

PYSER – SGI

**PYSER – SGI LIMITED
DEFENCE PRODUCTS DIVISION**

Fircroft Way, Edenbridge, Kent,
United Kingdom, TN8 6HA
Telephone: +44 (0)1732 864111
Facsimile: +44 (0)1732 865544
Email: sales@pyser-sgi.com
www.pyser-sgi.com



BS EN ISO 9001 : 2000
Certificate No FM 30264

**BS EN 55103 - 1
BS EN 55103 - 2
BS EN 60555 - 2**



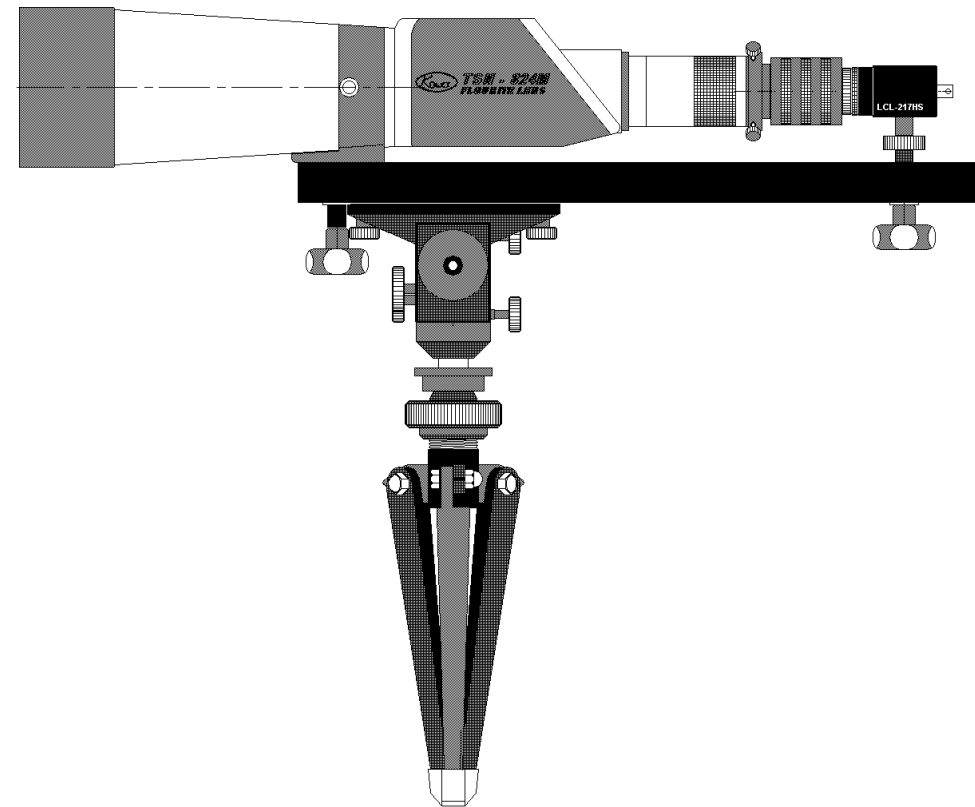
Note: The battery supplied with this equipment is a sealed lead acid cell. Due to the nature of its construction this battery is described under line entry UN2800 of the IATA manual, provision A67 as “Non Dangerous”, and is therefore safe for air travel purposes.

