FLEETWOOD

Digicall Spectrum®
The Portable Learning Lab

USER MANUAL

Digicall Spectrum®
ECM984
Mobile Wireless
Learning Lab

♦ **DS6MA Student Transceiver**

♦ **P54 Cassette Deck**

♦ **P11 CD Player (optional)**

♦ **P82000 VCR (optional)**

Revision 1/02

Table of Contents

1. General Description

1.1. Digicall Spectrum Console (Figure 1)

The Digicall system is designed to work within the normal classroom size of approximately 30' x 30'. (See Figure 4)

This equipment is a low power communication device using amplitude modulation. All transmitting circuits are factory certified to meet Part 15 radiation requirements of the FCC rules and regulations (see section 7). Factory seals, when broken, void this certification.

Figure 1

1.2. Student Transceivers

1.2.1. Digicall Spectrum Student Transceiver (Figure 2)

Battery operated student transceivers are used to receive lesson source transmissions from the console. These student units are capable of tuning to any one of the lesson sources on your console.

Each student unit can be remotely controlled from the instructor's console to allow monitoring, recording and private intercommunications between individual students and the instructor.

Remote control of the student unit for monitor and intercom functions is accomplished by the transmission, reception and decoding of a digital code. Student unit numbers are entered through the touch switch control panel keyboard, stored, converted into the digital code and transmitted along with the lesson to the student unit.

Figure 2

When a student unit receives its own digital code, the student's voice along with the program is transmitted back to the instructor's console. This permits the instructor to monitor or record the student's progress.

1.2.2. Student Headset (Figure 3)

Figure 3

1.2.3. T2400C Teachers Headset (Figure 4)

This Headset is used by the instructor to monitor the lessons at the console and the students, and is plugged in at the console.

Figure 4

2.   Principles Of Operation

2.1. ECM984 Digicall Spectrum Console

Your Fleetwood console is designed for ease of operation, using a soft touch membrane control center. Your first day's experience in operating your new language lab should be interesting and exciting.

Follow these three simple steps:

- Turn on the console power switch, located in the upper right corner of the panel.

- Hand out the Student headsets and transceivers to the students and follow the operating instructions in section 2.2 of this manual.

- Turn on the lesson source desired and follow the operating instructions for that lesson source explained in 2.1.3.1.

Once the students have put on their headsets and adjusted them, explain the purpose of your language laboratory to them. To do this, press the "ALL CALL" button on the black control panel. All of the students in the classroom will now hear your voice. This will give your class the opportunity to familiarize themselves with the sound of your voice as it comes from your microphone.

Figure 5

2.1.1. Digicall Spectrum Control Panel (Figure 5)

NOTE: Please refer to Figure 5 when reading the next section.

2.1.1.1. Power Switch

Turn on the power with the white rocker switch at the upper right corner of the control panel. A lesson indicator will light (red) and two zeros ("00") will appear on the digital display.

2.1.1.2. T2400 Instructor Headset and Volume Control

Plug in the "INSTRUCTOR HEADSET" all the way! Fleetwood suggests that you adjust the "INSTRUCTOR VOLUME" to maximum by holding down the "VOLUME UP ARROW BUTTON" for several seconds and adjust it later only after a lesson source has been selected and the volume of that lesson source has been set. See the next section to select the lesson source. A Guest Instructor jack allows a second headset to be plugged in to participate with the Instructor.

2.1.1.3. Lesson Select

These buttons allow the Instructor to select the lesson source to monitor. The numbers 1 through 6 on the "LESSON SELECT" buttons correspond to the lesson source (cassette player, CD player, VCR). To monitor a lesson source you must first select the lesson source via the "LESSON SELECT" buttons and then start the lesson source. Refer to the operation section of this manual for that source. The lesson source selected will be restored upon power-up.

> **IMPORTANT: Always adjust the volume of the lesson source so that the "LESSON LEVEL" indicator only fluctuates into the yellow area, but rarely into the upper red range.**

See section 2.2 of this manual for operation of the student transceivers.

2.1.1.4. Function

2.1.1.4.1. All Call

Place any active lesson sources in pause or stop mode. When in this mode, the students do not hear any lesson material. To talk to all students simultaneously, press the "ALL CALL" button. Be sure to cancel "ALL CALL" by pressing the button again or by pressing a "LESSON SELECT" button when finished.

> **IMPORTANT: You cannot monitor or intercom with any students if the "ALL CALL" or "MIC WITH LESSON" modes are active.**

2.1.1.4.2. Mic w/Lesson (Microphone with Lesson)

This function is used by the instructor to talk to all students listening to the same lesson channel as selected with the "LESSON SELECT" buttons. For example, to talk to students listening to lesson channel #1, press the "LESSON 1" button and the "MIC W/ LESSON" button. Be sure to cancel "MIC W/ LESSON" by pressing the button again when you no longer wish to speak with the students. Students will notice that during this mode, the lesson automatically drops in audio level, making the instructor's voice easily understood. If the Instructor wants to have a clear channel to speak with the students without any lesson, pause the lesson source.

