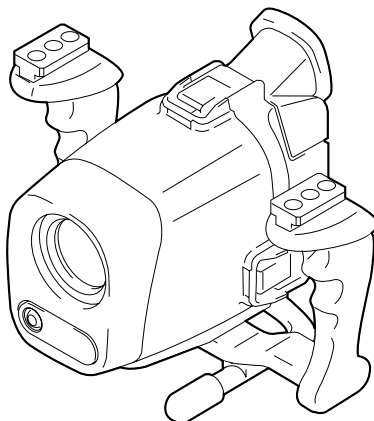


# MPK-DVF3

## SERVICE MANUAL

*AEP Model*

Ver 1.0 2000.03



### Differences Manual

This service manual only describes what are different from the MPK-DVF.

When repairing, please refer to the service manual for MPK-DVF (9-974-083-11) with this manual.

#### • Main differences

Change of monitor assembly, grips, bases (camera mounting shoes) and battery for remote controller in the grip.

### SPECIFICATIONS

#### Material

Aluminum alloy, glass, plastic (ABS, PC)

#### Waterproofing

O-ring, 3 latches

#### Usable depth

Up to 75 meters (246 feet)

#### Underwater microphone

Condenser microphone (monaural)

#### Controllable function

Power on/off, recording start/stop, auto focus on/off, power zooming, tape photo recording (DCR-TRV6E/TRV8E/TRV9E/TRV10E/TRV11E/TRV20E/TRV890E/TRV900E only)

#### Dimensions

Approx. 312 x 212 x 318 mm (w/h/d)  
(12 3/8 x 8 3/8 x 12 5/8 in.)

#### Mass

Approx. 4.4 kg (9 lb 11 oz) (the unit only)

#### Supplied accessories

Camera mounting shoe A, B, D (1 each)  
Spacer for camera mounting shoe B (Camera mounting shoe C) (1)  
Screw plate (2)  
Screw driver part (1)  
Wide-conversion lens (1)  
Colour filter (1)  
NP-F330 battery pack for the monitor (1)  
Lithium battery CR2 (1)  
Grease (1)  
O-ring (1)  
Sunshade (1)  
Reflex prevention ring (2)  
Strap (3)  
Battery cushion (1)  
Carrying bag (1)  
Carrying belt (1)  
Operating instructions (1)  
Warranty (1)

#### Recommended accessory

Underwater video light HVL-ML20

MARINE PACK

SONY®

## TABLE OF CONTENTS

<u>Section</u>	<u>Title</u>	<u>Page</u>
	Specifications .....	1
	Features and Precautions .....	2
<b>1. GENERAL</b>		
	Supplied Accessories .....	3
	Preparations .....	3
	Recording .....	5
	Underwater Recording .....	6
	Removing the Camcorder .....	6
	Note on the O-ring .....	7
	Caution on Handling .....	7
	Identifying Parts and Controls .....	7
<b>2. EXPLODED VIEWS</b>		8
<b>3. ELECTRICAL PARTS LIST</b>		13

## Features and Precautions

**GB**

- The MPK-DVF3 can be used with the Sony Handycam Vision™ camcorder DCR-TRV6E/TRV7E/TRV8E/TRV9E/TRV10E/TRV11E/TRV20E/TRV890E/TRV900E.
- Recording at depths of up to 75 meters (246 feet) is possible.
- The following operations can be performed underwater.
  - Power on/off
  - Auto focusing on/off
  - Recording start/stop
  - Tape photo recording (DCR-TRV6E/TRV8E/TRV9E/TRV10E/TRV11E/TRV20E/TRV890E/TRV900E only)
  - Electric zoom function
  - LCD screen monitoring

Sony does not accept liability for damage to the video camera recorder, battery, etc. in the marine pack, or for the loss of prerecorded material if a water leakage caused by incorrect operation occurs.



This mark indicates that this product is a genuine accessory for Sony video products. When purchasing Sony video products, Sony recommends that you purchase accessories with this "GENUINE VIDEO ACCESSORIES" mark.

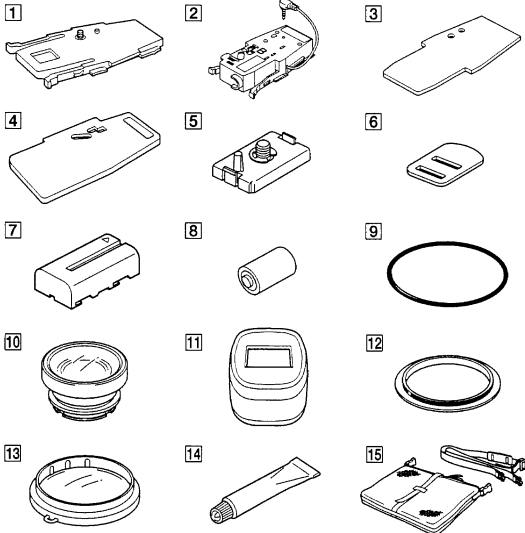
**3-GB**

SECTION 1  
GENERAL

This section is extracted from  
instruction manual.

Supplied Accessories

Check that the following accessories are supplied with your marine pack.



- 1 Camera mounting shoe A (1)  
for DCR-TRV7E

2 Camera mounting shoe B (1)  
for DCR-TRV6E/TRV8E/TRV9E/  
TRV10E/TRV11E/TRV20E/TRV890E/  
TRV900E

3 Spacer for camera mounting shoe B  
(camera mounting shoe C) (1)  
for DCR-TRV8E/TRV10E

4 Camera mounting shoe D (1)  
for DCR-TRV6E/TRV11E/TRV20E

5 Screw plate for camera mounting  
shoe B and D (2)

6 Screw driver part (1)  
Attachment for the camera mounting  
shoe B
- 7 NP-F330 battery pack for the LCD  
monitor (1)

8 Lithium ion battery CR2 (1)

9 O-ring (1)

10 Underwater wide-conversion lens  
(VCL-MK2) (1)

11 Sunshade (1)

12 Reflex prevention ring (2)  
Large:  $\phi$  37 mm (1)  
Small:  $\phi$  30 mm (1)

13 Colour filter (VF-MK2) (1)

14 Grease (1)

15 Carrying bag (1) Carrying belt (1)  
Battery cushion (1) Strap (3)

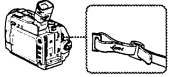
4-GB

Preparations

Preparing your camcorder

Before installing your camcorder in the marine pack, prepare the camcorder according to this chapter. The DCR-TRV20E is the model used for illustration purposes. Otherwise, the model name is indicated in the illustrations. Any differences in procedure are clearly indicated in the text, for example, "DCR-TRV20E only." The procedure may be different depending on your camcorder type. For details, please refer to the operating instructions supplied with your camcorder.

- 1 Remove the lens cap, shoulder strap, conversion lens, filter or lenshood from the camcorder.



- 2 Attach a charged battery pack.

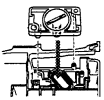
- 3 Insert a cassette tape.

GB

- 4 Attach the reflex prevention ring to the lens.  
for DCR-TRV7E/TRV9E/TRV20E :  $\phi$  37 mm (large)  
for DCR-TRV6E/TRV8E/TRV10E/TRV11E :  $\phi$  30 mm (small)  
for DCR-TRV890E/TRV900E : not necessary

- 5 Select the camera mounting shoe.  
The camera mounting shoe and the installing position of the screw plate differ on your camcorder. For details, refer to the table below.

