SAFETY & GENERAL INFORMATION

Headsets: For personal safety and comfort connect headsets into equipment, turn volume down and then switch on before placing headsets over ears. For safety use only 600 ohm headphones (i.e Coomber type 1931).

Environments: The equipment should not be exposed to dust, moisture, water, chlorine and other corrosive substances in normal use or during storage. It will cause damage to the equipment.

Swimming pool atmospheres: are very hostile to all electromechanical equipment (e.g. steel rusts and rubber perishes). Equipment returned for repair showing evidence of use in adverse environments may, at our discretion, be charged for even during the 12 month warranty period.

• Rechargeable battery replacement must be carried out by a competent qualified technician.

• The disposal of batteries (rechargeable or otherwise) where used in Coomber equipment should be discarded in accordance with local regulations.

• Do not cover the ventilation openings with any item (e.g. newspaper, fabrics etc.)

• Naked flames, such as lighted candles, should not be placed on or near the apparatus.

• The apparatus should not be exposed to dripping or splashing. No objects filled with liquids, such as vases, should be placed on or near the apparatus.

European Safety Standard: All Coomber equipment complies with EN60950. Any local requirements for use of this equipment should be taken into account.

Additional Technical Information: If you require any further help or information, or if any point is not clear, then please telephone 01905 25168/9 quoting your model number and serial number (located on a label on the rear of the product). Our Technical Department will be pleased to help you.

Mains Voltage
UK & EEC: 220-240V 50Hz: Mains Cable: Line - Brown, Neutral - Blue, Earth - Yellow & Green
USA: 110-120V 60Hz: Mains Cable: Line - Black, Neutral - White, Earth - Green

Isolate from mains supply when not in use by removing the plug from the wall socket.

Mains Plug fuse rating: 3Amp to BS1362 (applicable in UK)

Model type and rating information is located on a label on the base of the product.

Note: This equipment contains no user serviceable parts and should only be disassembled by competent qualified personnel. Disassembling will render the warranty void.

ELECTRICAL SAFETY INFORMATION

Note: This equipment contains no user serviceable parts and should only be disassembled and reassembled by competent qualified personnel. Disassembling will render the warranty void.

901 Teacher Controller Unit

Class I construction: This equipment must be EARTHED.

Electrical Safety Testing:
• Safety testing and servicing should only be carried out by competent qualified personnel.

• When undertaking an earth bond safety test, only use the externally exposed metalwork. Do not test against internal metal components found inside tape mechanisms or CD trays - THIS WILL LEAD TO IRREPARABLE INTERNAL DAMAGE.

• The supply cable is part of a special assembly. If damaged the equipment should be returned to Coomber Electronic Equipment Limited or their agent for cable replacement.

3902, 3904, 3907 Student Stations

Class II construction - electrical safety

Electrical Safety Testing:
• Safety testing and servicing should only be carried out by competent qualified personnel.

• The supply cable is part of a special assembly. If damaged the equipment should be returned to Coomber Electronic Equipment Limited or their agent for cable replacement.

901 Instructions

© Coomber Electronic Equipment Ltd. 2003

OPS 901 RS.4 201205

Coomber Electronic Equipment Ltd.
Brindley Road, Wombourne, Wolverhampton, WV1 9PB, U.K.
Tel: 0044 (0)1905 842070
Fax: 0044 (0)1905 793170
e-mail: sales@coomber.co.uk
web: www.coomber.co.uk

• Coomber reserves the right to change products and specifications without notice.

• All Coomber equipment is covered by a 12 months warranty against defective components or faulty manufacture from date of dispatch. Any malfunctions or breakdowns the equipment renders this warranty void.

• Equipment that is security marked or damaged cannot under any circumstances be exchanged.
INTRODUCTION
The Coomber Language Laboratory provides a portable, inexpensive method for learning languages.

This system consists of the Coomber 901 Controller and up to eight Audio Active Comparative (AAC) or Audio Active (AA) student stations. The 901 controller provides the power necessary to operate all of the student stations and can control many of the student station functions.

Audio Active
Audio Active recorders operate in the same way as domestic cassette tape recorders. A recording takes up one half of the cassette tape. Turn the tape over, and recording can continue using the other half of the tape.

Audio Active Comparative
Unlike a domestic cassette tape recorder, Audio Active Comparative (AAC) recorders, use both halves (or tracks) of the tape during recording. In this case, recording the teacher on one track and the student on the other. It is ideally suited for assessment purposes, since the teacher questions cannot be erased by the student.