2.1.1.4.3. Student Monitor

To monitor a student's response and lesson, enter the two-digit number of the student's headset on the keyboard in the same manner you would with a calculator. These numbers will appear on the digital readout. When the second digit is depressed, the student's lesson and responses will be heard. The Instructor's Lesson audio will no longer be heard as long as the two digits are non-zero.

NOTE: If the student headset that is selected is not turned on or if a nonexistent student number is selected, the console will still try to monitor the student but no audio will be heard by the instructor. A small period to the right of the headset number will light if that headset is transmitting and is being received properly.

2.1.1.4.4. Student Record

To record a student's response and lesson, enter the two-digit number of the student's headset on the keyboard in the same manner you would with a calculator. These numbers will appear on the digital readout. When the second digit is depressed, the student's lesson and responses will be heard. The Instructor's Lesson audio will no longer be heard as long as the two digits are non-zero.

Then select a console recorder that is not being used as a lesson source and place the recorder in the record mode. You will now record the student whose number is shown on the digital display, and the lesson. To play back this student's recording to the individual student, follow the instructions under "STUDENT REVIEW".

2.1.1.4.5. Student Review

To play back the recording of a student, press the "STUDENT REVIEW" button. Press the "LESSON SELECT" button for the lesson channel corresponding to the tape deck that you recorded the student on in section 2.1.1.4.4 above. Rewind the recording back to the beginning of the tape and then enter the student headset number that was recorded (if that student number is no longer on the display) and push the "INTERCOM W/ LESSON" button as described below. Start the tape to play the recording to that selected student through the intercom function.

2.1.1.4.6. Intercom (ON / W Lesson)

This button permits the instructor to determine whether the lesson is present during intercom with the student or whether the channel will be clear. The "ON / W LESSON" mode can be helpful when the instructor wants to talk to the student and point out particular points of interest in the lesson as it is playing.

To intercom with a student, enter the student headset number on the display and then depress the "ON / W LESSON" button. The student's lesson will continue to be heard and you will be able to carry on a private two-way conversation. When active, the "ON / W LESSON" light (red) will come on and the display lights will blink to indicate the intercom function. To return to monitoring the student, depress the button again.

NOTE: The lesson provided during ON / W 7Intercom is determined by the setting of the Instructor "LESSON SELECT" button.

2.1.1.4.7. Intercom (ON / W Mute)

This button is functionally identical to "ON / W LESSON" except that no lesson will be heard during the instructor-student conversation.

To intercom with a student, enter the student headset number on the display and then depress the "ON / W MUTE" button. The student's lesson will no longer be heard and you will be able to carry on a private two-way conversation. When active, the "ON / W MUTE" light (red) will come on and the display lights will blink to indicate the intercom function. To return to monitoring the student, depress the button again.

2.1.1.4.8. Remote Headset

The *Remote Headset* function enables a spare student headset to be used to provide an audio feed to one of the lesson channels. This can allow a teacher to freely move around the room while being able to act as a lesson source or provide additional comments on one of the channels. When supervised properly by a teacher, it can also allow any student to perform a recite function for the benefit of the rest of the class.

To perform the *Remote Headset* function, the teacher should press the appropriate "LESSON SELECT" button to determine the lesson the remote headset audio will be fed to, enter the number of the headset to be used as the remote headset, and press the "REMOTE HEADSET" button. The selected channel may be either a quiet channel or a channel with an active lesson source. Any students who have their lesson set to this channel should be able to hear the remote headset and lesson if active.

There are two ways of setting the lesson channel on the remote headset. The preferred and safest way is to set the remote headset to an unused lesson channel while making sure the volume control is set sufficiently high to not allow the headset to turn off. This has a disadvantage of not allowing the teacher or student to hear an active lesson if there is one. Fortunately this function is used most frequently by a teacher to function as a roving lesson source without an active lesson so the inability to hear the lesson is not a problem.

The second method should only be used if the remote headset is being used along with an active lesson source to add comments or recitation with the lesson. In this case the remote headset must be set to the same channel as the console. The volume control setting on the remote headset becomes critical because the headset voice audio is being fed back into the headset on the lesson and if the volume is set too high the system may go into feedback resulting in a howl on the lesson channel. This needs to be controlled closely by the teacher. The volume control should be set high enough to sufficiently hear the lesson and no higher. If feedback (loud squeal) occurs, the remote headset level is set too high and should be reduced. If it is reduced too far however, the headset may turn off. A volume setting where the lesson is slightly on the low side should provide satisfactory performance.

IMPORTANT: If feedback (loud squeal) occurs in the remote headset, select a different channel OR reduce the volume on the remote (student) headset. Be aware, however, that if the headset volume is turned down too far, you may cause the headset to turn off.

2.1.1.4.9. Record Comment

This button may be depressed and held down at any time to allow instructor comments to be recorded on a lesson recorder. This is useful in order to allow the instructor to add the student's name or other comments for future reference. The lesson recorder must be in record mode in order to retain these comments for future playback.