Camera mounting shoe	Position of the screw plate	Camcorder
A	-	DCR-TRV7E
B	1	DCR-TRV9E
	2	DCR-TRV6E/TRV11E/ TRV20E/TRV890E/ TRV900E
	3	DCR-TRV8E/TRV10E
D	1	DCR-TRV20E
	2	DCR-TRV6E/TRV11E



Installation position  
of the screw plate  
on the camera  
mounting shoe B

**Note**  
For DCR-TRV7E, use the camera mounting shoe A only. Do not use camera mounting shoe B, D, and the screw plate.

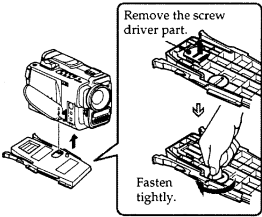
continued 5-GB

Preparation (continued)

- 6 Attach the camera mounting shoe.

For DCR-TRV7E

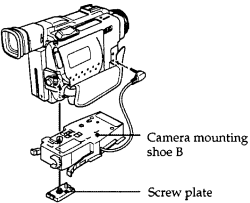
Use camera mounting shoe A.  
Fasten the screw of shoe A to the tripod screw hole of the camcorder and tighten firmly.



For DCR-TRV9E/TRV900E

Use camera mounting shoe B and the screw plate.

- Check the installation position (1, 2, or 3) of the screw plate for your camcorder according to the table on page 5.
- Attach the screw plate so that the catch on the reverse side of shoe B clicks into place.
- Fasten the screw of the screw plate to the tripod screw hole of the camcorder and tighten firmly.
- Connect the A/V cable of the shoe to the camcorder's AUDIO/VIDEO jack.

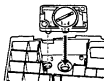


6-GB

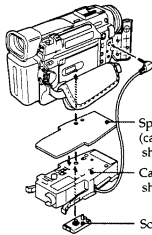
For DCR-TRV10E

Use camera mounting shoe B, spacer (camera mounting shoe C), and the screw plate.

- Attach the spacer to shoe B.
- Attach the screw plate to position 3 on shoe B so that the catch on the reverse side of the shoe clicks into place.
- Fasten the screw of the screw plate to the tripod screw hole of the camcorder and tighten firmly.
- Connect the A/V cable of the shoe to the camcorder's AUDIO/VIDEO jack.



Installation position  
of the screw plate  
on the camera  
mounting shoe B

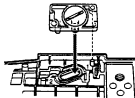


GB

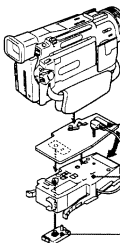
For DCR-TRV20E

Use camera mounting shoe B, and D, and the screw plate.

- Attach the screw plate to the position 1 on shoe D so that the catch on the reverse side of the shoe D clicks into place.
- Fasten the screw of the screw plate on shoe D to the tripod screw hole of the camcorder and tighten firmly.
- Attach the screw plate to the position 2 on shoe B.
- Fasten the screw of the screw plate on the shoe B to the screw hole on the shoe D of the camcorder tightly.



Installation position  
of the screw plate  
on the camera  
mounting shoe D



Now you are ready to install the camcorder to the marine pack.  
Be sure to check that the camera mounting shoe is attached to the camcorder tightly before you install the camcorder to the marine pack.

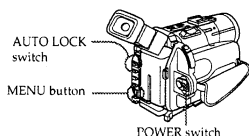
continued 7-GB

## Preparation (continued)

- 7** Prepare to record.  
Before installing the marine pack to the camcorder, prepare the camcorder for recording.

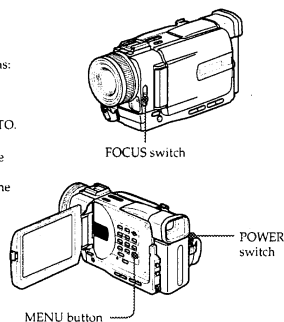
### For DCR-TRV7E

- 1 Set the POWER switch to CAMERA.
- 2 Set the COMMANDER to ON in the menu system.
- 3 Cancel the following functions: BACK LIGHT, Night Shot, PROGRAM AE, and Picture Effect.
- 4 Slide the AUTO LOCK switch up to AUTO.
- 5 Select V-OUT/LCD in the DISPLAY menu and press the DISPLAY button on your camcorder before installing it to the marine pack.



### For DCR-TRV9E/ TRV10E/ TRV20E/ TRV900E

- 1 Set the POWER switch to CAMERA.
- 2 Set the COMMANDER to ON in the menu system.
- 3 Cancel the following functions: BACK LIGHT, Night Shot, PROGRAM AE, and Picture Effect.
- 4 Set the FOCUS switch to AUTO.
- 5 Select V-OUT/LCD in the DISPLAY menu and press the DISPLAY button on your camcorder before installing the marine pack.

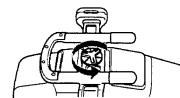


\* If your camcorder has REC lamp switch, set the REC lamp to OFF. By using this function, the light of the lamp is not reflected in the lens. For details, please refer to the operating instructions supplied with your camcorder.

8-GB

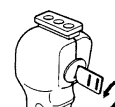
## Preparing the marine pack (installing the battery)

- 1** Remove the grip.  
Undo the screw on the bottom side of the marine pack.

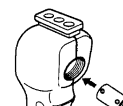


- 2** Insert the lithium battery into the grip.

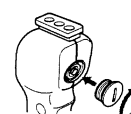
- 1** Remove the screw with the supplied screw driver.



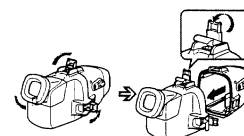
- 2** Insert the supplied lithium battery (CR2, x 1) with the polarity positioned correctly as indicated on the grip.



- 3** Fasten the screw tightly.



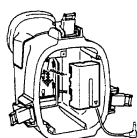
- 3** Unfasten the 3 latches and open the marine pack.  
If you lift the metal screw driver part in the direction of the finder when the latches are open, the latches will stop.



continued 9-GB

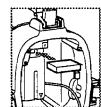
## Preparation (continued)

- 4** Attach the supplied battery pack NP-F330 for the LCD monitor to the rear shell. Be sure to charge the battery pack fully before attaching.



### Note

Firmly insert the supplied battery cushion as shown to prevent the battery pack from coming loose if it is dropped or otherwise subjected to impact.



### About the supplied battery pack NP-F330

#### What is an "InfoLITHIUM" battery pack?

The "InfoLITHIUM" is a lithium ion battery pack which can exchange data with compatible electronic equipment about its battery consumption. Sony recommends that you use the "InfoLITHIUM" battery pack with electronic equipment having the InfoLITHIUM mark.

- \* The indication may not be accurate depending on the conditions and environment in which the equipment is used.
- \* "InfoLITHIUM" is a trademark of Sony Corporation.
- \* To charge the supplied NP-F330 battery pack, prepare AC adapter/charger that can charge InfoLITHIUM L type (not supplied).
- \* You can use also the InfoLITHIUM L type and NP-F530/F550 AC adapter/charger (not supplied).
- \* The recording time of a fully charged NP-F330 battery pack is approximately 6 hours (continuous recording). The actual recording time may be less, depending on conditions of use.

- 1 InfoLITHIUM** The "InfoLITHIUM" battery pack is recyclable. When the battery is exhausted and can no longer be recharged, cover the metal parts of the battery with an isolator such as scotch tape and take it to a battery recycling shop.

### About the LCD monitor

- \* Images do not appear on the LCD screen unless it is fully connected to your camcorder.
- \* The remaining time displayed on the LCD screen refers to remaining time of the camcorder battery time, not the remaining time of the LCD monitor battery.
- \* The LCD monitor of the marine pack does not correspond with the "InfoLITHIUM" battery pack.