UPDATE INFORMATION
Software Version CCP230
901 controllers manufactured before the 17th June 1998 (preceding SW CCP227) record the students voice on the student track. 901 controllers manufactured after 17th June 1998 (exceeding SW CCP227), will record the students voice on the student track whilst in assessment mode. This change now allows the cassette to be used on a conventional cassette recorder for assessment appraisal.

Mode Descriptions
- Assessment
  - Assessment key: A = stop B = start

Assessment Mode
The ASSESSMENT Mode allows the teacher to play pre-recorded tapes to all student stations and control the recording of answers by the students at their respective student stations.

Fast (x2) Copy Tape Mode
The FAST (x2) COPY TAPE Mode allows the teacher to record from the 901 controller to all eight student stations at double speed (e.g. for the creation of assessment tapes prior to a lesson or examination).

NOTE:
Once the “Start” option has been selected, all student station cassettes will record for approximately 4 seconds to advance past the tape leaders.

TIP:
As the tape plays through the assessment, the question number is displayed.

Monitor individual students during assessment by depressing the appropriate student station key.

Press the key again to cancel monitoring.

INFORMATION
Output from student headphones is muted during copy in this mode. The teacher headset is still active for monitoring through everything is heard at double speed whilst copy is underway.

Fast (x2) Copy Tape

Press Key A to rewind all student stations
Press Key B to start assessing

Assessment

Assessment recording answer
station 6
key: A = stop B = question

Assessment playing question 2
key: A = stop B = question

Assessment auto-advancing leaders

Fast (x2) Copy Tape

LS on key: A = stop

Assessment

Assessment key: A = stop B = start

Fast (x2) Copy Tape

LS on key: A = stop

Fast (x2) Copy Tape copying

Fast (x2) Copy Tape copying

Press Key B to start copying to all student stations
Press Key A to stop rewinding or copying at all student stations
The COPY LINE/AUX Mode allows the teacher to record programme material from an external source such as a CD or musical instrument to the student stations.

**Copy Line/Aux**

- **Key A**: rewind
- **Key B**: start

Press Key B: to start copying

Indicates loudspeaker status

Station 2 being monitored

Press Key A to stop copying

To monitor individual students, press the appropriate student station key. Press key again to cancel monitoring or another station key to listen to a different student station.

**Copy Microphone Mode**

The COPY MICROPHONE Mode allows the teacher to record programme material directly (live) to all student stations. At each station the student can simultaneously record a response.

**Copy Microphone**

- **Key A**: rewind
- **Key B**: start

Press Key A: to rewind all student stations.

Press Key B: to start copying

Press Key A to stop copying

On AAC student stations, students cannot record in this mode; any subsequent student recordings will erase the teacher recording.

On AA student stations, the teacher records on the teacher track while the student records responses on a separate track, the student track.

On AA student stations, students cannot record in this mode; any subsequent student recordings will erase the teacher recording.

---

**Setting Up**

The Coomber Language Learning System

Due to its adaptability, the Coomber Language Learning System can be used as a "fixed installation", be moved and used anywhere in any classroom, or be easily transported on a trolley.

**Coomber Connecting Cables**

If the language learning system is to be "fixed" in one position, pre-made cables of different lengths are available to make installation easier. The cables lengths available from Coomber are as follows:

<table>
<thead>
<tr>
<th>Order code</th>
<th>Cable Length</th>
<th>Cable Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>1948</td>
<td>0.5m</td>
<td>plug to plug</td>
</tr>
<tr>
<td>1949</td>
<td>1.5m</td>
<td>plug to plug</td>
</tr>
<tr>
<td>1950</td>
<td>5.0m</td>
<td>plug to plug</td>
</tr>
<tr>
<td>1947</td>
<td>5.0m</td>
<td>plug to socket (extension)</td>
</tr>
</tbody>
</table>

**Bespoke Cables**

Suitable technicians should be able to manufacture bespoke cables to suit your needs if required. In this case, please read the following notes.

**1. Cable Type**

7 core with inner and outer screen. (Our part no. JD 1)

**2. Connection**

Connect JD 1 cable to 8 pin DIN plug as shown below.

1. Brown
2. Inner Screen
3. Orange
4. Yellow
5. Green
6. Blue
7. Violet
8. Grey

**3. Plug Type**

8 Pin DIN (RS Components No: 473-256)

**4. Warning**

Ensure that there is no connection between inner and outer screens.