2.1.1.5. Lesson Level Indicator

The Multi-segment Bar Indicator is used for setting the lesson source to the proper audio level. This is done by adjusting the lesson level so that the "LESSON LEVEL" Indicator on the console occasionally fluctuates into the yellow area, but rarely into the upper red range. This should allow the students to set their volume levels to the middle of their volume range. This will prevent the headsets from shutting off automatically due to low RF levels being received by the headsets.

NOTE: The console and the student headset must be turned on to perform this function. If the headset volume level is too low, the headset will turn off.

2.1.1.6. AUX Input Jacks

To use an external lesson source (AM/FM Radio, CD Player, Cassette Player, etc..), plug a patch cord from the speaker or earphone output jack of your portable source to the desired "AUX INPUT JACK". Using an external lesson automatically disconnects the built-in lesson on that channel. To listen to this lesson on the instructor's headset, press the "LESSON SELECT" button for the same channel number.

NOTE: The jacks that are covered with a plastic cap, do not have a channel transmitter and consequently are not active. The number of active jacks is determined by how many built-in lessons and separate auxiliary input channels are purchased. This console may be equipped with circuitry that prevents the use of a lesson when a transmitter is not present. This will be indicated by the inability to select that Lesson with the "LESSON SELECT" buttons.

IMPORTANT: Always adjust the volume on the external lesson for a "LESSON LEVEL" that occasionally fluctuates into the yellow, but rarely into the upper red range.

2.1.1.7. Student Selection

To select an individual student, enter the two-digit number of the student's unit on the keyboard in the same manner you would with a calculator. These numbers will appear on the digital readout. When the second digit is depressed, the student's lesson and responses will be heard.

2.1.1.8. Automatic Sequencer (Monitoring a Student Automatically)

To monitor students automatically, press the "AUTOMATIC SEQUENCER" "RUN/STOP" button. Automatically the #10 student number will appear on the digital display and you will immediately hear that student's lesson and response for a period of 30 seconds. (See section 2.1.1.8.5) The (red) "RUN" indicator light will come on indicating the automatic monitoring or recording function is taking place. If you prefer the console to start with a student other than #10, enter another student's unit number on the "STUDENT SELECTION" keyboard and press the "RUN/STOP" button of the "AUTOMATIC SEQUENCER". The microprocessor will start monitoring that student number and sequence upward rather than starting with #10. This feature will allow you to start your monitoring or recording process with any student number. The student numbers will be monitored in sequence. However, if any student unit number is missing, the microprocessor will quickly move onto the next student number. The microprocessor scans all 63 possible student numbers. If you have less than 63 student units in your lab and wish to reduce monitoring time for student headsets that are not active, see the instructions on "SET RANGE" in section 2.1.1.8.4.

2.1.1.8.1. Run/Stop

If at any time during the automatic mode you would like to monitor a student longer than the 30 seconds, push the "RUN/STOP" button and the microprocessor will pause on that student until you push the "RUN/STOP" button again. When "RUN" is inactive (STOP), the red light will go out. This function is just as if you had entered the student's number without using the "AUTOMATIC SEQUENCER". Press "RUN" to continue automatically.

2.1.1.8.2. Random

The "RANDOM" button allows sequencing through headset numbers in a random order rather than sequentially. Pressing the "RANDOM" button again can turn this off. This mode is useful during the "AUTOMATIC SEQUENCER" "RUN/STOP" mode and also when manually sequencing using the "NEXT" and "PREV" keys as described below.

2.1.1.8.3. Next/Prev

If you desire to shorten the monitoring time or skip over a student number, push the "NEXT" or "PREV" button quickly and advance to the next number. If you hold either button down, it will quickly advance through the student numbers until it is released.

The "PREV" button can be used to recall the previously monitored student during the normal "RUN/STOP" sequence or when using "RANDOM". Pressing this button repeatedly when in the "RANDOM" mode allows an instructor to continually focus on a particular student address while also reviewing other students in an alternating fashion.

If you feel that monitoring a student for the period of 30 seconds is either too short or too long and you would like the system to automatically monitor for a different length of time, see the operating instructions for "SET PERIOD" in section 2.1.1.8.5.

If at any time you are using the "AUTOMATIC SEQUENCER" to monitor students and you "INTERCOM" with that student, the "AUTOMATIC SEQUENCER" will hold on that student number until you again press the appropriate intercom button, which will cancel intercom and continue sequencing.

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2.1.1.8.4. Set Range

This Digicall Spectrum® system accommodates classes up to 63 students. The "AUTOMATIC SEQUENCER" is factory set to monitor student transceiver numbers "1" through "99" (99 headsets). Most classes have fewer than 99 students. In order to save searching time in the automatic mode, the range of the "AUTOMATIC SEQUENCER" should be set for your class size. To do this, complete the following steps:

1. Press the "SET RANGE" button. The letters "HI" will appear in the display.

2. Press the "SET RANGE" button a second time and the number 99 (or the last "HI" value) will show in the display. Enter the highest number headset in your class.

