

VT-100

THE WORLD'S MOST PORTABLE V.T.R.

UTILIZES 1/4" TAPE !!



AKAI®

MANUFACTURED & DISTRIBUTED BY AKAI ELECTRIC CO., LTD. /AKAI AMERICA LTD.

INTRODUCING A "REAL PORTABLE" VTR!

With the VT-100 Video Tape Recorder, video and audio recording is accomplished simultaneously. Since developing is not necessary as in the case of film, immediate playback can be effected. Moreover, tape can be re-recorded and corrected or rewound for repeated playback whenever desired.

Many difficulties had to be overcome in producing a small sized VTR which can be buoyantly carried on one's shoulder, and yet the structure of which displays a precision level many times greater than that of audio recorders. Heretofore such astounding characteristics were incorporated only in large sized broadcasting station and industrial apparatuses. AKAI's research in order to develop this model has been continuous from many years previous. Naturally, the quality of the VT-100 had to satisfy professionals and enthusiasts, but also serious consideration was given to economical aspects as well as to producing a model which can easily be operated even by amateurs.

Ordinarily, VTR equipment utilizes a tape of 1" or 1/2" in width. From an engineering standpoint, to develop a tape with a narrower width for practical use is a very difficult matter due to poor picture resolution. However, through the use of AKAI's recently developed highly capable Crystal Ferrite Head, the development and utilization of 1/4" tape (the same width as audio tape) capable of ensuring picture stability and clear playback has been made possible.

A most important factor in producing the VT-100 was the ability to perfect a small sized head assembly. Through the combined efforts of AKAI's research departments, in pursuance of developing units applicable to a precision manufactured "micro" VTR, successful advancements were made, beginning with the development of a small sized head, to small sized mechanisms, amplifier, camera, etc., and the further cooperation and research relative to precision assembly, resulted in the production of the world's smallest, most light weight VTR, the VT-100.





BETTER COMMUNICATION

As business organizations and society become more complex, it becomes more difficult to maintain smooth communication with a minimum of misunderstanding information.

Whether at your local business establishment, factories, or during overseas business trips, lengthy and easily misunderstood explanations are avoided with the VT-100. Employ the VT-100 for developing tourism or obtaining more detailed information for a clearer grasp of "on the scene" circumstances. Also a great time saver in the realm of broadcasting for use in rehearsing commercials, etc. When used for introducing new merchandise, and in PR activities, the VT-100 is all the more effective.

Perfect for accumulating "live" teaching material for the training of doctors, interns and nurses, and for many, many other practical and interesting uses.



FAST AND SURE REPORTING

Newsmen are always on the go, in hot pursuit of the ever-changing state of affairs throughout this throbbing, vibrating world. It is very natural that these newsmen worry over the collection and preservation of data. People in this field, who have shouldered the responsibility for prompt and accurate reporting, are always exhausting their nerves in order to furnish news as it happens.

After covering an important event in which time is so restricted, it is a serious matter to discover that none of your film has taken. With the appearance of the VT-100 on the scene, there is no danger of such a catastrophe. Just reassure yourself by simply glancing at the monitor screen while recording. With this world's smallest portable video tape recorder, equipped with a 3" monitor, you can make an "on-the-spot" confirmation of what is being or has been recorded at any time.



TRAVEL

Make every trip a joy to remember. Whether you travel by car, plane, train or ship, the lightweight and compact VT-100 can easily be taken along.

Family trips, honeymoons, business trips or field trips, no matter what the purpose of your travels may be, the VT-100 is a fun and reliable companion. Prints taken one-by-one are now out-moded. Capture the full splendor and glory of your travels for easy audio and video playback after your travels are over.

Beginning with the video head, the mechanical parts of the VT-100 are made of the finest materials to perform equally as well on the mountain tops of Iceland or during a safari in torrid Africa.

A second power source is readily available with the AC adapter equipped with universal voltage selector. Simply adjust voltage and plug in anywhere in the world for quick and easy recording and playback.



