

Flash A/V

Manual

Version 2.0

Akman Inc

Tel: (407) 948 0562 & (407) 847 3998

Fax: (321) 459 1086

<http://www.akman.com>

FLASH AV Manual Version 2.0**INTRODUCTION:**

The Flash A/V player is a self-contained Solid State Video/Audio player housed in a small aluminum enclosure. It is a combination of a DVD player and an Audio MP3 player (SR3) integrated into a custom single chip. This design eliminates all moving part and electronic noise that is usually associated with multi chip and rotating part design. The result is an excellent Video quality surpassing most Video players currently available in the market. The Flash A/V does not require any programming, it has been pre-programmed to play a 2 stage interactive multimedia presentation. The built in program is designed to replace a typical touch screen set up, thus lowering the total exhibit cost. The Flash A/V is a solid state device that will give you years of trouble free operation and at a much lower cost.

VIDEO PLAYTIME:

	1.1MBPS	4 MBPS	10MBPS
32 Meg	4 Min	50 sec	20 sec
128 Meg	16 Min	200 sec	80 sec
1 Gig	2 Hrs	26 Min	11 Min

AUDIO PLAYTIME:

	128KBS	256KBS
32 Meg	30 Min	60 Min
128 Meg	120 Min	240 Min

HOW DOES THE FLASH A/V WORK:

The Flash A/V uses a Compact Flash card to store the Video and Audio files. The file folder structure of the compact flash card is directly related to the input and playback of the Audio/Video files. The Audio/Video files are stored in the root directory and inside up to 8 File folders. After powering up, Flash A/V will loop all video/audio files in the root directory.

This is the HOME position of the Flash AV.

NOTE: *The Flash AV requires at least one video/audio file in the root directory to start. It will not start without one (or more) video/audio file in the root directory.*

From Home position you can select 8 input (8 File Folders). When an input e.g input#1 is triggered, the Flash A/V will immediately go to the associated file folder (file folder #1) and plays the first video file in that file folder once. While playing this first video file, you can set the Flash A/V to play 8 more video files (8 input). If no input is triggered, then the Flash A/V will go to home position. However if an input is triggered eg Push button #2, then the Flash A/V will play the correspond file plus 1 (file #2+1 = the third file) in that same file folder. After playing the third file, Flash A/V will return again to play once the first file and if no other input is triggered it will then return back to root directory to loop file(s) in home position.

AUDIO AND VIDEO FILE TYPES:

Flash A/V plays the following Audio and Video files:

Audio file: MP3 audio, Max 320kbit/s.

Video files: xxx.mpg (Mpeg1&2, program file)

xxx.vob (DVD video file). Max 10 mbit/s

Still picture: xxx.jpg (JPEG), resolution is 680X480

COMPACT FLASH CARD:

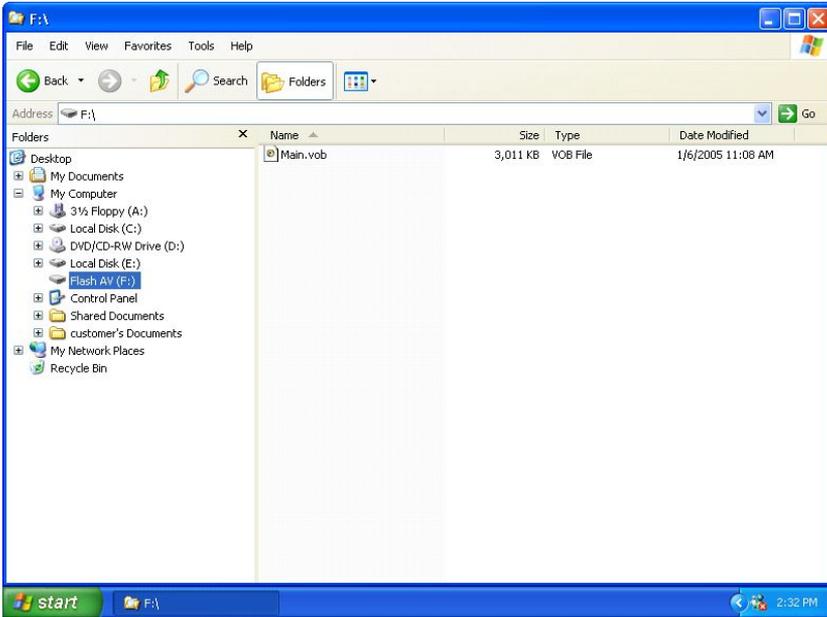
Important note: If you are using the Flash AV for Audio or Low bit rate Mpeg video (Mpeg1 or Mpeg2 under 4 Mbit/s), you can use any standard Sandisk Compact Flash card. If you are using the Flash AV to replace DVD (VOB files) use Sandisk Ultra II Compact Flash card only.

