

## SECTION 1: CEL-594

### Schedule of Parts

The CEL-594 Weather Protection System consists of the following items, which are shown in Figure 1.

	Wind Deflector Assembly Complete with built in microphone shield and mounting tongue for extension cable bracket,
032879	Windssock,
032869	Birdspike Assembly,
032899	Rainproof Preamp. Shield,
032870	Endplate, complete with 032871 Gasket and 2 x M3 screws,
060183	Operator's Instructions.

When the system is delivered, check that all of the items have been supplied. Special transit packing is provided which must be retained for use when it is to be transported, or will be consigned by general carriers. Current or pending legislation on recycling requires that this packing material must be retained for re-use or be recycled in a locally approved manner.

### Assembly

The CEL-594 System is designed for use with the CEL-525/527/530 Preamp. Amplifiers, which are connected to the sound level analyser by means of the C6615/5 (5 m) or /10 (10 m) Preamp. Amplifier Extension Cables, or by the C6610/5 or /10 when the instrument is to be installed in a weather-proof case.

The cables are supplied complete with tripod bracket (1/4" Whitworth thread), and a clamp and screw for attaching the microphone protection system. Both CEL-525 and CEL-527 accept microphones for Type 1 applications, while the CEL-530 accepts a microphone for Type 2 applications.

### WARNING !

**To avoid DESTROYING the microphone when an electret type is to be used, switch the 200 V polarizing supply OFF before connecting the microphone.**

In general, it is not recommended to use air-condenser microphones in humid conditions

as they need special arrangements such as microphone heaters and silica gel dehumidifiers for reliable operation.

For Type 1 measurement outdoors, the CEL-250 Electret Microphone is suggested, which will be less affected by humidity, and also has a more robust construction than the air-condenser microphones used for Type 1 measurements. However, if a condenser microphone must be used, it is recommended that the CEL-525 with built in microphone heater be employed. Refer to Figure 1, and assemble the system as follows.

1. Fix the preamp. end of the C6615 or C6610 Cable to a tripod (or to some other suitable support).
2. Use the two M3 screws to fix the 032870 Endplate to the block on the preamp. end of the C6615/X Cable - with the gasket facing upwards (i.e. away from the flexible cable).
3. Locate the preamp. in the guides on the preamp. end of the extension cable, and push it firmly into place.
4. Fit the flexible 032899 Rainproof Shield over the microphone on the preamp. and push it right down to touch the Endplate.

The flexible shield may need rotating about the microphone stalk to achieve best fit over the preamp. case. Additional protection may be obtained by smearing silicone grease around the contact line of the flexible shield and the microphone stalk. Make sure no grease comes in contact with the microphone diaphragm.

5. Put the windshield assembly over the enclosed preamp. and carefully engage the mounting tongue in the slot on top of the extension cable mounting block.
6. Push the tongue down into the slot until the fixing screw can be engaged.
7. Tighten the fixing screw.

8. Locate the tripod or other preamp. support (complete with weather protection system) in the required position.
9. With the instrument switched OFF, connect the extension cable to the sound level analyser.

The instrumentation is now ready for use following the instructions given in the CEL-553/573/593 Operator's Handbook.