A LIVE ALBUM OF YOUR FAMILY

Just imagine how wonderful it would be to have a "living" album of all the marvels of your children growing up. The VT-100 has made this a reality. Keep a video tape of their first precarious footsteps and amazing facial expressions as they form those first delightful words to the day of graduation from high school or college.

No waiting or fussing around with complicated equipment. The VT-100 is so simple to use that even a child can operate it. Just focus and press the Recording Start Button.

For clearer playback of groups of people, or when entertaining lots of guests, AKAI Model VM-12 (12" video monitor) can be used.

Handy AC Adapter for second power source. Simply plug into electric outlet. AC Adapter is also your battery charger (batteries can be recharged while AC power source is being utilized).

OUTSTANDING FEATURES

■ The world's smallest, most light weight VTR...

The VT-100 weighs only 10 lbs. (4.6 kg). Including 3" Monitor TV, and camera, the total weight comes to an easy-to-handle 28 lbs. (8.2 kg).

■ A more economical VTR...

1/4" tape is less expensive than 1" or 1/2" tape and easy to obtain. Also because it can be re-used, tape is economical even when compared with film.

■ Precision Head...

The AKAI engineered and developed durable Crystal Ferrite Head surpasses all other in top frequency response characteristics. This feature coupled with the high performing DC head motor produces a degree of picture "sharpness" which makes it incomparable with other models.

■ Preeminent Performer...

Because the VT-100 employs a "wear free" high performing brushless DC micro motor for capstan drive, smooth and noiseless operation will be continuous.

■ Automatically adjusted video and audio recording levels...

By operating a single camera aperture selector switch, an appropriate recording level is automatically adjusted. After switching aperture, simply focus and start recording. The range of the VC-100 camera's zoom lens is from telephoto to wide range (F 1.8, 10 to 40 mm), enabling free filming technique. Because the camera's built-in high capacity uni-directional microphone is equipped with automatic voice level control, documentary audio and video recording can be performed simultaneously. The VT-100 is also equipped with a microphone jack. By employing

an external microphone connected to the recording unit, commentary and conversation can be recorded along with picture.

■ Check video image as recording is being made...

Though the VT-100 is a portable model, because it is equipped with a handy 3" monitor TV, immediate "on-the-spot" monitoring is a very convenient feature. If by some remote chance your recording is not up to expectations, you can immediately re-record the scene. Therefore, there is no room for recording failure or wasted tape.

■ Larger monitor TV can also be used for video playback...

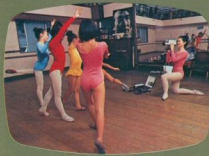
In the case of having filmed large groups, the VT-100 can be connected with AKAI's Model VM-12 (12" monitor TV) for clear video playback. If an AKAI RF Converter (optional accessory) is used, a blank channel of a generally marketed TV set can be converted for video playback.

■ Use the VT-100 Anywhere...

Two re-chargeable batteries provide 40 continuous minutes of video recording (sufficient for utilizing two AKAI 5" reel video tapes). The AC Adapter (standard accessory) is an equally quick and easy to use power source. Simply plug into power outlet (adapter can be set to recharge batteries while being utilized as power source). With AKAI Car Cord VOA-3 (optional accessory), your car battery (12 V) can also be used as a power source.

■ VT-100 Operating Controls identical to audio recorders...

The VT-100 is operated by depressing Record, Playback, Fast Forward, and Rewind Buttons. So simple to use that even a child can do so.



SPORTS

Whether it be skiing, gymnastics, land or water sports, or any other kind of human skill imaginable, you can defy the limits of human strength through recording and innovation.

Because the VT-100 and 3" monitor combination is a light-weight and easy-to-use portable video recording set, it can simply be carried along to tournaments, outdoor events, etc. for "on the spot" recording and video playback.

Research and improve your own game with the VT-100. A convenient short-cut to better proficiency. Coaches as well are able to analyze and study games objectively for fast improvement in guidance and scoring. Such is the impressive performance of the VT-100 in the field of sports.

