from multiple tuners, or multiple baseband sources (audio or video) or any combination thereof, so long as signal selection data relating to a first signal is stored, a timer is engaged and the stored signal selection data is used to automatically reselect the first signal when the time period expires.

In this regard, and in accordance with another aspect of the invention, the system controller may control more than one kind of signals. For example, the RCA Dimensia System manufactured by Thomson Consumer Electronics, Inc., Indianapolis, Indiana, controls, via a common control bus, various audio and video sources, such as an audio amplifier, an AM/FM stereo tuner, a compact disc player, and a VCR, in addition to controlling a video monitor.

If the present invention were incorporated into such a system, then it would be possible to engage the timer when a television or radio commercial begins, and via commands on the common control bus, switch to another signal source such as a CD player to listen to music during the timer period. The controller would, as described above, return to the original signal source upon the expiration of time period. Such a system is illustrated in simplified form in FIGURE 6. Similarly numbered elements in FIGURES 1 and 6 perform similar functions. The elements numbered 600'-612', and 604" provide for alternate selection of audio sources in similar fashion to alternate selection of images. For example, CD player 612' provides a baseband audio signal, and is thus similar to terminal 612 at which is developed a baseband video signal. Note that in this case, the "tuning" information stored also includes which device was active when the timer was engaged.

As shown in FIGURE 6 an audio multiplexer switch unit 610' is capable of selecting television audio signals, radio audio signals, or CD player audio signals, for further processing by an audio signal processor (not shown). Thus, during a television commercial message, system control microcomputer 614 may condition audio multiplexer switch unit 610' to disconnect the television audio signal and allow the user to substitute, during the timer period, an audio

signal from either the radio or a CD player. For simplicity, the controller for a VCR is not shown, but it is to be understood that the video signals developed at terminal 612 may be provided by a VCR.

Claims

1. Apparatus for use in a television receiver, comprising:

data input means (116;118) for generating data in response to activation by a user;

video signal selecting means (102;104;106;110) including tuning means (102;104;106) responsive to a video signal selection control signal for selecting a television (TV) channel from a plurality of RF signals corresponding to respective television channels applied thereto;

control means (114) coupled to said data input means (116;118) and to said selecting means for generating said video signal selection control signal in response to said data for controlling the selection of said particular signal from said plurality of signals;

said control means having an input for receiving a timer start signal;

said control means including timer means responsive to said timer start signal for timing a predetermined time period; and

memory means (120)

coupled to said control means,

characterized in that

said memory means stores in response to said timer start signal data relating to said video signal selection control signal;

said control means (114)

causes said memory means to store video signal selection data indicative of the currently selected video signal, and causes said timing means to begin timing said predetermined time period, and, upon expiration of said predetermined time period, said control means causes said video signal selection means to reselect said selected video signal in accordance with said stored video signal selection data, if said video signal selection means were controlled to select a different video signal after the occurrence of said timer start signal and during said predetermined time period.

2. Apparatus according to claim 1 characterized in that

said control means (114) is a microcomputer.

3. Apparatus according to claim 2 further including on-screen display means (on-screen display circuit) coupled to said control means (114) for producing a signal for display on a display screen,

characterized in that

said on-screen display means produces a signal indicative of the time remaining in said predetermined timing period.

4. Apparatus according to claim 1, characterized in that

said predetermined timing period is changed in response to said data input by a user.

5. Apparatus according to claim 3 or 4, wherein said video signal selection means further includes a video multiplexer switch unit (110) for selecting a baseband video signal which may be provided by a baseband video signal source,

characterized in that

said video signal selection data includes the state of said video multiplexer switch unit.

6. Apparatus according to claim 5 wherein

said television system further includes means for combining first (510) and second (520) video signals from respective independent sources to produce first and second combined signals, said first combined signal producing when displayed a combined image having a first portion corresponding to said first video signal displayed in a first area of said display screen and a second portion corresponding to said second video signal displayed in a second area of said display screen, characterized in that

said control means (114) causing said memory means (120)

to store, in response to a timer start signal, data indicative of a particular signal to be displayed in said first area of said display screen; said control means (114) being responsive to an occurrence of said timer start signal and the selection of a third signal in that order for causing said combining means to produce said second combined signal wherein said first portion of said image occupies said second screen area when displayed; said control means causing said combining means to produce said first combined signal wherein said first portion of said image occupies said first screen area when displayed, in response to the expiration of said predetermined time period if said first signal had occupied said second screen area after said timer start signal occurred and during said predetermined time period.