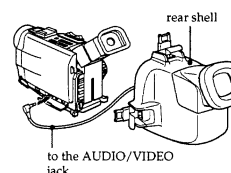
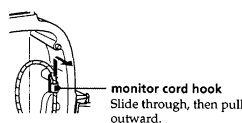
10-GB

## Installing the camcorder to the marine pack

- 1** Install the camcorder to the marine pack.

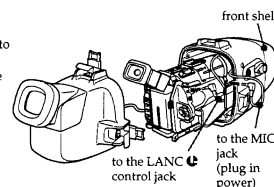
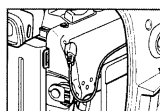
### For DCR-TRV7E

- Connect the monitor plug.  
**1** Remove the monitor cord hook.  
**2** Connect the monitor plug to the AUDIO/VIDEO jack of the camcorder.



Connect the remote plug and the microphone plug.

- 1** Connect the microphone plug to the MIC jack (plug in power).  
**2** Connect the remote plug to the LANC control jack.



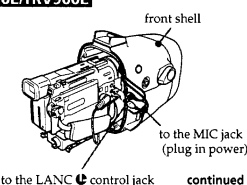
### Note

To prevent the cords from twisting or slacking, make sure that these plugs are inserted in the direction indicated in the illustration.

### For DCR-TRV9E/TRV10E/TRV20E/TRV900E

Connect the remote plug and the microphone plug.

- 1** Connect the microphone plug to the MIC jack (plug in power).  
**2** Connect the remote plug to the LANC control jack.

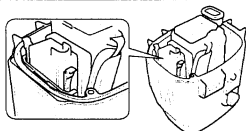


to the LANC control jack

continued 11-GB

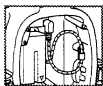
## Preparation (continued)

- 2 Insert the camcorder until the mounting shoe clicks into place.

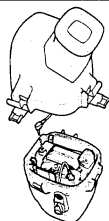


- 3 **For DCR-TRV6E/TRV8E/TRV9E/TRV10E/TRV11E/TRV20E/TRV890E/TRV900E**

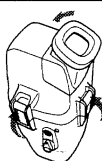
Connect the monitor cord to the jack of camera mounting shoe B.



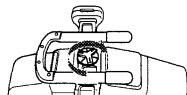
The cords are placed in the plug holders of the marine pack at the factory. Pull the plugs out of the holders when in use.



- 4 Attach the front shell to the rear shell. Hold both shells firmly and fasten the 3 latches securely. Take care not to pinch the remote, microphone, and monitor cords. If this happens water may leak in. For details on handling the O-ring, see page 20.



- 5 Attach the grip. Fasten the screw tightly.



Now you have finished the preparations. Be sure to check that the equipment operates correctly and that there is no water leakage before you dive (see page 16).

12-GB

## Recording

Now you are ready for underwater recording. When you dive with the camcorder, dive slowly, paying attention to the surrounding environment. Be careful not to strike the marine pack against Rocks or Reef, etc.

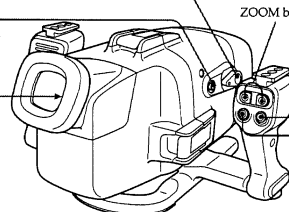
POWER switch

AUTO FOCUS ON/OFF button

REC lamp (red)  
LEAK lamp (yellow)

ZOOM button

PHOTO button  
START/STOP button



GB

- 1 Set the POWER switch to ON. The camcorder turns on and a picture appears on the LCD monitor.
- 2 Press the START/STOP button to start recording. The REC lamp (red) lights up during recording. To stop recording, press the START/STOP button again.

### To zoom

Press the ZOOM button. Press T for telephoto (subject appears closer) and W for wide-angle (subject appears further away). You cannot change the zooming speed of the camcorder.

### Recording a still image on a tape (Tape photo recording) (DCR-TRV6E/TRV8E/TRV9E/TRV10E/TRV11E/TRV20E/TRV890E/TRV900E only)

To record a still image, press the PHOTO button. The still image appearing on the LCD screen is recorded. Note that pressing the PHOTO button lightly does not allow you to check the recorded image. The memory photo function does not work on the DCR-TRV10E/TRV11E/TRV20E/TRV900E models. For more details, refer to the operation instructions supplied with your camcorder.

### To keep a subject in focus

Press the AUTO FOCUS ON/OFF button to set it to OFF. You can still keep the subject in focus even if fish swim between the camcorder and the subject. Press the AUTO FOCUS ON/OFF button again to set the camcorder to auto focus mode.

### Note

Do not cover the control emitter or detector with your finger as the remote control signal for operations is transmitted from the grip to the marine pack.

continued 13-GB

## Recording (continued)

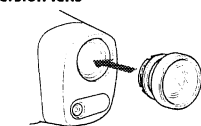
### Attaching the supplied accessories

#### Attaching the supplied wide-conversion lens

As objects appear 1/4 closer and therefore larger, the wide-conversion lens is recommended when you want to take pictures of wide areas. Note however, that objects will appear smaller.

#### Note

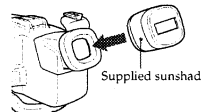
This supplied wide-conversion lens is to be used only underwater.



Attach the wide-conversion lens until it fits firmly.

#### Using the supplied sunshade

The supplied sunshade reduces glare from the LCD monitor.

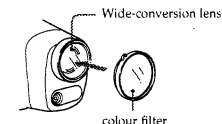


Supplied sunshade

#### Attaching the supplied colour filter

When using the supplied colour filter, attach it on top of the wide-conversion lens.

Water absorbs light, especially red light, so that objects in deep water are seen bluish. The colour of objects is affected by the clarity of the water. To record in natural colour, use the supplied colour filter.

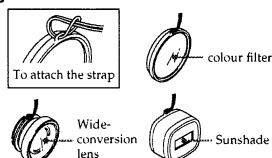


colour filter

You can attach and remove the wide-conversion lens, sunshade, and colour filter underwater. If the image on the LCD screen is not clear because of air between these accessories and the marine pack, reattach them underwater.

#### Attaching the supplied strap

Attach the strap as the shown. Attach the supplied straps to prevent loss of these accessories when removing them both on land and underwater.



To attach the strap

colour filter

Wide-conversion lens

Sunshade

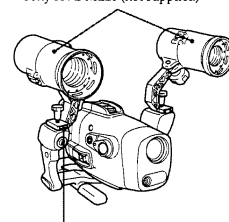
14-GB

### Attaching the optional accessories

#### Underwater video light

In deep water or under rocks where direct sunlight does not reach, recording with underwater video lights is recommended. You can attach these video lights to the video light shoes on the upper part of both grips.

Underwater video lights such as the Sony HVL-ML20 (not supplied)



Attachable to the video light shoes on both sides

GB

15-GB

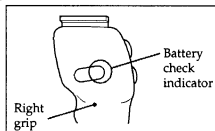
## Underwater recording

### Before diving

Check that the equipment operates correctly and that there is no water leakage at a depth of about one meter (3 feet) before you dive deeper. Take care not to expose the equipment to salty air. Do not drop water on the equipment. Do not open the marine pack underwater or on the beach. Preparations such as installing and checking the equipment should be done in a place with low humidity and no salty air.

