

SC120

User Manual



10W PA amplifier and ringing relay



Contents

1.	SeaCom 120 general description.....	4
1.1	Technical specification	4
2.	Installation	5
2.1	PA system description.....	5
2.2	Electrical connection	5
2.2.1	Grounding considerations	6
2.3	Volume control.....	6
2.4	Jumpers	6
2.5	Setting up a paging call in the SeaCom2000.....	7

1. SeaCom 120 general description

The SeaCom 120 is a 15W public address speaker amplifier unit used to drive speakers or loudhailers in public areas where a high sound pressure level is required. The SeaCom 120 together with the SeaCom 110 are used when implementing a full featured public address system using the SeaCom2000 maritime communication system. The unit is enclosed in an IP66 polycarbonate box, and can be used in exposed areas even on deck.

Additionally the SeaCom 120 has a N.O. or N.C. relay output activated when the amplifier is activated or when ringing is send to the unit. This can be used for activating rotating lights or a gate control etc.

The figure 1 below shows a picture and the mechanical outline of the SeaCom 120

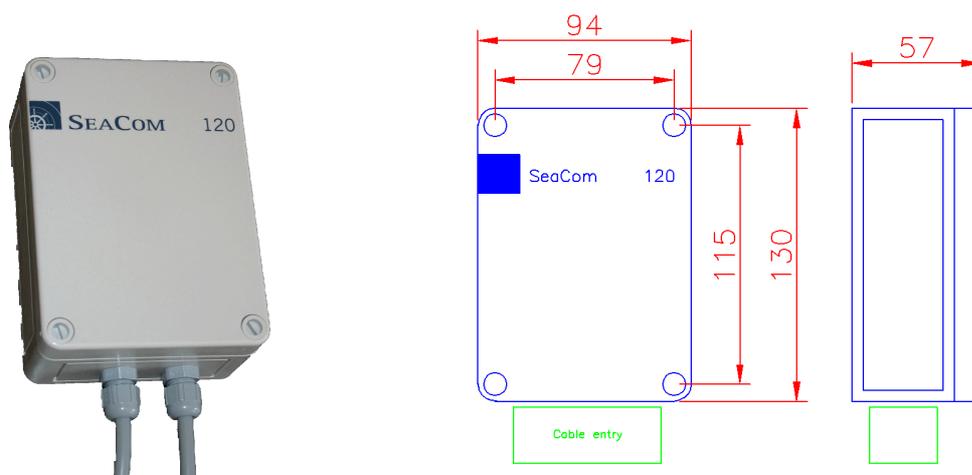


Figure 1 SeaCom 120 in picture and mechanical dimensions

1.1 Technical specification

- Load impedance 2x4 or 1x8 ohms
- Supply voltage 18-36V
- Standby 260mW
- Operating max. 20W
- Relay contacts 250V AC 1A
- Temperature -25 to 55C
- Size 94x130x57mm
- Weight 310 g
- Compass safe distance > 3m
- Environment Exposed
- Encapsulation IP66

2. Installation

The SeaCom 120 is installed on a bulkhead by 4 screws below the top cover. The telephone wires and the 24V DC power supply is taken through cable glands in the bottom of the cabinet. These 4 wires are taken to the 4 terminal connection block inside the SeaCom 120. Typically an extension line is devoted to the operation of one or a number of SeaCom 120 units.

Wires to the speakers are taken through cable glands in the bottom of the cabinet. 6 terminations are found internal to the unit.

2.1 PA system description

The figure 2 below shows a typical SeaCom2000 installation including public address functions:

