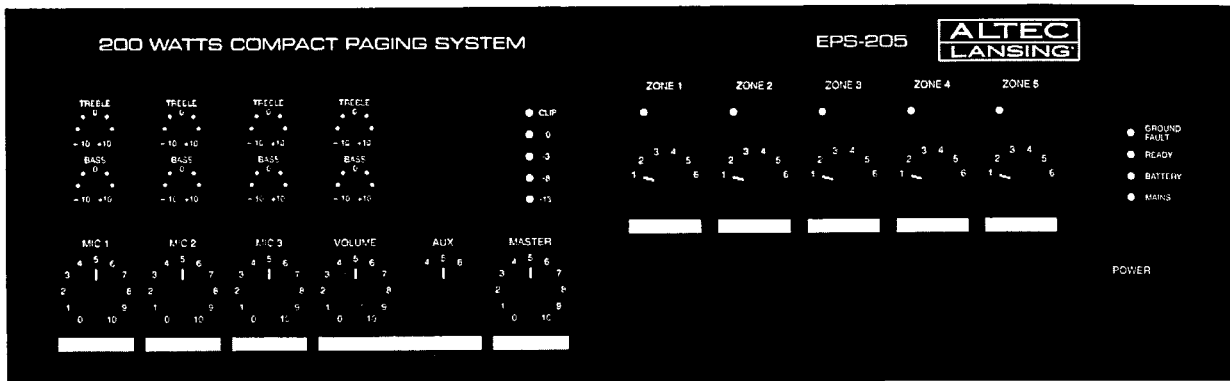




EPS-205

Owner's Manual

EXPANDED POWER SYSTEMS-Compact Paging System



Features:

- 3 XLR-type MIC/LINE inputs with bass/treble controls, electronically balanced, universal switchable phantom power
- 3 RCA-type unbalanced Line inputs for switchable single source (BGM) selection, with bass/treble controls
- Configurable Priority functions: mixable, block priority, cascade priority; configurable alternates
- Alternate PTT connection at Input 1 for the connection of a command microphone
- Alternate paging operation from up to 3 EPS-205/PS zoned microphone terminals or PTT-microphone via RJ-45 jack
- Integrated relay-field to assign call and program materials to the 5 separate output circuits, or to the direct output
- RCA-type connections for stereo inserts and record outputs
- Output capacity of 200 watts (IEC 268-3), protected against floating (no load) and short-circuit
- 5 Integrated output circuits, controllable and switchable from the front user interface, function for obligatory reception
- Output transformer for balanced 70 V loudspeaker networks; alternate 100 V, 50 V also available
- Monitor output
- LED indicators: Battery operation status, Main Power supply, Ready Status, and Ground Fault
- LED-meter with range from -13 dB to 0 dB and clip
- Overall volume control, bridged override in priority mode
- Power switch on the front panel
- Remote control connection
- 115/230 VAC main power supply, switchable at rear of unit
- 24 VDC battery operation, seamless emergency power switching
- Protection/Monitor Features:
 - Ground fault surveillance (DIN/VDE 0800)
 - Pilot test tone surveillance
 - Fault message output (remotable)
 - Optional Alert signals (DIN 33404)
 - Emergency power connection
- Optional Features:
 - Digital Voice Messaging for one pre-recorded message up to 1 min. duration (ANRS-90213)
 - Alarm Alert, Chime and Pre-Message Chime (ANRS-90212)
 - Voice-Operation switch for input 3 auto-gate or duck/ramp BGM (ANRS-90170)
 - Remote Volume control of Main output signal (ANRS-90178)
 - Input transformers for inputs 1-3 (ANRS-139)
 - 19" Rack Mount Kit (ANRS-90214)

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EPS-205

High performance compact paging system in a desktop enclosure, rack mountable, offering 3 Mic/Line balanced and 3 selectable Line-level unbalanced inputs, 200 watts of output power to 5 separately assignable output circuits. The EPS-205 can be operated with 115/230V AC or 24V DC.

Specifications

Nominal output power	200 watts (IEC)
Nominal output voltage	70 (100 / 50) volts (transformer)
Nominal output impedance	100 V : 50 ohms // 220 nF 70 V : 25 ohms // 440 nF 50 V : 12.5 ohms // 880 nF
Sensitivity: Balanced Mic/Line inputs (1-3)	0.6 mV / 12 mV
Note! XLR pin-assignment: 1=ground, 2=pos. input (+), 3=neg. input (-)	
Maximum input voltage Mic/Line	470 mV / 8.5 volts
Sensitivity: Unbalanced (BGM) inputs (4-6)	155 mV
Distortion	< 1 %
S/N ratio	< -60 dBu
Monitor output	8 dBu / 600 ohms
Bass/Treble Tone controls	100 Hz : ± 10 dB 10000 Hz : ± 10 dB
Tape Rec output	775 mV / 47 k ohms, unbalanced
Operational voltage	115/230V AC at 50 - 60 Hz 24 V DC
Environmental temperature	40° - 104° F (5 - 40° C)
Dimensions (W x H x D)	440 x 135 x 260 mm
Weight	approx. 11 kg

Optional Extension kits

Alert, chime, Pre-chime	ANRS 90212	(176 057)
Voice message	ANRS 90213	(176 058)
Remote control of the main output signal	ANRS 90178	(176 056)
Voice-operated switch	ANRS 90170	(176 055)
Transformer balanced inputs	ANRS 90139	(176 054)
19" Rack mount kit	ANRS 90214	(176 059)

1. General Use

The EPS-205 compact paging system has been specially designed to ensure durable performance and reliable operation. It is best suited for call and message announcement installations with or without background music, alert systems in industrial/commercial buildings, offices, sport centers, schools, churches, hotels, hospitals, supermarkets, cruise ships, restaurants, and other similar applications.

2. Installation Notes

Ventilation louvres at the front and rear of the unit must be clear of obstruction. The EPS-205 can be desk or 19" rack mounted. For proper operation the unit must be clear of:

- dropping or splashing water
- direct sunlight
- high environmental temperatures or direct radiation of heat sources
- moisture
- excessive dust
- shock or vibration

When the EPS-205 is moved from a cold to a warm environment, condensation of water inside the unit may occur. The unit should be operated only after reaching ambient environmental temperature (approximately after one hour). If liquid or dirt has penetrated the enclosure, the unit should not be operated. The unit should be disconnected at all connections and an authorized ALTEC LANSING service center should be contacted for the necessary maintenance. Do not operate the EPS-205 after such exposure. When cleaning the amplifier's outside enclosure, never use any cleaning sprays or detergents which may be flammable. Industry standards for installation must be used for the installation of the EPS-205. All connectors have to be free of tensile stress. To avoid electrical shock, the unit must not be operated while the enclosure is open. Provide sufficient air-flow between ancillary equipment when unit is rack mounted. At least 1RU above and below the unit is recommended for rack installations. For trouble-free operation, the maximum environmental temperature should not exceed +40° C.

3. First Operation

For AC voltage operation, the unit must be operated with the power cable provided with the unit. Connect the cable to the 3-pole machine-type socket (AC MAINS INPUT, [62]) at the back of the unit. The unit can be operated by 115VAC or 230VAC, 50-60 Hz. Voltage Selector (VOLTAGE SELECTOR [61]) switch must match available AC power.

Warning!