LEISURE

Today we have more leisure time for such things as skiing, surfing, bowling, golfing, yachting, sky-diving and etc. Games and facilities are gayly unfolding for our enjoyment. Triple your pleasure with the handy VT-100. Record just for fun or to improve your own form and technique.

For instance, in golf, you can't miss with the VT-100. Follow your favorite golfer around the course and record his game for discreet research later on. Try the same shots yourself and compare them for improvement the easy VTR way.

The VT-100 can also be operated by car battery. AKAI Car Cord (optional accessory) plugs into cigarette lighter receptacle on car dashboard.

Equipped with two rechargeable batteries for countless hours of video recording and playback pleasure.

FASHION

The fashion world is dominated by "feeling". Today's fashions lean toward Gypsy modes, Afghanistan styles, and the Morocco and India "feeling". Also much attention is being focused on skirt lengths — mini, midi, maxi — "Focus" your attention on all of these styles with the new portable VT-100. Take this "handy machine" with you to fashion shows, record interesting fads on busy street corners, gather and make your own fashion show for practical use. Be more diversified and completely up-to-date the VTR way.

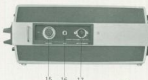
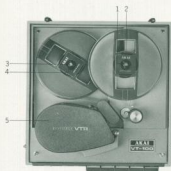
Designers can now save time and money by taking the Paris fashion shows home with them for further scrutiny by the designing staff. The new VT-100 compact portable is a contrasting black and white model. This smartly designed machine is a perfect match for the fashion conscious individual.

INSTRUCTION

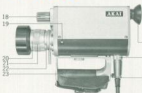
When portable tape recorders began their dissemination, "recorded study" became popular among students. Instead of taking notes, students recorded their instructors' classroom lectures and utilized playback for home study. However, with the introduction of the VT-100, recorded study now means picture plus!

Within the field of visual education, the VT-100 is ideal for a wide variety of uses. Utilize for language study, scientific experiments and research, study and documentary of plant and animal life, etc. Also perfect for ballet dancing, dramatic study, or other types of training in which movement is a prime factor.

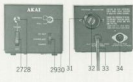
VT-100



VC-100



VA-100



VM-100



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|---|---|
| 1 Reel Retainer | 24 View Finder |
| 2 Take-Up Reel | 25 Camera Connection Terminal |
| 3 Supply Reel Table Shaft | 26 Recording Start Button |
| 4 Reel Retainer | 27 AC Power Switch |
| 5 Video Head Assembly | 28 AC Power Indicator Lamp |
| 6 Power Switch | 29 DC/Charge Selector Switch |
| 7 Battery Voltage Indicator | 30 Battery Charge Indicator |
| 8 Earphone Jack | 31 Voltage Selector |
| 9 Rewind Key | 32 Fuse |
| 10 Fast Forward Key | 33 AC Cord |
| 11 Stop Key | 34 DC Output Jack |
| 12 Play Key | 35 Video Monitor Screen |
| 13 Recording Safety Lever | 36 VT-100 Connection Plug |
| 14 Recording Key | 37 Volume Control and Power Switch Knob |
| 15 Camera Connection Jack | 38 Contrast Control Knob |
| 16 Microphone Jack | 39 Brightness Control Knob |
| 17 AC Adapter Connection Jack | 40 Horizontal Hold Knob |
| 18 Microphone | 41 Vertical Hold Knob |
| 19 Aperture (5.6 and 1.8 Selector Switch) | 42 Speaker |
| 20 Lens | |
| 21 Focus | |
| 22 Zoom Lever | |
| 23 Hand Grip | |