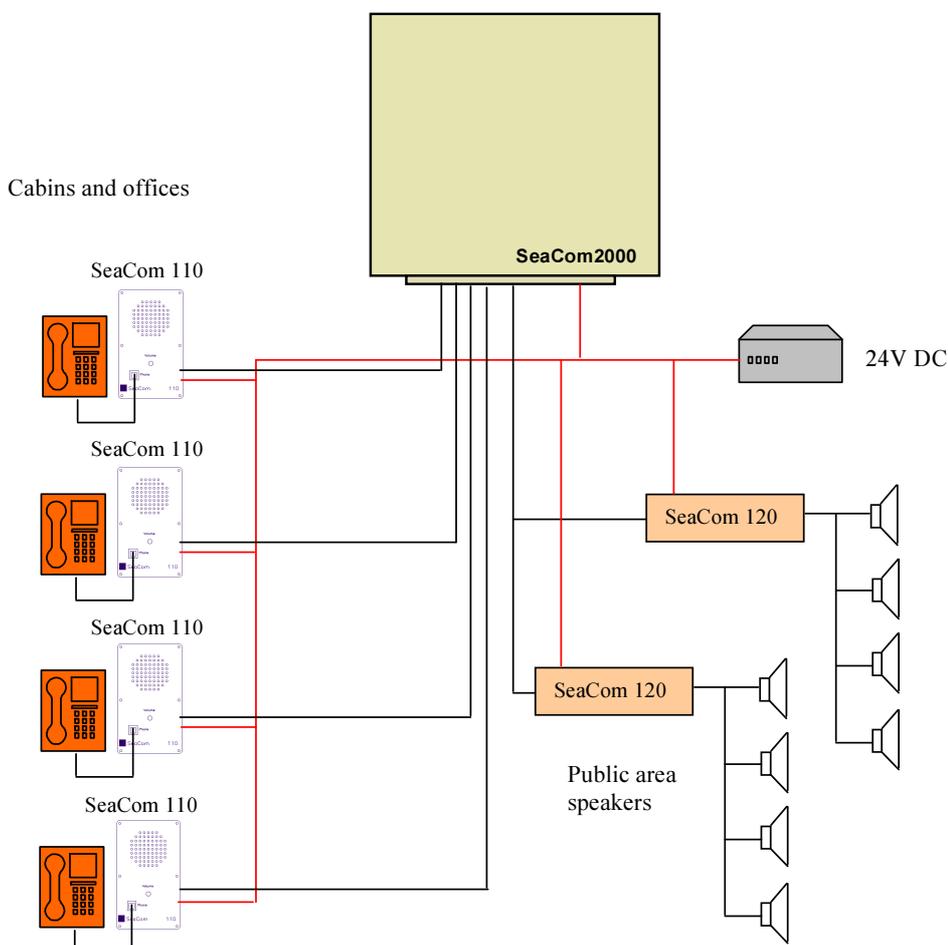


Figure 2. Typical SeaCom2000 public address installation. The red lines are 24V DC power lines. The black lines are extension lines. Note that more than one SeaCom 120 can be connected to one extension line.

2.2 Electrical connection

Inside the SeaCom 120 box, 2 termination blocks are found, one connecting extension line and 24V DC power and the speakers, and one connecting the relay.

The tables below shows the pin out of these termination blocks

Pin	Description
La	Extension line a
Lb	Extension line b
24V+	24V DC power supply positive terminal
24V-	24V DC power supply negative terminal
SpB+	5W amplifier #2 + output terminal
SpB-	5W amplifier #2 - output terminal
SpC+	15W amplifier (#1 and #2 bridged) + output terminal
SpC-	15W amplifier (#1 and #2 bridged) - output terminal
SpA-	5W amplifier #1 + output terminal
SpA+	5W amplifier #1 - output terminal

Pin	Description
N.O.	Relay output normal open contact
CT	Relay output center terminal
N.C.	Relay output normal closed contact

2.2.1 Grounding considerations

When installing the SeaCom 120 it is important to avoid excessive noise voltages between the power supply of the SeaCom2000 system and the SeaCom 120 or SeaCom 110 units. This can effectively be done by using the same 24V DC power supply for the SeaCom2000 as well as the SeaCom 120 and SeaCom 110.

If separate power supplies are used, it is important to make sure that the common mode voltages seen between the two supplies are kept at a minimum. Typically 10V AC 50Hz can be accepted, but be careful when using switched mode power supplies which can often generate non sinus shaped common mode voltages of much higher levels that accepted.

2.3 Volume control

The SeaCom 120 has an internal volume control (VR1) for setting the output sound level.

2.4 Jumpers

The SeaCom 120 has 3 jumpers selecting the functionality of the relay:

JP5	Description
1	Activate relay on ringing signal

2	Activate relay when amplifier is activated
3	Hold over for 6 seconds (used to keep relay closed between ringings)

2.5 Setting up a paging call in the SeaCom2000

The SeaCom2000 system has the ability to drive PA speakers using the extension lines. All or only some of the connected speakers can be driven depending on the system programming. Refer to the SeaCom2000 Configuration manual for details.

When programming the SeaCom2000 it is possible to install system call numbers representing paging calls. Several call numbers can be installed, each representing a group of selected speakers to be activated by a dialling from any analogue extension. Each paging call number can be given one of 3 priority levels, so that high priority paging calls can override lower priority paging calls. High priority paging calls can be set to activate speakers using the maximum volume, and can even be set to interrupt ongoing conversations. The speakers of active telephones cannot be activated as this would lead to acoustic feedback, but when a priority paging call is made to extensions in conversation, the conversation can be interrupted temporarily while sending the important message.