The amplifier is factory-set to 115V AC. To change this setting use the VOLTAGE SELECTOR [61]. For the operation with 230VAC, the mains fuse [60] has to be exchanged by an 3.15 Ampere slow-blow fuse. The master volume control (MASTER, [6]), the input controls (MIC 1 - MIC 3, [1] to [3]), and the unbalanced (BGM) line-level input control (VOLUME, [4]) should be set to their "0"-position prior to turning on the power of the EPS-205 (POWER [26] switch). Damage to loudspeakers may result if gain is excessive at initial turn-on. The EPS-205 is equipped with a cut-in delay of approximately 5 seconds to suppress power-on noise.

4. Inputs

4.1 Input 1

INPUT 1 [40] or [41] – XLR Connection of Mic and Line level sources, 0.5 mV - 1.3 V, electronically balanced, input transformers (ANRS-90139) optional. The 7-pin DIN connector (INPUT 1, [40]) allows connection to microphones with PTT button, providing a single connection for the signal and the switching.

The sensitivity selector switch (MIC / LINE, [42]), adjusts the input sensitivity from either high (microphone level, the button is NOT engaged or "out") or low (line-level, the button is engaged or "in"). The GAIN [43] control allows adjustment of the input sensitivity, to control (MIC 1, [1]) and the MASTER [6] control are both set to the "7" marking of the printed scale. The MIC 1 [1] control adjusts the input level of input 1 onto the mix bus. The corresponding TREBLE [7] and BASS [8] controls adjust the channel's sound according to acoustical conditions of the installation site. The connection of unbalanced line-level sources to the XLR at input 1 requires internal bridging, using the jumper J 101.

Important Note: In standard "mix mode", input 1 receives level 1 priority status. This status bypasses the MASTER [6] control and No Chime, alert signal, or voice message can be activated.

4.2 Input 2

INPUT 2 [44] – XLR Connection of Mic and Line-level sources, 0.5 mV - 1.3 V, electronically balanced, input transformers (ANRS-90139) optional.

The sensitivity selector switch (MIC / LINE, [45]), adjusts the input sensitivity from either high (microphone level, the button is NOT engaged or "out") or low (line-level, the button is engaged or "in"). The GAIN [46] control allows adjustment of the input sensitivity, to control (MIC 2, [2]) and the MASTER [6] control are both set to the "7" marking of the printed scale. The MIC 2 [2] control adjusts the input level of input 2 onto the mix bus. The corresponding TREBLE [9] and BASS [10] controls adjust the channel's sound according to acoustical conditions of the installation site. The connection of unbalanced line-level sources to the XLR requires internal bridging, using the jumper J 105.

Important Note: In standard "mix mode", input 2 receives level 2 priority status. This status bypasses the MASTER [6] control and No Chime, alert signal, or voice message can be activated.

If EPS-205/PS microphone terminals are connected to the RJ-45 jack, the XLR at input 2 cannot be used. The EPS-205/PS has an internal mic-preamp, sending line-level back to the EPS-205 RJ-45 jack. The MIC / LINE [45] selector must be set for low sensitivity (line-level, button is engaged or "in") and the corresponding GAIN [46] control should be adjusted to approximately center position.

Important Note: When using the EPS-205/PS microphone terminal, the unit must be internally jumpered for priority settings. (See paragraph 7 for additional information).

4.3 Input 3

INPUT 3 [47] – XLR Connection of Mic and Line-level sources, 0.5 mV - 1.3 V, electronically balanced, input transformers (ANRS-90139) optional.

The sensitivity selector switch (MIC / LINE, [48]), adjusts the input sensitivity from either high (microphone level, the button is NOT engaged or "out") or low (line-level, the button is engaged or "in"). The GAIN [49] control allows adjustment of the input sensitivity, to control (MIC 3, [3]) and the MASTER [6] control are both set to the "7" marking of the printed scale. The MIC 3 [3] control adjusts the input level of input 3 onto the mix bus. The corresponding TREBLE [11] and BASS [12] controls adjust the channel's sound according to acoustical conditions of the installation site. The connection of unbalanced line-level sources makes internal bridging necessary, using the jumper J 109. Input 3 [47] has an internal connection for the Voice-Operation Switch (ANRS-90170), allowing either auto-gate or duck/ramp of BGM. See paragraph 8.3 for additional information.

Important Note: System input priority can be established via internal jumper settings or the REMOTE CONTROL [58] connector. See also paragraph 7 (Priority function).

4.4 Phantom power for Inputs 1 - 3

MIC PHANTOM POWER [50] provides universal 48V phantom power to all of the inputs 1 - 3 when engaged or "in". For condenser-type microphones, this switch must be engaged for proper operation of the microphones.

4.5 Inputs 4 - 6

The inputs 4 - 6 (INPUT 4 ... INPUT 6, [51] to [53]) - Connection of unbalanced line-level, 155 mV - 1.5 V, sources such as Cassette Decks, CD-Players, DAT-Recorders, etc.

The inputs 4 - 6 (INPUT 4 ... INPUT 6, [51] to [53]) stereo RCA connections are internally summed to a monaural signal. The AUX [5] rotary switch on the front panel of the EPS-205 allows selection of one of the three inputs for BGM mix into the system. The VOLUME [4] control adjusts the input level of channel onto the mix bus. The corresponding TREBLE [13] and BASS [14] controls adjust the channel's tone of the selected input source. Output Zones (ZONE 1 ... ZONE 5, [21] to [25]) must be selected for BGM selected input 4-6 to pass through mix bus.

Important Note: During a priority announcement or alert/chime, BGM from the selected source input 4-6 is muted. However, the Voice-Operation Switch (ANRS-90170) allows for BGM to duck/ramp when announcements are made from input 3. See paragraph 8.3 for additional information.

4.6 Break Connections

The insert in-/outputs (BREAK, [55]) allows the connection of external amplifiers, equalizers, signal processors, etc. The insert point is located post master and pre internal amplifier.

The connectors are unbalanced and provide an output level of 1.1 volts = +3 dBu.

Warning! When these in-/outputs are not in use, one must be bridged using the supplied bridging jumper. The EPS-205 is otherwise not operational.

4.7 Remote Control Connector - Inputs

For the description of the REMOTE CONTROL [58] connector's pin assignment refer to the following table. Detailed information concerning the mentioned extension kits is provided within this manual in the corresponding paragraphs.

Pin	Description	Reference
1	Chime Start	Extension kit "Chime / alert" (90212), (paragraph 8.1)
2	Alert Start	Extension kit "Chime / alert" (90212), (paragraph 8.1)
3	Voice Reproduction	Extension kit "voice message" (90213), (paragraph 8.2)
4	Voice Recording	Extension kit "voice message" (90213), (paragraph 8.2)
5	Voice "Stop"	Extension kit "voice message" (90213), (paragraph 8.2)
6	Priority 1	Priority functions (paragraph 7)
7	Priority 2	Priority functions (paragraph 7)
8	Priority 3	Priority functions (paragraph 7)
21	Remote Master Control	Extension kit "remote control" (90178), (paragraph 8.2)
24	GND	Signal ground

4.7.1 Remote Control Connector – Input Pin Assignments

Pins 1-2 require contact closure to ground for the actuation of a chime (pin 1) or alarm alert (pin 2) signal from a remote location. This feature can be used as a door-bell, curtain-call, recess bell or emergency alarm button at various locations where a microphone terminal is not present. The Alert/Chime (ANRS-90212) extension card must be installed within the EPS-205 for this function.

Pins 3-5 control the actuation (pin 3), recording (pin 4) from a microphone input (input 1-3) and interruption (pin 5) of a voice message announcement. The feature allows remote voice messaging control where or when a microphone terminal is not present. The Voice Messaging (ANRS-90213) extension card must be installed within the unit for this function.

Pin 6 requires a contact closure to ground for establishing the Input 1 as Priority 1.

Pin 7 requires contact closure to ground for establishing Input 2 as Priority 2.