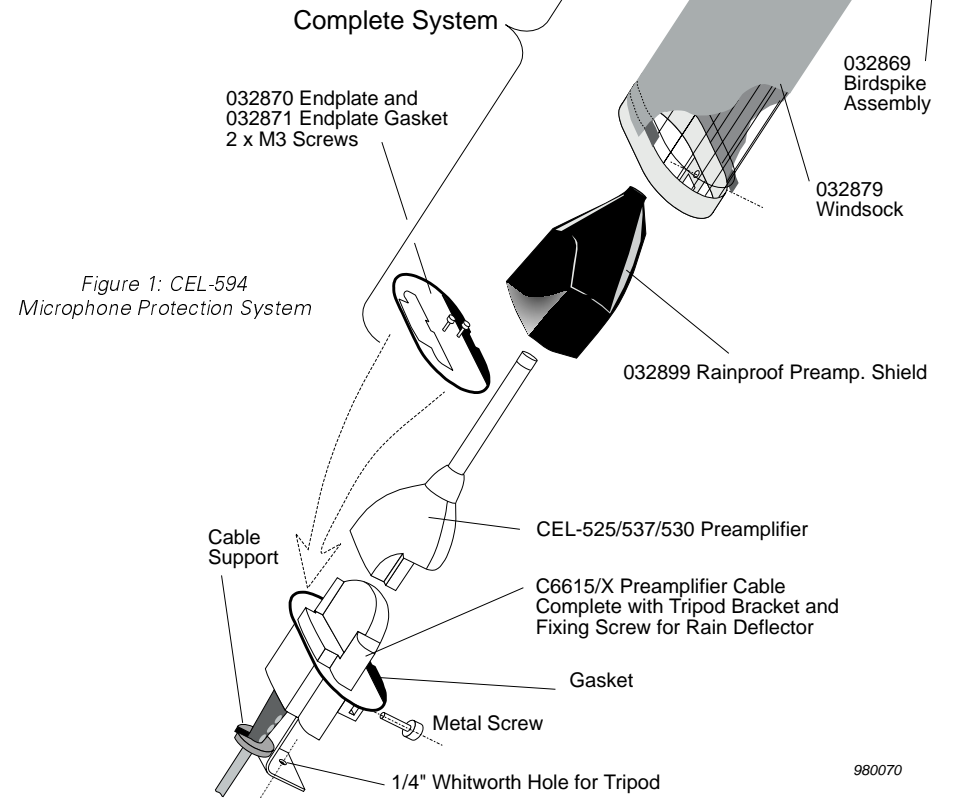


Figure 1: CEL-594 Microphone Protection System

### CEL-594 Dimensions

#### Weight of complete system:

1 kg (1.2 lb).

#### Wind deflector assembly:

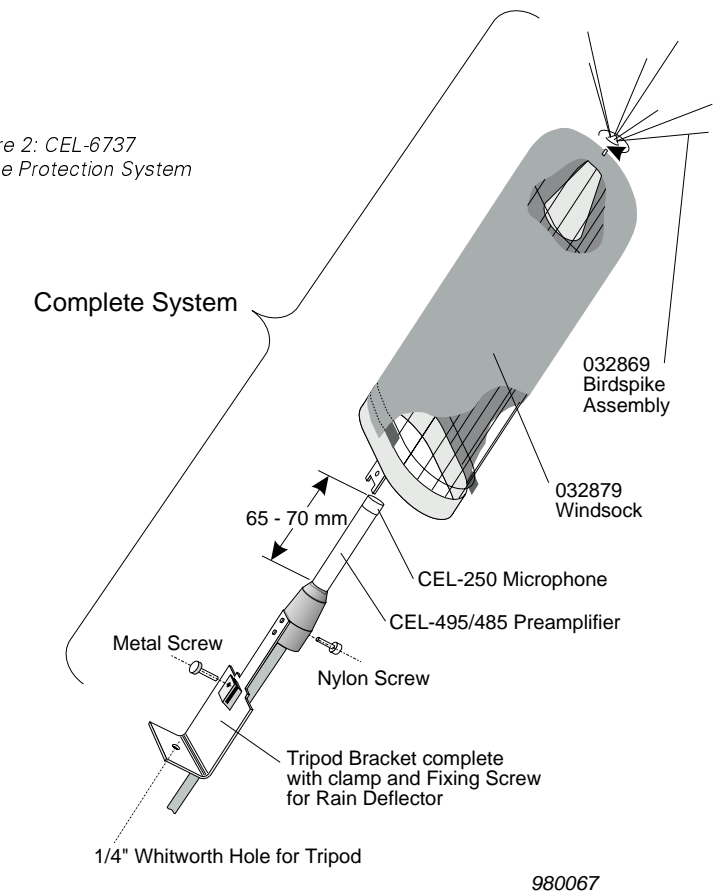
315 x 130 x 90 mm, (12.5 x 5.1 x 3.5 in).