7. Apparatus according to claim 6, characterized in that

upon expiration of said predetermined timing period said first signal is caused to occupy the entirety of said display screen.



signal from either the radio or a CD player. For simplicity, the controller for a VCR is not shown, but it is to be understood that the video signals developed at terminal 612 may be provided by a VCR.

Claims

1. Apparatus for use in a television receiver, comprising:

data input means (116;118) for generating data in response to activation by a user;

video signal selecting means (102;104; 106;110) including tuning means (102;104;106) responsive to a video signal selection control signal for selecting a television (TV) channel from a plurality of RF signals corresponding to respective television channels applied thereto;

control means (114) coupled to said data input means (116;118) and to said selecting means for generating said video signal selection control signal in response to said data for controlling the selection of said particular signal from said plurality of signals;

said control means having an input for receiving a timer start signal;

said control means including timer means responsive to said timer start signal for timing a predetermined time period; and

memory means (120)

coupled to said control means,

characterized in that

said memory means stores in response to said timer start signal data relating to said video signal selection control signal;

said control means (114)

causes said memory means to store video signal selection data indicative of the currently selected video signal, and causes said timing means to begin timing said predetermined time period, and, upon expiration of said predetermined time period, said control means causes said video signal selection means to reselect said selected video signal in accordance with said stored video signal selection data, if said video signal selection means were controlled to select a different video signal after the occurrence of said timer start signal and during said predetermined time period.

2. Apparatus according to claim 1 characterized in that

said control means (114) is a microcomputer.

3. Apparatus according to claim 2 further including on-screen display means (on-screen display circuit) coupled to said control means (114) for producing a signal for display on a display screen,

characterized in that

said on-screen display means produces a signal indicative of the time remaining in said predetermined timing period.

4. Apparatus according to claim 1, characterized in that

said predetermined timing period is changed in response to said data input by a user.

5. Apparatus according to claim 3 or 4, wherein said video signal selection means further includes a video multiplexer switch unit (110) for selecting a baseband video signal which may be provided by a baseband video signal source,

characterized in that

said video signal selection data includes the state of said video multiplexer switch unit.

6. Apparatus according to claim 5 wherein

said television system further includes means for combining first (510) and second (520) video signals from respective independent sources to produce first and second combined signals, said first combined signal producing when displayed a combined image having a first portion corresponding to said first video signal displayed in a first area of said display screen and a second portion corresponding to said second video signal displayed in a second area of said display screen, characterized in that

said control means (114) causing said memory means (120)

to store, in response to a timer start signal, data indicative of a particular signal to be displayed in said first area of said display screen; said control means (114) being responsive to an occurrence of said timer start signal and the selection of a third signal in that order for causing said combining means to produce said second combined signal wherein said first portion of said image occupies said second screen area when displayed; said control means causing said combining means to produce said first combined signal wherein said first portion of said image occupies said first screen area when displayed, in response to the expiration of said predetermined time period if said first signal had occupied said second screen area after said timer start signal occurred and during said predetermined time period.

7. Apparatus according to claim 6, characterized in that

upon expiration of said predetermined timing period said first signal is caused to occupy the entirety of said display screen.



Patentansprüche

1. Vorrichtung zum Gebrauch in einem Fernsehempfänger, umfassend:

Dateneingabemittel (116, 118) zur Erzeugung von Daten aufgrund einer Betätigung durch den Benutzer,

Videosignalauswahlmittel (102, 104, 106, 110), die Abstimmittel (102, 104, 106) umfassen, die auf ein Steuerungssignal für die Videosignalauswahl ansprechen, um einen Fernsehkanal aus einer Vielzahl von RF-Signalen auszuwählen, die jeweils daran anliegenden Fernsehkanälen entsprechen,

ein Steuerungsmittel (114), das mit den Dateneingabemitteln (116, 118) und mit den Auswahlmitteln verbunden ist, um das Steuerungssignal für die Videosignalauswahl in Abhängigkeit von den Daten zur Steuerung der Auswahl dieses bestimmten Signals aus der Vielzahl von Signalen zu erzeugen,

wobei dieses Steuerungsmittel einen Eingang zum Empfang eines Zeitschalterstartsignales aufweist,

wobei dieses Steuerungsmittel Zeitschaltermittel enthält, die auf das Zeitschalterstartsignal reagieren, um eine vorher festgelegte Zeit zu stoppen, und

