

## Six-Ninety Series B692 Station Box

The B692 is a versatile Station Box designed to fulfil a wide range of aircraft communication control system requirements. The unit provides for selection and control of audio input signals and for processing and routing of microphone signals to their destinations. The Station Box electrical configuration can be adapted to suit particular system requirements with 'custom' front panel engravings for identification of switch/control usage.



### PRODUCT DESCRIPTION

Thirteen toggle switches and a potentiometer enable selection and control of receiver audio signals and a further combined switch/potentiometer is provided to select and control intercommunication signals.

Selection of any one of six transmitter services is by means of a six position rotary switch which also provides automatic switching of the microphone amplifier circuits ensuring that the signal is routed at the correct level to the selected transmitter.

An optional use toggle switch is provided, wired so that it may be utilized for any desired purpose, e.g. Mic 1/Mic 2, Tels/Spkr, Hand/Boom etc.

The gated 'Normal/Fail' switch when in the 'Fail' position routes one of the receiver audios (with left to right, top to bottom priority) directly to the earphone terminal. With no receiver audio selected, intercom is routed to the earphone terminal.

The unit contains a telephone amplifier which combines and controls intercom and receiver audio signals and provides an output for headset earphones.

A microphone amplifier is incorporated which can be used with either electro-magnetic or carbon microphones. Depending on shorting links at the equipment connectors, a relay switching circuit routes the microphone signals directly to the transmitter when they are mutually compatible and via the microphone amplifier when they are not.

An intercom override facility is provided which, when selected, mutes the receiver audios and selects intercom at maximum level regardless of the control setting. Provision is made for an un-muteable audio input, which is not affected by the intercom override, for essential services such as warning tones.

The equipment contains a circuit which may be connected to a Cockpit Voice Recorder (CVR) and is arranged so that any signals transmitted or received at the Station Box are automatically routed to the CVR.

In a typical installation employing B692 Station Boxes, the units would be connected in a star-point configuration to the associated transmitter-receivers. In installations utilizing more than two B692 units, an intercom summing amplifier type A69 t or A692 may be required. The safety requirements of the Civil Aviation Authority require that in a single unit installation, conversion of the microphone level signal to suit the transmitter should be achieved by a separate in-line amplifier on at least one transmitter requiring level conversion.

## TECHNICAL DATA

A coded suffix following the stroke of the unit type number denotes the microphone type, microphone amplifier source

impedance and output level. These are given in the following table:

Type Number	Microphone Type	Input Level		Output Level	Source Impedance
B692/1	E.M.	2mV		3.4V e.m.f.	150 ohms
B692/2	Carbon	150mV		4.4V e.m.f..	150 ohms
B692/3	E.M.	2mV		220mV e.m.f.	10ohms
B692/4	Carbon	150mV		4mV e.m.f.	150 ohms
B692/5	E.M.	2mV	Transmitter o/p Intercom & Override:	3.4Ve.m.f.	150ohms
				3.4Ve.m.f.	1,650 ohms
B692/6	Carbon	150mV	Transmitter o/p Intercom & Override:	4.4V e.m.f.	150 ohms
				4.4V e.m.f.	1,650 ohms
B692/7	Dynamic	270IV		3.4V e.m.f.	150 ohms
B692/8	E.M.	7mV		3.4V e.m.f.	150 ohms
B692/9	Mic 1/ Mic 2 switchable				
	Mic 1: E.M.	2mV		2.5V e.m.f.	150 ohms
	Mic 2: Carbon	150mV			

### Microphone:

User Choice: E.M./Dynamic or Carbon (see above table)

### Audio Services:

18 audio inputs (15 switched + 3 unswitched), including system intercom facilities.

### Telephone Output:

75mW  $\pm$ 3dB into nominal 160 ohm or 600 ohm impedance. For low impedance (10 ohm) headsets a suitable matching transformer can be supplied.

### Volume Control:

30dB

### Distortion:

Less than 5%

### Frequency Range:

300Hz to 3kHz (0 to -3dB)

### Crosstalk Rejection:

Better than 80dB

### Breakthrough:

Better than 60dB

### Noise:

Better than 60dB down on rated output

### Power Supply:

Nominal 28V d.c. (operating range 22 to 32V d.c.)

### Ripple Rejection:

BS2G 100 part3 (Jan. '68) Better than 65dB

### Transient Protection:

BS2G 100 Part3 (Jan. '68)

### Radio Interference:

BS2G 100 Part 2 (Feb. '62) para 225

### Compass Interference:

Less than 304mm (12 in.)

## GENERAL DATA

### Weight:

Nominal 720g

### Dimensions:

Width 146mm x Height 67mm x Depth 64mm

### Panel Illumination:

Integral

### Altitude:

60,000 ft.

### Operating Temperature:

-40 to +70°C,

### Vibration:

BS2G 100 Part 2 (Feb. '62) Clause 216; Grade B

### Acceleration:

BS2G 100 Part 2 (Feb. '62) Clause 219

### Approval:

CAA (WR 723)

### Additional Facility:

DPCO switch provided on front panel for optional use.