



## ARRI TECHNICAL NOTE P - 1024

### ARRI Lens Accessories for Video Cameras August 1, 2000

#### Summary

This note describes the use of ARRI lens accessories on video cameras and gives a sample list of parts needed to equip a DVW-700 or HDW-700 with an ARRI Matte Box and Follow Focus.

#### Overview

Through ARRI adapters it is now possible to use ARRI lens accessories on video cameras. The adapters have been designed to fit the SONY High Definition HDW 700 and HDW 700A, plus the Digital Betacam DVW 700, DVW 709 and DVW 790 (the "supported cameras" in the following). There is no reason ARRI lens accessories cannot be used on other video cameras if the mountings are similar.

The ARRI lens accessories discussed in this note are:

- ARRI Shift & Tilt System
- ARRI Matte Boxes
- ARRI Follow Focus
- ARRI Lens Control System
- ARRI Eyepiece Leveler for SONY Extended Viewfinder

#### Order Numbers

Order numbers given are ARRI USA, Inc. order numbers. Check with your local ARRI dealer for local order numbers if you do not live in the US.

#### ARRI Video Adapters

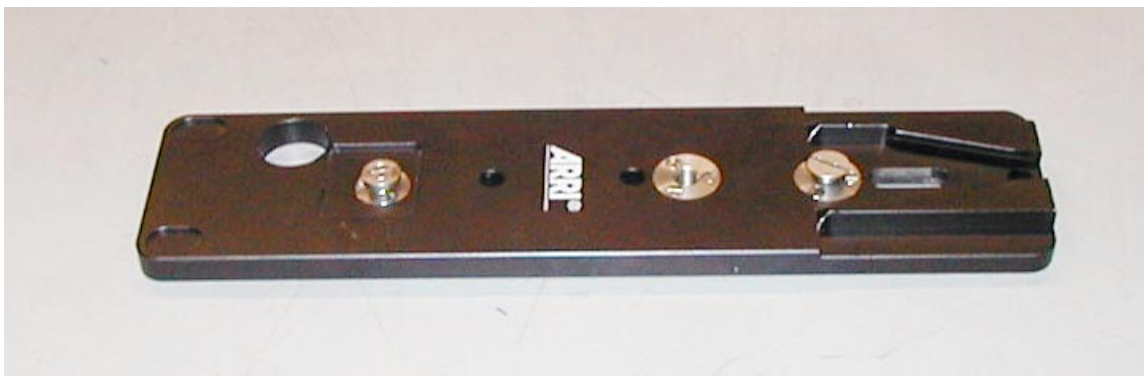
ARRI lens accessories are usually mounted to either an ARRI Bridgeplate (BP-6) or an ARRI Lightweight Support System (LWS-3). To attach the ARRI Bridgeplate or Lightweight Support System to the supported video cameras, a set of adapters is available, the SONY Adapter Plate (SAP-1) and the SONY Lightweight Bracket (SLB-1).



An ARRI Bridgeplate

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- SONY Adapter Plate (SAP-1) , order number 338870 (picture below)  
Connects the Bridgeplates BP-6 (19 mm rods) or BP-7 (15 mm rods) to the supported video cameras.



The SONY Adapter Plate SAP-1

- SONY Lightweight Bracket (SLB-1), order number 338872 (no picture)  
Connects the ARRI Lightweight Support System to the supported video cameras. Note that when the silver bottom wedge wears out, it can be replaced with a standard SONY part. If the ARRI Lightweight Support System interferes with the connector on the lens servo for an external zoom controller, use a right angle adapter (available from Optex).

## ARRI Shift & Tilt System

The ARRI Shift & Tilt System consists of a series of lenses that are freely attached to the camera by means of a stage/bellows system. It allows for the manipulation of depth of field and perspective, macro photography, shooting around objects or avoiding camera reflections in a mirror. Accessories include a wide range of lenses, a Retro Adapter (for more macro capabilities), a PL mount (allows the use of standard PL mount lenses, especially interesting when using the ARRI Macros) and a wired or wireless motorized focus (CFM-1).



SONY HDW-700 with SAP-1, ARRI BP-6 Bridgeplate and ARRI Shift & Tilt System

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Please note that only lenses for the Shift & Tilt System with 24 mm focal length or higher can be used. To use the Shift/Tilt System with the supported cameras, the following equipment is needed:

- ARRI Shift & Tilt System, order number 311860
- SONY Adapter Plate (SAP-1), order number 338870
- Bridgeplate BP-6, order number 339807
- SONY Shift & Tilt Adapter, order number 311896

This adapter replaces the PL lens mount on the Shift & Tilt System with a SONY B-4 lens mount.

## ARRI Matteboxes

We have used the ARRI MB-14, MB-16, MB-17, MB-17B and MB-19 matteboxes with the supported cameras.



SONY DVW-700 with SAP-1, ARRI BP-6 Bridgeplate and ARRI MB-19 Matte Box

The MB-14 and MB-16 need the BP-6 Bridgeplate, the MB-17 needs the Lightweight Support System, and the MB-17B and MB-19 can be mounted either on the BP-6 Bridgeplate or on the Lightweight Support System. Specify the front diameter of the lenses used, so the appropriate reflex prevention ring can be selected.

## ARRI Follow Focus

We have successfully attached the FF-3 and FF-4 studio follow focus, as well as the Lightweight Focus Drive LFD to the supported cameras.