ein Speichermittel (120), das mit diesem Steuerungsmittel verbunden ist,

dadurch gekennzeichnet, daß

das Speichermittel veranlaßt durch das Zeitschalterstartsignal Daten über das Steuerungssignal für die Videosignalauswahl speichert, das Steuerungsmittel (114) das Speichermittel dazu veranlaßt, Videosignalauswahldaten über das zur Zeit ausgewählte Videosignal zu speichern und die Zeitschaltermittel dazu veranlaßt, das Stoppen der vorher festgelegten Zeit zu beginnen und daß das Steuerungsmittel nach Ablauf der vorher festgelegten Zeit die Videosignalauswahlmittel dazu veranlaßt, das gewählte Videosignal in Übereinstimmung mit den gespeicherten Videosignalauswahldaten wieder auszuwählen, wenn die Videosignalauswahlmittel dazu gesteuert worden waren, nach Auftreten des Zeitschalterstartsignals und während der vorher festgelegten Zeit ein anderes Videosignal auszuwählen.

2. Vorrichtung nach Patentanspruch 1, **dadurch gekennzeichnet, daß** das Steuerungsmittel (114) ein Mikrocomputer ist.

3. Vorrichtung nach Patentanspruch 2, außerdem ein Mittel zur Anzeige auf dem Bildschirm ("on-screen display circuit") enthält, das mit dem Steuerungsmittel (114) zur Erzeugung eines Si-

gnals zur Anzeige auf einem Bildschirm verbunden ist, **dadurch gekennzeichnet, daß** das genannte Mittel zur Anzeige auf dem Bildschirm ein Signal erzeugt, das die Restzeit der vorher festgelegten Laufzeit angibt.

4. Vorrichtung nach Patentanspruch 1, **dadurch gekennzeichnet, daß** die vorher festgelegte Laufzeit des Zeitschalters in Reaktion auf vom Benutzer eingegebene Daten geändert wird.

5. Vorrichtung nach Patentanspruch 3 oder 4, bei der das Videosignalauswahlmittel außerdem eine Videomultiplexerschalteneinheit (110) zur Auswahl eines Basisbandvideosignals, das von einer Basisbandvideosignalquelle geliefert werden kann, **enthält, dadurch gekennzeichnet, daß** die Videosignalauswahldaten den Zustand der Videomultiplexerschalteneinheit enthalten.

6. Vorrichtung nach Patentanspruch 5, bei der das Fernsehsystem außerdem Mittel zur Kombination eines ersten (510) und eines zweiten (520) Videosignales von entsprechenden unabhängigen Quellen enthält, um ein erstes und ein zweites kombiniertes Signal zu erzeugen, wobei das erste kombinierte Signal bei Anzeige ein kombiniertes Bild erzeugt, das einen ersten Teil aufweist, der dem ersten Videosignal, angezeigt in einen ersten Bereich des Bildschirms, entspricht und einen zweiten Teil, der dem zweiten Videosignal, angezeigt in einem zweiten Bereich des Bildschirms, entspricht **dadurch gekennzeichnet, daß**

das Steuerungsmittel (114) das genannte Speichermittel (120) dazu veranlaßt, in Reaktion auf ein Zeitschalterstartsignal Daten über ein bestimmtes, im ersten Bereich des Bildschirms anzuzeigendes Signal zu speichern, wobei das Steuerungsmittel (114) auf das Auftreten des Zeitschalterstartsignales und die Auswahl eines dritten Signals in dieser Reihenfolge reagiert, um diese Kombinationsmittel dazu zu veranlassen, das zweite kombinierte Signal zu erzeugen, bei dem der erste Teil des Bildes bei Anzeige den zweiten Bildschirmbereich einnimmt, wobei das Steuerungsmittel das Kombinationsmittel in Reaktion auf das Ablaufen der vorher festgelegten Laufzeit dazu veranlaßt, das genannte erste kombinierte Signal zu erzeugen, bei dem der erste Teil des Bildes bei Anzeige den ersten Bildschirmbereich einnimmt, wenn dieses erste Signal den zweiten Bildschirmbereich eingenommen hatte, nachdem das Zeitschalterstartsignal aufgetreten war und während der vorher festgelegten Laufzeit.

7. Vorrichtung nach Patentanspruch 6, **dadurch**



gekennzeichnet, daß nach Ablauf der vorher festgelegten Laufzeit bewirkt wird, daß das erste Signal den gesamten Bildschirm einnimmt.

