

TalkSet

User Guide

Cove Industries

Bi-directional Single Fibre Optic Audio TalkSet

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1. INTRODUCTION

The TalkSet Fibre Optic Transceiver has been designed as a long range audio test and communication set primarily for use when testing fibre optic cable and site equipment. This product enables quality audio communication over multimode optical fibre for distances up to 5km. Longer distance operation is possible but at the expense of increasing noise due to the dispersion of the signal on the fibre.

This product is intended for use with multimode fibre and is available to order fitted with ST fibre optic connectors plus a full range of connector adapters.

The unit is fitted with a mic-earphone headset connected via a 3.5mm stereo jack socket. A constantly lit LED indicator shows low battery condition. The LED also flashes on transition to and from low power mode. The unit has an earphone volume control for individual sound level adjustment but this normally needs to only be adjusted once as the automatic gain control keeps the sound at a comfortable level despite changes in fibre length or background noise. The units incorporate voice activation battery saving circuitry. This enables the units to function for over a week of full use on a single PP-3 battery. The equipment has been designed to meet the European CE requirements.

2. FEATURES

- w Up to 4Km Multimode operating distance (3Km on Singlemode)
- w Full Bi-directional speech over a single fibre
- w Dual Automatic Volume Control
- w Voice Activated Low current consumption circuitry
- w Low distortion
- w Low Cost
- w Designed to meet EMC regulations
- w High efficiency Fibre Optic Transceiver
- w Personnel output level adjustment
- w Audio input and output are short circuit proof
- w 3.5mm Stereo Jack socket audio input and output connector
- w Totally immune to external interference
- w Telecommunications frequency response

3. SPECIFICATION

Audio output power: 300mW nominal

Output impedance: < 8 Ohms

Output connector: 3.5mm Stereo Jack socket

Output level: Adjustable with AGC level control to 2.5V rms (dependant on optical power received)

Optical input power range: 1 μ W - 174 μ W

Power Requirements: 9 volts (PP-3 Battery) approx. 15mA (Active) 1.5mA (Sleep Mode), 1 week normal use / battery

LED Indications: Power / Low Battery

Light detector: Pin diode

Wave Length: 850nm, 1310nm

Optical Connectors: ST (with adapters for other connectors)

Construction: Hand Held Unit with Belt Clip

Overall Size: 28mm x 68mm x 112mm

Overall weight: 0.2kg

Operating Temperature: -0° C to +40° C

Storage Temperature: -20°C to +70°C

Humidity: 90% non-condensing

Link Specification

Operating Distance up to 4 KM operating distance 50/125 or 62.5/125 fibre

Infra red spectrum 850nm and 1310nm

Frequency response: 300Hz to 3KHz \pm 3dB

Total harmonic distortion: Less than 3 %

Cove Industries reserves the right to change the specification without notice

5. OPERATION

5.1 General

The Cove Industries TalkSet is intended for communicating over and testing fibre optic cable.

5.2 Controls

On the TalkSet unit there is one volume control which adjusts the audio level to the earphone. The audio input is also through the 3.5mm stereo socket. This accepts the electret microphone provided.

6. USE

THIS EQUIPMENT IS NOT WATER PROOF AND MUST NOT BE USED OUTDOORS UNLESS PROTECTED BY A WATERPROOF COVERING.

Serial Number.....

Date Purchased.....

.6.2 External Use

If this fibre optic audio TalkSet is to be used in foul weather, it should be fitted in a waterproof covering.

6.3 Power Requirement

9 Volt PP-3 Battery

6.4 Power Connections and LED indications

A yellow LED is provided on the unit, which indicates when the battery is low during use.

6.5 Audio Connector

The audio connector is the standard 3.5mm Stereo Jack socket.

6.6 Fibre Optic Connection

The units are supplied with ST fibre optic connectors together with couplers for connection to other connector types.

6.7 Fibre Optic Cable

The receiver will work with all multimode fibre optic cable. 50/125 and 62.5/125 fibre optic cable are recommended. Cove Industries would be pleased to supply fibre optic cable, patch panels and patch cords, on request. Pre-terminated fibre optic cables can be supplied or an on-site termination service is available.

7. MAINTENANCE

The unit has been designed for continuous running and fault free operation. Should the unit require servicing it must be returned to Cove Industries as there are no internal customer serviceable parts.

8. FAULT FINDING

Yellow Power LED 'ON CONTINUOUSLY', _____ Battery is low.

Audio Level is low, _____ No audio input or 'Audio Level' control is set too low

High noise level on the audio signal, _____ Dirt in fibre optic connectors
(Background noise) _____ Fibre optic cable length is too long

9. CONTENTS

- 1 x Outer Case Containing:
- 2 x Duplex Talkset
- 2 x Earphone/Mic. Headsets
- 6 x ST-ST Patch leads
- 2 x 9v PP-3 Batteries
- 2 x ST – FC Adapter (M – M)

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