3. After entering this number, press the "SET RANGE" key again. At which time the letters "LO" will appear in the display.

4. Press of the "SET RANGE" button again. The number "1" (or the last "LO" value) will appear in the display. If the lowest numbered student unit in your class is greater than "10" enter that number in the display.

5. Pressing of the "SET RANGE" button again returns the console to the monitor mode. The "AUTOMATIC SEQUENCER" will now be reset to the highest and lowest numbered unit in the class.

    If you wish to review the student unit numbers stored in the "HI" and "LO" memory, press the "SET RANGE" key again after the "HI" or "LO" appears. The high and low student unit numbers will appear on the display.

NOTE: Each time your console is turned off, the "AUTOMATIC SEQUENCER" will remember the range settings for the next session.

2.1.1.8.5. Set Period

To change the length of time that each student is automatically monitored when using the "AUTOMATIC SEQUENCER", press the "SET PERIOD" button and notice the "SP" on the display. Pressing "SET PERIOD" again will show the present timer setting, in seconds, on the display. If you wish to change the setting, enter a new number. The timer may be set from 1 second to 99 seconds. For numbers 01 to 09, the leading "0" must be entered. Press the "SET PERIOD" or "CLR" to return the console to the normal monitoring mode.

NOTE: Each time your console is turned off, the "AUTOMATIC SEQUENCER" will remember the period range setting for the next session.

2.1.1.9. Save/Recall

The Digicall Spectrum® system allows an instructor to save individual preferences for future recall. The instructor can save Period and Range settings, volume settings, and the last lesson used in 10 different memory locations. This allows customized settings to be quickly restored for up to 10 different instructors or classes.

To save a specific settings group, hold down one of the 0-9 digit buttons (used to enter student address) until the letters "SA" are displayed (several seconds beyond "rE"). Release the button at this time to "SAve" these settings.

To recall a specific settings group, hold down one of the 0-9 digit buttons (used to enter student address) until the letters "rE" are displayed. Release the button at this time to "rEcall" these settings.

2.1.1.10. Volume

To adjust the Instructor/Guest headset volume, press the triangular buttons. The triangle pointing up is to increase the volume and the triangle pointing down, is to decrease the volume. The buttons can either be held down or repeatedly pressed to increase or decrease the volume.

This volume controls both the Instructor and Guest headsets simultaneously. The lesson level indicator will display the current volume setting each time the volume buttons are pressed.

NOTE: When the console is turned on, the "Volume" to the Instructor/Guest headset will return to its last volume setting.

2.1.2. P54R Cassette Player Recorder (Figure 6)

2.1.2.1. General Operating Instructions

NOTE: Please refer to Figure 6 when reading the next section.

Figure 6

2.1.2.1.1. Insert A Cassette

Push the "STOP/EJECT" key to raise the cassette door. Put the edge of the cassette with the exposed tape in first. Close the cassette door.

2.1.2.1.2. Play

To play the cassette deck press the "PLAY" key until it locks.

2.1.2.1.3. Volume

To adjust the volume, set the Instructor's "LESSON SELECT" button to the same number that is on the lesson source.

IMPORTANT: Always adjust the volume on the lesson for a "LESSON LEVEL" that occasionally fluctuates into the yellow, but rarely into the upper red range. Too much meter deflection into the red will cause the students to turn their volume down in their headsets, which could cause the headsets to turn off.

2.1.2.1.4. Review And Cue

While listening to a tape, you can review a portion of the lesson tape by holding down the "REW/REV" key and then releasing it. For Cue, simple press the "FF/CUE" key (while the tape is playing) and the tape will skip forward. When the "REW/REV" or "FF/CUE" key is released, the machine will automatically go back into play.

2.1.2.1.5. Rewind

Push the "STOP" key and then the "REW/REV" key to rewind any part of the tape.

2.1.2.1.6. Recording

To record, insert a cassette, push the "REC" key. Proper recording levels will be achieved when the level of the lesson source being copied that occasionally fluctuates into the yellow, but rarely into the upper red range on the audio bar indicator on the control panel.

To record another lesson source, select the lesson to be copied by the "LESSON SELECT" button. Whatever is heard in the instructor's headset will be recorded on the recording deck(s).

NOTE: A recording cannot be made with the record tab removed. The cassette needs this tab to depress the record button inside the cassette door area. (Record tab is located on top rear edge of the cassette)

2.1.2.1.7. Fast Forward (FF)

To fast-forward the cassette tape, depress the "FF/CUE". This advances the tape forward. To stop the tape, press the "STOP/EJECT" key once.

2.1.2.1.8. Pause

Pressing the "PAUSE" key will stop the tape motion. Pressing it again will release the tape and it will continue to play or record.

2.1.2.1.9. Automatic Shut Off

This feature of the cassette player automatically shuts the tape deck off in the "PLAY", "RECORD", "FF" and "REWIND" modes. It also shuts off if a cassette tape becomes jammed.