Pin 8 requires contact closure to ground for establishing Input 3 as Priority 3.

Pin 21 allows the connection of a 10K pot for Remote Master control (ANRS-90178) extension card to be remotely located.

Pin 24 is ground.

5. Outputs

5.1 Remote Control Connector - Outputs

For a description of the control outputs and the pin assignment of the REMOTE CONTROL [58] connector, please refer to the following table:

Pin	Description
10	Reply zone 1 (obligatory reception)
11	Reply zone 2 (obligatory reception)
12	Reply zone 3 (obligatory reception)
13	Reply zone 4 (obligatory reception)
14	Reply zone 5 (obligatory reception)
15	busy, normally open contact, signals that a priority signal is present
16	busy, normally closed contact, signals that no priority signal is present
17	busy, center contact
18	ready, normally open contact, signals that the appliance operates normal
19	ready, normally closed contact, signals that faulty operation is encountered
20	ready, center contact
23	power output max. 200 mA, e. g. for the operation of external relays
24	GND - signal ground
25	monitor output (unbalanced), e. g. for the connection of (high impedance) headphones

5.1.1 Remote Control Connector – Output Pin Assignments

Pins 10-14 signal by contact closure to ground the selection of the output zones. Obligatory reception means that all zones will receive voice-messaging, chime and alarm signals as described in paragraph 7. Priority regardless of selection.

Pins 15-17 signal the activity during alert, chime, announcement

Pins 18-20 signal faultless operation of the unit (temp, pilotone...)

Pin 23 provides 200mA,+5VDC for powering external relays.

Pin 25 provides a hi-Z unbalanced output for monitor or headphone connection at a remote location.

Pin 24 is ground.

5.2 Loudspeaker Outputs

The connector strip POWER OUTPUT [59] allows for the connection of up to five 70V switchable output zones and a direct non-switchable output. The maximum output capacity is 200 watts, which is randomly configurable to any of the outputs, zoned or direct. During normal operation, the routing switches (ZONE 1 ... ZONE 5, [21] to [25]) allow selection of the individual zones. The detented pots [16] to [20] control the output level of each zone separately.

When prioritized messages, chimes, or alerts are activated, the switching and volume controls are automatically deactivated and the signal is sent to all 5 zones at maximum output level, regardless of front panel zone selection. The direct output cannot be independently selected or adjusted. The direct output receives all prioritized messages, chimes and alerts. Important Note: The speaker zone has to be assigned before the unit will pass audio to that zone. Zones can be selected either from the front panel or via the remote control connector.

6. Emergency Power Supply

The EPS-205 can be operated on 24VDC for emergency back up power. Battery backup (by others) connects to the DC INPUT [56], for secondary source power. When the main AC power supply is interrupted, automatic switching occurs for operation from the secondary source (battery).

When a secondary DC source is connected, the EPS-205 unit operates regardless of the status of the front panel power switch POWER [26]. If the secondary supply must be switchable, an external breaker or relay which confines with the corresponding current must be installed.

The battery DC INPUT [56] must use insulated AMP plate plugs 6.3 x 0.8 mm. The EPS-205 is protected internally against the confusion of the poles. Both the positive and negative conductors are protected by 12.5 A fuses, located on the printed board assembly 86240 (relays and output board assembly).

The battery connection cord must be at least 2 x 2.5 mm² (AWG 13) in diameter and no longer than 7 meters (the loss of power is below).

Warning! The EPS-205 must be operated with batteries that are grounded at the negative pole or ungrounded. Operation with batteries that are positively grounded will damage the unit.

7. Priority function / setting options

7.1 Mixing Mode (factory preset)

- Inputs 1, 2, 3 and AUX are mixed
- Activating a Priority Input (7-DIN or Remote Control) mutes the AUX-signal (selected input 4-6)
 - Zone level settings and routings are maintained during priority announcements i. e. if one output is switched off it stays off or if a volume is set low, it stays low
 - The master volume control functions normally
 - Paging stations do not function in mix mode. EPS-205/PS cannot be used without alternately established priority settings.
 - When installed, Chime, Alarm and Voice Messages get highest system priority – all inputs are muted and all outputs are set to their maximum volume

7.2 Cascade Priority Mode

- Jumper J301 must be in the inserted position to establish cascading priority and use the EPS-205/PS microphone terminals.
- The Cascading Priority sequence, from highest to lowest is as follows: Voice Messages, Alarm, Chime, Input 1, Input 2, Input 3 and AUX
- EPS-205/PS microphone terminals are always in block priority; individual stations cannot be prioritized
- When a priority announcement is activated from the Remote Connector or 7-DIN (input 1), the Master Volume control is overridden for all zone. A collective call is performed and all zones are set to their maximum output level. When a call is launched via an EPS-205/PS, only the zones that are selected on the particular microphone terminal are set to maximum output, all other zones remain unselected.
- Cascading priority mutes the AUX signal during all levels of priority announcements.
- Additional jumpers may be inserted for additional priority features.

7.3 Additional Priority Functions

- Jumper J302 when inserted establishes Block Priority.
- Jumper J303 when inserted cancels the automatic pre-chime signal. (Note: A pre-chime signal is the tone generated prior a live or pre-recorded voice announcement.)
- Jumper J304 when inserted sets Input 1 to the highest priority – i. e. during a pre-recorded voice message, an Alert Alarm or a Chime signal, announcements can be made from Input 1.
- Jumper J305 when inserted mixes the audio signals of the Inputs 2 and 3 and allows the duck/ramp of the AUX (BGM) during announcements. This setting excludes the use of EPS-205/PS paging stations.
- Jumpers J301 and J306 when both inserted and the Voice Operation Switch (ANRS-90178) installed established Input 3 as Priority 1 and creates an auto-gate feature for Input 3, muting all other inputs when voice activated.
- Jumpers J307 and J308 combinations: Monitor the microphone terminals. Depending on the number of EPS-205/PS microphone terminals connected, the ready-contact reports whenever a microphone terminal does not answer (not connected, faulty connection, function error). See chart

The EPS-205 compact paging system can be adjusted internally for the operation with prioritized microphones / microphone terminals. When shipped it is factory preset to mixing mode and cascade priority operation for message, alert, and chime (J301 inserted). The jumpers for changing the priority programming are located within the unit on the printed board assembly 83107. (Refer to Diagram 4). The unit must be powered down from both VAC and VDC sources prior to removing enclosure and changing settings.

Jumper Settings for Priority are as follows:

Jumper	Notes	Inserted	Open
J301		Priority operation	Pure mixing operation, i. e. MIC 1 - 3 and AUX signals are mixed. During an outgoing voice message, the inputs 1 - 3 and the AUX input are switched off. When the priority inputs 1, 2, or 3 are active, the AUX signal is muted, no obligatory reception (standard setting). Operation of EPS-205/PS is not possible
J302	Block priority, i. e. a running message of any input is finished without interruption. Chime, alarm and voice messages still possess the higher priority		Cascade priority, i. e. higher priority inputs mute lower priority inputs. EPS-205/PS paging stations possess always block priority amongst each other! Priority in sequence: voice message, alert, Chime, input 1, input 2, input 3, AUX (standard setting)
J303	The pre-Chime signal is deactivated, even when the alert, Chime extension kit is installed.		Prior to any voice message coming from MIC 1, MIC 2, MIC 3 or from a microphone terminal EPS-205/PS, a pre-Chime signal is released (standard setting).
J304	The signal of the input 1 has a higher priority than Chime, alert, or any other voice message, i. e. it is possible to make an announcement during an outgoing alarm		Normal priority sequence (standard setting)
J305	Mixing mode for MIC 2 and MIC 3, despite the selected priority. Activating the priority inputs 2 or 3 mutes the AUX signals (No obligatory reception). Operation of EPS-205/PS paging stations is not possible.		Normal priority sequence (standard setting)
J306	J301 is inserted (priority operation). Mixing mode for MIC 3, despite the selected priority. Activating the control input Prio 3 mutes the AUX signal, no obligatory reception. Most beneficial in combination with the voice-operated switch 90170 with switchable microphone		Normal priority sequence (standard setting)
J307/308	Paging station surveillance, if a microphone terminal does not answer the fault-relay drops out (see also "REMOTE CONTROL [58] connector") J307 = paging station 1 J308 = paging station 1 + 2 J307 and J308 = paging station 1 + 2 + 3 (The surveillance mode is only attainable in this order!)		No surveillance of paging stations (standard setting)