Flash A/V reads the Compact Flash card that uses Windows (98 to XP) DOS (FAT) format. Do not format a new Compact flash card. However if you have to format a used Compact Flash Card, format it with DOS (FAT) system, not NTFS (XP user only). Use a PC and a USB card reader to read the Compact Flash Card such as Memorex USB CF card reader from Office Depot. The Sandisk compact flash cards including the Ultra II are available at www.Techdepot.com OR www.Buy.com.

HOW TO PREPARE THE COMPACT FLASH CARD:

Below is a screen print of a brand new Compact Flash card. This is a screen print of Windows Explorer, View is set to detail.

The PC reads the Compact Flash card as drive F. Please note that Drive F is the root directory of the Compact Flash card and is also the HOME position of the Flash AV.



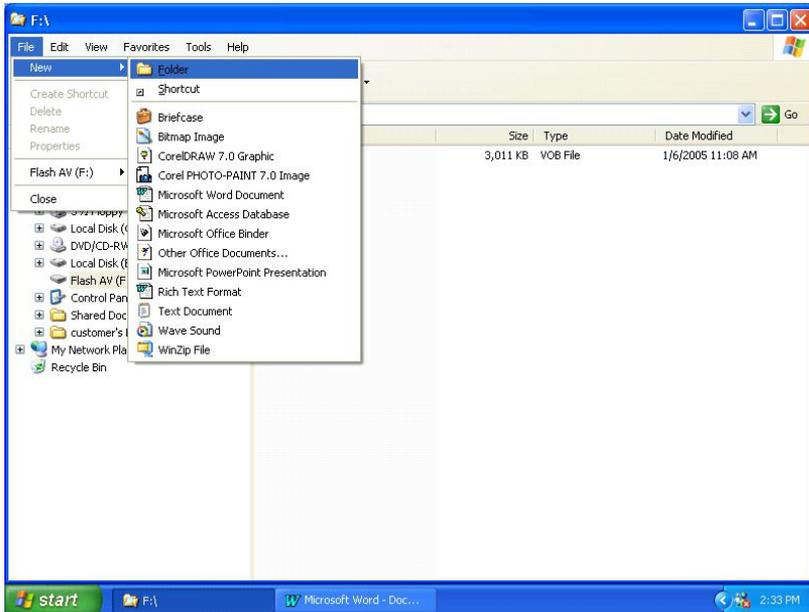
After powering up, the Flash AV will loop Main.vob. You can copy multiple Video/Audio files into the root directory. The Flash AV will loop all files in the root directory.

Remember that the Flash AV requires at least one file in the root directory to start.