2.1.2.1.10. Removing The Cassette

Push the "STOP/EJECT" key once to stop the cassette. Push it a second time to raise the cassette door and tape for removal.

2.1.3. P11 Compact Disc Player (optional)

2.1.3.1. General Operating Instructions

Refer to the Manufacturer's operating instructions supplied with the Digicall Console.

2.1.3.1.1. Volume

To adjust the volume, set the Instructor's "LESSON SELECT" button to the same number that is on the lesson source.

> **IMPORTANT: Always adjust the volume on the lesson for a "LESSON LEVEL" that occasionally fluctuates into the yellow, but rarely into the upper red range. Too much meter deflection into the red will cause the students to turn their volume down in their headsets, which could cause the headsets to turn off.**

2.1.4. P8100 Amplifier VCR (optional)

2.1.4.1. General Operating Instructions

Refer to the Manufacturer's operating instructions supplied with the Digicall Console.

2.1.4.2. Basic Hook-Up Instructions

To connect the VCR, use the following procedure:

1. Located inside the lower front compartment of the console are one cable with a coaxial connector; one cable with an RCA connector; and an AC outlet.

2. Connect the cable with the coaxial connector to the VHF/UHF Output labeled on the back of the VCR.

3. Connect the cable with the RCA connector to the Audio Output labeled on the back of the VCR.

4. Plug the VCR power cord into the AC outlet.

5. Locate the coaxial connector on the outside (right side) of the console.

6. There is a coaxial cable supplied with the VCR. Connect the cable to the coaxial terminal on the side of the console and to the VHF input of your monitor.

7. Set the VCR RF channel switch (refer to the Manufacturer's operating instructions for the location of this switch) to 3 or 4, whichever channel is not used in your area, then make sure your TV is set to that channel.

2.1.4.2.1. Volume

The volume knob for the VCR is located below the control panel. When adjusting the volume, set the Instructor's "LESSON SELECT" button to the same number that is on the lesson source.

Turn the TV volume control down to it's lowest level if you do not wish the audio to be heard through the TV built in speaker.

IMPORTANT: Always adjust the volume on the lesson for a "LESSON LEVEL" that occasionally fluctuates into the yellow, but rarely into the upper red range. Too much meter deflection into the red will cause the students to turn their volume down in their headsets, which could cause the headsets to turn off.

2.1.5. Classroom Speaker System (Figure 7)

NOTE: Please refer to Figure 7 when reading the next section.

To use the Classroom Speaker System, use the following procedure:

1. Set the instructor's "LESSON SELECT" button to the lesson source number you want to hear.

2. Turn the volume control clockwise to turn the amplifier on and adjust for the desired listening level.

IMPORTANT: Always adjust the volume on the external lesson for a "LESSON LEVEL" that occasionally fluctuates into the yellow, but rarely into the upper red range.

Figure 7

3. The instructor can use the classroom speaker system as a PA system by pressing the console button "MIC WITH LESSON" or "ALL CALL" and using the instructor's headset/microphone.

NOTE: Setting the speaker amplifier volume control too high may cause feedback (squeal). Turning the volume control down can eliminate this.

2.2. DS6MA Digicall Spectrum® Student Transceivers (Figure 8)

Figure 8

NOTE: Please refer to Figure 8 when reading the next section.

2.2.1. Lesson Selection

The lesson channel is selected using the joy pad on the right side of the Student Transceiver. The up arrow direction will raise the lesson number, and the down arrow direction will lower the lesson number

2.2.2. Volume Control

The volume on the Student Transceiver is adjusted using the left-right movement of the joy pad

2.2.3. Turn On

To turn the Student Transceiver on, push the "Mode" button. The LCD should display showing the unit is operating.

2.2.4. Turn Off

The Student Transceiver will shut down automatically when the console is shut-off or when the "Mode" button is held down for 5 seconds.

2.2.5. Microphone

The microphone is active whenever the headset is plugged in.

2.2.6. Inter - Student Communication

2.2.6.1. Pairing

Two students who are using Student Transceivers can communicate with each other by connecting a patch cord between the audio in/out jacks of both Student Transceivers. Both Students can now hear each other. The lesson channel should be set to the same channel for both Students.

2.2.7. Battery Check

Battery Indicator is located in the upper left hand corner of the LCD screen. (see figure 9)

Figure 9

2.2.8. To Change The Battery

See section 3.2.1. - How to change batteries.

2.2.9. To Record/Playback On a Separate Recorder

The students can use a patch cord between their headset "MONITOR JACK" (#6) and a portable recorder (optional) mic/auxiliary input jack. Place the recorder in record mode by pressing the Play and Record Buttons. To play the recording back or play lessons individually to each student, plug the patch cord between each student's portable recorder's earphone or speaker out jack and the headset "MONITOR JACK" (#6). Select an unused but active channel on the student headset "CHANNEL SELECTOR" (#1) to avoid hearing two lessons.