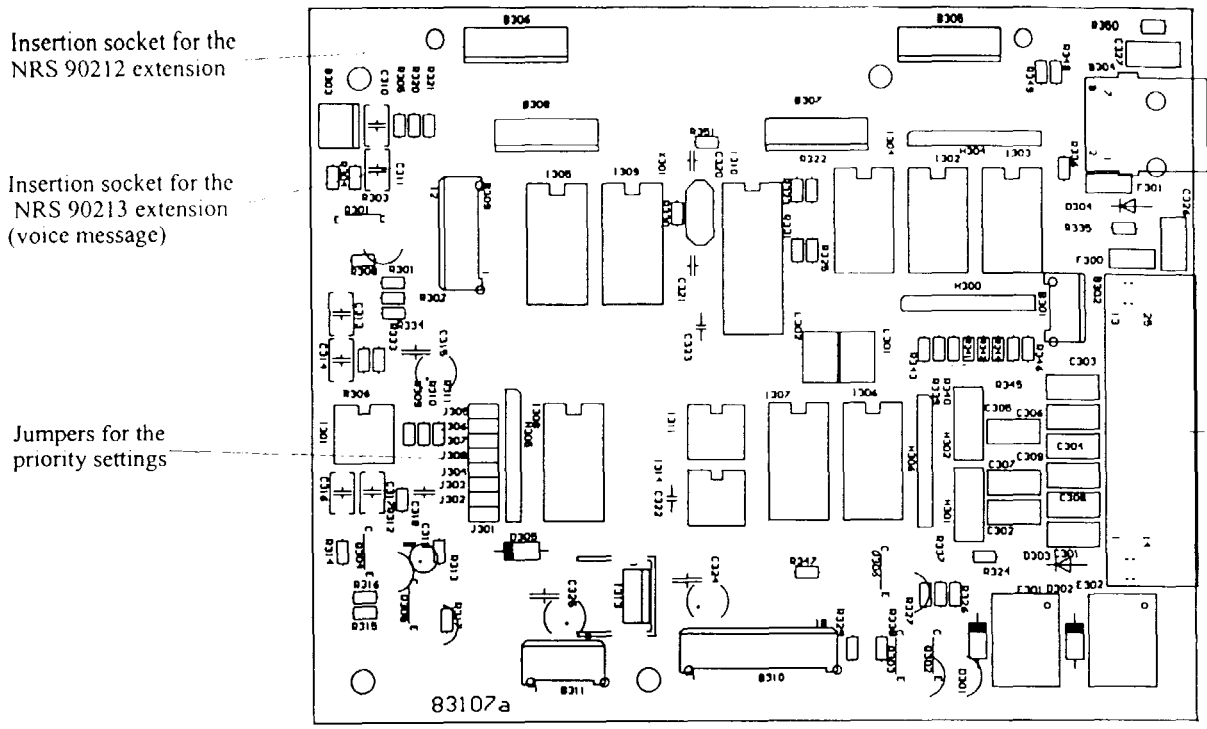


Diagram 4 (printed board assembly 83107)

8. Extension Kits

The EPS-205 compact paging system has been designed to meet flexible system requirements. Several optional extension kits are available providing additional functionality.

8.1 Alert, Chime, Pre-Chime (ANRS-90212)

Install this card in the insertion socket B305 / B306 on the printed board assembly 83107 (Refer to diagram 4). The EPS-205 must be disconnected from all power supplies prior to installation. The tone and gain settings must be established on the card prior to installation, via jumper settings and trim pots. For the different options, refer to the following table: (See also Diagram 5)

Jumper	Notes	Signal
J901		DIN - Alarm (1200 ... 500 Hz) (standard setting)
J902		Slow whoop alert (500 ... 1200 Hz)
J903		Jump - tone - alert (tone change impulse 925 / 1075 Hz)
J904		Dual Chime
J905		Triple Chime (standard setting)
J906		Quadruple Chime
J907		Dual pre-Chime (standard setting)
J908		Single pre-Chime

In standard mix or priority (J301) setting, the EPS-205 automatically mutes any microphone or line level signals when a Chime or Alert Alarm is activated. Volume settings for the three tones are adjust by the following: Alert Alarm - potentiometer R929; Chime - potentiometer R930 and Pre-Chime - potentiometer R931.

The Alert Alarm can be actuated from the EPS-205/PS microphone terminal's large covered red button (14) or from a remote button connected to ground from Pin 2 of the REMOTE CONTROL [58] connector. The Alert Alarm button must be held down or engaged to maintain the continuation of the tone.

The Chime can be actuated from the EPS-205/PS microphone terminal's "Chime" button (8) or via Pin 1 of the REMOTE CONTROL [58] connector (connected to ground potential). The Chime signal ends automatically.

Depending on the programming as described in paragraph 7, the Pre-Chime signal is automatically released prior to any live or pre-recorded voice announcement/message.

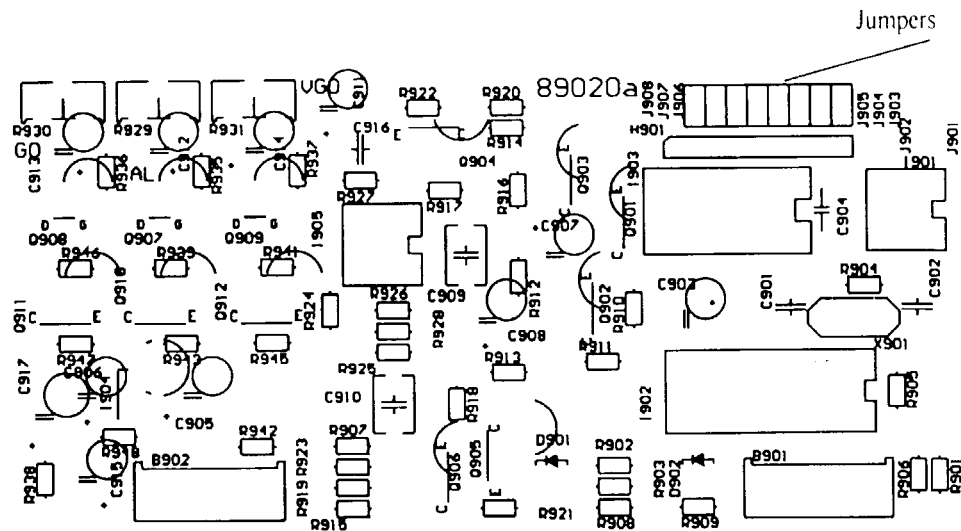


Diagram 5 (alert and Chime)

8.2 Voice Messaging (ANRS 90213)

Install this card in the insertion socket B307 / B308 on the printed board assembly 83107 (Refer to Diagram 4). The EPS-205 must be disconnected from all power supplies prior to installation.