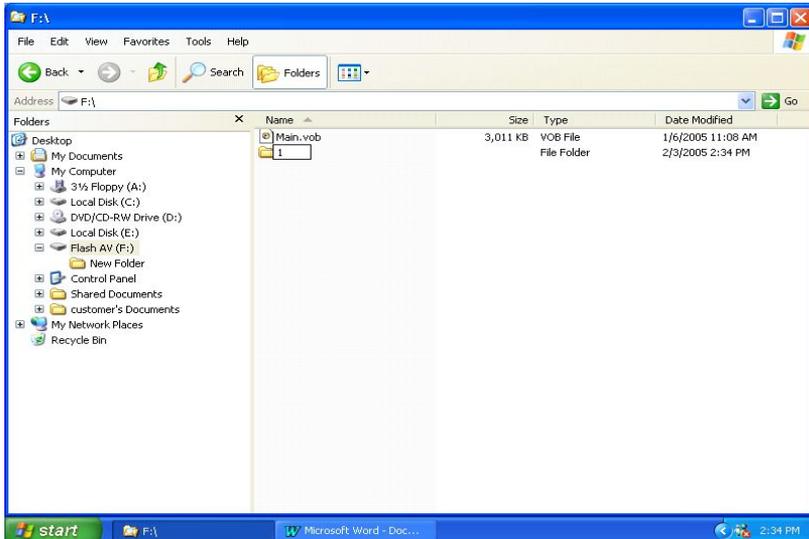
Note (for Audio Application only):

For specific audio application where you want the Flash AV to idle (no sound) after powering up, you can use any Jpeg file (from your digital camera) and copy it into the root directory.

Now create a new file folder for F: (CF card drive).

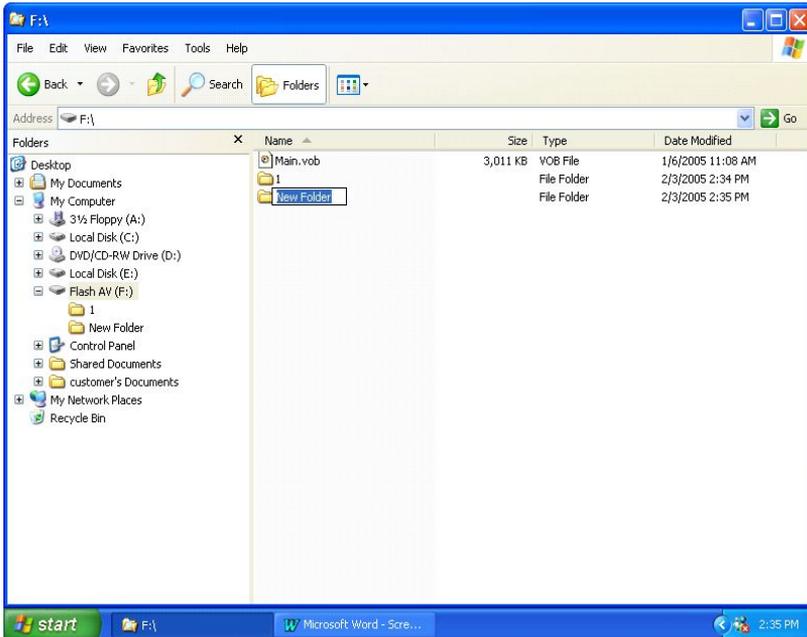


And name the new file folder 1 (numerical 1).



Continue creating new file folder(s). If you are planning to use only 1 input, then create only 1 file folder.

If you are planning to use 4 inputs, then create 4 file folders. If you are planning to use 8 inputs, then create 8 file folders.



Remember:

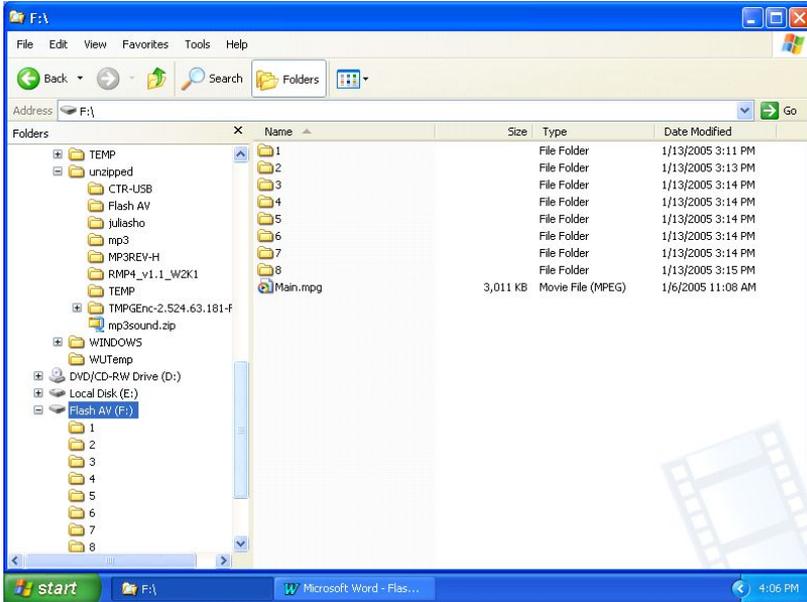
Input 1 allows you to automatically play the first file and access other files in file folder1.

