
Microphone as a meaningful tool for the interviewer

Abstract. *The purpose of the article is to fill the gap in the professional information field. The scientific significance of the article is that for the first time in the theory of Kazakhstani journalism, there have been analyzed all types of lavalier-type microphones and their accessories. In terms of research methods, there were used two main types of reviews such as systematic and narrative. This provided the most complete picture. For instance, a systematization of existing knowledge about lavalier microphones and an evaluation of that knowledge. As a result of the study, seven categories of lapel microphones have been derived and the characteristics of each of them are briefly presented. The value of the work lies in summing the main points in a short and simple way. The practical significance of the work's results lies in the collection of information necessary for the daily work of a journalist on television or on the Internet. There were derived five "golden rules", which a journalist must always apply for high-quality sound recording and aesthetic picture in the frame. Previously, there were no such reviews in the Kazakhstani scientific literature, so this work contributes to the development of the domestic special literature.*

Keywords: *journalism, lapel microphone, high-quality sound, recording interviews, types of microphones, accessories.*

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Introduction

As well as in all languages, this term has several options in English, including narrowly professional ones. The lapel microphone is also called a lavalier microphone or lavalier, a lav, lapel mic, clip mic, body mic, collar mic, neck mic or personal mic. The number of options does not change the basic purpose of this device and its significance for journalism in general.

The lavalier microphone is a miniature acoustic device that perceives sound waves and converts them into a digital signal. It is fixed on the clothes of TV presenters, journalists, and studio guests to record and broadcast voice. It perceives the sound qualitatively, without restricting the movements of the speaker [1].

The main advantage of a lav is its compactness. It is discreet, lightweight, and comfortable. There is no need to hold an uncomfortable microphone stick in your hands. It is much easier to convey information to the camera when your hands are free. Especially if you are filming a street video, when you need to move a lot and, perhaps, even run [2].

The use of lavalier microphones, of course, is not only in journalism. They are used in many areas. But we will elaborate on those points that are important for a journalist.

As J. Barrett said: "The modern journalist needs a toolbox of technology to compete in the digital age" [3]. In order to enable a journalist to record a high-quality interview or report from the scene, he must at least know the types of lavalier microphones, the specifics of their setup, and us.

Despite the widespread use of lavaliers in Kazakhstan, they are not written or spoken about in scientific circles. This subject is not the prerogative of journalism theory. Nevertheless, during the quarantine period, almost all journalists in Kazakhstan were forced to work in new conditions for themselves. For instance, they shot video on the phone, recorded sound themselves, and edited their stories for news broadcasts. In such situations, it was simply necessary to be aware of the basic rules of working with equipment.

In this article, we will try to fill this gap in the professional information field. We will analyze all

types of lavalier microphones, as well as additional accessories to them.

The article is divided into several sections. This will greatly facilitate the perception of technical information by creative people.

Literature review

There is plenty of foreign literature on this field, but we did not find domestic literature related to this topic.

Let us start the review with some interesting passages.

In the book of A. Ermilov "Tell me why ... The practice of television interviews and television reporting" there is an interesting passage in which the author claims that when creating reports, it is best for a journalist to use a regular microphone instead of a lavalier. "The good old microphone is more practical and convenient. It immediately indicates your profession. You walk up to a man on the street, and after a few steps, he sees who he is dealing with... If you have a lav in place of the microphone, it will take a time to notice the camera and understand that there is a reporter in front of it. A microphone is needed when you interview several people at once" [4, 163]. Here, of course, we cannot argue with the author. If a journalist goes out to work on the street in search of a good «synchronous», then a stationary microphone is indispensable; but, if the same journalist works in the studio ... In addition, over time, technologies are constantly improving and modern people no longer imagine life without compact mobile phones and other small devices.

For recording interviews, lapel microphones are preferable [5]. So we emphasize again, it all depends on the situation and from the people themselves.

Also, as a result of the review, we found a good "sound" checklist that every journalist can use in his daily work. We will present it in the original without shortening the text.

What is important to remember when recording sound?