In standard mix or priority (J301) setting, the EPS-205 automatically mutes any microphone or line-level signals when a Voice Message is activated. The volume for the Voice Message is adjusted at the potentiometer R810 on the card.

The Voice Message can be actuated from the EPS-205/PS microphone terminal's "Message" button (9) or via Pin 3 of the REMOTE CONTROL [58] connector. The reproduction of a voice message ends automatically or can be terminated through the use of the EPS-205/PS's "Stop" button (12) or via Pin 5 of the REMOTE CONTROL [58] connector.

To avoid unwanted message cancellation, the "Stop" button must be held for approximately 1 second.

Recording a Voice Message:

A Voice Message can be recorded from an EPS-205/PS or from a microphone or line-level source at inputs 1-3. Using the EPS-205/PS, the "Message" and "Stop" buttons must be pressed simultaneously for the duration of the recording. When recording from an independent mic/line source, the REMOTE CONTROL [58] connector Pin 4 must be contacted to ground for the duration of the recording. A 2 second pause should begin the recording to allow time for the Pre-Chime tone (if installed). The maximum recording time is 1 minute. The message should be recorded at maximum recording level. The Voice Messaging memory allows for only one message, which can be indefinitely re-recorded. Once recorded, the message resides in non-volatile memory, thereby independent of power status.

8.3 Voice-Operation Switch (ANRS 90170)

The EPS-205 allows the use of the Voice-Operation Switch in two different ways. Install this card in the insertion socket B114 on the printed board assembly 81333 (Refer to Diagram 6). The EPS-205 must be disconnected from all power supplies prior to installation.

8.3.1 Operation in Priority mode (J301)

With the Voice-Operation Switch installed and the J301 jumper inserted, Input 3 Priority is established. Voice-activation of a microphone at Input 3 automatically mutes all other signals and sends audio to all zones at maximum output level.

The voice activation threshold can be adjusted via the potentiometer on the card.

With this feature, the announcement is delayed by half a second for the duck of the AUX (BGM) signal.

8.3.2 Operation in Mixing Mode

The Voice Operation Switch automatically ducks and ramps the level of the AUX (BGM) source during voice announcements from Input 3. If Jumper 301 is inserted, J306 must be inserted, too. The correct threshold can be adjusted using the trimming potentiometer on the card.

The use of microphones that are equipped with an on/off switch is recommendable, since otherwise handling noise – such as crabbing or putting the microphone away – could cause temporary, unwanted attenuation of the AUX (BGM) signal.

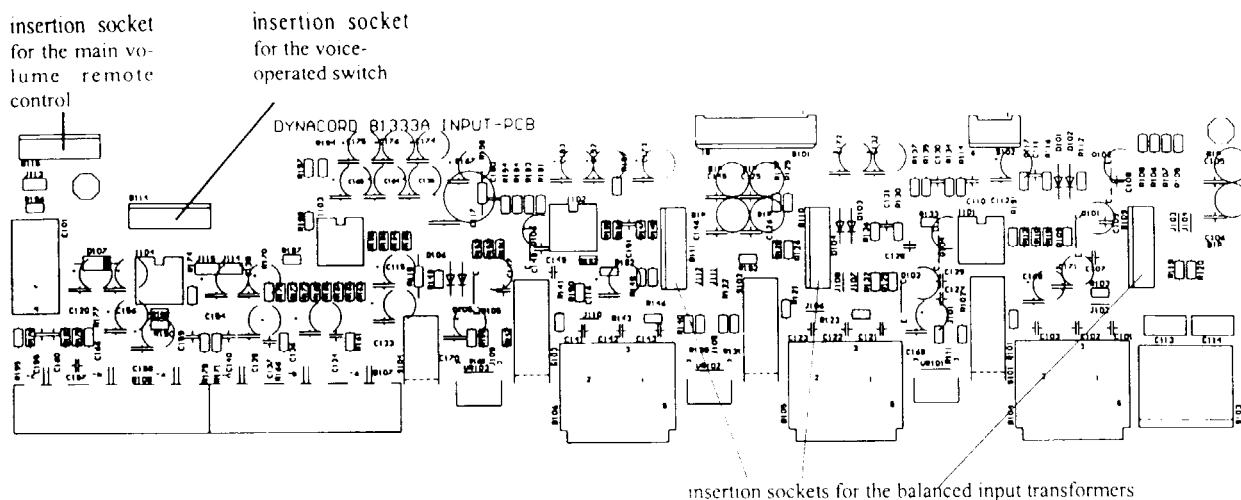


diagram 6 (printed board assembly 81333)

8.4 Remote Master Volume Control (ANRS 90178)

The main Master Volume control MASTER [6] can be remote located with the installation of the ANRS-90178 extension kit. The unit must be disconnected from all power supplies prior to installation. Install the Remote Master Volume Control card in the B115 insertion socket on the 81333 assembly card within the unit. (Refer to Diagram 6). Jumper J113 must be placed in the open (disconnected) position for proper operation of the remote volume. The main volume is remotely controlled by use of an external potentiometer (10 kOhms), supplied with the extension kit. Connect the 10K pot to Pins 22 and 24 of the REMOTE CONTROL [58] connector (high resistance results in a high output signal) for operation. The operation of this remote control is not affected by alert, chime, or any priority settings.

8.5 Transformer Balanced Inputs (ANRS 90139)

Inputs 1 - 3 of the EPS-205 are electronically balanced, which allows trouble free operation in most installations. However, if noise is induced within these inputs, balanced input transformers (ANRS-90139) on extension kit cards can be installed to eliminate unwanted noise. The unit must be disconnected from all power supplies prior to installation. The following jumpers must be disconnected for each input prior to the installation of the extension cards: Input 1 - J103 and J104; Input 2 - J107 and J108; and Input 3 - J111 and J112. Install the cards in the insertion sockets on the 81333 assembly card within the unit as follows: B109 - Input 1; B110 - Input 2; and B111 - Input 3. (Refer to Diagram 6).

8.6 19" Rack Mount Kit (ANRS 90214)

The EPS-205 must have 19" rack mount ears installed on the unit for proper rack mounting. When rack installed, assure proper ventilation to the unit. At least 1RU is recommended both above and below unit for proper ventilation.

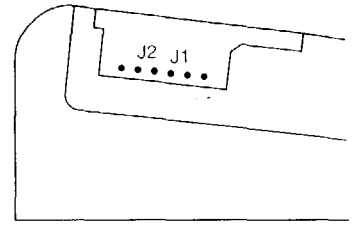
9. Operation with EPS-205/PS microphone terminals

The use of EPS-205/PS microphone terminals requires the EPS-205 main unit to be set in priority mode (J301 inserted). Refer to chapter 7.

The EPS-205 allows the connection of up to 3 EPS-205/PS microphone terminals. Each microphone terminal allows live announcements to be made into any of the output zones selected from the 5 speaker-zone keys. During a live announcement, the AUX (BGM) signal to all zones is temporarily suspended. Both Voice Messaging (ANRS-90213) and Alert Alarm/Chime (ANRS-90212) can be controlled via the EPS-205/PS.