SPECIFICATIONS

VT-100 PORTABLE VTR

TV Signal	USA Standard TV Signal (for receiving signals from VC-100 only). Also available for CCIR Standard TV Signal (specifications shown in gray).
Recording System	Twin Rotating Heads helical scan format. Frequency Modulation Video Signal Recording System.
Recording Time	20 minutes using a VT-5 tape (24 minutes)
Tape Speed	11-1/4" per second (238.5mm per second)
Tape Width	1/4" tape
Maximum Reel Size	5" reel
Resolution	200 lines
Video Signal S/N Ratio	Better than 40 dB
Video Input	1.4 Vp-p
Audio Input (external microphone)	-65 dB, 600 Ω
Audio Bandwidth	100 to 10,000 Hz
Sound Monitor System at Recording Time	By earphone (more than 600 Ω)
Fast Forward/Rewind Time	5 minutes using a VT-5 tape (6 minutes)
Power Source	DC 12V
Batteries	Two rechargeable batteries (6V each, Zoonen Shino 3G $\times$ 3/u)
Battery Using Time	40 minutes continuous recording operation using VT-100, VC-100 and VM-100
Battery Recharge Time	8 hours with AC adapter (external power source)
Dimensions	10"(W) $\times$ 4.4"(H) $\times$ 10.3"(D) (255 $\times$ 112 $\times$ 263 mm)
Weight	10.1 lbs. (4.6 kg)

VC-100 PORTABLE VIDEO CAMERA

Vidicon	2/3" Separate Mesh Vidicon Tube
Scanning System	Supplied from VT-100
Horizontal Resolution	More than 400 lines
Horizontal Frequency	15.75 kHz (15.625 kHz)
Vertical Frequency	60 Hz (50 Hz)
Video Signal S/N Ratio	Better than 40 dB
Video Output	1.4 Vp-p composite signal
Aperture Selector	F1.8 and F5.6
Lens	10 to 40 mm Zoom, F1.8
View Finder	One-eye reflex system
Power Source	DC 9V supplied from VT-100
Microphone	600 Ω uni-directional built-in microphone
Dimensions	3"(W) $\times$ 4.4"(H) $\times$ 7.3"(D) (75 $\times$ 113 $\times$ 187 mm, body only)
Weight	4.1 lbs. (1.9 kg) including grip

VM-100 PORTABLE VIDEO MONITOR

Picture Tube	3"
Video Input	1.4 Vp-p (negative sync)
Audio Input	-20 dB 5 k Ω
Speaker	3" $\times$ 1.7" (75 $\times$ 44 mm)
Maximum Audio Output	120 mV
Power Consumption	3.5 W
Power Source	12V supplied from VT-100
Dimensions	3.8"(W) $\times$ 4.4"(H) $\times$ 10.3"(D) (98 $\times$ 112 $\times$ 263 mm)
Weight	3.7 lbs. (1.69 kg)
VA-100 ADAPTER	
Voltage	12V
Selector Switch	DC Output/Battery Charge & DC/Battery Charge
Battery Charging Time	8 hours
Dimensions	4.3"(W) $\times$ 3.6"(H) $\times$ 7.8"(D) (111 $\times$ 92 $\times$ 200 mm)
Weight	5.9 lbs. (2.7 kg)

• OPTIONAL ACCESSORIES

VOA-1



Carrying Case

VOA-2



Camera/Accessory Case

VOA-3



Car Cord

VOA-4



Monitor Cord
(for 12" TV connection)

VOA-5



Earphone (600Ω)

VOA-6



Tripod

VOA-7



External Microphone
with stand (600 Ω)

VCA-600



Adapter



RF Converter

VM-12



12" Video Monitor

VT-5R



Video Tape Reel

VT-5



Video Tape

• STANDARD ACCESSORIES

Leather Carrying Strap	1
Adapter/Recorder Connection Cord	1
Camera/Recorder Connection Cord	1
5" Video Tape	1

5" Empty Reel	1
6 V Type D Rechargeable Batteries	2
Spare Fuse	1
Operator's Manual	1

MONITOR WITH YOUR OWN TV SET!

By a simple connection of an RF Converter (optional accessory), you can further enhance your enjoyment by converting your home TV into a playback monitor.



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