1. Always turn on airplane mode so that an unexpected call does not distort the sound recording.
2. Always bring a directional microphone for your smartphone.
3. Always bring a lapel microphone with you.
4. Always take replacement batteries for microphones.
5. Always use wind protection (street foam or fur "dog") when shooting outdoors. To avoid background interference, get as close to the interviewee as possible.
6. Always point the microphone at the sound source.
7. Always check your sound recording before leaving the recording site.
8. Always keep a clean record. Do not rely on adjusting the sound later [5].

In general, there is a lot of literature on this topic, but as mentioned earlier, this is, for the most part, technical information. However, a journalist - a representative of the creative profession - should also know the basics of this technical information.

Materials & methods

The basis for this study was the materials of foreign publications. The articles used were in Russian and in English. There were not found domestic scientific articles or educational materials on the issue under study. It can be noted that in Kazakhstani journalism education, too little attention is paid to technical aspects and mastery of technology. However, the demand in the labor market dictates different rules. In modern conditions, crews for news or TV programs are becoming minimal, and as a rule, they consist of a journalist and a cameraman; there is no sound engineer, so the responsibility for high-quality sound is shared between two people.

In terms of research methods, two main types of reviews were used: systematic and narrative.

The role of the systematic review is to examine the evidence across multiple individual studies

with similar research questions to arrive at some conclusion about our previous knowledge. The important contribution of a narrative review is the author's interpretation and critique of the literature under scrutiny in the review [6, 123].

Systematic reviews and narrative reviews serve different purposes and should be viewed as complementary. Conventional systematic reviews address narrowly focused questions: their key contribution is summarizing data. Narrative reviews provide interpretation and critique; their key contribution is deepening understanding [7].

Thus, using these two types of reviews, we can get the most complete picture. We will systematize the existing knowledge about lavalier microphones and will be able to assess this knowledge.

Research & results

In this section, we have tried to summarize the main points in a short and simple way. Therefore, for simplicity and convenience, we divide the types of lapel microphones into several categories (can be combined in various ways) and briefly present the characteristics of each.

First option: wired/wireless lavalier microphones.

Radio transmitting lavaliers, wireless, it means that there are no wires, the signal is transmitted over the radio channel. The sound is a little worse, but they are much more comfortable. Wired lavaliers - the microphone is connected to the base with a wire. It is inconvenient, you can get tangled and break the cable, but the sound is perfect [2].

Second option: dynamic/condenser lavalier microphones.

Dynamic lavs are a rarity, most microphones on sale are condenser ones. This means that the principle of their operation is based on the properties of an electric capacitor. Sound waves cause vibrations of the elastic membrane, due to which the volume of the capacitor changes and a charge arises - an electrical signal. Production of condenser microphones is more expensive than dynamic devices, but they have a uniform amplitude-frequency response and high-quality sound capture [1].

Third option: cardioid/Omni-directional lavalier microphones.

The polar or microphone capture diagram determines the direction of sound capture - from the front, side, or back of the microphone capsule. Omni-directional microphones span 360 degrees and are great for putting them on a table for recording multiple speakers, or for use as gander microphones. In cardioid microphones (sometimes they are also called narrowly directed), the directivity pattern is sharper. They are often used in handheld microphones or on camcorders by reporters or documentaries, especially those who work alone as a videographer or mobile journalist [5].

Fourth option: sensitive/insensitive lavalier microphones.

The higher the signal-to-noise ratio, the less distorted the sound. Good is 66 decibels, excellent if 72 decibels or more. This characteristic is responsible for how quiet or loud the sound the microphone can receive. Many condenser microphones are very sensitive to sound, you can even speak in a whisper, but they will not tolerate high sound pressure. If you start screaming or recording extreme vocals into the microphone, not all models will continue to work [8].

Fifth option: USB/XLR lavalier microphones.

Those who are going to connect a lav microphone to a laptop should know this option. USB (Universal Serial Bus) – a part of a computer through which extra devices such as printers, scanners, and digital cameras can be connected easily [9, 314]. USB microphones are now very popular with those who record at home. Using the USB output, you can connect them directly with a computer or laptop, but one drawback - if even one part fails, the microphone stops working. XLR (External Line Return) connector is a type of electrical connector primarily used in professional audio/visual and stage lighting equipment [10]. XLR is a classic microphone cord that goes into a sound card. They are more reliable;

they work for a long time and differ greatly in sound quality. If you're just getting started with sound and are on a tight budget, a regular USB microphone is enough. Later it will be possible to upgrade to more professional devices with XLR output [8].