Revendications

1. Appareil pour utilisation dans un récepteur de télévision comprenant :
des moyens d'entrée de données (116 ; 118) pour générer des données en réponse à une activation par un utilisateur ;
des moyens de sélection de signal vidéo (102 ; 104 ; 106 ; 110) qui comprennent des moyens d'accord (102 ; 104 ; 106) en réponse à un signal de commande de sélection de signal vidéo pour sélectionner un canal de télévision (TV) à partir d'une pluralité de signaux radioélectriques RF correspondant aux canaux de télévision respectifs qui y sont appliqués ;
des moyens de commande (114) couplés aux moyens d'entrée de données (116 ; 118) et aux moyens de sélection mentionnés pour générer ledit signal de commande de sélection de signal vidéo en réponse aux données indiquées pour commander la sélection du signal particulier mentionné à partir de la pluralité des signaux mentionnés ;
les moyens de commande mentionnés ayant une entrée pour recevoir un signal de départ du minuteur ;
les moyens de commande mentionnés comprenant des moyens de minuterie qui réagissent au signal de départ du minuteur mentionné pour minuter une période de temps prédéterminée et des moyens de mémoire (120) couplés aux moyens de commande mentionnés,
caractérisé en ce que
les moyens de mémoire mentionnés mettent en mémoire, en réponse au signal de départ du minuteur mentionné des données qui concernent ledit signal de commande de sélection du signal vidéo,
les moyens de commande mentionnés (114) provoquent la mise en mémoire par les moyens de mémoire de données de sélection du signal vidéo qui indiquent le signal vidéo actuellement sélectionné et font que les moyens de minuteur commencent le minutage de ladite période de temps prédéterminée et, après expiration de ladite période de temps prédéterminée, les moyens de commande provoquent la resélection du signal vidéo sélectionné par les moyens de sélection de signal vidéo en accord avec les données de sélection du signal vidéo mises en mémoire, si les moyens de sélection de signal vidéo mentionnés étaient commandés pour sélectionner un signal vidéo différent après l'apparition du signal

de départ du minuteur mentionné et pendant la période de temps prédéterminée.

2. Appareil conformément à la revendication 1, **caractérisé en ce que** les moyens de commande mentionnés (114) sont un micro-ordinateur.
3. Appareil conformément à la revendication 2 comprenant en plus des moyens de visualisation sur écran (circuit de visualisation sur écran) couplés aux moyens de commande mentionnés (114) pour produire un signal pour visualisation sur un écran de visualisation, **caractérisé en ce que** les moyens de visualisation sur écran mentionnés produisent un signal qui indique le temps qui reste dans la période de minutage prédéterminée.
4. Appareil conformément à la revendication 1, **caractérisé en ce que** ladite période de minutage prédéterminée est changée en réponse aux données mentionnées entrées par un utilisateur.
5. Appareil conformément à la revendication 3 ou 4 dans lequel les moyens de sélection de signal vidéo comprennent en plus une unité de commutation de multiplexeur vidéo (110) pour sélectionner un signal vidéo de bande de base qui peut être fourni par une source de signal vidéo de bande de base,
caractérisé en ce que
les données de sélection de signal vidéo comprennent l'état de la dite unité de commutation de multiplexeur vidéo.
6. Appareil conformément à la revendication 5 dans lequel
ledit système de télévision comprend en plus des moyens pour combiner le premier (510) et le second (520) signal vidéo de sources indépendantes respectives pour produire le premier et le second signal combiné, ledit premier signal combiné produisant, lorsqu'il est visualisé, une image combinée ayant une première portion qui correspond au premier signal vidéo mentionné visualisé dans une première zone de l'écran de visualisation mentionné et une seconde portion correspondant au second signal vidéo visualisé dans une seconde zone de l'écran de visualisation mentionné, **caractérisé en ce que**
les moyens de commande mentionnés (114) provoquent la mise en mémoire par les moyens de mémoire (120), en réponse à un premier signal de départ de minuteur, des données qui indiquent un signal particulier qui doit être visualisé dans ladite première zone de l'écran de visualisation mentionné, les moyens de commande (114) réagis-



sant à l'apparition du signal de départ de minuteur mentionné et la sélection d'un troisième signal de cet ordre pour faire en sorte que les moyens de combinaison mentionnés produisent ledit second signal combiné dans lequel ladite première portion de l'image occupe ladite seconde zone d'écran lorsqu'il est visualisé, les moyens de commande font en sorte que les moyens de combinaison produisent ledit premier signal combiné dans lequel ladite première portion de l'image occupe ladite première zone d'écran lorsqu'il est visualisé, en réponse à l'expiration de ladite période de temps prédéterminée si ledit premier signal a occupé ladite seconde zone d'écran après l'apparition du signal de départ de minuteur et pendant ladite période de temps prédéterminée.

7. Appareil conformément à la revendication 6, caractérisé en ce qu'après expiration de ladite période de minutage prédéterminée ledit premier signal est poussé à occuper la totalité de l'écran de visualisation.

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