### Check the following points again before you dive.

- ☐ Be sure to fully charge both the battery pack of the marine pack and the camcorder.
  - We recommend you use battery packs with a large capacity and prepare a spare battery.
- ☐ Be sure that a video tape has enough left.
- ☐ Check that there are no scratches or cracks on the O-ring.
- ☐ Make sure there is no dust, sand, or hair between the front shell and the rear shell.
- ☐ Be sure that the lithium battery has enough power.
  - The Flash lamp lights up if the remaining battery capacity is enough. Check this indicator as a criterion. If the flash lamp does not light, exchange for a new one. We suggest that you prepare spare ones.



### Conditions of underwater recording

Recording underwater is different from recording on land because it is affected by the clarity, depth of the water, and the light conditions. The following are hints for good recording underwater.

### Best time for recording

The best recording time is from 10:00 a.m. to 2:00 p.m. When the sun is at its highest, optimum results can be obtained. To record in dark places as the sun does not reach or at night, use a powerful underwater video light.

### Subject size underwater

Since the refractive index underwater is higher than that in air, objects appear 1/4 closer, and therefore larger. This phenomenon affects the lens on the camcorder as well as human the eye. Using the supplied wide-conversion lens is recommended.

### Operate the camera with slow and stable motions

When recording, keep your body stable. An unstable shot will be magnified on the TV screen. Move the camcorder as slowly as possible. Since most of the objects underwater move, you can record a good shot without moving the camcorder too much.

### Note on recording underwater

Be sure to follow the safety rules for diving, such as diving period and depth.

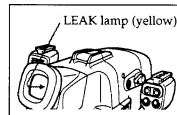
### Water leakage

The marine pack is designed to be waterproof, however if water happens to leak in, the LEAK lamp (yellow) flashes.

In such a case, remove the marine pack from the water as soon as possible, keeping it horizontal. Be sure to surface following the safety rules for diving.

Dry the marine pack with a soft cloth and then open it.

To switch off the lamp, disconnect the remote control cable. Check the cause of the leak.



If the camcorder is wet, take it to the nearest Sony dealer immediately.

We recommend you purchase property damage insurance for underwater materials in case of emergency.

### After using

- After recording in the sea, submerge the marine pack in tap water or fresh water for about 30-60 minutes before undoing the latches to completely remove any salt from the marine pack unit, filter, and wide-conversion lens.
- When your camcorder is to be used near the sea for a long time, we recommend that it be checked periodically by a Sony dealer.

16-GB

17-GB

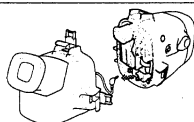
## Removing the camcorder

Before opening the marine pack, rinse it with fresh water and dry with a soft cloth. When you open the marine pack, make sure you are dry. And take care that no water drips from your wet suit.

### 1 Remove the grip.

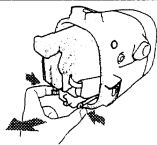
### 2 For DCR-TRV6E/TRV8E/TRV9E/TRV10E/TRV11E/TRV20E/TRV890E/TRV900E

Unfasten 3 latches and open the marine pack. Disconnect the monitor cord from the camera mounting shoe B.

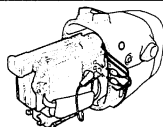


### 3 Take the camcorder out of the front shell.

Hold the camera mounting shoe by the knobs and extract the camcorder. When you open the marine pack, do not pull the monitor plug cord by force.



### 4 Disconnect the remote plug and the microphone plug.



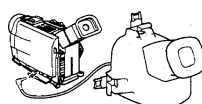
### 5 For DCR-TRV6E/TRV8E/TRV9E/TRV10E/TRV11E/TRV20E/TRV890E/TRV900E

Disconnect the A/V connecting cable of camera mounting shoe B from the AUDIO/VIDEO jack.



### For DCR-TRV7E

Disconnect the monitor plug from the AUDIO/VIDEO jack.



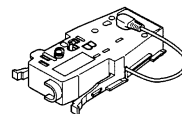
### 6 Remove the camera mounting shoe with the screw driver.

Undo the screw of the screw plate and remove the camera mounting shoe from the camcorder.

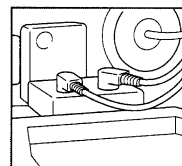
### 7 Remove the battery pack for the LCD monitor.

### After using the marine pack

- Insert the A/V connecting cable plug to the plug holder of the camera mounting shoe B.



- Insert the remote and microphone plugs to the plug holder inside of the front shell.

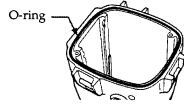


18-GB

19-GB

## Note on the O-ring

The O-ring assures the waterproof function of the marine pack. To maintain waterproof integrity, use it correctly. Incorrect handling may cause water to leak in.



### Check the O-ring

Before using the marine pack each time, check that there are no scratches or cracks on the O-ring and prevent dust from collection on it as it could allow water to leak in.

- Remove the O-ring from the groove with your finger. Do not use a metal tool or a tool with a sharp point.
- Put the O-ring in the groove evenly. Never twist it.
- Check that there are no cracks or dust on the O-ring, then coat it slightly with the supplied grease using your finger. This will prevent wear.
- While applying the grease, recheck for cracks or dust. Never use cloth or paper to apply grease because the fibers may cling.

If you run out of silicone grease (2-115-921-01) you can purchase it from your nearest Sony Service Center.

### Remove any dust, sand, or hair from the O-ring

Make sure there is no dust, sand, or hair on the O-ring, in the groove, or on the surface of the marine pack where the O-ring touches. If there is, clean it completely, or the O-ring and the surface of the marine pack may be damaged and water may leak in.

### Do not pinch the O-ring with the marine pack

When joining the front and rear shells, take care not to pinch the O-ring between the front and rear shells. If this happens, not only will the O-ring be damaged, but water may leak in.

### Useful life of the O-ring

Depending upon the maintenance and the length of use, we recommend changing the O-ring every one or two years.

The O-ring (3-977-362-01) can be replaced at your nearest Sony Service Center.

### When you store the O-ring

Store a reserve O-ring in its package in a cool dry place. Do not store in very hot, cold, or humid place. Be careful not to crimp it or to place any heavy weight on it.

## Caution on handling

### After using

The metal parts will rust and the movement of the operation switches will be impaired if you leave salt water on the marine pack. If sea water enters through scratches in the coating, the salt can corrode the metal parts of the marine pack unit and cause the coating to peel off. After recording in the sea, submerge the marine pack in tap water or fresh water for about 30 minutes before undoing the buckles to completely remove any salt from the marine pack unit, filter, and wide-conversion lens.

After washing, wipe any water from the inside of the marine pack and the loaded video camcorder with a soft dry cloth.

\* Always follow the above precautions when you use the marine pack.

When you open the marine pack or exchange the battery pack of the grip, take care that no water drips from your wet suit or hair.

Do not leave the marine pack under direct sunlight for a long period of time, otherwise the temperature in the marine pack may rise and the equipment inside may be damaged. If you cannot avoid leaving the marine pack under direct sunlight, be sure to cover the marine pack with a towel or other protection.

### When you store the marine pack

Coat the O-ring slightly with the supplied grease, and put it in the groove correctly. Join the front and rear shells then put it in a cool and dry place without fastening the buckles.

Avoid storing the marine pack in a very hot, cold, or humid place, or together with naphthalene or camphor, as these conditions might damage the unit.

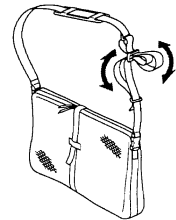
### On transportation

When transporting the marine pack, be sure to remove your camcorder from it. Otherwise this might damage the unit.

### Note

When you use the supplied carrying bag, attach the supplied carrying belt and adjust the length of the belt.