If a lot of lavs are used, then work with all channels is carried out from special mixers. From them, you can easily control each microphone, turn them off, combine, and more. In general, a complete set of remote control [2].

Sixth option: TRS/TRRS lavalier microphones.

This information can help those who connect a lavalier microphone to their cell phone. Mic jacks come in a wide variety, but for our purposes, we only need to talk about two: Tip Ring Sleeve (TRS) and Tip Ring Ring Sleeve (TRRS). TRS jacks have three conductors, while TRRS has four. An easy way to identify one from the other is to look for the black colored rings: TRS has two black rings and TRRS have three. Mics work by connecting to your phone's inner input socket. If your phone has a matching fit, the mic will work. That depends on the type and the arrangement of the conductors on the mic's 3.5 mm jack. The TRS jack fits most Android phones, except for a few new models that will also accept the TRRS jack [11].

Here it would be appropriate to make a comment that a journalist should always have several adapters with him, in case of an unplanned or on-site shooting. Adapters and spare batteries can play a crucial role in creating a story.

Seventh option: standard/small lavalier microphones.

If talk about the standard size of a lavalier microphone, then one of the most popular brands on the market (Boya BY-M1) is 2.5 grams for the microphone itself and 18 grams for the power module. Its dimensions are 18 by 8.3 mm. [12].

The Countryman B6 lav mic is tiny. Very tiny. Like the B3, it's practically invisible on camera, measuring only 0.1 inches in diameter. It's also resistant to moisture, so it can easily be hidden in hair or taped to bare skin [13]. It should be noted right away that there are no such microphones in Kazakhstan yet. Nobody uses them because of their high cost. But in more developed countries, it is already becoming the norm when the microphone is "hidden" in the hair on the head of women and in the stubble on the cheeks of men.

So, we have identified seven main types of lavalier microphones that can be combined in various ways. These are not all characteristics, but they will be enough for the effective work of a journalist.

In addition, brief characteristics will help make a choice if the journalist himself is going to buy microphones for work.

For recording, any dynamic microphone, which does not require serious financial investments or some of the cheap small lapel, may well suit you. If you need a softer, "acoustic" sound and you have extra money, choose a phantom-powered condenser microphone. At a press conference where the wires would only get in the way, a wireless kit would be the best option [5].

As mentioned earlier, often the journalist himself must supervise all issues related to sound, so you need also to understand the difference between interviews, synchrons, podcasts, etc.

The accessories for lavalier microphones can be singled out separately in this section. There are so many of them in the modern world that they themselves can be divided into several main categories.

Indoors lavalier mics work just fine, but when used outdoors on location, only a slight amount of blowing air can cause havoc. The cheap, thin foam windscreens that come with many lavs are rarely enough to offer genuine wind protection. These might be OK on the outside of clothing in very light breezes but should never be used on the inside of clothing [14].

1. A wind protection. Therefore, now in the Republic of Kazakhstan, journalists use two main types of windscreens for lavalier microphones: fur and parallon or foam. Let's briefly describe their advantages and disadvantages.



Microphone fur protection - effectively protects against wind in open areas. In its manufacture, as a rule, artificial fur with a long pile is used, which has a non-dense base and holds static electricity well. This allows the villi to always be fluffy and not stick together. How long the noise will be eliminated depends on the length of the villi. Two types of fur models are available - the first is designed to be mounted on top of the standard foam protection, the second is worn directly on the microphone.

Microphone foam protection - the most common and universal option. Such protection is best suited for indoor use but is unable to cope with strong gusts of wind when recording outdoors. Thanks to the acoustic pores, the material provides the original sound, frequency losses are minimized, while the noise level is noticeably reduced.

In addition to its main task - filtering interference - wind protection makes the appearance of the recording device more aesthetic and protects it from moisture, dust, temperature extremes, sweat and makeup, and mechanical stress [15].