820800-99

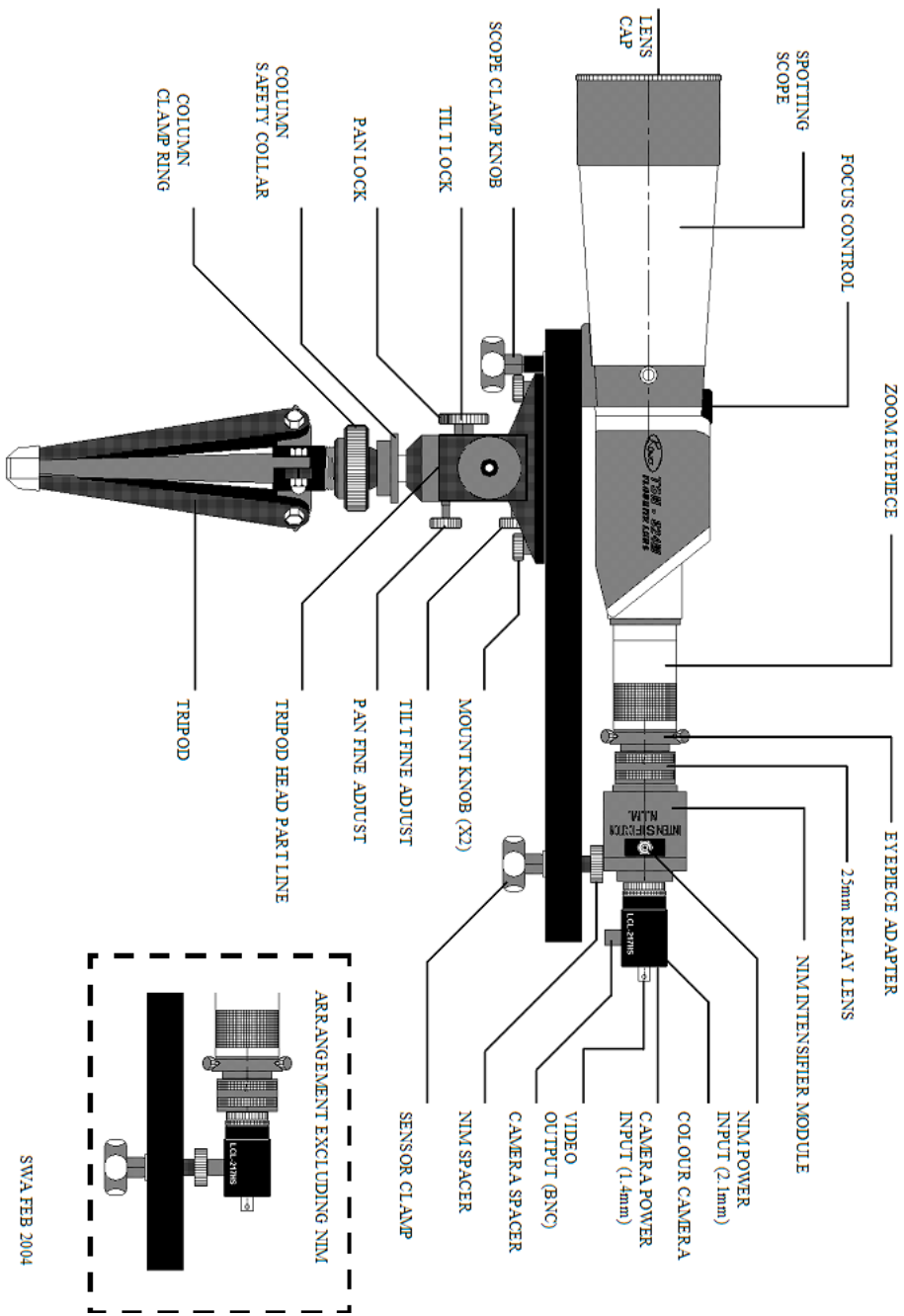
PROMS

**PORTABLE RAPID-DEPLOYMENT OBSERVATION
AND MONITORING SYSTEM.**

INSTRUCTIONS FOR USE



PROMS - PORTABLE RAPID-DEPLOYMENT OBSERVATION AND MONITORING SYSTEM.