Input 2 allows you to automatically play the first file and access other files in file folder2.

Etc.

Input 8 allows you to automatically play the first file and access other files in file folder8.

Below is an example of a Compact flash card with 8 file folders.



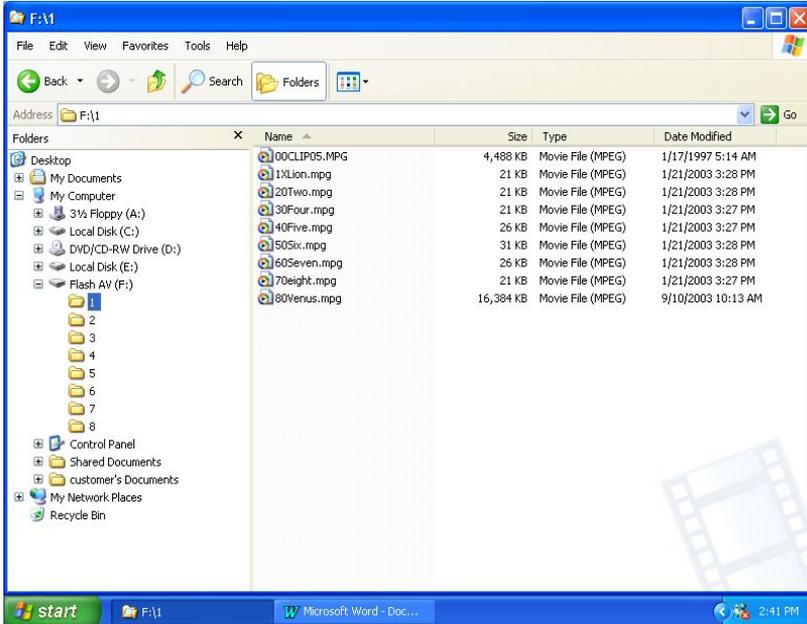
Referring to the above sample: From HOME position if input 1 is triggered, Flash AV will immediately go to File folder1 and play the first file of file folder 1. After finish playing the first file Flash AV returns to home position and loop Main.vob again.

From HOME position if input 2 is triggered, Flash AV will immediately go to File folder 2 and play the first file of file folder 2. After finish playing the first file Flash AV returns to home position and loop Main.vob again.

From HOME position if input 8 is triggered, Flash AV will immediately go to File folder 8 and play the first file of file folder 8. After finish playing the first file Flash AV returns to home position and loop Main.vob again.

However while inside a file folder, Flash AV is programmed to play another 9 Audio/Video files. Below is an example of file folder1 that contains 9 files.

Here is an example of the content of file folder 1.



Referring to File Folder 1:

If input 1 is triggered, Flash AV will immediately go to File folder1 and play the first file. (00Clip05.mpg). If while playing 00Clip05.mpg mpg, input1 is triggered again then 1Xlion.mpg will play. After finish playing 1Xlion.mpg, Flash AV will play 00Clip05.mpg once and then return home to loop Main.vob. If while playing 00Clip05.mpg mpg, input2 is triggered then 20Bird.mpg will play. If while playing 00Clip05.mpg mpg, input8 is triggered then 80Venus.mpg will play etc.