2. A pin or clip (so-called clothespins). It is usually included in the package of the lapel microphone, which helps to fix the capsule on clothes. Additionally, manufacturers can include additional clamp [1]. There are a wide variety of pins, but some of the best qualities are multi-serrated clothespins that hold effectively even on slippery fabric. In addition, some of the most beautiful and aesthetic look like tie pins.

3. Tape. Tape is something that is difficult to do without if a journalist wants to record a stand-up that is difficult to direct. There are several types of tape. You need to know them, whether you are going to work in a studio with several expert guests or go outside to shoot interviews.

The main purpose of tapes is to secure the lavalier microphone and secure the cable (remember that the cable length must be at least 1.5 meters), as well as to "hide" them from the camera as much as possible.

Securing the cable with a loop using gaffer tape on clothing or using surgical tape or skin-safe tape for use directly on the person will relieve strain on the cable and reduce or eliminate cable noise. Helpful for hiding mics under clothing are Stickers. They are simply used for taping the mic to clothing or skin. There are two types: Overcovers and Undercovers. Overcovers will protect the mic from wind and contact noise from clothing. Undercovers are very similar but are designed solely for placing mics under clothing [16].

That concludes our review of the main accessories for lavalier microphones. Of course, there are many more of them, but this volume of information is quite enough for a journalist.

In addition, the last thing we would like to note is the presence of a certain rule that a journalist must always apply for high-quality sound recording and aesthetic picture in the frame. This rule is called "golden".

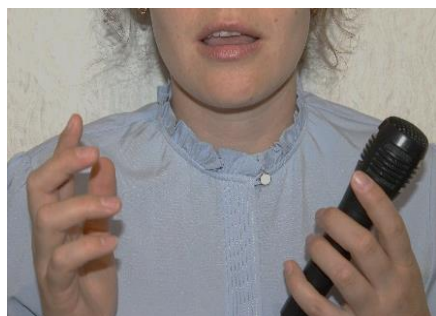
When placed at a distance of 6 to 8 inches (the distance between the apart extreme fingers of the hand) from the interviewee's mouth, the microphone is at the same time close to the sound source and protected from the wind by the speaker's body [5].

Conclusion

In conclusion, we will deduce several main "rules" for a journalist. We put the word "rule" in quotation marks, because in journalism, as in the creative process of creating content, there are no rigid frameworks and foundations, there are rather "traditions" and "recommendations". The beginner specialist should follow them.

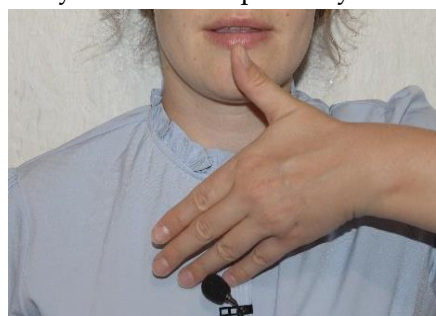
Rule #1. “Bad taste” in professional journalism is considered a frame where the journalist holds a lapel microphone in front of the interviewee so that the reporter’s hand is in the frame in defocus. Try to avoid this. A director of news or program may consider such shots a technical defect. In addition, it looks very ugly on the air and dislikes the person to whom you are asking the question.

Rule #2. Do not pass the microphone into the hands of the person you are interviewing despite circumstances. In any case, a person who is not connected with journalism will gesticulate and move the microphone away from himself, either up or down. Because of the marriage of sound, you will have to rewrite the interview several times. The second take will not give you that naturalness and spontaneity, those emotions that adorn news stories or programs.



Rule #3. Before shooting, make sure once again that you yourself or the sound engineer have correctly fixed the lavalier microphone. Do not forget about the “golden rule” - the ideal distance from your mouth to the microphone is the distance between the extended fingers: the thumb and the little finger. Each person has this distance "special, personal". Do not try to measure this distance for another person with your hand.

Rule #4. Always bring several different microphones and replaceable batteries with you when you go shooting. In a difficult case, they will "save" the situation. You yourself have probably noticed sometimes on television that the presenter, who works live, has two lavalier microphones attached to his clothes. One of them is the main one, the second - for insurance cases.