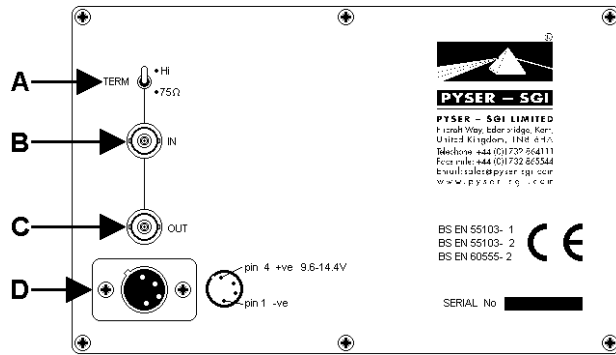


Page No

Section No	Section	Page No
1	System contents	1
	1.1 Standard configuration	1
	1.2 Optional extras	1
2	Specifications	2
	2.1 Spotting scope	2
	2.2 Eyepiece	2
	2.3 Camera	2
	2.4 Monitor	2
	2.5 System	3
3	Basic set up	3
	3.1 Sensor platform	3
	3.2 Tripod	4
	3.3 Connecting up the system	5
4	Alternative configurations	5
	4.1 25mm Relay lens	5
	4.2 Image intensifier module (NIM) *	6
	4.3 Image intensifier monocular (PNP) *	6
	4.4 Microwave transmission *	7
5	Operation & Maintenance	7
	5.1 Monitor controls	7
	5.2 Charging	8
	5.3 Care of optical components	8
	5.4 Fuses	8

* Depending on options purchased

Rear panel



- A VIDEO TERMINATION SWITCH. If VIDEO OUTPUT connector is connected to another piece of equipment i.e. a monitor or video recorder, then switch should be set to "Hi", otherwise set it to 75 Ω.
- B VIDEO INPUT CONNECTOR (BNC) Connect to monitor pigtail assembly.
- C VIDEO OUTPUT (LOOP)CONNECTOR (BNC) Connect to auxiliary equipment such as other monitors, video recorders etc.
- D POWER INPUT CONNECTOR (XLR 4way) Pin 4 positive, Pin 1 negative, 9.6 to 14.4 Volts DC.

5.2 CHARGING

The battery supplied should have a useable charge of 8-10 hours depending upon temperature, monitor dimmer setting and equipment used. Batteries should be recharged soon after use and always be fully charged before storage. If the monitor cuts out through low voltage then the battery must be immediately recharged to avoid a state known as deep discharge which may cause permanent damage to the battery.

Using only the chargers (mains and 12V) supplied connect the battery and supply voltage. Re-charging may take up to 6 hours or until the charge indicator turns green (refer to instructions printed on charger).

5.3 CARE OF THE OPTICAL COMPONENTS

Remove dirt from optical surfaces with a clean blower or soft brush, remove grease or marks with a lint free cloth or tissue moistened with alcohol or proprietary lens cleaner. Avoid touching glass with fingers.

5.4 FUSES

The battery assembly is protected with a 4A anti-surge 1¼" fuse. In the unlikely event that this should blow always replace with the same or equivalent.

1.0 SYSTEM CONTENTS

1.1 STANDARD CONFIGURATION

PART No	Qty	DESCRIPTION
142-824	1	KOWA SPOTTING SCOPE, FLUORITE LENS
141-206	1	KOWA 20-60 X ZOOM EYEPIECE
930-304	1	MICROTEST TFT 64V MONITOR
820800-07	1	WATERPROOF 75mm RELAY LENS
820800-08	1	WATERPROOF 25mm RELAY LENS
LCL-217HS	1	WATEC COLOUR CAMERA
Tripods 168	1	MINI TRIPOD
Bushmaster	1	4X20 FINDERSCOPE
820800-01	1	SUPPORT BEAM SUB ASSEMBLY
820800-02	1	PAN AND TILT HEAD (FINE & COARSE)
820800-03	1	12V 12AH BATTERY SUB ASSEMBLY
820800-04	1	PIGTAIL CABLE ASSEMBLY, CAMERA
820800-05	1	PIGTAIL CABLE ASSEMBLY, MONITOR
820800-06	1	10m POWER / VIDEO CABLE ASSEMBLY
820800-06L		90m POWER / VIDEO CABLE ASSEMBLY
820800-001	1	EYEPIECE ADAPTOR RING
820800-003	1	STEP-UP SUPPORT PILLAR CAMERA
820800-004	1	STEP-UP SUPPORT PILLAR NIM
Mascot	1	LEAD ACID THREE STAGE CHARGER, 2.7A
Switched Mode	1	DC/DC CONVERTER / CAR CHARGER
820800-20	1	CARRYING BAG SET WITH ATTACHMENTS