3.   Troubleshooting

3.1.   Digicall Spectrum® Console

3.1.1. Control Panel

3.1.1.1. Control Panel Removal For Service

The Control Panel is located in the center of the console. To remove the Control Panel, please use the following instructions.

Tools Required:

- Philips screwdriver

1. Turn off power and unplug the power cord from the wall receptacle.

2. Remove 4 screws from the edges of the control panel.

3. Place a foam pad or another protective object on the writing surface. Lift out the control panel and set it on the protective pad.

4. Unplug the eight pin (red) and the ten pin (green) connectors from the panel.

5. Unplug the white connector coming from the Power Supply module.

6. Refer to section 3.5 on how to return parts.

7. To reassemble, follow the reverse order.

IMPORTANT: The plugs are color-coded and must be matched when reassembling.

3.1.2. Power Supply

3.1.2.1. Power Supply Removal For Service

The Power Supply is located beneath Control Panel. To remove the Power Supply, please use the following instructions.

Tools Required:

- Philips screwdriver

1. Turn off power and unplug the power cord from the wall receptacle.

2. Remove Control Panel. See section 3.1.1.1

3. Unplug the black plug from the Power Reel.

4. Remove the screws holding the Power Supply to the wood of the console. This is visible through the Control Panel cutout.

5. Lift the Power Supply out through the Control Panel cutout.

6. Refer to section 3.5 on how to return parts.

7. To reassemble, follow the reverse order.

IMPORTANT: The plugs and sockets are color-coded and must be matched when reassembling.

3.1.3. P54R Cassette Deck

3.1.3.1. Clean the Play/Record Heads

The cassette deck has very important parts in them, such as erasing and recording heads, capstans, and pinch rollers, each of which touches the tape directly. If they get dirty or dusty, recording and

playback quality will be poor. You can also run the risk of tape damage if the cassette deck is not kept clean. To clean the Cassette Deck, please use the following instructions.

Tools Required:

- Cotton swabs
- Head Cleaning Fluid

1. Remove the cassette.
2. Wet swab with Head Cleaning Fluid and gently clean the tape heads and capstan drives.
3. Let the fluid dry completely before playing a cassette.

3.1.3.2. Cassette Deck Removal for Service

To remove the Cassette Deck, please use the following instructions.

Tools Required:

- Philips screwdriver

1. Turn off power and unplug the power cord from the wall receptacle.
2. Remove the four screws holding the Cassette Deck.
3. Lift the Cassette Deck out and disconnect the harness.
4. Refer to section 3.5 on how to return parts.

3.1.4. P10 Compact Disc Player

3.1.4.1. Compact Disc Player Removal for Service

To remove the Compact Disc Player, please use the following instructions.

Tools Required:

- Philips screwdriver

1. Turn off power and unplug the power cord from the wall receptacle.
2. Remove the four screws holding the Compact Disc Player.
3. Lift the Compact Disc Player out and disconnect the harness.
4. Refer to section 3.5 on how to return parts.

3.1.5. P8100 VCR

3.1.5.1. VCR Removal for Service

To remove the VCR, please use the following instructions.

1. Turn the console off and unplug the power cord from the wall receptacle.

2. Disconnect all cables and wires from the back of your VCR.

3. Disconnect the VCR power cord from the AC outlet.

4. Remove the VCR from the console.

5. Refer to section 3.5 on how to return parts.

6. To reinstall, please refer to section 2.1.5.2

3.2. DS6MA Student Transceivers (Figure 10)

Figure 10

3.2.1. How To Change Batteries

NOTE: Please refer to Figure 10 when changing the batteries.

The student unit uses 2 alkaline 1½-volt C Cell batteries. To replace the batteries, remove the screw on side of the Student Transceiver.

Please note that the negative ends of the batteries go towards the spring contacts.

IMPORTANT: When the headsets are not going to be used for a couple of months, the batteries should be removed. This will prevent battery corrosion that could damage the unit.

3.2.2. Loss Of Program at the Headset

HELP WITH THIS SECTION

3.3. Service Kit Spare Parts (P/N ECM982SK) (Figure 11)

Figure 11

3.3.1.Part Descriptions and Part Numbers

There is a service kit included in each Digicall Learning Lab. To refill this kit use the following part numbers.

- Philips screwdriver - 831058
- Slotted Screwdriver - 831059
- Tape Deck Cleaning Kit - 830027
- Allen Wrench - 831061
- Fuse 2A - 818006
- Channel Knob - 814018
- Volume Knob - 814017
- Slider Tips - 875192
- Headset Screws - 602010

3.4. How To Return Components

When returning components to Fleetwood for service, please use a copy of the "LANGUAGE LAB REPAIR" form, in **Appendix B,** in the back of this manual. When completing this form, be as accurate as you can **and be sure to include your return address and phone number.**

Unless otherwise specified, all parts should be sent to:

Fleetwood Group, Inc.
Electronics Division
Product Service Coordinator
11832 James Street
Holland, MI 49424

3.5. Phone Support

To reach **Fleetwood's Technical Support**, call

1-888-467-3759.