Also ensure cables are tested for shorts between any pins and pins to skirt, prior to connection, as permanent damage may result to equipment should a short circuit occur.

It is very important to adhere to the recommended specification cable type. Failure in complying, could result in poor immunity to interference and damage.

**Using the Trolley**

A trolley (part no. 1966) is available for security, easy transportation and use.

**Fitting the 901 Controller in the Trolley**

The Controller can be secured and operated from the trolley. An installation kit, including 4 screws, 4 spacers and 8 cable cleats are included with the trolley.

1. Open trolley doors (as shown above) and feed the connecting cables through holes (one cable per hole). Fit the cable cleats on the cables and push the cleats into the holes to secure the cable.

2. Connect each cable to the back of the 901 controller in numerical order.

**Using the Trolley**

1. Eight "8 pin DIN" sockets are located on the rear panel of the 901 controller. Each numbered socket is for use with one student station.

2. Connect cable to the right hand side of each student station as identified below.

3. Tighten all four bolts, do not overtighten.

4. To secure 901 controller in position on the top shelf, position each spacer over a hole. Fit the two rear bolts loosely (two or three turns only) and lift the front of the controller to help locate the front two bolts.

5. Tighten all four bolts, do not overtighten.

---

**Connecting 3902, 3904 or 3907 Student Stations to the 901 Controller**

1. Eight "8 pin DIN" sockets are located on the rear panel of the 901 controller. Each numbered socket is for use with one student station.

2. Connect cable to the right hand side of each student station as identified below.

**Notes**

- It is essential that the cable is used to connect the 3902, 3904 or 3907 student stations (Maximum eight).
- If using cable extensions, ensure adhesive tape is applied around the joint to prevent accidental separation.
Conference Mode

In CONFERENCE mode, the teacher can speak to a selection of students.

Alternatively, the teacher may select any number of student stations to confer with one at a time by pressing the appropriate station keys.

In the example above, stations 1, 2, 3 and 4 are selected.

Copy Teacher Tape

To copy programme material from a cassette tape in the Teacher Deck to the student stations.

Students can listen to the teacher tape being copied and record their responses on their track at the same time.

To monitor individual students, press the appropriate student station key. Press key again to cancel monitoring or another station key to listen to a different student station.
WORKING IN MODES

Monitor Mode

The MONITOR Mode allows the teacher to identify and monitor individual student stations or monitor a tape playing on the Teacher Tape Deck.

The loudspeaker can be switched on and off in this mode by depressing the 'A' Key.

To monitor individual students, press the appropriate student station key.

Press the appropriate student station key again to cancel monitoring. By default, the teacher tape is then monitored.

Call Teacher!!

Students may call for attention by pressing the CALL TEACHER button on their student station. The student presses their CALL TEACHER button while the 901 is in MONITOR or INTERCOM mode, the appropriate student station number flashes on the LCD display.

Intercom Mode

The default setting of the INTERCOM mode allows the teacher to listen to the Teacher tape and see which student stations are connected.

By pressing the appropriate station key, the teacher can communicate directly with a student or monitor student progress.

Press the same key again to cancel and return to INTERCOM TAPE, or press another station key to listen to another student.

OPERATING THE 901 CONTROLLER

Starting Up

1. Connect the student stations to the 901 controller as described on page 4.
2. Connect a headset to either of the two sockets marked ‘headset’ on the front of the controller.
3. Connect the 901 controller to the mains and switch on, using the switch on the right hand side of the 901 controller.

This message will appear on the LCD:

4. After approx. 5 secs, the start up mode will be displayed (MONITOR mode).

This message will appear on the LCD:

Copy Microphone

Key: A = rewind  B = start

The prompt appearing on the LCD monitor allows the teacher to rewind all of student station tapes by pressing key A.

Pressing key B will simultaneously record on to all student stations via the teacher microphone.

Mode Keys

Use the Mode Keys (E) to scroll up and down through the different operating modes.

The operating modes are described over the next few pages.
Volume Keys

Use the up / down Volume Keys (F) to increase or decrease volume respectively.

The moment the volume keys are depressed, the display will change to show the volume (as a bar) and whether it is being increased or decreased.

Internal & External Loudspeakers

The Controller is fitted with an internal Loudspeaker. It also has a socket on the rear allowing an external loudspeaker (not less than 4 (Ω) to be connected. This socket is reversible, so that depending how the plug is fitted, the external loudspeaker can be used by itself or in conjunction with the internal loudspeaker.