1.2 OPTIONAL EXTRAS

820800-03		12V 12AH BATTERY SUB ASSEMBLY
820800-30		MICROWAVE TRANSMISSION KIT
575-XXX		NIM, CCTV I/I MODULE (including thumbscrew)
589-XXX		PNP, IMAGE INTENSIFIER MONOCULAR

2.0 SPECIFICATIONS

2.1 SPOTTING SCOPE:

TSN 824M	
Effective diameter of objective lens:	82mm
Minimum focusing distance:	6m
Weight	1.4Kg

2.2 EYEPIECE:

TSE Z7	
Magnification:	20X~60X
Real field of view:	2°~1°
Apparent field of view:	40°~60°
Exit pupil diameter:	4.1~1.4mm
Relative brightness:	16.8~2.0
Eye relief:	15.0~15.5
Field of view at 1000m:	35~17.5m

2.3 CAMERA:

LCL-217HS	
Operating voltage	12V dc $\pm 10\%$ 180mA max
Pick-up device:	$\frac{1}{3}$ " CCD-Colour
Effective pixels:	752(H) X 582(V)
H Resolution:	> 480 TV lines
Operating temperature:	-10°C~+40°C

2.4 MONITOR:

TFT-64V	
Operating voltage	12V dc $\pm 20\%$ 1.2A max
Screen size:	6.4"
Aspect ratio:	4:3
Brightness:	300cd/m ²
Resolution:	640 X 480
Horizontal viewing angle:	+/-55°
Vertical viewing angle:	+15°/-35°
Case size:	220 X 140 X 75mm
Weight	1.2Kg
Environmental protection:	IP64
Operating temperature:	0°C~+55°C

4.4 MICROWAVE TRANSMISSION

When using the optional microwave kit, the normal pigtail assemblies and power/video cables are discarded and replaced with the cabling supplied with the kit. Note that a battery will be required at each end of the installation, therefore an additional battery assembly will also be required.

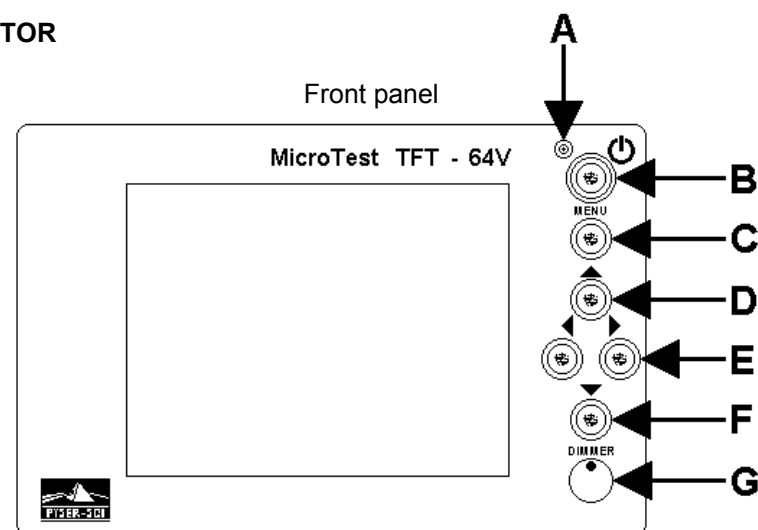
Once the system has been set up, the transmitter and receiver modules will have to be positioned for best transmission. Ideally, when using the "whip" antennae both should be positioned in the vertical attitude.