Connection of the microphone terminals is performed through a RJ 45 jack (8-pole) at the back of the terminal which is plugged into the PAGING STATION [57] socket. Multiple microphone terminals must be connected externally in parallel. The Power supply, Line-level, and data signals are provided through this connection. The EPS-205/PS has a built-in microphone pre-amp which sends electronically balanced line-level signal back to the EPS-205 main unit. Unique addresses (ID) for each microphone terminal must be set prior to operation of the station. Jumpers J1 and J2 located behind the left side panel of each terminal establish the proper addressing. (ID address 1 is factory presetted; other possibilities are addresses 2 and 3) (Refer to the following table).

address	jumper1	jumper2
1	inserted	open
2	open	inserted
3	open	open



The microphone terminal connector's (PAGING STATION, 57) pin assignment is as follows; cabling has to be performed using a common 8-pole shielded cable connecting all microphone terminals incorporated:

- 1 operation voltage +24 V
- 2 operation voltage ground potential, reference potential
- 3 signal wire "paging station detected"
(connected to the paging station's internal grounding)
- 4 data wire RS 485, conductor A
- 5 data wire RS 485, conductor B
- 6 PTT (contact to ground potential, only when using a PTT microphone)
- 7 NF-wire, el. Balanced
- 8 NF-wire, el. balanced

please note the cable-pairs: 1+2, 3+6, 4+5, 7+8!

Cable length

The minimum allowable voltage on the microphone terminal is 15.5 volts. The maximum power consumption of each EPS-205/PS at this voltage is 123 mA. At cut-off the battery should deliver 21.6 volts, internal voltage drops reduce the output voltage for the microphone terminals to 18.1 volts. The maximum allowable voltage drop on the microphone terminal cabling is not to exceed 2.6 volts.

The maximum permissible cable lengths between the EPS-205 and the paging station(s) are as follows (cabling can be carried out in stellar-connection or as a bus-system, where – because of the RS 485 interface definitions – the total length of the cable network is not to exceed 1000 meters):

	using cable 4 x 2 x 0.6 I(Y)STY or AWG 22	using cable 4 x 2 x 0.8 I(Y)STY or AWG 20
one microphone terminal	160 m	280 m
two microphone terminals	80 m	140 m
three microphone terminals	50 m	90 m

The MIC / LINE [45] switch of the EPS-205 main unit Input 2 must be engaged for proper operation of the microphone terminals. The Input 2 GAIN [46] control should be set to its center position to adjust for low sensitivity. The connection of microphone terminals eliminates the option of source connection into the Input 2 XLR connector. Loudness and Tone adjustments can be made at the front panel MIC 2 [2], TREBLE [9] and BASS [10] controls.

Power to the EPS-205/PS microphone terminal is drawn from the EPS-205 main unit through the RJ-45 cable. When the unit is properly connected and the main unit is powered up the POWER ON (13) indicator on the microphone terminal shows green.

The ZONE buttons (1 to 5) delegate signal to the desired output zones when depressed. The corresponding LED lights. Pressing the button again cancels the signal routing and the LED goes out. The "ALL" (6) button allows collective assignment of the signal to all zones. The "CLEAR" (7) button resets and cancels the selected output zones. To make a live announcement, the "TALK" (10) button must be pressed and held for the duration of the announcement. The BUSY (11) LED, when lit, indicates that another message is being made into the system. Multiple messages cannot be sent into the system at the same time. During busy status, the microphone terminal will not transmit information into the system.

When the "Chime/Alert" (ANRS-90212) extension kit is installed, the CHIME (8) button actuates the chime tone and the LED on the CHIME (8) button lights. For "normal" priority (J301 inserted), messages cannot be made during the chime tone. The chime signal ends automatically.

When the "Chime/Alert" (ANRS-90212) extension kit is installed, the ALARM (14) button must be pressed and held to actuate the Alert Alarm signal. The ALARM indicator (14) lights while the button is held down. For "normal" priority (J301 inserted), messages cannot be made during the duration of the alarm signal.

When the "Voice Message" (ANRS-90213) extension kit is installed, the pre-recorded Voice Message is initiated by pressing the MESSAGE (9) button. The LED on the MESSAGE (9) button lights for the duration of the message. For "normal" priority (J301 inserted), live announcements cannot be made for the duration of the pre-recorded Voice Message. The Voice Message ends automatically or can be terminated by pressing the STOP (12) button for a few seconds.

To record a Voice Message refer to Paragraph 8.2 Voice Message.

Labeling the Microphone Terminal

The ZONE-buttons on the EPS-205/PS are not factory pre-labeled. All other buttons are pre-labeled as detailed above.

The zone-keys and function-keys can be custom labelled. Zone-key custom labels can be inserted by removing the left side panel of the mic terminal. Function-key custom labels can be inserted by removing the right side panel of the terminal.

The internal jumper settings and firmware version of a paging station can be checked using internal diagnostics. The terminal must first be powered down. While turning it on, the STOP [12] button must be pressed and held for duration of power up. The ON (13) LED will blink in this mode.

The jumper set address (refer to paragraph 9) is displayed when the CHIME [8] button is pressed. The Zone 1 LED will blink repeatedly indicating the jumper setting. (1 x blinking = address 1, 2 x blinking = address 2, 3 x blinking = address 3).

The terminal internal firmware can be checked by pressing the Zone 5 [5] button. The blinking of Zone 1 through Zone 3 LEDs display the actual version number (e. g. Zone 1 LED blinks once, the Zone 2 LED does not blink at all, and the Zone 3 LED blinks three times = firmware revision 1.03).

Switching the EPS-205/PS's power off disengages the service mode.