Note: If this file folder contains only 1 file, then while playing this file, Flash AV will ignore other input except Home or Next.

Please note that the second letter of 1Xlion.mpg has an X, no interrupt is allowed while playing this file.

FILE FOLDER NAME AND ORDER:

The root directory can contain up to 8 file folders. Name the file folder by using distinct numerical character to arrange the order such as 1, 2, 3, 4 etc.

FILE NAME AND ORDER IN A FILE FOLDER:

By using 2 distinct letters/numerical (character) for the first 2 characters of the file name, you can arrange the file order in a file folder. Rename the original video/audio files accordingly to arrange the order of the files.

E.g.: 00bird.mpg, 10dog.mpg, 20Monkey.mpg, 31Lion.mpg , 41Tiger.vob etc.

The second letter (Character) of the file name has an important no interrupt and loop function as explain below.

NO INTERRUPT WHILE PLAYING A FILE:

To play a Video/Audio file to the end without any interruption (except HOME input), use X for the second letter of a file name.

E.g.: 1Xbird.mpg

While playing 1Xbird.mpg, Flash A/V will ignore all input and plays it to the end. However while playing you can abort playback by using HOME input. After finish playing, then Flash A/V is ready to accept another input.

LOOP A FILE:

To play a Video/Audio file in a continuous loop, use Z for the second letter of a file name.

E.g.: 1Zbird.mpg

Flash AV will continuously loop 1Zbird.mpg. To stop playback, use HOME input or input 1 to 8.

FLASH A/V TERMINALS:

There are 5 sets of 4 screw on terminal (total 20 terminals) at the rear of the Flash A/V player. They consist of 8 inputs, 3 Grounds, Home/Next (share same input), Relay out & Common, Volume Up & Down and 4 stereo speaker out.

FLASH A/V INPUT 1 to 8:

To trigger any input short it momentarily to ground. E.g: to trigger input#1, momentarily short input #1 to ground.

NEXT INPUT: (Default position – J4 ON)

Next input shares the same terminal with Home input. Flash AV is shipped with jumper J4 installed. J4 Jumper is located behind the Home input terminal. To trigger, short it momentarily to ground. If Next input is triggered, the first file of file folder 1 will be played. If Next input is triggered again then the first file of file folder 2 will be played.

HOME INPUT:

Home input shares the same terminal with Next input. To activate, remove the top cover and remove J4 jumper that is located behind the Home input terminal. Home position is when the Flash A/V loops the video file(s) in the root directory. If the Flash A/V is not at Home position, shorting the Home input momentarily to ground will abort the current playback and force the Flash A/V to Home position again.

VOLUME UP/DOWN INPUT:

Shorting the Volume Up/Down momentarily to ground will bring up/down the audio volume. The Flash A/V will memorize the last volume position even if the power is turned OFF. To see the volume setting, connect the video out (Yellow RCA) into a std TV monitor. Default setting is 15 (out of 32).

RELAY OUT:

Relay out has 2 terminals. These terminals are Normally open (not connected) when Flash A/V is at HOME position. When an input is triggered, the Flash A/V is active and these terminals are connected. After finish playing, these terminals are open again.

AUDIO LINE OUT, 2 RCA:

Connect these outputs into the Audio input of an amplified monitor OR audio line input of an external Audio Amplifier.

Use the Volume Up/Down to adjust the audio line level.

COMPOSITE VIDEO OUT, RCA:

Connect it to a standard RCA input of a monitor.

Video resolution is 720 X 480 (680 X 480)

S-VIDEO OUT, S Connector:

Connect it to a standard S-Video input of a monitor/LCD screen.

Video resolution is 720 X 480 (680 X 480)

STEREO SPEAKER OUT:

The stereo speaker out is available on a 4 screw on terminal. Connect them to a pair of external stereo speakers or the speaker input of a monitor. The Flash A/V amplifier output is 20 watt stereo. Adjust the speaker output using the Volume Up/Down.