If the range achieved in a particular situation is unsatisfactory, then higher gain (directional) antennae may be used at one or, ideally, both ends.

Full instructions will be supplied with the specific kit when supplied.

5.0 OPERATION AND MAINTENANCE

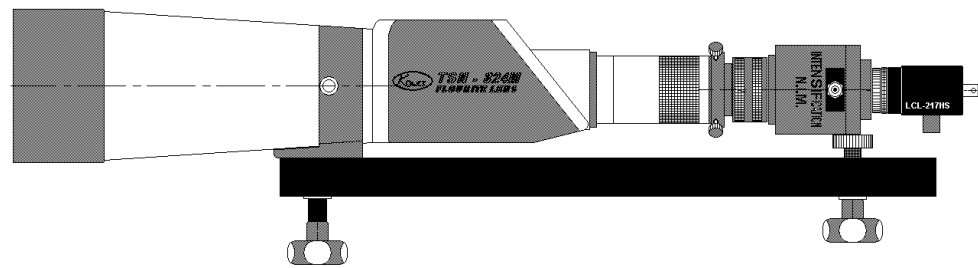
5.1 MONITOR



A	LED INDICATOR	Indicates that power is switched on, but monitor is in standby mode.
B	ON-OFF SWITCH	Turns power on
C	MENU	Turns OSD (On Screen Display) on and off. OSD also times out.
D	SELECT DOWN	Moves selector to next function
E	LEFT and RIGHT	Increase or decrease the setting.
F	SELECT UP	Moves the selection to previous function.
G	DIMMER	Controls back-light brightness (Note: high settings reduce battery life)

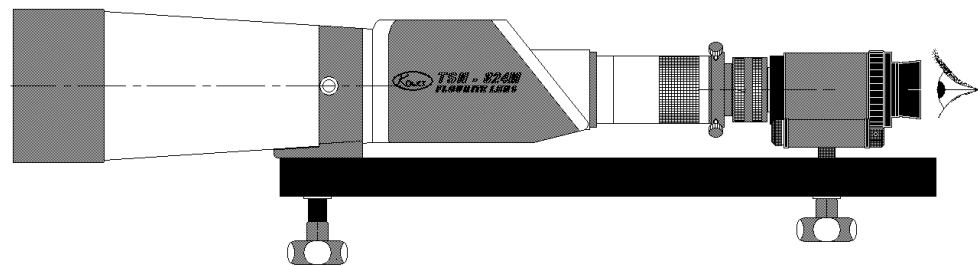
4.2 IMAGE INTENSIFIER MODULE (NIM)

As with the previous set up, slacken the clamp knobs and remove the camera and relay lens. Depending on surveillance situation, fit either the 25 or 75mm lens to the C mount thread of the NIM (note: the 25mm lens should be selected in the lowest light conditions). Screw the camera onto the opposite end of the NIM, re fit to the eyepiece adapter again slackening the thumbscrews to orientate the camera. Slacken the thumbscrew on the mounting ring of the NIM and rotate to locate with the support knob. Note that the camera support pillar remains with the camera. Power the NIM with the spare 2.1mm tubular power connector, which is part of the camera pigtail assembly.



4.3 IMAGE INTENSIFIER MONOCULAR (PNP)

Following the previous examples remove camera and lens, separate the lens and fit to the C mount thread of the PNP, re fit to the eyepiece adapter, orientate and screw in the support knob (after first removing the knurled NIM support pillar). This set up is for use in non CCTV situations, being viewed directly by the user.