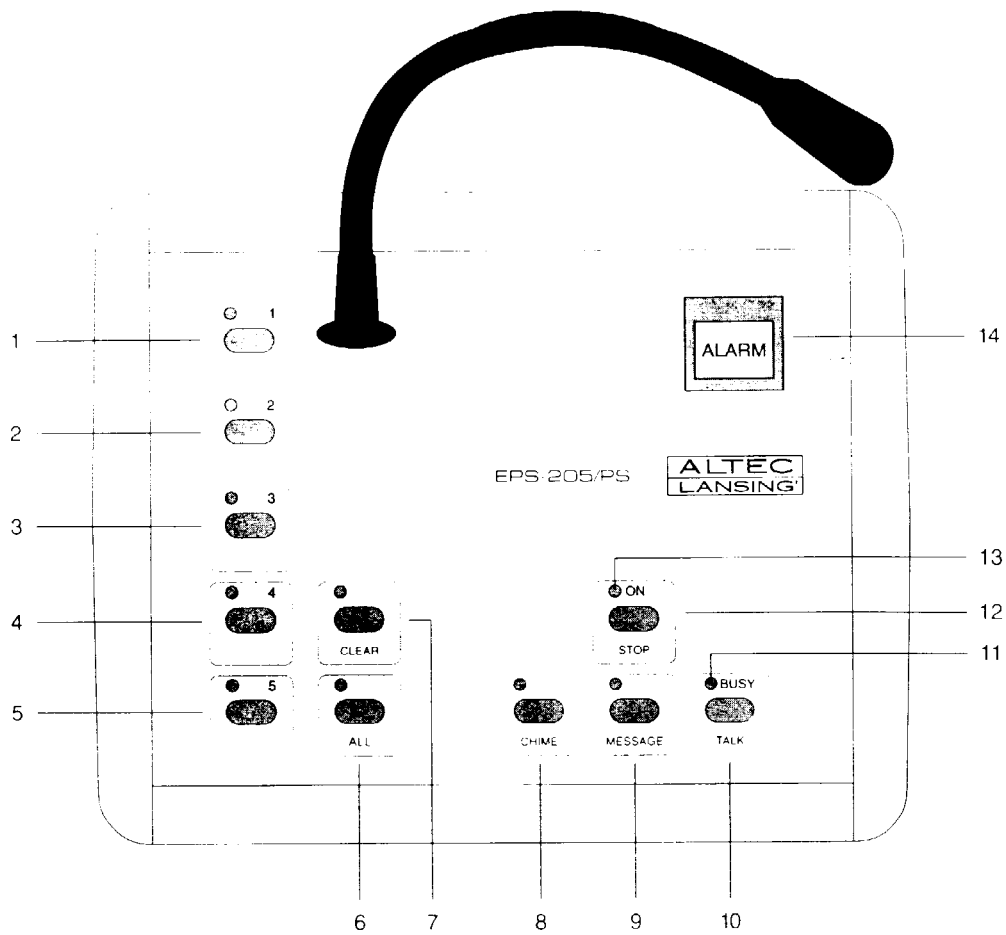
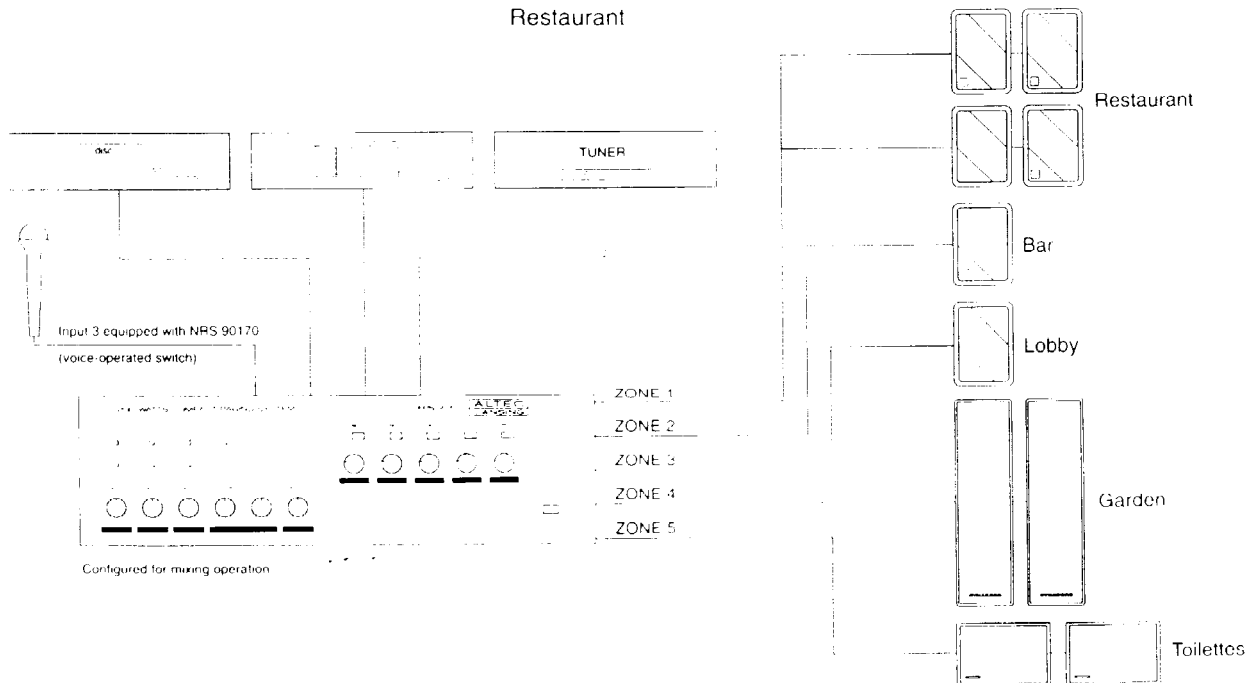
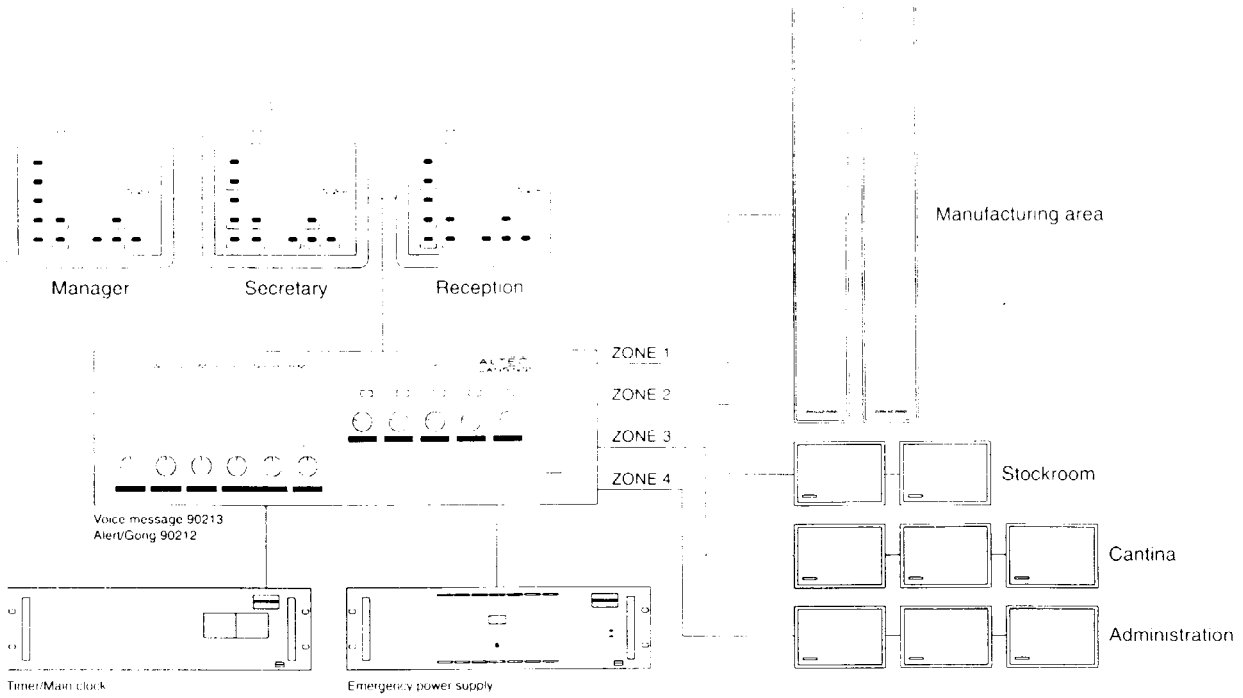


diagram 7(terminal EPS-205/PS)

