



Dual Channel



Antenna

MasterPoint S3 LCD

The fourth generation of Beel Technologies MasterPoint S3 SSR monitor provides continuous verification of integrity, accuracy, phase and azimuth alignment of secondary surveillance radars.

- Single (not shown) or dual channel versions
- Automatic switchover (dual channel only)
- Operation in modes 3/A, C and S Level 3
- Control via LCD and network ready embedded web server
- Fully solid state
- Built in test and fault reporting
- Modular construction
- Directional antenna
- Integral 50 dB attenuator
- Flight ID
- Indoor 19 inch 6U rack mount chassis
- Mode S features:
 - Level 3 (Comm A/B and Comm C ELM) datalink
 - Enhanced Surveillance
 - Surveillance Identifier (SI) Capability
 - Optional: set BDS registers using 429 labels

SPECIFICATIONS

Part Numbers: 41169 – Single Channel

42169 – Dual Channel

Transmitter

Transmit Frequency 1090 ± 1 MHz
 Transmit Power 125 Watts peak (minimum)
 500 Watts peak (maximum)

Dimensions (L x W x H)

SSR Monitor 563 x 484 x 268 mm
 Antenna 457 x 584 x 178 mm

Receiver

Center Frequency 1030 ± 0.2 MHz
 Sensitivity -74dBm ±3dB

Weight

	41169.000	42169.000
SSR Monitor	15 kg	24 kg
Antenna		4.5 kg

Parameters

Interrogation Modes 3/A ,C, S Level 3
 Mode S Formats 0, 4, 5, 11, 16, 20, 21, 24
 Altitude (feet) -1000 to 126000ft, 100ft steps
 Range Delay (NM) 0.3-300 NM in 0.1 NM steps

Reliability

	41169.000	42169.000
MTBF (hours)	40,000	55,000
MTTR (minutes)	24	30

Antenna

Frequency Range 1020 to 1100 MHz
 Construction Full wave backfire
 Impedance 50 Ohms
 Gain 12.5 ± 0.5 dBi

Environmental

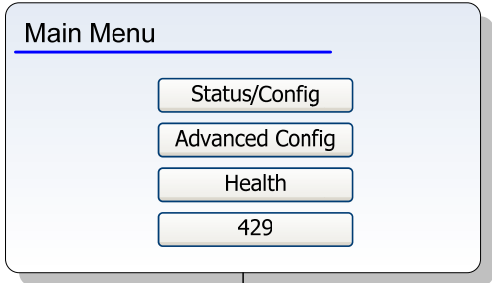
Operating Temperature 0° C to + 40° C
 Storage -40° C to + 65° C
 Relative Humidity Up to 90% , non-condensing
 Altitude, Operating Up to 3,000 m
 Altitude, Non-Operating Up to 5,000 m
 Weather, Antenna Up to 100% humidity
 Wind: 158 km/hr with driving rain or 4 cm of ice loading.
 Up to 240 km/hr wind while not operating.

Power

AC Input 86-264V AC
 Frequency 47-63Hz
 Power consumption 80 watts (41169.000)
 (Typical) 120 watts (42169.000)

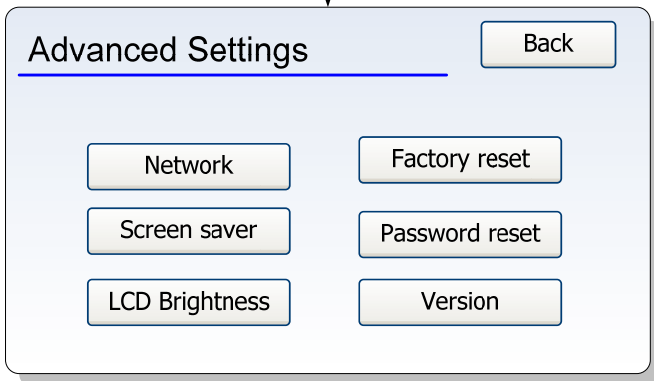
Advanced Menu and Control System

The next generation MasterPoint S3 incorporates an embedded control system with LCD touch screen panel which brings an unprecedented simplicity and ease of use through an intuitive graphical user interface. A first time setup wizard guides the user through setting the basic parameters. Advanced users and installations can be configured through the standard menu system.

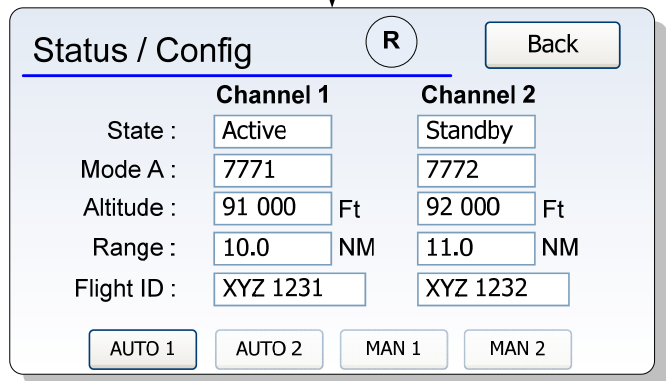


The Main Menu provides instant access to standard and optional functions through a simple menu system. Displayed values and data entry are done using standard engineering values for human readability.

- **Status/Config** controls the main operating parameters
- **Advanced Config** accesses the network and maintenance menus
- **Health** status (option 080) accesses the BITE status of the LRUs
- **429** (option 001) allows configuration of the 429 labels



Every unit includes Advanced Settings to configure typical network parameters and perform basic maintenance functions.



The Status/Config screen provides a simple view of the current transponder settings and allows quick editing by touching the field and updating the data.

Options	Description																
000	Standard configuration Mode S Level 3 test transponder. Includes remote control via embedded web server over TCP/IP (Ethernet) to control Mode A, C, Flight ID and range delay.																
001	Integrated 429 interface provides ability to set GICB (BDS) registers: <table border="1" style="margin: 5px auto; width: 80%;"> <thead> <tr> <th>Description</th> <th>BDS</th> <th>Description</th> <th>BDS</th> </tr> </thead> <tbody> <tr> <td>Aircraft /Flight Identification</td> <td>2,0</td> <td>Ground Speed</td> <td>5,0</td> </tr> <tr> <td>Selected Altitude</td> <td>4,0</td> <td>True Airspeed</td> <td>5,0</td> </tr> <tr> <td>True Track Angle</td> <td>5,0</td> <td>Own Magnetic Heading</td> <td>6,0</td> </tr> </tbody> </table>	Description	BDS	Description	BDS	Aircraft /Flight Identification	2,0	Ground Speed	5,0	Selected Altitude	4,0	True Airspeed	5,0	True Track Angle	5,0	Own Magnetic Heading	6,0
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040	Uninterruptible Power Supply (UPS) unit provides continuous AC power during short term power loss																
080	BITE reporting, including BITE encoded Mode C replies (priority encoded altitude increases)																
100	Support for Mode 1 & 2 replies in accordance with the DOD AIM565-1000B																

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