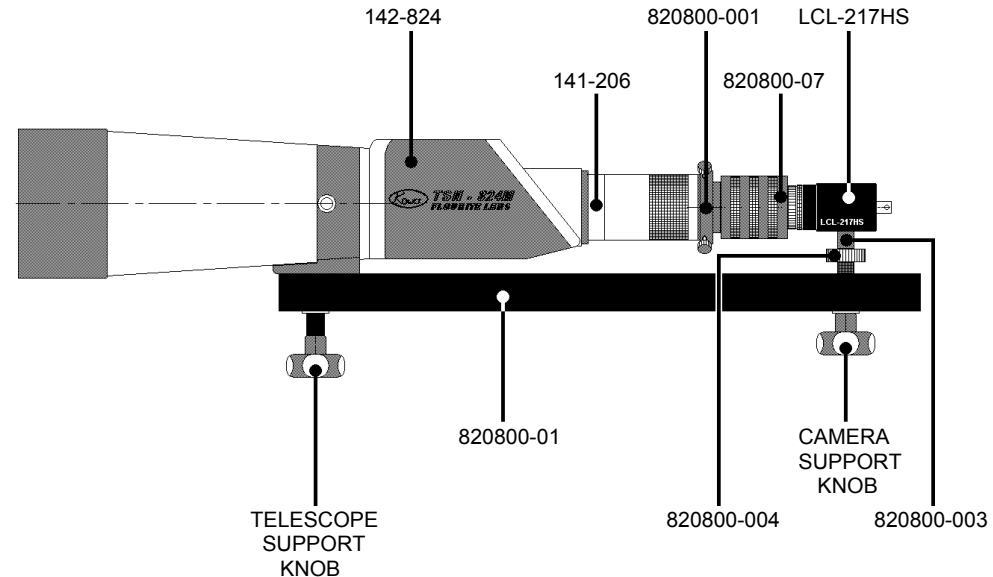
2.5 SYSTEM FIELDS OF VIEW (FoV):

SENSOR	RELAY LENS	EYEPIECE MAG	FoV deg	FoV mils	NOMINAL MAGNIFICATION
WATEC	25mm	X20	0.475	8.44	83X
	25mm	X60	0.162	2.87	249X
	75mm	X20	0.165	2.94	242X
	75mm	X60	0.056	1.0	711X
WATEC & NIM	25mm	X20	0.668	11.87	59X
	25mm	X60	0.228	4.06	175X
	75mm	X20	0.232	4.12	172X
	75mm	X60	0.077	1.37	519X
PNP ONLY	25mm	X20	1.336	23.74	29X
	25mm	X60	0.457	8.12	87X
	75mm	X20	0.464	8.25	85X
	75mm	X60	0.158	2.81	255X