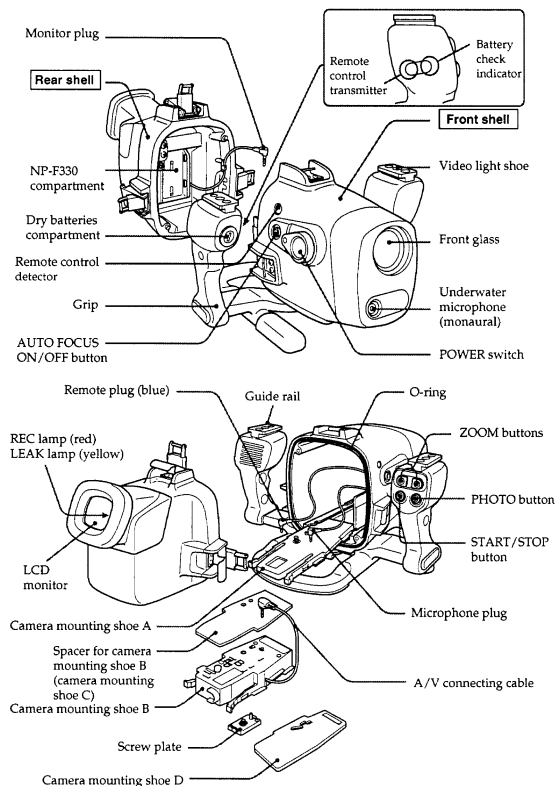
Avoid rough handling or a shock. We recommend covering the marine pack with a towel or other protection.



20-GB

21-GB

## Identifying parts and controls



22-GB

SECTION 2  
EXPLODED VIEWS

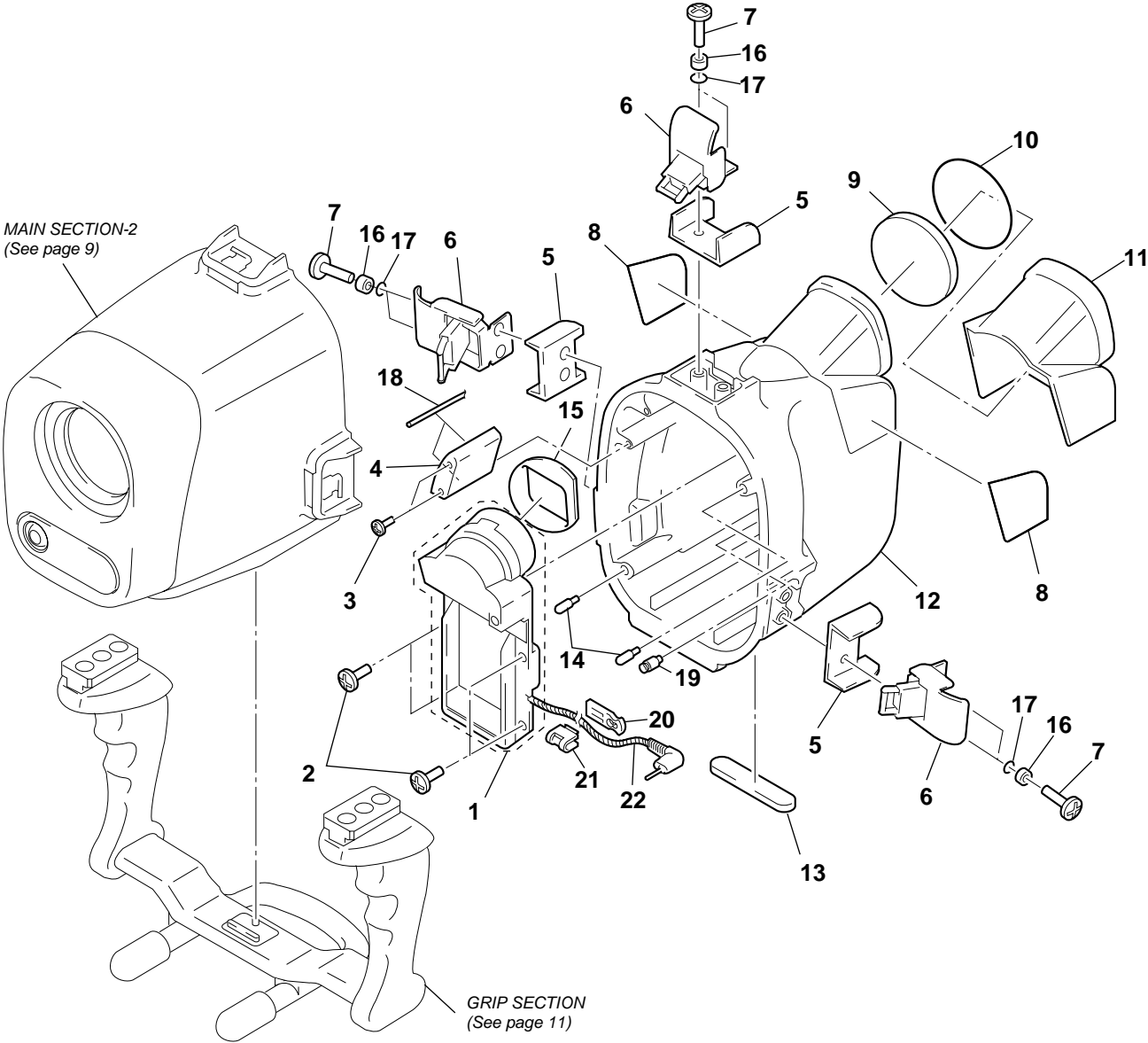
NOTE :

- -XX, -X mean standardized parts, so they may have some difference from the original one.
  - Items marked “\*” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
  - Hardware (# mark) list and accessories and packing materials are given in the last of this parts list.

Note :

Items marked “!” are parts in relation to waterproof.  
Replace these components with Sony parts.  
Be sure to check up waterproofing after repair.