Fleetwood's standard hours are Monday through Friday 7:00 AM to 3:30 PM Eastern Standard Time.

4. Application Guidelines For Fleetwood Digicall Spectrum® Wireless Learning Laboratory

The following guidelines must be followed to insure proper installation and operation of Fleetwood's Digicall Spectrum® Wireless Learning Laboratory.

1. **Space** two Digicall Lab systems operating with the same channels a minimum of 100 feet from one another.

2. If there is more than one lab per school, there should be a space of one classroom in between them. By keeping this distance, you can minimize the possibility of interference between lesson channels from one room to another.

3. **Adjust** the "LESSON LEVEL" so that the multi-segment bar indicator occasionally fluctuates into the yellow, but rarely into the upper red range. This should allow the students to set their volume levels to the middle of their headset volume range. This will prevent the Student Transceivers from shutting off automatically due to low RF levels being received by the headsets.

5.   General Information About Wireless Systems

5.1. How to Avoid Interference Between Lessons When 2 Labs are Required

WILL PLEASE HELP WITH THIS

If there is more that one lab per school, and you would like to have 6 lesson channels in each console then these labs must be placed at least the distance of a hallway in between them or if they are on the same side of the hallway, there should be a space of one classroom in between them. By keeping this distance, you will minimize the possibility of interference between lesson channels from one room to another.

Another way to avoid interference between lesson channels, if the two rooms must be side by side, back to back or above and/or below each other, is to limit the consoles to three lesson sources (three channels each) instead of 6. Put three channels in each console, one console having channels 1, 2, and 3 and the others having channels 4, 5, and 6. Use this method for two Digicall or any other wireless systems.

6. Limited Product Warranty

Fleetwood Group, Inc. warrants its Digicall Spectrum® Wireless Learning System components for a period of 24 months from the date of installation for any material or workmanship defect in the product. This warranty does not extend to batteries, Student Headsets or any product component, which has been subjected to misuse, neglect, accidental breakage, improper installation, use outside of present guidelines, or alteration outside of our factory.

Fleetwood Group, Inc. agrees to remedy, at the factory, any product defect, or at its discretion, replace any component or part of the product provided the owner complies with the following procedures:

Student Headsets are warranted for 30 days from ship date.

1) The owner is to determine that the problem is not the batteries or a faulty or improper connection or power source.

2) The owner will notify our **Product Service Coordinator** at:
   1 888-467-3759
   to obtain a Return Material Authorization (RMA)
   number prior to shipping the product back to the factory.

3) The owner will send the defective component via prepaid freight to:

   Fleetwood Group, Inc.
   Electronics Division
   Product Service Coordinator
   11832 James Street
   Holland, MI 49424

4) If the factory determines the defect is due to negligence or oversight on the part of the owner, the owner will be invoiced for the cost of the repair.

5) Onsite factory service is available to the owner of a Digicall® Lab on a time and material basis. This service must be scheduled by calling the Fleetwood Product Service Coordinator. Fleetwood Group, Inc. shall not bear the cost of any service call, labor to disassemble or other work performed in the field or outside the factory

7. FCC Information

This equipment complies with Part 15 of the FCC rules. Operation is subject to the following three (3) conditions:

1) This device may not cause harmful interference

2) This device must accept interference that causes faulty operation.

3) Any changes or modifications to the equipment not approved by Fleetwood Group, Inc., may void the users authority to operate the equipment.

Appendix A - Diagnostic Modes

The following information is provided in order to prevent accidental entry into the special diagnostic modes that have been programmed into your Digicall Console. Your console may not include all of these functions or may include additional modes that are explicitly reserved for factory use. Each of these modes will generally only be used by factory qualified representatives for diagnostic evaluation. On occasion, you may be asked to exercise one of these modes under the direction of a field service technician. Your Digicall console has been shipped from the factory with the correct configuration and should not require use of these functions under normal use.

1) RESTORE FACTORY DEFAULTS - This mode restores factory default settings for Range, Period, Lesson, and Volume. This mode is activated by holding down the "CLEAR" button while turning on power to the console. The range settings will be restored to HI=99, LO=1. The Period setting will be restored to 30. The Lesson will be reset to lesson 1. Volume will be set to mid-range.

2) KEY CODE DISPLAY - This mode is activated by holding down the "ALL CALL" button when turning on power to the console. This is a special diagnostic mode that allows testing of the codes used to identify individual buttons on the console. This mode will be active until the console is powered off and back on again.

3) SIMULATED LESSON TONES - This mode is activated by holding down the "MIC W/ LESSON" button while turning on power to the console. This is a special diagnostic mode that allows generation of fixed tones that can be heard on each of the 6 lesson channels. These tones may be used by field service personnel to test various modes of operation. This mode will be active until the console is powered off and back on again.

4) REVISION DISPLAY/LIGHT TEST - This mode allows the user to view the revision level of the microprocessor firmware. This mode is entered by holding down one of the "VOLUME" buttons while turning on power to the console. The system test will be slowed, such that the individual indicators can be viewed, if the button is held down following the display of the revision.