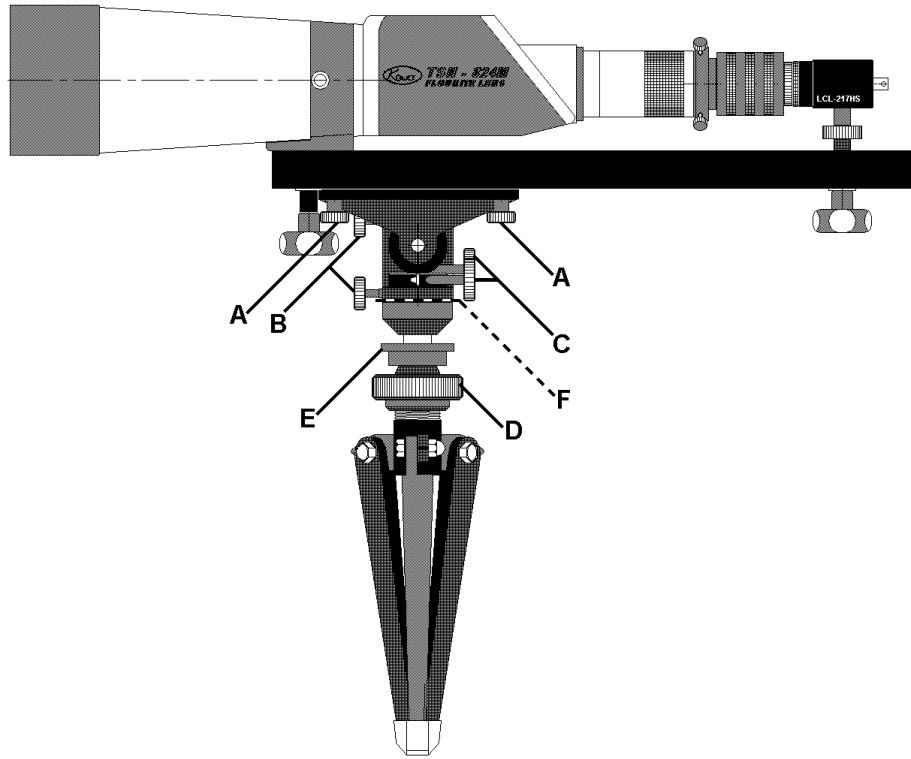
3.0 BASIC SETUP

3.1 SENSOR PLATFORM

The sensor platform in its standard set up is as follows (refer to item list for descriptions):



3.2 TRIPOD FITTING



The tripod is attached to the beam assembly using the two captive screws (A). For basic camera set-ups using the camera only with either the 25 or 75mm relay lens, the forward of the two fitting positions should be used. To aid counterbalance of the top assembly, the rear pair of fixing holes should be used when the sensor platform includes either of the image intensifying products NIM or PNP.

Before use ensure the fine adjustments are in the centre of their travel by rotating the adjustment knobs (B) and viewing the white alignment marks seen when viewing the pan and tilt head from the side containing the screws (B).

To allow maximum angles of elevation or depression, it is recommended that the tripod assembly is attached as per the diagram for angles of view ranging from horizontal to 45° ELEVATION, for horizontal to 45° DEPRESSION attach the tripod reversed from the above position with the fine adjust screws (B) facing to the viewer.

The height of the tripod column is adjusted by slackening locking collar (D) and releasing safety stop collar (E).

If required the system can be used on an alternative tripod. Unscrew the head assembly at point “F” and re fit to any tripod fitted with the standard ¼” UNC male thread adaptation.

To align the system to a target, slacken the pan and tilt lock knobs (C), whilst viewing through the finderscope, move the sensor platform approximately onto the object and firmly tighten the lock knobs (C). Fine tune to the target using adjustment knobs (B).

3.3 CONNECTING UP THE SYSTEM

The system is provided with two connection “pigtaills”, (Camera pigtail 820800-04 and Monitor pigtail 820800-05) each connects to the power/video cable assembly (820800-06) via a mini DIN connector.

The remaining connectors on the camera pigtail are; a 1.4mm tubular power connector for the camera, a BNC video connector for the camera and a 2.1mm tubular power connector for the NIM, image intensifier module, when fitted.

The remaining connectors on the Monitor pigtail are a 4 pin XLR **female** connector for the monitor power supply, a BNC video connector for the monitor video supply and a 4 pin XLR **male** connector for the system power input (from battery, 820800-03 or 12V regulated supply from the DC/DC converter included with the system).

For greater distances between sensor platform and monitor, replace the power/video cable assembly (820800-06) with the 90m version (820800-06L) or for up to 1km* use the microwave transmission kit (820800-30) referring to section 4.4.

*Line of sight range, maximum transmission distance is reduced in built-up areas.

4.0 ALTERNATIVE CONFIGURATIONS

Note: after changing the standard sensor platform set-ups to any of the following it may be necessary to reset the finderscope crossline.

4.1 25mm RELAY LENS

For applications requiring either or both maximum field of view or maximum light transmission the 25mm relay lens should be used in place of the 75mm lens. Simply slacken both clamping knobs, remove the camera and relay lens (ensure that the 5mm spacer ring stays with the camera) exchange the lens for the 75mm version and reassemble to the eyepiece adapter. At this stage it will be necessary to slacken the three locking thumbscrews and re-orientate the assembly rotationally in order to locate the camera fixing point at the bottom.