Listening using internal or external loudspeakers

a. Ensure you are in MONITOR mode.

b. Press key 'A' (immediately below the LCD) to turn the loudspeaker on.

c. Insert a pre-recorded cassette into the teacher cassette deck on the controller.

d. Press play on the teacher cassette deck.

e. Adjust 'Volume' to suit.

Notes:
The cassette in the controller can only be heard through the internal / external loudspeaker in 'MONITOR TEACHER TAPE' or 'COPY TEACHER TAPE' (once copying has begun).

Only in MONITOR mode can you toggle the internal / external loudspeaker on or off by pressing 'key A'.

Though switched on, the loudspeaker will only be active in the modes shown in the chart below.

<table>
<thead>
<tr>
<th>MODE</th>
<th>LOUDSPEAKER ACTIVE</th>
<th>LOUDSPEAKER VOLUME ADJUST</th>
</tr>
</thead>
<tbody>
<tr>
<td>MONITOR Teacher Tape / Station*</td>
<td>YES</td>
<td>in monitor teacher tape only</td>
</tr>
<tr>
<td>INTERCOM</td>
<td>NO</td>
<td>NO</td>
</tr>
<tr>
<td>CONFERENCE</td>
<td>NO</td>
<td>NO</td>
</tr>
<tr>
<td>COPY TEACHER TAPE</td>
<td>YES (when copying)</td>
<td>when monitoring teacher tape only</td>
</tr>
<tr>
<td>COPY LINE / AUX</td>
<td>YES (when copying)</td>
<td>when monitoring source only</td>
</tr>
<tr>
<td>COPY MICROPHONE</td>
<td>NO</td>
<td>NO</td>
</tr>
<tr>
<td>ASSESSMENT</td>
<td>NO</td>
<td>NO</td>
</tr>
<tr>
<td>FAST (x2) COPY TAPE</td>
<td>NO</td>
<td>NO</td>
</tr>
</tbody>
</table>

* loudspeaker plays sound only from the teacher tape, not from the student station if selected - though at the same time, the headset will switch from listening to the teacher tape to the student station.

SELECTING MODES

The MODE Keys (E) allow the user to select different modes in which to work.

Two keys are provided so that the user may scroll up or down the list of alternative modes, but essentially the list is cyclic by nature (as shown right).

By pressing either mode key, the different modes appear in the LCD screen, starting in MONITOR MODE and scrolling all the way through the list until MONITOR MODE is reached again.

One key works up through the list, the other works down!

Note: The Controller always starts up in MONITOR MODE.

Mode Descriptions

Monitor Mode

Monitor Teacher Tape: Use the controller like a normal cassette recorder with all the usual features.

Switch the loudspeaker on/off.

Monitor Station: Allows the teacher to listen to selected student stations.

Intercom Mode

Allows the teacher to communicate with a single student station.

May be used to record on to teacher tape using headset.

Conference

Allows group communication between selected/all student stations.

Copy Teacher Tape

Learning material can be copied from the 901 controller to student stations. If using 3902 or 3904 student stations, students can record on their track at the same time. Student stations may be individually monitored whilst recording is in operation.

Copy Line/Aux

May be used to copy material from an external CD player, radio, video (audio), etc. to all stations. If using 3902 or 3904 student stations, students can record on their track at the same time.

Copy Microphone Mode

Teacher's voice is copied on to all student stations. If using headset.

Copy Microphone Mode

Teacher's voice is copied on to all student stations. If using 3902 or 3904 student stations, students can record on their track at the same time.

Assessment Mode

In this mode, student responses are recorded sequentially on the student stations, for convenient assessing. Unlike the other modes, the student is recorded on the teacher track so that the cassettes can now be played back on any conventional cassette player.

Assessment

In the COPY and ASSESSMENT modes teacher can instruct students while in 'STANDBY'. This helps students who are waiting for teacher to begin a programme, rather than being isolated as teacher moves from one mode to another.

Fast (x2) Copy Tape

Provides double speed cassette copy from the 901 controller to student stations (3902, 3904 or 3907).

In the COPY, FAST COPY and ASSESSMENT modes a warning message appears on the LCD if any of the student stations present does not enter the 'RECORD' mode when 'START' is activated.

E.g. this may be because a student cassette is missing or because the cassette door is open.