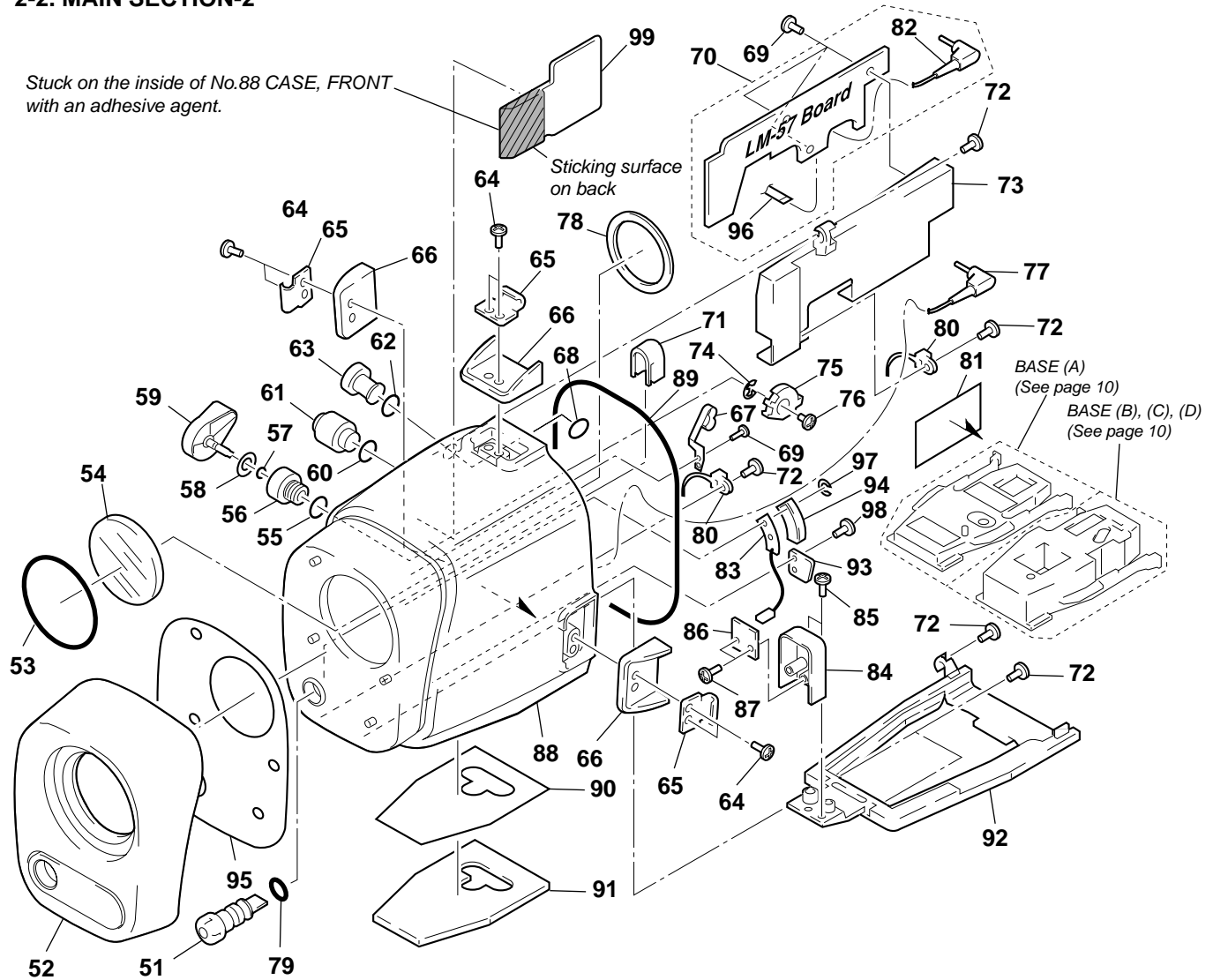
2-1. MAIN SECTION-1



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
1	A-7007-942-A	MONITOR ASSY		! 12	3-051-575-01	CASE, REAR	
2	3-977-369-01	SCREW, +P M3X8		13	3-976-698-01	FOOT, MAIN RUBBER	
3	3-052-092-01	SCREW, +P M2.6		14	3-977-265-01	PIN, POSITIONING	
4	3-051-577-01	COVER, FIBER		! 15	3-061-211-01	PACKING, LCD	
5	3-976-710-11	COVER (R), BUCKLE		16	3-052-426-01	COLLAR, PUNCH LOCK STOPPER	
! 6	2-390-778-02	BUCKLE		! 17	3-052-427-01	RING (S-5), O	
7	3-977-370-11	SCREW, +P M3.5X10		18	3-051-698-01	FIBER, PLASTIC	
8	3-977-994-01	SHEET, REAR PROTECTOR ADHESIVE		19	3-051-583-01	PIN, CABLE FIXED	
! 9	3-976-695-01	GLASS, REAR		* 20	3-051-584-01	STRAP (A), CABLE	
! 10	3-977-361-01	RING (G58), O		* 21	3-051-585-01	STRAP (B), CABLE	
! 11	3-976-694-01	PROTECTOR, REAR CASE		* 22	3-054-713-01	TUBE (A) SPIRAL	
					3-054-714-01	TUBE (B) SPIRAL	