Rule #5. If you urgently need to record a reading, and there are no conditions, you are on the street, and not in a recording studio with noise isolation, do not be alarmed. You can read the text or make a recitation even in the absence of the necessary conditions. For example, this can be done in a car or in a small, enclosed room. If there is extraneous noise in the room, you can

record a narration between two pillows or mattresses, or completely covered with a thick blanket. Also well suppresses noise ordinary terry towel.

Based on these simple rules, you can always make quality material.

This review is of highly practical and theoretical value. Its practical significance lies in the collection of information necessary for the daily work of a journalist on television or on the Internet. You will have to deal with lavalier microphones all the time, without having theoretical information, it will be more difficult to master all this in practice, moreover, valuable time will be lost. Previously, no such reviews were carried out in the Kazakhstani scientific literature; therefore, this work makes a significant contribution to the development of domestic specialized literature.

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Микрофон сұхбаталушының маңызды құралы ретінде

Аңдатпа. Осы мақаланың мақсаты - кәсіби ақпарат саласындағы бос орынды толтыру. Жұмыстың ғылыми маңыздылығы журналистика теориясында тұңғыш рет микрофондардың барлық түрлері, сонымен қатар олар үшін керек-жарақтар талданғандығында. Зерттеу әдістері мен әдіснамасы тұрғысынан ең тиімдісі (шолудың екі негізгі түрі: жүйелік және сипаттамалық) қолданылды. Оларды бірігіп қолдану ең толық көріністі ашады: ол лапелдік микрофондар туралы білімді жүйелеуге және осы білімді бағалауға мүмкіндік береді. Зерттеу нәтижесінде жеті категория (бір-бірімен әртүрлі жолдармен біріктіруге болады) лапелдік микрофондар құрылды, олардың әрқайсысының сипаттамалары қысқаша ұсынылды. Сондай-ақ, «түймелік тесіктерге» арналған аксессуарлар үш негізгі топқа бөлінді: жел өткізбейтін экран, түйреуіш және тәйп. Жұмыстың құндылығы лапелдік микрофонмен жұмыс істеудің негізгі тұстарын қысқа әрі қарапайым көрсетуде жатыр. Жұмыс нәтижелерінің практикалық маңыздылығы - теледидардан немесе Интернеттен журналистің күнделікті жұмысы үшін қажетті ақпаратты жинау. Сонымен қатар, қорытындыда бес «алтын ереже» шығарылды, олар журналист әрқашан жоғары сапалы дыбыстық жазба мен эстетикалық бейнеге жүгінуі керек. Бұрын қазақ ғылыми әдебиеттерінде шетелдік мақалаларға мұндай шолу жасалмады, сондықтан бұл мақала отандық арнайы әдебиеттің дамуына ықпал етеді.

Түйін сөздер: журналистика, лапелдік микрофон, сапалы дыбыс, сұхбат жазу, микрофон түрлері, аксессуарлар.

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Микрофон как значимый инструмент для интвьюера

Аннотация. Цель данной статьи - заполнить лауну в профессиональном информационном поле. Научная значимость работы заключается в том, что впервые в теории журналистики были проанализированы все типы микрофонов, а также, дополнительно, аксессуары к ним. С точки зрения методов и методологии исследования были использованы наиболее эффективные. Применено два основных типа обзоров: систематический и описательный. Их совместное использование проявляет наиболее полную картину: дает возможность систематизировать существующие знания о петличных микрофонах и оценить эти знания. В результате исследования были сформированы семь категорий (могут комбинироваться между собой различными способами) петличных микрофонов, и кратко представлены характеристики каждой из них. Также аксессуары для «петличек» были поделены на три основные группы: ветрозащиты, прищепки и различные виды тәйпа. Ценность работы заключается в кратком и простом изложении основных моментов работы с петличным микрофоном. Практическая значимость результатов работы заключается в сборе полной информации, необходимой для повседневной работы журналиста на телевидении или в Интернете. Также в заключение были выведены пять «золотых правил», которые журналист должен применять для качественной записи звука и эстетического изображения в кадре. Ранее в казахстанской научной литературе подобных обзоров зарубежных статей не проводилось, поэтому данная работа вносит вклад в

развитие отечественной специализированной литературы.

Ключевые слова: журналистика, петличный микрофон, качественный звук, запись интервью, виды микрофонов, аксессуары.

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