#### Complete system over bird spikes:

420 x 135 x 135 mm, (16.5 x 5.4 x 5.4 in).

## SECTION 2: CEL-6737

Figure 2: CEL-6737 Microphone Protection System



### Schedule of Parts

The CEL-6737 Weather Protection System consists of the following items. They are shown in Figure 2.

	Wind Deflector Assembly Complete with built in microphone shield and mounting tongue for extension cable bracket, Tripod Bracket, Windssock,	032869	Birdspike Assembly,
032879		060183	Operator's Instructions.

When the system is delivered, check that all of the items have been supplied.

Special transit packing is provided which must be retained for use when it is to be transported, or will be consigned by general carriers. Current or pending legislation on recycling requires that this packing material must be retained for re-use or be recycled in a locally approved manner.

## Assembly

The CEL-6737 System is designed for use with the CEL-435 and CEL-425 Preamplifiers.

It connects directly with the sound level meter by means of Preamplifier Extension Cables C6716/5 (5 m), /10 (10 m), /20 (20 m), or /30 (30 m), or by means of C6717/5 (5 m), /10 (10 m), /20 (20 m), or /30 (30 m) when the sound level meter is to be installed in a weather-proof case.

1. Fix the Tripod Bracket to a tripod (or to some other suitable support).
2. If fitted, remove the microphone from the preamplifier.
3. Plug the preamplifier into the extension cable.
4. Insert the microphone end of the preamplifier into the bottom of the black conical housing and push it past the "O" ring.
5. Screw the microphone finger tight on to the preamplifier.
6. Adjust the preamplifier position so that the top of the microphone lies between 65 and

## CEL-6737 Dimensions

### Weight of complete system:

1 kg (1.2 lb).

### Wind deflector assembly:

315 x 130 x 90 mm, (12.5 x 5.1 x 3.5 in).

70 mm from the top of the cone and clamp it finger tight into position with the nylon screw.

7. Put the windshield assembly over the preamplifier and carefully engage the mounting tongue in the slot on top of the extension cable mounting block.
8. Push the tongue down into the slot until the metal fixing screw can be engaged.
9. Tighten the fixing screw.
10. Locate the tripod or other preamplifier support (complete with weather protection system) in the required position.
11. With the instrument switched OFF, connect the extension cable to the sound level analyser.

The instrumentation is now ready for use following the instructions given in the CEL-440/480 Handbook.

### Complete system over bird spikes:

420 x 135 x 135 mm, (16.5 x 5.4 x 5.4 in).

## Correction Data for both CEL-594 and CEL-6737

The weather protection system has been found to have an almost negligible effect on measured levels, (especially when compared with the tolerances on directionality required for Type 1 or Type 2 sound level meters).

Nevertheless, Table 1 gives a series of corrections for the effects of the system at various frequencies at the angles of incidence shown in Figure 2. These corrections may be applied to measured levels.