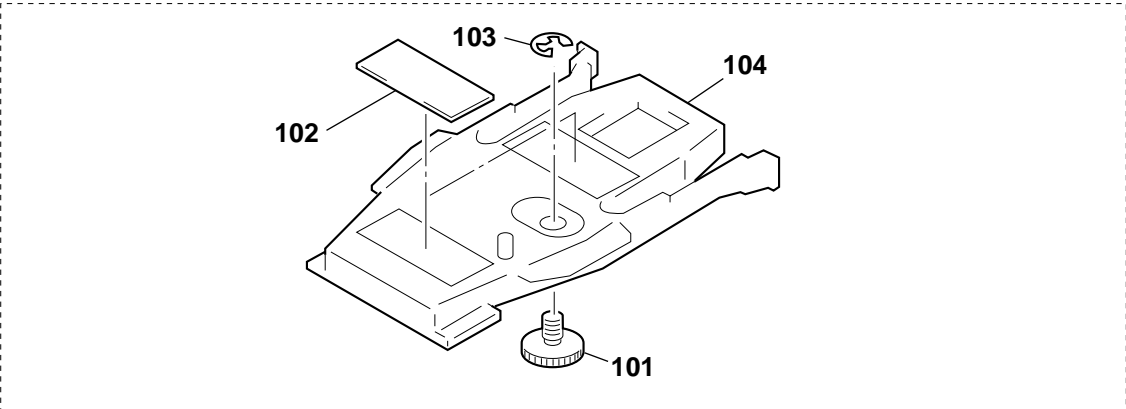
## 2-2. MAIN SECTION-2



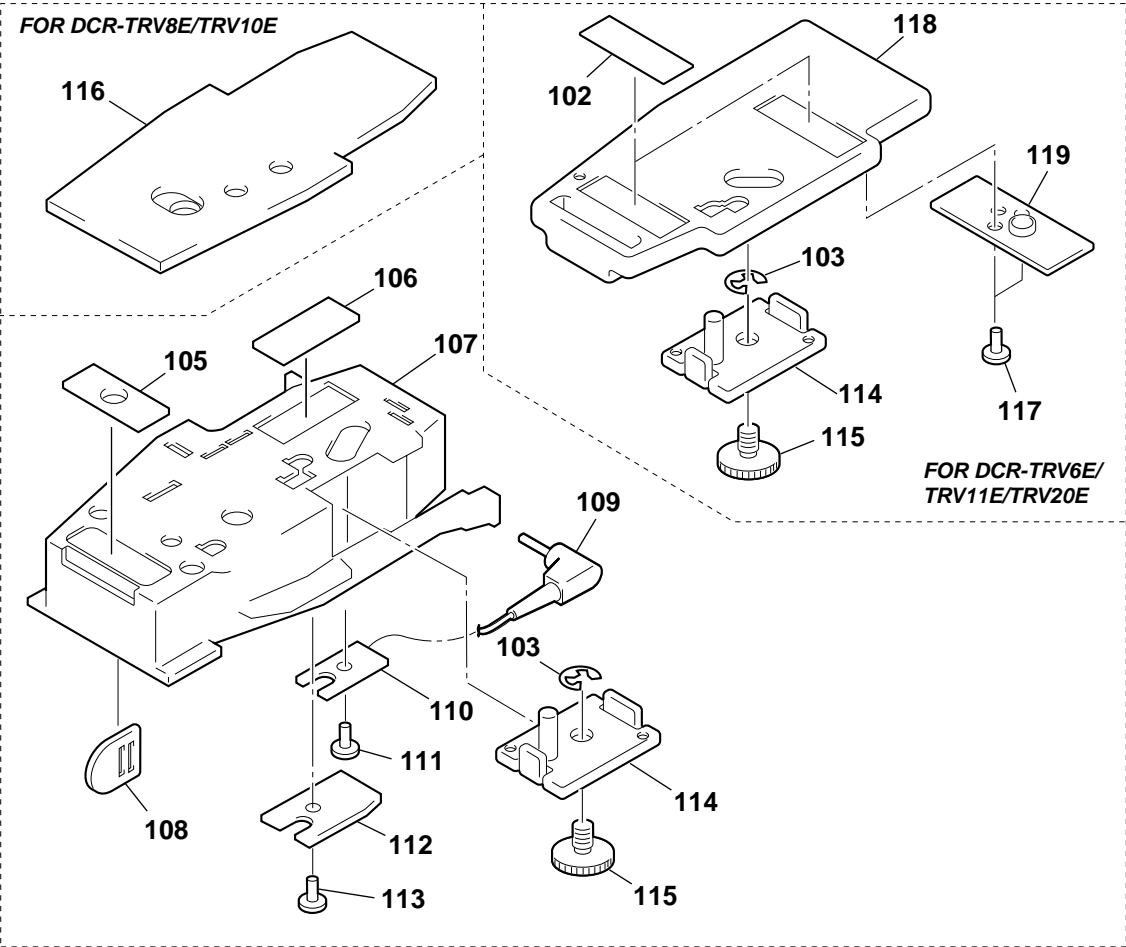
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
51	A-7007-751-A	MICROPHONE ASSY, UNDERWATER		76	3-977-368-11	SCREW, +P M2.6	
52	3-976-665-01	PROTECTOR, FRONT CASE		77	1-696-932-51	CORD, CONNECTION (MIC)	
! 53	3-977-360-01	RING (G55), O		78	3-051-586-01	PROTECTOR, FRONT LENS	
! 54	3-976-668-01	GLASS, FRONT		! 79	3-950-846-01	RING (P-7), O	
! 55	3-977-363-01	RING (JAS01011), O		80	3-977-269-01	INSULOCK (T18 MRW)	
56	3-976-681-01	SWITCH (BEARING), POWER		81	3-052-219-01	GUARD, CAMERA	
! 57	3-977-357-01	RING (P-3), O		82	1-696-933-71	CORD, CONNECTION (LANC)	
58	3-977-915-01	WAVE, WASHER		83	A-7073-652-A	LL-9 BOARD, COMPLETE	
59	3-976-669-11	LEVER, POWER		84	3-977-974-01	COVER, LED BOARD	
! 60	3-950-888-01	RING (P-11), O		85	3-978-338-01	SCREW, +P M2X5 BT	
61	X-3942-412-1	BUTTON ASSY, AF SELECTION		86	A-7073-651-A	LL-8 BOARD, COMPLETE	
! 62	3-950-858-01	RING (P-9), O		87	3-977-366-01	SCREW, +P M2X4 BT	
63	3-976-680-01	WINDOW, SENSOR		! 88	3-976-664-21	CASE, FRONT	
64	3-977-370-01	SCREW, +P M3.5X10		! 89	3-977-362-01	RING (V145), O	
! 65	2-115-906-01	RETAINER, BUCKLE		90	3-977-972-01	SHEET, GUARD RUBBER ADHESIVE	
66	3-976-711-01	COVER (F), BUCKLE		91	3-977-264-01	GUARD RUBBER	
67	3-051-559-01	SPRING, POWER SWITCH		92	3-976-666-01	RAIL, BASE	
! 68	3-950-907-01	RING (S-8), O		93	3-051-601-01	COVER, CABLE	
69	3-977-366-01	SCREW, +P M2		94	3-051-602-01	COVER, FRONT SENSOR	
70	A-7073-650-A	LM-57 BOARD, COMPLETE		! 95	3-977-995-01	SHEET, FRONT PROTECTOR ADHESIVE	
71	3-976-682-01	COVER, MICROPHONE		96	1-696-021-31	WIRE (LEAK SENSOR)	
72	3-977-369-01	SCREW, +P M3X8		97	3-052-220-01	RING (GTW-2), GRIP MOLD STOPPER	
73	3-051-599-01	COVER, INNER		98	3-977-369-11	SCREW, +P M3	
74	2-391-512-01	E RING, 5		99	3-052-492-01	GUARD, STRAP	
75	3-051-574-01	CAM, POWER LEVER					

2-3. BASES (A), (B), (C), (D)