FLEETWOOD ## LANGUAGE LAB REPAIR

Send to: Electronics Repair
11832 James Street, Holland, MI 49424   800-257-6390

Date: _____   Dealer: _____

Name: _____

Position: _____

School: _____

Street _____

City: _____ State: _____ Zip: _____

Phone: _____ Dealer Phone: _____

Repair: ☐ Headset   Nos: _____
         ☐ Tape Deck   ☐ VCR   ☐ C D   ☐ Radio
         ☐ Control Panel   ☐ Other: ☐ Student Transceiver

For: ☐ Digicall   ☐ Overhead   ☐ Digicall Spectrum

Repairs due to: Customer Needs Quote:

    ☐ Normal Use   ☐ Yes
    ☐ Vandalism   ☐ No
    ☐ Other: ☐ Send repaired parts to school
                                   ☐ Send repaired parts to dealer

Please list repair needs for each item checked above as well as need for
expedited service (use separate sheet if needed):

_____

_____

_____

_____

For Office Use:
Rec'd by: _____   Repaired by: _____
Date Rec'd: _____   Date Returned:

Appendix C - Digicall Spectrum Quick Reference Guide	
Function Description	**Button Key Definitions**
POWER SWITCH	Turn on the power with the black rocker switch. A lesson indicator will light (red) and two zeros ("00") will appear on the digital display
VOLUME	To adjust volume to Instructor/Guest headset hold down the "VOLUME ARROW BUTTON" for several seconds
ALL CALL	To talk to all students simultaneously, press the "ALL CALL" button.
MIC/W LESSON	Permits the instructor to talk to all students listening to the same lesson channel as selected with the "LESSON SELECT" buttons.
STUDENT MONITOR	To monitor a student's response and lesson, enter the two-digit number of the student's headset on the keyboard.
STUDENT REVIEW	Plays recording back to student in intercom. Lesson Select Button Chooses playback sources.
REMOTE HEADSET	Use the appropriate "LESSON SOURCE" button to set the transmit channel. Press the "REMOTE HEADSET" button. Enter the student headset number. If the student headset number is set to the same channel as the console lesson select, set the student headset volume slightly low so the headset will not feedback (loud squeal).
LESSON SELECT	To monitor a lesson source you must first select the lesson source via the "LESSON SELECT" buttons and then start the lesson source.
RECORD COMMENT	This button may be depressed and held down at any time to allow instructor comments to be recorded on a lesson recorder. The lesson recorder must be in record mode in order to retain these comments for future playback.
CLEAR	Clears LED Display
ON/W MUTE	This button is functionally identical to "INTERCOM W/ LESSON" except that no lesson will be heard during the instructor-student conversation.
ON/W LESSON	The "INTERCOM W/ LESSON" mode can be helpful when the instructor wants to talk to the student and point out particular points of interest in the lesson as it is playing
RANDOM ON/OFF	The "RANDOM" button allows sequencing through headset numbers in a random order rather than sequentially.
RUN/STOP	To monitor students automatically, press the "RUN/STOP" button.
NEXT	To shorten the monitoring time or skip over a student number push the "NEXT" or "PREV" button quickly and advance to the next number
PREVious	See "Next"

SET RANGE	Set HI and LO headset number limits 1st press – "HI" shows in display 2nd press – "72" on display, enter highest headset number 3rd press – "LO" on display 4th press – "10" on display, enter lowest headset number 5th press – Return to "00" New numbers remain in memory until changed (Remembered when console is turned off)
SET PERIOD	Set HI and LO headset number limits 1st press – "SP" shows in display 2nd press – "30" number on display indicates time in for automatic monitoring. Change by entering the desired time in seconds. (01 to 99 seconds) 3rd press – Return to "00" New numbers remain in memory until changed (Remembered when console is turned off)
STUDENT RECORD	To record a student's response and lesson, enter the two-digit number of the student's headset on the keyboard in the same manner you would with a calculator. These numbers will appear on the digital readout. When the second digit is depressed, the student's lesson and responses will be heard. The Instructor's Lesson audio will no longer be heard as long as the two digits are non-zero. Then select a console recorder that is not being used as a lesson source and place the recorder in the record mode. You will now record the student whose number is shown on the digital display, and the lesson. To play back this student's recording to the individual student, follow the instructions under "STUDENT REVIEW".
Jacks	**Jack - Definitions**
AUXiliary INPUTS	To use an external lesson source (AM/FM Radio, CD Player, Cassette Player, etc..), plug a patch cord from the speaker or earphone output jack of your portable source to the desired "AUX INPUTS".
INSTRUCTOR	Plug in the "INSTRUCTOR HEADSET" all the way! Fleetwood suggests that you adjust the "INSTRUCTOR VOLUME" to maximum by holding down the "VOLUME UP ARROW BUTTON" for several seconds and adjust it later only after a lesson source has been selected and the volume of that lesson source has been set
GUEST	Guest Instructor jack allows a second headset to be plugged in to participate with the Instructor

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