Important: Do not mix or combine the ground speaker. Each speaker has to be connected into it's own ground.

POWER INPUT:

Flash A/V is supplied with a 30watt desktop (external) AC switching power supply. The power input is 120VAC to 240VAC, 50 to 60 Hz. The AC power connection into the power supply is a std 3 prong PC style (IDC) complete with a PC style power cord.

APPLICATION EXAMPLES:

1. Exhibit with a main menu video and a selection of 4 push buttons to play 4 video files.

Main Menu Video: Create a main menu video e.g. main.mpg . When creating the main.mpg video, use a graphic program such as Paint shop to create a push button graphic overlay. (see sample video from Akman Inc). This will inform the user to select the push button to play the video. You can also add Home,Vol Up and Vol Down button if you decide to use them.

Root Directory:

Copy the main.vob into the root directory of the CF Card.

File folder:

Create 4 File folders e.g.: 1,2,3 and 4

Video Files: Create 4 video files as follows.:

Eagle.mpg to be played by PB1, copy to file folder 1.

Bird.mpg to be played by PB2, copy to file folder 2.

Dove.mpg to be played by PB3, copy to file folder 3.

Hawk.mpg to be played by PB4, copy to file folder 4.

After powering up, Flash AV will play (loop) main.vob.

If push button 1 is triggered, Eagle.mpg will be played once and then return to home position.

If push button 2 is triggered, Bird.mpg will be played once and then return to home position.

2. Exhibit with a selection of 4 push buttons to play 4 video files. (for Flash AV version2 only).

This example differs from sample 1, the video can be switched directly without returning to home position. To do this, use only one file folder. Copy all video/audio files into this one file folder and use the loop function to loop the first file. While looping the first file, the user can switch to play other files. However to start this program, someone initially has to trigger input 1.

Main Menu Video: Create a main menu video e.g. main.vob . Use a graphic program such as Paint shop to create a message such as: Press push button 1 to start.

Root Directory:

Copy the main.vob into the root directory of the CF Card.

File folder:

Create 1 File folders e.g.: 1

Video Files: Copy 5 video files as follows.:

0ZBlack.mpg to be loop when PB1 is initially triggered, copy to file folder 1.

10Eagle.mpg to be played by PB1, copy to file folder 1.

20Bird.mpg to be played by PB2, copy to file folder1.

30Dove.mpg to be played by PB3, copy to file folder1.

40Hawk.mpg to be played by PB4, copy to file folder1.

After powering up, Flash AV will play (loop) main.vob.

Note:

Push button1 has to be initially triggered to start the program.

If push button 1 is triggered (initially), then Flash AV will go to file folder1 and stays there and 0ZBlack.mpg will loop. (Second letter Z indicates that this file will be loop). The screen is now black OR you can substitute it with a with message screen such as: Input 1 plays Eagle, Input2 plays Bird etc.

If push button 1 is triggered, 10Eagle.mpg will be played.

If push button 2 is triggered, 20Bird.mpg will be played etc.

If push button 3 is triggered, 30Dove.mpg will be played.

If push button 4 is triggered, 40Hawk.mpg will be played.

Flash AV will stay in file folder1 until power is turned OFF or Home input is triggered.

3. Exhibit to play audio/video using motion detector. When idling the video screen is dark.

Main Menu file: Use any Jpeg file from your digital camera. **Root Directory:**

Copy the Jpeg file into the root directory of the CF Card.

File folder:

Create 4 file folders e.g.: 1,2,3 and 4.

Video Files:

Create 4 video files, to prevent double triggering use letter X when naming the audio/video file (no interrupt option). E.g.: 1XEagle.mpg, 2XBird.mpg, 3XDove.mpg and 4Xhawk.mpg. Copy them into the file folder as explained in example 1

Input: Connect the NO output of the motion into the NEXT input of the Flash AV.

After powering up, the motion detector will sequentially play the first file (only) of each file folder.