BASE (A) : DCR-TRV7E

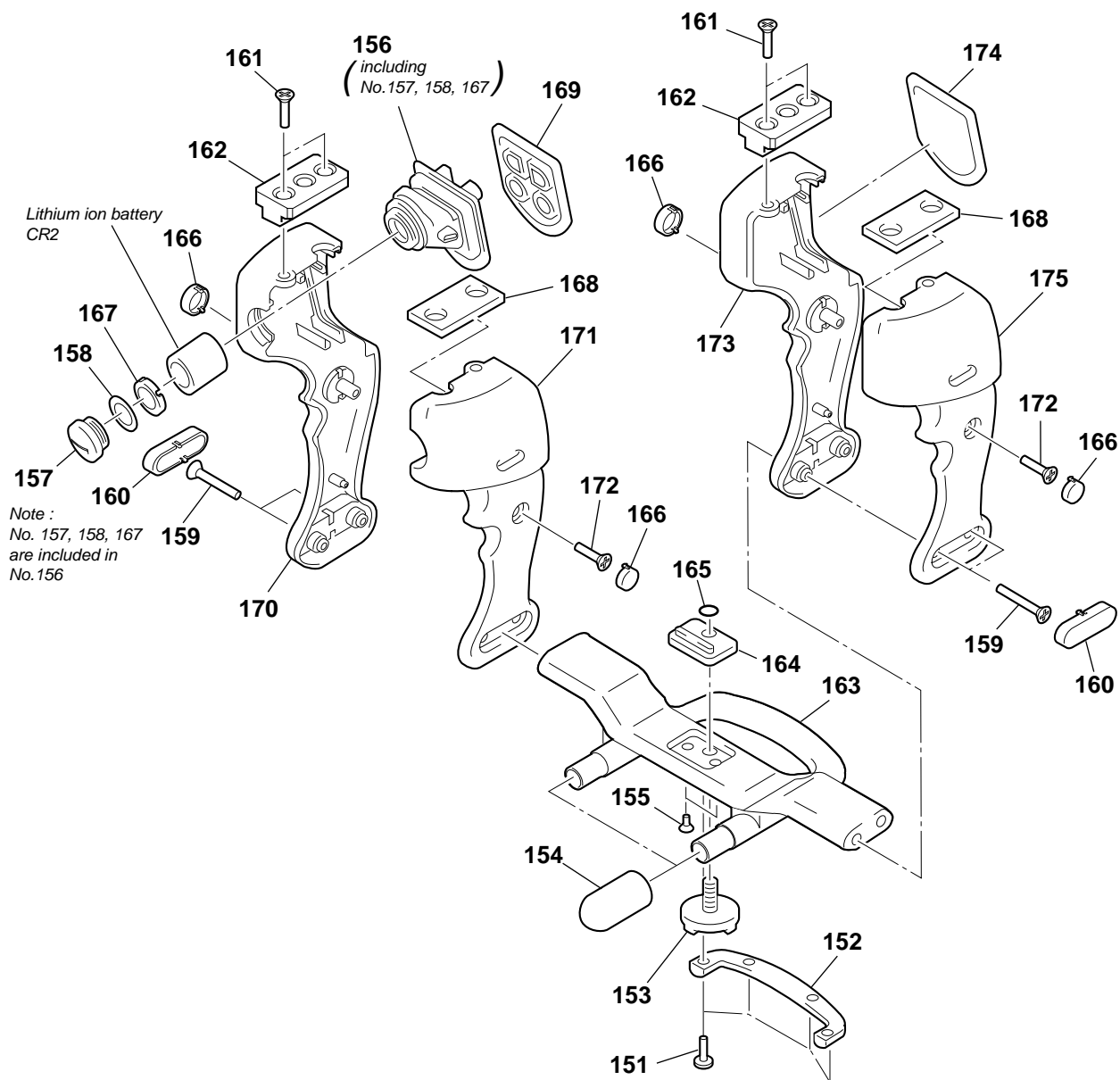


BASE (B) AND PERIPHERY : EXCEPT FOR DCR-TRV7E



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
* 101	3-970-217-01	SCREW, CAMERA FITTING		111	3-052-092-01	SCREW, +P M2X6	
102	3-964-843-01	SHEET, PROTECTION		112	3-051-587-01	COVER, AV JACK	
103	2-391-512-01	E RING, 5		113	3-977-366-11	SCREW, +P M2	
104	3-976-671-01	BASE		114	3-051-579-02	BASE, SLIDE (PLATE, SCREW)	
105	3-052-491-01	SHEET (B), PROTECTION		115	3-960-767-11	SCREW, CAMERA FITTING	
* 106	3-971-661-01	SHEET (A), PROTECTION		116	3-054-728-01	BASE (C)	
107	3-051-582-03	BASE (B)		117	3-971-597-01	SCREW +K	
108	3-953-086-01	SCREW DRIVER PART		118	3-061-171-01	BASE (D)	
109	1-782-557-21	CORD, CONNECTION (A/V CABLE)		119	2-115-831-01	SCREW, TRIPOD	
110	A-7073-655-A	DZ-3 BOARD, COMPLETE					

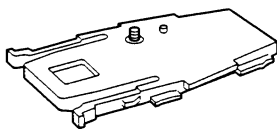
## 2-4. GRIP SECTION



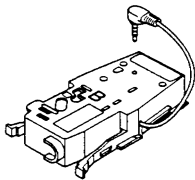
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
151	3-977-371-01	SCREW, +P M4X8		164	3-976-692-01	FIXED (LARGE)	
152	3-976-691-01	FOOT, KEEL		! 165	3-950-887-01	RING (P-4), O	
153	3-976-690-01	KNOB, TRIPOD SCREW		166	3-061-208-01	COVER (A), GRIP	
154	3-976-689-01	FOOT, KEEL RUBBER		167	3-061-196-01	PIPE, INSULATION, BATTERY LID	
155	2-186-307-01	SCREW (2) (M3X8), TAPPING		* 168	3-061-200-01	BRACKET, ACCESSORY SHOE	
156	A-7094-937-A	BOX ASSY, REMOTE CONTROL		169	3-061-201-01	PLATE (A), ORNAMENTAL	
! 157	3-061-195-01	LID, BATTERY		* 170	3-061-198-01	GRIP R-R	
! 158	3-061-197-01	RING (S-20), O		* 171	3-061-199-01	GRIP R-L	
159	3-944-944-11	SCREW, +K (5X30)		172	3-061-202-01	SCREW, +K (M4X20)	
160	3-061-209-01	COVER (B), GRIP		* 173	3-061-205-01	GRIP L-R	
161	3-944-944-01	SCREW, +K (5X18)		* 174	3-061-207-01	PLATE (B), ORNAMENTAL	
162	3-944-943-01	SHOE, ACCESSORY		* 175	3-061-206-01	GRIP L-L	
163	3-976-688-01	KEEL					

2-5. ACCESSORIES SECTION

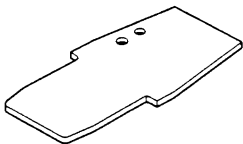
(See Page 10)



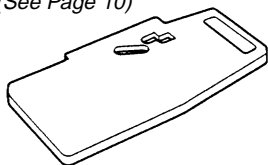
(See Page 10)



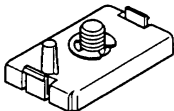
(See Page 10)



(See Page 10)



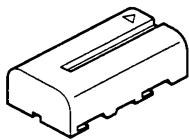
(See Page 10)



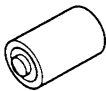
(See Page 10)



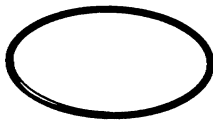
201



202



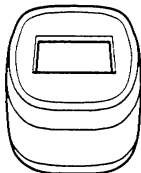
203



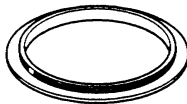
204



205



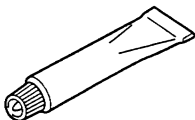
206



207



208



209



210

Ref. No.	Part No.	Description
ACCESSORIES & PACKING MATERIALS		
*****		
201	A-7094-141-A	NP-F330 BATTERY PACK
202	**	CR2 LITHIUM ION BATTERY
203	3-977-362-01	RING, (V145) O
204	3-051-636-01	CONVERSION (MAIN). WIDE
	3-052-046-01	CAP, FRONT
	3-052-047-01	CAP, REAR
205	3-977-715-01	HOOD, LIGHT INTERCEPTION
206	3-061-058-01	REFLEX PREVENTION RING (37)
	3-061-059-01	REFLEX PREVENTION RING (30)
207	A-7007-757-A	FILTER BLOCK ASSY

Ref. No.	Part No.	Description	Remark
208	2-115-921-01	GREASE	
209	3-976-762-01	CASE, SOFT CARRYING	
210	3-977-971-01	CARRYING BELT	
	3-061-174-21	MANUAL, INSTRUCTION (ENGLISH/FRENCH/ SPANISH/GERMAN)	
	3-061-174-31	MANUAL, INSTRUCTION (DUTCH/SWEDISH/ ITALIAN/PORTUGUESE)	
	3-061-174-41	MANUAL, INSTRUCTION (RUSSIAN/ARABIC/ CHINESE/KOREAN)	
<b>Note.</b>			
** MARK PARTS IS AVAILABLE AS AN OPTIONAL ACCESSORY.			

## SECTION 3 ELECTRICAL PARTS LIST

**DZ-3****LL-8****LL-9****LM-57****NOTE :**

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS  
All resistors are in ohms  
METAL : Metal-film resistor  
METAL OXIDE :Metal oxide-film resistor  
F : nonflammable
- Items marked “ \* ” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

## • SEMICONDUCTORS

In each case, u :  $\mu$  , for example :  
 uA.... :  $\mu$  A.... , uPA.... :  $\mu$  PA....  
 uPB.... :  $\mu$  PB.... , uPC.... :  $\mu$  PC....  
 uPD.... :  $\mu$  PD....

## • CAPACITORS

uF :  $\mu$  F

## • COILS

uH :  $\mu$  H**Note :**

Items marked “ ! ” are parts in relation to waterproof.  
 Replace these components with Sony parts.  
 Be sure to check up waterproofing after repair.

When indicating parts by reference number, please include the board.

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>	<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>
	A-7073-655-A	DZ-3 BOARD, COMPLETE *****			A-7073-650-A	LM-57 BOARD, COMPLETE *****	
	A-7073-651-A	LL-8 BOARD, COMPLETE *****				MISCELLANEOUS *****	
	A-7073-652-A	LL-9 BOARD, COMPLETE *****		77	1-696-932-51	CORD, CONNECTION (MIC)	
				82	1-696-933-71	CORD, CONNECTION (LANC)	
				96	1-696-021-31	WIRE (LEAK SENSOR)	
				109	1-782-557-21	CORD, CONNECTION (A/V CABLE)	