Table 1: Level corrections for various incidence angles

Freq. Hz.	Sound Incidence Angle for CEL-594				Incidence for CEL-6737	
	0°	30°	72°	90°	0°	
63	0.0	0.0	0.0	0.0	0.0	-0.1
80	0.0	0.0	0.0	0.0	0.0	-0.1
100	0.0	0.0	0.0	0.0	0.0	0.0
125	0.0	0.0	0.0	0.0	0.0	0.2
163	0.0	0.0	0.0	0.0	0.0	0.2
200	0.0	0.0	0.0	0.0	0.0	0.0
250	0.0	0.0	0.0	0.0	0.0	0.2
315	0.0	0.0	0.0	0.0	0.0	0.2
400	0.0	0.0	0.0	0.0	0.0	0.0
500	0.0	0.0	0.0	0.0	0.0	0.0
630	0.0	0.0	-0.1	0.0	0.0	0.0
800	0.0	0.0	0.0	-0.1	0.0	0.0
1 000	0.0	-0.3	0.0	-0.2	0.0	0.0
1 250	0.0	-0.3	-0.1	+0.3	0.0	0.0
1 600	+0.4	+0.4	-0.4	-0.1	0.0	0.0
2 000	0.0	-0.2	-0.3	-0.7	0.1	0.1
2 500	+0.3	+0.1	-0.2	-0.7	0.0	0.0
3 150	0.0	-0.3	-0.4	-0.8	-0.15	-0.15
4 000	0.0	-0.2	-0.6	-1.1	-0.1	-0.1
5 000	0.0	-0.5	-0.1	0.0	0.2	0.2
6 300	0.0	-0.7	-0.6	-1.0	-0.15	-0.15
8 000	0.0	-0.7	-1.5	-0.5	-0.1	-0.1
10 000	+0.5	-1.2	-0.9	-0.3	-0.1	-0.1
12 500	+0.6	-2.5	-0.2	-1.1	0.1	0.1
16 000	+0.1	-2.0	-0.4	-0.6	0.1	0.1
20 000	+0.2	-1.5	-0.3	-0.6	0.3	0.3

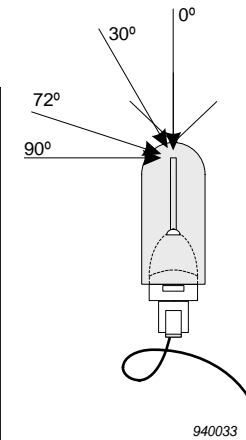
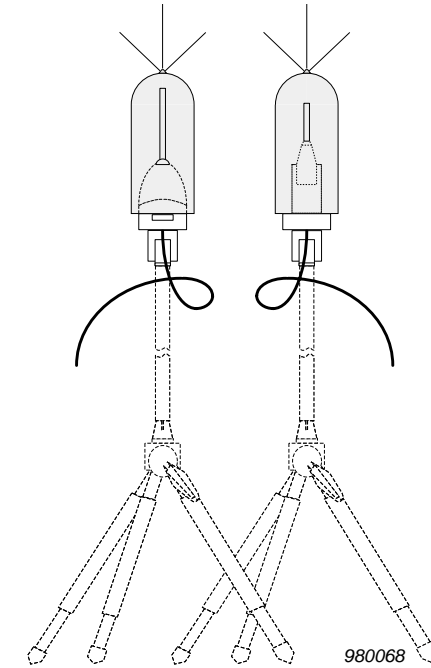


Figure 3: Sound incidence angles

## WEATHER PROTECTION SYSTEMS CEL-594 for CEL-525/527/530 Preamplifiers and CEL-6737 for CEL-495 Preamplifier



## Operator's Instructions

### INTRODUCTION

The CEL-594 and CEL-6737 Weather Protection Systems are intended to give CEL microphones and preamplifiers an improved ability to be used outdoors. For longer term or permanent outdoor microphone systems, or for installations in particularly hostile environments, please consult Casella CEL.

Over the wind speed range from 5 to 20 m/s (18 - 72 km/h, 10 - 45 mph) the measured attenuation in wind induced noise is constant at approximately 15 dB. It is not recommended to use these systems at wind speeds above this

range. (For example, ISO 3891 requires measurements to be made only with wind speeds below 10 m/s.)

The CEL-594 Weather Protection System is designed for use with the CEL-525/527/530 Preamplifiers used on CEL-553/573/593 Sound Level Analysers.

The CEL-6737 is designed for use with the CEL-485/495 Preamplifiers used with the CEL-440/480 Sound Level Meters.

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