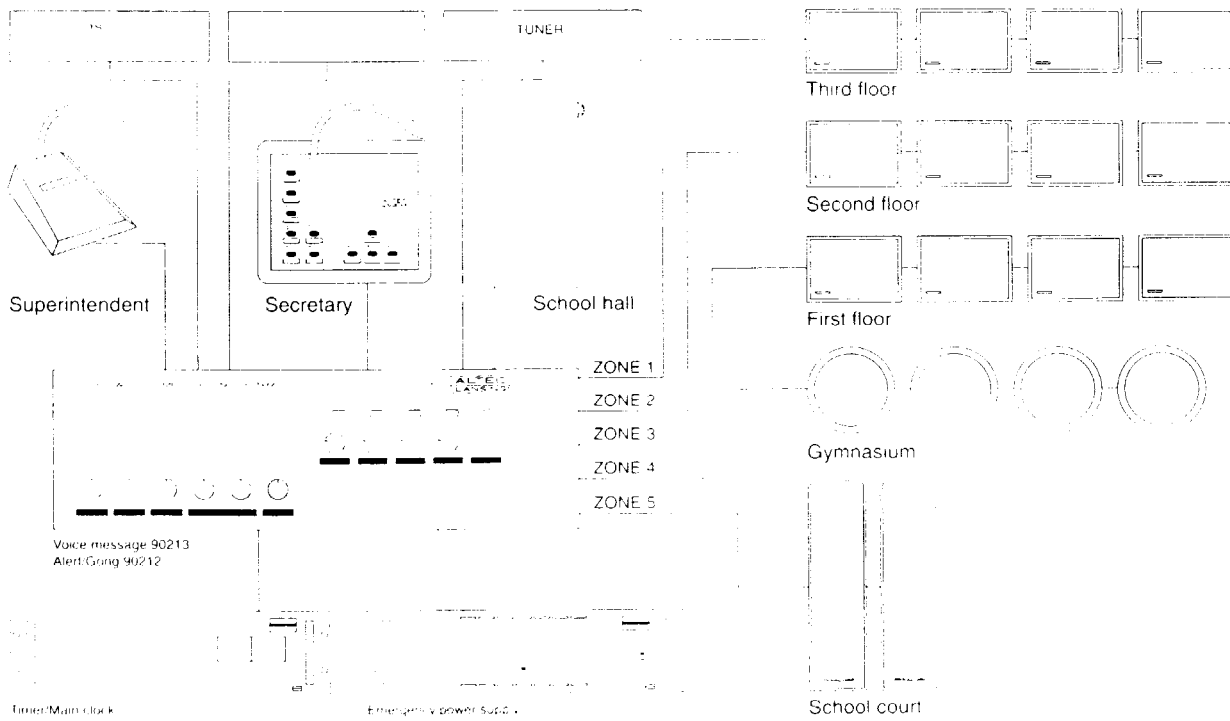
Standard application EPS-205 Restaurant

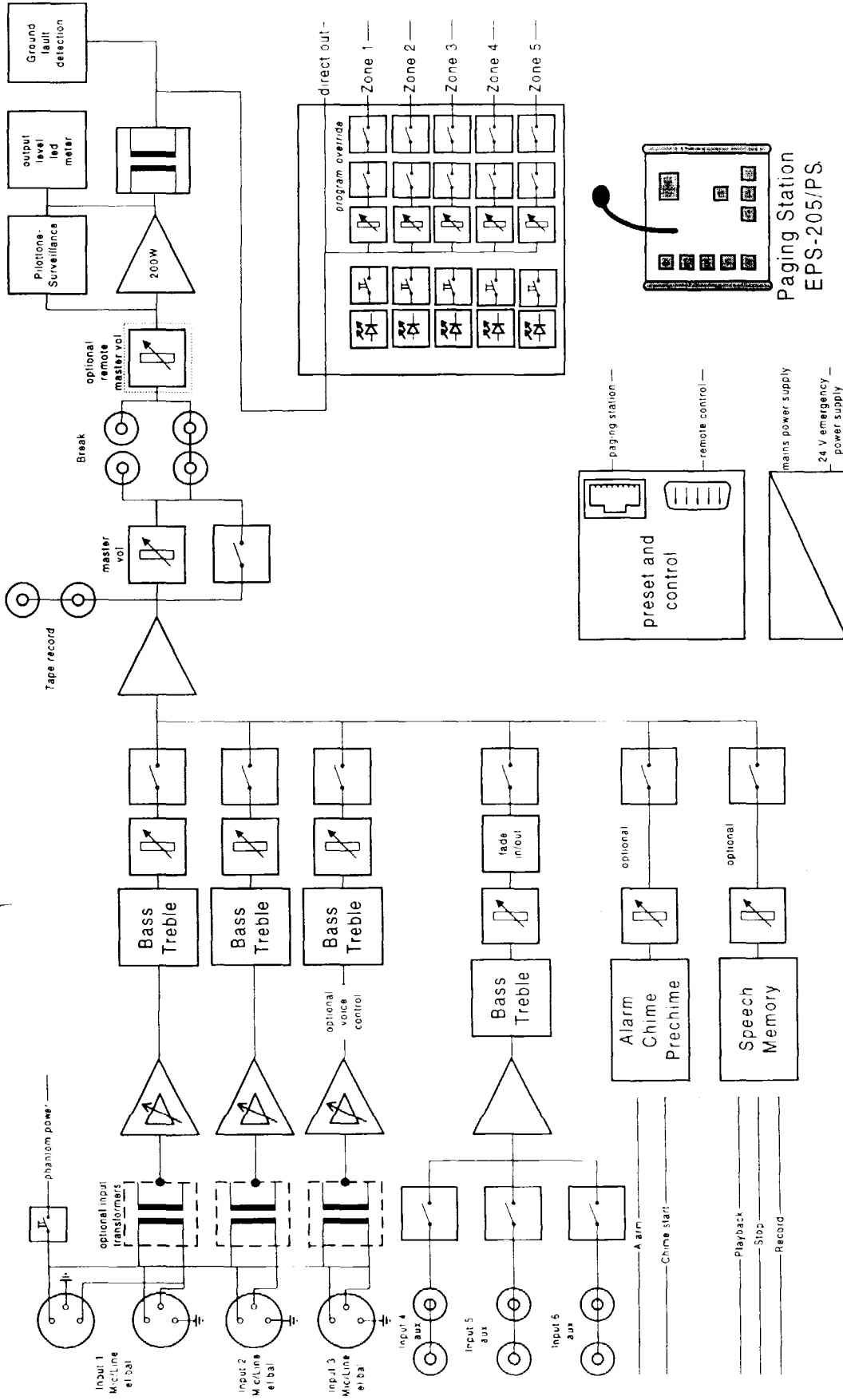


Industrial enterprise



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retrofit kits

Alarm, chime, prechime	90212	176057
Speech memory	90213	176058
Input transformer	90139	176054
Remote volume control	90178	176056
Acoustical switch	90170	176055
19" adapter	90214	176059

Block diagram			
EPS 205			
ELA compact paging system			
354 895			
ISSUE	REVISION	DATE	NAME
		98	
		DSGD	Hofmann
		CHKD	
		APPD	
ALTEC LANSING			

Notes

WARRANTY (Limited)

Altec Lansing products are guaranteed against malfunction due to defects in materials or workmanship for a specified period, as noted in the individual product-line statement(s) below, or in the individual product data sheet or owner's manual, beginning with the date of original purchase. If such malfunction occurs during the specified period, the product will be repaired or replaced (at our option) without charge. The product will be returned to the customer prepaid.

Exclusions and Limitations: The Limited Warranty does not apply to: (a) exterior finish or appearance; (b) certain specific items described in the individual product-line statement(s) below, or in the individual product data sheet or owner's manual; (c) Malfunction resulting from use or operation of the product other than as specified in the product data sheet or owner's manual; (d) malfunction resulting from misuse or abuse of the product; or (e): malfunction occurring at any time after repairs have been made to the product by anyone other than Altec Lansing or any of its authorized service representatives.

Obtaining Warranty Service: To obtain warranty service, a customer must deliver the product, prepaid, to Altec Lansing or any of its authorized service representatives together with proof of purchase of the product in the form of a bill of sale or receipted invoice. A list of authorized service representatives is available from Altec Lansing at 600 Cecil Street, Buchanan, MI 49107 (616-695-6831) and/or Altec Lansing West at 9130 Glenoaks Boulevard, Sun Valley, CA 91532 (213-875-1900).

Incidental and Consequential Damages Excluded: Product repair or replacement and return to the customer are the only remedies provided to the customer. Altec Lansing shall not be liable for any incidental or consequential damages including, without limitation, injury to persons or property or loss of use. Some states do not allow the exclusion or limitation of incidental or consequential damages so the above limitation or exclusion may not apply to you. **Other Rights:** This warranty gives you specific legal rights, and you may have other rights which vary from state to state.

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Service and repair address for this product: Altec Lansing, Inc. 600 Cecil Street, Buchanan, Michigan 49107.

Specifications subject to change without notice.



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