4. Exhibit with a Main menu video, 4 sub menu video and 4 push buttons. Each sub menu has a selection of up to 8 video clips.

Main Menu Video: Follow example 1.

Root File folder:

Copy the main.vob into the root directory of the CF Card.

Sub Menu Video: Create them using a similar method as the Main menu video. See example 1. Name them using 2 distinct character for their first 2 letter. This allows you to position each file as the first file on each file folder list.

File folder:

Create 4 File folders e.g.: 1,2,3 and 4.

Copy the submenu video files accordingly into each file folder.

Video Files: Create the video files accordingly and name them using 2 distinct character for the first 2 letter. This allows you to arrange them accordingly in the file list. E.g: 20Eagle.mpg.

Example of file folder 1:

10Submenu1.mpg (to be played by PB1 from Home position).

20Eagle.mpg (to be played by PB1 while at this file folder).

30Bird.mpg (to be played by PB2 while at this file folder).

40Dove.mpg (to be played by PB3. while at this file folder).

50Hawk.mpg (to be played by PB4 while at this file folder).

For a no interrupt playback, use 1X for the first 2 letters such as 1Xeagle.mpg,

2Xbird.mpg, 3Xdover.mpg etc.

TECHNICAL SPECIFICATIONS:

Video format:

--Mpeg1 and Mpeg2 Programmed video files.

- DVD – VOB video files
- VCD – DAT video files
- JPEG – JPG still pictures

Audio format:

MP3 – MP3 audio files

Memory Card:

For Audio application and low bit rate video (less than 4 mbit/sec) use any Sandisk Compact Flash Card.

For DVD video application (up to 10 mbit/sec) use only Sandisk Ultra II Compact Flash Card.

Bit Rate:

Video bitrate VBR or CBR is maximum 10 Mbps.

MP3 audio bitrate is maximum 320 kbps.

Outputs:

Video Composite out is standard Yellow RCA jack

S Video (Y/C) out is standard mini 4 pin din connector.

Audio line out is 2 V p/p stereo on 2 RCA jacks (red and white).

Audio speaker output is 20 watt on 4 mini screw on terminal.

Audio line out and speaker out are simultaneously controlled by the volume up/down.

Relay output is available on Busy and Common terminals. The output is Dry Contact, rated at 1 Amp.

Inputs (screw on terminals, plug in removable):

8 Digital input, to trigger short momentarily to ground.

1 Home/Next input, to trigger short momentarily to ground.

Volume UP and Volume Down input, to adjust the volume short it momentarily to ground.

Power supply:

120 – 240VAC Universal switching power supply complete with a standard PC style power cord.

Power output is 12VDC, 30 watt.

Enclosures:

Aluminum enclosure (desktop), 7.25" Wide X 4.25" Deep X 1.2" High.

Weight is approximately 1.2 lbs.

UPS/Fedex shipping weight with Power Supply and cord is 3 lbs.

Optional: NEMA (weatherproof) enclosure for outdoor application is also available.

Warranty

1. THIRTY DAY MONEY BACK GUARANTEE

If for any reason you are not satisfied with the performance of our product, you may return it for a full refund, minus shipping and restocking charges not to exceed 15% of the purchase price. This warranty is valid for 30 days after the date of delivery. Units must be returned in undamaged and unmodified condition.

2. ONE YEAR LIMITED WARRANTY

For a period of one year from the date of delivery, Akman Incorporated warrants that our product shall be free from defects in materials and workmanship under normal use and service. Akman Incorporated obligation under this warranty shall be limited to repairing or replacing the defective part. Buyer may return it only after permission has been obtained from Akman Incorporated. Buyer will pay all freight charges. This limited warranty does not cover loss or damages occurring in shipment to or from buyer, improper installation, modification, misuse, or any other cause other than ordinary commercial or industrial application. Akman Incorporated liability shall not exceed the price of the individual unit which is the basis of the claim. In no event shall Akman Incorporated be liable for any loss of profits, loss of use of facilities, of equipment, or other indirect, incidental, or consequential damages.

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