The FF-3 needs the BP-6 Bridgeplate, and the FF-4 can be mounted either on the 19mm support rods of the BP-6 Bridgeplate or on the Lightweight Support System. On some zoom lenses we had to machine down the tie down lever for the right side focus knob of the FF-4, since it interfered with the zoom lens servo motor. This new lever is called:

- Video Tie Down Lever, order number ZMISC-TIEDOWN

Please note that the Canon Hi-definition prime lenses and the Canon and Fujinon "film style" zoom lenses can use the ARRI prime gear, but regular Canon and Fujinon video zoom lenses need special gears:

- Video Gear, Large, Canon, order number 381486
- Video Gear, Small, Canon, order number 381488
- Video Gear, Large, Fujinon, order number 381490
- Video Gear, Small, Fujinon, order number 381492

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## **ARRI Lens Control System**

The ARRI Lens Control System (LCS), which works either wired or wirelessly, can be used with the ARRI Bridgeplate or with the Lightweight Support System. The lens motors will have to be supplied with power from a separate battery (cable available). We do not recommend powering the lens motors directly from the video camera, as the output current of most video cameras is below the peak current needed by the lens motors.

Based on the gears used on the lens motors, the ARRI Lens Control System can only be used with lenses that have the ARRI gear pitch. Currently those are the Canon Hi-definition prime lenses and the Canon and Fujinon "film style" zoom lenses.

## **Extended Viewfinder**

The SONY Extended Viewfinder BKW LVF-1, that can be used with all SONY HDW, BVW and DVW cameras, uses the ARRI Eyepiece Leveler EL-3.

- Eyepiece Leveler EL-3, order number 303108.

## **Other Notes**

2/3' CCD chips, as are used in the DVW-700 and HDW-700, have about the same area exposed as Super 16 film cameras.

The SONY BVW 600 camera with the component adapter (26 pin connector) has the lens too high for the Arri accessories. Without the component adapter it might fit (not tested yet). The SONY BVP-7A camera also has the lens mount too high. Even though this means that there is no easy way to use these cameras with the ARRI Bridgeplate, it might be possible to lock the Lightweight Support bracket a little higher on the SLB-1 adapter to compensate for this (also not tested yet).

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## Sample Parts List

These are all the ARRI parts needed to equip a SONY HDW 700 with an ARRI MB-19 Mattebox, an FF-4 follow focus and a SONY Extended Viewfinder BKW LVF-1. This list assumes that the camera is equipped with a video zoom lens with an 86 mm front diameter.

### Bridgeplates, Adapters

|   |   |        |
|---|---|--------|
| 1 | SAP-1 SONY Adapter Plate.....               | 338870 |
| 1 | Bridgeplate BP 6 for 16SR, 19 mm rods ..... | 339807 |
|   | - Top plate                                 |        |
|   | - Bottom plate with 1 3/8-16 screw          |        |
|   | - 2 Rods                                    |        |

### Eyepiece Leveler

|   |  |        |
|---|--|--------|
| 1 | EL 3 Finder Support for 535, 435, 16SR 3 ..... | 303108 |
|   | - Telescoping eyepiece leveler rod             |        |
|   | - Horizontal rod                               |        |
|   | - Arrihead mounting bracket                    |        |

### Matte Box MB-19 (4 x 5.65)

|   |  |        |
|---|--|--------|
| 1 | Matte Box MB-19 4x5.65 .....                           | 338660 |
|   | - with French flag bar                                 |        |
|   | - with 2 filter trays                                  |        |
| 1 | Adapter MB-19 to 19 mm rods .....                      | 338684 |
| 1 | 4x4 Filter Frame, for MB-19, for graduated stage ..... | 338680 |
| 1 | 4x4 Filter Frame, for MB-19, for rotating stage .....  | 338682 |
| 1 | 138 mm Filter/Reflex Prevention ring, 87 mm.....       | 333061 |
| 1 | Mask Set 18-180 mm, 35 mm format.....                  | 338672 |
| 1 | Top Flag Only for MB-19 .....                          | 338676 |
| 1 | Side Flags (2) for MB-19 .....                         | 338678 |

### Follow Focus

|   |  |               |
|---|--|---------------|
| 1 | FF-4 Follow Focus 4 Main Unit .....                  | 381440        |
|   | - with left focus knob                               |               |
|   | - with 1 marking disk                                |               |
| 1 | FF-4 Follow Focus Knob, Right Side .....             | 381442        |
|   | - with 1 marking disk                                |               |
| 1 | Follow Focus Right Side Extension .....              | 381120        |
| 1 | BA- 2, Bracket Adapter for FF-4, 19 mm.....          | 381411        |
| 1 | Focusing Crank .....                                 | 380140        |
| 1 | Flex Shaft with knob.....                            | 381130        |
| 1 | Follow Focus Gear for Primes.....                    | 381235        |
| 1 | Follow Focus Gear for Cooke Zooms .....              | 381190        |
| 1 | Follow Focus Gear for Canon Video Lenses, Large..... | 300999        |
| 1 | Follow Focus Gear for Canon Video Lenses, Small..... | 300999        |
| 1 | Follow Focus Gear for Fuji Video Lenses, Large ..... | 300999        |
| 1 | Follow Focus Gear for Fuji Video Lenses, Small ..... | 300999        |
| 1 | Video Tie Down Lever .....                           | ZMISC-TIEDOWN |

For more information on this issue, please contact your local ARRI representative.